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The Tocharian Gender System: A Diachronic Study

Tomba, A. del

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THE TOCHARIAN GENDER SYSTEM

A Diachronic Study

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ALESSANDRO DEL TOMBA

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Promotores:	Prof. dr. Alexander Lubotsky Prof. dr. Giorgio Banti (Università di Napoli “L’Orientale”)
Copromotor:	Dr. Michaël Peyrot
Promotiecommissie:	Prof. dr. Claudia A. Ciancaglini (Università di Roma La Sapienza) Prof. dr. Jenny Doetjes Prof. dr. Melanie Malzahn (Universität Wien) Dr. Alwin Kloekhorst Dr. Tijmen Pronk

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This book is dedicated to the beloved memory of a kind and strong man; lost but never forgotten.

Alessandro Del Tomba – Rome, January 2020

ABBREVIATIONS AND SYMBOLS

GRAMMATICAL ABBREVIATIONS

abl.	ablative
acc.	accusative
act.	active
adj.	adjective
adv.	adverb
all.	allative
alt., a.	alternating
adv.	adverb
arch.	archaic, cf. Peyrot (2008)
class.	classical, cf. Peyrot (2008)
coll.	colloquial, cf. Peyrot (2008)
com.	comitative
^{C}x	controller agreement
dat.	dative
dem.	demonstrative
det.	determinative
du.	dual
fem., f.	feminine
gen.	genitive
ger.	gerundive
inf.	infinite
instr.	instrumental
ipf.	imperfect
loc.	locative
masc., m.	masculine
mid.	middle
neg.	negation
nom.	nominative
NP	nominal phrase
nt.	neuter
obl.	oblique
opt.	optative
part.	particle
perl.	perlative
pl.	plural
prs.	present
prt.	preterite
ptc.	participle
sbj.	subjunctive
sg.	singular
subs.	substantive
^{T}x	target agreement
voc.	vocative

LANGUAGES

Alb.	Albanian
Arm.	Armenian
Att.	Attic (Greek)
Av.	Avestan
Bctr.	Bactrian
Celt.	Celtic
Chin.	Chinese
Croat.	Croatian (Standard)
Du.	Dutch
E	English
Fr.	French
Germ.	Germanic
Gk.	Greek
Goth.	Gothic
Hom.	Homeric
IE	Indo-European
Ir.	Irish
It.	Italian
Khot.	Khotanese
Khwar.	Khwarezmian
Lat.	Latin
Latv.	Latvian

Lesb.	Lesbian	Pkt.	Prākrit
Lith.	Lithuanian	Port.	Portuguese
Luw.	Luwian	Pre-PTch	Pre-Proto-Tocharian
M	Middle	Pre-TchA	Pre-Tocharian A
Mo	Modern	Pre-TchB	Pre-Tocharian B
MP	Middle Persian	Pruss.	Prussian
NP	New Persian	PTch	Proto-Tocharian
O	Old	Rom.	Romanian
OAv.	Old Avestan	Russ.	Russian
OCS	Old Church Slavonic	Skt.	Sanskrit
OD	Old Dutch	Sl.	Slavic
OE	Old English	Sogd.	Sogdian
OHG	Old High German	Sp.	Spanish
OLG	Old Low German	TchA	Tocharian A
ON	Old Norse	TchB	Tocharian B
OP	Old Persian	Tum.	Tumshuqese
Osc.	Oscan	Uy.	Uyghur
Oss.	Ossetic	Ved.	Vedic Sanskrit
P	Proto	W	Welsh
PIE	Proto-Indo-European	YAv.	Young Avestan

SYMBOLS

/x/	phonological form	<<	developed analogically from
[x]	phonetic form	→	yields through derivation
	uncertain reading		developed semantically into
	addition in translation		borrowed into
(*x*)	restoration in Tocharian texts	←	is formed through derivation
			developed semantically from
|x|	morphological form, cf. Peyrot (2013)		borrowed from
		///	the line starts or ends with a lacuna
‹x›	orthographic form		
**x*	reconstructed form	C	consonant or consonant cluster
*x**	inferred form		
***x*	projected, but wrong form	Ć	palat. consonant or consonant cluster
x| *x*	nom. form| obl. form		
>	developed phonologically into	V	vowel
		Ý	accented vowel
<	developed phonologically from	†*x*	ghost form
		x˚	member of compound; cut of a word
>>	developed analogically into		

CITATION CODES

A	Tocharian A fragments from Berlin
AS	Pelliot Koutchéen, Ancienne Série, Paris
B	Tocharian B fragments from Berlin
DA M	Pièces comptables de couvent, Paris
G	Graffiti (Pinault 1987)
IT	IOL Toch, London, Indian Office Library
LC	Lettres commerciales, Paris
LP	Laissez-passers, Paris
NS	Pelliot Koutchéen, Nouvelle Série
Or	India office oriental collections
Ot	Ōtani collection
SI	St. Petersburg collections
THT	Tocharische Handschriften der Turfansammlung, Berlin
W	Weber collection of medical and magical manuscripts, London
YQ	Tocharian A fragments found at Yanqi Qianfodong

CHAPTER ONE

INTRODUCTION

This study aims to describe the evolution of the Tocharian gender system, investigating the inflectional morphology of grammatical gender in Tocharian nouns, adjectives, and pronouns.

1.1. TOCHARIAN

At the end of the 19th century, ancient manuscripts were found in the Tarim Basin in Chinese Turkestan (present-day Xīnjiāng Uyghur Autonomous Region). In these manuscripts, different languages were documented, many of which were already known. Two of them, however, were completely unknown to the scientific community of the time. In 1908, the Indologists Emil Sieg and Wilhelm Siegling announced that the new languages were related to each other as an independent branch of the Indo-European language family (cf. already Müller 1907). As is clear from the name of the article, Sieg and Siegling named these languages "Tocharisch. Die Sprache der Indoskythen".

Thus, Tocharian is the conventional name of two extinct Indo-European languages: Tocharian A (also named East Tocharian or Agnean) and Tocharian B (also named West Tocharian or Kuchean).

Despite the differences between the two idioms, the comparison of Tocharian A and Tocharian B allows to reconstruct a coherent picture of an immediate antecedent, which is usually named Proto-Tocharian. The differences between the two Tocharian languages are significant and testify an independent evolution during at least some centuries. Tocharian B texts are dated from the 5th to 10th centuries CE, while Tocharian A is attested over a shorter period, from the 7th to 10th centuries CE (Pinault 1989: 7-12; Tamai 2011: 370-5). From a linguistic point of view, the largest differences between Tocharian A and B are found in the phonology (the vowel system in particular), the formation of some case and verbal endings, the verbal stems, and other elements of the morphology. On the lexical level, they are similar, but some differences can equally be found both in technical Buddhist terms and in some words belonging to the basic lexicon (Lane 1966). Another significant difference between Tocharian A and B is their sociolinguistic status: while Tocharian B has dialectal and chronological layers, Tocharian A appears to be linguistically uniform. Furthermore, apart from sporadic exceptions, texts drafted in Tocharian A are of religious content, while secular documents are more common in Tocharian B. This led some scholars to think that Tocharian A was not a language of everyday use (cf. e.g. Winter 1963; Peyrot 2010a). However, recent investigations on the Tocharian A materials have cast doubt on this analysis (see Ogihara 2014 with references), showing that Tocharian A was a spoken vernacular too. Following a classification

definitively standardised by Peyrot (2008), Tocharian B is usually divided into three main linguistic periods: archaic, classical, and late. Colloquial forms can be found across all periods (Ching & Ogihara 2013).

Tocharian A documents were mostly found in monastery complexes in the vicinity of Šorčuq (near Qarašähär) and in Turfan region. Tocharian B documents were found in the same areas as Tocharian A and in the region of Kuča (particularly in the Miŋ-Öy grottoes near Qizil). Most of the Tocharian leaves are damaged and sometimes abraded, and many manuscripts are mutilated and fragmentary. With the exception of fragments from two manuscripts drafted in Manichean script, Tocharian documents are written in a modified variety of the Indian Brāhmī script, commonly named North-Turkestan Brāhmī (*Nordturkistanische Brāhmī*). A peculiarity of Tocharian Brāhmī is the use of the so-called "Fremdzeichen", signs with inherent vowel *ä*, which are not found in the Indian Brāhmī. Furthermore, the anusvāra, a diacritic used to indicate nasalisation and usually transcribed with ‹ṃ›, appears often in word-final position, where it always corresponds to /n/.

Tocharian shows significant effects of contact with neighbouring languages. While the contacts with Indian (Sanskrit and Middle Indian languages), Chinese, and Old Uygur are from a relatively recent date and mostly surface in loanwords, contacts with Iranian languages have taken place over a much longer period. We find loanwords from Khotanese, Bactrian, and Sogdian, but an archaic layer must derive from an otherwise unattested Old Iranian variety.

The phylogenetic position of Tocharian within the Indo-European domain is debated. Affinity has been claimed with practically every other branch of the Indo-European family (Malzahn 2016: 281), from Germanic (Adams 1984) to Celtic (Pedersen 1913), and from Slavic and Armenian (Meillet 1914; Hamp 1998) to Greek and Phrygian (Benveniste 1936; cf. Klingenschmitt 1994). In recent years, a broad, though not universal, consensus seems to be reached, according to which Tocharian was the second branch that split off from Proto-Indo-European, after the earlier departure of Anatolian (Carling 2005; Ringe 2017; Jasanoff 2017; Weiss 2018; Lundquist & Yates 2018; Kim 2018a; Peyrot 2019). The supporters of the so-called "Indo-Tocharian hypothesis" tested the evidence either with the traditional comparative method (Schmidt 1992; Ringe 1991; Winter 1997; Jasanoff 2003; Kim 2018a), or with the computational cladistic method (Ringe et al. 2002; Bouckaert et al. 2012; Chang et al. 2015).

In order to bring the discussion forward and to possibly settle the debate, two points remain crucial: (1) the identification of possible common innovations of the remaining non-Anatolian and non-Tocharian branches; (2) more generally, the relative chronology of unitary and differential structural isoglosses between Tocharian, Anatolian, and the other Indo-European languages.

Indeed, most compelling evidence said to militate in favour of the early split-off of Tocharian comes from the lexical level. This has been recently reviewed by Malzahn (2016), who concluded that these lexical isoglosses could neither prove the early split of Tocharian nor deny it.

At any rate, the lexicon is of less value for establishing cognacy and tree-branching (Ciancaglini 2009; Ringe et al. 2002: 99). Indeed, lexical and semantic arguments may only serve as additional evidence, while the method must be based on structural evidence, i.e. phonological and morphological correspondences. In this respect, verbal morphology has been the privileged area of research, where, according to some scholars, the archaic status of Anatolian and Tocharian could be suggested by peculiar linguistic traits that these two Indo-European branches share, but that are not (or are only partially) attested in other Indo-European languages (Jasanoff 2003, 2017; Kim 2007a; Ringe 2000). On the other hand, nominal morphology has been less used to substantiate the early split-off of Tocharian. Indeed, in contrast to the verbal system, it is generally assumed that Tocharian nominal morphology is less conservative and archaic with respect to what is reconstructed for Proto-Indo-European. At first glance, this assumption seems reasonable and founded. A good example is the case system, where on top of only four nominal cases inherited from the proto-language, an additional agglutinative case layer has been formed.

In recent years, however, the gender system of Tocharian has been called into question, since it has been claimed to preserve a more archaic status with respect to the other non-Anatolian languages. This thesis is also concerned with this topic.

1.2. TOCHARIAN GRAMMATICAL GENDER

The Tocharian gender system is not complex. It distinguishes three category values, the masculine, the feminine, and the so-called alternating gender, which mostly evolved from the Proto-Indo-European neuter. A three-gender contrast is found in most of the ancient Indo-European languages. Still, the Tocharian gender system is different from that of the ancient Indo-European languages. These differences are many and can be addressed from both a diachronic and a synchronic point of view.

In the last few years, historical linguistics oriented towards Tocharian morphology has mostly focussed on the verbal system, which resulted in the publication of two monumental monographs, Melanie Malzahn's *The Tocharian Verbal System* (2010) and Michaël Peyrot's *The Tocharian Subjunctive* (2013). A new monograph by Markus Hartmann (2013) is an exception.[1] This publication is a slightly revised version of his *Habilitationsschrift*, submitted in 2011. The published version is not much different from the thesis, since recent bibliography has not been included (with the exception of Hackstein 2012 and an article by Melchert later published in 2014). As suggested by the title *Das Genussystem des Tocharischen* (2013), Hartmann's aim is to describe the Tocharian gender system from both a synchronic and a diachronic perspective, thus clarifying the status of Tocharian with respect to the other Indo-European languages. Is it therefore necessary to have another study on the grammatical gender of Tocharian?

Hartmann's book has been reviewed by two of the major experts from the Tocharian field: Georges-Jean Pinault (2015a, 20 pages) and Douglas Q. Adams (2016, 7 pages). These

[1] Hartmann's book has been recently joined by Kim's monograph on the Tocharian dual (2018).

reviews evaluate the book very differently: Pinault strongly criticises both the method and the results, while Adams considers it a rich contribution from the point of view of the analysis provided and the data collected.

In my opinion, the truth may lie somewhere in between. Hartmann's book can be divided into two sections: the first is synchronically orientated, while the second is diachronically orientated. I think these sections differ from each other not only in the final goals and in the perspectives, but also in the achieved results.

In the first section, Hartmann deals with the "gender resolution", i.e. the recognition of formal and functional patterns to predict the gender of a given noun. The data are detailed and analysed systematically, in order to provide an in-depth discussion about the gender assignment system of Tocharian from an inflectional, derivational, and semantic perspective.

On the other hand, Hartmann's diachronic analysis mainly concerns etymological problems related to the gender of some Tocharian nouns, which can be neither sorted into Tocharian inflectional classes nor traced back to common PIE stems. As a consequence, Hartmann did not deal with some other and, in my view, more important problems related to e.g. the origin of the third Tocharian gender, the so-called *genus alternans*, and the evolution of the feminine markers from Proto-Indo-European to Tocharian.

Another point that Hartmann did not consider in his book is the morphology of adjectives and pronouns. The Tocharian gender system must have arisen from formal and functional mergers of the genders inherited from Proto-Indo-European. These mergers have first taken place in the adjectival system, and they have reshaped not only the gender system, but also the nominal morphology of Tocharian as a whole. But even on a more general level, I think that grammatical gender must be considered, first of all, in light of the morphosyntactic relations between a noun and a modifier. This is just as true in the synchrony of the language, as it is in its diachrony. Indeed, in the Indo-European domain, nouns can be divided in genders only when they start to agree with targets, i.e. adjectives, pronouns, demonstratives, numerals, etc. This means that an important task for the diachronic analysis is to consider the marking of gender in the inflection of the modifiers.

Hartmann's book is part of a flourishing line of research that has the Tocharian category of gender as the central subject of investigation. The issues that this type of study face pertain to various aspects of the language from a phonological, morphological, and typological point of view. In some recent works it has been argued that Tocharian has inherited a gender system different from that of the other Indo-European languages (cf. Kim 2009, 2014, 2018b; Hackstein 2012; Kortlandt 2017). The most debated issue concerns the evolution of the feminine gender: on the one hand, it has been argued that, when Tocharian separated from Proto-Indo-European, the feminine had not yet risen as a grammatical category value; on the other hand, it has been hypothesised that Tocharian has maintained an older stage, where the suffix *-ih_2 was generalised in both the thematic and the athematic declensions. These theories have received some support, but they have also been criticised (cf. e.g. Pinault 2008: 516f., 2012; Malzahn 2011; Fellner 2014, 2014a).

As one can see, most of these recent articles have been published even after Hartmann (2013). This is indicative of the fact that the problems linked to this topic have not been solved yet. I therefore believe that there is ample reason to look at the subject again, starting, of course, from what Hartmann has either already clarified, or left unsolved (Adams 2016: 253).

1.3. AIM

The aim of this thesis is to illustrate what type of gender system Tocharian has and particularly to investigate how it developed. Consequently, the approach is mainly diachronic.

Nonetheless, a synchronic part of the thesis is aimed at clarifying an important and still unsolved problem of Tocharian grammar, namely how many genders Tocharian has. In order to answer this question, I will refer to the problematic status of the third Tocharian gender, i.e. the so-called *genus alternans*, putting forward typological arguments and invoking cross-linguistic comparisons with languages that show a similar gender system.

The diachronic part has a threefold aim. It aims at:

(1) describing the evolution of the gender markers in the inflection of the gender agreement controllers, i.e. nouns;
(2) describing the evolution of the gender markers in the inflection of the gender agreement targets, i.e. pronouns and adjectives;
(3) understanding what type of morpho-phonological mergers between the three inherited genders can be reconstructed.

It follows that the main subject of investigation concerns the question how grammatical gender developed over time and what type of gender system Tocharian inherited from Proto-Indo-European. The principal problems are related to the historical evolution of the feminine and the neuter.

As to how the feminine gender evolved in Tocharian nouns, I will consider inflectional classes that may be traced back to either the *(*e*)*h*$_2$-inflection (of both the ablauting and non-ablauting type) or the **ih*$_2$-inflection (of both the *deví*-type and *vr̥kí*-type). As far as the adjectival declension is concerned, I will focus on the relation between the "thematic" "*ā*"-inflection and the "athematic" ablauting **ih*$_2$-inflection, in order to verify whether Tocharian has inherited a different gender marking with respect to the other Indo-European languages, and how this system evolved in the inflection of the modifiers. Furthermore, I will consider the evolution of the demonstratives and the pronominal adjectives, because they show clear formal and functional differences between the masculine, the feminine, and the Tocharian "neuter". Indeed, the pronominal paradigm is in part different from that attested in the adjectival inflection. In addition, phonological problems related to the outcome of PIE *-*eh*$_2$(-) > *-*ā*(-) will be addressed, since it still represents a debated issue of Tocharian historical phonology.

As to how the neuter gender evolved in Tocharian nouns, I will investigate the outcome of selected classes of nouns, continuing both athematic and thematic paradigms. The ultimate goal is to understand how the PIE neuter lost its functions as a category of target gender and how it evolved into the Tocharian *genus alternans*.

In order to achieve these aims, I will also investigate the morpho-phonological mergers between case forms and gender markers that affected (Pre-)Proto-Tocharian in an unattested stage. These mergers have been caused by a general consonant apocope that led to confusions between the inherited case endings. In addition, I will consider typological comparisons in the evolution of languages which synchronically show a similar gender system to that of Tocharian. In particular, in the evolution from Latin to the Romance languages, the neuter gender suffered of gradual depletion. In a transitional stage, however, the neuter displayed an alternating agreement pattern, which is fully parallel to the Tocharian *genus alternans*. The same system was attested in some Old Italian dialects and survives even today in e.g. Romanian. The advantage that this type of comparison in the diachronic typology may give to the analysis of the Tocharian gender system is that the attestation of Latin as the antecedent of the Romance languages could, in a way, give insight into the Pre-Proto-Tocharian developments leading to the system attested by Tocharian A and B.

1.4. STRUCTURE AND OUTLINE OF THE THESIS

The thesis is organised as follows. Chapter 2 offers some remarks on the typology of grammatical gender and gives a general introduction to the gender system of Tocharian. In addition, it deals with the analysis of the Tocharian *genus alternans* from the perspective of general linguistics and offers an introduction to the gender assignment system of Tocharian. Chapter 3 addresses issues related to the inflection of nouns, clarifying for each of the selected inflectional classes the origin and the evolution. Chapter 4 provides an overview of the pronominal and adjectival system of Tocharian and treats the development of the three inherited genders across the inflection of both pronouns and adjectives. Chapter 5 recapitulates the findings and provides conclusive remarks. The main body of the thesis consists of the second, the third, and the fourth chapters. As each of them needs independent clarifications on the aim and the structure, such matters are discussed in the introductions of the relative chapters.

Since the category of gender requires the investigation of a wide variety of inflectional and derivational patterns as well as its intersection with the other nominal categories of case and number, this may perhaps be seen as a study of Tocharian nominal morphology as a whole.

CHAPTER TWO

THE GENDER SYSTEM OF TOCHARIAN: A SYNCHRONIC OVERVIEW

In this chapter, I present a general overview of the terms and concepts that are crucial to the investigation of the category of gender in Tocharian, from both a synchronic and a diachronic perspective. In general linguistics, the literature on this topic is quite inconsistent, especially with regard to the terminology used. Therefore, an introduction to some basic notions like gender, noun class, agreement, agreement target, and agreement controller is required (§2.1). This will be followed by a brief discussion of the reconstruction of the gender system in Proto-Indo-European, including the question whether the feminine gender was recently created (§2.2). Subsequently, I will deal with the Tocharian gender system from a synchronic perspective. Particular attention is paid to the problematic status of the third Tocharian gender, the so-called *genus alternans* (§2.3). I will put forward some typological arguments and cross-linguistic comparisons to demonstrate that the *genus alternans* is a separate gender in Tocharian (§2.3.1, §2.3.2). Finally, some principles of gender assignment in Tocharian will be treated, from both a formal and a semantic point of view (§2.4).

2.1. GRAMMATICAL GENDER: TERMS AND DEFINITIONS

In linguistics, GENDER (from Lat. *genus* 'origin, kind, species', via Old French *gendre* 'id.') represents a grammatical category that has attracted a great deal of studies oriented towards both the synchronic and the diachronic investigation of the languages of the world.

In western linguistic scholarship, it has become a matter of special interest since the fifth century BCE, when the Greek philosopher Protagoras (*c.* 480 - *c.* 410 BCE) recognised three genders in Ancient Greek, classifying and dividing the nouns in ἄρρενα 'masculine', θήλεα 'feminine', and σκεύη 'inanimate, pertaining to things'. The analysis of Protagoras is reported in the *Rhetorics* 1407b of Aristotle (*c.* 384 - 322 BCE), who, in view of the lack of a sex correlation for the σκεύη gender, claims that it should be defined as τὸ μεταξύ 'that which stays in the middle' (*Poetics* 1458a).[2] The term οὐδέτερον 'not either, neuter' appears

[2] As Belardi (1985: 82-3) clarified, Aristotle believed that, in Greek, the stem of masculine nouns had to end with an ἡμίφωνον (i.e. N, P, Σ [and Ψ, Ξ]), the stem of feminine nouns with a φωνῆεν μακρόν or a δίχρονον ("two-timed", i.e. long vowels, except for I and Y), while the stem of the third class of nouns, i.e. the neuter, could end either with an ἡμίφωνον or a δίχρονον (so, τὸ μεταξύ

in later grammatical traditions (Stoycs and Dionysius Thrax).[3] It is remarkable that early Greek scholars already recognised that there is often no straightforward correspondence between natural and grammatical gender. That is to say, the semantics of the referent and sex, in particular, must be distinguished from linguistic gender. Strictly speaking, gender refers to a grammatical category, i.e. GRAMMATICAL GENDER, which basically fulfils two essential functions: (1) classifying nominals, and (2) referring to constituents through agreement patterns. An important analytical tool in order to understand these functions is consequently the distinction between the notion of gender and that of AGREEMENT CLASS.

According to a famous definition by Hockett (1958: 231), gender is reserved for "classes of nouns reflected in the behaviour of associated words". An agreement class is a set of lexemes whose members each select the same set of inflectional realisations (Zaliznjak 1967: 30; Aronoff 1994: 182). The most significant pattern according to which gender is identified is consequently AGREEMENT, which commonly refers to "some systematic covariance between a semantic or formal property of one element and a formal property of another" (Steele 1978: 610).[4] This relation is very often made by means of specific markers on one or all the elements that are linked together morphosyntactically. It follows that agreement provides the most reliable basis for defining gender and establishing the number of genders that a given language has (Corbett 1991: 105, 2000: 348).

Nouns belong to the same agreement class if they take the same agreement form under the same conditions; if a given language has nouns that belong to different agreement classes, this language has, usually, more than one gender. In the scientific literature, we sometimes find the expression NOUN CLASS as a blanket term for gender (Aikhenvald 2000: 18-20). Properly, a noun class is a specific group of substantives that have some characteristics in common, either semantic (e.g. the meaning and the features of the referent) or formal (e.g. phonological and/or morphological). However, this nomenclature is mostly found within studies on non-Indo-European languages: languages with noun classes have more than three "genders", sometimes without a distinction between masculine and feminine.[5] As a consequence, the difference between gender and noun class is correlated with grammatical tradition rather than linguistic data.

'intermediate'). As a consequence, what Aristotle did was transposing Protagoras' distinction between ἄρρενα, θήλεα, and σκεύη "dal piano delle caratteristiche del denotato al piano delle caratteristiche del segno linguistico [...]" (p. 83).

[3] For a synthetic account of Greek and Latin linguistic terminology on grammatical gender, see recently Kilarski (2013: 59-82) with references therein.

[4] A distinction is sometimes made between "agreement" and "concord". This is based on the type of domain: the former is sometimes preferred for agreement within the verbal domain, the latter for agreement within the nominal domain. Since there is no evident advantage in using such a distinction for Indo-European studies, I will consistently use the term "agreement" for referring to both nominal and verbal domains.

[5] See mainly Corbett (1991: 146, 2007), who argues that there is no real difference between "gender" and "noun class": the former is preferred in Indo-European and Dravidian studies, and the latter in Caucasian, African, and Australian studies. Cf. also Kilarski (2013: 8): "[T]he term 'gender' is usually

As mentioned above, languages use grammatical categories to group together words or morphological forms that share semantic and/or formal features. Morphosyntactically, agreement allows to overtly mark that a certain adjective refers to a given noun, and not to others.

In nominal agreement, we can find different types of entities, namely a noun and its modifier(s). The element triggering gender agreement is the AGREEMENT CONTROLLER and the element that shows agreement is the AGREEMENT TARGET. Thus, a language has a gender system if noun phrases have an agreement target that shows gender marks (Corbett 2006: 4f.). See for instance the following example from Latin:

bona	*ancilla*	*dominās*	*amat*
good:NOM.SG.F	maid:NOM.SG.F	mistress:ACC.PL.F	love:3SG.PRS.ACT

"The good maid loves the mistresses".

DOMAINS	*bona ancilla*	*ancilla amat*
TYPE	nominal agreement	verbal agreement
CONTROLLER	*ancilla*	*ancilla*
TARGET	*bona*	*amat*
FEATURES	number, gender, case	person, number
VALUES	singular, feminine, nominative	third, singular

In the example, there are two different domains: the first is between the noun *ancilla* 'maid' and its modifier, the adjective *bona* 'good' (NOMINAL DOMAIN), while the second is between the subject of the sentence, i.e. *ancilla*, and *amat* 'loves', its predicate (VERBAL DOMAIN). The noun *ancilla* is the agreement controller in both domains, while the adjective *bona* and the verb *amat* are the agreement targets. The features expressed are case (nominative), gender (feminine), number (singular), and person (third).

The controller and the target stand somehow in asymmetric relation to each other and this asymmetry has a formal and a semantic side. On the semantic side, the information in the agreement marking is pertinent to the controller, but not to the target (Corbett 2006: 1). On the formal side, the target depends directly on the controller, implying that changing the controller is expected to have consequences for the target, but not vice versa.

Now, it may be clear that the category of gender has a different status with respect to some other nominal categories, such as number. Indeed, if a given language expresses both the category of gender and of number, a noun usually has a set of inflected forms that depends on the number values that this language has. On the other hand, nouns typically cannot have different inflected forms according to gender, given that it is inherently stored

reserved for the relatively small, sex-based system of the Indo-European type". An in-depth and clear discussion on the differences between noun class, agreement class, and inflectional class has been offered by Babou & Loporcaro (2016) in a paper dealing with the noun classes of Wolof, a Niger-Congo language.

in each substantive. Taking the nominative of Lat. *ancilla* as an example, we have two different inflected forms for the category of number, the singular *ancilla* and the plural *ancillae*, but only one with respect to the category of gender, i.e. the feminine. This means that we cannot find any masculine or neuter counterpart of Lat. *ancilla*. In the agreement targets, both gender and number are properties expressed by inflection (Booij 1994). In other words, adjectival and pronominal gender are inflectional and have a syntactic function, while the noun gender, i.e. the gender of the controller, is lexically specified and stored.

Although many languages normally show oppositions of gender, the modality through which these oppositions are expressed is not always the same. First of all, gender is not a universal category: many languages completely lack it (e.g. Turkic languages), while others display *formal* gender distinctions only in particular lexical classes (e.g. English only in the pronominal system).

The mechanisms by which nouns are allotted to genders – the ASSIGNMENT SYSTEM – may involve two basic principles: the meaning and the form.

The first principle is found in those languages where the gender system is assigned by semantic patterns: there are STRICT SEMANTIC ASSIGNMENT SYSTEMS and PREDOMINANTLY SEMANTIC ASSIGNMENT SYSTEMS (Corbett 1991: 8-30).

On the contrary, in many other languages semantic rules are not enough to assign gender to nouns, but other rules are required. Usually, if there is an opposition between masculine and feminine, one of the semantic factors that encodes gender is the sex: nouns denoting males are masculine, and nouns denoting females are feminine. However, this is often only a tendency (cf. the common example Germ. *Mädchen* 'girl', which is neuter, not feminine). As a matter of fact, the vast majority of nouns in these languages are classified according to formal mechanisms, i.e. the signifier. As a consequence, they have a FORMAL ASSIGNMENT SYSTEM. Among the formal criteria, some languages employ phonological information, like initial phonemes, final phonemes, or the prosodic structure of a given word. Another type of formal gender assignment is morphological, where the gender of a noun can be detected from morphological information, like inflection, derivation, and compounding. Usually, a morphological assignment system requires knowledge of the inflectional classes. However, gender crucially differs from the notion of inflectional class, which is defined as "a set of lexemes whose members each select the same set of inflectional realizations" (Aronoff 1994: 182). That is to say, an INFLECTIONAL CLASS includes nouns with the same inflectional characteristics, but it may consist of nouns with different genders. It follows that in formal assignment systems gender may be particularly difficult to predict, because the gender of many nouns turns out to require knowledge of the inflectional classes. The vast majority of the Indo-European languages show this typical formal assignment system.

To conclude, one can say that genders are paradigmatic classes of nouns, established on syntagmatic evidence, since they can be identified on the basis of the agreement with nominal modifiers. They can be assigned according to semantic or semantic/formal principles and form a relatively small, closed system.

2.2. AN INTRODUCTION TO THE GENDER SYSTEM OF PROTO-INDO-EUROPEAN

Since the late nineteenth century, the Proto-Indo-European category of gender has been one of the most enduring issues within Indo-European studies and it keeps being the topic of controversial analyses oriented towards the historical, the typological, as well as the areal perspective.[6]

In the Indo-European domain, semantic associations are a rather useless predictor to establish the gender of nouns. Indeed, the vast majority of the oldest Indo-European languages display a three-gender system, constituted by the MASCULINE, the FEMININE, and the NEUTER, with a predominantly formal assignment system. Natural sex certainly played an important role in the distinction between masculine and feminine. The third gender is the neuter, which is typical of those nouns referring neither to male, nor to female referents and to non-human entities in general. However, a given noun may certainly be masculine or feminine, even when it does not refer to animate entities (e.g. Gk. πόλεμος 'war' m.; Lat. *rosa* 'rose' f. etc.). This state of affairs is attested in many ancient Indo-European languages, like Sanskrit, Avestan, Ancient Greek, and Latin, and still today in some modern ones (e.g. in Modern Greek, German, Russian, etc.). On the other hand, amongst others, Romance languages (with the exception of e.g. Romanian), most of the modern Indo-Aryan languages (e.g. Hindi and Rajasthani languages), and modern Celtic languages have reduced the number of genders, as they have just two, the masculine and the feminine. This type of binary system is not semantically based, because the distribution of the substantives in a given gender is highly idiosyncratic. The idiosyncrasy mirrors the fact that the referent of most words has no sex. This has been a general property of Indo-European languages insofar as they preserve gender distinctions.

In several ancient Indo-European languages, the correlation between gender and inflectional class is not a one-to-one relationship. In Latin and Ancient Greek, for instance, *ā*-stems (the so-called "first declension") are predominantly feminine and *o*-stems (the so-called "second declension") are masculine or neuter, but still we find inconsistences in the distribution of the genders in these two declensions. For example, Lat. *poēta* 'poet', *agricola* 'farmer', *frātricīda* 'fratricide' and Gk. ὁ πολίτης 'citizen', ὁ νεανίας 'young man', ὁ στρατιώτης 'soldier' are all of masculine gender but they belong to the first declension, while Lat. *platanus* 'planetree', *domus* 'house', *alvus* 'womb, belly' and Gk. ἡ νῆσος 'island', ἡ ἔπημος 'desert, wilderness', ἡ ὁδός 'road' are feminine second declension nouns. In the athematic type (Greek and Latin third declension), which includes several inflectional classes, almost no relevant pattern allows to distinguish *a priori* the masculine from the feminine.

[6] For recent bibliography and up-do-date discussions on the PIE gender system, see Ledo-Lemos (2003), Matasović (2004), Luraghi (2006, 2009, 2011), Melchert (2000, 2014), and the papers collected in Neri & Schuhmann (2014). See also the accurate recent overview by Lundquist & Yates (2018).

As already noticed above, the analytical tool that allows to recognise the genders of a language is agreement. The Indo-European tripartite system is accordingly identified through a morphosyntactic agreement system that involves nouns, adjectives, pronouns, participles, etc. The same system of gender is reconstructed also for the proto-language, or at least it was up until the late 19th century. Indeed, even before Anatolian was discovered, leading scholars already recognised that the feminine gender was created the latest, through the application of internal reconstruction. According to this theory, (Pre-)Proto-Indo-European appears to have had originally a binary noun class opposition between an animate and a neuter gender. The feminine would have arisen later.

However, thanks to the decipherment of Hittite texts, it was discovered that the Anatolian language completely lacks a *grammatical* feminine gender, since it only displays a distinction between common (or animate) gender and neuter (or inanimate) gender (Hitt. *kāš antuḫšaš* 'this man', common gender, vs. *kī ḫuitar* 'this animal', neuter gender).[7] As a matter of fact, one of the most enduring questions within the Indo-European field has been the origin of the feminine gender, from the inception of modern historical linguistics by Rask and Bopp, through the work of the Neogrammarians (e.g. Brugmann 1891), but a special impetus for this continuing debate was provided by the decipherment of Hittite.

The French Indo-Europeanist Antoine Meillet (1921: 211-229, 1931) questioned the three-gender system for the older stage of Proto-Indo-European. He proposed that the distinction between masculine and feminine within the "animate" gender would have been a recent innovation: "[a]u gendre animé, marqué par le masculin, avec une différenciation éventuelle pour le cas particulier du féminin, s'oppose le genre inanimé, le «neutre»" (Meillet 1921: 213). Meillet further observed that in many ancient Indo-European languages we can find pairs of words with similar meanings, but one is either masculine or feminine, while the other is neuter. This peculiar gender-contrast in some limited sections of the lexicon would be the preservation of an old state of affairs where an opposition between active/agentive and inactive/inagentive entities can be reconstructed. Furthermore, it is well known that some old Indo-European languages have adjectival classes that exhibit only two-way sets of forms, making no distinction between the masculine and the feminine, which are condensed in one form. This is different from that of the neuter (cf. Lat. *trīstis* m./f. vs. *trīste* nt. 'sad'; Gk. ἄδικος m./f. vs. ἄδικον nt. 'unjust, wrong').

There are two different hypotheses concerning the lack of feminine gender in Anatolian. The *Schwundhypothese* claims that the feminine was not attested in Anatolian simply because this Indo-European branch has lost this category value that consequently should be reconstructed for the proto-language. On the other hand, the *Herkunftshypothese* (whose most radical variant is the Sturtevant's Indo-Hittite hypothesis) claims exactly the opposite, stating that the proto-language started to grammatically encode feminine gender only after the split of Anatolian from the rest of

[7] For a recent discussion on the feminine gender in Hittite and the functions of the suffix *-*eh*$_2$ in Anatolian and in Proto-Indo-European, see Melchert (2014: 257-271).

the Indo-European family. As a consequence, there would never have been a separate feminine gender in Proto-Anatolian. After almost a century of debate, it is today commonly agreed that the three-gender system [8] known from most Indo-European languages has replaced an earlier animacy-based two-gender system and that the Anatolian situation is actually archaic (see recently Melchert forth.; Kim 2018a with references), even though it is still a matter of discussion how exactly this development has come about. [9] In this reconstructed system, animate and inanimate gender were prototypical categories, where a given noun could be assigned to a given gender even if it did not share all the features of a certain category (Luraghi 2014).

I therefore agree with the current scholarly mainstream according to which the emergence of a grammatical feminine gender is a late phenomenon in the evolution of the prestages of Proto-Indo-European, which resulted in a reconstitution of the entire gender system of the proto-language. As we have seen, beside the Anatolian data, strong evidence from other Indo-European languages points unambiguously to the late creation of the feminine gender and to the subsequent reconstruction of a two-gender system for the oldest phases of Proto-Indo-European. A similar conclusion is suggested by the fact that in archaic inflectional classes, masculine and feminine gender do not attest formal differences in the declensions. These differences are only limited to the masculine and the neuter (e.g. in some Latin and Ancient Greek adjectival and pronominal inflections). On the other hand, feminine nouns are often characterised by suffixation, being therefore more marked. Furthermore, where there was a necessity to make a difference between masculine and feminine explicit, different nouns were used. Examples are numerous from the kinship lexicon: Skt. *mātár-* 'mother' f. (< PIE **méh₂tēr*) : *pitár-* 'father' m. (< PIE **ph₂tḗr*); Gk. υἱύς 'son' m. (< PIE *suHu̯-*) : θυγάτηρ 'daughter' f. (< PIE **dʰugh₂tḗr*); Lat. *frāter* 'brother' m. (< PIE **bʰréh₂tēr*) : *soror* 'sister' f. (< PIE **su̯esōr*). Etymologically, the last word contains PIE **sor-*, which can be found in Anatolian as an independent feminine suffix, e.g. Hitt. *išḫaššaraš* 'lady, mistress' from *išḫaš* 'sir', Hitt. *ḫaššuššaraš* 'queen' from *ḫaššuš* 'king' (Ledo-Lemos 2003: 133-5).

[8] Actually, there is another view on the PIE gender system, which assumes that a fourth gender should be added to the commonly assumed three, i.e. the collective. The supporters base this view on the peculiar agreement pattern of the collective nouns ending in **-ā* (< **-eh₂*), like in the Ancient Greek type ἕτερα καὶ ἕτερα ὕδατα (nom.pl.) ἐπιρρεῖ (3sg.) "sundry and different waters flow". This agreement of a neuter plural with a singular verb would represent the relic of the PIE fourth gender. This hypothetical fourth gender would have subsequently been reanalysed as a mere inflectional mark and would have given rise to the neuter plural ending in *-a*/*-ā*. See Loporcaro & Paciaroni (2011) and Hackstein (2012). On the other hand, some other scholars argue that the collective was a category of number, instead of gender, reconstructing a four-way contrast for animate nouns (namely, singular, dual, count plural, and collective plural), while inanimate nouns completely lack count plural. See Melchert (2000, 2011).

[9] On the so-called "*i*-mutation" in Luwian and Lycian, see Starke (1990: 85-9) and Oettinger (1987). Rieken (2005) has recently shown that "*i*-mutation" has nothing to do with either the *devi̯-* or the *vr̥ki̯-*suffix.

Some functional proprieties that invite to reconstruct an old opposition between animate and inanimate gender have also been identified. Meillet (1931) first pointed out that an important feature marking the division between what is animate and what is inanimate is linked to the capability to move and cause an action and/or an event. Confirmation of such a subdivision comes from the lexical level. Indeed, by comparison of some old Indo-European languages, we can find substantives that describe the same referent as a dynamic entity, on the one hand, and a static entity, on the other hand. The first kind of substantives pertains to the masculine or the feminine gender, while the second kind of substantives to the neuter gender.[10]

All these data clearly point to the fact that the gender system of the Anatolian languages may be archaic. From a morphological point of view, the original twofold system consisted only of the masculine and the neuter (mirroring the Anatolian common and neuter genders), while the feminine gender was later formed through the addition of special suffixes. There is little agreement about the details of this development and, in particular, on how the suffixes *-*ih*$_2$/-*i̯eh*$_2$ ("athematic") and *-(*e*)*h*$_2$ ("thematic") started to mark the feminine gender. In this field, the position of Tocharian is open to questions that still need to be definitively answered. Indeed, it has recently been claimed that Tocharian departed from Proto-Indo-European immediately after Anatolian and that the unexpected distribution of the grammatical feminine markers would be a strong evidence for such an early split (see e.g. Kim 2009, 2014; Hackstein 2012). We will deal with this diachronic issue in the following chapters.

2.3. THE GENDER SYSTEM OF TOCHARIAN

Although the modalities of expressing gender contrasts are not always clear, for the great majority of the Indo-European languages there is generally no dispute as to the number of genders they have. For a few others, however, the matter is more complex. Tocharian is one of those languages.

Like in most of the languages with gender, also in Tocharian the element triggering gender agreement is usually a noun: the agreement controller. Gender agreement occurs in adjectives, numerals from 'one' through 'four', demonstrative pronouns, some interrogative and relative pronouns, some participles and gerundives: these are the agreement targets.

According to a classical theory, Tocharian displays only two grammatical genders in both the controller and the target. These are the MASCULINE and the FEMININE. Remnants of the Indo-European neuter are indeed limited to some "crystallised" forms, like the singular of the demonstrative pronoun TchB *te*, A *ta-* < PIE **tod* (Skr. *tát*, Gk. τό, etc.; cf.

[10] On these pairs, see also Lazzeroni (1998b).

§2.3.2, §4.2.3). In the following, some typical examples of masculine agreement are presented:[11]

THT1113 a2-3

SG.	[T]***ṣe***	[C]***ṣamāne***	*postañ̃ñe*	*teṅkäñ-c*
	one:NOM.SG.M	monk:NOM.SG.M	even	hinder:3SG.SBJ-2SG.SUFF

"If only one monk stops you". (cf. Peyrot 2013: 311)

B337 a1

PL.	[C]***ṣamāni***	[T]***makci***	*naumīyenta*	*pareṃ*
	monk:NOM.PL.M	self:NOM.PL.M	jewel:OBL.PL.A	bring:3PL.PRS

"The monks carry off the jewels by themselves". (cf. Ogihara 2009: 327)

A394 b1

SG.	[T]***ṣom***	[C]***koṃ***	[T]***wäc***	[C]***koṃ***	*śwā‹t›si*	*mā*	*tāp*
	one:OBL.SG.M	day:OBL.SG.M	second:OBL.SG.M	day:OBL.SG.M	food	NEG	eat:3SG.PRT

"On the first and on the second day, he did not eat food". (cf. Thomas 1957: 128)

A151 a1

PL.	[T]***cesäm***	*ṣpät*	[C]***koṃsaṃ***
	this:OBL.PL.M	seven	day:LOC.PL.M

"In these seven days".

Some examples of feminine agreements are the following:

IT248 b5-6

SG.	*omte*	*kr$_u$i*	[C]***aśiya***	[T]***ṣär(ps)emaneññа***	[T]***stmausa***	*tākoy*
	there	if	nun:NOM.SG.F	pointing out:NOM.SG.F	stand:PRT.PTC.N.SG.F	be:3SG.OPT

"If a nun were standing there, giving instructions". (cf. Peyrot 2013: 348)

AS18B a2

PL.	[T]***toy***	[C]***aśiyana***	*po*	[T]***lalāṃṣuwa***	*stare*
	this:NOM.PL.F	nun:NOM.PL.F	all	carry out:PRT.PTC.NOM.PL.F	be:3PL.PRS

"These nuns have arranged all". (cf. Meunier 2013: 155)

[11] In the examples below, [T]*x* and [C]*x* indicate the agreement target and the agreement controller respectively.

A187 a1

SG.	T***lyāki***	T***kälkälyi***	C***tkaṃ***	*naṣ*
	flat:NOM.SG.F	accessible:NOM.SG.F	earth:NOM.SG.F	be:3SG.PRS

"The earth is flat and walkable". (cf. Knoll 1996: 16)

A59 a1

PL.	*sarkk*	*oki*	*tākar*	T***ñäkcyāñ***	C***tkañi***
	sequence	like	be:3PL.PRT	divine:NOM.PL.F	earth:NOM.PL.F

"The divine earths were like gradual stage(s)". (cf. Sieg 1952: 42)

As is clear, the substantives TchB *ṣamāne* 'monk', TchA *koṃ* 'day, sun', and TchB *aśiya* 'nun', TchA *tkaṃ* 'earth' are the controllers, while the various modifiers – adjectives, pronouns, participles – are the targets. As demonstrated by the agreeing modifiers, the first pair of nouns is masculine, while the second is feminine.

In addition, Tocharian has a large and productive class of nouns that constitutes a third, separate category: the *GENUS ALTERNANS*. As pointed out by Igartua (2006: 58), the term *genus alternans* "was coined to cover the specific nature of the third gender in Tocharian, which combines agreement traits of the other two, the masculine and the feminine". See the following examples:

B11 a5

SG.	*päst*	*kl*(*au*)*tkoträ*	T***se***	C***lakle***
	away	turn:3SG.PRS.MID	this:NOM.SG.A	suffering:NOM.SG.A

"This suffering turns away". (cf. Schmidt 1974: 273)

B88 b5

PL.	*sū*	T***toṃ***	C***läklenta***	*lkāṣṣäṃ*
	he: NOM.SG.M	this:NOM.PL.F	suffering: NOM.PL.A	see:3SG.PRS

"He sees these sufferings". (cf. Schmidt 2001: 318)

A341 b3

SG.	T***caṃ***	C***oko***	*wärpnātär*
	that:OBL.SG.M	fruit:OBL.SG.A	enjoy:3SG.PRS

"[She] enjoys that fruit". (cf. Sieg 1952: 40)

A57 b2

PL.	T***s$_u$kaṣināṣ***	C***okontu***	*eṣäntās*	*pñintu*	*ese*(*ñc*)
	happy:OBL.PL.F	fruit:OBL.PL.A	giving: PRT.PRS.PL	merit:OBL.PL.A	give:3PL.PRS

"[They] give merits giving fruits of happiness".

Although the agreement targets display only two distinct sets of forms, one for the masculine (nom.sg. TchB *se* 'this'; obl.sg. TchA *caṃ* 'that') and one for the feminine (nom.pl. TchB *toṃ* 'these'; obl.pl. TchA *s$_u$kaṣināṣ*), they stand in agreement with the same

noun (TchB *lakle* 'suffering' and TchA *oko* 'fruit'), revealing a third agreement environment that combines traits of both the masculine and the feminine. And this agreement is precisely *alternans*, because it "alternates" masculine agreement in the singular and feminine agreement in the plural.

From a historical point of view, the *genus alternans* in part mirrors the Proto-Indo-European neuter, because a number of alternating nouns historically reflect Indo-European neuters (e.g. TchB *yasar*, A *ysār* alt. 'blood' < PIE *$*h_1ésh_2$-r* or the collective *$*h_1ésh_2$-ōr* nt. see §3.6.2.1).

At this point, in order to better understand the Tocharian gender system, an important analytical tool that needs to be mentioned is the distinction between CONTROLLER GENDER and TARGET GENDER.[12]

Using the nomenclature and the definitions by Corbett (1991: 151), we can state that the controller gender is the gender into which nouns are divided, while the target gender is the gender which is marked on the modifiers. This means that there is no specific set of forms in the modifiers that specifically mark a given gender. In other words, the controller gender is lexically marked on a given noun, while the target gender provides, on the morphosyntactic level, the creation of sets of agreement patterns that are related to the gender of the noun.

From a typological point of view, one could therefore say that Tocharian has an opposition between two target genders – the masculine and the feminine – and three controller genders – the masculine, the feminine, and the *genus alternans* – which are regularly defined on the basis of the agreement between a noun and its modifier(s).

Table II.1. Correlation between gender and number in Tocharian

GENDER	NUMBER	
	SINGULAR	PLURAL
MASCULINE	masculine	masculine
GENUS ALTERNANS	masculine	feminine
FEMININE	feminine	feminine

In other words, the intraparadigmatic opposition between the three Tocharian agreement classes is based on the fact that the feminine is opposed to the *genus alternans* in the singular, while the masculine is opposed to the *genus alternans* in the plural. The masculine and the feminine are opposed to each other both in the singular and in the plural.

[12] I used this terminology because it seems to be better known and used in the literature. The pair target vs. controller gender mirrors Hocketts's selective vs. inflectional gender (1958: 230) and late Corbett's non-autonomous vs. autonomous gender (2011: 459f.).

2.3.1. THE STATUS OF THE TOCHARIAN *GENUS ALTERNANS*

The Tocharian system of gender is uncommon and typologically rare within the Indo-European domain. For this main reason, both its synchronic and diachronic analysis have become controversial. From a synchronic point of view, the main matter of debate has been the linguistic analysis of the *genus alternans*. This problem is linked to a central working question: how many genders did Tocharian have? The answer is not obvious, as one might imagine. In what follows, I will deal with the synchronic status of the third Tocharian gender, putting forward typological arguments and cross-linguistic comparisons with the Romance languages, in general, and with Romanian and Standard Italian, in particular. I argue that the Tocharian *genus alternans* is to be regarded as a fully-fledged gender value, formally and semantically opposed to both the masculine and the feminine.

Almost all relevant grammars and handbooks on Tocharian start the discussion on the category of gender reporting that both Tocharian languages would display only two genders, the masculine and the feminine (but cf. Winter 1998: 159).[13] This statement is, for example, present in the *Elementarbuch* (TEB §65-66), in the introduction to Tocharian by Krause (1971), more cautiously in the two excellent handbooks on Tocharian by Pinault (1989, 2008), but also in Schmidt (2018: 215f.; cf. also Kim 2006: 726). Also in other works on Tocharian nominal morphology, the *genus alternans* has been usually treated as a "group of nouns", or, more specifically, as an "agreement class" (Kim 2009: 73-4; Fellner 2014: 16). It is consequently not referred to as a gender in its own right, but a sort of gender-like category, paradigmatically different from the masculine and the feminine.

The books and articles quoted before are mainly historically orientated, so that a discussion on the gender system from a synchronic and a typological point of view is not expected. As we have seen, a new publication in this field is Hartmann (2013), whose aim is to provide a detailed account of the synchronic aspects of the category of gender in Tocharian (pp. 26-8). However, Hartmann only claims that in the historical attestation of Tocharian languages, they display two target genders (masculine and feminine) and three controller genders (masculine, feminine, and the alternating gender). He also argues that in the literature on gender (he refers to Busmann 2008), the term *Genus* is sometimes employed as a synonym of *Nominalklasse*. However, Hartmann affirms that it is more correct to use *Genus* instead of *Nominalklasse* for Tocharian, because in these languages male entities are sorted in the masculine gender and female entities in the feminine

[13] Some handbooks (e.g. Krause & Thomas 1960) report that Tocharian has three genders including the neuter. On the status of the Tocharian neuter gender, i.e. lexical "crystallised" forms that go back to the PIE neuter, see the next paragraph.

gender (p. 26).[14] No matter whether we accept this argument or not, I think it does not say anything new on the analysis of the *genus alternans*.

Given the special role Tocharian has acquired within the study of the gender system, I believe it is important to shed new light on the typological status of the *genus alternans*. The problem here is not only interpreting whether nouns of this class are neither masculine nor feminine, or are both masculine and feminine, but rather if we have to consider a controller gender like the Tocharian *genus alternans* as a real gender or not. Therefore, the issue is not purely definitional.

Various analyses can be put forward in order to interpret the Tocharian alternating gender. It can be or it has been considered as:[15]

(1) a real gender: a gender value;
(2) an "inquorate" gender: a group of substantives lexically marked as exceptions;
(3) an agreement class;
(4) a problematic category that mainly refers to derivational instead of inflectional matters.

The latter possibility (4) has been advocated by Acquaviva (2008: 148f.) for the Italian type *braccio* : *braccia* 'the arm(s)', which shares, in many respects, similarities with the Tocharian alternating gender (see below).[16] However, the third Tocharian gender cannot be regarded as a derivational category, because alternating nouns evidently have a morphological plural and not a lexical plural. Furthermore, they are not limited to only one inflectional class with a single specific plural ending (see §2.4). As a consequence, this option is not to be further considered.

Before analysing the Tocharian *genus alternans* as an agreement class (3), some terminological details must be clarified. As noticed above, the agreement class can be considered as the tool thanks to which we deduce gender (Zaliznjak 1967). That is, the gender of a noun is inferred from the gender-marking on associated elements. As a consequence, suggesting that Tocharian has two genders and three agreement classes does not say anything on the status of the *genus alternans*: once we have recognised that a language has two or more agreement classes, we must proceed further to establish if those agreement classes can be analysed as real gender values.

Usually, any language has as many genders as agreement classes. On the other hand, there are some cases that make the relation between gender and agreement class not straightforward. For our discussion, a comparison with Standard Italian is useful. Like most of the other Romance languages, Italian has reduced the three-gender system of

[14] Hartmann (2013: 26) further says that the term *Nominalklasse*, i.e. noun class, should be used as a synonym of *Deklinationsklasse*, e.g. inflectional class, but I cannot agree with this terminological choice for the reasons showed above (§2.1).

[15] See also Loporcaro (2018: 92f.).

[16] For criticism on Acquaviva's account, see Loporcaro & Paciaroni (2011: 403f.).

Latin into a two-gender system, losing the neuter as a category value. As a consequence, we would expect only two agreement classes, one for the masculine and one for the feminine. However, Standard Italian shows a limited class of nouns that behaves exactly as the Tocharian *genus alternans*. Some examples are given below:[17]

Table II.2. Italian "alternating" nouns

	SINGULAR			PLURAL	
MASCULINE	*il braccio*	'the arm'	FEMININE	*le braccia*	'the arms'
	il dito	'the finger'		*le dita*	'the fingers'
	il lenzuolo	'the bed sheet'		*le lenzuola*	'the bed sheets'
	l'uovo	'the egg'		*le uova*	'the eggs'
	il paio	'the pair'		*le paia*	'the pairs'

This peculiar group of nouns shows masculine agreement in the singular and feminine agreement in the plural, as is clearly demonstrated by the article, which is inflected as masculine in the singular (It. *il*, *lo*) and feminine in the plural (It. *le*).[18] Applying the rules given above, it must be concluded that the Italian type *braccio* : *braccia* constitutes a third gender value. However, there is broad consensus among scholars (and Italian speakers) that it does not constitute a separate gender in Standard Italian. The main argument adduced to support the latter analysis is that this kind of agreement is limited to only one inflectional class with more or less thirty members.[19] This class is very unproductive and closed, and it has been progressively eroded over the last centuries (Loporcaro, Faraoni & Gardani 2014: 5-6), developing a more recent masculine plural variant that is clearly based on the (masculine) singular form, e.g. *il braccio* : *i bracci*, *il lenzuolo* : *i lenzuoli* (Dressler & Thornton 1996: 16; Acquaviva 2008: 155). Given the fact that this group cannot form a new gender, not even a controller gender (like instead for Romanian and Tocharian), one could say that Italian has two genders and three agreement classes (masculine, feminine and the type *braccio* : *braccia*). However, this claim does not bring us any further, because, as we have already said, the agreement is the tool for establishing gender values, and, therefore, it should still have three genders.

[17] I do not mention the gender system of Central-Southern Italo-Romance dialects, where the alternating gender is to be analysed differently. See Loporcaro & Paciaroni (2011: 410ff.) and the relevant sections in Loporcaro (2018).

[18] A similar agreement environment can also be found in Modern French, although it is just limited to three substantives, *amour* 'love', *délice* 'delight', and *orgue* 'organ', which, like the Italian type *braccio* : *braccia*, show masculine agreement in the singular and feminine in the plural.

[19] In fact, other inflectional classes that show the same agreement environment as the type *braccio* : *braccia* can be found, for example, in *il carcere*, *le carceri* 'prison(s)' and *il gregge*, *le greggi* 'flock(s)'. However, this inflectional class is extremely marginal and more closed than the type *braccio* : *braccia*. See Loporcaro (2016: 950 fn. 16).

This problem brings us to the notion of INQUORATE GENDER. The term has been coined by Corbett (1991: 170-2) in referring to those agreement classes with insufficient members, which should be lexically marked as exceptions. This peculiar type of agreement class is "inquorate" because it has a few members and constitutes a closed category (cf. Igartua 2006: 59: "[I]nquorate genders are a kind of peripheral phenomena affecting a minimal part of the lexicon"). Although Corbett in his book does not deal with the Italian type under discussion, following Igartua (2006: 69) and Loporcaro (2016: 930 fn.16), it can be considered an inquorate gender precisely because it fulfils all the properties that an inquorate gender should have typologically.

Returning to Tocharian, I think there is now sufficient evidence for claiming that it has a three-gender system, including the *genus alternans*. First, the third Tocharian agreement class fulfils the claim by Hockett (1958: 231) and Corbett (1991: 105) that genders are classes of nouns reflected in the behaviour of associated words. Second, from the point of view of the noun inventory, we can find a wide range of substantives in the *genus alternans*, which is also productive, since the most recent loanwords not referring to human entities usually are placed in this category. Third, as Hartmann (2013) further demonstrated, the *genus alternans* is a quite coherent class also from a semantic point of view, since substantives pertaining to this gender never refer to animate entities. The situation of Tocharian is therefore parallel to the one of Romanian.

On several occasions, Corbett (e.g. 1991: 150-154, 2013: 93f.) exemplifies the distinction between target and controller gender using Romanian, a modern Romance language for which three genders are assumed by the vast majority of the scholars, although the sets of distinct agreeing forms available to mark gender values on the modifiers are just two:[20]

Table II.3. Target and controller gender in Romanian

	SINGULAR	PLURAL
(1) MASCULINE	*băiat bun* '(a) good boy'	*băieți bun-i* 'good boys'
(2) NEUTER	*scaun bun* '(a) good chair'	*scaune bun-e* 'good chairs'
(3) FEMININE	*fată bun-ă* '(a) good girl'	*fete bun-e* 'good girls'

As is clear, although the adjective *bun* 'good' displays only two distinct sets of forms, one for the masculine and one for the feminine, we have three substantives (*băiat* m. 'boy',

[20] Actually, the analysis of the Romanian gender system has become a disputed argument among the specialists of Romance languages. A three-gender analysis is today maintained by several scholars, e.g. Matasović (2004: 51f.), Igartua (2006: 60f.), Acquaviva (2008: 135ff.), Loporcaro & Paciaroni (2011), Loporcaro (2016, 2018). In contrast, a two-gender analysis is argued by e.g. Maiden (2016), Bateman & Polinsky (2010). For a discussion on the term "neuter" for the third Romanian controller gender, see Maiden (2016: 40-41).

scaun nt. 'chair', *fată* f. 'girl') in agreement with the same modifier, which shows three different agreement environments according to the gender of the substantive with which it agrees. In a manner similar to Tocharian, the so-called neuter nouns select agreement targets formally identical to the masculine in the singular and to the feminine in the plural. But the entire paradigm of a neuter noun and its gender agreement show a combination of agreement forms that differ from those used for the masculine and the feminine.

Still, there is another piece of evidence that clearly demonstrates that the Tocharian alternating gender must be regarded as a gender value in its own right. Again, this evidence comes from a cross-linguistic comparison between Tocharian and Standard Italian in nominal agreements where two alternating nouns are syntactically coordinated (non-canonical agreement). Look at the following example:

Il	*bracci-o*	*e*	*il*	*dit-o*	*sono*	*rott-i.*
DEF:SG.M	arm:SG.M	and	DEF.SG.M	finger:SG.M	be:3PL.PRS	broken:PTP.PL.M

Quest-i	*sembrano*	*davvero*	*brutt-i.*
this:PL.M	look:3PL.PRS	really	horrible:PL.M

"The arm and the finger are broken. These are so horrible".

In the sentence above, the coordination of two alternating nouns, i.e. *braccio* 'arm' and *dito* 'finger', inflected as singular crucially results in a masculine plural agreement in the modifiers (*rott-i* 'broken', *quest-i* 'these', *brutt-i* 'horrible'). This agreement seems to be ungrammatical, because we would expect the targets inflected as feminine plural. However, Italian speakers usually feel that this type of agreement is perfectly grammatical. In turn, the expected agreement is found only when the agreement controllers are inflected in the plural, as in the example below:

Le	*bracci-a*	*e*	*le*	*dit-a*	*sono*	*rott-e.*
DEF:PL.F	arm:PL.F	and	DEF.PL.F	finger:PL.F	be:PRS.3PL	broken:PTP.PL.F

Quest-e	*sembrano*	*davvero*	*brutt-e.*
this:PL.F	look:PRS.3PL	really	horrible:PL.F

"The arms and the fingers are broken. These are so horrible".

Although this is not a decisive argument for gender resolution in itself, since even same-gender conjuncts may require the application of specific gender resolution rules (Corbett 2006: 238-9), it shows that the Italian inquorate gender *braccio* : *braccia* has been losing consistency in its syntactic manifestations, particularly if compared with the situation of Old Italian and Central-Southern Italo-Romance dialects (Paciaroni, Nolè & Loporcaro 2013: 114f.).[21]

[21] Corbett (2006: 238-9) has shown that in Slovene two gender resolution rules operate in coordinated agreement: (1) if all conjuncts are feminine, then agreement is feminine; (2) otherwise

I therefore have tried to find examples of similar nominal agreement in Tocharian. The examples proposed below are in my opinion probative to draw up a strong distinction with respect to Standard Italian:[22]

A17 b5-6

knānmune	*pñintwäṣ*	*pkä*(*nt*)	*mā*	*pälkäṣ*	*ṣyakk*
wisdom:NOM.SG.A	virtue:ABL.PL.A	separately	NEG	shine:PRS.3SG	together

a(*ts*)	(*pa*)*t*	*nu*	*ṣokyo*	*pälketsāñ*[23]	*mäskaṃträ*
PART	or	but	very	shine:PL.F	be:3PL.PRS

tämyo	*tom*	*pkänt*	*pkänt*	*sambhārntu*	*wewñunt*
therefore	this:NOM.PL.F	separately	separately	Sambhāra:NOM.PL.A	call:3PL.PRT

"Wisdom without virtue(s) does not shine, but rather together are especially brilliant. Therefore, these are called Sambhāras". (cf. Sieg 1944: 21)

B5 a6

tary=	*akṣā-ne*	*pudñäkte*	*teki*	*ktsaitsñe*	*srukalñe*
three	announce:3SG.PRT	Buddha	disease:SG.A	old age:SG.A	death:SG.A

toṃ	*mā*	*tākoṃ*	*śaiṣṣene*	*mā*	*ṅke*	*tsaṅko*(*y*)	*pudñakte*
this:NOM.PL.F	NEG	be:3PL.OPT	world:LOC.SG	NEG	PART	rise:3SG.OPT	Buddha

"The Buddha announced to him the three: «Disease, old age, death. If these things were not there in the world, then the Buddha would not arise»". (cf. Sieg & Siegling 1949: 10)

B4 a2

//teki	*ktsaitsñe*	*kes*[24]	*yoko*	*toṃ*	*ñya*(*tsenta*)
disease:SG.A	old age:SG.A	hunger:SG.A	thirst:SG.A	this:PL.F	plague:PL.A

"Disease, old age, hunger, thirst: these (are) the plagues". (cf. Sieg & Siegling 1949: 8)[25]

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agreement is masculine (I thank Tijmen Pronk for bringing my attention to this point). This seems to suggest that agreement in these cases is not a very good indicator of gender. However, Corbett (2006: 261) argued that the difference in languages like Slovene is that they have also semantic resolution rules: (1) if all conjuncts refer to female humans, agreement is feminine; (2) if all conjuncts refer to humans, whether all male or of mixed sexes, agreement is masculine; (3) in all other cases, agreement is masculine. In this respect the situation of Romance languages and Tocharian is very different. For this reason, I think that the coordinated agreement test can be used.

[22] See also Hartmann (2013: 106).

[23] The nom.pl.m. of TchA *pälkets* 'shining' is not attested, but it may be reconstructed as *pälketse** (cf. TchA *wākmtse* 'distinguished, superior' from *wākmats*). The nom.pl.f. *pälketsāñ* is also attested in A148 a2-3, where it regularly agrees with an alternating noun inflected as a plural, i.e. *lyiyā-āpsā* 'limbs, limbs and joins' (Carling 2009: 37; see also SSS §174).

[24] For *kest* 'hunger' (DTB: 213).

[25] The example in B4 a2 seems less strong than the others, since an alternative translation "Disease, old age, hunger, thirst: these plagues…" cannot be excluded.

Both Tocharian languages have a wide range of demonstrative pronouns, which always agree in gender and number with their antecedent (in both attributive and pronominal uses). In the fragments above, we have two feminine inflected forms, i.e. TchA *tom* and TchB *toṃ*, which are in anaphoric reference with coordinated alternating nouns (namely *knānmune* 'wisdom' and *pñintu* (pl.) 'virtue' in A17 b5-6; *teki* 'disease', *ktsaitsñe* 'old age', and *srukalñe* 'death' in B5 a6; and *teki* 'id.', *ktsaitsñe* 'id.', *kest* 'hunger', and *yoko* 'thirst' in B4 a2). This means that the feminine plural forms in the pronouns actually represent the plural of the coordinated alternating singular in the nouns. Another important example in this sense is the following from Tocharian A:

A73 b5

āly(a)knaṃ	*mā*	[T]*yāmlaṃ*	[C]*tuṅk*	[C]*ynāñmune*
other:LOC.PL	NEG	to do:GER.NOM.PL.F	love:NOM.SG.A.	reverence:NOM.SG.A

"Love and reverence could not have been made to anyone else". (cf. Thomas 1952: 34)

There is no demonstrative pronoun attested here, but, as in the case of the previous examples, coordinated alternating nouns inflected as singular (TchA *tuṅk* and *ynāñmune*) agree with the subjunctive gerundive *yāmlaṃ*, which is in turn inflected as a feminine plural.[26] The situation of Tocharian is, again, parallel to that of Romanian (Corbett 1991: 289; Paciaroni, Nolè & Loporcaro 2013: 119-20):

Frigider-ul	*şi*	*televizor-ul*	*sunt*	*stricate.*
fridge:NT.SG	and	television:NT.SG	are	broken:FEM.PL

Acestea	*trebuie să fie*	*reparate*
this:PL.F	must be	repaired:PL.F

"The fridge and the television are broken. These must be repaired".

To sum up, on the basis of this meagre but very clear evidence, the following agreement rules can be posited:

[26] For a comprehensive account of other types of gender agreements in coordinating environments, see Hartmann (2013: 104-9). Selected examples are: B375 b1 *ista(k pañä)kt(e) käṣṣi cau wäntare śarsa* [T]***aṣanikeṃ*** (pl.m.?) [C]***śāriputreṃ*** (sg.m.) [C]***maudgalyāyaneṃ*** (sg.m.) "The Buddha, the teacher, immediately understood this fact [and] **the venerable Śāriputra** [and] **Maudgalyāyana**…" (cf. Thomas 1957: 120); B107 a9-10 [C]***nānda*** (sg.f.) [C]***nandābala*** (sg.f.) *weñāre se cisa śpālmeṃ tākaṃ cwi aiskem* […] [T-C]***toy*** (pl.f.) [T]***kakkāccuwa*** (pl.f.) *bramñikteṃś maitare* "**Nandā** [and] **Nandabalā** said: «Who is better than you, to him we give it». […] **Having rejoiced**, **they** set out to God Brahman" (cf. Pinault 2008: 158); A395 a4 *täm kaklyuṣuräṣ* [T]***cem*** (pl.m.) *priyadattes* [C]***pācar*** (sg.m.) [C]***mācar*** (sg.f.) *cam klopyo ime crakär* "Having heard that, Priyadattas **father** [and] **mother**, through this suffering, lost consciousness" (cf. Krause 1971: 40; Zimmer 1976: 49-50).

Table II.4. Alternating agreement in coordinated singular NP

	Italian	Tocharian
Controller	[“alt.” sg.]$_{subst.}$ + [“alt.” sg.]$_{subst.}$	[alt. sg.]$_{subst.}$ + [alt. sg.]$_{subst.}$
Target	[masc. pl.]$_{adj.}$	[fem. pl.]$_{adj.}$
Anaphoric	[masc. pl.]$_{pron.}$	[fem. pl.]$_{pron.}$

	Italian	Tocharian
Controller	[“alt.” pl.]$_{subst.}$ + [“alt.” pl.]$_{subst.}$	[alt. pl.]$_{subst.}$ + [alt. pl.]$_{subst.}$
Target	[fem. pl.]$_{adj.}$	[fem. pl.]$_{adj.}$
Anaphoric	[fem. pl.]$_{pron.}$	[fem. pl.]$_{pron.}$

This comparison of Standard Italian and Tocharian has highlighted that in the former the group of substantives that show alternating agreement is a closed category, with a peculiar agreement in coordinated environment and in anaphoric reference; in the latter, alternating nouns represent a cohesive group, with different plural markers and, as far as can be seen from the fragmentary corpus, coherent agreement in all the possible environments.

In my opinion, all these crucial elements allow us to conclude that the *genus alternans* should be considered a real gender in Tocharian. Although it is a grammatical strategy that pertains to the domain of the controller gender, it is fully embedded in the grammar of the language. In this way, I think it fulfils all features that a gender must have, since it also represents a systematic property that belongs to the core of the category of gender.

2.3.2. ON THE TERMINOLOGY OF THE THIRD GENDER AND THE STATUS OF THE TOCHARIAN “NEUTER”

In the current literature, the name of the third Tocharian gender is not consistent. So far, I did not mention this problem, thereby labelling it as “alternating gender”. However, even in recent works on Tocharian, the terms “alternating” and “neuter” are frequently used interchangeably.[27] This terminological mismatch can be found also in the two modern dictionaries of Tocharian, the *Dictionary of Tocharian B* by Adams (2013) and the *Dictionary and Thesaurus of Tocharian A* (vol. 1) by Carling (2009). The first uses the term neuter, but the second “alternans”. Other specialists of Tocharian also diverge with regard to this nomenclature: on the one hand, Krause & Thomas (1960, TEB), Pinault (e.g. 1989, 2008), and Hartmann (2013) use “alternans”, while Sieg, Siegling, & Schulze (1931, SSS), Malzahn (e.g. 2011), Kim (2009, 2014), and Fellner (e.g. 2014) use neuter.

[27] The third Tocharian gender cannot be labelled as “ambigeneric” (from Lat. *ambo* ‘both’). Etymologically, this term implies that the *genus alternans* must belong in part to the class of masculines and in part to the class of feminines, and consequently that the alternating nouns must be considered as masculine in the singular and feminine in the plural. This hypothesis is improbable also in light of the analysis given in §2.3.1.

The reason why scholars use "neuter" when referring to the third gender is historically founded, since several nouns reconstructed as neuter for the proto-language synchronically belong to this category. However, the third Tocharian gender is something different from the PIE neuter. Indeed, it is the result of morpho-phonological mergers that led, on the one hand, to the functional loss of the neuter and, on the other hand, to the rise of an agreement class that in turn can be analysed as a new gender, namely the *genus alternans*.

Employing the label "alternating" has also some terminological advantages with respect to a residual class of crystallised forms for which the term "neuter" is more appropriately used. This relic class is constituted by remnants of the historical neuter gender and it is limited to:

(1) demonstrative pronouns, like TchB *te*, A *ta-* < PIE **tód* (cf. Skt. *tát*, Gk. τό, etc.);
(2) ordinal numerals, which derived from the corresponding cardinals by adding the suffix TchB *-te*, A *-t* < PIE **-to-* (cf. Gk. τρίτος 'third', Lat. *quartus* 'fourth', Av. *puxδa-* 'fifth', etc.).

As demonstrated by Stumpf (1971: 5f. and 47f.), the neuter gender of the demonstratives must be regarded as an archaism. This is not surprising, given the fact that pronouns have a special typological role in the rise, the further development, and the possible decline of gender values. Indeed, if, on the one hand, the demonstratives play a key-role in the origin of gender markers, on the other hand, they are also the category where traces of a decayed gender might still be found.[28]

In Tocharian, neuter demonstrative forms have to be distinguished from the masculine and the feminine ones because of three important facts: (1) they have only singular inflection; (2) they have a non-palatalised stem TchAB *t-*; (3) they have only pronominal function (cf. below). From a typological perspective, this situation is fully understandable. Indeed, also in other languages where a gender is lost, but it continues to be formally differentiated in the pronouns, it can only be used with pronominal value, and never attributively, i.e. with adjectival value. Pronouns generally retain gender distinction, also when attributive modifiers have lost gender agreement (Corbett 1991: 137ff.). Strictly speaking, it means that in a noun phrase the neuter demonstrative cannot be used as a nominal modifier. See the following examples, which clarify the function of the neuter demonstratives (TchB *te*, A *täm*):

[28] According to Corbett (1991: 310-12) and Luraghi (2014: 451), the rise of gender systems is a grammaticalisation process that is expected to undergo the following development: generic nouns → classifiers → pronominal demonstratives → attributive demonstratives → determiners → agreement markers. On the contrary, when a gender value is lost, the opposite evolution is expected.

B85 b4-5

te	*keklyau«ṣo»rmeṃ*	*araṇemiñ*	*lānte*	*pit*	*maiwāte-ne*
DEM:OBL.SG	hear:ABS	Araṇemi:GEN.SG	king:GEN.SG	bile:NOM.SG	tremble:3SG.PRT-3SG.SUFF

"Having heard this, the bile of king Araṇemi quivered (= king Araṇemi fainted)". (cf. Schmidt 2011: 314-5)

A346 a1

täm	*pälkoräṣ*	*weyeṃ*	*nāṇtsu*	*nande*	*träṅkäṣ*
DEM:OBL.SG	see:ABS	surprised	be:PRT.PTC	Nanda:NOM.SG	speak:3SG.PRS

"Having seen this, Nanda, being surprised, speaks".

Crystallised forms of the neuter demonstratives also occur with two other functions: (1) as temporal or modal adverbs; (2) as conjunctions. In Tocharian A, neuter demonstratives with adverbial value usually show the particle TchA *-ne* added directly to the basic form: from the pronoun of anaphoric deixis TchA *säm*, *sām*, *täm* 'he, she, it', we have *tämne* 'so' or *tämnek* with further addition of the emphatic particle *-k* (e.g. TchB *ykāk* 'still', TchB *ṣek* 'always', TchA *okāk* 'until'). Formations with secondary cases are also attested, especially when the pronouns are used as conjunctions, as for the old instrumental TchA *tämyo* ~ *tämyok* 'therefore (← *'because of that')'. As far as Tocharian B is concerned, Stumpf (1971: 58-59) claims that the ablative TchB *tumeṃ* and the perlative TchB *tusa*, both from the pronoun of anaphoric deixis TchB *su, sā$_{u}$, tu* 'he, she, it', mostly mean 'then, thereupon (← *'from this')' and 'therefore (← *'through this')', respectively.

Out of the demonstratives, other old neuter forms can be found in the inflection of the ordinals for 'second' and 'third':[29] TchB *wate*, A *wät* < PTch **wətæ* < PIE **dṷitom* 'second'; TchB *trite*, A *trit* < PTch **trəytæ* << PIE **tritom* 'third'. Examples are:

AS16.7 a4

ta-makte	*wate*	*ñiś*	*päst*	*lkāst*
in such a way	second time:ADV	me	away	look:2SG.PRS
ostaṣṣai	*wṣeñai*	*rerīnū*		
prtng to house:OBL.SG	place:OBL.SG	leave:PRT.PTC.NOM.SG		

"In such a way, you, having left the home place, see me off for a second time".

[29] Following the etymology of Winter (1983: 322), one is tempted to analysed TchB *epiṅkte*, A *opänt* 'in the middle, between' as an old formation with the neuter numeral for 'fifth', TchB *piṅkte*, A *pänt*. The original meaning would have been "at the fifth place" (with reference to the cardinal directions). From a phonological point of view, this explanation is perfectly coherent, but it is weak from the point of view of the meaning. It is accepted by Pinault (2008: 559) but rejected by Adams (DTB: 95). See also Van Windekens (1976: 180-1).

A432 a3

wtaṣ	*akmal*	*līktsi*	*ywārckiṃ*
second time:ADV	face:OBL.SG	wash:INF	half:OBL.SG

"To wash a second time half of the face (?)".

These old neuter forms have adverbial value. In Tocharian A, we only have secondary case forms, like the ablative *wtaṣ* (with archaic abl. *-aṣ* for expected *-äṣ*) and the instrumental *wtā* ~ *wtāk* 'again' (vs. the regular instr. *wcā* 'by each other'). Secondary cases are also attested in Tocharian B, like the perlative *watesa* 'again, for a second time' alongside the genitive *wtentse* ~ *wteṃtse* 'id.' (Pinault 2008: 558).[30] With regard to the neuter form of the numeral for 'third', we have cristallised forms of a perlative TchB *tritesa* and an ablative TchA *tritaṣ*, both with the meaning 'for the third time'.

In his dictionary, Adams labels these forms as "neuter" (like a regular alternating noun, in his notation), even though they cannot actually be employed either in agreement with a noun or with a substantival value. They do not correlate with the *genus alternans*, because they are used for non-gendered reference. In contrast, alternating nouns are in agreement with the regular masculine form of the adjective *wate* 'second', e.g. obl.sg.m. TchB *wace* in AS6A b5 *wce camelne* "in the second (re)birth".

Furthermore, Winter (1992) underlines the fact that in Tocharian B the neuter stem of the two synchronic adverbs TchB *wate* and TchB *trite* forms the basis of the adjectives TchB *wteṣṣe*, TchB *triteṣṣe*, which do not mean 'second' and 'third', as one might expect, but 'of the second/third degree' instead. These new adjectival formations are attested only in B327, drafted in Late Tocharian B, and they are always in agreement with the word for 'son' or 'daughter', as in b1 *soy wte*(*ṣṣe*) *t*(*eṃ*) *yiknesa ṣuk täṅktsi* "a son of the second degree (i.e. a stepson) in this way until seven" and in b4 (*tri*)*teṣṣa eṣk*(*e*) *ṣuk täṅ*(*kts*)*i* "a daughter of the third degree until seven" (cf. Ogihara 2009: 311-12).

With regard to the demonstrative pronouns, it is frequently said that the PIE neuter gender survives as a separate category in Tocharian (e.g. TEB §65; Schmidt 2018: 215-16). However, this statement is acceptable only from a historical point of view. Strictly speaking, we need to make a clear distinction between form and function: the Tocharian neuter demonstratives are *formally* an archaic layer of the PIE neuter, but they do not *functionally* represent a real neuter gender.

To sum up, when we refer to neuter forms in Tocharian demonstratives, we have to keep in mind that they are only remnants of the PIE state of affairs, and they do not constitute a separate gender from a synchronic point of view. They cannot be used attributively because there are no neuter nouns: the neuter gender no longer exists in Tocharian. Accordingly, I believe it is more correct to refer to the third Tocharian gender

[30] As pointed out by Winter (1992: 134), the genitive TchB *wtentse* has been reinterpreted as an oblique neuter, on the evidence of the strange hybrid instrumental TchB *wtentsesa* (attested once in B512 a1), instead of the expected *wtesa*.

as "alternating", because, from both a diachronic and a synchronic point of view, the neuter has disappeared.

2.4. GENDER ASSIGNMENT SYSTEM OF TOCHARIAN

In this section, I will offer a general overview of the problems related to the gender assignment in Tocharian. The reader who intends to examine in depth this synchronic aspect of the Tocharian gender system will find a more detailed account in Hartmann (2013), especially in the section on the mechanism of synchronic gender assignment (pp. 381-409).

Like other Indo-European languages, Tocharian shows a formal assignment system. This type of assignment is found with languages where semantic information is supplemented by formal patterns, which, in the case of Tocharian, are based on phonological and morphological forms. Indeed, purely formal systems are so far unattested and, according to Corbett (2000: 294), they are excluded typologically. This means that gender assignment can be handled by rules that depend mainly but not only on the form of the nouns: in order to detect their gender, it is necessary to know the inflectional classes to which they belong. However, the relation between gender and inflectional class is not always unambiguous: we can say that nouns with a given gender usually favour some inflectional classes, although several exceptions are to be expected. As a consequence, the best solution in order to detect the gender of a noun is, as we have already stated, the agreement with a modifier. However, given the hybrid agreement patterns of the alternating gender, we often need agreement environments both in the singular and in the plural in order to establish the gender of a noun. This is difficult because of the limits of the Tocharian documentation.

In the following, I will introduce some formal strategies in order to detect the gender of a Tocharian noun, from both an inflectional and a derivational point of view. Finally, some considerations on the semantic strategies will be put forward.

2.4.1. INFLECTIONAL PATTERNS

The subdivision of substantives in Tocharian nominal morphology is arranged according to various inflectional patterns. Considering both the singular and the plural endings of the primary cases, around thirty nominal inflectional classes could be identified, often with minor differences. These declensions cannot be predicted on the basis of the inflected form of the nominative singular (Pinault 2017: 1337). A classical and much used model is that of Krause & Thomas (TEB §§158-200), who identified seven main classes on the basis of the plural endings (see also §3.2). In turn, these seven classes can be grouped into two broader macro-classes. In the first one, the nominative plural is identical to the oblique plural (Classes I, II, and III):

Table II.5. Tocharian first macro-class

CLASS	SUB.	PLURAL	EXAMPLES	GENDER			PRODUCTIVITY
		NOM. = OBL.		MASC.	FEM.	ALT.	
I.	1.	B *-a*	B *pikwala* 'years'	once	none (?)	common	closed
		A *-ā*	A *puklā* 'id.'	none	none (?)	common	closed
	2.	B *-wa*	B *ārwa* 'woods'	rare	rare	common	regular
		A *-wā, -u*	A *kursärwā* 'leagues'	rare	rare	common	closed
II.	1.	B *-na*	B *ñemna* 'names'	none	common	common	regular
		A *-äṃ*	A *poräṃ* 'fires'	none	twice	common	closed
	2.	B *-nma*	B *tekanma* 'diseases'	none	none	common	productive
		A *-mnā-*	cf. A *arkämnā-ṣi*	none	none	none	none
III.	1.	B *-nta*	B *yärkenta* 'honours'	rare	none	common	productive
		A *-nt*	A *yärkant* 'id.'	rare	none	common	productive
	2.	A *-ntu*	A *okontu* 'fruits'	rare	rare	common	productive

In the second, the nominative plural differs from the oblique plural (Classes IV, V, VI, VII):

Table II.6. Tocharian second macro-class

CLASS	PLURAL		EXAMPLES	GENDER			PRODUCTIVITY
	NOM.	OBL.		MASC.	FEM.	ALT.	
IV.	B *-a*/*-ñ*	B *-a*/*-ṃ*	B *pātärñ* / *pacera*	common	common	none	closed
	A *-i*	A *-s*	A *pācri* 'fathers'	common	common	none	closed
V.	B *-i*	B *-ṃ*	B *yakwi* 'horses'	common	very rare	none	productive
	A *-i*	A *-s*	A *mañi* 'months'	common	rare	none	regular
VI.	B *-ñ*	B *-ṃ*	B *oksaiñ* 'bulls'	common	common	none	regular
	A *-ñ*	A *-s*	A *riñ* 'cities'	common	common	very rare	productive
VII.	B *-ñc*	B *-ntäṃ*	B *lāñc* 'kings'	common	none	none	closed
	A *-ṃś*	A *-ñcäs*	A *lāṃś* 'id.'	common	none	none	closed

Note that there are examples of mismatching gender in nouns with similar origin – be they inherited or borrowed – between Tocharian A and Tocharian B (e.g. TchA *āy* 'bone' is masculine, while TchB *āyo* 'id.' is alternating; TchA *oppal* 'lotus' is feminine, while TchB *uppāl* 'id.' is alternating, both from Skt. *utpala-* 'the blossom of the blue lotus').

Alternating nouns constitute the most coherent and homogeneous class as far as their inflection is concerned. One general rule common to both Tocharian A and B can be established, a rule that is usually sufficient enough to outline also their formal characteristics: alternating nouns do not distinguish nominative and oblique in either the singular or the plural, which means that they cannot be found out of the first macro-class. It follows that a relevant characteristic of alternating nouns is a paradigm with no formal distinction between nominative and oblique. The sole notable exceptions are two Tocharian B nouns that belong to Class I, i.e. TchB *āyo* 'bone' (obl.sg. *āya*) and TchB *luwo*

'animal' (obl.sg. *luwa*), both with a synchronic irregular plural, TchB *āsta* and TchB *lwāsa* (on which see §3.7.1.2).[31] In Tocharian A, just a few alternating nouns belong to Class VI (TchA *tarp* 'pond', nom.pl. *tarpañ*; TchA *pikār* 'gesture', obl.pl. *pikārās*; TchA *asaṃkhe* 'a mega-era', obl.pl. *asaṃkhes*). This is unexpected, given the fact that alternating nouns are usually confined to the first macro-class.

On the other hand, masculine and feminine nouns can be randomly found in the first macro-class, even if they are not numerous. Examples include: Class I. TchB *wamer* 'jewel' m. (Pinault 2011), TchA *rape* 'music' f. (Hartmann 2013: 399); Class II. TchA *plāc* 'word' f., TchA *ytār* 'road' f., TchB *śaumo* 'man, person' m., and perhaps TchB *lāṃs* 'work, service' f. (on this last noun, see Hartmann 2013: 368; on Class II, see §3.6); Class III. TchA *āy* 'bone' m., TchA *paryāri* 'miracle' f., TchA *opṣäly* 'festivity' f., TchA *tsäṅkär* 'summit' m., TchA *ṣāñ* 'artistry' f., TchA *praṣt* 'time' f. (on this last noun, see §3.7.3.3). In all Tocharian dictionaries, grammars, and lexicons (e.g. DTB: 410; TEB §203; Thomas 1964: 117 and 210), TchB *pikul* 'year' and TchA *p$_{u}$käl* 'id.' are usually interpreted as feminine, but I found clear examples of feminine agreement only in the plural. As far as Tocharian B is concerned, isolated examples of agreement in the singular can be found in PK DAM 507.37 and .36 at lines a55 and a59 *ce pikultsa* "in this year (perl.sg.)". On the basis of this evidence, TchB *pikul* 'year' is better interpreted as an alternating noun.

In both Tocharian languages, the most productive class of alternating nouns is Class III (pl. TchB *-nta*; TchA *-nt*, *-ntu*), alongside Class II.2 in Tocharian B only (pl. *-nma*). As a consequence, one could make the generalisation that if a noun has a plural of Class III or II.2 it is alternating. There are only a few exceptions. In particular, a closed inflectional class of masculine nouns denoting male referents is formed by only five members with plural in TchB *-nta*: TchB *aśari* 'teacher', TchB *amāc* 'minister, king's intimate', TchB *käṣṣī* 'master', TchB *poyśi* 'the all-knowing, Buddha', and TchB *mcuṣke* 'prince'.[32] The corresponding Tocharian A nouns fall into another class, with nominative and oblique plural differentiated (e.g. Class VI, cf. TchA *āmāś* 'minister', nom.pl. *āmāśāñ*; TchA *käṣṣi*

[31] In addition, it is possible to include also TchB *lyiyo** 'limb' in this class of alternating nouns (Pinault 1988: 140; Winter 2003: 117-8). However, it is only attested in the pl. *lyyāsa*. If parallel to TchB *luwo* 'animal', TchB *lyiyo** differentiated the nominative from the oblique in the singular. On TchB *pilta* 'leaf, petal' (pl. *piltāsa*), see §3.7.1.2.

[32] The etymology of these nouns is not always clear. For some of them a foreign origin is unquestionable (e.g. TchB *amāc*, A *āmāś* from Pkt. **amāca-* or from Khot. *āmāca-*, Tum. *amaca-*; TchB *aśari* from Gāndhāri *acariya* - with variant forms - or Khot. *āśiria-*, etc.), but for some others the origin is more problematic. TchB *käṣṣī* 'master, teacher' is no longer to be considered a loanword from Khot. †*kṣīʾa-*, which is a ghost word (Skjærvø apud Emmerick-Skjærvø 1997: 44-45; DTB: 188-89; Pinault 2003a: 337-40). There is so far no agreement on the etymology of the Tocharian noun for 'prince'. See recently Pinault (2015: 172-181) for a detailed analysis of the problems that the two Tocharian words raise and for an etymological proposal.

'teacher', nom.pl. *käṣṣiñ*). All these Tocharian B nouns have an obl.sg. *-ṃ* /-n/.[33] In the noun inflection, this ending is confined to substantives referring to sentient and human beings. Therefore, the presence or the absence of this ending has a purely semantic reason (cf. the classical example: TchB *eṅkweṃ*, A *oṅkaṃ* 'man' [obl.] vs. TchB *yakwe*, A *yuk* 'horse' [obl.]). As far as the gender assignment is concerned, the obl.sg. *-ṃ* is characteristic of masculine words in Tocharian B, while it spreads also to feminine nouns in Tocharian A. If a noun has an obl. sg. in *-ṃ*, it is therefore of masculine gender in Tocharian B.

Another relevant case is constituted by the class with plural in TchB *-na* (Class II.1), which is productive for feminine nouns (TEB §163). Examples are: TchB *aśiya* 'nun', pl. *aśiyana*, *ṣerśka* 'little sister', pl. *ṣerśkana*, *śana* 'wife, woman', pl. *śnona*, *lāntsa* 'queen', pl. *lantsona*, etc. All these grammatically feminine nouns with plural in TchB *-na* denote female referents. From a formal point of view, they have a differentiated singular paradigm (*aśiya*-type: nom.sg. *-ʸa*, obl.sg. *-ʸai*; *śana*-type: nom.sg. *-a*, obl.sg. *-o*, see §3.5). It follows that if a given noun has a plural in *-na* and a differentiated singular paradigm, it is of feminine gender.[34] Formally speaking, the Tocharian A counterpart of this ending is TchA *-(ä)ṃ*, which is an unproductive marker limited to five nouns: TchA *por* alt. 'fire', pl. *poräṃ*, TchA *ysār* alt. 'blood', pl. *ysäräṃ*, TchA *wram* alt. 'object', pl. *wramäṃ* , TchA *plāc* f. 'word, speech', pl. *plācäṃ*, TchA *ytār* f. 'road', pl. *ytäräṃ* (on these nouns, see §3.6.2).

In the second macro-class, we find nouns of masculine and feminine gender. No alternating nouns are ranged here, apart from very rare exceptions in Tocharian A.

Class IV consists of kinship terms with *r*-stems. As in the ancient Indo-European languages, no formal patterns can distinguish a feminine from a masculine in this class, but only the sex of the referent. So, TchB *mācer*, A *mācar* 'mother' and TchB *tkācer*, A *ckācar* 'daughter' are feminine, while TchB *pācer*, A *pācar* 'father' and TchB *procer*, A *pracar* 'brother' are masculine, etc.

All other classes usually distinguish nominative and oblique also in the singular in Tocharian B. However, knowing the inflection of the singular is not sufficient to determine the gender of a noun. In Tocharian B, all nouns of Class V.1 with nom.obl.sg. *-e* are masculine. The only exception is the old thematic formation TchB *yente*, A *want* 'wind', which is unexpectedly feminine from both a synchronic and a diachronic point of view (cf. Skr. *vā́ta-*, Av. *vāta-*, Lat. *ventus*, Goth. *winds*, OHG *wint*, all of masculine gender). Feminine are also the members of Class VI, with nom. sg. *-ʸa*, obl. sg. *-ʸai* (e.g. *emalya* 'heat', *newiya* 'canal', *weśeññа* 'voice' etc.). As we have seen, the same singular inflection is also characteristic of those feminine classes with a plural in *-na*, like *aśiya* 'nun' or *ñäkteññа* 'goddess'. As a consequence, one could say that if a noun has a nom. sg. *-ʸa*, obl. sg. *-ʸai* it is of feminine gender in Tocharian B.

[33] The origin of this ending should be sought in remnants of original nasal stems. Cf. also the similar function that the preposition αβο 'to' has in Bactrian, since it marks direct objects which are animate and human (Pinault 2002: 243-4; Gholami 2009).

[34] Note that in Tocharian A the corresponding substantives are sorted in Class VI.

2.4.2. DERIVATIONAL PATTERNS

Derivation plays an important role in the formation of new lexical items in both Tocharian verbal and nominal morphology. The bulk of these derivational processes involves suffixation, since prefixation is rare. According to Adams (2017: 1365-6), prefixation usually adds semantic information to a given word, without changing its lexical category (but cf. TchB **en*-adverbs from nominal stems). Dealing with the morphological gender assignment criteria, some suffixes and derivational patterns are good predictors of nominal gender. Indeed, they specify one of the Tocharian genders, becoming gender determiners.

Masculine nouns

As far as the masculine is concerned, we can distinguish two types of derivatives, on the basis of the lexical category of the stem from which they derive.

The derivational processes thanks to which a new masculine noun is created from a verbal base involve many suffixes that are used to build *nomina agentis* (Pinault 2012; Peyrot 2013a: 236f.; Fellner 2014; Adams 2015: 140ff.). They are particularly productive in Tocharian B: (1) nominalised participle in TchB *-eñca*, from the present stem (e.g. TchB *aiṣṣeñca* 'giver' from *ay-* 'to give'; TchB *kauṣeñca* 'killer' from *kaw-* 'to kill, destroy'; TchB *trikṣeñca* 'sinner' from *trəyk-* 'to fail, stumble', etc.); (2) TchB *-ntsa*, from the subjunctive stem (e.g. TchB *tarkāntsa* 'carpenter', from *tərka-* 'let go' (?);[35] TchB *wapāntsa* 'weaver', from *wapa-* 'to weave', etc.); (3) TchB *-nta*, A *-nt*, from the present stem (e.g. TchB *kauṣenta*, A *koṣant* 'murder' from TchB *kaw-*, A *ko-* 'to kill'; TchB *weñenta* 'speaker', from *weñ-* 'to speak'; TchA *pekant* 'painter' from *päyk-* 'to write'; TchA *āśant* (written *āśand*, cf. obl.sg. *āśäntāṃ*) 'leader, chariorteer', from *āk-* 'to lead', etc.; (4) TchB *-uca*, from the subjunctive stem (e.g. TchB *pälskauca* 'thinker', from *pləska-* 'to think'; TchB *kälpauca* 'obtainer' from *kəlpa-* 'to obtain, to realize', etc.); (5) TchB *-uki*, from the present stem (e.g. TchB *yamaṣṣuki* 'maker', from *yam-* 'to do'; TchB *weṣṣuki* 'talker' from *weñ-* 'to speak'; TchB *aksaṣṣuki* 'instructor, announcer' from *aks-* 'to proclaim'; TchB *kälpaṣṣuki* 'thief', from *kəlp-* 'to bring, steal', etc., see Schaefer 1997 and Peyrot 2008: 96); (6) verbal governing compounds in TchB *-i*, A *-e* (e.g. TchB °*pläṅṣi* 'seller, selling' from *pləṅk-* 'to sell'; TchB °*yāmi* 'doer, doing' from *yam-* 'to do'; TchA °*pāṣe* 'protecting' from *pās-* 'to protect', see Fellner 2018). The fact that these agent formations are typically masculine is in line with a widespread Indo-European trend according to which agent nouns are masculine by default. However, they may also refer to feminine nouns, while, in other Indo-European languages, if feminine equivalents need to be made out of them, some other derivational strategies are employed (cf. Lat. *genitor* 'parent, father': *genitrīx* 'female parent, mother', Luraghi 2014; but cf. also TchB *yäkwe-pläṅṣi* 'horse seller' vs. *käryor-pläṅṣi-ñña* 'female trader').

[35] Cf. also Malzahn (2010: 656), who sets up an otherwise unattested verbal root *tark-* 'do carpentry' for this agent noun to account for its meaning.

In parallel, the suffix TchB *-tse*, A *-ts* also forms masculine agent nouns and names of professions, from both verbal (e.g. TchB *rīnätstse* 'renouncer' from *rəyn-* 'to renounce'; TchB *yāmätstse* 'doer' from *yam-* 'to do'; TchA *tspokäts* 'taster' from *tspok-* '±to taste, suck', etc.) and nominal bases (e.g. TchB *werpiśkatse* 'gardener' from *werpiśke* 'garden'; TchA *amokäts* 'artist' from *amok* 'art', etc.). The agentive meaning of this suffix is to be sought in the nominalisation of adjectives in TchB *-tstse*, A *-ts*, whose original connotation was 'having-X'. They are productive in the historical phase of both languages (e.g. adj. TchB *ñuwe* 'new' → adj. *ñwetse* 'having news' → subst. *ñwetse* 'novice', cf. Fellner 2014c).

Another agentive suffix is TchB *-tau*, *-au*, which is employed to form agent nouns from nominal bases (e.g. TchB *käryorttau* 'merchant' from *karyor* 'commerce'; TchB *olyitau* 'boatman' from *olyi* 'boat'; TchB *pälkostau** 'spy' from an unattested noun itself deriving from *pəlka-* 'to see'; TchB *saṃtkinau* 'doctor' related to TchB *sāṃtke* 'medicine' ← Skt. *śāntaka-* through a Prākrit intermediary; TchB *yotkolau* 'foreman, superintendent monk' of unclear etymology; TchB *wetā*$_u$ 'warrior' from *weta* 'strife, battle', etc.).[36] On these formations, see also §3.7.1.2.

Finally, TchB *-śke* is a diminutive suffix, attested only in Tocharian B. It forms masculine nouns from nominal bases, mostly referring to human beings and, less frequently, to animals and things (e.g. TchB *ṣarmirśke* 'young novice' from *ṣarmire* 'novice monk'; TchB *ylaṃśke* 'young gazelle' from *yal* 'gazelle'; TchB *käntwāśke* 'little tongue' from *kantwo* 'tongue'; TchB *kuntiśke* 'little pot' from *kunti* 'pot', etc.). It is also frequently found in proper names (e.g. TchB *Mitraśke*, TchB *Cowaśke*, etc.; cf. the similar use of the comparable suffix -ηþκο *-iška* in Bactrian, e.g. βαζηþκο Vasiška).[37] Another suffix forming diminutives and hypocoristics was probably TchB *-kke*, although it is limited to three nouns: TchB *appakke* 'daddy, dear dad' from *āppo** 'dad'; TchB *larekke* 'dear one' from *lāre* 'dear'; TchB *naumikke* 'little gem', from *naumiye* 'gem' (Malzahn 2013: 112).

Feminine nouns

As far as the feminine is concerned, gender derivation usually implies that a new feminine substantive is created as the counterpart of a masculine one. Derivation of feminines from masculines is indeed one of the most common ways of forming new feminine words in Tocharian. This type of gender motion affects animate and mostly human nouns (linked to the referential gender). It follows that gender shift is common from masculine to

[36] Cf. Hartmann (2013: 95) and Adams (2015: 180). In Tocharian A, we sometimes find the equivalent of the Tocharian B forms. However, they are mismatching in the suffixes and sometimes in the phonology, e.g. TchA *kuryart* 'merchant' ≅ TchB *käryorttau*; TchA *sāṃtkenu* 'doctor' ≅ TchB *saṃtkinau*; TchA *waco* 'warrior' ≅ TchB *wetā*$_u$.

[37] In parallel, the suffix TchB *-ṣke* forms adjectival derivatives, although sporadic secondary nominal formations are attested, e.g. *yäkwaṣke* 'young horse' from *yakwe* 'horse'. See Adams (2015: 182). An analysis of the suffixes TchB *-śke* and *-ṣke* has recently been proposed by Pinault (2015: 176-77). On their origins, see Sims-Williams (2002: 237ff.) and Ciancaglini (2001: 76ff.).

feminine, but not vice versa.[38] The suffixes used are the following (Malzahn 2013; Hartmann 2013: 392f.): (1) TchB *-āñca*, A *-āñc* of Iranian origin (e.g. TchB *upāsakāñca*, A *wāskāñc* 'female lay-disciple' from TchB *upāsake*, A *wāsak* 'male lay-disciple'; TchB *parivrājakāñca* 'female mendicant' from an unattested masculine **parivrājake*, cf. TchA *parivrājak* 'wandering religious mendicant', borrowed from Skt. *parivrājaka-* 'mendicant, renouncer', etc.); (2) suffix TchB *-a*, through a derivational process thanks to which the final vowel of a masculine noun is substituted by *-a* (e.g. TchB *mañiya* 'female maid-servant', from *mañiye* 'male servant'; TchB *rākṣatsa* 'female demon' from *rākṣatse* 'demon'; TchB *oṅkolma* 'she-elephant' from *oṅkolmo* 'elephant'; TchB *mewiya* 'tigress' from *mewiyo* 'tiger'; TchB *ostañña* 'female house-holder' from *ostaññe* 'male house-holder'); (3) suffix *-ñña*[39] (e.g. TchB *ñäkteñña* 'goddess' from *nakte* 'god', TchB *plaktukäñña* 'female house-keeper'). Although the resulting nouns are formed through different suffixes, in Tocharian B they are always inflected according to the same inflectional class: nom.sg. *-ʸa*, obl.sg. *-ʸai*, nom.obl.pl. *-ʸana*. In other words, the commonest way to build a feminine noun from a masculine is the shift of inflectional class.

In the list just discussed, I have not included the type TchB *lāntsa,* A *lānts* 'queen', which is the feminine counterpart of the noun of participial origin TchB *walo*, A *wäl* 'king', with obl.sg. TchAB *lānt* (see §3.5.1.2). This type of feminine formation is not synchronically productive and is limited to this noun (Malzahn 2013: 110). Hartmann (2013: 96) analyses TchA *-i* as a *Motionssuffix*, although he gives only two examples: TchA *nāśi* 'mistress' and TchA *ākläṣlyi* 'female pupil' (p. 181). The first is the feminine counterpart of TchA *nātäk* 'sir', on which see §3.5.2. TchA *ākläṣlyi* is the feminine form of the substantivised gerundive TchA *ākälṣäl* (TchB *akalṣälle*) 'one who has to learn' → 'pupil, disciple'.

Two similar and functionally equivalent suffixes, TchB *-eñña*, A *-eṃ* and TchB *-auña*, *-oñña*, form deverbal and denominal feminine abstract and action nouns (e.g. TchB *katkauña* 'joy, delight' from *katk-* 'to rejoice, be glad'; TchB *läk$_u$tsauña* 'brilliance' from *lak$_u$tse* 'shining, brilliant'; TchB *weśeñña*, A *waśeṃ* 'voice' from TchB *wek*, A *wak* 'voice, noise', etc.).

The feminine counterparts of the masculine suffixes TchB *-śke* and TchB *-kke* are TchB *-śka* and TchB *-kka* (e.g. TchB *ṣerśka* 'little sister' from *ṣer* 'sister', *śamñāṃśka* 'girl' probably

[38] The only attestation of a masculine derivative from a feminine noun may be TchB *mokoṃśke* 'male monkey', but it is uncertain. The problem is that the feminine noun is attested with variants (TchB *mokauśka* ~ *mokoṃśka* ~ *mokośka* '(female) monkey'), and their distribution cannot allow to decide which the older form is (cf. also Peyrot 2008: 91f.). Although the feminine word is much more productive than the masculine, an original feminine derivative from *mokoṃśke* → *mokoṃśka*, which in turn became *mokauśka,* cannot be excluded.

[39] See §4.3.3.1. As Winter (1961) pointed out, TchA *ñäkteññā* 'goddess' is borrowed from Tocharian B. In Tocharian A, we also find two other nouns which seem to display a similar feminine suffix *-ñā.* They are *kinnarñā** '±female Kiṃnara' (attested once as an oblique singular (*ki*)*nnarñāṃ* in A180 a6) and *vidyādharñā** '±female Vidyādhara' (attested only as a nominative plural *vidyādharñāñ*, see SSS §50 and 149). However, it is very probable that these nouns are also loanwords from Tocharian B (cf. TchB *kinnarña* in B109 b5, serving as an adjective). See Fellner (2013: 58 fn. 70).

from *śāmña**; see §3.5.2); the vocative form TchB *ammakki* 'oh dear mum' from an unattested *āmma** 'mum', parallel to *āppo** 'dad' and similar to Gk. ἀμμά, Lat. *amma*, OHG *amma* 'mother, nurse'; TchB *pälkaucäkka* 'female fortune-teller [= Skt. *ikṣaṇikā*-]' and a few others.[40]

Alternating nouns

There are several suffixes forming alternating nouns. The most productive are TchB *-ñňe*, *-auñe*, *-uññe* which correspond to TchA *-une*, *-one* (Kim 2007: 23-5; Pinault 2011a). These suffixes occur in abstract nouns derived from nominal bases (e.g. TchB *aiśamñe* 'wisdom' from *aiśamo* 'wise'; TchA *kāswone* 'virtue' from *kāsu* 'good'; TchA *knānmune* 'knowledge' from **knānäm* 'knowing'; TchA *wsokone* 'joy, serenity' from *wsok* 'joyfully', etc.). Furthermore, they are commonly added to the gerundive stem of a verb, forming verbal abstracts, e.g. TchB *nesalñe* 'being' from *nes-* 'to be', corresponding to TchA *naslune* 'id.' from *nas-* 'id.'. These derivatives are inflected as nouns of Class II.2 and III in Tocharian B, and III.2 in Tocharian A.[41]

There are also some instances of fully nominalised infinitives in TchAB *-tsi*. These new verbal nouns are of alternating gender (e.g. TchB *wastsi* 'clothing' from *wəs-* 'to dress, wear'; TchB *raktsi* 'mat' from *rək-* 'to extend, spread out'; TchAB *śwātsi* 'food' from TchB *śəw(a)-*, A *śwā-* 'to eat'; TchAB *yoktsi* 'drink' from TchAB *yok-* 'to drink'; TchAB *śwātsi-yoktsi* 'food and drink' etc.).

In Tocharian B, we also find derivatives in *-or* and more rarely in *-wer*, both built on the stem of the past participle (e.g. TchB *karyor* 'commerce' from *kərya-* 'to buy; TchB *kärsor* 'understanding' from *kərsa-* 'to know'; TchB *yāmor* 'act, deed, accomplishment' from *yam-* 'to do'; TchB *āyor* 'gift' from *ay-* 'to give', etc.; e.g. *śeśuwer* 'food, mealtime' from TchB *śəw(a)-*, A *śwā-* 'to eat, consume', etc.).

Another old and fairly productive suffix is TchA *-äm*, forming abstract nouns (Hartmann 2013: 60). These Tocharian A formations correspond to the Tocharian B action nouns in *-i*: TchA *näkäm* : TchB *näki* 'injury', TchA *wäkäm* : TchB *wäki* 'disease', etc.. From a diachronic point of view, they are old neuters in **-men-*, as the plural formations in TchA *-mant* (e.g. *näkmant, wakmant*), TchB *-nma* < **-mna* (e.g. *nakanma*, *wakanma*) clearly show (Pinault 2008: 495-6).

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[40] See Malzahn (2013: 112-4) for an in-depth discussion on the other feminine forms with the suffix *-kka*. She also points to a vocative form parallel to *ammakki*, TchB *ṣerikki* 'oh dear sister', derived from *ṣer*, but I was not able to find any attestation of this noun.

[41] In parallel, Tocharian A shows some instances of a palatalised suffix *-(r)ñe*: *ykorñe* 'negligence' (cf. TchB *ykorñe* 'id.'), *ekrorñe* 'poverty' from *ekro* 'poor', *pruccamñe* 'advantage' (cf. TchB *pruccamñe* 'id.') from *pruccamo* 'useful'. However, this suffix seems to be borrowed from Tocharian B.

2.4.3. SEMANTIC PATTERNS

All gender systems include some kind of semantic residue, because phonological and/or morphological rules operate alongside semantic rules also in those languages where the assignment system is typically formal (Corbett 1991: 34).

Since Tocharian has masculine and feminine genders, one of the semantic principles is obviously the sex. Accordingly, when, on the referential plane, there is an opposition of sex and, on the linguistic plane, there is an opposition of gender, grammatical gender follows the sex. Nouns denoting males are therefore masculine and those denoting females are feminine. Another intuitive semantic principle is that Tocharian words referring to human beings are solely masculine or feminine. As we have partially seen, these semantic patterns are sometimes formally reflected in the inflectional class of nouns. For example, in Tocharian B the great majority of feminine nouns denoting female referents attests a plural in *-na*, and a singular paradigm of two types: (1) nom.sg. *-ʸa*, obl.sg. *-ʸai*; (2) nom.sg. *-o*, obl.sg *-a*. Furthermore, a new animate-based opposition has also been developed in both Tocharian languages: the new ending obl. sg. *-ṃ* has been used to mark the oblique singular of nouns denoting animate entities. In Tocharian B, it is limited to masculine nouns, so it is predictable for the gender resolution.

Floristic terms are sorted in all three genders, depending mostly on their inflectional class and etymology. Many technical and medical plant words are borrowed from Sanskrit or Middle Indian languages. As a general trend of Tocharian loanwords, these nouns are typically alternating. However, if we do not consider these loanwords, the situation is still patchy: inherited words for plants, fruits, and cereals can be masculine (e.g. TchB *taiwe* 'ripe fruit'), more frequently feminine (e.g. TchB *pyāpyo*, A *pyāpi* 'flower'; on TchB *tāno* 'grain', see §3.7.1.2), but also alternating (TchAB *oko* 'fruit').

Inanimacy is a general condition for the members of the alternating gender. The fact that the term for 'animal' TchB *luwo*, A *lu* is alternating does not represent a real contradiction, because this is a generic term referring to the entire class of animals (Hartmann 2013: 388). Abstract nouns are typically alternating. However, inanimate and abstract nouns are distributed across feminine and masculine genders too, though more rarely.

Body parts are usually masculine and feminine, and only rarely alternating. This division may mirror a general Indo-European trend according to which the moving parts of the body are animate (masculine and feminine) while the unmoving ones are inanimate. For example, TchB *āśce* 'head', TchB *pokai* (obl.), A *poke* 'arm' are feminine, TchB *paiyye*, A *pe* 'foot', TchB *ṣar*, A *tsar* 'hand', TchB *kantwo*, A *käntu* 'tongue' are masculine, while TchB *āyo* 'bone' is alternating (but TchA *āy* 'id.' is masculine).

In faunal terms, the subdivision between masculine and feminine can also be found. As discussed above, while the generic term for 'animal' is alternating, animals are always masculine or feminine, depending on the sex of the referent. Apart from those feminine nouns derived from the corresponding masculine (e.g. *mewiyo* 'tiger' → *mewiya* 'tigress'), the distinction between male and female animals is frequently made by different words

that are also etymologically unrelated. Some examples are: TchB *āl* 'he-goat' vs. TchAB *ās* 'she-goat', TchB *ā$_u$* 'sheep' vs. TchB *ariwe* 'ram', TchB *ke$_u$*, A *ko* 'cow' vs. TchB *ka$_u$rṣe*, A *kayurṣ* 'bull' (Adams 2017: 1367f.). As pointed out by Malzahn (2013: 117) and Adams (2015: 1376), the specification of animal's sex can also be made with a noun phrase consisting of the word for 'male' or 'female' and the animal's noun, like in the case of TchB *klaiyna śroñ* 'female goat-kids' (Ching 2010: 332), TchB *āl yrīye* 'male lamb' (vs. *klaiyna yriṃ*, Kizil, Wood 5; cf. Ching 2010: 297) or in the compounds TchB *alaṃ-śrotaññe* 'pertaining to a male kind', TchB *alaṃ-yritaññe* 'pertaining to a male lamb', TchB *klaiṃ-śrotaññe* 'pertaining to a female kind', TchB *klai-yritaññe* 'pertaining to a female lamb'. This strategy of gender disambiguation can be found in secular documents (Ching 2015). Some other animal nouns seem to refer to both masculine and feminine entities, although they have a fixed grammatical gender. For example, TchB *okso* is a generic masculine term, which can mean both the ox and the cow (DTB: 117), and it is used to translate both Skt. *go-* 'ox, cow' (or Chinese *niú* in B549) and Skt. *anaḍuh-* 'ox, taurus' (in B550.a).

Curiously, Tocharian does not attest any generic word for 'bird', but instead uses the following periphrasis with the word for 'animal': TchB *ṣlyamñana lwāsa* 'flying animals', TchA *salat lu* 'flying animal'. In Tocharian B, this noun phrase is opposed to TchB *ynamñana lwāsa* 'walking animals', as in B29 b8 /// *kowän lwāsa ṣlyamñana ynamñana nau* "If he kills flying and walking animals …".[42] As pointed out by Adams (DTB: 560), the adjective *ynamo** 'walking', derived from *y-* 'to go', is only for those entities that are "opposed to flying". This statement is of particular interest from a comparative perspective. As pointed out by Lazzeroni (1998), in the Ṛg Veda, humans and animals are called *dvipád-* 'two-footed' and *cátuṣpad-* 'four-footed', as representing the inhabitants of the earth, in opposition to the inhabitants of the air, which are usually defined *pakṣín-* or *patatrín-* 'winged'. In Tocharian B, the exact match of the Vedic terms is attested: TchB *wi-pew** 'two-footed' and *śtwer-pew* 'four-footed'.[43] The first can be interpreted as a fundamental attribute of human beings, as the following example from the Aggañña-Sutta shows: AS16.2 a1 *wi-ppewänne kṣattaryi śpālme* "Among the two-footed, the kṣatriyas (are) superior" (cf. Pinault 1989a: 195). On the other hand, the nom.sg. *śwer-pew* is attested in two fragmentary documents: once in B512 a3 (/// (*śwer-pe*)*wä wat waipecce kwri tañ* "…or the four-footed … wealth. If you (will have)…") and twice in B513 at lines a3 (*kwri tākaṃ śwer-pewä wat* "or if there is a four-footed …") and b3 (/// *wärñai śwer-pewä kwri tañ tākaṃ-ñ* "beginning with … the four-footed. If you will have…"). Together with B511, these two documents are part of a short literary composition in prose on a dream oracle. However, the fragments are damaged, so that the correct interpretation of the four-footed entities mentioned is impracticable. Both *wi-pew** and *śtwer-pew* are attested in a passage

[42] Perhaps similar locutions are also attested in the archaic document B343 a3 /// *śle ynämñanā ślye ṣlyämña*(*na*)///. Also in Tocharian A there seems to exist an opposition between terrestrial and flying animals, on which see Carling (2009: 156) and Malzahn (2014: 87 fn. 2).

[43] These Tocharian words are used for translating Sanskrit terms, but they seem to match Proto-Indo-European words at a deeper level (see the main text above).

of the Vinayavibhaṅga, Pārājika 2, where the conditions of the expulsion of a monk are explained: *lyakäṃ kr(au)pträ ·snai-pewaṃ · wi-pewaṃ ·śtwer-pewaṃ ·makā-pewaṃ* "one gathers thieves for himself, those without foot, the two-footed, four-footed, and many-footed" (IT127 b2-3, cf. Michaël Peyrot apud CETOM). Given the high cultural prestige that Sanskrit and Middle Indian languages have had on Tocharian, one could of course think that these terms are loanwords. However, as first pointed out by Winter (1962a: 29f.), the element *-pew* is best understood as an inherited word, which in turn is important evidence that Tocharian continued the athematic word **ped-/pod-* 'foot' (cf. TchB *paiyye*, A *pe* 'foot'): PIE **pod-u̯n̥t-* > PTch **pœwə* > TchB *pew* (Ringe 1996: 28; cf. Adams DTB: 429, who reconstructs a suffix **-u̯en-* here). The outcome of the PIE possessive suffix **-u̯ent-* is well attested in Tocharian, like in TchB *pernew* 'glorious', *tallāw* 'miserable', etc. (Pinault 2008: 524-6). The fact that TchB *-pew* did not follow the same inflection of the regular outcome of the adjectives in **-u̯ent-* is plausibly explained by Winter (1962a) by analogy with the inflectional type of the bahuvrīhi-compounds. Now, since TchB *-pew* is an inherited word (to be formally connected with Skt. *padvat-* 'having feet, running'), the pair TchB *wi-pew** : *śtwer-pew* matches Skt. *dvipád-* : *cátuṣpad-* and Umb. *dupursus* : *petupursus* (Iguvine Table VIb 10-11).[44]

Furthermore, both Tocharian languages show two terms referring to 'water', i.e. TchAB *āp* and TchB *war*, A *wär*. The fact that the former is feminine while the latter is alternating matches the Vedic pair *áp-* (f.) : *udan-* (nt.), also from an etymological point of view.[45] In

[44] On the meaning of Gk. ἀνδράποδα 'slave' as opposed to Gk. δοῦλος and τετράποδα, see Lazzeroni (1998: 26-31).

[45] Several PIE words for 'water' can be reconstructed, but the heteroclitic PIE **u̯ód-r/n-* is surely the most broadly attested. It is well-known that Vedic had many words referring to water. Two of them are Ved. *udán-* and *vā́r*, both of neuter gender. Lubotsky (2013) has recently argued that these nouns may belong to one and the same supplementary paradigm, so that the nominative and the accusative case of *udán-* are supplied in the singular by *vā́r*. He argues that these two nouns come from the same paradigm on the diachronic level, and that PIE **u̯eh₁r* (or **u̯oHr*), from which Ved. *vā́r* derives, developed from an original **u̯odr̥*. I agree with Lubotksy in arguing that *vā́r* and *udán-* are both synchronically and diachronically connected. To be more precise, since Ved. *vā́r* occurs only in the nominative and accusative singular, and the *udán-*forms in all other cases, they would perfectly mirror the outcome of a heteroclitic **r/n-*stem. However, I am not completely convinced by the evolution **-dr* > **-h₁r*. One could simply say that the cluster **-dr#* has been simplified in *-r*, and that the loss of the dental stop caused compensatory lengthening of the root vowel in some Indo-European languages. A parallel situation is perhaps attested in two different Latin words. According to de Vaan (2008: 641 and 644), Lat. *unda* 'wave' (< **udna*; cf. also Lat. *fundus* 'bottom' < **bʰudʰno-* < **bʰudʰmno-*) is etymologically connected to the *n*-stem of **u̯odr̥/n-*, which in turn became a noun of first declension (the *a*-stem is to be probably interpreted as an old neuter plural); on the other hand, Lat. *ūrīna* is built on the root *ūr* plus the suffix *-īno-*. This *ūr°*, attested only indirectly, can be the outcome of a zero grade **udr-*, with loss of **-d-* and compensatory lengthening of the initial vowel. If Tocharian inherited this paradigm, TchB *war*, A *wär* may be the result of a merger between the *r*-stem and the *n*-stem. See recently Kim (2019a). The continuant of PIE **h₂ep-* is only attested in the Indo-Iranian branch (e.g. Av. *āp-/ap-*, OP. *ap-* 'water'), in Tocharian, in Oscan

the Ṛgveda, the feminine noun clearly refers to water as an active and living being, a personified natural force, while the second one as a material and inactive entity, i.e. as the thing itself (Meillet 1931: 216-7). In Tocharian A, the first term is attested only twice in the locative singular *āpaṃ* 'in the water' (A226 a3 *tāmäk āpaṃ ālyek nuṃ wrasañ tāloṣ klopasuṣ* "in this very water again other unhappy and miserable living beings…" and A396.a a1 *āpaṃ* "in the water"). In Tocharian B, the term is not frequent either. I found the following certain attestations (twice as a nominative singular, once as an oblique singular, and once as an oblique plural): (1) IT179 a4 *ot śoliṣṣa āp wräṃtsaimeṃ mäske*(*tär*) "then, the water of the hearth is from the opposite direction" (cf. Broomhead 1962: I, 240-1; DTB: 47); (2) IT179 b4: *sā*$_u$ *āp* "the water"; (3) B140 b4: *āp saṃsā*(*rṣṣai no*) *sū kā swāsaṃ* "why does he rain the water of saṃsāra?" (cf. DTB: 46-7); (4) IT23 a5 *orotstsana āpäṃ* "great waters/rivers".[46] As is clear, TchAB *āp* does not mean simply 'water', but more specifically 'river, rain' or, more generally, 'flowing water'. As far as the origin of this word is concerned, two different hypotheses can be formulated: either it goes back directly to PIE **h*$_2$*ép-* or it has been borrowed from Sanskrit or Middle Indian. Hartmann (2013: 445ff.) claims that both explanations are possible and that one cannot take sides in favour of one of them. On the contrary, I believe that some observations are in favour of the first analysis. In Tocharian B, the term is surely feminine and has an oblique plural in *-äṃ*. It belongs to Class V, which does not include loanwords of Indian origin not referring to human beings. Indeed, if a loanword, a plural ending in TchB *-nma* or TchB *-nta* would be expected. As we have seen, the plural form of this word is attested only once in Tocharian B at the end of a fragmented line. As a consequence, one could say that *āpäṃ* has to be restored as *āpäṃ*(*ta*) /ápənta/ or *āpäṃ*(*ma*) /ápənma/ (cf. for instance TchB *cakaṃma*, plural of *cāk* 'picul'). Of the two restorations, the latter would be preferable because monosyllabic loanwords usually take the plural *-nma* in Tocharian B. However, a peculiarity of nouns of Class II.2 is that they attract the accent in the plural (e.g. *kālp* /kálp/ 'meaning, sense' : *kalpanma* /kalpánma/), while in the hypothetical form ***āpänma* the accent would be fixed on the first syllable. For these reasons and also because the word is of feminine gender, TchAB *āp* is more likely to be an inherited word (Van Windekens 1976: 166; DTB: 47).

Turning now to the second term, the situation is completely different, both with regard to the productivity and the gender. Indeed, TchB *war* and TchA *wär* are very productive, and they are of alternating gender, representing old neuter forms. From a semantic point of view, TchB *war* and TchA *wär* mean both material and flowing water. A semantic polar distribution with TchAB *āp* is therefore opaque. As a matter of fact, the chronological

(acc.sg. *aapam* 'basin'), and perhaps in Baltic (e.g. OPr. *ape*, Lith. *ùpė* 'river, brook', see NIL: 31ff.). Apart from Indo-Iranian and Tocharian, in the other Indo-European languages this term has developed the specific meaning of 'river, basin', with further resuffixations.

[46] According to Adams (DTB: 47) another possible attestation is in IT74 b1, a bilingual Sanskrit-Tocharian B fragment, where he reads (*śt*)*w*(*āra*) *a*(*päṃ*). However, the reading is doubtful, given the fact that the document is very fragmentary.

distance between the culture attested in the Veda and the one attested in the Tocharian texts is huge. We can therefore hypothesise that the Tocharian words had the same semantic distribution of the Vedic pair, and that this distribution is still represented in the gender polarisation of the terms, even though it has become opaque in the historical attestations of the Tocharian languages.

2.5. SUMMARY AND CONCLUSION

The goal of this chapter was twofold: on the one hand, it aimed at introducing the category of gender from the point of view of general linguistics; on the other hand, it was intended to investigate the gender system of Tocharian from a synchronic perspective.

After having discussed some terms and concepts revolving around the linguistic notion of gender, we have dealt with the reconstruction of the Proto-Indo-European gender system from a comparative perspective, underlining that the feminine was latest created. Afterwards, we have moved on to the core of the chapter, discussing the synchronic problems of the Tocharian gender system. The linguistic analysis of the so-called *genus alternans* has come to light. Nouns pertaining to this category show a peculiar agreement, since they combine agreement traits of the masculine and the feminine. In particular, they take masculine agreement in the singular and feminine agreement in the plural, so that the targets show only two distinct sets of forms, even though they stand in agreement with the same controller. I have made a typological and cross-linguistic comparison with Romanian and Standard Italian in order to illustrate that the *genus alternans* must be regarded as a real category value. Furthermore, this investigation has shown some methodological points of interest in the domain of general and typological linguistic analysis on the notions of gender value, agreement class, and inquorate gender. Then, I have discussed some terminological difficulties in labelling the third Tocharian gender, examining the difference between the alternating gender and the "neuter" in Tocharian. Finally, the last section of the chapter has been devoted to how the gender assignment system of Tocharian worked, by commenting on inflectional, derivational, and semantic patterns that allow us to infer the gender of Tocharian nouns.

CHAPTER THREE

GENDER

IN THE NOUN INFLECTION

The present chapter aims at investigating the evolution of the gender system in the Tocharian inflection of the noun. The main focus is the origin and the development of the feminine and the alternating gender as well as their formal and functional differentiation with respect to the masculine. As a consequence, endings and forms of those inflectional types that may have been relevant in their evolution will be considered. The masculine gender will be treated in less detail, since its development is generally well understood. Furthermore, its relevance to the evolution of the gender system mainly concerns the merger with the PIE neuter.

3.1. TOCHARIAN NOMINAL CATEGORIES

The Tocharian noun is differentiated and inflected according to three grammatical categories: case, gender, and number.

Like other ancient Indo-European languages, Tocharian has maintained three numbers: the singular, the plural, and the dual.[47]

As pointed out in the previous chapter (see mainly §2.3.1), Tocharian has three different gender values: the masculine, the feminine, and the alternating gender. The Tocharian masculine mostly continues the PIE masculine gender, the Tocharian feminine mostly continues the PIE feminine gender, and the Tocharian alternating gender mostly continues the PIE neuter gender. But still, the Tocharian *genus alternans* should be considered as a separate category from the PIE neuter.

As compared to the other Indo-European languages, one of the most striking peculiarities of Tocharian is the category of case. In both Tocharian A and B, the case system is structured in two tiers: a first level consists of the so-called "primary cases",

[47] Krause (1954, 1955: 23-4) claimed that two other values may be added to the number category, i.e. the "paral" (TchB *-ne*, A *-ṃ*) and the "plurative" (TchB *-aiwenta*). He suggested that the paral served for natural pairs and the dual for accidental pairs. After the critical treatment of this analysis by Winter (1962), it is now agreed that the paral is nothing but a dual marker, while the plurative, limited to just a few nouns, made countable and distributional plurals and cannot be considered as a "morphologically signalled category of inflection" (p. 117). On the history of the dual endings and forms, see Hilmarsson (1989) and now Kim (2018) with references.

largely inherited from Proto-Indo-European; the second level consists of the "secondary cases", whose origin is still disputed.[48] A scheme of the Tocharian cases is the following:

Table III.1. Case system of Tocharian

CASES	TOCHARIAN A AND B	TOCHARIAN A	TOCHARIAN B
Primary	nominative, oblique, genitive(-dative)	–	[vocative]
Secondary	locative, perlative, allative, comitative, ablative	instrumental	causal

For the most part, morphological factors determine the division into these two tiers: while the primary cases are fusional, the secondary cases are agglutinative. The secondary case suffixes are attached to the oblique case of nouns inflected for singular, plural, or dual, while the suffixes themselves are number-indifferent.

Note that the equivalent of the PIE accusative is usually termed oblique in Tocharian. Syntactically, it functions as the accusative in many other Indo-European languages; morphologically, it is the stem on which the secondary cases are built. Furthermore, Tocharian is renowned for the "Gruppenflexion", a morphosyntactic phenomenon: in noun phrases, secondary case markers are added only to the last member, while all the preceding ones are inflected in the oblique.

The secondary case suffixes are mostly assumed to be of late origin. Some of them can be traced back to Proto-Tocharian (i.e. locative, perlative, and allative), while some others are independent innovations of each Tocharian language. Carling has dealt thoroughly with their morphological structure, functions, and evolution (see Carling 2000, 2008, 2012, 2017: 1354-55). The secondary cases will not be treated in this thesis. Instead, I will focus on those case endings that prove relevant for the diachrony of gender. For this reason, I will only consider cases inherited from Proto-Indo-European, i.e. the nominative, the oblique, and the genitive(-dative).

3.2. TOCHARIAN NOUN CLASSES

As pointed out in the previous chapter, the *Tocharisches Elementarbuch* by Wolfgang Krause & Werner Thomas (1960, TEB) selects the plural morpheme as the criterion to group Tocharian substantives in classes, which leads to the identification of seven classes. Nonetheless, if we regarded both the singular and the plural paradigm and all minor differences in the inflection, the number of inflectional classes would increase

[48] It is usually claimed that the origin of the secondary cases is to be ascribed to substratum influence of non-Indo-European languages (see mainly Krause 1951a; K.H. Schmidt 1987 and 1990; Thomas 1994; Barbera 2000: 29-31; Peyrot 2019a). For a diametrically opposite proposal see Carling (2012), who has highlighted similarities between the evolution of the case system of Tocharian and Romani. According to her, the almost completely parallel formation of their case systems may serve as an argument in support of an internal development, without invoking any kind of foreign influence.

enormously, since around thirty types can be identified. This fact does not surprise by itself. For instance, if we considered all minor inflectional differences in the three declensions of Ancient Greek (Attic), we would get a number of inflectional types very close to that of Tocharian. Thus, each class identified by Krause & Thomas can be divided into several other subclasses that in turn make up the Tocharian inflectional types.

In the first three classes, we find nouns that mostly build the plural by means of a suffix marker. See the following synchronic scheme:[49]

Table III.2. TEB Classes I, II, III

	TOCHARIAN B		TOCHARIAN A	
	PL. ENDING	EXAMPLE	PL. ENDING	EXAMPLE
CLASS I	*-a*	*cmel* : *cmela*	*-ā*	*lu* : *ḷwā*
	-sa	*luwo* : *ḷwāsa*	–	–
	-wa	*ost* : *ostwa*	*-wā, -u*	*cmol* : *cmolu*
CLASS II	*-na*	*ñem* : *ñemna*	*-äṃ*	*ysār* : *ysäräṃ*
	-nma	*teki* : *tekanma*	*-mnā-*	*arkämnā-*
CLASS III	*-nta*	*āke : akenta*	*-nt*	*yärk : yärkant*
	–	–	*-ntu*	*tiri : tirintu*

Class I is poorly represented in both Tocharian A and B. It forms a closed category. The plural ending *-sa* can only be found in three Tocharian B nouns (*ḷwāsa* 'animals', *piltāsa* 'petals, leaves', *ḷyyāsa* 'limbs') and it has no formal match in Tocharian A. Note that very often a noun does not belong to the same class in Tocharian A and B.

The ending TchB *-wa*, A *-wā*, *-u* is more productive than TchB *-a*, A *-ā*. Indeed, loanwords are occasionally inserted into this class. Examples include: TchB *kottär* (pl. *kottarwa*) 'family' from Skt. *gotrá-* 'family, clan' and TchB *tsain* (pl. *tsainwa*) 'arrow' from OIran. **d*ᶻ*ainu-* 'weapon' (cf. Av. *zaēnuš-* 'baldric'). TchB *kottär* /kóttər/ has been added to this class because of its formal resemblance to other members of the *wa*-class, like TchB *āmpär** 'limb'[50], TchB *kwarsär*, A *kursär* 'league', TchB *tsaṅkär*, A *tsäṅkär* 'summit, top', etc., all ending in final *-är* /-ər/ (see §3.6.1.2.).

In Class II, the ending TchB *-nma* is very productive, but in Tocharian A it is not.[51] It comes from PIE *-*mn-h*₂ through regular metathesis of *-*mn-* to *-nm-* in Tocharian B (Pinault 2008: 449). It is the plural marker of both inherited nouns and loanwords of Indian (cf. *kālp* 'eon' from Skt. *kalpa-*), Iranian (cf. *sāñ* 'plan, skill' from Khot. *sańa-* 'expedient'), and Chinese origin (cf. *cāk* 'hundred quarts [dry measure]' from MChin.

[49] A slightly revised version of TEB declensional classes has been proposed by Hartmann (2013: 63-71). For an introductory diachronic account of these classes, see Pinault (2008: 491-7).

[50] The singular of this noun seems not to be attested. The plural *amparwa* /ampə́rwa/ is attested twice in NS32 b1 and b2 (see Pinault 2012a).

[51] See Hilmarsson (1991a: 152f.) for a subdivision of the Tocharian B class with plural *-nma*.

**dzyek* > *shí* 石 'stone; dry measure', Lubotsky & Starostin 2003: 264; Blažek & Schwarz 2017: 37). In Tocharian A, the expected ending **-mnā* has been preserved in the adjective TchA *arkämnāṣi* 'pertaining to the burial places' from **arkämnā* 'burial places, cemeteries' (cf. TchB *erkenma* 'id.'). Indeed, nouns that are expected to show this ending have regularly added the marker TchA *-nt(u)* (cf. TchB *nakanma*, A *nākmant* 'faults, errors'; TchB *wakanma*, A *wākmant* 'distinctions, superiorities', Pinault 2008: 495). On the other hand, the Tocharian B ending *-na* is usually considered to be matched in Tocharian A by *-äṃ*. However, the Tocharian B counterparts of nouns with the plural ending TchA *-äṃ* belong to different classes. Furthermore, nouns with *na*-plural form two well-differentiated subclasses in Tocharian B: (1) alternating nouns with no differentiation between nom. and obl. in the singular; (2) feminine nouns with differentiated nom. and obl. in the singular. The Tocharian A equivalents of subclass (2) are ranged under other inflectional classes with differentiated nominative and oblique plural. See §3.6 for both a synchronic and a diachronic discussion on this ending.

Class III is by far the most productive in both Tocharian A and B. Krause & Thomas (TEB §167-173) divided it in subgroups on the basis of the vowel preceding the plural ending. Thus, we have: TchB *-enta*, A *-ant*; TchB *-onta*, A *-ant*; TchB *-ānta* /-ánta/; TchB *-anta* /-ə́nta/, *-äntа* /-ənta/, A *-äntu*; TchB *-inta*, A *-intu*; TchB *-unta*. In synchronic terms, the difference between these endings is fairly easy to explain: the plural *-nta* is directly attached to the basic stem of the singular form of a given noun, which can in turn end with all the aforementioned vowels. It follows that the singular has a zero morpheme, and the plural ending is just *-nta*. In parallel, we find TchA *-ntu* as an extended variant of *-nt*, and it has become the most common plural ending for alternating nouns. It has no formal match in Tocharian B. As pointed out by Sieg, Siegling & Schulze (SSS §§134-136; cf. also Pinault 2008: 497), the plurals in TchA *-nt* have an allomorph *-ntw-* when constructed with suffixes of the secondary cases (cf. *ṣurmant* 'reasons', perl. *ṣurmäntwā*, but not in the instrumental, where the *nt*-stem is maintained). The origin of the *nt*-plural is debated, but probably Melchert (2000) is correct when he compares it with the "individualising" Anatolian suffix *-ant-*. In both Tocharian A and B, this class is the most productive, assimilating most loanwords of Indian origin.

Furthermore, in each of the classes outlined so far, we can randomly find nouns inflected only in the plural (pluralia tantum or lexical plurals), e.g. *mīsa* 'flesh', *ersna* 'form'.

The remaining classes differentiate the nominative from the oblique in the plural. Virtually no alternating nouns can be found here. See the following scheme:

Table III.3. TEB Classes IV, V, VI, VII

	TOCHARIAN B		TOCHARIAN A	
	PL. ENDING	EXAMPLE	PL. ENDING	EXAMPLE
CLASS IV	*-ñ| -ṃ*	*pātärñ*	*-i| -äs*	*pācri, -äs*
(CLASS I)	*-a*	*mācera*	–	–
	–	–	*-e| -es*	*pracre, -es*
CLASS V	*-i| -ṃ*	*yakwi, -eṃ*	*-i| -äs*	*akṣari, -äs*
CLASS VI	*-ñ| -ṃ*	*riñ, -iṃ*	*-ñ| -s*	*riñ, -is*
CLASS VII	*-ñc| -ntäṃ*	*lāñc, -ntäṃ*	*-ṃś| -ñcäs*	*lāṃś, -ñcäs*

Class IV consists of kinship terms that are regularly derived from PIE *r*-stems. They include: TchB *pācer*, A *pācar* 'father'; TchB *mācer*, A *mācar*; TchB *tkācer*, A *ckācar* 'daughter'; TchB *procer*, A *pracar* 'brother'; TchB *ṣer*, A *ṣar* 'sister'. The expected continuant of the nom.pl. **-es* vanished, and it seems that the Tocharian languages independently marked this case again, with the abolishment of the expected **pacərə* < PIE **ph₂téres,* etc. In Tocharian B, we have variant forms, e.g. nom.pl. *tkātärñ* vs. *tkacera* or *pātärñ* vs. *pacera*. On the basis of the text distribution of the forms and the phonological shape of the stem, Peyrot (2008: 112-4) demonstrated that the *cera*-plurals are the latest, although it is still debated how exactly the ending *-a* was introduced after the plurals of *sa̮suwa* 'sons', *klaina* 'women', and other feminine kinship terms. TchA nom.pl. *-e*, obl.pl. *-es* is found only in the word for 'brother', where it has probably been taken over from the adjectival inflection.

Class V can be divided into three major subclasses. The first and most productive one contains Tocharian B *e*-stems (nom.obl.sg. *-e*, the *yakwe*-type). In Tocharian A, the final vowel has been regularly dropped. It is generally agreed that these nouns continue the PIE masculine thematic inflection (i.e. the PIE **o*-stems). The nom.pl. TchB *-i* is indeed the regular outcome of PIE **-oi̯* (see §4.3.4.1). In Tocharian A, the expected continuant of this ending (TchA †*-e*) seems to have been replaced by *-añ* (cf. **h₁ék̑u̯oi̯* 'horses' > TchB *yakwi*, but TchA *yuk-añ*). The obl.pl. is *-eṃ* in Tocharian B and *-as* in Tocharian A. Loanwords referring to human (male) beings are usually inserted into this class (e.g. TchB *ar(a)hānte* 'arhat' from Skt. *arhant- ~ arahant-*, BHSD: 67; TchB *winasāre* 'expert in monastic discipline' from Skt. *vinayadhara-* through Gāndhārī; Pinault 1987: 143, von Hinüber 2001: 153). Another subclass inflects in a slightly different way, since, in Tocharian B, its members have a zero-marked oblique singular, palatalisation of the stem throughout the inflection, and obl.pl. TchB *-äṃ*, A *-äs* (cf. TchB *meñe*, A *mañ* 'moon, month', obl.sg. TchB *meñ*, A *mañ*, nom.pl. TchB *meñi*, A *mañi*, obl.pl. TchB *meñäṃ*, A *mañäs*). In addition, a group of Tocharian B nouns inflects like the previous one, but the obl.pl. TchB *-äṃ* is not palatalising (cf. TchB *āśce* 'head', nom.pl. *āści*, obl.pl. *āstäṃ*). Finally, a last class also has palatalising nom.pl. *-i* and non-palatalising obl.pl. TchB *-äṃ*, A *-äs*, but their members end with a non-palatalised consonant in the singular (cf. nom.obl.sg. TchB *kauṃ*, A *koṃ* 'sun, day', nom.pl. TchB *kauñi*, A *koñi*, obl.pl. TchB *kaunäṃ*, A *konäs*).

Class VI is very productive and can be subdivided into an impressive number of subclasses. In Tocharian B, we find the following types:

Table III.4. Inflectional types with nom.pl. *-ñ* in Tocharian B

	NOM. SG.	OBL. SG.	NOM. PL.	OBL. PL.
kantwo-type	*-o*	*-a*	*-āñ*	*-aṃ*
okso-type	*-o*	*-ai*	*-aiñ*	*-aiṃ*
arṣāklo-type	*-o*	*-ai*	*-añ*	*-aṃ*
ymiye-type	*-iye*	*-ai*	*-aiñ*	*-aiṃ*
kälymiye-type	*-iye*	*-i*	*-iñ*	*-iṃ*
wertsiya-type	*-ʸa*	*-ʸai*	*-ʸañ*	*-ʸaṃ*
śamaśke-type	*-e*	*-e(ṃ)*	*-añ*	*-aṃ*
saswe-type	*-e*	*-e(ṃ)*	*-eñ*	*-e(nä)ṃ*
prāri-type	*-i*	*-i*	*-oñ*	*-oṃ*

In light of the many similar endings and forms, it is reasonable to assume that some nouns shifted between these subclasses during the development of nominal declensions, both in the prehistory of Tocharian B and in Proto-Tocharian.

In Tocharian A, the identification of the inflectional classes is easier. Basically, we only find the following plural forms: (1) *-añ*| *-as*; (2) *-āñ*| *-ās*; (3) *-iñ*| *-is*; (4) *-eñ*| *-es*. A convenient synchronic mechanism identified by Sieg, Siegling & Schulze (SSS §146) highlights the fact that when a given noun ends with a vowel in the singular, the plural form quite often repeats that final vowel (cf. TchA *ri* 'city', nom.pl. *riñ*; TchA *poke* 'arm', nom.pl. *pokeñ*); on the other hand, when a given noun ends with a consonant in the singular, the vowel in the plural form varies (cf. TchA *olar* 'fellow, companion', nom.pl. *olariñ*), although it usually belongs to those types with plural *-añ* or *-āñ*. From a diachronic perspective, the first type (pl. *-añ*| *-as*) usually matches the Tocharian B *e*-stems (TEB Class V.1); the second type (pl. *-āñ*| *-ās*) matches nouns belonging to Class VI in Tocharian B (cf. TchA *oṅkaläm* 'elephant', nom.pl. *oṅkälmāñ* vs. TchB *oṅkolmo*, nom.pl. *oṅkolmañ*). However, there are significant exceptions. Indeed, it is important to note that feminine nouns referring to female entities always belong to this subtype with pl. *-āñ*| *-ās* (with the exception of TchA *lānts* 'queen', whose plural varies *lāntsañ* ~ *lāntsāñ*). The Tocharian B equivalents of these feminine nouns belong to Class II (pl. *-na*).[52]

Lastly, we have Class VII, which is the least productive. The most prominent member is TchB *walo*, A *wäl* 'king' (pl. TchB *lāñc*| *lāntäṃ*, A *lāṃś*| *lāñcäs*). In Tocharian A, this inflectional class is even limited to this noun.

[52] For a detailed overview of the plural ending *-ñ* and its various inflectional types in Tocharian A, see SSS §§146-156 and §§226-240.

In this thesis, I will not deal with all of these classes, but only with those relevant to the diachronic analysis of the gender system. They will be outlined in the following paragraphs.

3.3. AIM

The three pivotal questions this chapter addresses are (1) how the PIE feminine gender evolved in the Tocharian noun inflection, (2) how the PIE neuter gender evolved in the Tocharian noun inflection, and (3) whether the PIE neuter gender is continued as the Tocharian *genus alternans*. These three questions lead to other minor issues about the marking of alternating and feminine nouns from both a synchronic and a diachronic perspective, and, in general, about the consequences caused by the morpho-phonological mergers of the three inherited genders in the system of the noun.

In order to understand how the PIE feminine gender evolved in Tocharian, I will investigate the Tocharian inflectional classes that may continue four different PIE types that are important to the historical evolution of the feminine gender: (1) the non-ablauting *eh_2-type (i.e. the *"$\bar{a}$"-inflection); (2) the ablauting *h_2-type (i.e. the *$\bar{a}$/$\check{a}$-inflection); (3) the ablauting *ih_2-type (the so-called *devḯ*-type, *-ih_2/*-$i̯eh_2$); (4) the non-ablauting *ih_2-type (the so-called *vr̥kḯ*-type). For each of the identified inflectional classes, I will analyse the paradigm of the singular and the plural in both Tocharian languages, in order to verify where the comparison between Tocharian A and B allows to reconstruct Proto-Tocharian structures straightforwardly, and where they do not match. In this latter case, new problems will of course come to light and for each of them an attempt at an explanation will be made. It will then become clear that some of these inflectional types exhibit similar or equivalent characteristics, since they attest nominative and/or oblique endings that are often the same. As a consequence, it may be assumed that some of these classes influenced each other over the prehistory of the two Tocharian languages, i.e. in a Proto-Tocharian phase and then independently in Tocharian A and B.

In order to understand whether the PIE neuter is continued as the Tocharian alternating gender, I will try to find alleged outcomes of the PIE thematic neuter and clarify how this reconstructed class has developed in Tocharian. Continuants of the athematic type will also constitute the subject of my investigation, although they have usually been well explained. For this reason, I will limit my attention to those types whose origin has in my view been overlooked and to those that have played an important role in the evolution of the gender system.

Among the TEB inflectional types outlined above, there are some that are more relevant than others to carry out an in-depth analysis of the Tocharian gender system. They will be the subject of this chapter. The Tocharian A classes are simpler, because the Proto-Tocharian word-final vowels *-*a*, *-*æ*, and *-*å* have been lost in this language. For this reason, I will mostly refer to Tocharian B when individuating and naming these types. Nonetheless, evidence from Tocharian A will be consistently considered and analysed in tandem with that of Tocharian B.

3.4. STRUCTURE OF THE CHAPTER

Although synchronic analyses are sometimes necessary, the main approach of the investigation is diachronic. In §3.5, the evolution of feminine nouns denoting female referents is investigated (*śana*-type and *aśiya*-type). In §3.7, I discuss the plural endings TchB *-na* and TchA *-äṃ*, which play an important role in the evolution of both the feminine and the neuter. Some of the inflectional types from Class VI are historically analysed in §3.7 (*kantwo*-type, *okso*-type, *arṣāklo*-type, *wertsiya*-type). Each one of these types contributes to a better understanding of the feminine gender. In §3.8, an overview of the development of neuter nouns is offered. A short summary of the main findings concludes the chapter (§3.9).

3.5. FEMININE NOUNS REFERRING TO FEMALE ENTITIES

The *śana*-type and the *aśiya*-type

This section aims to trace the history of two closely related inflectional classes of feminine substantives, whose plural formation ends in TchB *-na*, as well as their Tocharian A matching nouns and forms. I will discuss problems about their inflection and highlight their central role in the evolution of the Tocharian feminine gender.

All these grammatically feminine nouns share a core semantic feature: they denote female referents. From the point of view of their paradigm, they can be grouped into two main classes:

(1) the *śana*-type, with the following inflection (exemplified with TchB *śana* 'wife', TchA *lānts* 'queen'):

Table III.5. Inflection of the *śana*-type

	SINGULAR		PLURAL	
	TchB	TchA	TchB	TchA
NOM.	*-a* *śana*	*-Ø* *lānts*	*-ona* *śnona*	*-añ* ~ *-āñ* *lāntsañ* ~ *-āñ**
OBL.	*-o* *śano*	*-Ø* ~ *-āṃ* *lānts* ~ *-āṃ*	*-ona* *śnona**	*-as* ~ *-ās* *lāntsas** ~ *-ās*
GEN.	*-oy* *śnoy*	*-e* *lāntse*	–	–

(2) the *aśiya*-type, with the following inflection (exemplified with TchB *aśiya* 'nun', A *aśi* 'id.'):[53]

[53] Note that TchA *-śś-* is an inner-Tocharian A development of *-śy-* between vowels (cf. also the obl.sg.f. variants *-ṣṣāṃ* ~ *-ṣyāṃ* in the inflection of Tocharian A *ṣi*-adjectives, see §4.3.3.1).

Table III.6. Inflection of the *aśiya*-type

	SINGULAR		PLURAL	
	TchB	TchA	TchB	TchA
NOM.	*-ʸa*	*-i, -Ø*	*-ʸana*	*-ʸāñ*
	aśiya	*aśi*	*aśiyana*	*aśśāñ*
OBL.	*-ʸai*	*-ʸāṃ*	*-ʸana*	*-ʸās*
	aśiyai	*aśśāṃ**	*aśiyana*	*aśśās**
GEN.	*-ʸantse*	*-ʸe*	*-ʸanaṃts*	*-ʸāśśi*
	aśiyantse	*aśśe*	*aśiyanaṃts*	*aśśāśśi*

Another feminine noun with the *na*-plural in Tocharian B is the word for 'woman', TchB *kliye*, A k_u*li*. This noun forms a separate inflectional class by itself. Also, its paradigm is very irregular and has several variant forms in some cases: nom.sg. TchB *kliye ~ klyiye*, A k_u*li*, obl.sg. TchB *klaiṃ ~ klai ~ klaiñ*, A k_u*le*, nom.obl.pl. TchB *klaina*, nom.pl. A k_u*lewāñ*, obl.pl. k_u*lewās*. The etymological and morphological difficulties connected to this word have been the subject of a very long debate, and proposals about its origin have been made by several scholars (Pedersen 1925; Schmidt 1980: 409-410; Kortlandt 1988a; Hilmarsson 1996: 157-159; Blažek 2005; Pinault 2005; Adams DTB: 242-3). However, I think that none of the etymologies proposed is conclusive. I have of course tried to figure out a possible source and derivation, but I cannot so far offer a convincing solution myself. The reader is referred to Peyrot (2008: 106f.) for the explanation of most of the variant forms, and to Pinault (2005) and Kortlandt (1988a) for some etymological proposals, the last one ultimately based on Schmidt (1980).

As can be seen from the tables above, the corresponding Tocharian A nouns do not share the same inflection as that of Tocharian B. This mismatch is peculiar and deserves an explanation. For this reason, in the following paragraphs and in the next section, I will discuss the endings of the primary cases of these classes, in order to outline their historical evolutions from Proto-Indo-European to Tocharian.

3.5.1. THE *śana*-TYPE

Tocharian B nouns with nom.sg. *-a*, obl.sg. *-o* and their Tocharian A correspondents

The analysis of the *śana*-type has proved to be a controversial topic, since it plays a pivotal role in the evolution of the feminine gender. As we will see, the debate has focused on the paradigm of the singular, in general, and on the opposition between nom.sg. *-a* and obl.sg. *-o*, in particular. My final goal is to understand if these nouns inherited their paradigm from Proto-Indo-European or if some analogical developments need to be postulated. Before going into these diachronic matters, however, some preliminary synchronic remarks will be made.

3.5.1.1. Members and synchronic problems

The *śana*-type is not a productive class, since it includes only three nouns: TchB *śana*, A *śäṃ* 'woman, wife', TchB *lāntsa*, A *lānts* 'queen', and TchB *ṣarya* '(beloved) lady'. Inflected forms of the first two substantives can be frequently found; the latter is without equivalent in Tocharian A and it is well attested only in the vocative and in the nominative singular in Tocharian B. However, on the basis of the comitative form TchB *ṣaryompa*, attested once in B496 a3-4, we can infer the obl.sg. *ṣaryo*.

TchB *śana* and TchB *lāntsa* are matched in Tocharian A by *śäṃ* and *lānts* (frequently spelled *lāṃts*, as in e.g. A324 b4, YQ III.7 a8). Both nouns have a peculiar inflection and some interesting endings.

TchA *lānts* has two oblique singular forms: besides the common *lāntsāṃ* (e.g. *lāṃtsāṃ* in YQ III.5 b8, perl.sg. *lāntsānā* in A78 b1), we find isolated forms of an obl.sg. *lānts* (e.g. *lā(ṃ)ts* in A94 a5 and abl.sg. *lāntsac* in A319 b7). Since TchA *-āṃ* represents the ubiquitous feminine oblique in both nouns and adjectives, it is reasonable to assume that TchA *lānts* is the archaic form (cf. obl.sg. TchB *lāntso*). We have variants also in the plural inflection: nom.pl. *lāntsañ*, obl.pl. *lāṃtsas* stand beside nom.pl. *lāntsāñ*, obl.pl. *lāntsās*. It is evident that the former forms are older, since the endings *-āñ*| *-ās* represent the common plural paradigm of the Tocharian A feminine nouns with female referents (etymologically equivalent to the Tocharian B *aśiya*-type). As a consequence, the oldest inflection of TchA *lānts* is: nom.obl.sg. *lānts*, nom.pl. *lāntsañ*, obl.pl. *lāntsas* (cf. SSS §233).

On the other hand, the plural paradigm of TchA *śäṃ* presents a special problem. Indeed, besides the expected obl.pl. *śnās*, this noun is supposed to have a pl. *śnu*. Since Sieg, Siegling & Schulze (SSS §179.c), this TchA *śnu* is unanimously interpreted as a nominative plural. Winter (1985: 262) argues that TchA *śäṃ* had two parallel plural paradigms: (1) TchA *śnu* (nom. = obl.) < **śənwa-* had a collective meaning, while (2) TchA *śnāñ**| *śnās* was the regular "countable" plural. In my opinion, this explanation is ad hoc. One could think that *śnu* has been analogically created after the plurals TchA *sewāñ* 'sons' (cf. TchB $s_{ä}$*suwa* 'id.') and k_{u}*lewāñ* 'women', but still I cannot account for the absence (or the loss) of final *-āñ* in the nominative plural.[54]

I have found only two attestations of TchA *śnu*, and both are from passages with considerable problems of interpretation.[55] The first is in A299 b2 /// *pr(ā)mne śnu* · *brahmavatiṣiṃ śriñäktes kātsaṃ cmolu nutässi cmol eṃtsäṣtär* || "… the *śnu* of the Brahmin [i.e. Brahmāyu]. In order to make the births disappear, he takes birth in the womb of the Śrīdeva of a Brahmāvatī" (cf. Peyrot & Semet 2016: 367). This leaf preserves the end of the 10th act of the Tocharian A *Maitreyasamiti-Nāṭaka*, which has been

[54] One may think that this *śnu* maintained the original situation prior to the addition of final *-ñ* (cf. TchB $s_{ä}$*suwa* vs. A *sewāñ*). But see the main text below. Not with Čop (1975: 4) can we interpret final *-u* in TchA *śnu* as the regular outcome of PIE **-ās*.

[55] According to SSS §164, there would be a third attestation of this form in a broken document, but I was not able to find this fragment.

translated into Old Uyghur as the *Matrisimit*. However, a Uyghur parallel of the Tocharian A passage is unfortunately missing, and there are therefore no external clues to translate TchA *śnu* properly. If *śnu* is a nominative, its position at the end of the sentence, before the dot, is surprising and urging caution. Furthermore, compositions in other languages dealing with the legend of the Buddha Maitreya do not mention that Brahmāyu (or Subrāhmaṇa), the father of Maitreya, has more than one wife.[56] Reference is made only to his divine mother Brahmāvatī.

A second attestation is in A86 a4, which is very fragmentary: ///*tvāp śnu mā tās*(–)*āṃ* ///. The restorations of the gen.sg. (*bodhisa*)*tvāp* at the beginning of the line, and TchA *tās*(*km*)*āṃ* 'like, as' at the end are quite certain. However, the understanding of the line is still obscure (/// (*bodhisat*)*tvāp śnu mā tās*(*km*)*āṃ* /// "… not like the *śnu* of the Bodhisattva …" (?)).

Thus, the contexts do not indicate that *śnu* is a nominative plural. No nominal modifiers or inflected verbs are in agreement with this form. Other hypotheses can be put forward, but they are still not conclusive.[57] I therefore believe there is no secure evidence for considering TchA *śnu* as an inflected form of TchA *śäṃ* 'wife'.

Before proceeding further with the historical analysis of these nouns, let us come back again to Tocharian B, since another very controversial substantive is supposed to be a member of the *śana*-type. It is a famous hapax legomenon attested as an apparent oblique singular in the archaic document B275. The traditional reading of line b4, where the noun is attested, is as follows: *tkātre petso aiṃ-ñ cai śāmnā* (Peyrot 2008: 98; Kim 2009a: 113 fn.6; Hartmann 2013: 161). According to this reading and division, the passage would contain two hapax legomena: the first is our noun TchB *petso* (equated with TchA *pats* 'husband'); the second is *tkātre*, a morphological hapax, usually analysed as an archaic genitive singular of TchB *tkācer* 'daughter', from PIE **d*^{h}*ugh*$_2$*tr-ós* (Gk. θυγατρός, Skt. *duhitúḥ*, OLith. *dukterès*). The genitive singular of this noun is expected to have been *tkātri** (cf. gen.sg. *pātri* from TchB *pācer* 'father', gen.sg. *mātri* from TchB *mācer* 'mother', *protri* from TchB *procer* 'brother').

A new look to this passage has been offered by Pinault (2010), who divided the sequence *tkātre petso* as *tkātr epetso*, with *tkātr* as a sandhi-variant of the obl.sg. *tkātär*, and *epetso* as the obl.sg. of an unattested noun TchB *epetsa** 'fiancée' (cf. also Pinault 2019: 97). The entire passage would have to be translated as follows: "The people will give their daughter as a fiancée'". This reading has two important advantages: first, the irregular gen.sg. †*tkātre* ceases to exist; second, it makes the translation of the document more coherent with the Khotanese parallel passage in the Book of Zambasta (22, 123c-124a):

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[56] Cf. e.g. the Khotanese version of the *Maitreyasamiti* (Kumamoto forth.).

[57] One could indeed claim that TchA *śnu* is the nom.sg. of a *u*- or *nu*-adjective (e.g. *yäslu* 'enemy', *lukśanu* 'shining'), or an inflected form of the otherwise only dual *śanweṃ* '(two) cheeks', from PIE **ǵenu-* (the *a*-vocalism of *śanweṃ* for expected ***ś*(*ä*)*nweṃ* is probably due to analogical development after *kanweṃ* 'knees', as Michaël Peyrot p.c. pointed out to me). However, both solutions are very tentative.

māta päte kṣundai heḍä dätäna käḍe tcarṣuva hvąʾndä "a mother, a father will give to a husband their five-hundred-year old daughter as yet unmatured" (Emmerick 1968: 307; see Peyrot 2013: 663 fn.45).

Pinault's analysis of TchB *epetso* as the obl.sg. of *epetsa** received broad consensus (cf. Malzahn 2011: 89-90 fn. 14; Fellner 2014: 8; Hackstein 2017: 1320; Weiss 2018: 375). Although I consider the new reading of the passage entirely correct, I think that the hapax legomenon TchB *epetso* should be considered as an adverb with the meaning of 'in marriage' (see Peyrot 2013: 663 fn.45), which has been built on the original oblique singular of the equivalent of TchA *pats* 'husband' (< PTch **pætsə*, cf. Skt. *páti-* 'lord, master', Lat. *potis* 'able, capable', Gk. πόσις 'husband'). According to this analysis, the final *-o* of *epetso* is due to the so-called "bewegliches *o*", which is fairly common in metrical passages (cf. *śauwlo* for TchB *śaul* 'life' at the same line of *epetso*, and nom.pl.m. *poñco* for *poñc* 'all' at line b5). Although deriving adverbs from substantives is not a productive process in the historical phase of the Tocharian languages, there is good evidence that it was in Proto-Tocharian (Adams 2015: 172). Furthermore, very often a new adverb is formed with a prefix *e*(*n*)-, as in this case, which could have had either an intensive or a locative value. In this case, the adverb would mean 'in husband' → 'in marriage' (cf. TchB *elauke* 'far', from *e*(*n*)- + *lauke* 'remote, far'; TchB *eweta* 'in conflict (with)', from *e*(*n*)- + *weta* 'battle'; TchB *eṣe* 'together', from *e*(*n*)- + *ṣe* 'one'), and the expression TchB *epets ay-* should be translated as 'to give [someone] in marriage'. I have therefore not included it into the *śana*-type.

3.5.1.2. Diachronic analysis

In the following sections, I will deal with the etymologies of each noun of the *śana*-type. Then, I will analyse their problematic endings and forms in order to trace their history and derivation from Tocharian to Proto-Indo-European.

TchB *śana*, A *śäṃ* 'wife'

TchB *śana* and TchA *śäṃ* are the most prominent members of this class. They evidently go back to the PIE word for woman, **g^{w}énh$_2$* / **g^{w}n-éh$_2$-*.[58] This noun originally belonged to the proterodynamic inflection:

[58] The relation of this noun with the PIE root **g^{w}ón-*/**g^{w}én-* is evident, although the exact derivation is still problematic. See mainly Harðarson (1987). For the Anatolian evidence, see Gusmani (1985), Harðarson (1987), Kloekhorst (2008: 501ff.), and Lipp (2009: II, 57).

Table III.7. PIE proterodynamic paradigm of *$*g^{w}énh_{2}$-*

CASE	R	S	E	'WIFE'
nom.sg.	*é*	-	-	*$*g^{w}énh_{2}$*
gen.sg.	-	*é*	-	*$*g^{w}n$-$éh_{2}$-s*
acc.sg.	*é*	-	-	*$*g^{w}énh_{2}$-m*

Leaving aside for the moment the outcome of this noun in Tocharian and looking at the other Indo-European languages, we can basically recognise three specific trends of development for this noun, as summarised below:

(1) conservation of the PIE paradigm, as in OIr. *bé* 'woman' < *$*g^{w}enh_{2}$-*, gen. sg. *mná* < *$*g^{w}neh_{2}$-s* and Arm. *kin*, instr. sg. *knaw*.[59] In Indo-Iranian the two PIE stems split into doublets, cf. the *i*-stem Ved. *jáni-* 'wife, woman', OAv *jəni-* (YAv. *jaini-*) < *$*g^{w}enh_{2}$-*, and the *ā*-stem Ved. *gnā-* 'wife, goddess', OAv. *gənā-* '(heavenly) woman' (YAv. *γənā-*) < *$*g^{w}neh_{2}$-* (Harðarson 1987: 130; EWAIA: I, 503-04 and 569-70; AIGR: III, 113 and 137; Hoffmann & Forssman 2004);

(2) generalisation of one of the two stems, as in Greek, cf. γυνή, Dor. γυνά, Beot. βανά (cf. the derived adjective Myc. *ku-na-ja* /gunaiā/ 'feminine', a Pylos' hapax) < *$*g^{w}ṇeh_{2}$-* (GEW: I, 334-335; Chantraine 1999: 242f.; Beekes 2010: 291-2);[60]

(3) generalisation of the full grade in both the stem and the suffix, as in OCS *žena*, OPr. *genno*. In Germanic, *$*k^{w}enō$* < *$*g^{w}enā$* is the basis of the *n*-stem *$*k^{w}enō(n)$* (cf. Goth. *qino*).

For Tocharian, two elements are relevant: (1) the consonant *ś-* as the outcome of a palatalised (labio)velar; (2) the endings nom.sg. *śan-a*, obl.sg. *śan-o*, and the plural stem *śno-*.

TchB *śan-* and TchA *śäṃ* point evidently to PTch **śən-*, which in turn can be the regular outcome of PIE *$*g^{w}en$-* (strong stem). This means that some analogical levelling of the root took place in the prehistory of this word, since we do not have any alternation between palatalised velar (*$*śən$- < *$*g^{w}en$-*) and non-palatalised labiovelar (*$*k^{w}ən$- < *$*g^{w}n$-*) in Tocharian. However, it is not entirely clear if this generalisation took place in a Proto-Tocharian phase or if it should be reconstructed at an earlier stage. If we opted for the second hypothesis, then the development of TchB *śana*, A *śäṃ* would have been parallel

[59] It seems probable that OIr. *bé* is from *$*g^{w}enh_{2}$*, while the feminine OIr. *ben* reflects a new nom.sg. PCelt. *$*benā$* > OIr. *ben* (thus Jasanoff 1989; Zair 2012: 223-4).

[60] The inflection of Gk. γυνή shows allomorphy. The stem γυνή(-) is attested only in the nominative and in the vocative, and the stem γυναικ- in all other cases (though a number of variant forms exist, including acc.sg. γυνήν, nom.pl. γυναί, acc.pl. γυνάς). The origin of the κ-stem is debated. The common view involves a comparison between Gk. γυναικ-, Arm. nom.pl. *kanay-k'*, abl.-loc.pl. *kanay-s*, and Messapian *gunakhai* (from *$*g^{w}ṇh_{2}$-iH-* (?), Olsen 1999: 172). Cf. also Szemerényi (1960), who reconstructs an original adjective *γυναικός.

to the one seen in the Slavic languages, where the full grade was generalised, and the word became a non-ablauting *$\bar{a}$-stem (e.g. OCS *žena* < *$g^{w}enā$). This analysis is supported by some scholars, including Winter (1981: 938), Ringe (1996: 94-7), Adams (DTB: 677), and Kim (2009: 78). Accordingly, the diachronic evolution of the singular paradigm would have been as follows: nom.sg. *$g^{w}enh_2$ >> *$g^{w}eneh_2$ > PTch *śəna* > TchB *śana*, A *śäṃ*; acc.sg. *$g^{w}enh_2$-*m* >> *$g^{w}eneh_2$-*m* > PTch *śənå* > TchB *śano*, A *śäṃ*.

The problem with such an analysis is twofold. On the one hand, no other Tocharian continuant of *"$\bar{a}$"-stems has a singular inflection with nom.sg. *-a*, obl.sg. *-o*, particularly in adjectival and pronominal inflections.[61] On the other hand, the fact that *-eh_2 regularly yielded PTch *-*å* even in word-final position is corroborated by other inflectional types (§3.7.1.2, §3.7.2.4, §3.8.2.1., §4.3.4.4).

As a consequence, a better explanation of the nom.sg. TchB *-a* starts from PIE *$g^{w}enh_2$, which regularly evolved into TchB *śana* (Pinault 1989: 59). A special issue relates to the obl.sg. *śano*, because it cannot go back to the accusative singular PIE *$g^{w}enh_2$-*m*. After the loss of final *-*m* in Proto-Tocharian, this form should have yielded * *śəna*, and nominative and oblique would have become perfectly homophonous. In order to disambiguate these core cases, Tocharian generalised the stem of the weak cases PTch *-*å*- < PIE *-eh_2- in the oblique singular. This analysis is supported by Pinault (2008: 486) and is further corroborated by evidence that will be treated below and in the following sections (cf. §3.7.1.2). In particular, in some other nominal classes, Tocharian seems to have continued the stem of the weak cases (e.g. the PIE dative or the genitive singular) as the oblique, in order to differentiate nominative and oblique in a Proto-Tocharian phase. As for the palatalised consonant of the stem, it can be explained by analogical levelling based on the strong cases. This implies that a stem with palatalised consonant **śən*- became the standard stem before the break-up of Proto-Tocharian.

Another ending that needs to be discussed is the genitive singular TchB *-oy*, A *-e*. Following a private suggestion by Cowgill, Ringe (1996: 54-5, 59f.) claims that TchB *-oy* is the regular outcome of the genitive PIE *-eh_2-*s*, which yielded PTch *-*åy* and then TchB *-oy*, A *-e* (cf. also Katz 1997: 61f.). This peculiar development of PIE *-*s* > PTch *-*y* would be a specific auslaut sound law that operated in monosyllables. However, the diphthong TchB *-oy*- usually originated from a contraction over two syllables. Examples from verbal morphology include: (1) the optative allomorph *-oy*-, which only occurs in those subjunctive stems ending in PTch *-*a*- (Malzahn 2010: 348f.); (2) the verbal root TchB *soy*- 'to be satiated', which is from PIE **seh$_2$*- (cf. Hitt. *šāḫ*- 'to stuff up', Gk. ἄεται 'is safied', Lat. *satis* 'enough, sufficient') + a present formant suffix *-*i̯e*/*o*- (Hackstein 1995: 299-300). Examples from nominal morphology include: (1) TchB *poyśi* 'omniscient', which is from *po* 'all' + *aiśi* 'knowing'; (2) TchB *soy*, A *se* 'son', which is from PIE **suH-iu-*, cf. Gk. υἱύς 'id.' (Winter 1985; Chantraine 1999: 1154).

[61] As I will show in other sections (§4.2.4), the nom.sg. *-a* in *alyāk* 'other' (obl. sg. *allok*) and *sana* 'one' (obl. *somo*) is secondary.

Following Winter (1999: 254-7) and Pinault (2008: 441), it is therefore likely to analyse the gen.sg. TchB *-oy* /-oy(ə)/ (?) as PTch **-å-* + **-əy*, where PTch **-å* was the regular oblique singular and PTch **-əy* was secondarily taken from the gen.sg. *-i* of the kinship terms and the demonstratives. As a matter of fact, the other examples provided by Ringe in support of a sound law PIE **-s* > PTch **-y* in monosyllables can now be reconsidered: (1) the nom.pl.f. TchB *toy* 'those' is not from **téh₂-es* > **tās*, but it rather acquired final *-y* from the masculine inflection (*pace* Ringe 1996: 59 and 95; cf. nom.pl.m. *cey* and the TchA counterpart nom.pl.f. *to-*, §4.2.3.3, §4.2.3.4); (2) TchB *trey*, A *tre* '3' needs not to go back to PIE **tréi̯es* > **trēs* > PTch **tŕœy* directly (*pace* Ringe 1996: 54-5), but PTch **tŕœ* (< **trēs*) more probably acquired final **-y* either from the feminine PTch **tərya* (as per Pinault 2008: 554), or from the nominative plural ending (as per Michaël Peyrot p.c., cf. also TchB *wi* 'two' that has added the dual ending *-i* to the outcome of PIE **dṷoh₁*).

All things considered, the evolution of the singular paradigm of TchB *śana*, A *śäṃ* can be schematised as follows:

Table III.8. Evolution of the singular paradigm of TchB *śano*, TchA *śäṃ*

	PIE				PTCH			TCHB	TCHA
NOM.	**g^{w}énh₂*	> **k^{w}enă*	> **śəna*	>	**śəna*	>	nom.	*śana*	*śäṃ*
ACC.	**g^{w}énh₂-m*	> **k^{w}enă(m)*	> **śəna*	↗	**śənå*	>	obl.	*śano*	*śäṃ*
GEN.	** g^{w}néh₂-s*	> **k^{w}nā(s)*	>> **śənå*	>>	**śənå-y*	>	gen.	*śnoy*	*śne**

TchB *lāntsa*, A *lānts* 'queen'

The second noun to be discussed is TchB *lāntsa*, A *lānts* 'queen', which is to be linked to TchB *walo* /wə́lo/, A *wäl* 'king' (obl.sg. TchAB *lānt*). The formal match between Tocharian A and Tocharian B and the unproductive inflectional class to which the noun belongs ensure its archaic formation. The morphological and semantic masculine counterpart TchB *walo*, A *wäl* is a substantivised participle from the PIE verbal root **u̯elH-* 'to control' (Lubotsky 1994; LIV²: 676).[62] Although the feminine noun is evidently of Pre-Proto-Tocharian origin, it is at first sight unclear whether it is a derivative of the masculine noun, or the substantivised outcome of the feminine participle. However, if we consider that both Tocharian nouns are members of an unproductive class (cf. also the Tocharian A plural paradigm) and that feminine nouns deriving from masculines almost always belong to the *aśiya*-type, the derivation of PTch **lantsa* from an old participle seems more probable (as per Malzahn 2013: 110: "The latter [scil. *lāntsa*] started out as a feminine formation in **-nt-ih₂* [...], which was based on the masculine form of a *participle* [...] in *-nt-*", emphasis by the author).

[62] This evolution strikingly resembles **u̯r-ant-* > Khot. *rre, rrund-* 'king', though I do not think that Tocharian has calqued this formation from Khotanese (*contra* Tremblay 2005: 426).

Further evidence for this historical analysis comes from the reconstructed inflection of PTch **lantsa*. Indeed, it is usually assumed that PTch **lantsa* took the inflection after the model of PTch **śəna* (Pinault 2008: 486; Malzahn 2013: 110). However, if TchB *lāntsa* and TchA *lānts* can be ultimately traced back to a substantivised feminine participle, it can be claimed that they inherited the inflection directly from Proto-Indo-European. Indeed, the feminine participle inflected as a *devḱ*-type in the proto-language, with a proterodynamic inflection parallel to PIE **g^{w}énh$_2$-*:[63]

Table III.9. Participle of PIE **u̯elH-*

	PROTO-INDO-EUROPEAN			PRE-PROTO-TOCHARIAN	
	MASCULINE	FEMININE		MASCULINE	FEMININE
NOM.	**u̯l̥H-ōn(t-s)*	**u̯lH-nt-ih$_2$*	>	**wəlōn*	**wlăntyă*
ACC.	**u̯lH-nt-m̥*	**u̯lH-nt-ih$_2$-m*	>	**wlănt*	**wlăntyăm*
GEN.	** u̯lH-nt-os*	**u̯lH-nt-i̯eh$_2$-s*	>	**wlăntos*	**wlăntyās*

In the feminine, a length-differentiated contrast **-ă-* vs. **-ā-* between the strong and the weak cases can indeed be reconstructed for the antecedent of PTch **lantsa*. This contrast is expected to have yielded **-a-* vs **-å-* in Proto-Tocharian. As a consequence, there is no need to reconstruct analogical developments in order to explain the singular paradigm nom. *-a*, obl. *-o* of TchB *lāntsa*: in a Proto-Tocharian phase, the weak stem **lantså* has been reanalysed as the Tocharian oblique. Thus, we can schematise the following development:

Table III.10. Evolution of the singular paradigm of TchB *lāntsa*, TchA *lānts*

	PTCH					TCHB	TCHA
NOM.	** lantsa*	>	**lantsa*	>	NOM.	*lāntsa*	*lānts*
ACC.	** lantsa*	↗	** lantså*	>	OBL.	*lāntso*	*lānts* >> *lāntsāṃ*
GEN.	** lantså*	>>	**lantså-y*	>	GEN.	*lāntsoy*	*lāntse*

As far as the plural inflection is concerned, Tocharian A has two sets of plural forms that are differentiated by the vowel preceding the ending (nom.pl. *lāntsāñ*, obl.pl. *lāntsās* vs. nom.pl. *lāntsañ*, obl.pl. *lāntsas*). We have already seen that the second plural set is the older one. The sources of the vowel TchA *-a-* are various, but the match TchA *-a-* : TchB *-o-* points to PTch **-å-* (if not from Pre-TchA **-ā-* through vowel weakening). This vowel should in turn be considered as the regular outcome of PIE **-eh$_2$-* > **-ā-*. In other words, both Tocharian languages point to the reconstruction of the full grade of the root **-i̯eh$_2$-* (characteristic of the *devḱ*-type) for both the oblique and the plural.

[63] The table is based on Lubotsky (1994: 70) and Pinault (2008: 511f.). If the acc.sg. PIE **-ih$_2$-m̥* underwent Stang's Law, yielding **-īm*, then the acc.sg. Pre-PTch **-yăm* was reintroduced after other case forms. On Stang's Law, see recently Pronk (2016: 23) and §4.3.4.4.

TchB *ṣarya* '(beloved) lady'

The last noun to be discussed is TchB *ṣarya* (without equivalent in Tocharian A), whose etymology has caused years of debate among scholars. This noun is usually translated as 'beloved, dear (woman)' (e.g. DTB: 713; Broomhead 1962: II, 247), 'Geliebte' (Sieg & Siegling 1949: 180; Otto 2007), 'female lover, concubine' (Winter 1981: 938; 2003a: 205), 'chérie, bien-aimée' (Pinault 2008: 486).[64]

In recent years, a new interpretation has been proposed by Kim (2009a), who claims that TchB *ṣarya* means 'lady, mistress', without any sort of affective value. Kim largely bases his analysis on B33 a4, which is part of the Tocharian Udānālaṅkāra without clear parallels in Sanskrit. The passage in question is as follows:

B33 a4

saswe	*ṣarya*	*sompastär*	*te*	*retke*	*yāmträ*
lord:NOM.SG	NOM.SG	take away:3SG.PRS	DET	army:NOM.SG	do:3SG.SBJ
were	*te*	*pūwar*	*tsakṣäṃ*	*war*	*paräṃ*
smell:OBL.SG	DET	fire:NOM.SG	burn:3SG.PRS	water:NOM.SG	bear:3SG.PRS

"The lord (or) the *ṣarya* takes this away; the army may reduce that to a scent; fire burns it; water carries it (off)". (cf. Peyrot 2013: 705)

Kim argues that the sequence *saswe ṣarya* has a sort of official meaning, and thus translates it as "lord and lady" (see also Otto 2007: 114). Pinault (2013: 241-2 fn.3) is against this new interpretation. He claims that this passage constitutes a common topos in Buddhist literature that deals with the impermanence of mundane goods, by enumerating all entities that caused the ruin of humans. This list is usually composed by five figures, i.e. kings (or rulers), thieves, fire, water, and unloving heirs (the five enemies of wealth), but sometimes also female characters are found. Accordingly, Pinault claims that *ṣarya* in B33

[64] Adams (DTB: 713) questioned the part of speech of TchB *ṣarya*, since in his dictionary he claimed that it can be both a noun and an adjective referring to either masculine or feminine nouns. If so, it would be a sort of synonym of TchB *lare* 'dear'. However, we have no clear evidence that *ṣarya* can be used as an adjective, nor that it could refer to both male and female humans or deities (Kim 2009a: 112; Otto 2007: 111). Adams mainly based his analysis on a passage from the *Araṇemi-jātaka*, in B85 a2: *ṣarya ammakki poññ āppai mā ñiś cempaṃts rakṣatsents aiṣṣäṃ* "beloved mother, tell father not to give me to these rakṣas" (translation by Adams). However, as pointed out by Otto (2007) the fact that one can translate TchB *ṣarya* as an adjective does not mean that it was an adjective in Tocharian B. Indeed, in other passages, this term occurs as a vocative without any other noun with which it can agree. Therefore, rather two nouns are used in apposition. A more literal translation is: "Oh lady! Mummy! Tell dad that he mustn't give me to those rākṣasas!" (cf. Couvreur 1964: 240; Schmidt 2001: 314). Furthermore, we have several examples of double appositional nouns in similar constructions as in line a1 of the same document: || *tumeṃ uttare m*(*ñcu*)*ṣk*(*e*) *wcukaisa mātär lāntso eṅku* "Thereupon prince Uttara while grasping [his] mother, the queen, by the cheek…".

a4 means 'harlot, courtesan', as the "darling by profession". However, in some other Buddhist maxims it is not harlots that are said to cause the ruin, but women in general, as those who inevitably link man to mundanity, because in inspiring love and affection they cause the perpetuation of men in the *saṃsāra*.[65] Furthermore, in other passages, TchB *ṣarya* refers always to respectable and virtuous women, like queens and princess (e.g. the Buddha's wife Yaśodharā and the wife of king Araṇemi). As a consequence, I do not think that the passage in B33 a4 implies that *ṣarya* means 'harlot' and Pinault's argument is therefore not sufficient to invalidate the translation 'mistress, lady'.

Let us see all attested forms of this noun: it is inflected eight times as a vocative (IT111 b3-4, AS15C b4, NS18 b1, NS699 b4, B85 a2, B91 a6, B516 b6), twice as a nominative (NS49 b5, B33 a4), and once as a comitative (AS15 b4).

Starting with the vocative, in IT111 TchB *ṣarya* refers to a queen, but the document is very fragmentary, the character that is speaking is ambiguous, and thus also the translation of our noun (b3 /// *maimañcu ṣarya oro*(*tse*) /// "…oh excellent one! Oh *ṣarya* … great …"; b4: ///*ritstse ṣarya kre*(*nt*) /// "… *ṣarya* … good …"; for the edition, see Peyrot 2007: n° 111). On the other hand, in AS15C someone talks with queen Yaśodharā and informs her about the sender of a gift:

AS15C b4

ṣarya	*ce*	*hār*	*saswe*	*epiyacäññe*	*lywā-c*
VOC.SG	this:OBL.SG	necklace:OBL.SG	lord:NOM.SG	memento:OBL.SG	send:3SG.PRT-2SG.SUFF

"Oh *ṣarya*, the lord sent this necklace to you as a memento". (cf. Pinault 1989a: 189)

In this passage, a servant delivered the necklace to Yaśodharā on behalf of the lord, and thus TchB *ṣarya* should be translated with a kind of official and reverential value. Therefore, the meaning 'lady' fits well here. Likewise, in NS18 a maidservant addresses to a female character (probably princess Mitrakāminī in line a2) the following question: *ṣarya candraprabheṃ mäñcuṣkemeṃ kekamus*(*a*) "Oh *ṣarya*, did you come from prince Candraprabha?" (NS18 b1). Also here, the translation of *ṣarya* as 'lady' is preferable.

The passage in B516 is difficult. We find two characters, Yaśodharā and a female door warden named Priyaśāriṇi, but it is unclear who the speaking character is: b6 *lyelyakormeṃ weṣṣäṃ ṣarya* (– –) *yaśodhara lāntsa memīyus*(*a*) /// "After having seen (this), she speaks: «Oh *ṣarya* […], queen Yaśodharā, deceived (by)…"). What is clear is that in all aforementioned passages, the voc.sg. *ṣarya* is always used by servants when referring to princesses or queens.

All other vocative forms come from the *Araṇemi-jātaka*. In two passages (B85 and NS699, which both contain the same portion of text), prince Uttara speaks to his mother

[65] Several Khotanese passages about the wiles of women can be compared, e.g. chapter 19 of the Book of Zambasta (the so-called *straiya-parivāra* 'chapter concerning woman'); 23.172-3 of the same text; a lyrical poem (Kumamoto 2000); the tales of the animals in the Rāmāyaṇa (133-149); passages in the Book of Vimalakīrti (218), etc.

(B85 a2 *ṣarya ammakki poññ āppai mā ñiś cempaṃts rakṣatsents aiṣṣäṃ* "Oh *ṣarya*! Mummy! Tell dad that he mustn't give me to those rākṣasas!"), while in another passage (B91) king Araṇemi speaks to his wife (a6 *ṣarya kauṃ* (*s*)*ū* (*pe*)*rn*(*e*)*w t*(*a*)*kā-ñ* "Oh *ṣarya*! This day has become a glorious one for me"). In these texts, TchB *ṣarya* can be translated with 'beloved one, dear one', although a more official meaning 'oh lady' is possible too.

Apart from B33, TchB *ṣarya* is probably attested as a nominative also in NS40 b5, where it can be translated both as "lady" and "beloved woman" (/// *m*(*akā-yk*)*ne tarśauna pälwāmane ṣarya* ///, "...lamenting the deceptions of many sorts, the *ṣarya*...", cf. Pinault 2015b: 154).

Finally, the comitative is attested once:

B496 a3-4

sanai	*ṣaryompa*	*śāyau*	*karttse*(*ś*)	*śaulu-wärñai*
one:OBL.SG	COM.SG	live:1SG.PRS	good:ALL.SG	life-long

"I live for the good a life-long with a single *ṣarya*".

Even though this leaf has a clear love content, both 'lady' and 'lover' may fit well into the context. One may therefore wonder whether the basic meaning of TchB *ṣarya* is 'lady, mistress', and that 'beloved woman' is a later meaning (Kim 2009a: 112), perhaps influenced by the fact that this noun is mostly attested in the vocative, which gives a sort of affective pragmatic nuance to its meaning and/or translation.[66]

We now turn to the etymology of TchB *ṣarya*. In the past few decades, it has been attempted to link this noun to TchB *ṣar* 'hand', by postulating a substantivised possessive adjective (see Van Windekens 1976: 449; Hilmarsson 1987a: 88). This etymology is still accepted by Adams (DTB: 713), who implausibly reconstructs PIE **ǵʰeser-iHeh₂-* '(one) at hand' → 'the beloved' (cf. Gk. χείρος 'under control'). The semantic parallel offered by Icelandic *hand-genginn* 'favourite' is too meagre to support this hypothesis.

In recent times, Otto (2007) argued that the noun is a derivative in **-ih₂* from the verbal root PIE **ser-* 'to attach, connect' (LIV²: 534-5, cf. Lat. *serō* 'to link, join', Gk. εἴρω 'to knit together'). The semantic evolution would have been 'the one who is (physically/mentally) attached' → 'the one who is beloved', via the metaphor of love as a physical/mental attachment (see also Willi 2010: 252-7). From the phonological point of view, this analysis works fine, but from the semantic point of view there are some flaws. Indeed, there is no clear evidence that Tocharian speakers could have considered the physical closeness to both a mother and a lover as aspects of one and the same notion (cf. Kim 2009a: 113). Furthermore, and most importantly, we have no other clear continuants of the PIE root **ser-* 'to attach, connect' in Tocharian.

[66] For the sake of comparison, one could notice that the Tocharian A word for 'lady', TchA *nāśi* (without equivalent in Tocharian B), is mostly attested with vocative value (cf. A106 a6, A149 a3 and b4, probably YQ III.5 a7, and A160 a6).

The inflectional class to which TchB *ṣarya* belongs suggests that we are dealing with a very old derivative or at least with a "noun belong[ing] to the oldest layer of the Tocharian lexicon inherited from Proto-Indo-European" (Kim 2009a: 114). Only two scholars have taken into consideration this important piece of evidence in their etymological discussions. They are Pinault (1989: 58; 2008: 486) and Kim (2009a). For this reason, I will present their proposals in more detail.

Pinault argues that TchB *ṣarya* is a *deví*-derivative of the PIE word for 'sister', thus PIE **su̯é-sr-ih₂* > **s'əsrya* (palatalisation) > **ṣəṣərya* (assimilation) > TchB *ṣarya* /ṣə́rya/ (simplification). At first sight, this development seems difficult, because it requires some irregular changes. However, the fact that PIE **su̯ésor-* is continued in Tocharian as TchB *ṣer*, A *ṣar*, i.e. with the same assimilation and syllabic simplification, may be used in support (Pinault 1989: 58).

From a historical point of view, PIE **su̯ésor-* can be analysed as an original compound of the reflexive pronoun **su̯é-* and the noun **ser-/sor-* 'woman'. The latter can in turn be a good candidate for our Tocharian B noun. This analysis has been proposed by Kim (2009a), who claims that TchB *ṣarya* is the regular outcome of PIE **ser-ih₂* (**h₁-ser-ih₂* in his notation). In most of the Indo-European languages, the noun **ser-/sor-* is attested as the second member of compounds or it has been grammaticalised as a suffix. Besides PIE **su̯ésor-* 'sister', examples include: the feminine numerals for 'three' and 'four' in Indo-Iranian and Celtic (cf. OIr. *téoir*, *cethéoir*, Ved. *tisráḥ*, *cátasraḥ* < **trisr-*, **kʷetesr-*) and the Hittite feminine suffix *-(š)*šara* (cf. Hitt. *išḫa-ššara-* 'mistress' from *išha-* 'master').[67] Probably, also Lat. *uxor* 'wife' belongs here, if an original compound (Ernout & Meillet 1951: 1341; Luján 1996; Harðarson 2014: 32-35; *contra* Pinault 2013: 248ff. with references). However, some other Indo-European languages show continuants of **ser-/sor-* as a free word, even if it is always enlarged with suffixes. We can mention: the thematised Cuneiform Luw. **ašra/i-* 'woman', inferred on the basis of *ašrul(i)-* 'female', *ašrulāḫit-* 'womanhood' and *ašraḫit-* 'id.' (cf. Pinault 2013: 246-7 and Harðarson 2014: 38-41 for the origin of initial *a-*); the theonym Gk. Ἑρᾱ́ < **Sērā* < **sēreh₂* (Willi 2010); YAv. *hāirišī-* 'woman' < **sēr-is-ih₂*; and probably YAv. *å̊ŋhairī* 'id.' as if from **(h₁)-eh₁-ser-ih₂* 'belonging to woman' (as per Harðarson 2014: 41ff.).[68] According to Kim, TchB *ṣarya* may be added to this list, too.

A further objection put forward by Pinault (2013) is that a recharacterisation of a feminine word by means of the feminine *deví*-suffix is redundant.[69] However, the forms

[67] See recently Gąsiorowski (2017) for hypothetical continuants of *(-)*sr-ih₂* in Germanic.

[68] Kim (2005; 2009a) proposes to add Ved. *strī-*, YAv. *strī-*, Khot. *strīyā-*, Oss. Digor *silæ*, Iron *syl* to this list, but the origin of the dental stop in these forms would be very difficult to justify both phonologically and analogically. See the criticism by Pinault (2013: 242).

[69] Pinault (2013: 241-2) further claims that Tocharian has already two terms for 'woman' (the generic TchB *klyiye* 'woman, female' and the specific TchB *śana* 'wife'), and that a third noun with similar semantics would be unnecessary, because it would partially overlap in meaning with *śana*. This criticism, however, does not hold, because it is hardly surprising that the lexicon of a given language has cases of quasi-synonymy. Actually, a good example in this sense is Tocharian A, which,

just discussed point to the reconstruction of an acrostatic root noun **sor-/ser-* that lost its autonomy as a free word soon after PIE, since it became a feminine suffix, a second member of compounds, or it has always been recharacterised with some other suffixes. As a consequence, the claim by Kim (2009a) that PIE **ser-/sor-* has been enlarged with the productive and highly transparent derivational suffix **-ih_2* cannot be discarded so easily, although the lack of any exact morphological match of **ser-ih_2* in other Indo-European languages may require some caution.

To conclude, whatever ultimately the root, TchB *ṣarya* is derived with the ablauting feminine suffix **-ih_2/-$i̯éh_2$-* (of the *devī́*-type). Thus, the protoform from which this noun comes from must have had the same inflection as TchB *lāntsa*: nom.sg. *-ya* is the outcome of nom.sg. **-ih_2* > **-$yă$* > PTch **-ya*, while the obl.sg. *-yo* is from the weak stem **-$i̯eh_2$-* > **-$yā$-* > PTch **-$yå$*.

3.5.1.3. Summary

Summing up, we have seen that the inflection of the feminine substantives belonging to the *śana*-type has to be interpreted as the outcome of the archaic proterodynamic inflection in **-h_2/-$éh_2$-* and **-ih_2/-$i̯éh_2$-*. In a Proto-Tocharian stage, the weak stem (or probably the genitive form) has been reinterpreted as the Tocharian oblique. The reason why this reanalysis took place is easy to envisage: after the apocope of final consonants in Pre-Proto-Tocharian, the nominative and accusative merged formally. If this interpretation has already been proposed in order to explain the inflection of TchB *śana*, as far as the two other nouns are concerned, it was usually assumed that the PIE acc.sg. **-ih_2-m* > PTch **-ya* had been analogically modified to PTch **-$yå$* after the obl.sg. *śano* (Winter 1981: 938; Pinault 2008: 486; Malzahn 2011: 89 fn.14, etc.). However, the *śana*-type is not a productive inflectional class, since it is confined to isolated feminine substantives. If we assumed that TchB *śana* is the only noun whose inflection is original, then TchB *lāntsa* and TchB *ṣarya* are not expected to be analogically included in this class, but rather in the *aśiya*-type, which is a productive class of feminine nouns referring to female entities. Analogical extension to this inflectional type would have also been supported by the fact that the majority of the *aśiya*-nouns have (suffixal) *-y-* or palatalisation/assibilation of the stem final consonant, just like TchB *lāntsa*, A *lānts* (assibilation) and TchB *ṣarya*. As a consequence, the inflection of TchB *lāntsa* and TchB *ṣarya* must be original.

In conclusion, all nouns of the *śana*-type have continued the archaic inflection inherited from Proto-Indo-European: the contrast between nom. sg. *-$^{(y)}a$* vs. obl. sg. *-$^{(y)}o$* mirrors the ablauting alternation between the full and the zero grade of the suffix **-(i)h_2*,**-($i̯$)eh_2-*, where the original genitive singular has been reanalysed as the Tocharian oblique.

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besides TchA *$k_u$li* and TchA *śäṃ*, has a third noun that precisely means 'lady', i.e. TchA *nāśi* (on which see §3.5.2).

3.5.2. THE *aśiya*-TYPE

Tocharian B nouns with nom.sg. *-ʸa*, obl.sg. *-ʸai* and their Tocharian A correspondents

The nouns belonging to the *aśiya*-type are grammatically feminine and denote natural female referents. This is therefore a feature that the *aśiya*-type and the *śana*-type have in common. On the other hand, these two inflectional classes are clearly distinct as regards their inflection and productivity. The two major inflectional characteristics distinguishing their paradigms are the oblique singular and the stem forming the derivatives and the plural: in the *aśiya*-type, the former ends in *-ʸai-*, and the latter in *-ʸa-*. Furthermore, the great majority of these substantives show palatalisation of the stem-final consonant in both the singular and the plural inflection. The paradigm of the Tocharian A equivalents has different but uniform inflectional patterns: a usually unmarked nominative singular, obl.sg. *-āṃ*, gen.sg. *-e*, and the differentiated plural *-āñ*| *-ās*.[70] The Tocharian paradigms are therefore identical to the feminine adjectival type ending in pl. TchB *-ana*, TchA *-āñ*| *-ās* (see §4.3.3.1).

From a synchronic point of view, the *aśiya*-type is very productive: if a new feminine noun with female referent needs to be created, it is always added to this class. Furthermore, several feminine literary and non-literary proper names belong here, mostly borrowed from Sanskrit or Uyghur (e.g. the girl TchB *Cañca*, obl. *Cañcai*; the princess TchB *Nānda*; the queen TchB *Yaśodhara*, obl. *Yaśodharai*; the queen obl. TchA *Kṣemāṃ*; the Uyghur proper name TchA *Kutluk*, obl. *Kutlukāṃ*, see Carling 2009: 148 and Ching 2010: 440 fn. 221). In Tocharian B, these loanwords are sometimes extended either with the suffix *-śka* or with *-kka* (TchB *Lariśka*, *Priśka*, *Räknāśka*, etc.).

The most representative member of this class, i.e. TchB *aśiya*, A *asi* 'nun', is also a loanword, from either OKhot. *aśiā-* 'id.' or a Middle Indian language.[71]

The derivational processes involved have been described in the previous chapter (§2.4.2) and analysed thoroughly by Malzahn (2013) and Hartmann (2013). In this paragraph, I focus on major derivational and etymological patterns that these nouns have in common. Indeed, a curious thing that should be highlighted is that no nouns directly inherited from Proto-Indo-European belong to the *aśiya*-type. Indeed, inherited nouns that figure in this class have always been involved in some derivational process. Examples

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[70] In Tocharian A, nouns of the *aśiya*-type usually end in a consonant, or in *-i* in the nominative singular. Sporadic cases of final *-ī* and *-ā* are attested, but they are loanwords from either Sanskrit or Tocharian B.

[71] In my view, it is still uncertain if Tocharian borrowed this word from Khotanese or not. Indeed, the noun is neither of Tocharian nor of Khotanese origin, but it may have been borrowed in both languages from a Middle Indian form linked to Skt. *arya-*/*ārya-* 'noble'. The source from which the Khotanese word derives is usually reconstructed as Prākrit **aźyā-* (Gāndhārī ?) < *ayyā* (cf. Pāli *ayyā*), in turn from Skt. *āryikā-* (Bailey 1967: 9). This Prākrit **aźyā-* may have been directly borrowed in Tocharian as **aśya-*. For the phonological development *y* > *ś* [ź] in Prākrit, see von Hinüber (2001: 174).

include: the substantivised adjective TchB *eṣerña** 'sister' (attested only in the plural *eṣerñāna* in B107 a5 and b3) < PTch **æ(n)-ṣær-ña* (Pinault 2008: 129); TchB *ṣerśka* 'little sister', which displays the same base of the previous noun but extended with the suffix *-śka*; TchB *śamñāṃśka* 'girl' (on which see below).

The feminine suffix *-(ñ)ña* is of adjectival origin: etymologically, it is the paradigmatic feminine form of TchB *-ñṅe* (Van Windekens 1979: 105, 123; Malzahn 2013: 115f.; see §4.3.3.2). It is also the only native suffix used for creating oppositional feminine nouns. In some cases, we have the substantivisation of both masculine and feminine forms of a *ñṅe*-adjective, as in *ostañṅe* 'male householder' : *ostañña* 'female householder' and *riñṅe* 'male citizen' : *riñña* 'female citizen'. In some other cases, *-ñña* is clearly an independent morpheme. This implies that TchB *-ñña* has been grammaticalised as a feminine suffix in the history of Tocharian.[72] Examples are: TchB *ñäkteñña* 'goddess' from *ñakte* 'god', TchB *kaṭapūtañña** 'female demon' (= Skt. *kaṭapūtanī-*) from TchB *kaṭapūtane** (from Skt. *kaṭapūtana-*), TchB °*pläṅkṣiñña** 'female seller' from TchB °*pläṅkṣi* 'seller', TchB *yakṣañña* 'female yakṣa' from TchB *yākṣe* 'yakṣa'. There is no corresponding suffix in Tocharian A. Indeed, all nouns formed with TchA *-ññā* are loanwords from Tocharian B (e.g. TchA *ñäkteññā* from TchB *ñäkteñña*, cf. §2.4.2). Another frequent Tocharian B morphological process aimed at creating oppositional feminine nouns provides for the substitution of the final vowel of the masculine noun with TchB *-a*, as in *oṅkolma* 'she-elephant' from *oṅkolmo* 'elephant', *mañiya* 'female servant' from *mañiye* 'male servant' (borrowed from Iranian **māṇi̯a-* 'servant', Tremblay 2005: 435), and *mcuṣka* ~ *mñcuṣka* 'princess' from TchB *mcuṣke* ~ *mñcuṣke* 'prince'.

All other suffixes, including TchB *-śka* and *-kka*, have been borrowed from Iranian (Klingenschmitt 1975: 149f.), the most common being TchB *-āñca*, A *-āñc* (Müller 1908: 47; Gershevitch 1961: 158). They are often used to form feminine nouns to loanwords from Indian. Examples are: TchB *brahmaṇāñca* (attested once in IT956 a2), A *brāmnāñc* 'female brahmin' (= Skt. *brāhmaṇī-*) from TchB *brāhmaṇe*, A *brāmaṃ* (loanword from Skt. *brāhmaṇa-*); TchB *upāsakāñca*, A *wāskāñc* 'female lay-discipline' (= Skt. *upāsikā-*), from *upāsake* '(male) lay-discipline' (loanword from Skt. *upāsaka-*); TchB *parivrājakāñca** 'female mendicant', from an unattested masculine borrowed from Skt. *parivrājaka-* 'mendicant'. In Tocharian A, this suffix is particularly frequent: TchA *karmavāckāñc** 'female Karmavācaka' from *karmavācak** (loanword from Skt. *karmavācaka-*); TchA *kānikāñc* 'girl, virgin'; TchA *ārāntāñc** 'female arhat' from *ārānt* 'arhat'; TchA *kränolāñc* 'adopted girl'; TchA *pravārāpakāñc* '?' (cf. Tamai 2014: 391 fn. 88); TchA *ṣāmnerāñc* 'feminine novice' from *ṣāmner* 'novice'; *pretāñc* 'female Preta' from *pret* 'Preta' (loanword from Skt. *preta-*); cf. also TchA *mäśkitāñc* 'princess' from *mäśkit* 'prince'.[73]

[72] On the value of TchB *-ñṅe* and its grammaticalisation as a feminine suffix, see §4.3.3.1.

[73] As pointed out by Pinault (2015: 173ff.), TchA *mäśkit* can be used both with masculine and feminine referents. The specific feminine *mäśkitāñc* is probably a secondary form, which corresponds semantically to TchB *mcuṣka* ~ *mñcuṣka*.

There are two Tocharian A members of the *aśiya*-type whose origin deserves to be treated in more detail. They are TchA *śomiṃ* 'girl' and TchA *nāśi* 'lady'.

The first noun is usually interpreted as a derivative of the masculine *śom** 'boy' (attested once in A63 a2 as an oblique TchA *śomäṃ*), by means of the suffix TchA *-iṃ*, which is equated with the feminine suffix TchB *-(ñ)ña* by Poucha (1955: 327) and Klingenschmitt (1994: 368). However, I found no other feminine nouns built with the feminine suffix TchA *-iṃ*, and I therefore see no reason for equating TchB *-ñña* to TchA *-iṃ* in *śomiṃ* 'girl'.

On the other hand, Peyrot (2012: 193) links TchA *śomiṃ* 'girl' to the adjective TchB *śāmña*, which is the feminine form of *śāmñe* 'human'. Although the derivational process involved is obscure (DTB: 682), TchB *śāmñe* seems to be a secondary relational adjective in *-ñña* from TchB *śaumo* 'human being' (cf. TchB *śay-* ~ *śaw-* 'to live', Gk. ζώω, Ved. *jīvati*, YAv. *juuaiti* < PIE **g*^{w}*ih*$_3$*-u̯e/o-* 'to live'), with reduction **-au-* > *-a-* before a consonant cluster. The derivation of TchA *śomiṃ* from PTch **śawmäñña* works phonologically fine, but the fact that Tocharian A does not show any continuant of the correspondent masculine **śawmäñnæ* is suspicious.

The masculine TchA *śom** 'boy' has long been equated with TchB *śaumo* 'human being' (Pinault 2008: 520). They derive from PTch **śawmo*, an original adjectival derivative in *-mo* < PTch **-mo*(*n*) from PTch **śaw-* 'to live'. Now, since TchA *śomiṃ* inflects as the feminine counterpart of an adjective in TchB *-mo*, A *-m* (of the *klyomo*-type, cf. nom.sg.f. TchB *klyomña*, A *klyomiṃ*; see §4.3.3.2), I believe that *śomiṃ* and *śom** belonged to the same adjectival paradigm in Proto-Tocharian, which can be reconstructed as follows: nom.sg.m. **śawmo*, obl.sg.m. **śawmon*; nom.sg.f. **śawmäñña*, obl.sg.f. **śawmäñña* (similarly, Pinault 2008: 520).

In Tocharian A, both the masculine and the feminine have been substantivised with the meaning of 'boy' and 'girl', while in Tocharian B only the masculine survived with the generic meaning of 'people, man' (but with the deviant plural TchB *śāmna*, on which see §3.6.1.3). The expected Tocharian B counterpart of TchA *śomiṃ* is probably attested in the problematic form TchB *śamñāṃ-śka* 'girl'. Adams (DTB: 678) improbably segmented this noun as *śamñ-āṃśka*, claiming that TchB *-āṃśka* "denotes females". However, this hypothetical suffix is not attested elsewhere. Rather, TchB *śamñā°* is to be linked etymologically with TchA *śomiṃ* as the regular outcome of PTch **śawmäñña*. The final nasal in the Tocharian B stem *śamñāṃ-* may have been taken from *soṃśke* 'dear son' (cf. also the much less conclusive derivatives *ylaṃśke* 'young gazelle', *wlaṃśke* 'soft, pliable').[74]

[74] Even in these forms the origin of the nasal is debated. Klingenschmitt (1975: 150ff) and Winter (1985) argue that *-ṃ-* /-n-/ has been analogically extended after the accusative singular of the *n*-stems. This analysis is convincing in the case of *soṃśke*. Klingenschmitt (1975: 154) seems to go a little further: he argues that the *-ṃ-* in *śamñāṃśka* is to be interpreted as an archaic residue of the Proto-Tocharian state of affairs, where the accusative **-an* and the (dative-)locative **-ay* were still formally and functionally distinguished. Afterward, Tocharian B extended **-ay* as the oblique, while Tocharian A has further reanalysed the locative as a genitive **-ay* > *-e*. However, the obl. sg. *-ṃ* is only limited to masculine nouns in Tocharian B, and its spread to the feminine in Tocharian A seems

The second noun, TchA *nāśi* 'lady, mistress', is the feminine counterpart of TchA *nātäk* 'lord, master'. These two words are supposed to be the equivalents of Greek ἄναξ, -κτος 'lord, ruler' (cf. Mycenaean *wa-na-ka*, Beotian *Fάναξ*, etc., and also OPhrygian *vanak*, if not borrowed from Greek) and ἄνασσα, -ης 'lady, queen'. Winter (1970: 53) first proposed this lexical isogloss, which is today still supported by Adams (2017: 1376).

However, there are serious problems with this etymology: (1) the mismatching order of the consonant *-t-* and *-k-* in the masculine noun, and (2) the loss of initial **u̯-* in Tocharian. Moreover, the reconstructed term from which the Greek word derives is a puzzle and recent etymological dictionaries raise the possibility of a loanword from a non-Indo-European language (Chantraine 1999: 84; Beekes 2010: 98-9). On the other hand, if Gk. ἄναξ is inherited, the most promising etymology has been proposed by Szemerényi (1979: 217), also followed by Hajnal (1998: 66). Szemerényi reconstructs an endocentric determinative compound PIE **u̯n̥-h₂eǵ-t-* 'one who led the tribe', whose first member was PIE **u̯en-* 'kin, tribe', and the second **h₂eǵ-* 'to lead'.[75] The final *-t* is interpreted as an agent suffix. If one wanted to link TchA *nātäk* to this protoform, a metathesis **kt* > **tk* should be postulated, which is without parallel, however.[76] Furthermore, the loss of the semivowel in such a phonetic environment is also unexpected. All these phonological difficulties invalidate the etymological link between Tocharian and Greek: their formal resemblance is totally accidental.

Van Windekens (1976: 313) connected TchA *nātäk* to the verb TchA *nätk-* 'to hold off, push away' (see also Willms 2010: 251 fn.92), but this proposal has flaws from both the formal and the semantic point of view. On the formal level, we should postulate a very old derivative built on a lengthened **o*-grade of the root (cf. instead the τόμος-derivatives, TchB *snai-netke* 'unprompted', TchA *natäk* 'urge, pressure', Malzahn 2012: 167). On the semantic level, a semantic development 'the one who pushes away' → 'the lord' does not seem reasonable to me.[77]

Since TchA *nātäk* cannot be derived from any internal source, I looked for a foreign origin. One would be tempted to link TchA *nātäk* 'lord' to Skt. *nāthá-* (m.) 'protector, possessor, lord' (MW: 534; SWTF: III, 15; see Pisani 1941-1942), which can also be found in Pāli *nāthá-*, Pkt. *ṇāha-* and in Gāndhārī *nasa-*. This noun is frequently attested in apposition to gods and men, cf. Skt. *govinda-nātha-* name of Saṃkara's teachers, *nāka-nātha-* 'sky-lord',

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to be a recent and independent development. Furthermore, the origin of TchB *śamñāṃśka* seems to be quite recent, probably of Pre-Tocharian B stage, also because we have no Tocharian A equivalent of the suffix TchB *-śke/-śka*.

[75] See Willms (2010) for a slightly different reconstruction, which does not invalidate however the morphemic segmentation.

[76] In order to get out of this problem, Winter (1970: 53f.) reconstructed PIE **wnatk-* and further assumed a metathesis of the cluster **-tk-* > **-kt-* in Greek (like **τίτκω > τίκτω). However, he did not give any etymological segmentation of the protoform.

[77] Following Thomas (1964: 110), Van Windekens erroneously translated TchAB *nätk-* as 'soutenir, appuyer', and thus claimed that TchA *nātäk* originally meant 'qui soutient, puissant'. See Jasanoff (1978: 39) for the correct meaning of the verb.

loka-nātha- 'saviour of the world (epithet of the Buddha)'. Furthermore, a *ka*-extended variant of Skt. *nātha-* is also attested: Skt. *nāka-nāthaka-* 'sky-lord', *gaṇa-nāthaka-* 'epithet of Śiva; of Gaṇeśa; leader of the attendants of any god; head of an assemblage corporation', *vṛkṣa-nāthaka-* 'lord of trees', *gaṇa-nāthakā-* 'Durgā' etc. It is therefore probable that Tocharian borrowed this word from a Middle Indian intermediary of Skt. *nāthaka-*, integrating it as either PTch **natakæ* (cf. TchA *kātak**, B *kattāke* 'householder' < **ka*(*t*)*takæ* from a Middle Indian *ka*-extended variant of Skt *gṛhasta-*, cf. Khot. *ggāṭhaa-*, Pinault 2008: 69), or PTch **natəkæ* (cf. TchA *sāṃtäk*, B *sāṃtke* 'medicine, remedy' < **santəkæ* from a Middle Indian equivalent of Skt. *śāntaka-*).

It is clear that TchA *nāśi* 'lady' is the derived feminine counterpart of TchA *nātäk*. There may however be an additional problem related to this form. Indeed, evidence for the palatalised variant of the cluster *-tk-* is extremely meagre in Tocharian. In the verbal roots in *-tk-*, only the *-t-* get palatalised, yielding *-ck-* (cf. TchA the gerundive *kāckäl* from TchA *kātk-*, see Burlak 2000: 128; Malzahn 2010: 460f.; Peyrot 2013: 76). The same kind of palatalisation also occurs in TchA *nācki* 'lords', the nom.pl. of *nātäk*. This nom.pl. is suspicious, since it is limited to this noun and TchA *ratäk* 'army', whose instr.pl. *rackisyo* (A183 a5) is very irregular (TEB §181).[78] I see two possibilities to explain the palatalisation in TchA *nāśi* 'lady'. If PTch **-tk-* always palatalised as *-ck-*, then TchA *nāśi* cannot derive from TchA *nātäk* directly. The derivation probably occurred at an earlier stage. Accordingly, TchA *nāśi* is derived from the earlier **natakæ*/**natəkæ*, through the addition of the palatalising feminine suffix **-^{y}a*. We can therefore reconstruct the following development: **natak^{y}æ* > **nataś^{y}a* (palatalisation) > **natəkś^{y}a* > Pre-TchA **nātśi* > *nāśi* (assimilation and simplification). Otherwise, one may think that PTch **-y-* palatalised the cluster **-tk-* differently, yielding Pre-TchA **-śś-*: **natk^{y}a* > **naśśi* > TchA *nāśi* (Hackstein 2004: 175, 2017: 1328).

To sum up, we have seen that not a single member of the *aśiya*-type can be traced back to Proto-Indo-European, since all nouns belonging to this inflectional class are of late origin. Therefore, it could be concluded that the *aśiya*-type became a productive class of feminine nouns only in a relatively recent Proto-Tocharian period. Indeed, given the fact that we have clear examples of nouns with the same origin and matching inflections in both Tocharian languages, the origin of this inflectional class must be sought in a Proto-Tocharian stage. Taking the common antecedent of TchB *aśiya*, A *aśi* as an example, we can reconstruct the following paradigm:[79]

[78] *Pace* TEB §181, the nom.pl. of TchA *ratäk* 'army' is not *racki*, but probably *rackiñ* (THT1134 a3; cf. obl.pl. *rackis** A183 a5).

[79] The Proto-Tocharian paradigm of the *aśiya*-type follows the reconstruction of the Proto-Tocharian paradigm of the feminine adjectival inflection (Peyrot 2012: 200-4). For further remarks on this topic, see §3.7.2.5, §4.3.3.1.

Table III.9. Evolution of the *aśiya*-type from Proto-Tocharian to Tocharian A and Tocharian B

	PTCH		
NOM.SG.	**aśəya*	>	TchB *aśiya*
		>	TchA *aśi*
OBL.SG.	**aśəya*	>>	TchB *aśiyai*
		>>	TchA *aśśāṃ*
GEN.SG.	**aśəyay*	>>	TchB *aśiyāntse*
		>	TchA *aśśe*

As can be seen, in a Proto-Tocharian stage nominative and oblique formally overlapped. As a remedy, in both Tocharian B and Tocharian A the oblique was recharacterised, but in a different way: Tocharian B reanalysed the gen.sg. **-ay* (< dat.sg. PIE **-eh₂-ei̯*) as the oblique and further acquired the gen.sg. *-ntse* from the *n*-stems, while Tocharian A turned the original dative PTch **-ay* > TchA *-e* into the genitive and took *-āṃ* from the *n*-stems (see recently Peyrot 2012). As we will see, this evolution coincides with that of the feminine in the adjectives with which the *aśiya*-type shares its inflection (see §4.3.3.1).

On the other hand, the plural inflection poses a special problem, because the comparison between the two Tocharian languages invalidates a direct Proto-Tocharian reconstruction. Indeed, where Tocharian B attests an undifferentiated plural ending *-a-na*, Tocharian A has the differentiated plural nom. *-āñ*, obl. *-ās*. Since this mismatch can also be found in the adjectival inflection, where TchB *-ana* consistently corresponds to TchA *-āñ*| *-ās*, I will return to this problem in the next chapter (see §4.3.3, §4.3.4.4, §4.3.4.5). In the following, I will focus on the synchronic distribution and the diachronic evolution of the endings TchB *-na* and TchA *-äṃ* in the noun inflection.

3.6. ORIGIN OF THE PLURAL ENDINGS TCH B *-na* AND TCH A *-äṃ*

The two plural endings TchB *-na* and TchA *-äṃ* are usually considered to be the outcome of the original neuter plural of nasal stems, which underwent reanalysis: PIE **-n-h₂* > **-n-ă* > PTch **-na* > TchB *-na*, A *-(ä)ṃ*. Despite this alleged common origin, they have a different distribution: there are no Tocharian B nouns with plural in *-na* matching Tocharian A nouns with plural in *-äṃ*. Their productivity is different as well: TchB *-na* is the plural marker of a fair number of nominals, while TchA *-äṃ* is confined to five substantives only. The aim of this section is to trace the origin of these plural markers, analysing their synchronic distribution and diachronic evolution. In the following paragraph, I will focus on Tocharian B; afterward I will deal with Tocharian A (§3.6.2). At the end of the section, I will comment on the collected data from a diachronic perspective (§3.6.3).

3.6.1. DISTRIBUTION AND EVOLUTION OF TCH B *-na*

A basic parameter to divide Tocharian B nouns with the plural ending *-na* is grammatical gender. We have seen that the members of the so-called *śana-* and *aśiya*-types are

feminine. With the exception of the masculine TchB *śaumo* 'man, person', all other Tocharian B nouns with plural in *-na* are alternating. This gender-based subdivision mirrors a formal one: feminine nouns are differentiated for the nominative and the oblique singular, while alternating nouns have one form for both the nominative and the oblique in the singular.

I have already discussed the feminine nouns in the previous section. The alternating nouns will be examined in the following paragraphs. On the basis of three factors (i.e. the singular paradigm, the nominal stem, and the phoneme preceding the plural marker), they can be grouped into various subclasses (TEB §§162-164). Since the aim of this section is to trace the origin of the plural marker TchB *-na*, it is more convenient to divide these nouns into two groups: (1) nouns that have the basic plural TchB *-na*; (2) nouns that have a slightly different plural TchB *-una*. The first group will be scrutinised below; the second group will be the topic of the subsequent paragraph (§3.6.1.2).

3.6.1.1. Alternating nouns with the plural ending TchB *-na*

Although TchB *-na* is more productive than the etymological correspondent TchA *-äṃ*, it seems to represent a closed category in the historical phase of Tocharian B. In this respect, an important evidence is that only a very few loanwords are morphologically inserted into this class (e.g. TchB *tsäṅkana* 'naked barley', if correctly identified as a loanword from Chin. *qīng* 青, an abbreviated form of *qīngkē* 青稞 'highland barley',[80] and probably TchB *karāk* 'water pot', on which see the main text below).[81]

Most of the Tocharian B alternating nouns with plural in *-na* show etymological and derivational problems. In certain cases, this ending is to be interpreted as an innovation; in some others, it can be traced back to Proto-Indo-European. The latter is the case of four nouns that all together make up a quite coherent subclass. The members of this subclass are: (1) TchB *ṣarm* (A *ṣurm*) 'motive, cause, origin', with variant plurals *ṣarmna*, *ṣärmanma*, *ṣärmana*, from PIE **sṵer-men-* (Lat. *sermō* 'speech') or PIE **(s)k^{w}er-men-* (cf. Skt. *kárman-* 'action, result', Lubotsky 1988a: 91);[82] (2) TchB *sārm* 'germinated seed', pl. *sārmna,*

[80] See Ching (2010: 384, 2016: 52f.). Lubotsky & Starostin (2003: 264) claim that Chin. *qīng* 青 'blue, green' has also been borrowed in Tocharian as the adjective TchAB *tseṃ* 'blue' (see also DTB: 810). See also the discussion in Blažek (2016: 232f.) and Blažek & Schwarz (2017: 62-3).

[81] In his dictionary (DTB: 678-9), Adams refers to a noun *śaṃts* 'announcement' (from Skt. *śaṃsa-*), allegedly attested in the perlative plural in AS7H a6 *śaṃtsnasa spärkālñe westrä* "the dissolution is learned/spoken of by announcements" (ed. by Sieg 1938: 36; transl. by Adams). However, the current reading of the line is rather *pärnāññana* (*wäntarwa*)*ṃ*(*ts*) *ś*(*r*)*aṃts tūsa spärkālñe westrä* "the dissolution is therefore said [to be] the removing of external (objects)" (cf. Georges-Jean Pinault apud CETOM). TchB †*śaṃts* 'announcement' is therefore a ghost word.

[82] Peyrot (2008: 110) argues that the older plural must have been TchB *ṣärmanma*, since it is never attested in late and colloquial texts. He claims that *ṣärmanma* developed a plural in *-na* after dissimilation of the two labial nasals. Although this explanation is phonologically fine, I think it is morphologically less probable. First, as pointed out by Peyrot himself, the plural *-nma* is much more

sarmana, from PIE **sōr-men-* (Peyrot 2018: 19-20; DTB: 747; Blažek & Schwarz 2017: 207); (3) TchB *ñem* (A *ñom*) 'name', pl. *ñemna*, from PIE **h₁neh₃-men-* (or **h₃neh₃-men-*); (4) TchB *stām* 'tree', with irregular pl. *stāna* (> **sta*(*C*)*mna* (?))[83] from PIE **sth₂-men-*.

Their derivation from PIE **men*-stems is made evident by the final *-m* in the singular, which is from Pre-PTch **-mən* < PIE **-mn̥*. The Tocharian A correspondents have the final *-m* as well, but the secondary plural *-nt* /*-ntu* (cf. TchA *ṣurm* : *ṣurmant*, TchA *sārm* : *sārmäntu*).[84]

The plurale tantum TchB *särwāna* 'face, countenance' has occasionally been compared with Ved. *sr̥kvan-* 'corner of the mouth, lock-jaw' (cf. also Ved. *srákva-* 'tooth, fang', Schmidt 1980: 409; EWAIA: II, 783-4). There are two problems with this comparison, however. They are: (1) the unexpected loss of **-k-* (if original) and (2) the lack of cognates forms in other Indo-European languages. For these reasons, Hilmarsson (1989a) analysed TchB *särwāna* as a **men*-stem formed to PIE **streuH*(*d*)- 'to swell'. According to Emmerick (1990), a similar semantic development could be envisaged in Khot. *śśāman-* 'face', from PIE **ḱeu̯-* 'to swell'. [85] Otherwise, one may wonder whether TchB *särwāna* 'face, countenance' has been borrowed from a Middle Indian continuant of Skt. *sr̥kvan-*, although the cluster *-kv-* is expected to have yielded *-kk-* in Prākrit (Pischel 1981: 240; see further Schmidt 1987, 2018: 211; Hackstein 1995: 121f.).

Among nouns with doubtful etymology, we find TchB *kārak* (pl. *karākna*) 'branch (of a tree)' (cf. TchA *karak** 'wooden part of a bow', which is a hapax legomenon attested as a perl.sg. in A316 a1, Carling 2009: 102). Adams (DTB: 150) reports the nominative of this form as *karāk* /karák/, which is perhaps to be considered as a separate word. Indeed, one can argue that TchB *karāk*, with stressed last syllable, actually means 'pot, vessel'. This noun is attested three times only in AS13D at lines a4 (*kauṃ-pirko kalymi war past ñārka-ñ karā*(*k*) "water kept me away from the eastern direction, the vessel …"), b6 (/// *ñiś karāk aimar war kewu* "… I will take a vessel and I will pour water"), and b7 (*karākmeṃ war kū*(*tär*) "water from the vessel will be poured …"). This *karāk* is a loanword from Skt. *karaka-* 'water-vessel'.

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productive than *-na*. Second, there are no other nouns with singular *-m* and plural *-nma*. As a consequence, I believe that the original plural is TchB *ṣarmna*, which is attested in two archaic documents (B133 a3 and THT1302 a3) and represents the less attested plural variant. Later, two competitive plurals have been created: *ṣärmanma* (since archaic stage) and *ṣärmana* (with epenthesis). The latter becomes the standard variant, since it is attested only in classical and late documents. A similar analysis can also explain the plural of *sārm* 'seed', with old plural *sārmna* and late plural *sarmana* (attested in the late document AS14.1).

[83] The expected plural form would have been ***stamana*, ***stāmna*, or ***stānma*. The lack of *-m-* in the plural led some scholars to reconstruct a PIE root enlarged by *-d-* (Hilmarsson 1986a) or *-s-* (Adams DTB: 777), with the subsequent loss of the labial nasal in the cluster *-Cmn-*.

[84] On the evolution of the PIE **men*-stems in Tocharian, see Malzahn (2006) and Pinault (2008: 495).

[85] See Adams (DTB: 750-1) for yet another etymology.

On the other hand, TchB *kārak* 'branch' (with stressed first syllable according to Hilmarsson 1996: 83) is attested once as *karak* (B281 b5) and twice as a plural, *karakna* (B554 a4) and *karākna* (B3 a8). The use of *-a-* (here /a/) instead of *-ā-* (/á/) is due to the archaic linguistic stage of B281 and B554. The long-spelled *-ā-* in the plural *karākna* /karákna/ (B3 a8) does not allow to reconstruct a nom.sg. *kārak* /kárak/ with any certainty. This word has been traced back to Proto-Indo-European by Adams (DTB: 150) and Hilmarsson (1996: 83).

However, one may also wonder whether TchB *kārak** 'branch' and *karāk* 'pot, vessel' are actually just one word and that the ambiguous spelling TchB *karak* in B281 b5 is to be interpreted as *karāk*. If so, this *karāk* would mean both 'pot' and 'branch of a three' and should be a loanword from Skt. *karaka-*, which is also used as a proper name of several types of plants (MW: 254).

We further find two pluralia tantum ending in TchB *-na* with a clear singulative meaning: TchB *ersna* 'appearance' and the hapax legomenon TchB *yasna** 'treasury' (cf. THT1114 a4 loc.pl. *prakrona yasnane* "in a firm treasury"). Adams (DTB: 103 and 526) argues that they are old derivatives of TchB *ere* 'form, appearance' and TchB *yasa* 'gold' respectively. The derivation of the first noun from a PIE **s*-stem **h₃er-os-* > TchB *ere* has long been accepted (cf. Gk. ὄρος 'mountain', Skt. *ṛṣvá-* 'high').[86] The second noun is probably from **h₂u̯esh₂* > PTch **wə̄sa* > TchB *yasa*, A *wäs*, an original collective formation (Pinault 2012: 197; Hackstein 2017: 1318-9; but see also Driessen 2003: 348-50, who explained TchB *yasa*, A *wäs* as a loanword from Proto-Samoyedic **wesä*). If these derivations are correct, it can be argued that the plural ending PTch **-na* has been added in a Proto-Tocharian stage in order to recharacterise the plural form of some **s*-stems.

As far as TchB *ersna* is concerned, another possibility can be envisaged. It can be argued that this noun goes back to the plural form of an original heteroclitic paradigm. Comparative evidence may support this reconstruction. In Hittite, we find the heteroclitic stem *ḫaršar*, *ḫaršn-* 'head, person, beginning'. In the past decades, this noun has been variously linked to PIE **ḱérsh₂-s-r*, **ḱérsh₂-s-n-* 'head', but this derivation has to cope with formal difficulties (Kloekhorst 2008: 314-6). For this reason, Goetze (1937: 492) suggested the comparison with Gk. ὄρος 'mountain' and further reconstructed PIE **h₃er-s-r*, **h₃r-s-n-* (cf. also Hitt. *ḫaršiš* / *ḫaršai-* 'high, risen' < PIE **h₃ers-i*, **h₃rs-eḭ-*, Kloekhorst 2008: 315-6). From the formal point of view, this reconstruction works fine, and if we add TchB *ersna* < **h₃er-s-nh₂* it acquires even more credit. If so, Tocharian could have continued both the *s*-stem **h₃er-os-* > TchB *ere* and the derived heteroclitic stem **h₃er-s-nh₂* > TchB *ersna*.[87]

Although TchA *aräṃ* 'appearance, form' should belong here (Carling 2009: 20), it is unclear how it is related with TchB *ersna*, because the change **-rsn-* > *-rn-* is without

[86] The fact that this noun is synchronically an *e*-stem (cf. the obl. pl. *ereṃ* in B566 a6) is secondary (cf. §3.8.1).

[87] In passing, it could be noted that the singular TchB *śalna* 'quarrel' may originally belong here as well, if it is an old plural form (which it seems to be). For an etymological suggestion, see Malzahn (2011: 100).

parallel in Tocharian A.[88] Rather than deriving TchA *aräṃ* from a different protoform (Van Windekens 1976: 149; DTB: 99), however, one may think that an original Pre-TchA **arsäṃ*, the regular outcome of PTch **ærsna*, has been influenced by the noun TchA *ar** 'form', the unattested Tocharian A counterpart of TchB *ere*. If so, TchA **arsäṃ* has first lost internal **-s-* and then has been reinterpreted as a singular by aligning the singulative meaning with the singular number (cf. §3.6.3).

3.6.1.2. Alternating nouns with the plural ending TchB *-una*

All other alternating nouns belonging to Class II.1 attest a slightly different plural formation ending in TchB *-$e_u$na* / *-auna* or TchB *-una*. The historical interpretation of these markers is debated. Before pursuing this diachronic matter, however, these Tocharian B nouns and the Tocharian A matching forms have to be scrutinised closely from a synchronic perspective.

We find TchB *-$e_u$na* / *-auna* in two separated groups. The first group contains lexical plurals with a clear singulative meaning. They are: TchB *palauna* 'praise', TchB *tarśauna* 'deception(s)', and TchB *krentauna* 'virtue(s)'. Tocharian A matching nouns are only found for the former two: TchA *paloṃ* and TchA *tārśoṃ*. Although they closely resemble their Tocharian B counterparts, these two nouns are grammatically singular. It can be argued that they were plurals in Proto-Tocharian and that Tocharian A has later aligned the singulative value of the meaning with the singular morphology of the number (see §3.6.3).

The second group consists of nouns that have TchB *-i* in the singular and TchB *-$e_u$na* / *-auna* in the plural. They are: TchB *reki* 'word' : *rekauna* (TchA *rake* : *rakentu*), TchB *ṣewi* 'pretext' : *ṣewauna*, and TchB *yapoy* 'land' : *ypauna* (TchA *ype* : *ypeyu*).

Finally, TchB *-una* is the plural marker of only three nouns. Once again, their derivation is not clear. The first is TchB *akrūna* 'tears', which is only attested in the plural and is matched by TchA *ākär* (pl. *ākrunt*). The other two substantives are TchB *ṣotri* : *ṣotrūna* (TchA *ṣotre* : *ṣotreyäntu*) and TchB *lāṃs* : *laṃsūna* (TchA *wles* : *wlesant*).

Origin of TchB *-una*

The comparison between Tocharian A and B does not allow to reconstruct the Proto-Tocharian plural form of these nouns with confidence. In addition, the singular forms of some Tocharian B nouns do not match with their respective plural forms, since they seem to be the outcome of different Proto-Tocharian antecedents. This means that they cannot be reconstructed as mirroring the same PIE stem paradigm.

[88] Actually, I found only one certain word where a *-rsn-* cluster can be shown to predate Proto-Tocharian. It is TchA |kärsnā-| (cf. TchB |kərsə́na-|), the present stem of *kräsā-*, 'to know', where the cluster *-rsn-*, however, could have been easy restored (while TchA |kärṣnā-| 'to cut off' is from **|kärṣt-nā-|*).

In the following, I will first focus on the previous etymological explanations of TchB -(*a*)*una*. Then, I will argue that this ending can be traced back to the *n*-form of heteroclitic stems in PIE *-*ur*/*n*-.

In the past decades, the origin of the plural morpheme TchB -(*a*)*una* has been a major topic of debate. One of the most cohesive discussions is that of Hilmarsson (1988a). His basic claims are: (1) the ending *-*una* has been abstracted from the plural *akruna* 'tears', and (2) the ending *-*auna* is a conglomerate marker, formed by the collective formation in PTch *-*a* and the new abstracted ending *-*una*. This proposal has to cope with some difficulties, however. First, some of the nouns with plural -*auna* attest a variant form -e_u*na* (sometimes spelled -*ewna*) in archaic texts. Examples are: *krente$_u$na* (B244 b1, B248 a2, B365 b4, *krentewnaṣṣe* B146 b8), *pale$_u$na* (B248 b1), *rekewna* (THT1312 b6). This shows that the plural forms in -*auna* of classical Tocharian B – or at least a great part of them – are actually from older -e_u*na* (Peyrot 2008: 43). The second difficulty concerns the origin of the element *-*una*. Indeed, it is unlikely that the bulk of its spread lies in its abstraction from a single plural form, namely *akruna* 'tears', where, moreover, the *na*-element is taken as secondary too (see above). For these reasons, Hilmarsson's proposal is to be rejected.

Adams (1990) dealt with the same topic. His main aim was to reconstruct hypothetical stems from which both the singular and the plural may have derived directly. Yet, his derivations are quite algebraic, since he reconstructs chains of derivational morphemes containing the nasal suffix PIE *-*h$_1$en*- as the last element. Furthermore, some of his explanations are phonetically dubious.

As pointed out by Malzahn (2006: 400), the fact that the formations in -(*a*)*una* are somehow related to the Tocharian B singular forms in -(*a*)*u* seems obvious at first glance, but after a closer scrutiny this statement seems cryptic.[89] Another explanation for TchB -*una* ought to be found.

In a way, I think Hilmarsson was right in trying to find a way by which the element -*una* could have been abstracted and then generalised to other formations that are etymologically unrelated to this plural ending. On the other hand, the bulk of this spread cannot be sought in isolated words, but rather in morphological formations where -*una* is an inherited morpheme. In the following, I will show that the marker PTch *-*una* was the original plural ending of the heteroclitic paradigms in *-*uer/n*-.

It has long been acknowledged that Tocharian inherited these PIE formations and that they were quite productive for a certain period. In a recent article, Pinault (2011) convincingly argued that the most productive type was derived with the suffix *-*u̯or* > PTch *-*wær*, a stem allomorph of the collectives in *-*u̯ōr* (Pinault 2011: 164).[90] This suffix became quite productive in Proto-Tocharian, where it was employed to form verbal

[89] In a similar way, it is improbable that these nouns are the outcome of PIE **men*-stems (as per TEB §106) and therefore need to be related with the Tocharian B nouns of the *nāki*-type (with singular ending -*i* and plural -*nma*, on which see Pinault 2008: 495f.).

[90] The collective formation in *-*u̯ōr* may have continued in Tocharian only in isolated forms (see §3.6.2).

abstract nouns (Malzahn 2014a: 265). Examples include (Pinault 2011: 164): TchB *ārwer*, A *ārwar* 'ready, willing' < PTch **arwœr* < PIE **h₂er-* 'to fit'; TchB *malkwer* 'milk' < **məlkwœr* < PIE **h₂ml̥ǵ-* 'to milk', etc. In most of the cases, however, the outcome of PTch **-wœr* has become synchronically opaque, as **-w-* has been lost between vowels. Examples include: TchB *yerter* 'wheelrim, fellow' < PTch **yœrtœwœr*; TchB *rser* 'hate' < PTch **rəsœwœr*; TchB *karyor*, A *kuryar* 'commerce' < **kʷəryəwœr*.

In parallel to the formations in **-u̯or*, I believe there is evidence for claiming that Tocharian also inherited the regular paradigms in **-ur/n*, which followed the proterodynamic type in Proto-Indo-European. Pinault (2011: 164) claims that these formations were no longer productive in Tocharian, since they would be limited to relics. From a comparative point of view, the best example is TchAB *ṣñor* 'sinew' (pl. TchB *ṣñaura*), which has cognates in several Indo-European languages, like YAv. *snāuuarə.bāzura-* 'having arms like sinews', Ved. *snā́van-* 'sinew', *a-snāvir-á-* 'having no sinews', Gk. νεῦρον 'string, sinew', Lat. *nervus* 'sinew, muscle, nerve', Arm. *neard* 'sinew'. All these forms point to the reconstruction of a heteroclitic paradigm PIE **snéh₁-ur/n-*. The formal mismatch between the singular TchB *ṣñor* and the plural TchB *ṣñaura* has given some cause for concern, since they should be traced back to the same base PTch **snœwr-*. It is generally assumed that the singular PIE **snéh₁-ur* > **snēu̯r̥* developed differently, because the expected PTch **ṣñœwər* (or the like) underwent some kind of contraction, yielding TchAB *ṣñor* (Þórhallsdóttir 1988: 199-200; Ringe 1996: 155-56).[91] For instance, Hilmarsson (1985a; 1986c) argues that PTch **ṣñœwər* first became **ṣñœwur* and then **ṣñowur* (through *u*-umlaut) > TchAB *ṣñor* (either with contraction or with irregular reduction of **-owr* to **-or*). But this solution is ad hoc and requires a significant number of unattested intermediate stages. A different explanation must therefore be found.

Lubotsky (1994a) dealt with the reconstruction of the PIE root **turḱ-*, its outcome in the Indo-European languages (Av. *θβōrəštar-* 'creator', Ved. *tváṣṭar-*, the god-creator, Gk. σάρξ 'meat', OIrish *torc* 'boar', etc.), and some related issues. One of these problems concerns the alleged metathesis of PIE **CurC* to **CruC* (AIGR: I, 206; Mayrhofer 1986: 161ff.; Meier-Brügger 2003: 98; Byrd 2015: 142-3). After having scrutinised the data that may testify

[91] I could not find any strong example of a contraction of **-œwə-* to **-o-*. Ringe (1989) adduces the reduplicated preterite participle of root beginning with *w-*. For instance, he argues that TchB *ausu*, A *wasu* 'having put of (clothing)' (from TchB *wəs-*, A *wäs-* 'to wear') can ultimately be traced back to Pre-PTch **wœwəs(ə)wu*, which would have evolved according to the following path: **wœwəs(ə)wu* > PTch **wos(ə)wə* (> TchA *wasu*) > Pre-TchB **wowsəw* (reintroduction of *-w-*) > **owsəw* > TchB *ausu*. This reconstruction is quite cryptic and other solutions can be put forward. Indeed, TchB *ausu* can reflect PTch **wœ-wəs-u* directly, through a development of PTch **wœ* to TchB *o*, i.e. **wœ-wəs-u* > **wewsu* > **owsu* > TchB *ausu* (cf. 3sg.prt. TchB *otkasa*, from *wotk-* 'to separate') < PTch **wœtksa*; see Peyrot 2010, 2013: 530). On the other hand, TchA *wasu* may be from **wœ-wœs-u*, as Michaël Peyrot (p.c.) pointed out to me (cf. also Malzahn 2010: 248). Furthermore, Tocharian B sequences of *-ewə-* and *-awə-* (< **-œwə-*) are attested (cf. e.g. obl.pl. TchB *kewäṃ*, A *kos* 'cows' < PTch **kœwəns* < acc.pl. PIE **gʷóu̯s*; 2sg.act. *rewät* from TchB *rəw-* 'to open'; cf. also nom.sg. TchB *pernauntsa*, A *parnoṃts* < PTch **pœrnewəntsa* < **-u̯n̥tih₂* (?), Pinault 2008: 525).

such a phonetic development, he concluded that "in PIE the metathesis *-*ur*- > *-*ru*- was phonetically regular in the final syllable only" (1994a: 191). I believe that Tocharian might bring new evidence in favour of this reconstruction.

Indeed, the plural TchB *ṣñaura* 'sinews' can be traced back to **ṣñewra*, which is from an older **ṣñewna* with generalisation of the *r*-stem, while the singular TchB *ṣñor* 'sinew' is from **ṣñœru* < **snēru* < **snéh$_1$-ur*, through older metathesis of *-ur#* > *-ru#* and Tocharian *u*-umlaut of internal *-*œ*-, which has been regularly modified to *-*o*-.[92] In addition, there are a dozen nouns with plural ending TchB *-wa*, A *-u* (*-wā*, *-unt*), of which the majority can in my view be traced back to heteroclitic stems in PIE *-ur*/*n*-. These nouns have a singular in TchAB *-r* and a plural form in TchB *-rwa*, A *-ru* (*-rwā*, *-ru-nt*). Examples include: TchB *ampär** 'limb, member' (pl. *amparwa*), TchB *kwarsär*, A *kursär* 'mile, vehicle' (pl. TchB *kwärsarwa* ~ *kursarwa*, A *kursärwā* ~ *kurtsru*), TchB *tarkär*, A *tärkär* 'cloud' (pl. TchB *tärkarwa*, A *tärkrunt*), TchB *yarpär* '± enclosure' (pl. *yärparwa*), TchB *tsaṅkär*, A *tsäṅkär* 'top, summit' (pl. TchB *tsäṅkarwa*, A *tsäṅkrunt*), etc. The morphological derivation of these nouns has not been clarified yet. Following Van Windekens (1944: 155f.; 1979: 15f.) and Isebaert (1980: 235; 2004), Adams (1990; DTB: s.v.; 2015: 178) argues they are old action nouns and verbal abstracts in *-*r*, which have been extended with an *u*-suffix in the prehistory of Tocharian. The *u*-extension is obviously assumed to explain the unexpected *wa*-plural.[93] However, this explanation is debatable, since it fails to identify a reason behind the alleged spread of the inherited *u*-stems, which do not form a very productive category in Tocharian.[94]

I believe that the derivational and inflectional issues related to these nouns can be solved by analysing them as old heteroclitic derivatives in *-*ur*/*n*-, which underwent the sound law *-*ur* > *-*ru*. That is to say, all original *ur*-forms of the paradigm underwent metathesis in the strong cases, becoming *ru*-stems.[95]

As far as the plural paradigm is concerned, all these nouns, including those derived with the suffix PTch *-*wær*, has lost the archaic *n*-form in the plural, since they have

[92] Through metathesis *-*ur* > *-*ru* we can also account for other problematic forms, like TchA *kror*, B *kror-iya** 'crescent of the moon', as if from **g^{h}réh$_1$-ur* 'horn' (Hilmarsson 1985a, but this etymology has some problems, see §3.7.3.3), TchB *plor-iya* from **b^{h}léh$_1$-ur* 'blowing', and perhaps TchB *ñor* 'below', as if from PIE **néh$_1$-ur* (Hilmarsson 1986c).

[93] Cf. Adams (1990: 68): "These neuter *r*-stems were typically extended as neuter *u*-stems at some point in pre-Tocharian".

[94] Of a slightly different opinion is Pinault (2008: 493), who claims that the reanalysed plural PTch *-*wa* of the old *u*-stems spread analogically to some stems and, in particular, to some *nomina actionis* in *-*l* and *-*r*.

[95] The loanwords assimilated to this class, i.e. TchB *kottär* (pl. *kottarwa*), A *kotär* 'family, clan' (from Skt. *gotrá*-), TchB *cākkär* (du. *cakkarwi*), A *cākkär* 'wheel, cakra' (from Skt. *cākrá*-), TchB *mittär** (du. *mittarwi*) 'sun, mitra' (from Skt. *mitrá*-), TchB *yāntär* (pl. *yantarwa*), A *yāntär* 'mechanism, tie' (from Skt. *yantrá*-) may be explained in the following terms: after the loss of final vowels, they became formally identical to indigenous nouns with singular *-är* /-ər/, plural *-arwa* /-ə́rwa/.

generalised the *r*-stem, e.g. *ṣñaura* 'sinews', *wmera* 'jewels', *tärkarwa* 'clouds', *amparwa* 'limbs', *pwāra* 'fires', *ysāra* 'blood (pl.)', etc. The reason why this development took place is fairly easy to envision: the formal link between the *r*- and the *n*-stem became increasingly opaque in the pre-history of Tocharian. It follows that some of these nouns have been detached from the *n*-form of the plural, becoming either *r*-stems (pl. *-ra*) or *ru*-stems (pl. *-rwa*). Thus, the *n*-plurals became easy to be abstracted and employed to mark the plural of other inherited formations. And these formations are in my view some of the nouns that synchronically attest the plural ending *-(a)una.*

Let us now look at the diachronic evolution of these nouns within the framework set up above, starting with the nouns with the plural *-una*.[96]

The reconstruction of the PIE word for 'tear' is notoriously difficult, and the derivation of TchB *akrūna* 'tears' is no exception.[97] The most comprehensive study on this word is undoubtedly Pinault (1997: 219f.). Before his investigation, the stem *akru°* was considered to be the outcome of PIE **-u-h₂* by Adams (1988: 32) and Ringe (1996: 30).[98] This explanation is contradicted by several examples of PIE neuter **u*-stems, which have a plural ending TchB *-wa* < PIE **-uh₂* (e.g. TchB *ārwa* 'trees' < PIE **d(o)ru-h₂*, TchB *ostūwa* ~ *ostwa* 'houses' < PIE **ueh₂stu-h₂*).[99] In Tocharian B, this noun is attested only in the plural; in Tocharian A, also the singular TchA *ākär* is attested, alongside the late plural form *ākrunt*. In order to demonstrate that *akru°* does not represent the outcome of PIE **h₂eḱruh₂*, Pinault (1997: 224-5) notes that the singular TchA *ākär* does not mean 'tear' but it has the collective meaning of 'masse de larmes'. He therefore suggests that PTch

[96] Nouns with dubious etymology will not be considered. This is the case of TchB *lāṃs*, A *wles* 'work' and TchB *yapoy*, A *ype* 'land'. The first noun is related to the homophonous verbal root TchB *lans-*, A *wles-* 'to work on, perform'. Adams (DTB: 594) takes the verb as a denominal formation. For an etymological suggestion, see Malzahn (2010: 834). The second noun has been the topic of controversial analyses, which have been summarised and commented by Hartmann (2013: 472-3). Although I am not convinced by the etymology of Hilmarsson (1988a), I believe he was right in linking the evolution of TchB *yapoy*, A *ype* with that of TchB *soy* 'son', A *se* (see further Malzahn 2006: 402 and Blažek & Schwartz 2017: 49). As far as the plural form is concerned, it is possible that PTch **yəpoy-wna* regularly evolved in TchB *ypauna*, after the loss of internal *-y-* (see the main text below).

[97] Cf. already Schulze (1927). In order to account for the initial **d-* in some Indo-European forms (e.g. OIr. *dér*, Gk. δάκρυ, etc.), Kortlandt (1985) claims that the archaic PIE **h₂eḱru-* was replaced by the compound **dr̥ḱ-h₂eḱru-* 'eye-bitter' in some languages. Following this reconstruction, de Vaan (2008: 322) tentatively reconstruct the plural of the second form as **dr̥ḱ-h₂ekru-n-h₂*, continued in TchB *akrūna*, OLat. *dacruma*, Gk. δάκρυμα. However, the classical theory that Lat. *dacruma* has been borrowed from Gk. δάκρυμα is probably to be preferred (Ernout & Meillet 1932: 336).

[98] See recently Kim (2018: 98f.).

[99] In order to solve these problems, Ringe (1996: 31) claims that the final *-a* of *wa*-plurals has been analogically introduced after the alleged outcome of PIE **-eh₂* > PTch **-a*. However, as we will see in the following sections, PIE **-eh₂* yielded TchB *-o* even in word-final position. Furthermore, since all other *a*-plurals continue PIE **-h₂*, it is preferable to say that PIE **-uh₂* yielded PTch **-wa* > TchB *-wa*, TchA *-u*.

**akru-* was the regular outcome of the collective PIE **h₂eḱrōu̯* and that this form has been reinterpreted as the base of a new plural. This analysis has the advantage of not deriving PTch **akrəw-* from the plural PIE **h₂eḱruh₂*, which one would rather expect to have yielded TchB ***akruwa*. Pinault further argues that the plural endings TchB *-na* and TchA *-nt* have appeared independently in the two Tocharian languages, i.e. when they had already split off from Proto-Tocharian. However, it is also possible that the ending **-na* has already been added in a Proto-Tocharian stage: on the one hand, Tocharian B has maintained the plural form **akruna* unchanged, while, on the other hand, Tocharian A has extended the apocopated form **ākrun* to *ākrunt* (as for e.g. **wakmna* > Pre-TchA **wākmän* >> TchA *wākmant* 'separations').

Although this explanation is certainly possible, some Indo-European continuants of the word for 'tear' clearly point to the reconstruction of a heteroclitic **ur*/*n*-stem (see the discussions in Hamp 1959 and 1972; Eichner apud Mayrhofer 1986: 162; Matasović 2004: 87; Kloekhorst 2008: 391, 2011: 268; Kroonen 2013: 504-5; Byrd 2015: 143).[100] If we reconstruct this heteroclitic paradigm for Pre-Tocharian, then the plural TchB *akruna*, A *ākrunt* may attest an important archaism: an original paradigm containing **akuna* as a Pre-Tocharian replacement of the inherited collective formation was levelled as an *r*-stem and the ending *-una* was blended in.[101] On the other hand, the singular PIE **h₂eḱ-ur* underwent metathesis **-ur* > *-ru*, yielding Pre-PTch **akru* > PTch **akrə* > TchB *ākär** /ákər/, A *ākär* 'tear' (cf. Table III.10).[102]

Table III.10. Evolution of the word for 'tear' in Tocharian

	PIE	PRE-PTCH		PRE-PTCH	PTCH	TCHB	TCHA
STRONG STEM	** h₂éḱur*	> **akru*	sg.	> **akru*	> **akrə*	> *ākär**	*ākär*
WEAK STEM	** h₂eḱuén-*	> **akṷén-*	pl.	>> **akuna*	>> *akrəwna*	> *akrūna*	*ākrun-t*

The etymology of TchB *ṣotri* 'sign, mark' (pl. *ṣotrūna*, du. *ṣotrūni*) is unclear. The most recent attempt has been made by Adams (1990: 65), whose reconstruction has some difficulties, however. Indeed, he posits a vr̥ddhi formation in *-r* to PIE **sṷed^{h}-* 'to custom',

[100] The fact that some other Indo-European languages point to the reconstruction of a *u*-stem may equally be interpreted as caused by the metathesis of **-ur-*> **-ru* (as if, in Ved. *áśru-*, Gk. δάκρυ, OIr. *dér*, etc.).

[101] Judging from the Hittite data (with residues in Old Avestan, cf. *aiiārə* 'days'), heteroclitic nouns formed the nom.acc.pl. on the *r*-stem in PIE (see recently Nussbaum 2014: 300f.). However, several Indo-European languages have reshaped the nom.acc.pl. on the basis of the *n*-stem, cf. Ved. *áhāni* from *áhar*/*n-* 'day', OLat. *femina* from *femur*, *feminis* 'thigh', OAv. *sāxᵛənī* 'teachings' (de Vaan 2003: 138), Gk. ἥπατα from ἧπαρ 'liver' (cf. also Cantera 2009: 21 fn. 9 on Middle Persian). Further pieces of evidence that the same replacement took place in Tocharian are dealt with in §3.6.2.2.

[102] I think one cannot claim that PTch **akər* is from **h₂éḱ-ur* directly, because the sequence **-ḱu-* (or **-ḱw-*) is expected to evolve into PTch **-kʷ-* (cf. PIE **hₓéḱṷo-* 'horse' > PT **yəkʷœ* > TchB *yakwe*; PIE **h₂eḱutio-* > PTch **akʷətsœ* > TchB *akwatse* 'sharp', Kim 1999).

which, in the history of Tocharian, would have become a *u*-stem and then recharacterised by a nasal suffix. The final protoform would have been **sm̥ēd^{h}-r-u-h$_1$en-*, which is extremely cryptic.

The reconstruction of TchB *ṣotri* is complicated by the derivative TchB *ṣotarye* 'signal, remarkable' (PK DAM 507.32 a5 and a8) and the variant plural *ṣotarnma* (AS3B a1). These forms may point to the reconstruction of a parallel singular *ṣotär**. If this singular form is original, then we can reconstruct a Proto-Tocharian paradigm with sg. **ṣotrə*, pl. **ṣotrəwna*, which morphologically matches sg. **akrə*, pl. **akrəwna.* In Pre-Proto-Tocharian, this noun would have been inflected as **ṣotru* in the singular and **ṣotuna* in the plural. Later, the *r*-stem would have been generalised, resulting in the blended plural *ṣotr-una*. On the other hand, the singular PTch **ṣotr-œy* > TchB *ṣotri*, A *ṣotre* would have been analogically created on the model of TchB *reki* (A *rake*) 'word', pl. *rekauna* (on which see below).

From a formal point of view, PTch **ṣotər* can be derived from PIE **seHd^{h}-* 'to achieve a goal', according to the following path: **seHd^{h}-ur* > **sēd^{h}-ru* > **ṣœtru* > **ṣotru* (*u*-umlaut) > TchAB *ṣotr-* (on the semantic side, 'goal' → 'target' → 'mark').[103]

All other nouns to be discussed attest a plural formation in *-ewna* / *-auna*. Among the pluralia tantum, TchB *palauna* 'praise' and TchB *tarśauna*[104] 'deception' are action nouns derived from the subj. stem of TchB *pəla-* 'to praise' and the poorly attested verbal root TchB *tərk-* 'to wind', A *träk-* 'to lose (consciousness)' respectively.[105] Although their exact derivation is not clear,[106] the plural form *-auna* is of Proto-Tocharian origin, as demonstrated by the Tocharian A correspondents *tārśoṃ* 'deception' and TchA *paloṃ* 'praise' (cf. the plural *palonās* and the adjective *paloṃṣi*), synchronically singular.[107] In Tocharian A, the two terms have been reinterpreted as singular, due to the singulative meaning of the plural formation, which is still attested in Tocharian B.

In Tocharian B, a parallel case is *kerekauna* 'flood' (= Skt. *ogha-* 'torrent, flood'), which is also morphologically singular. According to Pinault (2001: 99) and Hilmarsson (1996: 132-3), TchB *kerekauna* derives from a thematisation of the PIE root **g^{w}o/erh$_3$-* 'to devour',

[103] Cf. Rix (1985) and de Vaan (2008: 562-3). For yet another suggestion, see Malzahn (2006: 402f.).

[104] Adams (DTB: 303) reconstructs a singular *tārśi** on the basis of the dubious adjective TchB *tārśi*(*cce*) in B133 b5. A genitive singular may be attested in B255 a4 as *tarśi<ṃ>tse.* On the other hand, an obl.sg. *tārśai* seems to be attested in B496 a4, which makes the reconstruction of the singular paradigm difficult. As pointed out by Hannes A. Fellner apud CETOM, *tarśauna* is expected to have a singular *tārśi**, while the obl.sg. *tārśai* points to a nom.sg. *tarśiye**. Following Pinault (2015b: 213), I assume that the development of the singular paradigm is a Tocharian B innovation, and that in Proto-Tocharian this noun was a plurale tantum. See also Malzahn (2006: 400-1).

[105] Van Windekens (1979: 197) suggested that the ending *-auna* is to be segmented as *-au-na*, where *-au-* is the mark of past participles. He therefore assumed that the ending *-auna* in *tarśauna* and *palauna* was original. For criticism, see Hilmarsson (1988a: 35).

[106] See Malzahn (2006: 401-2) for recent proposals.

[107] For the mismatching root vocalism between TchB *palauna* and TchA *paloṃ*, see Malzahn (2006: 401-2).

enlarged with *-*k*-. In fact, in many Indo-European languages, this root appears in reduplicated nominal forms or in derivatives formed with a *-*k*-suffix (cf. Skt. *gargara*- 'whirlpool', MP *galōg* 'throat', Lat. *gurges* 'whirlpool', Lat. *vorax*, *voracis*, Lat. *vorago*, etc.). Hilmarsson (1996: 133) reconstructs a formation *$g^{w}orh_{3}o$-*ko*- 'devouring' > PTch *kærækæ-, to which the collective ending TchB -*una* has been added. This formation regularly developed PTch *kærækæwna 'violent stream' > TchB *kerekewna > kerekauna.

Another Tocharian B plurale tantum that can be ranged under this class has no Tocharian A correspondent. It is TchB *krentauna* 'virtue(s)', which evidently derives from the synchronically suppletive adjective TchB *kartse*, obl.sg.m. *krent* 'good'. Hilmarsson (1988a: 36f.) reconstructs a neuter plural *krænta enlarged with *-*una*. As noticed above, however, the only problem with this reconstruction is that we find the spelling *krentewna* in archaic texts and this form cannot be the regular outcome of PTch *kræntawna. However, the absence of any *krente*- among the case forms of *kartse* is striking. Furthermore, the derivatives of this adjective took their base from *kartse* (cf. the *ṣṣe*-adjective TchB *kärtseṣṣe* 'pertaining to the good'; the abstract *kärtsauñe* 'goodness, virtue, service'). It follows that TchB *krentauna* should be interpreted as an old derived form (perhaps from a derived noun PTch *kræntæy 'goodness', see below).[108]

We thus remain with two nouns with the deviant singular ending TchB -*i*, i.e. TchB *reki* 'word' (TchA *rake*) and TchB *ṣewi* 'pretext' (without equivalent in Tocharian A).[109] In the first noun, the vocalism of the stem may derive from either PIE *-*o*- or *-*ē*-, but the palatalisation in *ṣewi* points unambiguously to PIE *-*ē*-. On the other hand, the matching TchB -*i* : TchA -*e* must reflect PTch *-*æy*, the outcome of a PIE *o_{i}-stem (Ringe 1996: 82-3). This reconstruction follows Klingenschmitt (1994: 400), who argued that TchB *reki*, A *rake* 'word' are from PIE *$rēk$-o_{i} (cf. OCS *rěčь* < *$rēki$-) > PTch *ŕækæy*. According to Klingenschmitt, the plural ending should have been -$ō_{i}$, but long diphthongs have usually lost the semivowel in absolute final position already in the proto-language (Gk. πειθώ < PIE *$b^{h}e_{i}d^{h}$-$ō(_{i})$, Ved. *sákhā* < PIE *$sek^{w}h_{2}$-$ō(_{i})$). Be that as it may, we cannot find Tocharian continuants of either pl. *-$ō_{i}$ or *-*ō* and the origin of -e_{u}*na*/-*auna* must therefore be sought in other formations. I believe that the abstracted plural PTch *-*una* has been added to the singular form of these nouns in order to recharacterise their plural. We can therefore outline the following development: *-*æy-una* (or -*æy-wna*) > *-*æwna* (loss of *-*y*-) > TchB -e_{u}*na* > -*auna*.[110]

[108] Malzahn (2006: 400) reconstructs an original derivative in *-*ur*/*n* for this noun, but she does not specify what was the basis on which TchB *krente$_{u}$na* was constructed.

[109] TchB *ṣewi* is the only member of this class that seems to be feminine (cf. B109 a6 *yalñeṣṣai ṣewisa*). According to Adams (DTB: 725), a masculine agreement is found in B325 a5 (*alye*)*k ṣewisa*, but it is conjectural.

[110] See also Malzahn (2012c: 179). As far as Tocharian A is concerned, we can assume two different developments. If Tocharian A never had this ending, then the plural *-*una* originated in a Pre-Tocharian B stage. On the contrary, if its spread took place in (Pre-)Proto-Tocharian, then Tocharian A has lost this ending and has further rebuilt the plural with the productive ending -*nt*(*u*). The

3.6.1.3. TchB *śaumo* 'man, person'

So far, we have seen that the Proto-Tocharian ending *-*na* has various sources. What is quite uniform, however, is the semantic meaning of these formations. Indeed, a relatively large group of Tocharian B pluralia tantum that attests this ending has a clear singulative meaning, mostly uncountable. I believe that this Proto-Tocharian value of *-*na* may account for its attestation in the plural of TchB *śaumo* 'person, man'. The etymology of this word is clear: it is an original deverbal adjective in *-mo* from the ancestor of TchB *śaw-* 'to live' < PIE *$g^{w}ih_{3}$-*u-* (LIV^{2}: 2015-6). The singular inflection (nom. *śaumo*, obl. *śaumoṃ*) is exactly the same as the adjective *kḷyomo* 'noble'. On the other hand, the deviant plural *śāmna* (with reduction of Pre-TchB *-*aw-* before consonant clusters; cf. also TchB *śāmñe* 'human', Lane 1938: 26) runs counter to the expected form nom.pl. **śaumoñ* (cf. nom.pl. *kḷyomoñ*). Other substantivised adjectives in *-mo* also have a differentiated plural paradigm nom. *-oñ*, obl. *-oṃ* (e.g. TchB *wāṣmo* 'friend', nom. pl. *wāṣmoñ*, obl. pl. *wāṣmoṃ*).

However, one should note that the plural TchB *śāmna* very rarely means 'men (i.e. male people)', since in the great majority of the attestations it must be translated with 'people, mankind' (e.g. B3 b3-4: *śaul attsaik totka śāmnaṃts ñke wrīyeṣṣe pältakwä atyaṃts a(k)entasa* "the life of humans is now only short (as) a drop of dew on the tips of grasses", cf. Peyrot 2016a: 204). Furthermore, as pointed out by Adams (DTB: 698), TchB *śaumo* is often used to designate humans as opposed to deities (e.g. the merism 'men and gods' in B30 b8 *ñakti śāmna tsälpāre piś toṃ cmelameṃ* "gods and men were freed from the five rebirths", cf. Zimmer 1976: 77). Thus, also in this noun the plural ending *-na* conveys a collective meaning. As for its origin, it seems that before the loss of the neuter as a category of target gender in the adjectival inflection, the historical outcome of the neuter plural *-*mna* < *-*mnh$_{2}$* started to serve as the plural of *śaumo* 'man', conveying the collective meaning of 'humankind'. This reanalysis may have occurred when the masculine and the neuter already merged morpho-phonologically in the singular, but the neuter plural was still differentiated from both the masculine and the feminine.

3.6.1.4. Summary

Before proceeding further with the analysis of the ending *-äṃ* in Tocharian A, I summarise the result of my investigation of the Tocharian B ending *-na.*

From a synchronic perspective, we have seen that the alternating nouns with the plural ending TchB *-na* are a closed class; from a diachronic perspective, this class is quite heterogeneous, since its members cannot derive from a common PIE nominal stem type.

A little subclass continues neuter formations in PIE *-*men-*, where the ending *-na* derives from PIE *-*nh$_{2}$* (e.g. TchB *śāmna* 'mankind', TchB *ñemna* 'names', etc.). Another noun that may have inherited this plural marker from Proto-Indo-European is TchB *ersna*

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second hypothesis seems preferable, because the spread of *-*una* can be reconstructed for a Pre-Proto-Tocharian stage.

'form, appearance', which I have compared with Hitt. *ḫaršar*, *ḫaršn-* (Kloekhorst 2008: 314-5) as both reflecting the outcome of a heteroclitic paradigm.

Furthermore, we have seen that several nouns with *na*-plural had a clear singulative meaning in Proto-Tocharian. This value has been maintained in both Tocharian languages, but it is morphologically expressed in different ways. Indeed, Tocharian A, as opposed to Tocharian B, has reanalysed most of the formations in PTch *-*na* as singulars (cf. plural TchB *palauna* 'praise' vs. singular TchA *paloṃ* 'id.'; plural TchB *tarśauna* 'deception' vs. singular TchA *tārśoṃ* 'id.; perhaps plural *ersna* 'form' vs. singular TchA *araṃ* 'id.', etc.). The same development can be observed also in a few Tocharian B nouns, as in *kerekauna* 'violent flood' and probably *śalna* 'quarrel'. This peculiar value of PTch *-*na* is understandable from a comparative perspective. Indeed, as recently argued by Pronk (2015a), the nasal suffix had a "singulative" meaning in Proto-Indo-European, where it was initially limited to neuters. Proto-Tocharian has recharacterised this suffix with the original neuter collective *-h_2 > PTch *-*a* and this new ending *-*na* has become a special marker of plural nouns with singulative and collective meaning.

The origin of the plural ending TchB *-una* has been the main topic of my discussion. I have argued that this marker has been abstracted from the neuter plural of the PIE heteroclitic stems in *-*uer/n*. In order to substantiate this claim, I have scrutinised the Tocharian lexicon with a view to finding continuants of these archaic stems. The results of my investigation are recounted below.

Tocharian inherited both the regular heteroclites in *-*ur*/*n* and the derived collectives in *-*uōr*/*n*. In the latter type, the allomorph *-*u̯or* > PTch *-*wær* became a common suffix to form verbal abstracts (Pinault 2011). In the former type, the PIE sequence *-*ur* underwent metathesis, yielding *-*ru* in all strong cases. These new **ru*-stems converge in the Tocharian Class I.2, where we find a conspicuous number of alternating nouns with sg. TchB *-är* /-ər/, A *-är* and pl. TchB *-arwa* /-ə́rwa/, A *-ru* (*-rwā*, *-runt*). Additional evidence in support of the metathesis *-*ur* > *-*ru* comes from isolated words, where the *o*-vocalism in the root has always been a matter of debate. This vowel can be now explained through affection by final *-u* (e.g. TchAB *ṣñor* 'sinew' vs. pl. TchB *ṣñaura*, TchA *kror* 'crescent of the moon', TchB *kror-iya* 'horn', TchB *plor-iya*, a wind instrument, etc.). From a diachronic perspective, the paradigmatic connection between metathesised **ru*-forms (strong stem) and non-metathesised **un*-forms (weak stem) became increasingly opaque in the prehistory of Tocharian and a new plural form based on the singular was created, thus Pre-PTch *-*ru* : *-*una* >> PTch *-*ru* : *-*rwa* > TchB *-r* : *-rwa*, A *-r* : *-ru*. Indeed, while the singular *-*ər* could be from either Pre-PTch *-*ru* or *-*ur*, the plural *-*rwa* proves that the singular was Pre-PTch *-*ru*. The formal mismatch between *r*- and *n*-forms favoured the gradual abstraction of the plural ending *-una*, which started to form pluralia tantum and to recharacterise the plural form of various inherited stems. Among these stems, PTch *-*una* has been attached to singular forms ending in PTch *-*æ*/*-a* and *-*æy*, forming a diphthongised plural *-*ewna* that regularly developed -e_u*na* in archaic Tocharian B, *-auna* in classical Tocharian B, and *-omna* in Late Tocharian B (Peyrot 2008: 52). The original distribution of the heteroclitic forms has been partially retained in relics, like *akrūna*

'tears' and *ṣotrūna* 'signs, markers', where the *r*-containing stem has been generalised and the plural **-una* blended in. As we will see, the same phenomenon also occurred in Tocharian A.

3.6.2. DISTRIBUTION AND EVOLUTION OF TCH A *-äṃ*

The plural ending TchA *-äṃ* is not productive, since it is confined to five substantives only.[111] As can be seen from the table below, the cognate nouns in Tocharian A and B belong to different inflectional classes.

Table III.11. Tocharian A nouns with plural *-äṃ* and their Tocharian B correspondents

TOCHARIAN A		CLASS	TOCHARIAN B		CLASS
SG.	PL.		SG.	PL.	
por 'fire'	*poräṃ*	II.1	*puwar* 'id.'	*pwāra*	I.1
ysār 'blood'	*ysäräṃ*	II.1	*yasar* 'id.'	*ysāra*	I.1
ytār 'road'	*ytäräṃ*	II.1	*ytārye* 'id'.	*ytariṃ* (obl.)	VI.1
wram 'thing'	*wramäṃ*	II.1	°*wreme* '?'	-	?
plāc 'word'	*plācäṃ*	II.1	*plāce* 'id.'	*plāci* (nom.)	V.2
				plātäṃ (obl.)	

Of the five Tocharian A nouns, three are of alternating gender (TchA *por*, TchA *ysār* and TchA *wram*), and two are of feminine gender (TchA *ytār* and TchA *plāc*).

The core issue is which of the two languages preserves the older state of affairs, and the present section aims to answer this question, analysing the synchronic distribution and the diachronic evolution of this ending in Tocharian. I intend to show that Tocharian A has generally preserved the original situation, while Tocharian B has mostly recharacterised the plural form of these nouns. If my analysis is correct, it would also confirm that this inflectional class is relevant to the reconstruction and the further development of an archaic Proto-Indo-European class of nouns: the **r/n*-heteroclites.

3.6.2.1. Etymology of the nouns

Three of the five Tocharian substantives that belong to Class II.1 can be traced back to PIE heteroclites.[112] They are: TchA *por*, B *puwar* 'fire', TchA *ysār*, B *yasar* 'blood', and TchA *ytār*, B *ytārye* 'road'. That these nouns reflect PIE **r*/*n*-stems was actually noted decades ago,

[111] Part of this section appeared in: Del Tomba (2019).

[112] The connection of these Tocharian nouns with the PIE **r*/*n*-heteroclites had already been proposed in the past decades by leading scholars, like Petersen (1939: 75), Van Windekens (1944: 79ff.), and Hilmarsson (1984a) but their treatments are in many points different from mine. Furthermore, a systematic analysis of this Tocharian A class is still missing.

but the relevance of this fact for their plural formation has not, to my knowledge, been explicitly pointed out.

TchA *ytār*, B *ytārye* 'road'

Let us start our discussion with TchA *ytār*, B *ytārye* /y(ə)tárye/ 'road, street, path', both of feminine gender. These words must be compared with Lat. *iter*, gen. *itineris*, and the derivative YAv. *pairiϑna* 'the course of life' (Yt 8.54, Panaino 1990: 141).[113] The PIE form from which these nouns derive is usually reconstructed as **h₁éi̯tr̥*, **hit-én-* (from PIE **h₁ei̯-* 'to go', LIV²: 232-3), although evidence for the full grade **h₁éi̯tr̥* is meagre.

A closer look at the Tocharian words reveals some issues to be discussed. To begin with, the *a*-vocalism of the stem does not represent the expected outcome of PIE **h₁éit-r*. This means that Tocharian continues a different formation, which can be traced back to the collective PIE **h₁itōr* (Hilmarsson 1986: 44; Pinault 2011: 163-4; DTB: 559; Kim 2019a: 145). Kortlandt (1988: 84-5) is the only one to stand against this derivation, since he prefers to postulate analogy after TchA *ysār*, B *yasar* 'blood'. Even though this solution is certainly not unthinkable, analogy is in my view unnecessary here, because we can easily reconstruct a morphologically plausible ancestor from which the Tocharian words may derive.[114]

The unexpected feminine gender in both Tocharian A and B, and the element *-ye* /-(ə)ye/ in Tocharian B are problematic. Hartmann (2013: 470-2 and 519-20) has recently collected and commented on the previous interpretations of these problems, and he has further posited PIE **h₁itōr-ih₂* or **h₁itōr-ēn* as the potential virtual ancestors of TchB *ytārye*. The first reconstruction follows Klingenschmitt (1994: 396 fn.140), who argued that both TchB *ytārye* and TchA *ytār* would be a recharacterised collective formation by means of the *vr̥kí-*suffix. The second reconstruction follows Hilmarsson (1987: 48f.), who argued that a conflation of the *r*- and the *n*-stem took place in Proto-Tocharian, in such a way that from **itōr* a new form **itōr-en-* was created. The nominative singular of this preform should have been **itōr-ēn*, which in turn became **yətarəye* > TchB *ytariye* ~ *ytārye*. Hartmann favours the first hypothesis, while Malzahn (2014b: 198) prefers the second.

I believe there are flaws in both theories. The first reconstruction is unsatisfactory from a phonological point of view, because PIE **-ih₂* should have evolved into TchB *-(i)ya*, A *-i*, thus TchB ***ytār(i)ya*, A ***ytāri*. The fact that PIE **-h₂* yielded PTch **-a* > TchB *-a*, and

[113] The oft-cited Hitt. †*itar* (alleged hapax legomenon in KUB 41.8 i 20, cf. Rieken 1999: 374-7; Kloekhorst 2008: 422) has recently been read by Miller (2008: 209 fn. 97) as DUMU-*tar* 'offspring'.

[114] One might object that, from the semantic point of view, the assumption of an original collective **h₁itōr* is difficult, as neither TchA *ytār* nor TchB *ytārye* denotes a multitude of streets and it cannot be proven that they did so at an earlier stage either. Nussbaum (2014a: 251) points out this problem and convincingly suggests that this (morphological) collective formation has an "instantial" value, i.e. "denotes […] an individual instance of an action, event, or state" (p. 247), as in Gk. τέρμα 'crossing' < **tér(h₂)-mn̥* vs. τέρμων 'a boundary' < **tér(h₂)-mō(n)*.

never PTch *-*œ* > TchB -*e* (as per Hartmann 2013: 470) is corroborated by unambiguous examples (see e.g. §3.7.3, §4.3.4.5).

The second solution presents no difficulties from a phonological point of view (cf. TchB *yriye* 'lamb' < PIE **werh₁-ēn*, see Pinault 1997a: 185-7), but it has to cope with chronological and morphological problems. Indeed, it implies that an original **yətar*, the regular outcome of PIE **h₁itḗr*, first became **yətarəye* (continued without modifications in TchB *ytārye*) and then turned to be **yətar* > *ytār* in Tocharian A, according to the model of TchA *ysār* 'blood'. But this solution sounds very circular.

As the other heteroclites, this noun should be reconstructed as neuter in Proto-Indo-European. It follows that the feminine gender of TchA *ytār*, B *ytārye* must be secondary, because PIE neuter nouns are usually continued as alternating in Tocharian. In my opinion, in the Proto-Tocharian phase, this substantive was influenced by the ancestor of the productive feminine nouns TchB *kälymiye*, A *kälyme* 'direction, region' because of its meaning, so that PTch **yətar* initially acquired feminine gender. Since the gender of TchA *kälyme* also fluctuates between alternating and feminine (Carling 2009: 176; Peyrot 2012: 212), one might assume a case of mutual influence. Subsequently, after the dissolution of Proto-Tocharian, it shifted inflectional class in Tocharian B, becoming a noun of the *kälymiye*-type.[115]

TchA *ysār*, B *yasar* 'blood'

The second noun to be discussed is TchA *ysār*, B *yasar* /yə́sar/ 'blood'. It has cognate forms in several Indo-European languages, including Hitt. *ēšḫar*, gen. *išḫanāš*, Skt. *ásr̥-k*, gen. *asnáḥ*, Gk. ἔαρ ~ ἦαρ[116], Latv. *asinis*, OLat. *as*(*s*)*yr* (Paul. Fest. 12. 19; cf. also *aser* in CGL 2.23,56 and the derivative OLat. *assarātum*, a kind of "bloody" drink, de Vaan 2008: 58), perhaps Lat. *sanguen* (Ennius, Ann. 108) ~ *sanguis*, Arm. *ariwn* etc. These forms may allow us to posit PIE **h₁ésh₂-r*, **h₁sh₂-én-*. The Tocharian words can easily be derived from this protoform (Kortlandt 2010: 146). Otherwise, they may also be the outcome of the collective **h₁ésh₂ōr* (Hilmarsson 1986: 22; Pinault 2011: 163; DTB: 525).

[115] A similar analysis has been proposed by Pinault (2015a). Malzahn (2014: 200) tentatively tries to analyse the irregular feminine gender of these nouns as an archaism, by comparing it with Homeric Gk. ἐέλδωρ 'desire, wish', of unexpected feminine gender (see also Leukart 1987: 355). In parallel, Nussbaum (2014: 253) also claims that there is no reason not to interpret the feminine gender of this noun as original, because the other continuants in *-*ōr* inherited by Tocharian are alternating. However, this statement can also be read the other way around: since the other continuants of *-*ōr* are alternating in Tocharian, **h₁itḗr* should originally have been neuter too and thus expected to evolve as an alternating.

[116] Gk. ἔαρ is unattested before the Hellenistic period. In the glosses by the fifth-century CE grammarian Hesychius we find both variants: ἦαρ· αἷμα. ψυχή (Hsch. sub ἤ-8) and ἔαρ · αἷμα. Κύπριοι (Hsch. sub ε-31).

TchA *por*, TchB *puwar* 'fire'

The last noun that can be traced back to a PIE heteroclitic stem is TchA *por*, TchB *puwar* 'fire'. Cognates of these words are found in most Indo-European languages. Among these, Hitt. *paḫḫur* (gen. sg. *paḫḫuenaš*) continued the proterodynamic inflection almost intact and thus provides substantial evidence for reconstructing the heteroclitic paradigm as PIE **péh₂-ur, *ph₂-uén-* (Kloekhorst 2013: 111). Other cognates include: Gk. πῦρ < **pūr*, gen. πυρός, Arm. *howr* < **pūr* (Olsen 1999: 94), Umbr. *pir* < **pūr* (cf. acc. sg. *sim* 'pig' < **suH-m*), abl. *pure* < **pŭr-ed*, Goth. *fōn*, gen. *funins*, OHG *fuir*, ON *fúr* < **pūr* (Simms 2009), Cz. *pyř* 'burning ash' (Machek 1957: 502). There is no doubt that both TchA *por* and TchB *puwar* 'fire' are somehow linked to these formations. However, the exact apophonic grade and morphological formation from which they descend are notoriously problematic, since the phonological comparison between TchA *-o-* and TchB /-əwa-/ is awkward and complicates the Proto-Tocharian reconstruction.

Winter (1965: 192f.) was the first to claim that Tocharian A and B point to different preforms: TchA *por* would continue PIE **péh₂-ur*, while TchB *puwar* would be from PIE **puh₂-r*. Other scholars propose that the word for 'fire' retained both regular and collective stems in Proto-Tocharian: Tocharian A would continue the former, Tocharian B the latter. This reconstruction is followed by Van Windekens (1976: 383) and Adams (DTB: 421-2), and it has been recently advocated by Kim (2019a: 145). However, I believe that multiplying the number of protoforms that cannot belong to the same morphological paradigm is questionable and quite unlikely. Indeed, if Tocharian inherited both the regular and the collective formation of this noun, it is highly probable that it had already generalised one of the two paradigms before the breakup of Proto-Tocharian.

In an attempt to trace back TchA *por*, and TchB *puwar* to a single preform, Hilmarsson (1985: 42-3, 1989: 135) argued that a collective **ph₂u̯ōr* may have evolved in Proto-Tocharian as **pəwar* and then TchB *puwar* and TchA *por*. A similar reconstruction has been supported by Ringe (1996: 17-8) and Hackstein (2017: 1314). In my view, there are two problems with this theory. The first is the outcome of the laryngeal. I indeed expect PTch **pawar* > TchB ***pāwar* /páwar/ as the regular outcome of PIE **ph₂u̯ōr*. Ringe points to this problem and hesitantly argues that in a sequence *CH*u*V, the laryngeal evolved into **ə* rather than **a*. This "sound law" is difficult to evaluate, since it is not falsifiable. There is indeed no other clear parallel that can prove this evolution.[117] However, PTch **p(ə)war* can be the expected outcome of the zero grade **puh₂r*, and it is therefore much more

[117] The only parallel that Ringe (1996: 18-9) was able to find is TchB *skiyo*, which he traced back to PIE **sḱh₂ieh₂-*. He imputed the lack of palatalisation in this word to an irregular development of the first laryngeal that yielded as "some nonfront segment" in Proto-Tocharian (p.19). However, the evolution of this term is even more complex than the one seen in the word for 'fire'. As a consequence, I think it cannot be used as a solid argument in favour of the sound law *CH*u*V/*CH*i*V > *C*ə*w*ə*V/*C*ə*y*ə*V. See further §3.7.2.1.

economical to start with this protoform. Still, a more serious problem is the alleged contraction PTch *-*əwa*- > TchA -*o*-, because it lacks again any immediate parallel.[118]

In the following, I base myself on direct and indirect evidence in order to determine whether this sound law can be established or not. As we will see, however, the overall picture is still fuzzy. Let us look first at other potential outcomes of PIE *-*uh*$_2$-. I have found the following clear examples: (1) PIE **suh*$_2$*d-ro-* 'sweet' (Gk. ἡδύς, Skt. *svādú-*) > PTch **sware* > TchA *swār*, B *swāre*; (2) PIE **uh*$_2$*g-* (LIV^2: 664-5) > PTch **wak-a-* > TchB *waka-* 'to split, flourish', A *wākā-* 'to burst'. Other examples of the correspondence TchB -*wa*- : A -*wā*- are: (1) TchA *swāñceṃ*, TchB *swāñco* (obl.) 'ray of light' (to be linked in some way with the *n*-stem of PIE **séh*$_2$*-ul / -uén-* 'sun') and (2) the dual TchA *pärwāṃ*, TchB *pärwāne*, from PIE **h*$_3$*b*^{h}*ruH-* 'eyebrow' (Gk. ὀφρῦς, Skt. *bhrū́-*). These examples evidently go against the proposed sound law, but they are still not conclusive. Indeed, TchB *pūwar* may inform us about the original accentuation of this word, which should have been stressed on the shwa in Proto-Tocharian, thus */pə́war/.

Some other indirect evidence may be adduced. Hilmarsson (1989: 135, 1996: 187) saw a similar development in the oblique singular of the Tocharian A word for 'dog', which is TchA *koṃ* (attested once in A360 a9), B *kweṃ*. Both of these oblique forms are considered as the outcome of PTch **k*^{w}*æn* < PIE **ḱu̯on-m̥*. But this example is probably too uncertain and quite isolated, also because Proto-Tocharian labiovelars are expected to lose the labial element before PTch **æ* < PIE **o* (e.g. **k*^{w}*ólo-* '± turning' > PTch **kælæ* > TchB *kele* 'navel'; PIE **ǵ*^{h}*u̯ono-* 'sound' > PTch **kænæ* > TchB *kene*, A *kaṃ* 'melody'). It is therefore probable that the labiovelar was reintroduced analogically after the nominative at some stage. Another parallel might be TchA pl.ipv. *plos* for the expected **pälwäs*, as if from **pələ́wasa*, perhaps showing the same alleged contraction as TchA *por* < **pə́war* (Peyrot 2012: 210, 2013: 171 fn. 178). However, an analogical development after the singular TchA *plo** cannot be excluded, and it is even likely in view of the variant *plamäs* for the regular pl.ipv. *pälmäs* and the lack of root-final -*ā* in the Tocharian A pl.ipv. (Peyrot 2013: 171 fn.178). A last indirect parallel of the sound law PTch *-*əwa*- > TchA -*o*- may be envisioned in the evolution PTch *-*əyæ* > TchA -*e*-, which has quite a number of comparable items (see the previous section on TchA *ytār*, B *ytāriye*).

All things considered, I believe that this sound law cannot be established with confidence, since other parallels (if any) still need to be found. However, in light of the data presented, we might say that the disyllabic sequence PTch **ə́wa*- became TchA -*o*- if the first syllable was accented and the entire sequence came to occur in a closed syllable.

If one is not inclined to accept this sound law, two last possibilities can be ventured. As hinted in §3.6.1.2, I expect that in the regular paradigm of PIE **péh*$_2$*-ur*/*n* 'fire' the strong cases underwent metathesis of *-*ur* > *-*ru* in Tocharian. The weak stem regularly evolved into **ph*$_2$*un-V́-* > **puh*$_2$*n-V́-*. If Tocharian inherited this paradigm, it should have yielded

[118] Hilmarsson (1989: 135) hesitantly proposed that PTch **pəwar* became **powar* in Pre-Tocharian A, via umlaut. However, there is no evidence that *u*-umlaut operated in Tocharian A after the Proto-Tocharian period. See Burlak & Itkin (2003).

PTch **pår(u)*, **pwan-*, which can account for both Tocharian forms. Accordingly, Tocharian A would have continued the strong stem PTch **påru* > **pår* > TchA *por*, while Tocharian B would have continued the weak stem PTch **pwan-* > **pəwan-* (*ə*-epenthesis) >> Pre-TchB **pəwar* > TchB *puwar* (see also Schindler 1967: 242f.). Otherwise, if Tocharian inherited a double zero grade form **puh₂r* (from an older **ph₂ur*), the reverse development would have occurred. Indeed, Tocharian B would have continued the strong stem PIE **puh₂r* > PTch **p(ə)war* > TchB *puwar*, while Tocharian A would have continued **ph₂uen-* > PTch **pawə́n-* >> Pre-TchA *pawər* > TchA *por*. As a matter of fact, this case would not be isolated in the Tocharian nominal lexicon. Indeed, there are other – admittedly rare – cases where the two Tocharian languages have continued outcomes of different apophonic grades of one single paradigm. A clear example in this sense is TchA *tsar* and B *ṣar* 'hand', which point to different inflected forms of PIE **ǵʰesr-* 'hand' (for explanations, see Schindler 1967: 244f.; Pinault 2006: 80f.; Kim 2009a: 112 fn.4; DTB: 711).[119]

One might think that the paradigm was levelled as a *r*-stem already in Proto-Tocharian. However, compelling evidence that Proto-Tocharian still preserved *n*-forms comes from Tocharian A, as I will show below.

TchA *wram* (B *wreme*) 'thing, object'

The two last substantives that belong to Class II.1 are TchA *wram* (B °*wreme*) 'thing, object, matter' and TchA *plāc,* B *plāce* 'word'. They cannot go back to heteroclitic stems.

From a synchronic point of view, TchA *wram* is well attested, while TchB *wreme* occurred twice in B197 as a second member of the compound TchB *käkse-wreme* '?' (= Skt. *viṣaya-*?). This fragment is part of a Sanskrit Tocharian bilingual dealing with matters of Abhidharma. The Sanskrit parts are quotes from the *Abhidharmāvatāra-prakaraṇa* (Kudara 1974; Catt 2016). The translation of *käkse*° is always left out and the meaning of °*wreme* is inferred from the comparison with TchA *wram*. Indeed, the usual Tocharian B noun for 'thing, object' is TchB *wäntare*, which is not etymologically related to TchA *wram*. Furthermore, since the gender of TchB *wreme* is unknown and it is attested only in the nominative singular, we are not able to determine to which class it belongs. Indeed, TchB *-e* is the nom.sg. of several Tocharian B inflectional classes, among which the most productive is Class V.1 (continuing old thematic stems). For this reason, the authors of the *Elementarbuch* sorted this noun into this class. From a diachronic perspective, one can think that final *-e* in *käkse-wreme* '?' reflects a secondary thematisation in compounds (cf. the Greek type στόμα 'mouth' vs. °στόμος).

Following Van Windekens (1976: 580-1), TchA *wram* can be the exact cognate of Gk. ῥῆμα, -ατος 'statement, word', since both Greek and Tocharian A point to an action noun

[119] Some other cases of formally different inflected forms due to either regular or syntagmatic phonological developments are mostly found in Tocharian B: TchB sg. *āyo*, pl. *āsta* 'bone' (cf. TchA *āy*, pl. *āyäntu*); TchB *or* 'wood', pl. *ārwa* (due to different kinds of umlaut); TchB *ṣñor* 'sinew', pl. *ṣñaura*.

PIE **u̯réh₁-mn̥*. This etymology is supported by the plural form TchA *wramäṃ* (cf. gen.pl. *wramnāśśi* in e.g. A4a3).[120]

TchA *plāc*, B *plāce* 'word'

The last noun to be discussed is TchA *plāc*, B *plāce* 'word'. Among the five nouns with plural TchA *-äṃ*, it is the only case where Tocharian B has the more archaic inflection, while Tocharian A has replaced the plural form. In the following, I will therefore refer more to Tocharian B than Tocharian A.

An etymological connection with the verbal root TchB *pəla-*, A *pälā-* 'to praise' is obvious. This verb is the outcome of either PIE **(s)pelH-* 'to proclaim, speak solemnly' (cf. Gk. ἀπειλέω 'to threat', Pinault 2008: 345; LIV²: 576), or **b^helh₁-* 'to yell, roar' (cf. OHG *bellan* 'to bark', Klingenschmitt 1994: 127; DTB: 403; LIV²: 74), although the meaning of the Tocharian verb speaks in favour of the first derivation. It is usually assumed that our noun is an old *ti*-derivatives of this verbal root.[121]

From an inflectional point of view, TchB *plāce* belongs to an unproductive class (Class V.2, cf. TEB §183), whose few members display nom. sg. *-e* after a palatalised consonant, truncation of this vowel in the oblique singular, and non-palatalised consonant in the oblique plural. The bulk of this class can be traced back to PIE **i*-stems with original hysterodynamic inflection (Pinault 2013: 345f.). This analysis is confirmed by TchB *maśce* 'fist', which is to be equated with Proto-Indo-Iranian **musti-* 'fist' (cf. Skt. *muṣṭí-*, Av. *mušti-*), although the Tocharian word continues a nom.sg. PIE **-tē(i̯)*, instead of the expected **-ti-s* in Indo-Iranian (Pinault 2013: 346f.; DTB: 476; Malzahn 2014a: 259 fn. 2).

All thing considered, the evolution of TchB *place* is as follows: nom. sg. PIE **plH-tēi̯* > PTch **-cœ* > TchB *-ce*, acc.sg. PIE **-ti-m̥* > PTch **-cə* > TchB *-c*, nom.pl. PIE **-tei̯-es* > PTch **-cəyə* > TchB *-ci*, acc.pl. PIE **-ti-ns* > **-cəns* >> PTch **-təns* > TchB *-täṃ*.[122]

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[120] I see no reason to reconstruct either Pinault's **u̯r̥h₁-o-mo-* (2008: 512) or Adams' **u̯rē-mēn-* (DTB: 672). Although these preforms have the advantage of deriving both Tocharian A and B words from a common ancestor, the former does not take into account the unproductive plural ending TchA *-äṃ* (showing, say, the "morphologia difficilior"), while the latter requires an unfounded lengthened grade in both the root and the suffix. On the basis of TchB *kälymiye*, A *kälyme* < PIE **kli-mēn*, we would expect that an alleged **wrē-mēn* evolved into TchB ***wremiye*, A ***wrame*.

[121] Klingenschmitt (1994: 401-2) reconstructed a hysterodynamic abstract derivative in **-tu* (see recently Hackstein 2017: 1316). However, as correctly pointed out by Hartmann (2013: 486f. with references), this derivation is implausible, because evidence for reconstructing hysterodynamic **u*-stems is meagre (Neri 2003: 110f.) and the derivatives in PIE **-tu* are usually either masculine or neuter, and never feminine (Adams 1988: 125f.). Furthermore, we have no other clear continuants of hysterodynamic *u*-stems in Tocharian (as Klingenschmitt himself acknowledged).

[122] The reconstructed paradigm of the PIE hysterodynamic *i*-stem follows Beekes (1973). Malzahn & Fellner (2015: 72 fn. 36) argue that the nom. sg. *-e* and the lack of palatalisation in the oblique plural are unexpected and that they are due to analogical development after the ubiquitous TchB *e*-stems, on the one hand, and to the contrast between palatalised nom.pl. and non-palatalised

Now that we have clarified what type of PIE stems are continued in the Tocharian A Class II.1, we can move forward with the origin of the plural ending TchA *-äṃ.*

3.6.2.2. Origin of the plural ending TchA *-äṃ*

There are two opposing ways to explain the plural forms of the nouns discussed above: (1) either Tocharian B has preserved the original situation and Tocharian A has introduced the morpheme *-(ä)ṃ* < PTch **-na* from other stems, or (2) Tocharian A has preserved the original situation and in Tocharian B the nasal plural **-na* has been lost.

At first sight, both hypotheses seem plausible. The former implies that Tocharian A inherited plural forms identical to those of Tocharian B. When final vowels were deleted in Pre-Tocharian A, nominative and oblique would have become homophonous in both the singular and the plural. In order to reintroduce a distinction between singular and plural, the plural morpheme *-äṃ* would have been attached at a later stage (e.g. pl. PTch **yəsara* > Pre-TchA **ysār* >> TchA *ysäräṃ*). This hypothesis also has to cope with some problems, however. As stated in the opening section, the fact that the marker TchA *-äṃ* is the least productive among the plural endings of Tocharian A must be seriously considered if its origin is to be traced. As a consequence, analogical developments can hardly be involved: basically, there is no immediate source where the plural **-äṃ* could have been abstracted and then generalised.[123]

I therefore believe that the latter scenario is the correct one, since it lends itself to a more elegant solution: the nasal element in TchA *-äṃ* must be interpreted as an archaism not only in TchA *wram* 'thing, object', which goes back to an old **men*-stem, but also in those words that continue heteroclitic **r*/*n*-stems, where the plural *-äṃ* historically coincides with the original *n*-form. It follows that Tocharian A, as opposed to Tocharian B, has continued the heteroclitic inflection, by refunctionalising the *n*-form of the oblique cases in the plural. This is not an isolated trend of development, since it closely resembles similar cases in Latin and Iranian.

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obl.pl. in e.g. *lāñc* : *lāntäṃ* (from TchB *walo* 'king'), *ḷyśi* : *ḷykäṃ* (from TchB *ḷyak* 'thief'), on the other hand. I agree with them that the replacement of the non-palatalised obl.pl. TchB *plātäṃ* for the expected TchB **plācäṃ* is secondary. In Proto-Tocharian, the ending **-əns* instead of **-'əns* was ubiquitous, and an analogical change after the class of TchB *ḷyak* (obl. pl. *ḷykäṃ*) is probable. On the other hand, I do not see any diachronic problem with the nom.sg. *-e* of TchB *plāce*. Analogy after the TchB *e*-stems is in my view unnecessary.

[123] One might think that TchA *-äṃ* has been introduced from the neuter nasal stems. However, the only noun that diachronically goes back to a **men*-stem and synchronically shows this ending is namely *wram* 'thing, object', because other continuants of the PIE **men*-stems have replaced their original plural forms, like TchA *ñom* 'name', pl. *ñomäntu* (cf. TchB *ñem*, pl. *ñemna* < PTch **ñœmna*). This evidence implies that **-äṃ* was not a convenient plural ending in Pre-Tocharian A. There is therefore no reason why words like TchA *por* 'fire', *ytār* 'road', and *ysār* 'blood' should have selected this ending, and not other much more productive plural markers.

In the history of Latin, the old heteroclites are normalised in two ways (Ernout 1914: 67-8; Leumann 1977: 359-60; Weiss 2009: 240f.). On the one hand, some nouns have analogically levelled the *r*-stem in all cases (e.g. Lat. *ūber*, *-eris* 'udder; abundant', cf. Skt. *ū́dhar/n-* 'udder'), although in Old Latin a few of them were still heteroclitic. Compare, for instance, Lat. *femur*, gen. *femoris* 'thigh' (e.g. *in femore*, Cicero, Verr. Or. IV. 43, 93) with OLat. *femur*, gen. *feminis* 'id.' (e.g. *femina* in Plautus, Poen. 3.1, 68). On the other hand, nouns like *iter*, gen. *itineris* 'street, way, journey' or *iecur*, gen. *iocineris* 'liver' show spread of the *r*-stem from the strong cases to the *n*-stem of the weak cases. It follows that in the pre-history of Latin two paradigms of the word for 'way, street' can be virtually reconstructed: older **iter* / **itinis* and newer **iter* / **iteris* (Leumann 1977: 103). Latin speakers mixed up the two paradigms, forming a new inflection with a stem **itin-er-*, from a pre-existing **itin-*, in all weak cases and in the plural. Only the nominative and the accusative singular still attest the original distribution of the allomorphs.

Let us now consider some examples from Iranian. In Khotanese, spellings with double *-rr-* are the result of consonant clusters beginning with the vibrant (e.g. Khot. *ttarra-* 'grass' < **tr̥na-*, cf. Skt. *tŕ̥ṇa-*; Khot. *kārra-* 'deaf' < **karna-*, cf. YAv. *karəna-* 'ear [daēvic]; deaf', Ved. *kárṇa-* 'ear', Emmerick 1969: 69). For this reason, OKhot. *gyagarra-*'liver' is traced back to **i̯akr̥na-* by Emmerick (1980: 168). In parallel, the numeral OKhot. *byūrru* '10.000, myriad' can be the outcome of **baiwarnam* (Emmerick 1980: 168 and 1993: 292; cf. Bailey 1979: 309). Although no clear Indo-European cognates of this word have been identified so far, OKhot. *byūrru* has some cognates in several Iranian languages, from both the Western (e.g. Pahl. *bēwar*, Parth. *bywr*) and the Eastern side (e.g. Sogd. *βrywr* 'myriad', Iron *biræ*, Digor *be*(*w*)*æræ*, cf. Cheung 2002: 65), including YAv. *baēuuarə*/*bāeuuan-*, which points to the reconstruction of a heteroclitic **r*/*n*-stem for Proto-Iranian (KEWA: II, 2514).

It is reasonable to assume that the same mixture of the two stems has affected the words for 'fire', 'blood', and 'road' in the Pre-Tocharian A stage. In Proto-Tocharian, these words must have continued the heteroclitic inflection, with *r*-stem in the singular and *n*-stem in the plural. Then, when Tocharian B and A split off from Proto-Tocharian, the former generalised the *r*-stem, and the latter refunctionalised the two stems, adding the reanalysed nom.obl.pl. PTch **-na* < PIE **-nh₂* to the *r*-stem (cf. Table III.12).[124]

Table III.12. Heteroclitic inflection from Proto-Indo-European to Tocharian A

	PIE	PRE-PTCH		PTCH	PRE-TCHA	TCHA
STRONG STEM	**it-ór*	> **yət-ar*	sg.	> **yətar*	> **yätār*	> *ytār*
WEAK STEM	**it-n-*	> **yət-ən-*	pl.	> **yətə-na*	>> **yätār-än*(*ā*)	> *ytāräṃ*

[124] Other survivals of PIE **r*/*n*-stems may have formed their plural as nouns of Class II.1 in Tocharian A, like TchA *ṣñor* 'sinew' (TchB *ṣñor*) < **snéh₁-ur*/*n-* (cf. YAv. *snāvarə*, Ved. *snā́van-*). Unfortunately, the plural of this noun is only attested in TchB *ṣñaura*, but one might reconstruct *ṣñoräṃ** for Tocharian A.

As Hock (1991: 189f.) has pointed out, in analogical changes old and innovative forms have to coexist as variants for some time before the effective realisation of the analogy. Occasionally they are affected by blending (sometimes also called contamination). The phenomenon of blending is usually treated as a sporadic lexical change by which a new word is created through the combination of two already existing lexemes. In some cases, however, blending also affects the morphological paradigm of words, especially when they develop competing stems. This is exactly what has happened to the three Tocharian A nouns. In Proto-Tocharian, the two stems were therefore maintained for some time, particularly because they had different grammatical functions: the *r*-stem was used to express the singular, and the *n*-stem the plural. But the entire paradigm was analogically levelled, and the *r*-stem became the basis on which the *n*-containing endings were added. Through this development, the functional correspondence between singular and plural has been formally maintained, and PTch *-*na* has become a new plural marker.[125]

On the other hand, the competitive *r*- and *n*-forms have developed differently in Tocharian B: the entire paradigm of these nouns was levelled in favour of the *r*-stem, while the *n*-form disappeared. This is a common trend of development that is also found in some other Indo-European languages. Examples include: Lat. *ūber*, gen. *ūberis* 'udder' (cf. Skt. *ū́dhar*, gen. *ū́dhnas*, Gk. οὖθαρ, gen. -ατος), MP *ǰagar* 'liver' (cf. Skt. *yákr̥-t*, gen. *yaknás*, YAv. *yakarə*), OHG *wazzar* 'water', OE *wæter* 'id.' vs. Goth. *wato* (*n*-stem) 'water', ON *vatn* 'id.' (cf. Hitt. *u̯ātar*, gen. *u̯itenaš*, Gk. ὕδωρ, gen. ὕδα-τ-ος), OHG *fuir* 'fire; heart', OD *fuir* 'fire', OE *fȳr* 'id.' vs. Goth. *fon* 'fire', ON *funi* 'flame' (cf. Hitt. *paḫḫur*, gen. *paḫḫuenaš*), and see further the doublet Goth. *sauil* 'sun' vs. Goth. *sunno* 'id.' (cf. OAv. *huuarə̆*, gen. *xᵛəṇg*).

A similar analysis, *mutatis mutandis*, also accounts for TchA *wram* 'thing, object', whose plural *wramäṃ* may go back to **u̯réh₁-mn-h₂* > **wrēmnă* > PTch **wŕœmna*. On the other hand, I was not able to find any clear explanation for the plural *plācäṃ* 'words' (cf. *plācänyo* 'because of words' in e.g. A75 b6). Indeed, among the words discussed above, this is the only case where Tocharian B attests remnants of the original inflection (cf. nom.pl. TchB *plāci* < PTch **pəlacəyə* < PIE *(*s*)*plH-teḭ-es*). A tentative analysis suggests that TchA *plāc* acquired the plural ending from TchA *wram*. The reason this analogical development took place lies in the meaning of these nouns. Indeed, TchA *wram* must originally have meant 'speech, word', as the etymology of the term seems to indicate. For a certain period, TchA *wram* and TchA *plāc* were consequently almost synonyms, and this has favoured the transfer of the ending *-äṃ* to the paradigm of *plāc*. Only at a later time would TchA *wram* have developed the meaning of 'object'.

[125] One may wonder whether this phenomenon can be regarded as a process of exaptation, a term introduced in linguistics by Lass (1990), according to which linguistic relics can be refunctionalised by being adapted according to existing regular templates.

3.6.2.3. Summary

Summing up the result of our findings, we have seen that, with the exception of TchA *plāc* 'word', the Tocharian A nouns with plural ending *-äṃ* can be traced back to PIE **r*/*n*-stems (TchA *ytār* 'road', *ysār* 'blood', *por* 'fire') and to PIE **men*-stems (TchA *wram* 'thing'). My final aim was to demonstrate that the plural ending TchA *-äṃ* is an important archaism that in a way continued the Proto-Indo-European state of affairs. We have seen that the reconstruction of heteroclitic nouns requires strict comparisons between the older stages of the Indo-European languages, because in more recent times the same languages generalised one of the two stems. In Tocharian B we find precisely this development: the formal contention between *r*- and *n*-stems was resolved with the victory of the former over the latter. The final result of this process caused the collapse of the *n*-stem. On the other hand, we have seen that Tocharian A preserved the older state of affairs, since it has maintained both the *r*-form of the singular and the *n*-form of the plural. The final outcome of this development is a blended plural with the *r*-form as the stem and the *n*-form as the ending. This inflectional class therefore constitutes an important section of the Tocharian lexicon that offers a small but significant contribution to the diachronic evolution of Indo-European nominal morphology.

3.6.3. THE DEVELOPMENT OF TCH B *-na*, TCH A *-äṃ* IN THE INFLECTION OF THE NOUN: A RETROSPECTIVE

Let us summarise the results of our survey. From a synchronic point of view, it has become clear that TchB *-na* and TchA *-äṃ* are differently distributed. The Tocharian B ending is characteristic of two groups of substantives: (1) a closed class of alternating nouns, where TchB *-na* has to be interpreted as an inherited marker (both of Proto-Indo-European and Proto-Tocharian origin); (2) a flourishing class of feminine nouns, where the origin of *-na* is debated. On the other hand, TchA *-äṃ* is confined to archaisms, which mostly inherited this plural marker from the proto-language.

Nonetheless, the internal comparison between Tocharian A and B allows us to reconstruct **-na* as a quite common marker of alternating nouns in Proto-Tocharian. Krause & Thomas (TEB) divided Class II into two parallel subclasses: Class II.1 has a plural ending TchB *-na*, while Class II.2 has a plural ending TchB *-nma*. This bipartition is based on Tocharian B, since the metathesis of the cluster *-mn-* to *-nm-* entailed the formation of the second subclass. The Tocharian A correspondent nouns have different plural forms. On the one hand, a few inherited heteroclitic **r*/*n*-stems and **men*-stems continued to be member of Class II. On the other hand, most nouns with the plural PTch **-na* have been transferred to other classes with plural ending TchA *-nt* /*-ntu* (Class III.1 and Class III.2). These Tocharian A nouns corresponds to Tocharian B nouns of both Class II.1 and II.2, as the examples below show: TchB *sārm*, pl. *sārmna* : TchA *sārm*, pl. *sārmäntu*; TchB *ñem*, pl. *ñemna* : TchA *ñom*, pl. *ñomäntu*; TchB *nāki*, pl. *nakanma* : TchA *nākäm*, pl. *nākmant*; TchB *wāki*, pl. *wakanma* : TchA *wākäṃ*, pl. *wākmant*, etc. Sometimes we can still see the old

plural form *-mnā* in isolated Tocharian A derived forms, as in TchA *arkämnāṣi*, derived adjective from * *arkänmā* (cf. TchB *erkenma*) or the gen.pl. TchA *wramnāśśi* from *wramäṃ*.

Another trend of development of Tocharian A is that Proto-Tocharian formations with plural ending **-ewna* have been reinterpreted as singular, as in TchA *paloṃ* 'praise' (cf. TchB pl. *palauna* 'id.') and TchA *tārśoṃ* 'deception' (cf. TchB pl. *tarśauna*).

We should now turn to the feminine paradigm of the *śana* and *aśiya*-type. As already underlined, Tocharian A and B diverge in the formation of the plural paradigm of these classes, since Tocharian B attests *-ona* and *-^{y}ana* (nom. = obl.), while Tocharian A has differentiated markers in the nominative and in the oblique, i.e. TchA *-añ*| *-as* and *-āñ*| *-ās*. In this case, the comparison between the two languages invalidates a direct Proto-Tocharian reconstruction. An important question is therefore which of the two languages maintained the older situation. There are two opposite ways to explain this mismatch: (1) Tocharian B maintained the older state of affairs, and thus Proto-Tocharian had **-na* as the plural marker of these classes; (2) Tocharian A maintained the older state of affairs, and thus we have to reconstruct the situation of Proto-Tocharian as different from that of Tocharian B. Both hypotheses have advantages and disadvantages. The former implies that Tocharian B maintained the Proto-Tocharian state of affairs unaltered, but also leads us to ask why Tocharian A has lost the expected outcome of **-na* and, more generally, how this ending came out in Proto-Tocharian. The second hypothesis suggests that Proto-Tocharian had formally differentiated nominative and oblique plural forms. This should have been also the situation of Proto-Indo-European, and thus Tocharian A would have developed it. But why would Tocharian B lose such a differentiated paradigm?

This problem cannot be addressed without considering evidence form adjectival and pronominal inflections. Indeed, in the continuant of the PIE thematic type we find a clear contrast between adjectives with f.pl. TchB *-ona*, A *-aṃ* and adjectives with f.pl. TchB *-ana*, TchA *-āñ*| *-ās.* Again, for the former type the comparison between Tocharian B and A is straightforward, while it is not for the latter, which in turn strongly resembles what we find in the noun inflection. Given the fact that these plural markers are characteristic of both nouns and adjectives, I will investigate the origin and the development of the feminine plural ending *-na* once having also considered data from the adjectival inflection (§4.3.3.1).

3.7. ON THE ORIGIN AND THE EVOLUTION OF INFLECTIONAL TYPES FROM CLASS VI

So far, I have investigated the evolution of the PIE feminine and neuter gender in a restricted group of nouns, which mostly coincides with TEB Class II in Tocharian B. These nouns have been consistently compared with their Tocharian A equivalents, in order to clarify the diachronic evolution of their endings and forms.

Following the same method, I will in the following paragraphs deal with the historical evolution of selected inflectional types, which synchronically belong to TEB Class VI (pl. *-ñ*). The aim is to understand how (1) the non-ablauting **eh*$_2$-type (i.e. the **ā*-inflection), (2) the hysterodynamic **(e)h*$_2$-type (i.e. the **ā*/*ă*-inflection), and (3) the

*ih_2-type (of both the *devī́*-type and *vr̥kī́*-type) evolved in the Tocharian inflection of the noun.

The section is divided into three central parts. I will first investigate nouns with nom.sg. *-o*, obl.sg. *-a*, which can be grouped under two different types on the basis of their plural inflection: (1) masculine or feminine nouns with differentiated nominative and oblique in the plural (nom.pl. TchAB *-ñ*, obl.pl. TchB *-ṃ*, A *-s*) and (2) alternating nouns with undifferentiated nominative and oblique in the plural (§3.7.1). Afterwards, I will deal with two closely related inflectional classes, the so-called *okso*-type and *arṣāklo*-type, which both end in nom. *-o*, obl. *-ai* in the paradigm of the singular (§3.7.2). In the third part, I will investigate the origin of the *wertsi̯ya*-type, whose members have a palatalised stem *-^{y}a-* throughout the inflection of both the singular and the plural.

3.7.1. THE *kantwo*-TYPE

Tocharian B nouns with nom.sg. *-o*, obl.sg. *-a* and their Tocharian A correspondents

In this section, I will investigate the diachronic evolution of a small class of nouns, the so-called *kantwo*-type. Some preliminary remarks on the identification of each substantive will be made (§3.7.1.1). These will entail a revision of the list of the members usually proposed. Thereafter, I will discuss the etymology of the nouns identified and examine the evolution of their inflected forms. I will also discuss the gender of difficult nouns in order to have a solid basis for their diachronic investigation (§3.7.1.2).

One of the most recent and detailed works about the nouns of the *kantwo*-type (nom.sg. *-o*, obl.sg. *-a*) is Malzahn (2011). Within the specialised literature on Tocharian nominal morphology, this inflectional class has over the years become one of the most debated types, since the great majority of its members are supposed to go back to the PIE type in *-eh_2 > *-*ā*. Nevertheless, an overall discussion on the problems presented by this class was missing until Malzahn's article, which is, as far as I know, the only work that has considered these nouns all at once. Most notably, she analysed both the synchronic attestations and the diachronic interpretations of each substantive of the *kantwo*-type. Given the wide number of data collected and the relevant examinations suggested, in this paragraph I will frequently refer to her article, though differing interpretations will be proposed.

From a synchronic point of view, only a few Tocharian B substantives pertain to this inflectional class. Their main characteristic is that they have a nominative singular *-o* and an oblique singular *-a*. The plural formation is, on the contrary, not uniform. The great majority of them falls into TEB Class VI.3 (nom. pl. *-āñ*, obl. pl. *-aṃ*, see below), while, for some others, no plural forms are so far attested.

Furthermore, two alternating substantives, TchB *luwo* 'animal' and TchB *āyo* 'bone', can be included in a class somehow parallel to the *kantwo*-type: these words have nom.sg. *-o*, obl.sg. *-a*, but also attest the deviant plurals TchB *lwāsa* and TchB *āsta* (with no formal difference between nominative and oblique). Other two nouns with *sa*-plural are TchB *lyyāsa* 'limbs' (TchA *lyi̯yā* ~ *lyā*) and TchB *piltāsa* 'petals' (TchA *pältwā*), but the

reconstruction of the singular paradigm of these words is either unclear or debated (see the main text below).

In Tocharian A, the few matching nouns show unmarked nominative and oblique singular forms. Judging by the comparison with Tocharian B and some rare Tocharian A plural and derived forms (cf. instr.pl. *käntwās-yo* 'with tongues', *käntwāṣi* 'related to tongue', *kātsaṣi** 'belonging to the belly' < **kātsāṣi*), they belong to Class VI.3 as well. The Tocharian A equivalents of TchB *luwo* and TchB *āyo* are TchA *lu* and TchA *āy*. As in Tocharian B, also in Tocharian A these nouns show no difference between nominative and oblique plural (TchA *lwā* and TchA *āyäntu*).

3.7.1.1. The members of the *kantwo*-type

Krause and Thomas (TEB §§145, 159, 194) list six members: (1) TchB *kantwo*, A *käntu* 'tongue, language', obl.sg. *kantwa*; (2) TchB *kāswo* 'skin disease', obl.sg. *kāswa*; (3) TchB *kātso*, A *kāts* 'belly, abdomen', obl.sg. *kātsa*; (4) TchB *tāno*[126] 'grain, seed', obl.sg. *tāna*; (5) TchB *tsāro* 'monastery', obl.sg. *tsāra*; (6) TchB *luwo*, A *lu* 'animal', obl.sg. *luwa*.[127] In addition, at least three other nouns belong to this class: (1) TchB *āyo*, A *āy* 'bone', obl.sg. *āya*; (2) TchB *suwo* 'pig', obl.sg. *suwa*; (3) TchB *maiyya* ~ *maiyyo* 'power, strength', obl.sg. *maiyya*.

Somewhat problematic and not listed by Malzahn is TchB *kāwo* 'desire', which, according to Adams (DTB: 164), has an obl.sg. *kāwa*. While the nominative singular is clearly attested (e.g. in NS39 b1 and in B588 b4), to my knowledge, no oblique singular form has been identified yet. However, the allomorph of the oblique singular stem can be easily inferred from secondary cases and derivatives. Indeed, the causal *kawāñ* 'out of desire' – to be phonetically analysed as /kawáñə/[128] – allows us to reconstruct the obl.sg. as *kāwa* (e.g. in AS7L b3 *läks ra misāṃts kawāñ nakṣäṃ l*(*āre śaul*) "like the fish loses [its] dear life out of desire for meat"). A confirmation of this analysis can be found in the derivative *kawātse* 'desiderous' (B516 b4)[129], regularly based on the oblique singular form. In addition,

[126] Schmidt (apud EWAIA: I, 787) mentions a hypothetical TchA *tāṃ* 'grain' without giving, however, the attestation (see also Malzahn 2011: 84 fn.3). As pointed out by Peyrot (2018), this *tāṃ* may be an overlooked form of the homophonous obl.sg.f. of the demonstrative of remote deixis TchA *saṃ* 'that'.

[127] As correctly pointed out by Malzahn (2011: 83 fn.1), an obl.sg. †*māskwa* of TchB *māskwo* 'hindrance' is never attested. The forms of the secondary cases (e.g. abl. sg. *māswkameṃ* ~ *māsk$_{u}$meṃ*) and the derivative *maskwatstsai* speak in favour of an obl. sg. *māskwä* /máskwə/ (not †*māskwa* /máskwa/). Furthermore, this noun has a plural in *-nta* (cf. the derived adjective *maskwantaññeṣṣe* in B291 b6), which would be strange for a noun of the *kantwo*-type (Peyrot 2011: 151).

[128] Cf. the similar accent position in *läkleñ* /ləkléñə/ 'because of the suffering'. See Pinault (2008: 400 and 465).

[129] This fragment is admittedly difficult to translate: the form *aukatsāmat* (in b4 *weṣṣäṃ aukatsāmat ra māka no kawātse*, cf. Sieg & Siegling 1953: 319-20) is hard to analyse and the word

one cannot claim that *kāwo* is a member of the *okso*-type (nom.sg. *-o*, obl.sg. *-ai*, stem *-ai-*), because a stem ***kawai-* should then be expected. Accordingly, TchB *kāwo* must be assigned to the *kantwo*-type.

Another noun that has not been considered by Malzahn is the hapax legomenon nom.pl. TchB *käryāñ* 'viscera (?)' attested in IT1 a4: *ṣemeṃts käryāñ pruknānträ* "The *käryāñ* of some are bounding" (cf. Broomhead 1962: I, 143-6; Wilkens & Peyrot 2017: 694).[130] This plural form allows us to reconstruct the nom.sg. as *karyo** /kə́ryo/. The Tocharian A equivalent is TchA *kri* 'will, desire', nom.pl. *käryāñ* (Carling 2009: 217, cf. also TchA *käryāñ präṅki-ñi* '[my] desires are restrained' in A115 a4). However, a translation 'wills, desires' for *käryāñ* does not make sense in the text and one should rather translate it with 'viscera, guts', as Wilkens & Peyrot (2017: 693 and fn.29) pointed out. On the basis of its etymology (cf. Gk. κραδίη 'heart'), Hilmarsson (1996: 100), followed by Adams (DTB: 175), proposes a meaning 'heart', despite the fact that the regular word for 'heart', TchB *arañce*, occurs in the same text (line a1). Therefore, it is tempting to analyse the original contrast between TchB *karyo** and TchB *arañce* in light of similar pairs of synonyms referring to the notion of the heart as "the source of emotion", on the one hand, and "the material organ", on the other hand, found in some other Indo-European languages (cf. Bolelli 1948 for an analysis of ἦτορ, κῆρ, and κραδίη in Homer).

Problematic is also the alleged obl.sg. TchB *ekita* ~ *ekīta* 'help' (DTB: 80). No evidence of the nominative singular has been found so far, as it is only attested in the expression *ekita yam-* 'to help' (Meunier 2013: 173-74), and in some derived forms (cf. *ekītatstse* 'helpful, helper' and *ekītatsñe* 'assistance'). From a derivational point of view, one might claim that it contains the suffix *-ito*, which also occurs in TchB *laukīto* 'stranger' (to be linked with *lauke* 'far'). If so, it might be assumed that the nominative singular of obl.sg. *ekīta* was *ekīto** (cf. nom.sg. *laukīto*) and that the oblique singular of nom.sg. *laukīto* was *laukīta** (cf. obl.sg. (?) *ekīta*).[131] However, since TchB *ekita* is never attested as a free word, we are still not sure to which part of speech it must be assigned (cf. Meunier 2013: 173, who considers it an adverb). Since its origin and derivation are unclear too, I think it is better not to include it into the discussion.[132]

On the other hand, another noun may share the same formation of TchB *laukīto*. It has been read by Sieg & Siegling (1953: 333) as TchB *tekīta*, a hapax legomenon attested in B530

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division is uncertain. Sieg & Siegling (1953: 320 fn. 8) proposed *aukat tsāmat* "you will grow and increase" (cf. Adams DTB: 136), but both Malzahn (2010: 547) and Peyrot (2013: 843 fn. 1029) rejected this division. For discussions, see Hackstein (1995: 338) and Malzahn (2010: 547 and 985).

[130] The Tocharian verb *pruknānträ* corresponds to OUy. *sekriyü sučıyu* (0794) "springen" in the parallel passage. See Wilkens & Peyrot (2017: 685, 688, 692).

[131] For a slightly different idea, see Peyrot (2012: 194). Cf. also Pinault (2015: 176 fn. 39).

[132] Van Windekens (1976: 176) claims that a noun TchB *ek** is inferable after *ekañ̃ñi* 'possession', and that this hypothetical word would be a loanword from TchA *ek* 'fodder'. However, this hypothesis is highly improbable, both for the postulation of a loanword from Tocharian A and for the meaning. Furthermore, TchB *ekañ̃ñi* is related to TchA *akäṃtsune* 'possession', as Carling (2009: 2) and Adams (DTB: 79) demonstrated.

b4 /// *d vā* · *tekīta taśi wat ya* ///. This fragment is a bilingual list of Sanskrit terms translated into Tocharian. Unfortunately, the Sanskrit counterpart of TchB *tekīta* is missing, because the document is torn on both the left and right sides. As for other Tocharian words, also in this case the meaning of the noun could be envisaged on the basis of its etymology. Adams (DTB: 322) connected it to the action noun *teki* 'disease' and thus translated *tekīta* as 'sufferer, sick person', an oblique singular. Although this analysis is certainly possible from a linguistic point of view, I believe that the line should be read differently. As is well known, a common difficulty of Tocharian palaeography is how the signs ‹na› and ‹ta› are written and differentiated. Sieg & Siegling read three *t*-signs in the line, but it seems to me that the shape of the second differs from that of the other two.

We therefore must decide if the sequence should be read *tekīna taśi* or *nekīta naśi*. Before looking morphologically at these forms, I checked how ‹ta› and ‹na› are written in the manuscript to which B530 belongs (Couvreur 1968), and it seems to me that ‹ta› is usually written like our second akṣara, while ‹na› is written like the first (i.e. ‹ne›) and the third. I will therefore work with *nekīta naśi*. Although both these forms are not attested elsewhere, they are not difficult to interpret. The second is the expected 3sg.opt. of the verbal root TchB *nək-* 'to destroy, lose' (Malzahn 2010: 324-26 and 681). On the other hand, TchB *nekīto** can be a derivative in *-(i)to* of an unattested action noun *neki** 'destruction', regularly built on the subjunctive stem of *nək-*. If this analysis is correct, we must interpret the entire phrase as a figura etymologica with the meaning of "(s)he would destroy the destroyer", or the like.[133] Therefore, both TchB *laukīto*, A *lokit* and TchB *nekīto** will be treated as members of the *kantwo*-type below.

According to Adams (DTB: 141), TchB *auso**, a verbal noun built on the past participle of *wəs-* 'to wear, don', seems to fit into this inflectional class. The supposed attested forms are: oblique *ausa* in THT1859 a1 and THT1105 b3, and locative *ausane* in AS4A a2. As regards the locative (listed also by Hartmann 2013: 326), TchB †*ausane* (AS4A a2) must now be corrected in *aisene* 'in the cauldron' (Pinault 2015a: 197). The other putative attestations of TchB *ausa* are more difficult to analyse with regard to both the meaning and the form. In particular, the reading of line a1 in the archaic manuscript THT1859 is debated, to such an extent that I cannot consider it a certain attestation of the noun.[134] Much more certain is the reading *ausa* in THT1105 b3 *makā-yäkne ausa aṣitaṃ pār pitsamonta wasātai* "you wore in many kinds, clothes (?), fur (?), plumage (?), scales (?)"

[133] A last possibility implies that the ‹ne› of the first akṣara is a scribal mistake and thus that the phrase {*t*}*ekīta naśi* would mean '(s)he would destroy the infector' (cf. also *tekanma nakṣeñca* 'destroying all diseases' in Y2 a2).

[134] Adams (DTB: 141) reads the line as *ausa snai parnnā yāntaite* and translates the sentence as 'they exchanged clothes voluntarily'. This interpretation is rejected by Ogihara (2015: 106f.), who claims that the correct reading is *ausa snai pernne ayāttaite*. According to him, *ayātaitte* 'untamed, untameable' is the nominative singular of a *te*-adjective that must be linked to some other attested forms (e.g. obl.sg.m. *ayātaicce*, obl.pl.m. *ayātaicceṃ*), while *ausa* would be a nominative singular of uncertain meaning.

(edited by Schmidt 2018: 51 and 98; cf. Tamai 2014: 369-370).[135] All nouns attested (i.e. *ausa*, *aṣitaṃ*, *pār*, *pitsamonta*) are oblique forms, but their exact meaning is uncertain, considering that they are hapax legomena. Apparently, these terms denote different kinds of human and animal hides, in representation of the preceding existences of the character in the tale. So as to the inflectional class of this noun, we must conclude that, in the present state of documentation, it cannot be considered as a member of the *kantwo*-type, because we lack unquestionable nominative forms and we are not even sure whether to interpret *ausa* as a singular or a plural (if a plural, it should be sorted into the *mīsa*-type, on which see §3.8.2.2).[136]

In the list made by Malzahn (2011: 88), she includes two other substantives, TchB *śaro** 'adult man, elder' and TchB *ñāsso* 'part, portion'.

As regards the first noun, she agrees with Peters (2004: 267 fn.5) in reconstructing a nom.sg. *śaro**, obl.sg. *śara** for the attested plural paradigm nom.pl. *śrāy* < **śráñə* (?), obl.pl. *śrānäṃ*.[137] This interpretation is in my opinion unconvincing. The oblique plural of this noun clearly shows a nasal as part of the stem that does not fit well with the other nouns of the *kantwo*-type: indeed, while the latter attests a plural *-āñ| -aṃ*, the reconstructed plural of *śrāy* may have been **-añə| -anən*. If, as Peters argues, this word went back to an extended **nt*-stem, i.e. PIE **ǵerh₂-nt-s*, we should still see the outcome of *-t-* somewhere in the paradigm, as in the case of TchB *walo* 'king', nom.pl. *lāñc* < **ulH-nt-es*, obl.pl. *läntäṃ* < **ulH-nt-n̥s* (Lubotsky 1994). As a consequence, Pinault's diachronic interpretation (2008: 484f.) is preferable, as he postulates a Proto-Tocharian stem **śəran-* /śərán-/, with fixed accent on the last syllable. Furthermore, given the fact that no singular forms are attested and that the plural nom. *śrāy*, obl. *śrānäṃ* has no immediate parallels in Tocharian, I believe that the singular of this word cannot be set up with any certainty.[138]

The identification of *ñāsso* 'part, portion' is also doubtful. According to Malzahn (2007), this word is attested in two documents: once in B547a2 as a nom.sg. TchB *ñasso* (with *-a-* /ə/?), and twice in THT1168 b4 as an obl. sg. TchB *ñāssa.* The first fragment represents a bilingual word-by-word translation of a doctrinal Sanskrit text, in which the expression TchB *s(e) ñasso* would be the counterpart of Skt. *yoṃśaś*, a sandhi-variant of *yaḥ aṃśaḥ* (Sieg & Siegling 1953: 342 fn.13). She therefore interprets *ñasso* (a mistake for *ñāsso*) as a nominative singular with the meaning of 'part, portion' (Malzahn 2007: 241). She further links this word with TchB *ñāssa*, which is attested twice in THT1168 b4, and

[135] In the document, *wasātai* is to be corrected in *wäs(s)ātai* (cf. lines a3 and a4 of the same text).

[136] Adams (DTB: 114), followed by Hartmann (2013: 326), interprets this noun as masculine (or alternating) on the basis of the ghost attestation in AS4A a2 (see the main text above).

[137] On **-áñə#* > **-áyə#*, see Carling (2003: 93), Pinault (2008: 485), Peyrot (2012: 185) and §3.7.2.5. Adams (DTB: 705) suggests that TchB *śrāy* is from nom.pl. **ǵerh₂-u̯es*, an ablaut variant of Gk. γραῦς 'old woman'. However, Gk. γραῦς is rather from **ǵreh₂-i̯u-* (GEW: I, 324; Beekes 2010: 285), and Adams' acc.pl. **ǵerh₂-u̯n̥s* cannot be the ancestor of the Tocharian obl.pl. *śrānäṃ.*

[138] Peters (2004: 267) wants to put also TchB *pānto* in the *kantwo*-type. On this noun and the problematic nom.pl. *pantañ*, see Malzahn (2011: 95 fn.31).

analyses this form as an oblique singular of *ñāsso*. The fragment is part of an avadāna that tells the Buddhist story of the merchant Anāthapiṇḍika, who donates the Buddha a beautiful garden. Line b4 reads ///*kete pelkiñ ñāssa uppāl ñaskeṃ po ñāssa sanai tināṙ sā* […][139] ///, and Malzahn's translation is "… on his behalf, they demand blue lotus as a share (*ñāssa*). The entire share (*ñāssa*) of one coin (obl.) this one (nom.sg.fem.) …".

In defence of her analysis, she points out that THT1168 is more carefully written than B547,[140] and therefore argues that *ñasso* is a mistaken form to be corrected in *ñāsso*. Although a wrongly spelled vowel is possible in itself, I cannot agree with her in saying that TchB *ñāssa* is the oblique singular of *ñāsso*, since *ñāssa* is better analysed as the perlative singular of TchB *ñyās* 'desire', which displays a clear development of *ñy-* > *ñ-* in initial position, otherwise attested in some other Classical Tocharian B documents (Peyrot 2008: 63-64; Ogihara 2012). Contrary to Malzahn (2007: 242 fn.22), who claims that it would be unlikely to consider *ñāssa* as a perlative of *ñyās* because this document does not show "any eastern TB language features", Ogihara (2012: 179) points out that the scribe who copied this and other fragments belonging to the same avadāna probably was a Classical-Late Tocharian B speaker. Furthermore, the frequent figura etymologica *ñyāssa ñäsk-* 'to seek with desire' attested also in THT1168 b4 confirms this analysis. As a consequence, the entire line should be translated as follows: "… To whom they seek with desire a blue lotus; this one (nom.sg.f.) [seeks] with desire one gold coin …" (cf. Peyrot 2008: 63-4 fn.61). I therefore agree with Ogihara and Peyrot in saying that there is no link between *ñasso* in B547 a2 and *ñāssa* in THT1168 b4: TchB *ñasso* (not †*ñāsso*) is to be considered a hapax legomenon.

Ogihara (2009: 426-7, 2011: 135 fn.33) also discovered the new inflected form *mālo* (in THT2382.1 b2), which appears to be the nom.sg. of the already attested obl.sg. *māla*, a kind of inebriating drink (= Skt. *maireya-* in THT1103 b1; cf. also the derivative *mālatsai* '± drunkenness, related to *mālo*' in B241 a3 [arch.]). This noun is now demonstrated to belong to the *kantwo*-type (DTB: 482; cf. already Klaus T. Schmidt apud Tremblay 2005: 436).

Finally, a last noun that can be inserted into the *kantwo*-type is TchB *patso* 'pollen, stigma'.[141] It is a difficult word. From a synchronic point of view, it is attested several times in the nom.pl. *ptsāñ* (spelled once as *pätsāñä* in W38 a5): it occurs twice in the Berlin collection (B497 b8 (*ptsā*)*ñä*; B498 a8 *ptsā*(*ñ*)), twice in the Paris collection (AS3B a3 and b5 *ptsāñ*), and eleven times in the Weber series (W4 b1; W7 b4; W19 b2 and b5; W20 a5; W21 b4; W28 a6; W29 b1; W32 a5; W38 a5; W39 a3) . Quite remarkably, TchB *ptsāñ* is only found in nominal phrases with the adjective *kurkamäṣṣi* 'pertaining to saffron (pl.)'. The rest of the paradigm is more difficult to be established, because all other inflected forms are found in broken contexts. The nominative singular may be attested in the archaic

[139] For an interpretation of the final portion of the line, see Ogihara (2012: 178ff.) and Peyrot (2008: 63-4 fn.61).

[140] Some other misspellings are in fact attested in this document, e.g. monophthongisation of *au* into *o*, cf. *onästrä* for *aunasträ* in B547 a1. See Peyrot (2008: 53ff.).

[141] See also Hartmann (2013: 70-1).

document IT881 b2 (/// *pätso śkwäśko ma*///, "...pollen, barberry...///, cf. Michaël Peyrot apud CETOM s.v.), while the oblique singular can be probably found in IT244 a3 (///*kektseṃtsa* || *patsa tā*///, "...on the body || pollen this..."). [142] We find an apparent oblique plural *patsaṃ* /pə́tsan/ in IT305 at line a4 (*malkwer patsaṃ uppāläṣṣana witsakaṃmpa kärkoṣ śātrempa mā swälle* "milk is not to be drunk with pollens, lotus roots, and sprouted grain", cf. Thomas 1964: 72 fn.2), and a5 (*patsaṃ śemesteṃ kwrarāk arkwañai śeśuwermeṃ mā malkwer yokalle* "After having eaten pollens ..., the milk is not to be drunk"). Filliozat (1948: 62), followed by Adams (DTB: 388), claims that the translation of *patsaṃ* as 'pollens' does not seem appropriate, but I do not see any problem with this meaning (cf. Thomas 1964: 217; Sieg 1955: 70; Broomhead 1962: I,20). Adams (DTB: 388) further objects that "the difficulty of associating *patsaṃ* [obl.pl.] with *ptsāñ* [nom.pl.] in a single paradigm argues against the equation [of *patsaṃ* as an inflected form of *patso*]".

In other words, the claim by Adams is that we would expect *ptsāṃ** /p(ə)tsán/ as the obl.pl. of a noun of the *kantwo*-type. However, there are parallels contradicting this claim. Indeed, nouns of the *kantwo*-type seem to have a contrast between nom.pl. *-āñ* /-áñ(ə)/ and obl.pl. *-aṃ* /-an/ in Tocharian B, showing that the observed accent is regular. A noun that pairs well with *patso* is TchB *tāno* 'seed', which has nom.pl. *tanāñ* /tanáñ(ə)/ (cf. *tanāñ*^{ä} IT305 b3; *tanāñ*^{ä} W11 a6), obl.pl. *tānaṃ* /tánan/ (PK DA M 5067.37 and .36 a36, a40).

Malzahn's list (2011: 88) can now be amended to contain the following nouns:[143]

Table III.13. Nouns with nom.sg. *-a*, obl.sg. *-o*

TCHB NOUN	GENDER	OBL. SG.	NOM. PL.	OBL. PL.	STEM	TCHA
kantwo 'tongue'	m.	*kantwa*	*käntwāñ**	*kantwaṃ**	*käntwā-*	*käntu*
kātso 'belly, stomach'	f.	*kātsa*	*katsāñ*	–	*katsā-*	*kāts*
tāno 'seed of grain'	f.	*tāna*	*tanāñ*	*tānaṃ*	*tanā-*	–
patso 'pollen, stigma'	m.	*patsa*	*p(ä)tsāñ*	*patsaṃ*	–	–
mālo '±spirit, alcohol'	f.	*māla*	–	–	*malā-*	–
*karyo** '±viscera'	?	*karya**	*käryāñ*	–	–	*kri* (m.)

[142] On the basis of the prevalent occurrence of TchB *patso* in agreement with the nom.pl.m. *kurkamäṣṣi* (Hartmann 2013: 215), I do not believe that the obl.sg.f. *tā* agrees with *patsa* in IT244 a3, also because the word order clearly suggests that the demonstrative refers to a following word. Moreover, *tā*/// occurs at the beginning of a broken line, where it may stand for obl.sg. *tā*(*na*) 'seed of grain', among many other words.

[143] The list could of course become larger if for additional nouns the relevant forms are identified in the texts. Other nouns that are not listed, but which could probably be listed here too, will be discussed in the following paragraphs.

kāwo ‘desire’	f.	*kāwa*	–	–	*kawā-*	–
kāswo ‘skin disease’	f.	*kāswa**	–	–	*kaswā-*	–
tsāro ‘monastery’	f.	*tsāra*	–	–	–	–
laukīto ‘stranger’	?	*laukīta**	–	–	–	*lokit*
*nekīto** ‘±destroyer’	?	*nekīta*	–	–	–	–
suwo ‘pig’	?	*suwa*	–	–	*s(u)wā-*	–
luwo ‘animal’	alt.	*luwa*	*lwāsa*	*lwāsa*	*lwā-*	*lu*
āyo ‘bone’	alt.	*āya*	*āsta*	*āsta*	*ayā-*; *astā-*	*āy*
maiyya ~ -yo ‘strength’	f.	*maiyya*	*maiyyana~ maiyyañ* (?)	*maiyyana ~ maiyyaṃ*	*maiyyā-*	–

3.7.1.2. Analysis of the nouns

This section is the central part of my discussion on the *kantwo*-type, in which I deal with the diachronic evolution of all nouns identified in the previous paragraph. Because of its etymology, TchB *kantwo*, A *käntu* ‘tongue’ is the obvious choice to start our discussion. Then, I will deal with four nouns that are supposed to go back to the PIE type in *-eh_2 > *-*ā* (TchB *tāno* ‘seed of grain’; TchB *karyo** ‘±viscera’; TchB *kātso*, A *kāts* ‘belly, stomach’; TchB *kāswo* ‘skin disease’) and I will discuss the origin of *mālo* ‘spirit, alcohol’. The outcome of *-eh_2 in word-final and internal position will be outlined and examined. Furthermore, I will discuss whether these nouns can go back to the same PIE inflectional type or if some phonological and/or analogical changes have mixed up different inherited stem types. Afterwards, I will deal with the remaining substantives. First, I will analyse the abstract nouns *kāwo* ‘desire’ and *tsāro* ‘monastery, nunnery’, and investigate the origin of the suffix TchB *-to*, A *-t* in TchB *laukīto*, A *lokit* ‘stranger’, TchB *nekīto** ‘±destroyer’, and other agent nouns. Then, I will analyse the faunal terms TchB *suwo* ‘pig’ and TchB *luwo*, A *lu* ‘animal’. The last two nouns, TchB *āyo*, A *āy* ‘bone’ and TchB *maiyya* ‘strength’ will be treated separately.

TchB *kantwo*, A *käntu* ‘tongue’

The Tocharian word for ‘tongue’ has attracted the interest of many scholars, since it is the only member of this class for which cognates are found in most of the Indo-European languages. Before proceeding to the discussion of its historical development, however, the gender of the noun in both Tocharian languages must be clarified.

In the singular, TchB *kantwo* is found in agreement with a masculine modifier (e.g. B118 b7 [C]*ārkwi* (m.sg.) *mäsketär-ne* [T]*käṃtwo* "his tongue becomes white"). On the other hand, the plural paradigm is not attested directly; however, the oblique plural *kantwaṃ** /kə́ntwan/ can be easily inferred on the basis of the perlative plural *colormeṣṣeṃ käntwāṃtsa* "with *colormeṣṣe* tongues" (AS17H a3). Although the meaning of *colormeṣṣeṃ* is unknown, it can be formally analysed as the obl.pl.m. of an adjective TchB *colormeṣṣe** in argreement with the perl.pl. *käntwāṃtsa* (cf. also *colormetse* NS11 b1; *colormecce* IT823 a2; *colormeṃtsa* B355 b2). This plural concord is not listed either in Hartmann (2013: 327) or in Adams (DTB: 147). They report the gender of the noun as masculine or alternating, but I cannot agree with this analysis. Even if we did not have the plural agreement in AS17H, TchB *kantwo* could not have been interpreted as an alternating noun in any case, because it should then have had identical nominative and oblique plural forms (§2.4.1).

The gender of the Tocharian A equivalent, TchA *käntu*, is more difficult to establish. Hilmarsson (1996: 79) claims that we have only three agreement sets: TchA *käntu* agrees twice with a masculine modifier (A300 a8; YQ II.10 a8), and only once with a feminine modifier (A57 a2), both in the singular. These contradictory environments led scholars to lemmatise the noun as both masculine and feminine (e.g. Carling 2009: 163; TEB §194). The cases in the singular are given below (Hartmann 2013: 309-10):

A300 a8

napeṃsinäṃ	*käntuyo*
human:OBL.SG.M	tongue:INSTR.SG.M

"with human tongue".

YQ II.10 a8

wärts	*knuṃts*	*käntu*
broad:NOM.SG.M	supple:NOM.SG.M	tongue:NOM.SG.M

"the tongue is broad and supple".

A57 a2

opal-yokāṃ	*käntuyo*
lotus-coloured:OBL.SG.(F ?)	tongue:INSTR.SG.(F ?)

"with a lotus-coloured tongue" (cf. SSS §58 p.33)

The only plural attestation is the following:

A356 b2

triśkās	*käntwāsyo*
??	tongue:PERL.PL

Let us start with the plural form. Hartmann (2013: 310) hesitantly gives the instrumental plural *käntwāsyo* as agreeing with TchA *triśkās*, which he interprets as a hapax legomenon

of uncertain meaning and formation. However, another inflected form seems to be attested in a broken passage of A375 a2 as *triśkaṃ*, which, if an adjective, could formally be a feminine plural in agreement with *pātruk* /// 'skull(s)' (likewise SSS §174).[144] Otherwise, TchA *triśk** can be a noun with plural TchA *-āñ*| *-ās* and loc.sg. *triśkaṃ*.[145] In view of these inconclusive data, I agree with Sieg, Siegling & Schulze (SSS §58, p.33) in saying that TchA *triśkās* is too uncertain ("dunkel") to be used for identifying the gender of *käntu*.

Back to the singular paradigm, we see that, in the first two passages, TchA *käntu* and *käntuyo* agree with the targets *wärts* 'broad', *knuṃts* 'supple', and *napeṃsināṃ* 'human', three adjectives inflected as masculine. Based on these nominal agreements, we should therefore consider TchA *käntu* a masculine noun. However, the problematic passage in A57 a2 seems to contradict this analysis, since *oppal-yokāṃ* 'lotus-coloured' is generally interpreted as a feminine oblique singular. Hartmann (2013: 99f.) has correctly questioned this analysis. He lists a range of cases where the adjectival compounds of the type *oppal-yok* (literally 'lotus-colour' → 'lotus-coloured') take an obl.sg. TchA *-āṃ* when they refer to either masculine or feminine nouns.[146] This leads to the conclusion that they are not gender-differentiated and cannot therefore be used to identify the gender of a noun.

Since no substantives with an oblique plural in *-ās* (cf. *käntwās-yo*) can be interpreted as alternating, it follows that TchA *käntu* is definitely a masculine noun. This fits the Indo-European comparative situation nicely: given the fact that Avestan, Balto-Slavic, and some Old Irish and Breton formations point to the reconstruction of the noun as masculine in Proto-Indo-European (cf. AIGR: II.2, 492; EWAIA: I, 592), Tocharian seems to preserve the original state of affairs.

After having determined that 'tongue' is masculine in both Tocharian languages, the historical evolution of the noun is to be discussed. TchB *kantwo*, A *käntu* can be traced back to the familiar PIE word for 'tongue', PIE **dn̥ǵʰu̯eh₂-*, through metathesis of **dn̥ǵʰ-* > **ǵn̥dʰ-* (Ringe 1996: 45f.; Pinault 2008: 428). The singular paradigm nom. *-o*, obl. *-a* has given rise to debate, insofar the outcome of **-(e)h₂* is concerned. For this reason, it is best to start the diachronic analysis of the *kantwo*-type with this noun. I will first deal with the origin of the nom.sg. *-o*, and then with the obl.sg. *-a*.

In order to explain the nominative singular *-o*, three different proposals have been made:

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[144] On the correct meaning of *pātruk*, see now Malzahn (2014: 91f.).

[145] For the two forms discussed, no certain etymology has been proposed. Poucha (1955: 133) is the only one who suggests a link with the verb TchA *träyk-* 'be confused, faint'.

[146] I do not think that compounds of the type *oppal-yok** can be interpreted as a "Karmadhārayabildungen", as Hartmann seems to argue. These compounds are evidently of the Bahuvrīhi-type, as demonstrated also by the most prominent member of this type of compounds, TchB *ysā-yok*, TchA *wsā-yok* 'gold-coloured', calque from the Sanskrit Bahuvrīhi *suvarṇa-rūpa-* (Pinault 2008: 562).

(1) Asigmatic nominative singular, PIE *-*eh*$_2$, which regularly yielded PTch *-*å* > TchB -*o*. Accordingly, the nom.sg. can be reconstructed as PIE *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}eh_2$ > PTch **kəntwå* > TchB *kantwo* (Hilmarsson 1986: 18; Pinault 2008: 428);

(2) Sigmatic nominative singular, so that TchB -*o* is the outcome of a Pre-PTch form with final *-*ās* (< PIE *-*eh*$_2$-*s*), which yielded *-*å*(*s*) before the loss of final *-*s*. Thus, PIE *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}eh_2s$ > **kəntwås* > PTch **kəntwå* > TchB *kantwo* (Peters 1991; Kim 2009; Malzahn 2011), while PIE *-*eh*$_2$ > PTch *-*a*;

(3) TchB *kantwo* does not derive from PIE *$d\!\underset{\circ}{n}\hat{g}^{h}\underset{\wedge}{u}eh_2$ directly, but rather from a nasal-extended variant. The new nominative singular *-*ōn* first became *-*ō*(*n*) and then TchB -*o* (Adams 1988a: 13-14, 2015: 177).

The reason why Adams reconstructs TchB *kantwo* as an old *ŏn*-stem (hypothesis 3) is twofold. To begin with, he argues that PIE **eh*$_2$ first became PTch **a* and then TchAB *a*, in both internal and final positions; however, if PIE *-*eh*$_2$- was in the proximity of an etymological nasal, the sequence *-*eh*$_2$*N*(-) should have given PTch *-*oN*(-), through rounding of the vowel (Adams 1988: 20). As a consequence, reconstructing a nom.sg. PIE *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}eh_2$, acc.sg. *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}eh_2$-*m* as the ancestors of TchB nom.sg. *kantwo*, obl.sg. *kantwa* would make no sense according to Adams' assumptions, since a paradigm with nom.sg. **kantwa*, obl.sg. ***kantwo* is expected (i.e. exactly the opposite of the attested forms).

Second, he claims that, within Indo-European, Tocharian is most closely related to Germanic. One of the similarities singled out by Adams would include the extension of *n*-stems in both these Indo-European branches (Adams 1984). The same extension would have affected also TchB *kantwo*, A *käntu*, which has a nom.pl. *-ñ* < PIE *-*n-es*. As a consequence, he claims that TchB *kantwo* mirrors Goth. *tuggo* (< PGerm. **tungōn*-, Ringe 2006: 81; Kroonen 2013: 526), as both reflecting PIE *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}ōn$ or PIE *$d\!\underset{\circ}{n}\acute{g}^{h}\underset{\wedge}{u}eh_2ōn$ (Adams 2015: 177).

These reconstructions are questionable. Indeed, there is no evidence that Tocharian had a Germanic-like distinction between strong and weak inflection (Jasanoff 2018; Fellner 2013: 20; Pinault 2008: 478f.). Furthermore, it is today agreed that PIE *-*eh*$_2$- did not develop into PTch *-*a*-, but rather into PTch **å* > TchB *o*, TchA *a*, *o* (cf. e.g. PIE *$b^{h}réh_2$-*tēr* > TchB *procer*, A *pracar* 'brother'; PIE *$\underset{\wedge}{u}éh_2stu$ > TchB *ost*, A *waṣt* 'house').

On the other hand, the development of *-*eh*$_2$ in word-final position is still debated. This diachronic matter is behind the two remaining explanations on the origin of the nom.sg. -*o*. In order to assess these opposite theories, we must now look at the reconstructed inflection of this noun in Proto-Indo-European.

As pointed out above, the word for 'tongue' is attested in several Indo-European languages, though it has often been subject to various irregular and analogical changes: the initial *l*- in Lat. *lingua* (cf. also the regular OLat. *dingua*), Lith. *liežùvis*, and Arm. *lezu* has been influenced by the outcomes of the PIE root *$leig^{h}$- 'to lick' (LIV^{2}: 404; Olsen 1999: 67); in Sanskrit, we find a feminine *ā*-stem, Ved. *jihvā́*-, with -*ā*- extended throughout the whole paradigm, alongside with a feminine *ū*-stem *juhū́*- (EWAIA: I, 591; Pisani 1954: 143f.); in Old Persian and Germanic, it became an *n*-stem, cf. OP *hạzān*-, acc. *hạzānam* (Skjærvø

2007: 886), and PGerm. **tungōn* (Ringe 2006: 81f.; Kroonen 2013: 526-7); OPr. *insuwis* and OCS *językъ* display loss of initial **d-* before syllabic nasal and resuffixation with **-kъ* in Slavic (Derksen 2015: 285); finally, in Celtic this noun became a *t*-stem, PCelt. **tangwāt-* (Matasović 2009: 368).[147] Among all these cognate formations, only Av. *hizuuā-* 'tongue' helps us to reconstruct the PIE inflectional type of this word. It is therefore worthwhile to have a closer look at the attested paradigm of Av. *hizuuā-*:[148] acc.sg. YAv. *hizuuąm* (< PIE **-u̯éh₂-m*), gen.sg. OAv. *hizuuō* (< PIE **-uh₂-és*), instr.sg. OAv. *hizuuā* (YAv. *hizuua*) 'with the tongue' (< PIE **-uh₂-éh₁*) (Beekes 1985: 39ff.; EWAIA: I, 591f.; Martínez & de Vaan 2014: 60).[149]

This paradigm points to the reconstruction of a hysterodynamic type for Proto-Indo-European, with ablauting suffix **-éh₂-*/**-h₂-* (Kuiper 1942: 15; Peters 1991: 242):

Table III.14. PIE hysterodynamic paradigm of **dn̥ǵʰu̯éh₂-*

CASE	R	S	E	'TONGUE'
nom.sg.	-	*é*	-	**dn̥ǵʰu̯éh₂(-)*
gen.sg.	-	-	*é*	**dn̥gʰuh₂-és*
acc.sg.	-	*é*	-	**dn̥ǵʰu̯éh₂-m*

[147] The main work on the evolution of the Celtic word for 'tongue' is Widmer (1997). He shows that nouns that originally belonged to other stems adopt inflectional patterns of the *t*-stems for different reasons. As far as the word for 'tongue' is concerned, he argues that PCelt. **tangu̯ā-* has been remodelled as a *t*-stem (PCelt. **tangu̯āt-*) because the regular outcome of the paradigm of this hysterodynamic noun would have created a unique and isolated inflection in Celtic. Widmer's theory implies that the original sigmatic nom.sg. **tangu̯ās* has been analogically influenced by the nom.sg. **-V̄-s* of the *t*-stem (< PIE **-Vt-s*). This view was accepted by some scholars (e.g. Matasović 2009), but there may be some problems of relative chronology. First, the reconstruction of a sigmatic nom.sg. for PIE **dn̥ǵʰu̯eh₂-* is not ascertained (see below the discussion on the main text). Second, in Proto-Celtic the *t*-stems were still not a productive morphological class (Vijūnas 2009). One could draw an optimistic view according to which this trend of attracting nouns from various classes to *t*-stems was only occasional in Proto-Celtic, but it became even more productive later, especially in Irish. However, the list of *t*-stems with a long vowel before the consonant, i.e. with nom.sg. **-V̄(t)-s*, includes only few substantives (Pedersen 1913: 101f. listed only 8 nouns), and for many of them a Proto-Celtic reconstruction is impossible. Indeed, they are not listed in Matasović's dictionary (2009). As a consequence, the transition of the PCelt. word for 'tongue' from an *ā*-stem to a *t*-stem has happened in a stage in which the nouns with *t*-inflection were just a few, especially those with nom. sg. **-V̄s.* I therefore do not believe that the Proto-Celtic word for 'tongue' developed a *t*-inflection due to its sigmatic nominative singular.

[148] For the evolution of PIE **dn̥ǵʰu̯eh₂-* in Indo-Iranian, see EWAIA: I, 591-3 and now Lipp (2009: I, 188f.), who reconstructs the following transitional stages: IIr. **ǰiǰʰuaH-* > PIr. **dzidzwā* > **[zidzwā]* (dissimilation) > **[sidzwā]* > OAv. *hizuua-*. See also de Vaan (2011: 6).

[149] On Av. *hizū-* and the instrumental plural OAv. *hizubīš*, see further Benveniste (1954: 30f.), Kuiper (1942: 16; 1978: 12ff.), and Peters (1991: 243).

Actually, the nominative singular of the Avestan word is more difficult to reconstruct, since it is only attested in compounds. I found the following attestations:[150] Av. *hizuuå.uxδāiš* 'parole prononcée par la langue' (Y. 18.1; Y. 47.2; Y. 51.3), OAv. *hizuuå.āuuərətō* 'prisonnier de la langue' (Y. 45.1), YAv. *hitō.hizuuå* 'dont la langue est liée'[151] (Y. 65.9). The interpretation of Av. *hizuuå°* as the first member of the compound is disputed in both the linguistic and the philological analysis. For this reason, the two modern editions of the Gāthās (Kellens & Pirart 1988-1991 and Humbach 1991) have different readings: on the one hand, Kellens & Pirart have *hizuuå°* because it is "massivement imposé par la tradition manuscrite"; on the other hand, Humbach does not analyse the Old Avestan forms as compounds, emending *hizuuā* as an instrumental singular from *hizū-*. Humbach argues that the variant *hizuuå uxδāiš* "by thought (voiced) by one's tongue" is due to corruption, because final *-ā* of *hizuuā* would have been assimilated to the initial *u-* of *uxδāiš,* due to the oral transmission of the text. In a similar way, the great majority of the manuscripts read *hizuuå* for the sequence *drəguuå hizuuå āuuərətō* "the deceitful one, invited by one's tongue" (Y 45.1.), which, according to Humbach (1991: 165), has facilitated the writing variant with *-uuå*.

Although Kellens & Pirart maintain the reading with *hizuuå*, they state that *-å* is an "absurd terminaison", explaining the final vowel as a peculiarity of this word in the internal compound boundary.[152] As a matter of fact, *hizuuā-* and *hizuuå-* alternate frequently in the manuscripts, but the variant *hizuuå°* is considered a bizarre form by almost all experts of Avestan (cf. already Kuiper 1978: 16, who argued that readings with *hizuuå°* must be corruptions for *hizuuā-*).[153]

The nom.sg. YAv. *hitō.hizuuå* (Y. 65. 9) is even more difficult to analyse. On the basis of this form, Peters (1991) and Widmer (1997), followed by Malzahn (2011), reconstruct a sigmatic nominative singular PIE **dn̥ǵʰu̯éh₂-s*: indeed, from a diachronic point of view, only a final sequence PIr. **-ās* (< **-eh₂-s*) turned into Av. *-å*, while PIr. **-ā* (< **-eh₂*) yielded Av. *-ā*.[154] However, I believe that YAv. *hitō.hizuuå* is not sufficient evidence for arguing that

[150] The translations presented follow Kellens & Pirart (1988-1994). On the compound *hizuuārəna* 'by moving the tongue' (Yt. 5.6), Oettinger (1983: 187-88), who reconstructs **hizuuā-arnā-* 'by a tongue movement'.

[151] This compound is usually translated as 'having a bound tongue'. For a new translation of *hitō.hizuuā-* 'dont la langue est liée', see Kellens (2009: 333).

[152] For different proposals on the interpretation of *hizuuå.āuuərəta-*, see Kuiper (1978: 12ff.), Kellens & Pirart (1991: 187f.), and Kellens (1994: 60-61).

[153] See Pirart (1986: 188) for the distribution of the variants. See also Skjærvø (2007: 886), who puts a question mark after a hypothetical nominative singular attestation of *hizuuā-*.

[154] It seems to me that the supporters of the reconstruction of a sigmatic nom.sg. come from the School of Vienna, where they certainly attained Professor Jochem Schindler's classes. Indeed, Malzahn, Peters, and Widmer all studied and/or teach(ed) at the University of Vienna. Furthermore, in EWAIA under the etymological discussion of Skt. *jihvá-*, Mayrhofer refers to Schindler's reconstruction of Av. *hizuuå* < PIE **dn̥ǵʰu̯éh₂s.* However, as far as I know, Schindler has never discussed this reconstructed form in his publications.

the PIE nominative singular was sigmatic, because the nominative singular of *hizuuā-* never occurs as an independent word and is only attested in compounds.[155] Furthermore, in the *Frahang ī oīm*, an Avestan-Pahlavi glossary, the gloss of Pahl. *uzwān* 'tongue' is Av. *hizuua* (nom.sg.), not *hizuuå̊* (EWAIA: I, 591; Reichelt 1900: 187). However, the dictionary entry cannot be considered as probative evidence, since it could have been based on other inflected forms.

For all the aforementioned reasons, we do not have sufficient evidence in support of the reconstruction of a sigmatic nom.sg. for the PIE word **dn̥ǵʰu̯éh₂-*; I therefore see no strong comparative evidence for claiming that the nom.sg. *-o* of TchB *kantwo* is to be traced back to a sigmatic nom.sg. **-eh₂-s* (cf. also Hilmarsson 1986; Pinault 2008: 428, 286, 2012: 189 fn.48).[156] In any case, I assume that both PIE **-eh₂* and **-eh₂-s* would have turned into **-å̊* in Proto-Tocharian (see §4.3.4.4).

As the nominative, also the oblique singular TchB *-a* has given rise to controversy. Scholars usually argued that the obl.sg. *-a* has been influenced by the **ŏn-*stems, so that TchB *-a* would be the outcome of either the obl.sg. PTch **-an* < acc. sg. **-ōn-m* (Adams 1988a: 13-4; Hilmarsson 1986: 18) or the late gen.sg. PTch. **-ansæ*, resegmented as *-a-nsæ* (Pinault 2008: 486f.).

On this issue, Malzahn (2011: 96f.) has now proposed a different explanation. Following the teachings of the late Schindler, she reconstructs the acc.sg. of the PIE word for 'tongue' as **-eh₂-m̥* (with syllabic nasal), and therefore suggests a sound law "Very Early pre-PT

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[155] If one compares Av. *hizuuā-* with Ved. *jihvá-*, some issues related to both the inflection and the gender of the IIr. noun come to light. Indeed, Av. *hizuuā-* is a masculine, while Ved. *jihvá-* is a feminine. Moreover, the Indian word does not attest a sigmatic nominative singular. The relevant problems that the comparison between the two cognate forms highlights are: (1) the mismatching gender of the nouns; (2) the different shape of the nominative singular. Lipp (2009: I, 188-90) reconstructs a masculine noun with asigmatic nominative singular PIE **dn̥ǵʰu̯éh₂*, which yielded IIr. **ǰíǰʱuā*. In Indian, the word has been reinterpreted as a feminine *ā*-stem, since the members of the *ā*-inflection were only feminine since the Vedic period (Lazzeroni 1997: 193-205). On the other hand, if final *-å̊* in YAv. °*hizuuå̊* is not due to compounding, one may wonder whether the masculine gender of the noun has hindered its inclusion into the feminine *ā*-stems, while the nom.sg. has become sigmatic under the pressure of original root nouns ending with a vowel, like *xå̊* f. 'well', °*stå̊* 'standing', *paṇtå̊* m. 'path', *mazdå̊* m. 'Mazdā' (Skt. *medhā-* f. 'wisdom' < IIr. **mas-dʰaH-* < PIE **mn̥s-dʰeh₁-*). One could also be tempted to say that the alternation between *-uuā* and *-uuå̊* in the manuscripts partly mirrors this development. But this is speculative.

[156] Malzahn (2011: 89) claims that one would like to derive the nom.sg. *-a* of the Tocharian B feminine "thematic" adjectives from a non-ablauting PIE **eh₂-*stem. However, the ending of these Tocharian adjectives is not *-a*, but rather *-ʸa*, which cannot be reconciliated with **-eh₂* > **-ā*. Indeed, according to Malzahn's explanation, the expected Tocharian B outcome of the PIE adjective in **-reh₂* should have been TchB ***-ra*, but the attested form is rather TchB *-rya*. Her claim cannot therefore be considered as a real counterargument against the evolution of PIE **-eh₂* > TchB *-o*. I will discuss more thoroughly the evolution of PIE **-eh₂* in word-final position in other sections of this chapter. For a discussion about the evolution of the feminine inflection in the Tocharian adjective, see §4.3.4.4.

*-*ah*$_2$*m̥* > Later pre-PT *-*ăm*". I find this sound law very hard to accept. First, it is not falsifiable, because there are no Tocharian parallels that may testify it. Second, even if we reconstructed a syllabic acc.sg. *-*m̥*, I do not understand what the exact phonetic condition was for causing the loss of the laryngeal in the sequence *-*eh*$_2$*-m* > *-*aH-m̥* (perhaps through *-*aH-əm*?) > *-*ăm*.

Klingenschmitt (1994: 393), followed by Kim (2009: 79), argues that the obl.sg. -*a* is from the zero grade *-*h*$_2$-, which was not characteristic of the accusative singular in the hysterodynamic type. This implies that the obl.sg. -*a* is to be traced back to the weak stem. Pinault (2008: 483-4) questioned this reconstruction, since it would not be coherent with the general development of the Tocharian oblique, which mostly mirrors the PIE accusative. He correctly points out that, in several inflectional types of Tocharian, the nominative and the accusative must have coalesced in the singular "en raison des lois phonétiques des finales". The same development must be assumed also for the paradigm of *kantwo*: both nominative and accusative should have merged in **kəntwå* < **ǵn̥d*^{h}*u̯eh*$_2$(*m*) in Proto-Tocharian, while the gen.sg. **ǵn̥d*^{h}*u̯h*$_2$*-és* should have yielded **kəntwa*. This **kəntwa* can be the direct ancestor of TchB *kantwa* /kə́ntwa/, A *käntu* (cf. TchA °*käntwā-ṣi* 'related to tongue or language', Carling 2009: 163).

As a matter of fact, this is not an isolated trend of development, since there are other Tocharian obl.sg. endings that cannot go back to the PIE accusative. As pointed out in §3.5.1.2, the contrast between nom.sg. -(*ʸ*)*a* vs. obl.sg. -(*ʸ*)*o* in the *śana*-type mirrors the ablauting alternation between strong and weak stem of the suffix *-(*i*)*h*$_2$, *-(*i̯*)*eh*$_2$-. In addition, Peyrot (2012) has recently identified indisputable correspondences between the TchB obl.sg. -*ai* and the TchA gen.(-dat.) sg. -*e* and has highlighted the fact that the Tocharian B feminine adjectives (with obl.sg. -*ai*) do not attest genitive singular forms. This clear piece of evidence allows us to support the reconstruction of a dative (or locative) PIE *-(*e*)*h*$_2$-(*e*)*i* as the ancestor of the obl.sg. TchB -*ai* (Pedersen 1941: 53, see further §3.7.2. and 4.3.3.). Also, the obl.sg. forms of the kinship terms in PIE *-*ter*- of the type TchB *pātär* 'father', *mātär* 'mother', *protär* 'brother' cannot be derived from the acc.sg. PIE *-*tér-m̥*, which was expected to have yielded **-*cär*, but it is instead the outcome of the zero grade stem of the gen.sg. *-*tr-és* > PTch **tŕə* > TchB -*trä* ~ -*tär* (cf. Lat. *patrem* vs. Gk. πατέρα).

Back to the obl.sg. TchB *kantwa*, I believe that, after the formal confusion between the nominative and the oblique in the paradigm of the singular (both resulting in *-*å* in Proto-Tocharian), Tocharian B has acquired a new obl.sg. *-*a*, which is itself the regular outcome of the weak stem of the hysterodynamic paradigm (probably of the gen.sg. PIE *-*h*$_2$*-és*).[157]

All things considered, the diachronic evolution of the paradigm of TchB *kantwo*, A *käntu* 'tongue' can be schematised as follows:[158]

[157] Unfortunately, this analysis cannot be confirmed by Tocharian A, where the Proto-Tocharian nonhigh vowels disappeared in word-final position.

[158] There is some hesitation in the gen.sg. of Tocharian A. Carling (2009: 130) indicates two variants, TchA *käntwis* and TchA *käntwes*, both attested in A300 (at lines b1 and b3 respectively).

Table III.15. Evolution of the singular paradigm of TchB *kantwo*, TchA *käntu*

	PIE		PRE-PTCH		PTCH		TCHB	TCHA
NOM.	**dn̥ǵʰu̯éh₂*	> **ǵn̥dʰu̯ās* >	** kəntwå* >		**kəntwå* >	NOM.	*kantwo*	*käntu*
ACC.	**dn̥ǵʰu̯éh₂-m*	> **ǵn̥dʰu̯ām* >	**kəntwå*	↗	**kəntwa* >	OBL.	*kantwa*	*käntu*
GEN.	**dn̥ǵʰuh₂-és*	> **ǵn̥dʰu̯ās* >	**kəntwa* >>		**kəntwanse* (?) >	GEN.	*käntwāntse*	*käntwis*

TchB *karyo** 'viscera (?)', A *kri* 'will'

Besides TchB *kantwo*, another noun with clear etymological comparanda is TchB *karyo** '±viscera', A *kri* 'will, desire'. Since Sapir (1936: 263), TchA *kri* has been connected to the familiar PIE word for 'heart', as represented by e.g. Skt. *hr̥d-*, OAv. *zərəd-*, Gk. κῆρ, Lat. *cor* (gen. *cordis*), etc. In fact, a Proto-Tocharian singular paradigm nom.sg. **kəryå*, obl.sg. **kərya* would fit well from both a Tocharian and an Indo-European comparative perspective (Hilmarsson 1996: 100). We can therefore posit PIE **ḱr̥di̯eh₂* as the ancestor of TchB *karyo**, A *kri* (cf. Gk. καρδίᾱ, Hom. Gk. κραδίη but also the stem Hitt. *kard(i)-*, OIr. *cride* and Skt. *hŕ̥daya-*, Av. *zərədaiia-*).

TchB *kāswo* 'leprosy', TchB *kātso*, A *kāts* 'abdomen, belly', and TchB *patso* 'pollen, stigma'

As regards TchB *kāswo* and TchB *kātso*, A *kāts*, I believe no certain etymologies have been proposed so far.

Hilmarsson (1996: 107) relates TchB *kāswo* to PGerm. **haswa-* 'grey' (cf. ON *hǫss*, OE *haso*, MHG *heswe* 'pale, dull'; cf. further PGerm. **hasan-*, **hazan-* > ON *heri* 'hare', OE *hara* 'id.', OHG *haso* 'id.', MDu. *has* 'id.') both from PIE **ḱh₂es-* 'grey; hare' (cf. also Lat. *cānus* 'grey, ashen, old' < **ḱas-no-*; Ved. *śaśa-* 'rabbit, hare', Khot. *saha-* 'id' < **ḱas-o-*, etc.) followed

This fragment is part of the *Maitreyasamiti*. Parallels from the Old Uyghur *Maitrisimit* can be identified: A300 a5 can match Hami 21.5v9-12 (Geng et al. 1998: 33 and 90; Michaël Peyrot p.c.), while A300 a7 can match Mainz 973.r2-4 (Tekin 1980: 179-80). See Laut & Wilkens (2017: 184-5 and 385). These documents belong to Chapter 21 of the *Maitrisimit*. As far I can see, a Uyghur parallel of line b3 is missing. However, the fact that two variants of a genitive form are attested just in the same fragment is very suspicious, and TchA *käntwes* is actually written *kätwes*: b3 *ṣñi kätwes mätkont prakte ypamtär kārūṇik*. This line may refer to tortures and penances the penitents suffered in one of the eight hells. Thus, TchA *kätwes* may be interpreted as an obl.pl. of *kätwe**, which has been translated by Hilmarsson (1996: 114) with 'deception' or 'sin', and the line may be translated as follows: "we make penance to ourselves, to our own sins". As a consequence, I do not consider this *kätwes* as a miswritten genitive singular form of TchA *käntu* 'tongue'. See further Malzahn (2010: 553).

by *-u̯o-. If so, the ancestor of TchB *kāswo* would be **ḱas-u̯eh₂* (cf. also Hackstein 2003: 84).[159]

Another possibility is to connect *kāswo* with PIE **ḱes-/*ḱseu̯-* 'to comb, scratch', but the vocalism of the root and the lack of palatalisation in Tocharian would be difficult to explain. Following Van Windekens (1976: 625), Tremblay (2005: 441) proposes a loanword from an unattested Khotanese word **kasva-* < OIran. **kasu-u̯iš-* '± bubonic', otherwise attested only in Av. *kasuuiš-*. However, the isolation of this word in Iranian urges caution.[160] Since the last two possibilities are too uncertain, I will focus on Hilmarsson's derivation of TchB *kāswo* from the PIE root for 'grey'.

TchB *kāswo* is attested four times: twice as a nominative TchB *kāswo* (IT305 b5; THT1111 b3), once as a perlative TchB *kāswasā* (B282 a4 [arch.]), and once in the derivate *kaswātse* 'leprous' (IT305 a6). According to Filliozat (1948: 56ff.), the fragment IT305 is a Tocharian reworking of passages from the *Sūtrasthāna*, the first book of the Āyurvedic *Carakasaṃhitā*. At line b6, TchB *kāswo* matches Skt. *kuṣṭha*, the Sanskrit technical term referring to skin disease in general, and to leprosy in particular (Emmerick 1984: 96f.). Moreover, the derived adjective TchB *kaswātse* is the translation of Skt. *kuṣṭhin-* 'suffering from *kuṣṭha*, leprous'. On the contrary, B282 is not a medical fragment, but a poetic composition (Skt. *kāvya-*), where we find the following passage: *śaiṣṣe se kleśanmaṣṣai wämyu räskre kāswasā*, "this world is harshly covered by the leprosy of kleśas" (a4).

The last document to be discussed (THT1111) may confirm the translation of TchB *kāswo* 'leprosy' and may suggest some new etymological arguments. The passage in question is from the Tocharian *Karmavācanā*, of which several fragments are Sanskrit-Tocharian bilinguals.[161] At line b3, we find a list of diseases: *no eṅ(k)wetse toṃ te y(äknetsana teka)nm(a) koṣṭä kāswo piśträ kṣai apasmār*, "now there are such diseases of a man: *koṣṭä, kāswo, piśträ, kṣai, apasmār*" (cf. Schmidt 2018: 74; Tamai 2014: 378). Although an internal Sanskrit parallel for this passage is missing,[162] TchB *koṣṭ* is clearly borrowed from Skt. *kuṣṭha-* 'leprosy'. One may therefore wonder whether we have a sequence of apparent synonyms, i.e. *koṣṭä* and *kāswo*. However, following Schmidt (1986: 68-70, 2018: 74), we can interpret these two terms as different types of leprosy: the former would be the 'black disease', while the latter would be the 'white disease', a distinction that mirrors the modern one between lepromatous (black) and tuberculoid (white) leprosy. This identification is further confirmed by a specific section of the Sanskrit *Karmavācanā* that is about the rite of ascetic vetting thanks to which a candidate enters the community (Skt.

[159] This etymology seems to be accepted also by Malzahn (2011: 99), who says that the Tocharian word may go back to an old plural form denoting 'the grey ones'.

[160] For the etymology of the Avestan term and dubious Indo-European cognate forms, see Kellens (1974: 367-8) and Humbach (1974: 92).

[161] For an overall overview of all known Tocharian *Karmavācanā* materials, see Ogihara (2013: 325-6). For the edition and the translation of the texts, see Schmidt (1986; 2018), Tamai (2014), and Ogihara (2013), who has also discovered some new fragments.

[162] The Sanskrit parallel of THT1111 is attested in THT1116, a fragmentarily preserved document in which the list of diseases is missing, due to the damaged condition of the fragment.

upasaṃpadā 'ordination') and in particular with the so-called *Befragung im Geheimen* (Härtel 1956: 77ff.). In this section, the *Unterweiser im Geheimen* explains one of the obstacles that may prevent the admission of the candidate: the diseases. Those which occur in both Sanskrit and Tocharian are (Schmidt 2018: 103): epilepsy (Skt. *apasmāra-* = TchB *apasmār*), tuberculosis (Skt. *kṣaya-* = TchB *kṣai*), goiter (Skt. *gaṇḍa-* = TchB *piśträ* ?), leprosy (Skt. *kuṣṭha-* = TchB *koṣṭä* and Skt. *kilāsa-* = TchB *kāswo*). According to Sāyaṇa, a medieval commentator of the Āyurveda, Skt. *kilāsa-* is 'white leprosy'. This view is partly shared by Emmerick (1984: 96), who concludes that *kilāsa-* must have meant a "disorder of the coloration of the skin characterised by whiteness", although it is unclear whether it denoted the same skin disease already in the Āyurvedic medicine. Now, given the fact that TchB *koṣṭ* corresponds to 'black leprosy', and TchB *kāswo* to 'white leprosy', I think that the etymological connection proposed by Hilmarsson with PIE **ḱh₂es-* 'grey, whiteness' is correct. The derivational and semantic developments are as follows: **ḱh₂s-u̯o-* 'having whiteness' → **ḱh₂s-u̯e-h₂* 'mass of whiteness' > PTch **kaswå* > TchB *kāswo* 'white leprosy; skin disease'.

The etymology of TchB *kātso*, A *kāts* 'stomach, belly'[163] is equally disputed. Pinault (1991: 186) suggests a connection with Gk. κατά 'down', Hitt. *kattan* 'below', and further argues that the Tocharian word is the outcome of an animate derivative of the PIE adverb **kati*, PIE **katį̯-eh₂*. The semantic evolution would have been 'below' → 'what is below' → 'stomach'.

Adams (DTB: 165) puts forward another hypothesis, connecting the Tocharian word with PIE **gʷōt-* 'belly', with alleged cognates in Germanic (e.g. Goth. *qiþus* 'stomach, belly') and probably in Latin (Lat. *botūlus* 'sausage'). This form would be suffixed in **-i̯ōn* or in **-i̯eh₂*. In IEW: 481, PIE **gʷet-* is said to mean 'swelling, rotundity', but from the point of view of the lexical typology it is quite preferable to state that the root meant 'stomach, belly' already in the proto-language. Indeed, in a diachronic approach to lexical typology, a general diachronic trend from a concrete to an abstract meaning can be fixed. Furthermore, the continuants of this root mean precisely 'stomach, belly', e.g. PGerm. **kʷiþu-* > Goth. *qiþus* 'stomach, womb', OIcel. *kviðr* 'belly, womb' (and *kviðugr* 'pregnant'), Anglo-Saxon *cwiða* 'womb', OHG *quiti* 'vulva', etc. From a formal perspective, Adams reconstructs the protoform from which TchB *kātso*, A *kāts* derives with lengthened *o*-grade of the root. The *o*-grade is perhaps attested also in Lat. *botūlus* 'cumb, sausage' (loanword from an Italic language, where the PIE labiovelars developed into labial stops, Weiss 2009:

[163] TchA *kāts* seems to have a slightly different meaning, namely 'womb' (Peyrot 2012: 207 fn.32). If so, we have a case of asymmetry in overt marking: 'womb' is expressed by an overtly marked term on the basis of 'belly/stomach', but not vice versa. This assumption can find some confirmation in the semantic evolution of terms of the same meaning in some other languages. For example, Ved. *udára* 'belly' > Old Gujarātī loc.sg. *ūyari* 'womb'; Prākrit *peṭṭa-*, *piṭṭa-* 'belly' > Sindhī *peṭu* 'belly, womb, foetus'.

473 fn.45), so that one could also say that PIE *$g^{w}ōt$- derives from PIE *$g^{w}et$- through both qualitative and quantitative ablaut. But many details are unclear.[164]

Finally, Hilmarsson (1996: 112) connects TchB *kātso*, A *kāts* 'belly, womb' with the hapax legomenon TchA *kāc** 'skin' (A147 b4 *y(p)es(uṃts)enāṃ kācyo epunt yṣitstseyaṃ lmont* "sitting on a couch, covered with the skin of a leopardess", cf. Carling 2009: 109), with possible cognates in Lat. *cutis* 'skin', ON *húð* 'id.', OHG *hūt* 'id.', Lith. *kiáutas* 'shell, rind, peel', etc. If so, TchB *kātso*, A *kāts* could be from PIE *kuH-$tḭ$-eh_2 > *$k^{w}atså$ > PTch *katså*, with delabialisation of *k^{w} > *k before a consonant (Hilmarsson 1985b; Kim 1999: 158 fn. 42).

The origin of TchB *patso* 'pollen; stigma' is also unknown. Adams (DTB: 388) is the only one who has proposed an etymology, reconstructing *$b^{h}ed^{h}$-$i̯eh_2$ from *$b^{h}ed^{h}$- 'to stick' (cf. OCS *bodlъ* 'punctured, spine of plant'; for the semantic development, Gk. στίγμα from στίζω 'to mark').

TchB *tāno* 'seed of grain' and TchB *mālo* '±inebriating drink'

Another noun of the *kantwo*-type is usually considered to go back to the same PIE inflectional type of *kantwo*, i.e. TchB *tāno* 'seed of grain'. Two different etymological analyses have been proposed so far: (1) TchB *tāno* goes back to PIE *$d^{h}oH$-neh_2 'grain' (> the plurale tantum Skt. *dhānáḥ* 'grain', Khot. *dānā*- 'id.', Manichean Sogd. *δ'n* 'id.', Lith. *dúona* 'bread', Latv. *duõna* 'slice of bread, heel of a loaf'; Kortlandt 2013: 96 suggests a derivation from the zero grade *$d^{h}h_3nā$, with vocalisation of the laryngeal)[165] or (2) it is a loanword from either Indian or Iranian.[166] The former hypothesis has no problems from a phonological point of view; it is sustained by e.g. Adams (DTB: 303) and Pinault (2008: 486).[167]

Recently, Peyrot (2018: 258f.) has supported the latter hypothesis, since he claims that TchB *tāno* has been borrowed from Iranian **dānā*-. There are two indications that may substantiate this analysis. On the one hand, the semantic resemblance between TchB *tāno* and Khot. *dānā*- as both referring to single seeds that may be counted one by one is admittedly remarkable; on the other hand, Peyrot reveals that the Baltic forms have some semantic problems if derived from PIE *$d^{h}oH$-neh_2 'grain' (see Peyrot 2018: 259-60 for these problems and for etymological suggestions). If Baltic must be removed from the list of

[164] According to NIL: 185ff., Germanic is to be connected with *$g^{w}i̯eh_3$- 'to live'. Kroonen (2013: 319) reconstructs PGerm **kweþu*-, considering the derivation from PIE *$g^{w}i̯h_3$-*i*- conjectural. See also Mallory & Adams (2006: 185-6).

[165] Cf. also the Young Avestan compound *dānō.karš(a)*- 'grain-carrying', where the *ō*-vocalism of *dānō*° does not necessarily indicate that it is a masculine *a*-stem (Malandra 2002: 229f.; EWAIA: I, 787).

[166] See Klingenschmitt (1994: 394 fn. 136).

[167] I think there is no reason for claiming that the final *-o* of TchB *tāno* should reflect an original plural *-eh_2-*es* (Peters 1991: 243, followed by Malzahn 2011: 98).

comparanda, the peculiar distribution of the term strongly suggests that Tocharian borrowed from Iranian.

There is, however, a serious problem with this analysis. Indeed, TchB *tāno* belongs to a non-productive class of nouns, where borrowed items are not expected. Peyrot adduces TchB *twāṅkaro* 'ginger' (← Khot. *ttuṃgare* 'id.'; see Bailey 1937) as an example of Iranian loanwords inserted into genuine Tocharian inflectional classes (the so-called *arṣāklo*-type). However, this class is more productive than the *kantwo*-type and its productivity can be easily reconstructed for Proto-Tocharian as well (see §3.7.2).

Still, I believe that the problem of the inflectional class of TchB *tāno* can be solved, because another loanword can now be included into the *kantwo*-type. It is TchB *mālo* '± alcohol, spirit' (obl.sg. *-a*, see Ogihara 2011: 135). Since Bailey (1959: 131), a foreign origin of this term has been suggested: it has been connected with YAv. *maδu-* 'Beerenwein', Sogd. *mδw* 'wine', Khot. *mau-* 'intoxicant drink' (cf. Skt. *mádhu-* 'sweet, sweet drink', EWAIA: II, 302-3). As Adams (DTB: 483) pointed out, TchB *mālo* must derive from an Iranian variety where **-d-* became *-l-*. Therefore, Winter (1971: 152) connected this word with Bctr. μολο 'wine' < **malu-* < **madu-*. As one can see, however, the vocalism of Bctr. μολο /mul/ deviates from that of TchB *mālo* /málo/. The Bactrian vowel is the outcome of *u*-affection of an original **-a-* (in labial environment), which results in a back, rounded vowel Bctr. *-o-* (Gholami 2014: 65). Since the class to which TchB *mālo* belongs testifies its old acquisition, one may claim that Tocharian borrowed this word before *u*-umlaut took place in Bactrian.

To conclude, we can say that both TchB *tāno* 'seed of grain' and TchB *mālo* 'spirit, alcohol' are loanwords from Iranian.

If we look at the gender of the nouns just discussed, we notice that TchB *kantwo*, A *käntu* 'tongue' and TchB *patso* 'pollen, stigma' are the only certain masculine nouns, while four of the last five substantives are feminine (TchB *tāno* 'grain', TchB *mālo* 'alcohol', *kāswo* 'leprosy', *kātso* 'belly, abdomen'). The gender of TchB *karyo** is unknown, but its equivalent TchA *kri* is masculine (Carling 2009: 172). The interpretation of this evidence is crucial to the historical analysis of the obl. sg. *-a*. In my view, two possibilities can be envisaged.

If one interprets the feminine gender of TchB *kāswo* and *kātso* (but cf. the masculines TchA *kri* and TchB *patso*) as due to their derivation from non-ablauting **eh₂*-stems, then the obl.sg. *-a* must be secondary. If so, this may have been analogically created after TchB *kantwa*:, in order to disambiguate the nominative from the oblique singular (both ending in **-å*). This explanation would work formally fine for TchB *kāswo* (final *-wo* in both nouns).

Otherwise, one could be tempted to reconstruct an ablauting paradigm for the ancestors of all these nouns, so that they inherited (or generalised) the full grade in the nominative (**-éh₂-*) and the zero grade in the weak cases (**-h₂-*). If so, there would be no strict historical link between the gender and the inflectional type of these nouns. Kortlandt (2013: 95f.) reconstructs a PIE hysterodynamic type with full grade in the nom.sg. and zero grade in the other cases for some of the members of the *kantwo*-type (i.e. *kantwo*, *kātso*, *tāno*). This reconstruction is possible, although not entirely provable. Between the

two hypotheses, I will favour the latter, as one can also argue that some old derivatives in *-*ā* < *-*eh₂* developed an ablauting paradigm in a Pre-Proto-Tocharian period. This is an issue we will return to in the following sections (see §3.7.2.5), where I will show that it is more economical to assume that Tocharian inherited and generalised the hysterodynamic type in *-*h₂* in the older stage of the Pre-Proto-Tocharian nominal inflection.

TchB *kāwo* 'desire' and TchB *tsāro* 'monastery'

The deverbal nouns TchB *kāwo* 'desire' and *tsāro* 'monastery' must be discussed. The latter has been thoroughly investigated by Malzahn (2011: 98f.). I think that her analysis can also account for the evolution of *kāwo*.

Following Krause (1952: 51), she links TchB *tsāro* 'monastery' with the verb *tsər-* 'be separated, separate'. However, the derivation of the noun from the verb raises some difficulties: (1) the non-productivity of the *kantwo*-type as a class of abstract derivatives;[168] (2) a deverbal noun from *tsər-* is expected to show root-vowel *-a-* /ə́/, instead of *-ā-* /á/ (cf. TchB *palsko* 'thought' from *pləska-* 'to think'; TchB *traṅko* 'sin' from *trənk-* 'to lament'). In order to solve these problems, she claims that TchB *tsāro* is a very archaic derivative of the Indo-European root from which also the verb TchB *tsər-* derives, i.e. PIE **der-* 'to split'. She further reconstructs a derived abstract in *-*eh₂*, i.e. PIE **dōreh₂*.[169]

In a similar way, TchB *kāwo* 'desire' is usually regarded as a deverbal noun from *kawa-* 'to crave' (DTB: 164-5). If so, it would be a very archaic derivative from the same PIE root from which also the verb TchB *kawa-* goes back, PIE **k(u̯)ap-* 'well up' (Malzahn 2010: 563; but LIV² does not reconstruct such a verbal root). However, the matter is a little more difficult than it seems.

The problems involved are: (1) the lenition *-p-* > *-w-* in both the noun and the verb; (2) TchA *kāpā-* 'to surge up; be greedy' as the apparent cognate of TchB *kawa-* 'to crave'; (3) alternation of *-p-* and *-w-* in the inflection of the Tocharian B verb.[170] The formal match between TchB *kawa-* and TchA *kāpā-* is an issue on which scholars strongly disagree: on the one hand, Malzahn (2010: 563) reconstructs PTch **kapa-*, implying that Tocharian A would attest the original form; on the other hand, Peyrot (2013: 729) has a diametrically opposite view, as he claims that the Proto-Tocharian form was **kawa-*. In fact, the only TchB attestation of a *p*-form from *kawa-* is the isolated prt.ptc. *kakāpau* (adduced by Saito 2006: 301), which is not easy to interpret and translate (B66 a8).[171] Since we do not have any parallel to account for the consonant mismatch between Tocharian B and A (that is, PTch *-*p-* > TchB *-w-* or PTch *-*w-* > TchA *-p-*),[172] I think that the best solution is

[168] On the contrary, among the noun classes with nom.sg. *-o*, the alternating members of the *oko*-type are verbal abstracts (with nom.obl.sg. *-o*, nom.obl.pl. *-o-nta*). On this class, see §3.8.2.1.

[169] In fact, Malzahn claims that TchB *tsāro* is the outcome of a plural **dōreh₂-es*.

[170] See Malzahn (2010: 562f.) and Peyrot (2013: 729) for further details.

[171] On TchB *kakāpoṣ*, see Malzahn (2010: 563).

[172] The evolution *-p-* > *-w-* is only attested in Late Tocharian B, and not in the prehistory of the language, nor in its archaic phase (Peyrot 2008: 88-90).

reconstructing different protoforms for the two Tocharian languages. Indeed, while TchA *kāpā-* can be the regular outcome of PIE **k(u̯)ap-* 'to well up', the root from which the Tocharian B verb comes from may be PIE **geh₂u̯-* 'to rejoice' (> Gk. γηθέω 'to rejoice', γάνυμαι 'to be glad', Lat. *gaudeō* 'id.'), which resulted quite regularly in TchB *kawa-*.[173] The reconstruction of two different roots for the Tocharian A and B verbs could also explain the fact that in Tocharian A the verb is intransitive, while in Tocharian B it is transitive. Furthermore, it seems to me that TchB *kawa-* and TchA *kāpā-* differ quite remarkably also in the meaning. In Tocharian A, this verbal root is attested in the following forms (Malzahn 2010: 562-3): 3sg.subj.act. *omäl ysär ṣuṅkac kāpaṣ-äṃ* "hot blood will rise to his throat" (YQ I.7 b1, cf. Ji 1998: 51), and 3sg.prt.act. *ś(wā)tsiṣy ākāl-yo kāpar ymār* "in their wish for food they soon became fully impatient" (A340 a3, cf. Schmidt 1974: 146 fn.1). As a consequence, the meaning of TchA *kāpā-* is 'to surge up, be impatient', while TchB *kawa-* means specifically 'to crave' (Peyrot 2013: 729; cf. also the derivatives TchA *kāplune** 'boiling' vs. TchB *kāwalyñe* 'desire, craving').

As regards TchB *kawo* 'desire', it would be an old derivative of this root (perhaps of the τομή-type?): PIE **ǵ(o)h₂u̯-eh₂* > **ǵō/ău̯ā* > PTch. **kawå* > TchB *kāwo*, intended as 'what makes someone glad' → 'what someone desire'.[174]

The suffix TchB *-to*, obl.sg. *-ta*, TchA *-t*

We have seen that TchB *laukīto* 'stranger' and, if well identified, TchB *nekīto** '± destroyer' may belong to the *kantwo*-type. The problem here is the origin of the suffix *-(i)to*, which is an unproductive derivational morpheme in Tocharian. The only match between Tocharian A and B is TchB *laukito* : TchA *lokit* 'guest, stranger', with regular monophthongisation **aw* > *o* in Tocharian A (cf. also the gen.sg. TchA *lo«ki»täp-äk* in A6 a4). In Tocharian A, we also find TchA *mäśkit* 'prince', which is matched in Tocharian B by *mcuṣke* 'id.' (see fn. 32). As a consequence, the suffix TchB *-ito*, A *-it* only surfaces in four nouns, two in Tocharian B (*laukīto* and *nekīto**) and two in Tocharian A (*lokit* and *mäśkit*).

It seems that TchB *-ito*, A *-it* is the result of some kind of reanalysis, since the vowel *-i-* cannot synchronically belong to the stem (cf. *laukaññe* 'for a long time' /laukə́ññe/). Pinault (2015: 176) has recently dealt with the origin of this suffix. He reconstructs PTch **-əy-tå*, which in turn may have had two possible Indo-European sources: (1) **-əy-* was part of the stem and PTch **-tå* is from the "individualising" suffix PIE **-teh₂* > **-tā*; (2) PTch **- əytå* reflects a second compound member PIE **-Hi-t-eh₂* > **-itā*, from the verbal root **h₁ei̯-* 'to go' (cf. the type of Lat. *comes*, *comitis* 'companion', and Hom. Gk. περικτίτης 'neighbor' etc.).[175]

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[173] On TchB *katk-*, A *kātk-* 'to be glad', see DTB: 159 and Hackstein (2002: 8).

[174] It is still matter of debate if the paradigm of TchB *kawa-* started out as a denominative to *kāwo*. For discussions, see Hilmarsson (1991b: 80-1) and Malzahn (2010: 563).

[175] See Leukart (1994: 66ff.). Not with Benveniste (1942-1945: 49), who analyses TchB *laukito*, A *lokit* a loanword from the adjective Skt. *laukika-* 'mundane, profane'.

Pinault seems to favour the latter hypothesis, so that the meaning of PTch **lawk-əytå* would have been 'coming from afar'. Then, the original value of the second member **-əytå* would have become obsolete and it would have been employed in the derivation of few other nouns. However, whenever we assume that PIE **i* palatalise neither velar nor labiovelar stops in Tocharian,[176] I would expect PTch **lawkətå* > TchB ***laukato*, A ***laukät* as the outcome of a (virtual) compound **lou̯k-Hi-teh₂*.[177]

Following the first hypothesis, one could posit an abstract noun **lawkəy* at the origin of TchB *laukito*, as suggested by Pinault himself.[178] If so, the original suffix was **-tå*, which would have been reanalysed as **-əytå* via resegmentation of **lawkəy-tå* as **lawk-əytå*.[179] The only problem with this analysis is that final TchB *-i* is usually matched by TchA *-e* in these abstract nouns (cf. TchB *telki* 'sacrifice' : A *talke* 'id.'; *leki* 'bed' : A *lake* 'id'. etc.). As a consequence, one should assume that the expected ***loket* became *lokit* under the influence of Tocharian B. But this sounds speculative. A last hypothesis is to reconstruct a derivative PTch **lawk(ə)ycæ* 'far; distance' (cf. TchB *werpi-śke*, A *warpiśke* 'little garden', based on TchB *werpye**, A *warpi* 'garden', etc.) from which an agent noun in **-tå* is derived. This reconstructed noun is expected to have evolved into TchB *laukīto*, A *lokit*. Be that as it may, TchB *laukīto*, A *lokit* is clearly related to the adverb TchB *lauke*, A *lok* 'far, remote, away'.

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[176] Word-initially, PIE **i* (**Hi*) evolved into PTch **yə* > TchA *yä-*, B *yə-*, while it becomes PTch **-ə-* > TchA *-ä-*, B *-ə-* in internal position. The palatalising effect of PIE **i* is debated. Palatalisation seems to be regular in front of **-l-* and dental stops, cf. **limn̥* 'bay, like' > PTch **ĺəmə* > TchA *lyäm*, B *lyam* 'lake'; PIE **-nti* (3pl.) > PTch **-ñcə* > TchA *-ñc*. It is clear that it does not palatalise labiovelars (e.g. **kʷi-so-* 'who' > PTch **kwəsœ* > TchB *kᵤse*, A *kus*; PIE **du̯itó-* 'second' > PTch **ẃətœ* > TchA *wät*, B *wate* 'id.'). Pinault (2008: 433) assumes that PIE **i* did not palatalise labials, velars, labiovelars, and **s*.

[177] On the other hand, if laryngeal metathesis must be reconstructed, I would expect that Pre-PTch **ī* in **lou̯k-Hi-teh₂* >**lou̯k-iHteh₂* > **lowkītā* would have palatalised the internal velar.

[178] One would be tempted to say that this **lauki* actually derived from the verbal *a*-root TchB *ləwka-*, on which see Adams (2012) and Peyrot (2013: 811). Cf. further the adverb *laukar* 'afar' (AS6A a5, a6, b7).

[179] A similar type of reanalysis also characterised some Ancient Greek nouns in -ῑτης. On several occasions, Van Windekens (1942: 295, 1944: 132, 1976: 176 and 266) equated this suffix with TchB *-ito*, A *-it* as both reflecting PIE **-īteh₂* (cf. also Hirt 1912, 1927: 228). However, the Greek suffix can be easily explained as an indigenous formation, through the same reanalysis that hypothetically characterised PTch **-ităå*, too. Indeed, as pointed out by Redard (1949: 11ff.), partially followed by Leukart (1994: 187ff.), Gk. -ῑτης is a back-formation from πολίτης 'citizen' (regularly from πόλῑς 'city'), on the basis of which the -ῑ- has been reanalysed as part of the suffix and then generalised to form other common and proper nouns (e.g. Hom. Gk. ὁδίτης 'traveller' ← ὁδός 'road'; Gk. ὁπλίτης 'hoplites' ← ὅπλον 'tool, weapon'; Att. Gk. ἐρημίτης 'hermit' ← ἔρημος 'lonely, solitary'; Hom. Gk. Θερσίτης 'Thersites', the antihero of the Iliad). This new suffix became increasingly productive in the history of Greek (with its feminine counterpart as -ῑτις), especially from the Hellenistic period on, when it started to form technical terms, as well as ethnic designations and Biblical tribal names.

The second Tocharian B noun built with the suffix -(*i*)*to* is TchB *nekīto**. As we have already seen, this noun is a hapax legomenon and its precise meaning cannot be identified, due to the broken context where it is attested. However, if TchB -(*i*)*to* has a sort of agentive value and *nekīta naśi* in B530 b4 is a figura etymologica, then TchB *nekīto** should mean '± destroyer' as a form derived from the subjunctive stem of TchB *nək-* 'to destroy, lose' (perhaps from an abstract **neki* 'distruction').

So far, we have seen that the suffix TchB *-ito*, A *-it* must be historically segmented as TchB *-i-to* (obl.sg. *-i-ta*), A *-i-t*. This should be traced back to the agentive suffix PIE **-teh*$_2$ of the type Lat. *nauta* 'sailor', Myc. *e-re-ta* ἐρέτας 'rower', Hom. Gk. ἱππότᾰ 'horseman', etc. (Pinault 2015: 176; Adams 2015: 180). The reconstruction of the obl.sg. **-ta* for this type of derivatives allows us to consider other agent nouns which seem to have been formed with the same suffix in Proto-Tocharian. The nouns in question are: (1) TchB *käryorttau*, A *kuryart* 'merchant'; (2) TchB *olyitau* 'boatman'; (3) TchB *pälkostau* 'spy'; (4) TchB **kamarta-* 'ruler' (cf. *kamartāññe* 'rulership'), A *kākmart* 'ruler, master'.[180]

Pinault (2015: 161-2) claims that the suffix *-tau* was abstracted from the noun TchB *käryorttau* 'merchant', which is the most prominent and attested member of this class of derivatives. He analyses TchB *käryorttau* as a compound of TchB *karyor*$^{\circ}$, A *kuryar*$^{\circ}$ 'trade' and $^{\circ}$*ttau*, an agent noun based on the verbal root PTch **tətta-* 'to put'. The reason why he reconstructs a compound is that TchB *käryorttau* is very often spelled with geminated *-tt-*. According to Pinault (2015: 162), once "the original meaning of the root of the second member vanishes", the formation was reanalysed, and the suffix was abstracted. I cannot agree with this analysis. Indeed, the gemination of TchB *-t-* in the cluster *-rt-* > *-rtt-* is very frequent, as the following examples show: *warto* ~ *wartto* 'forest'; *kartse* ~ *karttse* 'good'; *akarte* ~ *akartte* 'near'; gen.sg. *udāvarttäntse* (← Skt. *udāvarta-* 'disease, ileus'); *kerte* ~ *kertte* 'sword'; *kamartāññe* ~ *kamarttāññe* 'rulership'; *kamarttīke* ~ *kamartīke* 'ruler', etc.[181] Furthermore, TchA *kuryart*, with a stem *kuryartā-*, points to the reconstruction of a noun with nom.sg. **k*^{w}*ryår-tå* obl.sg. **k*^{w}*ryår-ta* for Proto-Tocharian, which would also explain the derivative TchB *käryortañña*, name of a metre. The same analysis can also account for other nouns from this class, like TchB *olyita-u* 'boatman' from *olyi* (obl.) 'boat". In my view, the final *-u* must have been taken over from other *nomina agentis*, like *yenme*$_u$ 'gatekeeper' (from *yenme* 'portal'), TchB *yotkolau* 'controller, director [of a monastery attendants]' (from **yotkol* 'order'), TchB *wetā*$_u$ 'warrior', A *waco* (from TchB *weta*, A *wac* 'battle'),[182] and

[180] TchB **kamarta-*, A *kākmart* 'ruler' is borrowed from Bactrian *καμιρδιγο, a suffixed form of καμιρδο 'head, chief (god)'. See the discussion in Pinault (2002: 262f.). On TchB *mlyokotau*, a kind of seed for lamp (?), see Ching (2014: 45).

[181] Example of non-geminated *-t-* can be found in AS13I b2 *käryortantäṃ*, IT8 b1 *käryortantäṃne*, NS73 a3 *käryortau*, B239 b3 *käryortantäṃṣ*, and frequently in the derived *käryorttañña*(*ne*), name of a metre (cf. IT887 a2; AS17I a5; NS58 b3; B350 b3; B121 a4).

[182] The formation of TchB *saṃtkīnau*, A *sāṃtkenu* 'physician, doctor' has not been understood yet, since we would rather expect TchB *-itau*, A *-it*. It is evidently derived from TchB *sāṃtke*, A *sāṃtäk* 'medicine' (← Middle Indic intermediary of Skt. *śāntaka-* 'allaying'), but the two Tocharian languages do not match phonologically and the suffix TchB -(*i*)*nau*, A -(*e*)*nu* is not attested elsewhere.

from the adjectival type TchB *tallā*$_u$, A *tālo* 'miserable', TchB *maiyyā*$_u$ 'powerful, strong' (cf. Van Windekens 1979: 98f.). These formations contain the outcome of the PIE possessive suffix *-*u̯ent-*.

To conclude, we have seen that Tocharian inherited from Proto-Indo-European the agentive suffix *-*teh*$_2$ of the type Gk. ναύτης 'sailor'. The Proto-Tocharian outcome of this suffix was used to derive agent nouns from nominal bases. The paradigm of the singular was nom.sg. *-*tå*, obl.sg. *-*ta*. This paradigm has been maintained in isolated words, like TchB *laukīto*, A *lokit* (stem TchA *lokitā-*) 'stranger', TchB *nekīto** (obl.sg. *nekīta*) '±destroyer', TchA *kuryart* 'merchant'. In Tocharian B, there is a general tendency to turn all these nouns into *wənt*-stems, of which the majority can be traced back to the possessive formations in *-*u̯ent-*. This suffix formed denominal adjectives but, already in Proto-Tocharian, it started to be reanalysed as an agentive suffix, cf. PTch **wæta* 'battle' → **wætaw* 'combating, warlike' → TchB *wetā*$_u$ 'soldier, warrior' (cf. TchA *waco*). Tocharian B has therefore started to level all the original formations in *-*tå*| *-*ta* with the existing *wənt*-stems. The result of this process is the attested conglomerate suffix *-*taw*, which regularly follows the *nt*-inflection.

TchB *suwo* 'pig' and TchB *luwo*, A *lu* 'animal'

Two faunal words can be ranged under the *kantwo*-type: TchB *suwo* 'pig',[183] of unknown gender, and TchB *luwo*, A *lu* 'animal', an alternating noun with the rare plural morpheme TchB *-sa*.

The PIE source of the first term is **suH-* 'pig, swine' (> Lat. *sūs*, Gk. ὗς, YAv. *hū-*, etc.), but the Tocharian paradigm is problematic since from PIE **suH-s* we would expect a nom.sg. **suwa*, and not the attested *suwo* (B549 a6, cf. Katz 1997: 79f.). For this reason, usually a protoform enlarged with a nasal suffix is reconstructed, i.e. PIE **suHōn*/**suHn-* (Winter 1965: 192; Hilmarsson 1988: 507f.; DTB: 763). Peters (1991), Kim (2009), and Malzahn (2011) are of a different opinion: they all claim that nom.sg. **suHs*, acc.sg. **suHm* yielded nom.sg. **suwăs*, obl.sg. **suwăm* in a Pre-Proto-Tocharian period. The expected paradigm should have final *-a* in both the nominative and the oblique singular. In order to explain the nom.sg. *-o*, Peters (1991: 243) argues that an analogical replacement of *-*ăs* by *-*ās* affected the nominative singular (after **kn̥tu̯ās*). On the other hand, Malzahn puts forward a different scenario, postulating a sound law pre-Ptoch. *-*ăs* > PTch. *-*å* > TchB *-o*, so that the nom.sg. *suwo* would directly mirror PIE **suHs*.

Before commenting on this sound law, let us introduce the paradigm of TchB *luwo* 'animal', clarifying its etymology and derivation. So far, two different etymological proposals have been put forward:[184] (1) TchB *luwo* is from PIE **luHs-* '± louse' (cf. OHG *lūs*,

[183] A plural form of TchB *suwo* is perhaps to be restored in THT2071 4 ///*teṃ yiknesa ṣkas ssuw*/// "In this manner six pigs (?)" (Ching 2010: 307).

[184] The two etymologies were first proposed by Pedersen (1941: 72) and Van Windekens (1976: 268) respectively, but the formulations presented here are from Hilmarsson (1988: 155) and Adams (DTB: 607; differently in Adams 1988: 129).

OIcel. *lús*, OE *lows*; MW *lleu*, MBret. *lou* [collective], etc.); (2) TchB *luwo* is to be linked with the verbal root PIE **leu̯H-* 'to separate, cut off' (PSl. **lôvъ* 'hunting' (?), Lat. *luō* 'to suffer' (?), Skt. *lunā́ti* 'cuts off') or **leu̯-* 'beschmutzen' (LIV²: 414, cf. also Gk. λῦμα 'filth, garbage' < **lus-mn*).[185] From a formal point of view, both Germanic and Tocharian point to PIE **luHs-*, which can be interpreted as a neuter *s*-stem built on the zero grade of the root PIE **leu̯H-*.

The reconstruction of a neuter *s*-stem for the Tocharian word is suggested by the plural formation TchB *lwāsa*, which displays an "*s*-Erweiterung". This plural morpheme is extremely rare, since it is further attested in *piltāsa* 'leaves' (TEB §159) and *lyyāsa* 'limbs' only. [186] Therefore, there is no doubt that it is an archaism, not a secondary "*s*-Erweiterung".[187]

For the same reason, I cannot agree with Adams (DTB: 607) in arguing that the Tocharian B plural *-sa* in *luwo* "may result from a cross of this etymon with a PTch **tsäuwā* 'animal', reflecting PIE **dʰéuhₓōs* 'animal'". This hypothesis has to cope with two problems: on the one hand, no other Indo-European language points to a collective *s*-stem **dʰéuhₓōs*, but rather to a thematic formation (e.g. Goth. *dius* 'wild animal', OE *deor* 'id.' are from PGerm. **deuza-* 'beast' < **dʰeu̯só-*, see Kroonen 2013: 94-5); on the other hand, we have no Tocharian continuants of Adams' **tsäuwā* 'animal'. I therefore believe one must reconstruct a PIE *s*-stem for both the singular and the plural inflection of TchB *luwo*, A *lu*.

We can now finally discuss the sound law proposed by Malzahn (2011: 94f.). As mentioned above, she believes that Pre-PTch. **-ās* and **-ăs* resulted in PTch. **-å* > TchB *-o*. This sound law is aimed at explaining the singular paradigm of both *suwo* and *luwo*. But this is not convincing. While nom.sg. **suH-s* (> **suwăs*), acc.sg. **suH-m* (> **suwăm*) could theoretically underlie nom.sg. *suwo*, obl.sg. *suwa*, a sound law **-ăs* > PTch. **-å* could not account for the singular paradigm of *luwo*, because it comes from a neuter *s*-stem, with both nominative and accusative reconstructed as **luHs* (> **luwăs*). In accordance with Malzahn's sound law, we would expect TchB *luwo* both in the nominative and in the oblique singular and further reconstruct analogy after obl.sg. *suwa* to explain the obl.sg. *luwa*. Since this sound law does not solve all problems linked to the paradigm of TchB *suwo* and *luwo* and, above all, it is based on these two nouns only, I cannot accept it.[188]

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[185] Adams (DTB: 607) thinks that Gk. λέων 'lion' can be interpreted as a nominal derivative from PIE **leu̯H-*, i.e. **leu̯H-ōn* 'the hunter, predator'. However, several details are still unclear, and scholars still prefer a non-Indo-European source for Gk. λέων 'lion', probably from Semitic (see Beekes 2010: 854; GEW: II, 113).

[186] Winter (2003: 117f.) reconstructs a nom.sg. *lyiyo**, obl.sg. *lyiya**. For an etymological proposal, see Van Windekens (1976: 567). For further details on the plural form, see Pinault (2008: 467), Schmidt (2008: 326f.), Malzahn (2010: 851).

[187] The corresponding Tocharian A forms show a different development, since the plural of *pält* 'leaf' is *pältwā*, and the plural of *lu* 'animal' is *lwā*. See Winter (1965: 122f.) for further details.

[188] Malzahn (2011) claims that through the sound law **-ăs* > *o* we would be able to explain some members of the *oko*-type (nom.obl.sg. *-o*, nom.obl.pl. *-onta*) as the descendants of an inflectional type in PIE **-h₂s-*, cognate with the so-called Greek κρέας-type. Meissner (2005: 122f.) clarifies that this type is a recessive category in Greek (with less than thirty nouns), which seems to be the

We are left with Winter's PIE **suH-ōn* (1965: 192), which would yield the attested TchB *ṣuwo* quite regularly. Since analogical influence between the Proto-Tocharian paradigms of *ṣuwo* 'pig' and *luwo* 'animal' may have occurred, one may wonder whether the *-o* in TchB *luwo* would have been taken from the word for 'pig' (Hilmarsson 1988). There is, however, a problem in the reconstruction of PIE **suH-ōn* itself. Indeed, no other IE language points to such a protoform, and this isolation within the Indo-European domain is suspicious.

As a consequence, I believe Tocharian inherited PIE **suH-* 'pig' and **luHs-* '±louse' directly. For a certain stage, a paradigm with an undifferentiated sg. **səwa* and ** ləwa* is to be reconstructed. Then, a secondary distinction took place between the nominative and the oblique through the introduction of the forms **səwå* and **ləwå* in the nominative. This final PTch **-å* > TchB *-o* has plausibly been introduced after other faunal terms that synchronically belong to either the *okso-* or the *arṣāklo*-type (both with a late obl.sg. *-ai* cf. §3.7.2.5), like *okso* 'ox, cow', *arṣāklo* 'snake', *kercapo* 'donkey', *mewiyo* 'tiger', *oṅkolmo* 'elephant', *kraṅko* 'cock', etc. As we will see, the singular paradigm of these nouns can be reconstructed as nom. **-å*, obl. **-a* for a certain stage of Proto-Tocharian (§3.7.2.4). As a consequence, both the singular inflection and the semantics of these nouns have favoured the generalisation of the ending nom.sg. **-å* to the otherwise undifferentiated singular paradigm of PTch **səwa* and **ləwa*.[189] On the other hand, the plural PIE **luHs-h_2* regularly yields the attested TchB pl. *lwāsa*, while, in Tocharian A, it was expected to develop to **lwās* (nom. = obl.). This isolated plural form was soon remade in the attested plural *lwā*.[190]

There are two other nouns that have the rare plural TchB *-sa*, i.e. *piltāsa* 'leaves, petals' and *lyyāsa* 'limbs' (see also the next section). Winter (1962: 112) and Schmidt (1982: 363) suggests that the paradigm of the word for 'leaf, petal' was parallel to TchB *luwo*, positing a nom.sg. TchB *pilto**. The same reconstruction has been recently advocated by Malzahn (2011: 86-7 fn.10). On the other hand, Krause & Thomas (TEB §159.2), Adams (DTB: 415), and Pinault (2008: 205) give a singular *pilta* (nom.=obl.). I believe that only the latter paradigm is correct. Indeed, the form *pilta*, attested in B622 b4 /// *uppālṣe pilta nest* /// "you are a lotus petal", can hardly be interpreted as something other than a nominative. This makes the paradigm of TchB *pilta* and TchB *luwo* synchronically different. However, since the nom.sg. *-o* in *luwo* has been explained as secondary, their paradigms were probably identical at an unattested stage of Tocharian. This allows us to reconstruct an old *s*-stem for the antecedent of TchB *pilta*: the singular paradigm goes back to PIE **-Hs*, while the plural paradigm is from PIE **-Hs-h_2*. The word may come either from **b^heltH-* (DTB: 415) or **pelth$_2$-* (Pinault 2008: 205).

Indo-European language that maintained this inflectional type best (together with the Indo-Iranian group). On the origin and the evolution of the *oko*-type, which is quite different, in my view, see §3.8.2.1.

[189] Probably, TchB *ṣuwo* retained a singular *ṣuwa* and did not develop an obl.sg. ***ṣuwai* because of its formal resemblance with TchB *luwo*, obl. *luwa*.

[190] A form TchB *luwāñ* seems attested in IT395 a3, which is a very fragmented document. Formally, this *luwāñ* might be interpreted as a secondary nominative plural of *luwo*.

TchB *āyo*, A *āy* 'bone'

There is just one other alternating noun that has nom.sg. *-o*, obl.sg. *-a*: TchB *āyo,* A *āy* 'bone'. In the previous edition of his dictionary, Adams (1999: 45) provides a list of variants for the singular paradigm of this noun in Tocharian B: nom.sg. *āy* ~ *āyo*, obl.sg. *āy* ~ *āya*, with (synchronically) suppletive plural *āsta*. Pinault (2008: 333) argues that the singular is *āy* < **ayə,* and further analyses *āyo* as a poetic form and *āya* as a new plural formation. However, as correctly pointed out by Peyrot (2008: 111-112), a hypothetical TchB †*āy* is never attested in the entire corpus of Tocharian B. The singular forms are the following (Peyrot 2008: 111):

(1) nom. sg. in W20 b3, *oṅkolmaiññe āyo* [*ay*] *·īle* "elephant's bone is to be ...ed"[191]. Unfortunately, the correct reading of the line is hindered by ink stains from another leaf that was laid over it. However, Peyrot is certainly right in reading the final part of a gerundive at the end of the line. This gerundive is inflected as a nom.sg. in agreement with *āyo* 'bone'. As for the internal coherence of the text, an elephant bone that must be treated in some way would fit well in a medical context;

(2) obl. sg. in AS4A b1 *tsirauwñeṣṣe kauṣn āya ompalskoṣṣe mrestīwe pakṣäṃ* "He breaks the bone of energy [and] he cooks the marrow of meditation" (cf. Meunier 2015: 169; the same portion of text is in NS27 a2). The fact that TchB *āya* must be analysed as a singular is confirmed by the agreement with a modifier inflected as a masculine singular (*tsirauwñeṣṣe* 'pertaining to energy').[192] Furthermore, the derived adjective *ayāṣṣe* /ayáṣṣe/ corroborates this analysis, since it is regularly based on the oblique singular (Peyrot 2008: 111; differently Pinault 2008: 333).

Other fragments where one could read independent sequences of *āyo* or *āya* are broken or severely damaged, especially at the end of the line, where unfortunately these words are mostly attested. For many of them, the restoration of the frequent noun TchB *āyor* 'gift' is preferable (instead of TchB *āyo* 'bone'). Other probable, but not certain, readings of TchB *āyo* are in IT826 b5 and THT1324.b a2. The former is a small fragment, but it seems to deal with some medical or magical practice; in the latter, the reading TchB *āyo* may be supported by the attestation of the plural *āsta* 'bones' in line b1.

Dealing with the paradigm of this word, Hartmann (2013: 267-8) proposes a new interpretation that seems to give credit to the variant forms given by Adams (1999:4 5). Once having introduced and commented on Peyrot's analysis about the singular

[191] The reading follows Peyrot. Filliozat's *oṅko*(*lma*)*ññe āy* (1948: 72) is based on an inaccurate facsimile by Hoernle (1902), as Filliozat himself wrote (p. 64). The manuscript clearly reads *oṅkolmaiññe* for expected *oṅkolmaññe*, with *ai* for *a* probably due to the following palatal consonant (Peyrot 2008: 54).

[192] Cf. the translation of the passage by Georges-Jean Pinault apud CETOM, where *āya* is translated as a plural form.

paradigm, Hartmann argues that the annexation of TchB *āyo* to the *kantwo*-type is probable, but not entirely convincing. Crucial in his argumentation is the hypothetical attestation of TchB *ay* in B284 b2 (arch.), which he interprets as an oblique singular of *āyo*: *apsāl śakattai ṣäp ay ṣesa pyākälyñe* "striking with sword, club together with bone" (translation by Adams 1999: 619). Since the obl.sg. *āya* is attested in a classical document with some late forms, while the alleged obl.sg. *ay* occurs in an archaic one, Hartmann concludes that TchB *āy* is the old and regular form. In the history of Tocharian B, a new nom. sg. *āyo* would then have resulted through reanalysis of a form with *o*-mobile[193] and, later, the obl. sg. *āya* would have been analogically created after the paradigm of TchB *luwo* 'animal'.

I believe there are flaws in this theory. If, on the one hand, it is true that the spelling *ay* might be an archaic writing variant of TchB *āy* /áy/, the syntax of the sentence in B284 b2 is very strange and Adams' translation is puzzling. From a morphosyntactic perspective, one should notice that the verb TchB *pyak-* is never combined with *ṣesa* and that the postposition *ṣesa* is usually constructed with a nominal in the comitative. A form *ayämpa** (or the like) would therefore be expected. I am further hesitant to assume that a new singular paradigm nom. *āyo*, obl. *āya* originates after the creation of the new nom.sg. *āyo* from **ayə* with *o*-mobile. Indeed, the Tocharian B phenomenon named "bewegliches *o*" usually presupposes that an original final *-ä* /-ə/ is replaced by final *-o* in metrical (mostly archaic) texts in *pāda-* or colon-final position (Pinault 2008: 404f.; Malzahn 2012a). To my knowledge, the variant with *o*-mobile has never been reinterpreted as a new inflected form replacing the original one with final *-ä*. Perhaps the only exception could be the plural of the imperative active, where the variant with *-o* is not confined to the usual contexts (Malzahn 2010: 42). Alternatively, one might say that TchB *āyo* is itself an example of *o*-mobile of a regular *āyä** (as per Pinault 2008: 333). However, as noticed above, the only clear occurrence of TchB *āyo* is from a non-metrical text, i.e. a collection of medical recipes.

To sum up, the correct paradigm of the word for 'bone' in Tocharian B is: nom.sg. *āyo,* obl.sg. *āya*, nom.obl.pl. (suppletive) *āsta*.[194] The Tocharian A paradigm is: nom.obl.sg. *āy*, nom.obl.pl. *āyäntu*.

As far as the etymology of the term is concerned, one would like to derive the Tocharian noun directly from the familiar PIE word for 'bone', namely PIE **h₂ést-* / **h₂ést-* (or **h₃ést-*). The plural TchB *āsta* has evolved quite regularly. Pinault (2008: 428) outlines the following development: PIE **h₂ést-h₂* > **œsta* > PTch **asta* (through *a*-umlaut) > TchB *āsta*.[195]

On the other hand, the origin of the singular TchB *āyo* (obl.sg. *āya*) and TchA *āy* (pl. *āyäntu*) is more difficult. Hartmann (2013: 448-453) and Adams (DTB: 48-50) have recently

[193] On the insertion of *-o* in metrical texts, see Malzahn (2012a).

[194] See also Adams (DTB: 48ff.) and Malzahn (2011: 99).

[195] Not with Van Windekens (1976: 172-3) a loanword from Khot. *āstaa-* 'bone' < **astaka-*, with pl. *āste*, cf. Isebaert (1980: 190).

summarised and commented on the previous etymological attempts. Van Windekens' derivation from PIE *$h_2$éi̯u- 'life-force' (cf. Skt. *áyu-*) is phonologically fine, but semantically difficult (1976: 173; cf. DTB: 49-50). Hilmarsson's *$h_2$ei̯d-i-h_2 'swelling' (cf. Arm. *ayt* 'cheek') is also difficult, from both a morphological and a semantic point of view.

Katz (1997: 73-7) takes **ay* as the regular outcome of PIE *$h_2$ést- > **ast* > **as* > PTch **ay* by sound law of Pre-PTch **-s* > *-y* in monosyllables. Such a sound law, however, has no clear parallels in Tocharian (see §3.5.1.2) and the word TchB †*āy* no longer exists.

As a matter of fact, the situation of this word is quite peculiar, because it is an accented monosyllable. The expected outcome of PIE *$h_2$ést* would have been PTch **a* after regular loss of final consonants.[196] One may wonder whether this PTch **a* 'bone' (?) was reshaped in **ayå* (obl.sg. **aya*) after the paradigm of the word for 'member', TchB *lyi̯yo** /ĺáyo/, pl. *lyyāsa* /ĺyása/ (TchA pl. *lyi̯yā* ~ *lyā*). However, this noun is not attested in the singular, neither in Tocharian B, nor in Tocharian A and its etymology is equally unknown.[197]

TchB *mai̯yya, -yo* 'force, strength'

The last substantive ranged under the *kantwo*-type is the abstract noun TchB *mai̯yya* ~ *-yo* 'force, strength'. There are some issues about the derivation and the alternation *-o* ~ *-a* in the nominative singular of this noun.

From an etymological point of view, the word must be linked to the PIE root **mei*(*H*)- '± soft, little' (cf. PGerm. **mai̯wa-* 'slim, narrow', and further Lat. *mītis* 'soft'), in turn probably derived from PIE **meh*$_1$- 'to measure' (cf. further DTB: 508). TchB *mai̯yya* is linked to the adjective TchB *mai̯we* 'young', which Adams (DTB: 509) traced back to PIE **moHi-*

[196] Adams (DTB: 49) suggests that this PTch **a* was perceived as overly short by Tocharian speakers and it was extended in some way, perhaps by the outcome of the PIE suffix **-i̯o-/-i̯eh$_2$-*, also attested in other body-part terms in some other Indo-European languages (e.g. Skt. *āsya-* 'mouth' alongside *ās-* 'id.').

[197] For the identification of the word, see Pinault (2008: 146-7) with references. Blažek (2012: 16) has connected TchB *lyi̯yo** with Hitt. *ḫaliu̯e/a-*^{zi} 'to kneel down', which has been traced back to PIE *h_2l-oi̯-/ *h_2l-i- by Kloekhorst (2008: 273f.) (cf. the reduplicated *halihla/i-* 'to genuflect' < *$h_2$li-h_2l(o)i-). For Tocharian, Blažek reconstructs *$h_2$li-h_2i-, without clarifying how this protoform could have evolved into TchB *lyi̯yo**. Witczak (2017) recently reconstructs an *s*-stem noun referring to fleshy parts of the body, which he derives from the PIE root **leh*$_1$- '±smooth' (cf. Gk. λεῖος 'level, smooth', Lat. *lēvis* 'id.' < **leh$_1$i-u̯-* (?), Gk. λίς 'smooth' < **lih$_1$-t-*). According to him, evidence for this *s*-stem would come from OE *līra* 'muscle, soft part of the body', MLG *liese* 'thin skin', Lith. *líesas* 'lean, thin', Latv. *liẽss* 'id.', and Hitt. *lēši, lišši* 'liver'. If Proto-Indo-European had such a neuter *s*-stem noun, a paradigm sg. **l*(*e*)*h$_1$i-s*, pl. **l*(*e*)*h$_1$i-sh$_2$* 'soft part of the body' would have evolved in Tocharian into sg. **ĺəy*, pl. **ĺəysa* (or sg. **ĺœy*, pl. **ĺœysa*). Then, this paradigm may have been remade to sg. **ĺəyå*| *-a*, pl. **ĺəyasa* after other body-part terms that belong to the *kantwo*-type. Otherwise, one may link TchB *lyi̯yo** with the PIE root **lei̯-* (cf. Goth. *liþus* 'member, body part', ON *liðr* 'joint', OHG *lid* 'joint, articulation', Du. *lid* 'id.' < **liþu-*, ON *limr* 'limb', E *limb* 'id.' < **limu-*, Kroonen 2013: 338 and 340).

u̯o-. He reconstructs an old abstract in **-i̯eh₂* derived from this adjective, which would have evolved into our TchB *maiyya*.[198]

However, I am not aware of other abstract nouns formed with (the outcome of) the suffix **-i̯eh₂* in Tocharian.[199] Furthermore, since I expect **-eh₂* to have yielded TchB *-o* (see §4.3.4.4 and above), Adams' proposal implies that TchB *maiyyo* is to be considered as the older variant. However, on the basis of the textual distribution of the variants, Peyrot (2003: 62ff. and 2008: 99ff.) demonstrated that many substantives of the *wertsiya*-type (nom. sg. *-ʸa ~ -ʸo*, obl. sg. *-ʸai*) show a general trend to shift to a subtype with nom.sg. *-o* between the classical and the late stage, while they consistently attest a nom.sg. *-a* in archaic documents. I have therefore checked the occurrences of TchB *maiyyo* in the texts. They are all from classical and late texts, thus confirming Peyrot's distribution of the variants: *maiyyo* (NS103 a1 [class.]., B21 b5 [class.-late], B231 b5 [class.-late], B278 b2 [class.], B371 b2 [class.], THT1131.i [late?]; *(mai)yyo* (IT27 a1 [class.]); *mai(yy)o* (B17 b8 [class.-late]); *maiyo* (AS8B a4 [class.-late]). I therefore consider the nom.sg. *maiyya* as the archaic variant. This cannot be the outcome of a virtual PIE **moh₁i-u-i̯eh₂*.

In my opinion, the best option is to consider TchB *maiyya* a substantivised adjective of the original feminine form of TchB *maiwe* 'young'. Indeed, after the generalisation of the feminine singular paradigm in *-ʸa(-)* in the thematic adjectival inflection (cf. nom.sg.m. *ratre* 'red' < **rətræ* < **h₁rudʰro-*, nom.sg.f. *rtarya*, not **ratro* < *rətrå* <**h₁rudʰréh₂*; cf. Lat. *ruber*, *rubra* 'red', Gk. ἐρυθρός, ἐρυθρᾰ́ 'id.'), the feminine form of TchB *maiwe* < PTch **mæywæ* should have been TchB *maiyya* < PTch **mæywa*. Moreover, TchB *maiwe* does not attest a feminine inflection. This kind of development strongly resembles the one of the abstract nouns TchB *emalya* and TchA *omlyi* 'heat', which, from a formal point of view, seem to be the feminine counterparts of the adjectives TchB *emalle* and TchA *omäl* 'hot, warm' (again, with no feminine inflection attested). In addition, this analysis may improve the historical interpretation of the plural paradigm of TchB *maiyya.* Adams (DTB: 508) reports the following plural forms: nom.pl. *maiyyāñ*, obl.pl. *maiyyaṃ ~ maiyyana*. The suppletive plural form in *-ana* is problematic, because this plural marker is exclusively confined to nouns of the *aśiya*-type (§3.5.2). I checked the attestations of the plural forms and my results are given below:

(1) IT96 a5 *snai-maiyyañ*; IT36 b1 // *maiyyañ*; NS56 b2 *śak-maiyyaṃ*; B211 a2 *śak-maiyyaṃ*; B303.d. b1 // *maiyyaṃ*; B621 b3 *maiyyaṃ*;
(2) B31 a1-2 *(mai)yyana* (cf. Sieg & Siegling 1983: 67-8); NS49A b5 *maiyyana*; B533b4 *mai(yyana)* (rest. by Claus-Peter Schmidt apud Hartmann 2013: 237).

[198] An older variant *meyya* is attested in archaic texts (e.g. B248 a1; B274 b1-b2). See Peyrot (2008: 58f.) and Pinault (2008: 275).

[199] According to Adams, TchB *peñiya ~ -o*, A *pañi* 'splendour' may also go back to an abstract in **-i̯eh₂*. On this noun, see §3.7.3.3.

All these documents are drafted in classical Tocharian B, with archaic forms in B211 and late forms in NS56. I was not able to find any nom.pl. †*maiyyāñ*. An important thing to be noticed is that the plural *maiyyana* is always attested as an independent word, while the nom.pl. *maiyyañ* and the obl.pl. *maiyyaṃ* are for the most found in composition with *snai* 'without' (*snai-maiyyañ* 'without powers' in IT96), or *śak* 'ten' (*śak-maiyyaṃ* 'provided with ten powers' in NS56 and B211), an epithet of the Buddha (Pinault 2008: 564). Since the forms *maiyyañ* in IT36 and *maiyyaṃ* in B303.d. are the first discernible words at the beginning of a broken line, we cannot tell whether they were in composition or not. I therefore believe that the original plural form of *maiyya* was *maiyyana* (nom. = obl., cf. TEB §163 and Hartmann 2013: 237), as attesting the common ending of the feminine adjectival inflection. Soon after, the plural *-na* started to be perceived as incorrect, because this ending usually marks feminine words with female referents in the noun inflection. As a consequence, TchB *maiyya* acquired a new plural in *-añ*| *-aṃ*, as the attestation in B621 b3 seems to confirm, where an obl.pl. *maiyyaṃ* cannot be part of a compound.

A last thing that still needs to be explained is the obl.sg. *-a*. A possibility is that an original obl.sg. **maiyyai* was dissimilated in *maiyya.* However, the obl.sg. *-a* is attested since the archaic stage, where an obl.sg. ***meyyai* would have hardly evolved into *meyya* after dissimilation.[200] Now, since we have traced TchB *maiyya* back to an old feminine adjective, one may wonder whether the obl.sg. *-a* reflects the maintenance of the original obl.sg. ending of the feminine adjectives. Indeed, at a certain pre-stage of Tocharian, the singular paradigm of the feminine adjectives did not differentiate the nominative from the oblique, since they both ended in **-ʲa* (cf. §4.3.3.3). This fits the analysis of *maiyya* as an old feminine adjective nicely.[201]

3.7.1.3. Summary

In this section, I have analysed a group of nouns with nom.sg. *-o*, obl.sg. *-a*. I have pointed out that many of its members can be traced back to the PIE hysterodynamic type in *-(*e*)h_2. Furthermore, we have seen that there is no reason to explain the nom.sg. TchB *-o* as the outcome of either a sigmatic nom.sg. PIE *-*eh*$_2$*s* or a plural formation *-*eh*$_2$*-es* (*vel sim.*).

The discussion can be summarised as follows. The stock of the *kantwo*-type words is made up of: (1) words with certain etymologies and exact Indo-European correspondences that are the outcome of a PIE type in *-(*e*)h_2 of the hysterodynamic type (TchB *kantwo*, A *käntu* 'tongue'); (2) words with certain etymologies and exact Indo-European correspondences that may have inherited (or developed) an hysterodynamic inflection as well (TchB *karyo** 'viscera', A *kri* 'will, desire'); (3) words with probable etymologies with no precise Indo-European correspondences that can go back to a PIE type in *-*eh*$_2$ or *-h_2

[200] Cf. also Malzahn (2011: 93 fn. 25).

[201] A last possibility is to interpret TchB *maiyya* as a *vr̥kí*-derivative of *maiwe* (see §3.7.3.). From a semantic point of view, this reconstruction works fine, because the original meaning of PTch **mœywə* would have been 'pertaining to the youth' and then 'force, strength'. If so, however, the deviating plural *maiyyana* would be hard to explain.

(TchB *kātso*, A *kāts* 'belly, stomach'; TchB *kāswo* 'leprosy, skin disease'); (4) two old loanwords from Iranian (TchB *tāno* 'seed of grain'; TchB *mālo* 'alcohol; spirit'); (5) abstract nouns that are very old Tocharian formations (TchB *tsāro* 'monastery, nunnery'; TchB *kāwo* 'desire'); (6) nouns built with the suffix PTch *-(*i*)*tå* (TchB *laukīto*, A *lokit* 'stranger'; TchB *nekīto** '±destroyer'); (7) substantivised adjectives (TchB *maiyya* 'strength'). The only two alternating nouns belonging to an inflectional type somehow parallel to the *kantwo*-type can be traced back to old *s*-stems (TchB *luwo*, A *lu* 'animal') or to PIE root nouns (TchB *āyo*, A *āy* 'bone'). As for TchB *suwo* 'pig', we do not have any attestation of the plural paradigm, so that the inflectional type remains unknown. However, it can mirror its PIE reconstructed ancestor, with some motivated analogical adjustments.

3.7.2. THE *okso*-TYPE AND THE *arṣāklo*-TYPE

Tocharian B nouns with nom.sg. *-o*, obl.sg. *-ai* and their Tocharian A correspondents

The Tocharian B *okso*- and *arṣāklo*-types are two closely related inflectional classes. Since they have the same case endings, their paradigms seem to overlap at first sight. However, a closer look at their inflection and derivation reveals distinct differences. As can be seen from the table below (Table III.16), the inflection of these two types differ in the stem to which the case markers are attached: in the *okso*-type, all non-nom.sg. forms and derivatives are built on an *ai*-stem (cf. gen.sg. *oksaintse** and the derived adjective *oksaiñ̃ñe* 'pertaining to the ox'), while in the *arṣāklo*-type they are built on an *a*-stem (gen.sg. *arṣāklantse* and the adjective *arṣāklatstse** '± snake-infested').[202]

Table III.16. Inflection of the *okso*-type and the *arṣāklo*-type

	NOM. SG.	OBL. SG.	NOM. PL.	OBL. PL.	STEM
okso-type	*okso*	*oksai-Ø*	*oksai-ñ*	*oksai-ṃ*	*oksai-*
arṣāklo-type	*arṣāklo*	*arṣākla-i*	*arṣākla-ñ*	*arṣākla-ṃ*	*arṣākla-*

This difference has caused some debate, in which a central question was the origin of the *ai*-element. Winter (1989: 111f.) was the first who dealt with this problem in a systematic way. In contrast with other theories previously proposed,[203] he showed that the two Tocharian B inflectional classes are in complementary distribution: all members of the *okso*-type are disyllabic, while all members of the *arṣāklo*-type are tri- or polysyllabic. As a consequence, he explains the contrast *-ai-* vs. *-a-* as depending on the position of the accent in the plural: on the one hand, the substantives of the *okso*-type were stressed on

[202] Cf. also the contrast between dual forms of the *okso*-type, e.g. TchB *oksai-ne* 'two oxen', TchB *pokai-ne* '(two) arms', A *pokeṃ* 'id.', and dual forms of the *arṣāklo*-type, e.g. TchB *yerkwanta-ne* /yerkwə́ntane/ 'two wheels', *wcūka-ne* /wəcə́wkane/ '(two) chins'. See recently Kim (2018: 44-6).

[203] Cf. e.g. Adams (1988a: 16), who ascribed the difference between *-añ̃* and *-aiñ̃* as due to "analogical dominance" of either the nominative or the oblique.

the last syllable, while, on the other hand, the substantives of the *arṣāklo*-type were stressed on the penultimate syllable.

Winter's analysis is generally accepted today. However, the historical issues to which these classes give rise are by no means solved, to such an extent that little convergence of scholarly opinions can be acknowledged. On the strength of views expressed by some scholars (most notably Pinault 2008: 483-5 and Peyrot 2012), I will in this section deal with the origin of these classes and with the spread of TchB *-ai* in the nominal declension. My final aim is to understand what the role of these inflectional classes has been in the evolution of the *$*eh_2$*-stems from PIE to Tocharian. However, before proceeding to this diachronic matter, an introduction to the nouns of these classes as well as a discussion on some of the etymologies of their members are needed.

3.7.2.1. The *okso*-type

As noticed above, the *okso*-type consists of disyllabic nouns, which build the plural and derivatives on a stem ending in *-ai-* (cf. *oksaiñ̈ñe* 'pertaining to an ox'). The nouns of this type are usually feminine, but we can also find sporadic masculine nouns (e.g. *okso* 'ox', *pānto* 'support', *naunto** 'street, road', Hilmarsson 1987). The stem finals are usually not attached to a preceding palatalised consonant, with very few exceptions (e.g. *swāñco* 'ray of light'). In addition, some nouns attest alternation between *-o* and *-iye* in the nominative singular, a phenomenon that is still being discussed by the specialists of Tocharian.

Hilmarsson (1987: 44f.) argues that the nom.sg. *-iye* is the result of analogy after other inflectional classes, as he recognises the oldest variant in the nom.sg. *-o*. This analysis would be substantiated by phonological evidence. Indeed, the *o*-umlauted stem in some of the *okso*-nouns can be explained by reconstructing an older nom.sg. *-o*. Furthermore, the assumption that the nom.sg. *-o* has been replaced by *-iye* poses no difficulties from the point of view of Tocharian A.[204]

Taking into consideration the meaning of the nouns, we can make the following semantic groups: (1) faunal and floristic terms, like TchB *okso*, A *opäs** 'cow'; TchB *koro** 'camel' or 'mule';[205] TchB *kraṅko* 'chicken'; TchB *tsāktso** '±duck' (hapax legomenon

[204] An apparent counterexample could be TchB *prosko* 'fear', whose Tocharian A counterpart is *praski* 'id.'. However, TchA *praski* (alt.) cannot be the morphological match of TchB *proskiye* (f.) for formal reasons. Following Peyrot (2008: 103, 2012: 211) and Pinault (2011: 174), the possibility of an independent formation in the two Tocharian languages seems to be the best way to explain this mismatch.

[205] The meaning and the etymology of TchB *koro** are unknown. It is mostly attested in the plural in documents that deal with caravan-passes (*korai* PK Bois B18 a4, *koraiṃ* B577 b2; cf. also *koraiśke* (?) PK DA M 507.27 b2). For proposals, see Adams (DTB: 218, in favour of a meaning 'camel') and Pinault (2008: 391f., who suggests 'mule'). On TchB *etswe* 'mule', see Peyrot (2015: 222, 2018: 243, 2018a). Another peculiar faunal term is TchB *kraṅko* 'chicken' (cf. perl.pl. *kräṅkaiṃtsa* AS16.8a4 and the adjective *kräṅkaiñ̈ñe* W14 a5, THT1520 a3, etc.), which has to be related to the onomatopoeic PIE root **kerk-*/*krek-* 'make noise' (cf. the nominal derivatives in Gk. κρέξ, κρεκός 'ruff', Skt. *kṛkara-* 'a

nom.pl. *tsaktsaiṃ* in AS16.8 a5); TchB *pyāpyo*, A *pyāpi* 'flower'; (2) abstract and action nouns, like TchB *prosko* (~ *-iye*) 'fear'; TchB *ścono*, A *śoṃ** 'enmity'; TchB *yoko* (~ *-iye*), A *yoke* 'thirst'; TchB *pānto* 'support'; (3) terms for body parts, like TchB *pokai* (obl.), A *poke* 'arm'; TchB *klautso* 'ear'; TchB *porsno* 'ankle'. In addition, there are some nouns without any common semantic feature, like TchB *kolmo**, A *koläṃ* 'boat', TchB *naunto** 'street', TchB *koṣko* (~ *-iye*) '(wooden) hut; hole (?)', TchB *koto* 'crevice, hole in the ground', TchB *lyauto* 'opening' (cf. TchA *lot* 'hole' and TchB *laute* 'moment', see Hilmarsson 1988b).[206] Two points show the productivity of this inflectional class. On the one hand, there are some nouns that analogically developed new inflected forms with an *ai*-stem, as in the case of the late obl.pl. *eśaiṃ* (IT85 b2) from TchB *ek* 'eye', shaped after nouns for body parts of the *okso*-type.[207] On the other hand, this class comprises some loanwords. A clear example is TchB *pātro*, A *pātär* 'alms bowl', borrowed from Skt. *pātra-* (nt.). A loanword of Iranian origin seems to be TchB *koṣko* '(wooden) hut (?); pit (?)', to be probably linked to the Middle Iranian ancestor of Pahl. *kwšk* 'part of a building', MP *kōšk* 'pavilion, palace, kiosk', Khot. *kūṣḍa-* 'mansion' (cf. also Tum. *kuẓda* TUMXUQ 002.a7; see Ogihara & Ching 2017: 456 fn.14), or to Khot. *kuṣḍa-* 'hole, clearing' (Van Windekens 1976: 627; Tremblay 2005: 434; Bailey 1979: 63-4; but cf. also Adams DTB: 220, who is sceptical about this etymology).

It is generally assumed that the bulk of this class is to be traced back to two PIE stem types: stems in **-on* and stems in **-eh₂* (Hilmarsson 1987: 44; Pinault 2008: 484). I am in general agreement with this reconstruction. Indeed, among the various members of this class, there are two nouns that seem to derive from the PIE stems just outlined. They are TchB *okso*, A *opäs** 'ox, cow' and TchB *skiyo* 'shadow'. Before proceeding further, it is therefore worth recalling and commenting on the etymology of both nouns in more detail.

The etymology of TchB *okso*, A *opäs** has never been in doubt: it has been linked to the familiar PIE word for 'ox', continued by many Indo-European languages, e.g. Ved. *ukṣán-*

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kind of partridge', *kr̥kavā́ku-* 'chicken', YAv. *kahrka°* in *kahrkāsa-* 'vulture', lit. 'eater of chickens', MIr. *cercc* 'hen'). It seems that we have the outcome of a nasalised variant **krenk-* in Tocharian, which is also attested in Germanic (cf. OE *hringan* 'to sound, ring', ON *hrang* 'noise'). In Khotanese we find *kṛṅga-* 'fowl, cock' (Bailey 1967: 52; 1979: 64), which strikingly resembles the Tocharian noun. Since all other Iranian languages have continued the nasalless variant (cf. YAv. *kahrka-tāt*, NP *kark*, Oss. *kark*, etc., de Vaan 2000: 284), one may wonder whether Khotanese borrowed this term from Tocharian (or vice versa?).

[206] On TchB *pīto* 'price', see §3.8.2.1.

[207] The palatalisation of the stem in *eśaiṃ* (vs. non-palatalised sg. *ek* < PIE **h₃ek*̑-*) comes from the dual stem *eś°*, which is from **h₃ek*̑-ih₁* (Kim 2018: 78). In addition, TchB *klautso* 'ear' (A *klots*, du. *klośäṃ*) has two different stems: the singular has nom.sg. *klautso*, obl.sg *klautsai*, while the dual is constructed on a stem *klauts°*. I agree with Hilmarsson (1989: 102-3) that the original forms must be sought in the dual, as reflecting an Indo-European **ti*-stem, **ḱlou̯ti-* from PIE **ḱleu̯-* 'to hear'. This noun originally had a *ne*-less form, as confirmed by the derivative *klautsa-pälṣi* /klautˢəpəlṣi/ '±pricking up the ears' (IT246 a4; B162 b2 (?)). Also in this case, the singular paradigm must be analogical after body part nouns of the *okso*-type.

'id.', Av. *uxšan-* 'id.', Goth. *auhsa* 'id.', OE *oxa* 'id.', OHG *ohso* 'id.', MW *ych* 'id.', MIr. *oss* 'deer' etc. This word is usually reconstructed as a hysterodynamic *n*-stem **uks-én-*, **uks-n-* (Oettinger 1980: 46; EWAIA: I, 20).[208] Accordingly, the nominative singular was PIE **uksēn*. However, this reconstructed form cannot be the direct ancestor of nom.sg. TchB *okso* for phonological reasons (final TchB *-o*, lack of palatalisation, *o*-umlaut), and several of the Indo-European cognates just mentioned cannot continue a nom.sg. **uksēn* either. Indeed, Tocharian, (West) Germanic (OHG *ohso*, OE *oxa* < **uhsan-* < **-on-*), and Celtic (MW *ych*, OBret. *ohen* < **uxsō*) offer evidence for the reconstruction of a nom.sg. with *o*-vocalism in the suffix. This comparative evidence has led some scholars to reconstruct nom.sg. **-ō(n)* for an older stage of Proto-Indo-European, by arguing that Celtic, Germanic, and Tocharian would have preserved the original form (Szemerényi 1989: 154; Peters 1993: 394f.; Höfler 2015: 231f.).

The paradigm of TchB *okso* presents additional problems. Indeed, the fate of PIE **-ō(n)* in word-final position keeps being a debated issue among the phonological developments of Tocharian. Scholarly opinions can be divided into two trends of thoughts: on the one hand, Kortlandt (1988: 84), Ringe (1996: 89-90), Pinault (2008: 421-2), and Kim (2018: 101-2) have supported **-ō* > **-əw* > TchB *-u*, *-Ø*, while Hilmarsson (1988), Fellner (2014b: 63), and Jasanoff (2018) have argued **-ō* > **-å* > TchB *-o*.[209] The supporters of the first hypothesis are certainly aware of the case of TchB *okso* and they also agree that part of the members of the *okso*-type are from PIE **on*-stems. As a consequence, Pinault (2008: 421f., 2017b: 144-45) and Hajnal (2005: 228 fn. 27) claimed that nom.sg. *-o* is the outcome of a secondary **-ōn*, originated from the contraction between the inherited **-ō(n)* plus the so-called Hoffmann suffix PIE **-oHon* (cf. OAv. *mąθrān-* 'knowing the *mąθras*' < **mantra-Han-*). The outcome of this conglomerate suffix would have been a Proto-Tocharian vowel with *o*-timbre, which yielded TchB *-o*, A *-Ø*. However, as Jasanoff (2018) pointed out, there is no evidence that the Hoffmann suffix was productive in Tocharian, nor that Proto-Tocharian

[208] The PIE root is sometimes reconstructed with a labiovelar, but there is no evidence in support of this reconstruction. Höfler (2015: 232) favours the following PIE internal derivation: **h₂eug-* 'to grow' → **h₂eug-es-* 'strength' → **h₂ug-s-ó-* 'having strength' → **h₂uk-s-on-* 'the strong one'.

[209] Clear examples of PIE **-ō* > PTch **-u* are (Ringe 1996: 89-90; Pinault 2008: 421-2; Kim 2018: 101-2): (1) PIE **h₃eḱtō* 'eight' > TchB *okt*, A *okät* (with *u*-umlaut); (2) PIE *-oH* (1sg. thematic ending) > TchB *-u* (1sg.subj.); (3) **ḱu̯ó* 'dog' > TchAB *ku*; (4) PIE **du̯óh₁* 'two' > PTch **wu* > TchA *wu*; (5) **-u̯ós* (part.prf.act.) > TchAB *-u*; (6) **h₂ent-bʰoh₁* > TchA *āmpuk* 'both' (if final *-uk* is not analogical after TchA *puk*; Kim 2018: 85-6). In some of these forms (3-4-5), PTch **-u* can have resulted through affection by **-u̯-*, but for all others the situation is more complex. The reduction of PTch **-u* > **-ə* in 'eight' may be analogical after **ṣəptə* 'seven' (Kim 2018: 101). Jasanoff (2018) has recently questioned the sound law **-ō* > PTch **-u*. However, I do not see any reasons for his reconstruction of a PIE dual **-ōu̯* for (1)-(4)-(6) (see also Hilmarsson 1989: 9f.), and there are no parallels for a hypothetical long diphthong **-ōu̯* yielding TchAB *-u* (on TchB *akrūna*, A *ākrunt* 'tears', see §3.6.1.2). Furthermore, I see no reason either for his claim that the participles in TchAB *-u* are the outcome of an alleged neuter **-u̯us* (see Peyrot 2010: 79), or that the 1sg.prs. TchB *-u* is from a supposed lenited form of PIE **-mi* (but see Malzahn 2010: 28-30).

developed a Germanic-like morphological distinction between weak and strong inflection.

Two solutions can be put forward: (1) either the nom.sg. *-*ō* restored the final nasal after all other *n*-forms of the paradigm (Ringe 1996: 10-1), or (2) Tocharian has simply preserved the original nom.sg. *-*ōn*. A clear parallel for this development is found in Greek, e.g. Gk. κύων 'dog', gen.sg. κυνός, Gk. ἄρσην 'male', gen.sg. -ενος, where final -*n* may represent either a preservation or a restoration (Chantraine 1933: 158f.; Mayrhofer 1986: 159; Byrd 2015: 21). These solutions would also explain other cases of Tocharian nominal *n*-stems with nom.sg. -*o* (e.g. the adjectives of the *klyomo*-type).[210]

To sum up, the nom. sg. PIE *-*ōn* of the *n*-stem was either preserved or it has been remade in *-*ōn* very early in the pre-history of Tocharian, through analogical levelling after other *n*-forms of the paradigm that caused the replacement of the inherited nominative case. Furthermore, there is strong evidence that at the same stage Tocharian generalised the vocalism of the suffix from the nominative throughout the rest of the paradigm. Indeed, the fact that we do not have any traces of a suffix *-*en*- in this type is confirmed by the lack of palatalisation. And yet, there are no traces of *-*on*-, either. If we, for instance, consider the nominative plural, it is expected to have evolved PIE *-*on-es* > PTch *-*œñə* > TchB **-*eñ*. As a consequence, we have to assume that the suffix was *-*ōn*- in all case forms, and that it regularly yielded *-*an*- in all the non-nominative singular cases (see above). On the other hand, the spread of the *ai*-stem for the expected **a*-stem should be interpreted as secondary. We will deal with this secondary replacement in the following paragraphs, where an overview of the previous interpretations will also be given.

The Tocharian A equivalent of nom.sg. TchB *okso* is reconstructed as *opäs**, based on the hapax legomenon nom.pl. *opsi* in YQI.4 a4.[211] This form has been analysed and commented in-depth by Pinault (1999: 467f., 2008: 457f.). He argues that TchA *opäs** attests a phonological development proper of Tocharian A, according to which the consonant cluster PTch *-*ks*- developed into TchA -*ps*- (cf. TchB *klayksa*- vs. TchA *klāypsā*- ~ *klepsā*- 'to dry up' < PTch **klayksa*-; TchB *ekṣalye* vs. TchA *opṣäly* 'festive day; celebration', see Pinault 2015d). What is actually unexpected is the nom.pl. TchA -*i*, which obviously cannot match the nom.pl. TchB -*añ*. It follows that TchB *okso* and TchA *opäs** synchronically belong to different inflectional classes. There is however strong evidence to support that the nom.pl. -*i* of TchA *opsi* is secondary. Leaving aside the Indo-European comparative evidence, nom.pl. TchA -*i* (TchB -*i*) is usually accompanied by the palatalisation of the stem-final consonant (e.g. TchA *mañi*, B *meñi* 'moons, months'). As a consequence, TchA ***opṣi* would have been expected (Pinault 2008: 498). Following

[210] Jasanoff (2018) rejects both solutions, since he believes that Tocharian shortened long vowels before final nasals. I cannot agree with this shortening, since all forms proposed can be explained differently (e.g. the obl.sg. TchB -*a* in the *kantwo*-type, on which see §3.7.1.2). *Pace* Malzahn (2011: 94-5), there is no clear evidence that PIE *-*ōn* yields PTch *-*āy* (see the main text above), neither that the PIE ending *-*ō* was enlarged in Pre-Proto-Tocharian by *-*s*.

[211] I leave the putative "Lolanisch" *ok*ᵤ*soṃ* out of my discussion (Schmidt 2018: 166).

Pinault (1999: 468), it is possible to assume that the non-palatalising nom.pl. *-i* in the hapax legomenon TchA *opsi* has been introduced after TchA *kowi* 'cows', which is attested exactly before *opsi* in YQI.4 a4-5: (*klankañ wā*)*mpuṣ yetwentuyo kowi opsi kayurṣāñ* : *ma*(*hirṣāñ*), "(vehicles) adorned with decorations, cows, oxen, bulls, buff(aloes)" (cf. Ji et al. 1998: 37).

To conclude, on the basis of this clear PIE etymology, there is good reason to set up the hypothesis that other nouns of the *okso*-type derive from *ōn*-stems, too.

Let us now move on to TchB *skiyo* 'shadow', which has no match in Tocharian A. This noun has been the subject of several investigations from both the Tocharian and the Indo-European comparative perspectives. Many problems are involved. TchB *skiyo* has cognates in most of the Indo-European languages, including Gk. σκιά́ 'shadow'; Ved. *chāyā́*- 'shadow, reflection', YAv. *a-saiia*- 'throwing no shadow' (de Vaan 2003: 120; Lubotsky 2001: 35), MP *sāyag* 'shade' < **sāya-ka*-, Sogd. *sy'k*, Khot. *śāhauja*- 'umbrella' (Bailey 1979: 398); Latv. *seja* 'face', OCS *sěnъ* 'shadow'; Alb. *hije* 'id.' < OAlb. *hē* (Demiraj 1997: 201; Matzinger 2006: 96). Despite these cognate forms, the precise identification of the PIE root and the type of suffixation involved are debated.

Beekes (2010: 1350-1) reconstructs an original ablauting formation **sḱéh*$_2$*-ih*$_2$, **sḱh*$_2$*-i̯éh*$_2$-, i.e. a PIE root **sḱeh*$_2$- followed by the so-called *deví*-suffix (cf. also GEW: II, 731). Accordingly, Indo-Iranian would have generalised the full grade of both the root and the suffix, while Greek would have generalised the allomorph of the weak cases (Lubotsky 2001: 35). Although the derivational part of this reconstruction is supported by some other scholars, the value of the laryngeal is debated. Mayrhofer (EWAIA: I, 559) reconstructs the laryngeal as PIE **h*$_1$. The reason behind this reconstruction is the connection with the Slavic forms. Indeed, the vowel - *ě*- in OCS *sěnъ* cannot be from PIE *-*eh*$_2$- > *-*ā*-, while it can be the outcome of PIE *-*eh*$_1$- > *-*ē*-.[212] However, the Slavic form can be also accounted for with a slightly different PIE reconstruction.

Indeed, there is some evidence that the *i*-element found in *all* Indo-European descendants of this noun was part of the PIE root (as also per Rasmussen 1989: 33; Ringe 1996: 18-9; Lubotsky 2001: 35) and that the laryngeal was *-*h*$_2$-. To begin with, outcomes of the verbal root PIE **sḱeh*$_2$*i*-/ **sḱHi*- 'to shine' are traceable in Goth. *skeinan* 'id.', Croat. *sînēm* < **skiH-n*-, and OCS *sijati* (LIV^2:546; see further Derksen 2008: 450-1; Kroonen 2011: 246-7).[213] Second, OCS *sěnъ* 'shadow' can be the direct descendant of PIE **sḱeh*$_2$*i*- followed by an *n*-suffix, thus PIE **sḱeh*$_2$*i-n*- > **skain-is* > OCS *sěnъ* (with regular monophthongisation of *-*aḭ*- > -*ě*-; cf. also Derksen 2008: 447, 2014:549). Third, if Lat. *scaevus* 'left, inauspicious' and Gk. σκαιός 'id.' are independent derivatives from this root (de Vaan 2008: 541), they both presuppose a protoform **skai-u̯os* (cf. **g*$^{\text{w}}$*eḭh*$_3$- 'to live' → **g*$^{\text{w}}$*ih*$_3$*-u̯os* 'living, alive' > Gk.

[212] Beekes' reconstruction is also based on the alleged etymological connection of Gk. σκηνή/σκανά 'tent, booth, stage' to the root under discussion, but this connection is by no means certain.

[213] According to Yakubovich (2002) and Hitch (2017: 518-9), Sogd. *sy*- 'to seem, appear' and Khot. *se*- 'id.' are from **skāi*- < PIE **skeh*$_2$*i̯*-.

ζῷον, Lat. *vīvus*, Lith. *gývas*, Latv. *dzîvs*, etc.). If this analysis is correct, then the suffix cannot have been **-ih₂/-i̯eh₂*. Accordingly, Rasmussen (1989: 61) and Ringe (1996: 18-19) reconstruct **sḱéh₂i-h₂*, **sḱh₂i-éh₂-* (cf. also Lubotsky 2001: 35).

The various Indo-European forms continue different apophonic grades from this paradigm. The full grade of both the root and the suffix was apparently maintained in Indian, where the noun has become an *ā*-stem.[214] Other languages, including Greek, selected the zero grade of the root and the full grade of the suffix **skHi-eh₂* > **sk(H)i-eh₂* (Pinault's law) > **skiu̯ā* (Siever's Law).[215]

Back to Tocharian, TchB *skiyo* must be traced back to PTch **skəyå*. The final vowel PTch **-å* is the regular outcome of **-eh₂* (see §4.3.4.4, §3.7.1). It follows that the word had already become an **ā*-stem in the prehistory of Tocharian. However, it is still not clear why palatalisation of the stem did not take place; and it is in fact a debated topic of Tocharian historical phonology, since the precise contexts where PIE **i* failed to palatalise are still unclear. As a matter of fact, we have no other clear evidence of a PIE sequence **-K/Ḱi-* continued in Tocharian, so it is difficult to verify if the lack of palatalisation in TchB *skiyo* is regular.[216] On the other hand, we know that PIE **e* also palatalised those consonants that PIE **i* failed to palatalise, e.g. **kʷ* and **u̯* (cf. **du̯ito-* 'second' > TchB *wate*, A *wät* and **kʷi-* > TchB *kᵤse*, A *kus* 'who' vs. **u̯égʰno-* 'cart' > TchB *yakne*, A *wkäṃ* and **kʷetu̯ores* 'four' > TchB *śtwer*, A *śtwar*). However, it would be strange if PIE **i* did not palatalise velars in Tocharian, because velars are typologically among the consonants most easily palatalised.[217]

Be that as it may, the nom. sg. TchB *skiyo* can be the outcome of **-eh₂* > **-ā* > PTch **-å* > TchB *-o*. On the strength of this etymological analysis, we can argue that other nouns

[214] Neri (2003: 332) reconstructs another formation for the Vedic form, i.e. **skh₂oi̯-áh₂*.

[215] In my opinion, it is not possible to reconstruct laryngeal metathesis here (**h₂i* > **ih₂*), since metathesis usually occurs between stops.

[216] Normier (1980: 256) and Pinault (2008: 423) suggested that PIE **i* does not palatalise bilabials, velars, labiovelars, and **s*. Van Windekens (1976: 88-9) listed alleged examples of **k* > *ś* before **i*, but they are all uncertain, to say the least.

[217] Cf. Bateman (2011). Accordingly, Ringe (1996: 18-9) claimed that palatalisation of the PIE velars in front of **i* must have happened in Tocharian and thus that it should have affected also TchB *skiyo*. He argued that the laryngeal in **sḱHi-* was not lost and that it must have survived as a sort of non-front vowel until after palatalisation had run its course. But this assumption sounds very improbable to me, and its fragility is acknowledged by the scholar himself. Admitting that **i* palatalised, one may claim that Tocharian inherited the Indo-European paradigm of the word for 'shadow' still intact. This led to an opposition between non-palatalised **sḱeh₂i-* > PTch **skai-* and palatalised **sḱiu̯-* > PTch **ṣəy-* (or the like). This aberrant alternation in the paradigm was normalised soon after: the resulting form would show the consonantal skeleton of the former, but the vocalism of the latter. But this solution is extremely questionable. A last possibility is to dismiss the etymological link of TchB *skiyo* with Gk. σκιά́, etc. and to rather support a derivation from the PIE root **skeu̯H-* 'to cover', with possible continuants in Germanic (cf. OHG *scuwo* 'shadow') and Latin (cf. Lat. *obscūrus* 'dark').

that synchronically belong to the *okso*-type were originally *(*e*)h_2-formations in the proto-language, including some abstract nouns previously mentioned.[218]

3.7.2.2. The *arṣāklo*-type

As mentioned above, the *arṣāklo*-type differs from the *okso*-type in the formation of the genitive singular, the plural, and the derived forms, which are not built on a stem in *-ai-*, but on a stem in *-a-* (e.g. *arṣāklatstse* 'snake-infested'). This inflectional type includes both masculine and feminine nouns. As in the *okso*-type, we also find several faunal words in the *arṣāklo*-type, like TchB *oṅkolmo*, A *oṅkaläm* 'elephant', TchB *mewiyo* 'tiger', TchB *kercapo* 'donkey', TchB *arṣāklo*, A *ārṣal* 'snake', possibly TchB *yerkwantalo* 'leopard (?)', as well as body part nouns, like TchB *pratsāko* 'chest', TchB *wcuko* /wəcə́wko/ 'cheek, jaw' (late *wicuko*), TchB *ckācko* /cəkácko/ 'leg' (cf. also du. *tskertane* '(two) calves', DTB: 813; Kim 2018: 45). We also find several loanwords from Iranian. Examples include: (1) TchB *witsako* 'root', borrowed from an Iranian form related to Oss. Ir. *widag*, Dig. *wedagæ/jedagæ* < **u̯aitikā-* (cf. Av. *vaēti-* 'willow', Winter 1971: 222; Tremblay 2005: 426); (2) TchB *mewiyo* 'tiger', probably to be linked with LKhot. *muyi* ~ *mauya* < OKhot. **mūya-* < **mauya-* (cf. Manichean Sogd. *myw* 'id.');[219] (3) *ampoño* 'putrefaction, infection', to be linked with a Middle Iranian form **hampu-* (cf. Khot. *haṃbūta-* 'rotted, festering); (4) *tvāṅkaro* 'ginger', loanword from Khot. *ttuṃgare* 'id.' (see already Bailey 1937: 913).

Two more complex words are TchB *eñcuwo*/*iñcuwo*, A *añcu* 'iron' (see Peyrot 2008: 60 on the Tocharian B variants) and TchB *kercapo* 'donkey'. The former has been variously linked to the Proto-Iranian noun for 'iron'. Schwartz (1974: 409) was the first who suggested a relation with Khwar. *hnčw* 'steel', though he claimed that both Khwarezmian and Tocharian borrowed from a third language. Tremblay (2005: 424-5), on the other hand, reconstructed (in his notation) **ačʹu̯an-* > Khot. *hīśśana-* 'iron' (with irregular **ačʹ-* > *hīśś-*)[220] and further claimed that a nasalised variant of **ačʹu̯an-* was borrowed into Tocharian. Recently, Adams (2004: 29f.; DTB: 85) has put forward a different analysis. After having collected a number of etymologically related Iranian words meaning 'iron', he ultimately posited a Proto-Iranian ancestor **anćuwan-* (in his notation). According to Adams, however, this protoform would be etymologically unanalysable in Iranian terms. For this reason, he claimed that Tocharian was actually the source language, and that Iranian borrowed from Tocharian, which had in turn inherited this form from PIE

[218] It could be claimed that at least a part of them are the outcome of the PIE τομή-type (Pinault 2011: 174), cf. TchB *prosko* 'fear' < **proskå* (umlaut) < **præskå* (PIE **perk-* 'to fear' (?), cf. TchB *prəska-*, A *präskā-* 'to be afraid', TchA *praskañi* 'fearful', DTB: 402; Hilmarsson 1987; IEW: 820), TchB *kolmo* 'boat' < * *kolmå* (umlaut) < **kælmå* (PIE **kelh$_1$-* 'to rise up' (?), DTB: 219), etc.

[219] See recently Blažek & Schwartz (2017: 58f.) with references. However, an onomatopoeic common origin cannot be discarded.

[220] The development **ačʹu̯an-* > Khot. *hīśśana-* 'iron' is not expected: the initial Khot. *h-* is unetymological (cf. Khot. *hays-* 'to drive, send' < Ir. **Hadz-a-* < PIE **h$_2$eǵ-*; see Maggi 2016: 76f. with references), but the palatalisation **-a-* > Khot. *-ī-* could be from a secondary added suffix **-i̯a-*.

*$h_{1}n$-$ǵ^{h}eu̯eh_{2}$- 'what is poured in' → 'cast iron' (see also Hackstein, Habata & Bross 2015: 103). I cannot agree with this analysis. If, on the one hand, TchB *eñcuwo* can be the outcome of a formation PIE *$h_{1}n$-$ǵ^{h}eu̯eh_{2}$- from a formal point of view, on the other hand, it is improbable to me that this word spread from Tocharian to practically all Iranian languages. Indeed, we find continuants of a protoform *$atsu̯an$- in several Eastern and Western Iranian languages (Sadovski 2017: 572): *$atsu̯ana$- > Oss. *æfsæn*; *$atsu̯anⁱa$- > Khwar. *ʾspny*, Khot. *hīśśana*-, Shughni *sipin*, Waxi (*y*)*išn*; *$ātsu̯anⁱā$- > MP *ʾsyn*; *$ātsuna$- > Parth. *ʾswn*, MP *ʾhwn*, NP *āhan*. I therefore remain unconvinced by Adams' proposal, but I have to admit that the exact phonological derivation of the Iranian forms is still to be clarified.

A similar case is TchB *kercapo* 'donkey'. In the past decades, this noun has been considered a loanword from the ancestor of Skt. *gardabhá*- 'donkey' < *$gord^{(h)}eb^{h}o$- (Pisani 1942-1943: 25; Van Windekens 1976: 214; DTB: 210.). It has been assumed that the borrowing happened in an early Indo-Iranian period, taking place before the merger of the non-high vowels in Indo-Iranian (Carling 2005: 54). However, this scenario is to be rejected, not only for chronological issues, but also because of the fact that a hypothetical *$gordeb^{h}o$- is expected to yield PTch *$kærts'əpæ$- > TchB **$kerśape$ or **$kertsape$, as Pinault (2008: 393f.) has demonstrated. Even if this form were at a certain point transferred to the *arṣāklo*-type because of its meaning, there is no way to explain the unexpected outcome of *d.

3.7.2.3. On the origin of their inflection

The diachronic evolution of the *okso*- and the *arṣāklo*-types has been one of the most debated topics within Tocharian nominal morphology. The most important and/or recent discussions are Hilmarsson (1987, 1989: 82-3), Winter (1989), Hajnal (2005), Kim (2007, 2018: 67-8), Pinault (2008: 483-5), Peyrot (2012), Hartmann (2013: 413-424), and Jasanoff (2018). Each one of these scholars has taken a step forward towards a clearer understating of the development of these inflectional classes.

The pivotal question of this section is how the *$(e)h_{2}$-type and the *$ōn$-type evolved into these Tocharian inflectional types, merging their inflection in Proto-Tocharian. This central question leads to a number of sub-issues: (1) the reconstruction of the Proto-Tocharian paradigm(s); (2) the origin of the contrast between *ai*- and the *a*-stems in Tocharian B and their historical relation with the *ā*-stems of Tocharian A; (3) origin of the obl.sg. TchB *-ai*. In this section, I will address all these issues. Although the problems are clear, they are not easy to solve. Indeed, the data involved is difficult to be analysed from a diachronic perspective, since it requires the reconstruction of some intermediate and non-attested stages. It follows that my historical account of these inflectional types must be taken as a working option to their evolution: my final results are admittedly not entirely new, nor fully conclusive. However, I hope they will be an impulse for further investigations on this important topic of Tocharian nominal morphology.

The structure of the rest of the section is diachronically oriented. I will first deal with the reconstruction of the Proto-Tocharian paradigm of the *okso*- and *arṣāklo*-types and I

will try to understand their PIE source(s). Then, I will deal with its evolution from Proto-Tocharian to Tocharian A and Tocharian B. At the end, I will recapitulate the achieved results.

3.7.2.4. Reconstruction of the Proto-Tocharian paradigm

It is usually assumed that the *okso*-type and the *arṣāklo*-type must have descended from a common proto-type (cf. e.g. Winter 1989: 111-5; Hilmarsson 1989: 82f.; Pinault 2008: 484f.; Kim 2018: 67-8). This is certainly correct and substantiated by synchronic and diachronic evidence.

First, we have already seen that the difference between the two types is that the members of the *okso*-type are disyllabic, while the members of the *arṣāklo*-type are trisyllabic, so that an accent-conditioned sound law caused the split of the common proto-type. Second, apart from the highlighted similarities in their inflection, the members of both *okso*- and *arṣāklo*-types have many semantic features in common: animal names, terms for body parts, abstract nouns, and floristic terms are typical of both classes. Third, from a derivational point of view, we find e.g. derivatives in *-nto* in both types. Compare the following examples: disyllabic *naunto** 'road' (obl.pl. *nauntaiṃ*) and *pānto* 'support' (obl.pl. *pantaiṃ*) vs. trisyllabic *auñento* 'start, beginning' (obl.pl. *auñentaṃ**, cf. TchA *oñant*) and *yerkwanto** 'wheel' (obl.pl. *yerkwantaṃ*, cf. TchA *wärkänt*).[221]

Therefore, there are good reasons for claiming that the *okso*-type and the *arṣāklo*-type descend from a common proto-type. But still, we need to understand how this common proto-type was inflected and if its split must be reconstructed for Pre-Tocharian B or for Proto-Tocharian.

In order to answer this question, we need to compare closely the Tocharian B data with that of Tocharian A. As Peyrot (2012: 208f.) points out, the formal differences between the Tocharian B *okso*-, *arṣāklo*-, and *kantwo*-types do not exist in Tocharian A. The great majority of Tocharian A nouns matching these Tocharian B inflectional types have an unmarked singular paradigm and nom.pl. *-āñ*, obl.pl. *-ās*. Some examples are:

TchB *pyāpyo* vs. TchA *pyāpi* (nom.pl. *pyāp(p)yāñ* in e.g. A68 a2 and THT3878 a1; obl.pl. *pyāppyās* in e.g. A253 b4);
TchB *kolmo* vs. TchA *koläm*;
TchB *ārṣaklo* vs. TchA *ārṣal* (obl.pl. *ārṣlās* in e.g. A1 b3);
TchB *oṅkolmo* vs. TchA *oṅkaläm* (nom.pl. *oṅkälmāñ* in e.g. A22 b6; obl.pl. *oṅkälmās* in e.g. A395 b3; cf. the derived adj. *oṅkälmāṣi* in A403 b6);
TchB *yerkwanto** vs. TchA *wärkänt* (obl.pl. *wärkäntā(s)*/// in e.g. A152 b1);
TchB *kantwo* vs. TchA *käntu* (obl.pl. *käntwās**);
TchB *karyo** vs. TchA *kri* (nom.pl. *käryāñ* in A115 a4, obl.pl. *käryās* (?) in THT2424 b2);
TchB *kātso* vs. TchA *kāts* (cf. derived adj. *kātsaṣi** in e.g. A68 a5).

[221] On the confusion between the *okso*- and the *arṣāklo*-type is Late Tocharian B, see §3.7.2.6 below.

On the other hand, there are three cases where a Tocharian B noun with stem in *-ai-* is matched by a Tocharian A noun with stem in *-e-*. They are: TchB *pokai* (obl.) 'arm' : TchA *poke* (du. *pokeṃ*, obl.pl. *pokes*), TchB *yoko* (~ *-iye*) 'thirst' : TchA *yoke*, and TchB *swāñco* (~ *-iye*) 'ray of light' : TchA *swāñceṃ*. On the basis of these word-equations it is sometimes assumed that **-ay* already served as an oblique in Proto-Tocharian, since TchA *-e* can be the regular outcome of PTch **-ay*.[222] However, Peyrot (2012: 211f.) has correctly claimed that none of these equations is probative. TchA *poke* can be compared with other body parts nouns that also have an *e*-stem in Tocharian A, including *pe* 'foot', du. *kanweṃ* 'knees', du. *śanweṃ* 'jaws', etc;[223] TchA *yoke* is compared by Peyrot with other abstract and action nouns ending in *-e* (but note that the exact morphological formation of this word is not clear, cf. Pinault 2008: 433; DTB: 552-3);[224] TchA *swāñceṃ* cannot be the exact morphological match of TchB *swāñco* ~ *-iye*, since the Tocharian A noun seems to be a late derivative from the Proto-Tocharian ancestor of *swāñco* (cf. the nasal enlargement).[225]

Furthermore, for the interpretation of these nouns it may be relevant that there is another small class of Tocharian B nouns that inflects exactly as the *okso*-type with the only exception of having a nom.sg. in *-iye*. As noticed above (§3.7.2.1), in the history of Tocharian B, some nouns of the *okso*-type were developing a parallel nom.sg. in *-iye* (Hilmarsson 1987: 44-45; Peyrot 2008: 102-106). However, it seems that a class with nom.sg. *-iye*, obl.sg. *-ai* already existed in Proto-Tocharian, the so-called *ymiye*-type (Peyrot 2012: 188). Only five nouns can be considered as belonging to this class: TchB *oskiye* 'habitation', TchB *kaumiye* 'pond', TchB *ymiye* 'path; station of the life', TchB *ṣpakiye* 'pill, poultice', and TchB *säly*(*i*)*ye* 'line'. The Tocharian A matching nouns usually end in *-e* in the singular: TchA *yme* : B *ymiye*; TchA *oṣke* : B *oṣkiye*. This correspondence is parallel to the type TchB *kälymiye* : TchA *kälyme* (with TchB nom.sg. *-iye*, obl.sg. *-i*, nom.pl. *-iñ*, obl.pl. *-iṃ*; TchA

[222] Kim (2018: 67-8) reconstructs both the *okso*-type and the *arṣāklo*-types as **ay*-stems in Proto-Tocharian, with a subsequent reduction of posttonic **ay* > **a* in Tocharian B. The same reduction would have also occurred in Tocharian B adjectives with pl.f. *-^{y}ana*, which, according to Kim, would go back to PTch **-^{y}ayna*. However, the reconstruction of an **ay*-stem for the Proto-Tocharian paradigm of the feminine adjectives is totally unfounded (see §4.3.3). On the alleged reduction of **ay* > **a* in Pre-Tocharian B, see below.

[223] Winter argues that we must posit **pokiye* and not **poko* as the nom.sg. of obl.sg. TchB *pokai*. If so, this word would have been a member of the *ymiye*-type and TchA *poke* would regularly match TchB **pokiye*. Cf. also the irregular paradigm of TchB *paiyye* 'foot' (nom.obl.sg. *paiyye*, du. *pai-ne*, nom.pl. *pai-ñ*, obl.pl. *pai-ṃ*), which is matched by TchA *pe* 'id.' (du. *pe-ṃ*, nom.pl. *pe-ñ**, obl.pl. *pe-s*, see Kim 2018: 80 with references).

[224] Jasanoff (2018) reconstructs an *i*-stem Pre-Proto-Tocharian **ēg^{wh}-oi-* as the antecedent of TchB *yokai* (obl.), A *yoke*.

[225] One may wonder whether PTch **swañcå/a-* (obl.) has been resuffixed in **swañcå/a-ññV* in Pre-Tocharian A, with the following development: **swañcå/a-ññV* > **swañcå/a^{i}ññV* > **swañceñə* > TchA *swāñceṃ*. Cf. also Hilmarsson (1987b).

nom.obl.sg. *-e*, nom.pl. *-eñ*, obl.pl. *-eṃ*), where TchB *-iye* /-əye/ phonologically corresponds to TchA *-e*.

The historical analysis of the *ymiye*-type is debated, also because its members are not attested in the archaic period of Tocharian B (with the exception of *ymiye*), and their paradigm seems to be nothing but a hybrid combination of the *okso-* and the *kälymiye*-type. Recently, Peyrot (2012) reconsidered his previous opinion on the secondary development of the *ymiye*-type (Peyrot 2008: 105-6), because the existence of this inflectional class in Proto-Tocharian would be necessary to explain the acquisition of the ending *-iye* by the *okso*-type.

To sum up, the Tocharian B *okso*-type (*ai*-stems) and *arṣāklo*-type (*a*-stems) are matched in Tocharian A by an inflectional class with zero ending in the singular and plural nom. *-āñ*, obl. *-ās*.[226] Two scenarios can therefore be outlined: (1) Proto-Tocharian had both **ay*- and **a*-stems and Tocharian B preserves this situation unaltered; (2) Proto-Tocharian had only **a*-stems and Tocharian B has developed the *ai*-stems later.

Three pieces of evidence can be adduced in order to substantiate the second hypothesis. First, in the Tocharian A counterpart of Tocharian B *okso-* and *arṣāklo*-types we do not find any certain or systematic counterpart of TchB *-ai*. This may imply that there was no *okso*-like class in Proto-Tocharian, where **-ay* did not serve as an oblique (see above). Second, in the feminine inflection of the adjectives, the obl.sg.f. TchB *-ai* consistently matches with the gen.sg.f. TchA *-e*, and not with the obl.sg.f. *-āṃ*; as we will see, the latter ending should be reconstructed as a Pre-Tocharian A innovation, since some adjectival classes point to the reconstruction of an unmarked singular ending **-a* for both the nominative and the oblique of the Proto-Tocharian feminine paradigm (see §4.3.3). Third, some other noun types that have TchB *-ai* as the oblique singular are not match by *-e* in any case form of Tocharian A (cf. e.g. the *wertsiya*-type §3.7.3, and the inflection of the *nomina agentis* of the *aknātsa*-type). It follows that Proto-Tocharian must have had only one inflectional type, and that the origin of the obl.sg. *-ai* and the *ai*-stems (i.e. the *okso*-type) is to be sought in a Pre-Tocharian B period (see also the next paragraph).

Now, since Tocharian A nouns matching Tocharian B *okso-* and *arṣāklo*-types have a plural paradigm *-āñ*| *-ās*, we need to understand whether the vowel stem TchA *-ā-* < PTch **-a-* is to be interpreted as an innovation or an archaism. As a matter of fact, *-āñ*| *-ās* is a common plural set of Tocharian A, so one might think that its spread to this type is secondary. Furthermore, once we have understood that the obl.sg. **-ay* should be interpreted as a Tocharian B innovation, the next task is to envision what the oblique singular in Proto-Tocharian was. I agree with Peyrot (2012) that just two endings can be postulated: either PTch **-a* (cf. TchA *ā*-stems) or PTch **-å* (cf. TchB nom.sg. *-o*). The Tocharian A zero-marked singular is ambiguous, since it could go back to both these

[226] The Tocharian B *ymiye-* and *kälymiye*-types corresponds to a Tocharian A inflectional class with a singular ending TchA *-e* and a plural paradigm nom. TchA *-eñ*, obl. TchA *-es* (Peyrot 2012: 210f.). If the inflection of the *ymiye*-type is old, Tocharian A *-e* can correspond to both nom.sg. TchB *-iye* and TchB *-ai*(-).

Proto-Tocharian endings. However, only the first would have yielded -*ā*- in the plural. Therefore, it is more economic to assume that both *okso*- and *arṣāklo*-types were **a*-stems in Proto-Tocharian and that Tocharian A has preserved the original state of affairs.

Once we have reconstructed that the common proto-type inflected as an **a*-stem in Proto-Tocharian, we need to understand how these **a*-stems came about as the outcome of both *(*e*)h_2- and **ōn*-stems. In what follows, I will deal with this issue, which is very tricky. As a matter of fact, I have to admit that some of my developments and reconstructions are hypothetical and, sometimes, speculative, being based on intermediate reconstructed stages.

As noticed above, at least two PIE stems are continued in both *okso*- and *arṣāklo*-types, i.e. the PIE **ōn*- and the *(*e*)h_2-stems: we have therefore to clarify how these types developed in Proto-Tocharian.

Starting with the nasal inflection, it is usually assumed to have evolved as follows (Hajnal 2005: 238; Hilmarsson 1989: 83; Pinault 2008: 483f.; Hartmann 2013: 418-9; Fellner 2014b: 63): nom.sg. **-ōn* > **-å*, acc.sg. **-ōn-m* > obl.sg. **-an*, nom.pl. **-ōn-es* > **-añə*, obl.pl. **-ōn-ns* > obl.pl. **-ans*.[227] The final nasal in the oblique singular, which, etymologically, was part of the stem, has probably been lost already in a Proto-Tocharian phase. A semantic reason is behind this irregular change. Indeed, the ending PTch **-n* (> TchAB *-ṃ* /-n/) started to become a special marker of [+ human] and [+ male] entities already in Proto-Tocharian, and since there are no nouns sharing these semantic properties in the proto-type of both *okso*- and *arṣāklo*-types, they simply lost final **-n* in the oblique for

[227] Actually, there is still some hesitation in the Tocharian development of PIE **-ō*- in non-final position. The *communis opinio* is that **-ō*- gives PTch **-a*-. However, the oft-cited PIE **dʰoHneh*$_2$ 'grain' > **dʰōnā* > TchB *tāno* is better explained as a loanword from Iranian (see Peyrot 2018: 257f. and further §3.7.1.2). TchB *krāmär* 'weight, heaviness' (cf. TchA *krāmärts*, B *kramartse* 'heavy') need not to be the outcome of PIE **gʷróh*$_2$*-mr* (as per e.g. Ringe 1996: 8; Pinault 2008: 424), since internal -*ā*- /-á-/ can regularly reflect a vocalised laryngeal (Hilmarsson 1996: 174-5; DTB: 230-1). Also, TchB *āntse*, A *es* 'shoulder' is usually compared with Gk. ὦμος 'id.' (cf. e.g. Ringe 1996: 7; Pinault 2017b: 135), as both reflecting a lengthened grade PIE **ōmso*-. However, other hypotheses have been formulated to account for the vocalism of both Tocharian and Greek (cf. already GEW: II, 1148 and further Hilmarsson 1989: 127-8; Hackstein 2002: 190f.; Kim 2018: 81 fn. 205; the reconstruction of PIE **h*$_2$*ems*-is based on Tocharian, cf. Kloekhorst 2008: 178). There are, however, other examples that may prove an evolution PIE **-ō*- > PTch **-a*-. The collective suffix PIE **-ōr* always surfaces as *-ar* in both Tocharian languages, as in TchA *ytār*, B *ytār-ye* 'road' < PIE **hₓitōr* (cf. §3.6.1.2), TchA *ymār* 'quickly' < PIE **hₓimōr* (Van Windekens 1976: 592), PTch **wəsar*- 'spring' (cf. TchB *ysāre* 'wheat', A *wsār* 'grain') < **u̯esōr* (Peyrot 2018: 251f.; Pinault 2017b: 131). Theoretically, TchB *aknātsa*, A *āknats* 'foolish' may reflect either PIE **n̥-ǵneh*$_3$*-ti*- or a zero grade **n̥-ǵnh*$_3$*-ti*-. However, cognate formations from other Indo-European languages point to the former form (cf. Gk. ἄγνωτος 'unknown', Lat. *ignōtus* 'ignorant; unknown', Ved. *ájñāta*- 'unknown' and further Gk. ἀγνώς 'unknown; ignorant'; but Goth. *unkunþs* 'unknown' < **n̥-ǵnh*$_3$*-t*-; see Pinault 2012: 187f. and Hackstein 2012: 156f.). Therefore, I still work with PIE **-ō*- > PTch **-a*- (cf. Pinault 2017b: 144).

morpho-semantic reasons (Hilmarsson 1987: 46). Accordingly, PIE *$\bar{o}n$-stems became PTch *a-stems.

On the other hand, the phonological development of the non-ablauting PIE *eh_2-stems is reconstructed as follows (cf. Pinault 1989: 67f.; Hajnal 2005; Fellner 2014): nom.sg. *-eh_2 > *-$å$, acc.sg. *-eh_2-m > obl.sg. *-$å$, nom.pl. *-eh_2-es > *-$å$, acc.pl. *-eh_2-ns > obl.pl. *-$åns$ (?). At this point, two hypotheses are possible: either this PTch *$å$-stem remained as such until the dissolution of Proto-Tocharian, or it developed an obl.sg. *-a and consequently became an *a-stem prior to when Tocharian A and B split off from Proto-Tocharian. Accepting either of these two theories implies different scenarios.

If the former is the case, it follows that in Tocharian A an original PTch *$å$-stem (> TchA a-stem) has been influenced by the PTch *a-stem (> TchA $ā$-stem). A possible reason behind this supposed analogical change is that the PTch *$å$-stem and the PTch *$æ$-stem would have merged phonologically (see Peyrot 2012: 214 for an account of this supposed merger). There are, however, other problems to be considered.

It is generally assumed that the conflation between the Proto-Tocharian outcomes of the PIE *$ōn$- and the *$(e)h_2$-stems has been caused by the homophonous nominative singular PTch *-$å$:[228]

> "The reason for the wide-spread merger of ā- and ōn-stems in Tocharian is the identical outcome of *-ā and *-ōn in the nom. sg." (Hilmarsson 1986: 18).
> "Older feminine *-$ā$-stems have joined this class [i.e. nasal stems] due to the coincidence of the nom. sg. B -o" (Pinault 2017: 1339).

Although formal identity of the nom.sg. forms is reconstructable (cf., for instance, TchB *kantwo* 'tongue' < PIE *$dn̥ǵ^hu̯eh_2$- and TchB *okso* 'ox' < PIE *$uksōn$) and this is certainly an important case form, I think that additional homophonous case forms can be reconstructed in order to historically account for the merger of these stems (see below).

Thus, it is time to test the second hypothesis, i.e. these types were *a-stems already in Proto-Tocharian. Indeed, it can be claimed that also the PIE *$(e)h_2$-stems developed into a-stems in Proto-Tocharian, and that Tocharian A has maintained the original situation. Following this line of argument, we could reconstruct the following inflection for the primary cases of Proto-Tocharian: nom.sg. *-$å$, obl.sg. *-a, nom.pl. *-$a(ñə)$, obl.pl. *-ans. This paradigm strongly resembles the Tocharian B *kantwo*-type, where I have explained the contrast nom.sg. -o vs. obl.sg. -a of Tocharian B as mirroring an ablauting paradigm with PIE strong stem *-eh_2 > *-$ā$ vs. weak stem *-h_2- > *-$ă$ (§3.7.1.3). One can therefore hypothesise that from this type the obl.sg. *-a spread also to the Proto-Tocharian outcome of the PIE *eh_2-stems and that the *a-reflexes in the common proto-type of both *okso*- and *arṣāklo*-types did not develop from *eh_2 by sound law.

[228] Cf. also Jasanoff (2018: 77): "The identity of the nom. sg. forms [...] was the basis for the amalgamation of the two types". However, Jasanoff thinks that the coalescence was between the outcome of "amphikinetic *n*-stems" and "amphikinetic *i*-stems".

However, another possibility can be envisaged. The Leiden School (see Beekes 1985: 20-36, 2011: 199-201) reconstructs the Proto-Indo-European *(*e*)h_2-stems with an original ablauting suffix *-*éh*$_2$/-h_2. If we were prone to accept that Tocharian inherited and generalised this hysterodynamic ablaut throughout the inflection of the "*ā*-stems", then the merger with the **ōn*-stems would be perfectly understandable (also on the condition that *-*ōn-m* > PTch *-*a*). Accordingly, the nom. sg. *-*å* can be historically interpreted as the outcome of the full grade PIE *-*éh*$_2$, and the obl. sg. *-*a* as the outcome of the zero grade PIE *-h_2-. It follows that the only form of the paradigm where the two types differed was the nominative plural, which would have been *-*a* < *-h_2-*es* for the *(*e*)h_2-stems and *-*añə* < *-*ōn-es* for the **ōn*-stems. I tentatively reconstruct the development of the paradigms ancestral to the *okso*- and *arṣāklo*-types as follows:[229]

Table III.17. Evolution of the **h*$_2$-stems and the **ōn*-stems from PIE to PTch

*h_2-stems	STAGE I	STAGE II	STAGE III	STAGE IV
nom. sg.	*-*eh*$_2$	> *-*å*	> *-*å*	> *-*å*
acc. sg.	*-*eh*$_2$-*m*	> *-*å*(*m*)	>> *-*a*	> *-*a*
nom. pl.	*-(*e*)h_2-*es*	> *-*a*(*s*)	> *-*a*	>> *-*añə*
acc. pl.	*-(*e*)h_2-*ns*	> *-*ans*	> *-*ans*	> *-*ans*
*ōn-stems	STAGE I	STAGE II	STAGE III	STAGE IV
nom. sg.	*-*ōn*	>*-*å*	> *-*å*	> *-*å*
acc. sg.	*-*ōn-m*	> *-*an*	>> *-*a*	> *-*a*
nom. pl.	*-*ōn-es*	> *-*añə*	> *-*añə*	> *-*añə*
acc. pl.	*-*ōn-ns*	> *-*ans*	> *-*ans*	> *-*ans*

STAGE I: proto-inflection of the *h_2- and the **ōn*-stems;
STAGE II: regular evolution of their inflection;
STAGE III: generalisation of the weak stem *-h_2- > *-*a* in the oblique singular of the h_2-stems, and loss of final *-*n* in the *ōn*-stems for semantic reasons;
STAGE IV: merger of the two paradigms and generalisation of the nom. pl. *-*ñə*.

The reconstructed paradigm outlined above evolved without relevant modifications in Tocharian A. The original contrast between nom.sg. *-*å*, obl.sg. *-*a* disappeared when these vowels were regularly apocopated in Pre-Tocharian A. On the other hand, the **a*-vocalism of the stem was maintained in the plural, nom. PTch *-*añə* > TchA -*āñ*, obl. PTch *-*ans* > TchA -*ās*,[230] and in derived forms (e.g. *oṅkälmā-ṣi* 'belonging to an elephant').

[229] It is also possible that the acc.pl. of the **ōn*-stems first developed *-*anəns* and it was then reduced to *-*ans* by haplology. If so, the obl.pl. of the **h*$_2$-stems may have also been reanalysed as *-*anəns*, with the subsequent spread of the nom.pl. *-*añə*.

[230] On the evolution of the Proto-Tocharian cluster *-*ns* in word-final position, see Pinault (2008: 458) and §4.3.4.1.

3.7.2.5. From Proto-Tocharian to Archaic Tocharian B: Origin of the obl.sg. TchB *-ai* and *ai*-stems

Among the research questions outlined, we have dealt with the reconstruction of the Proto-Tocharian paradigm of these inflectional types, and tentatively described the morpho-phonological conditions that may have caused the merger between the **ōn*-stems and the **(e)h₂*-stems. We remain with the source of the obl.sg. TchB *-ai* and the origin of the contrast between *ai*- and *a*-stems in Tocharian B. These two problems are related.

Indeed, the connection between the nouns with *ai*-stems (i.e. the *okso*-type) and nouns with *a*-stems (i.e. the *arṣāklo*-type) warrants a more extensive discussion of the origin of the obl.sg. *-ai*, which has been very controversial since the beginning of the study of Tocharian nominal morphology. Let us start with the proposal by Winter (1989: 305f.), who has been the first to identify the two inflectional types under discussion. He reconstructs a sound law PTch **-an* > TchB *-ai*, according to which the nasal vocalised in Tocharian B, at least in morpheme-final position. He attributes the difference between obl.pl. *oksaiṃ* and *arṣāklaṃ* to a change from **oksan#* to **oksai#,* with restoration of the nasal in e.g. the obl.pl.: **oksan* > **oksai* >> *oksai-ṃ*. This sound law is accepted by some scholars (e.g. Hajnal 2005: 237f.). Hilmarsson (1989: 82f.) pointed out that this development was conditioned by the accent as follows: accented **-án-* became TchB *-ai-*, while unaccented **-an-* yielded TchB *-an*. I see two problems with this hypothesis. First, the obl.sg. of the *okso*-type never has final accent (cf. *pyāpyai* /pyápyay/; Peyrot 2012: 184). Second, I cannot find any phonetic reason for the change **n* > **y*.

Another theory holds that TchB *-ai* may directly derive from Proto-Indo-European and that the source of this ending would be sought in the PIE amphidynamic *i*-stems. Thus, acc.sg. PIE **-oi̯-m̥* > obl.sg. PTch **-œy* > TchB *-ai* (Van Windekens 1979: 16 and 177; Marggraf 1975; Čop 1975: 11). A recent contribution by Jasanoff (2018) brought this theory back to the attention of the scholars. He claims that the amalgamation of the PIE **ōn*-stems with the PIE **ōi*-stems (with the generalisation of the allomorph **-ōi̯-* throughout the paradigm) was caused by an alleged homophony of their nominative singular, both reconstructed as yielding Pre-PTch **-ō* > PTch **-å*. Jasanoff further adds that this merger was favoured by the "immense productivity of the amphikinetic *i*-declension in Tocharian", but at the same time he does not clarify what nouns he refers to. Indeed, it is generally assumed that the amphidynamic *i*-inflection (if inherited in Tocharian) was too small a category to account for the spread of the obl.sg. TchB *-ai* (Hilmarsson 1987; Pinault 2008: 483). Furthermore, there are no certain clues in support of a lengthened grade **-ōi̯-m̥* > PTch **-ay* (Jasanoff 2018: 76). As Pinault (2008: 483) rightly objects, if Tocharian inherited this small class, it could not account for the proliferation of the obl.sg. *-ai*. In addition, if **ōn-* and **ōi*-stems really merged in Pre-Proto-Tocharian under the identity of their nominative singular, I would have expected that the new conflated paradigm was based on the most productive stem-type, which, in the case under discussion, is not the **ōi*-stem. As a consequence, it does not seem possible to derive TchB *-ai* (exclusively?) from the PIE *i*-stems.

The two last theories that need to be commented on are those of Pinault (2008) and Peyrot (2012). Their results are greatly at odds, since Pinault argues that the origin of TchB *-ai* should be sought in the **-ōn*-stems, while Peyrot sees it in the **(e)h₂*-stems. Rather than taking sides in favour of one or the other, what I would like to show is that both theories are correct, since they offer complementary explanations of the origin and the spread of TchB *-ai*. We start the discussion with Peyrot's hypothesis.[231]

Peyrot's theory implies that the ending TchB *-ai* is of Proto-Indo-European origin: it would be the outcome of PIE loc.sg. **-(e)h₂-i* and dat.sg. **-(e)h₂-ei*, reanalysed as the oblique in a Pre-Tocharian B stage. In the past decades, Pedersen (1941: 43), Lane (1976: 145-6), Klingenschmitt (1975: 153, 1994: 319-20), and Kim (2009: 84 fn. 29) have proposed or supported the same Proto-Indo-European origin, but they only based their analyses on the formal level of this equation. Instead, Peyrot has made this derivation clearer and more precise through closer inner-Tocharian correspondences. Indeed, he claims that the gen.sg. TchA *-e* and the obl.sg. TchB *-ai* must be analysed as the outcome of the same PIE form, namely the dative-locative, and that this marker served as a genitive-dative in Proto-Tocharian. This claim receives a strong confirmation by a close comparison between Tocharian A and B.

The evidence found by Peyrot can be summarised as follows: (1) some of the inflectional classes with obl.sg. TchB *-ai* have the respective Tocharian A matching nouns with gen.sg. *-e* (e.g. obl.sg. TchB *aśiyai* : gen.sg. TchA *aśśe*, from TchB *aśiya*, A *aśi* 'nun'); (2) Tocharian B lacks any gen.sg.f. form in the adjectival inflection, while Tocharian A consistently attests a gen.sg.f. *-e* (e.g. obl.sg.f. TchB *klyomñai* : gen.sg.f. TchA *klyomine* from TchB *klyomo*, A *klyom* 'noble'); (3) several adverbs end synchronically in TchB *-ai*, A *-e* (e.g. TchB *amāskai* 'with difficulty', TchB *anaiśai* 'carefully', TchA *kātse* 'close', TchA *pre* 'outside' etc.). All these correspondences lead to the reconstruction of TchB *-(y)ai*, TchA *-(y)e* < PTch **-(y)ay* < PIE **-(i̯)(e)h₂-ei̯* or/and **-(i̯)(e)h₂-i* (cf. also Kim 2018: 94). I thus reconstruct the singular paradigm of the Pre-Tocharian B ancestor of both the *okso-* and *arṣāklo*-types as follows: nom.sg. PTch **-å* > Pre-TchB **-o*; acc.sg. PTch **-a* >> Pre-TchB **-a-y*. This **-ay* may still have served as a genitive-dative in Proto-Tocharian. When Tocharian B reanalysed it as the oblique, the gen.sg. was marked with the nasal genitive **-nse*, which was attached to the new obl.sg. **-ay*, thus **-ay-nse* > TchB *-aintse*. Unfortunately, there is hesitation in the genitive singular of Tocharian A, because *ā*-stems matching TchB *okso-* and *arṣāklo*-types usually do not attest genitive singular forms. A direct correspondence between gen.sg. TchA *-e* : obl.sg. TchB *-ai* can be observed in gen.sg. TchA *oṅkälme* : obl.sg. TchB *oṅkolmai* from TchA *oṅkaläm*, B *oṅkolmo* 'elephant' (Pinault 2009a),

[231] For yet another proposal, see Hackstein (2012: 161), who seems to equate the TchB obl.voc.sg. *-ai* found in the formation in TchB *-eñca* with the vocative of the type γύναι. He concludes that the homophony between the vocative and the oblique singular is nothing but the preservation of an older state of affairs.

which might be used for reconstructing a gen.sg. *-*ay* for Proto-Tocharian. However, the isolation of this genitive form requires caution.[232]

Although Peyrot's analysis can explain the origin of most of the obl.sg. -*ai*, I believe it can hardly account for the origin and the spread of the Tocharian B *ai*-stems (i.e. the *okso*-type). We should therefore wonder whether other sources of TchB -*ai*- can be identified. At this point, Winter and Hilmarssons' theory on the difference between *okso*- and *arṣāklo*-types becomes relevant again. We have already seen that they explain these two classes by means of different outcomes of PTch *-*an*- conditioned by the accent (Marggraf 1975): considering the oblique plural, on the one hand, the substantives of the *okso*-type were disyllabic and stressed on the last syllable (e.g. *oksáiṃ*), while, on the other hand, the substantives of the *arṣāklo*-type were trisyllabic and stressed on the penultimate syllable (e.g. *arṣā́klaṃ*).[233] As a result, in the *okso*-type the accent would have caused the diphthongisation: the two inflectional types would have the same origin, but the *arṣāklo*-type would preserve an older state of affairs.

Recently, Kim (2007: 19f., 2018: 44-46, 67-8) and Peyrot (2012: 184f.) have put this development into question, claiming that the correspondence is to be interpreted the other way around. They argue that both *okso*- and *arṣāklo*-types were originally **ay*-stems in a prehistoric stage of Tocharian B. The diphthong has been maintained in accented position (i.e. in the *okso*-type), but monophthongised in posttonic position (i.e. in the *arṣāklo*-type). That is to say, after the break-down of Proto-Tocharian, the **a*-stems first became **ay*-stems, continued as the TchB *okso*-type, and then a part of these new **ay*-stems turned into **a*-stems, becoming the TchB *arṣāklo*-type. The sound law underlying these developments can be schematised as follows (Peyrot 2012: 189): * ′*-ayn* > * ′*-an*. However, there is no strong evidence that may testify this sound law, except for the alleged reduction of -*oy*- to -*o*- in TchB impf. and opt. forms of the type *tākoṃ* 'may they be' < **tákoy-ən* (Kim 2007: 19-20 fn. 32; Peyrot 2008: 142-4). A general fact in favour of Kim and Peyrot's hypothesis is that stressed syllables are typologically better maintained. Although this is certainly true, it does not mean that they cannot undergo modifications but simply that they are louder and less apt to be dropped. Indeed, diphthongisation of stressed vowels can be found in the historical development of many languages. A good example in this sense can be sought in the phonetic evolution from Latin to Romance languages, where cases of diphthongisation of stressed vowels are frequent (e.g. Lat. *pĕdem* > It. *piede*; Lat. *pŏrtum* > Sp. *puerto*; Lat. *nŏvum* > OFr. *nuef*, etc.). Furthermore, neither Kim, nor Peyrot clarify how these alleged **ay*-stems would have come about in

[232] A further comparable item may be TchA *kātse* 'near, close', which could be related to TchA *kāts* 'belly, womb', B *kātso* 'id.', a member of the *kantwo*-type. TchA *kātse* is traced back to PTch **katsay* by Pinault (1991: 186) and Hilmarsson (1996: 112). See further Peyrot (2012: 207). The gen.sg. TchA *käntwis* from *käntu* 'tongue' must be secondary. On the form *kätwes* (A300 b3), cf. Hilmarsson (1996: 114), Malzahn (2010: 553), and §3.7.1.2 fn. 156.

[233] Cf. Winter (1987: 305f.).

Pre-Tocharian B (or Proto-Tocharian); I think that the generalisation of the new obl.sg. *-ai* is not sufficient.

I therefore believe that the classical interpretation as formulated by Winter has the advantage of leaving a way out in this intricate development.

With the reconstruction of *okso-* and *arṣāklo*-types as both coming from Proto-Tocharian **a*-stems, introducing the theory of Pinault (2008) on the origin of TchB *-ai* becomes relevant. Pinault argues that the source of TchB *-ai* should be sought in the nominative plural of the **ōn*-stems, PIE **-ōn-es* > PTch **-añə*. He claims that in final syllables an accented sequence PTch **-áñə#* would have regularly become **-áyə*. This sound law could be more clearly discerned in two isolated forms (Carling 2003: 92-3): (1) nom.pl. TchB *śrāy* 'elders', whose obl.pl. *śrānäṃ* /śránən/ clearly speaks in favour of the reconstruction of a Proto-Tocharian nominative plural **śrañə*; (2) TchB *ylai-ñäkte* 'Indra' < **ylañ-ñəkte* < **ylan-ñəkte* (cf. TchA *wlāṃ-ñkät*). According to Pinault, in an unattested phase of Tocharian B, all nouns of the *okso*-type spontaneously developed a nominative plural **oksay*, and from this protoform the element **-ay* was extracted and then generalised as the oblique singular of some other inflectional classes. Soon after, the expected nom.pl. **oksay* was replaced by TchB *oksaiñ*, on the model of *arṣāklañ*.

In broad terms, I agree with the sound law suggested by Pinault, although my proposal differs in some details. First, the diphthong that arose in the nominative plural can hardly be the source of the oblique singular (see the criticism by Peyrot 2012: 191). Second, if nom.pl. **-áñə* really evolved into **-áy*, I would expect to find more direct evidence of this ending.

Still, I believe Pinault's sound law can be slightly modified as follows: PIE **-ōn-es* > PTch **-áñə#* > Pre-TchB > **-á^{y}ñə#* > TchB *-áiñ*, i.e. in stressed syllables a palatal nasal transferred the palatalisation to the preceding vowel, which thus became a diphthong. From a phonetic perspective, this development can be explained as a case of anticipated palatal pronunciation (assimilation) of a vowel in front of a following palatal consonant. It follows that, if a noun of the *okso*-type had an obl.sg. Pre-TchB **-ay* as the outcome of the gen.(-dat.)sg. PTch **-ay* and a nom.pl. Pre-TchB **-ayñə* as the outcome of the sound law just discussed, it may have generalised **-ay-* as the basic stem of all other cases and derivatives, which were equally stressed on the last syllable.[234] A schematic summary of the final development of *okso-* and *arṣāklo*-types is the following:[235]

[234] One may object to Pinault's sound law that also the residual *kantwo*-type could have had a nom.pl. **-áñə* in Proto-Tocharian. However, this inflectional type shows many differences with respect to the *okso*-type. From a diachronic point of view, there are, apparently, no historical *n*-stems continued in the *kantwo*-type and the nom.pl. marker *-ñ* may have been added at a later stage. From a synchronic point of view, it seems to have a clear contrast between stressed nom.pl. *-āñ* and unstressed obl.pl. *-aṃ*, and an obl.sg. *-a* (vs. *-ai* of the *okso*-type). As a consequence, even if PTch **-áñə#* became Pre-TchB **-á^{y}ñə#* also in this type, then analogical levelling from the rest of the paradigm could have easily changed it to **-áñə* again.

[235] As concerns *śray* 'elders' (attested only in classical and late texts), I would suggest the following development: **śráñə* > **śra^{y}ñə* > **śra^{y}nə* > *śrāy*. The reason why this development could have taken

Table III.18. Evolution of *okso-* and *arṣāklo*-types from Pre-Tocharian B to Archaic Tocharian B

okso-type	PRE-TCHB		ARCH. TCHB
nom. sg.	*′-*o*	> *′-*o*	> ′-*o*
obl. sg.	*′-*ay*	> *′-*ay*	> ′-*ai*
nom. pl.	*-*áñə*	> *-*á^{y}ñə*	> -*áiñ*(*ə*)
obl. pl.	*-*án*	> *-*án*	>> *-*áin*

arāklo-type	PRE-TCHB	ARCH. TCHB
nom. sg.	*′-*o*	> *′-*o*
obl. sg.	*′-*ay*	> *′-*ai*
nom. pl.	*′-*añə*	> *′-*añ*
obl. pl.	*′-*an*	> *′-*an*

A further indication of the phonetic change *-*áñ* > *-*á^{y}ñ* may be warranted by the fact that, out of the *kantwo*-type, final -*āñ* /-áñ(ə)/ in extremely rare in Tocharian B.[236] Furthermore, this modified version of Pinault's sound law PTch *-*áñə#* > Pre-TchB *-*á^{y}ñə#* > TchB -*áiñ* partially resemblances to similar processes of assimilation in late and colloquial texts. All these developments involve assimilation of the palatal pronunciation of a palatal consonant over a preceding (or following) vowel. Examples are: (1) *a* (and /ə/) > *ai* (Peyrot 2008: 54-5), e.g. *ravaiñ̈ñe* (Gsu2 1) for *rapañ̈ñe* /rapə́ñ̈ñe/ 'pertaining to the last month of the year', *läksaiñe** (IT206 b1) for *läkṣäñ̈ñe* /ləkṣə́ñ̈ñe/ 'pertaining to fish', *oṅkolmaiñ̈ñe* (W20 b3) for *oṅkolmañ̈ñe* /onkólmañ̈ñe/ 'pertaining to elephant'; (2) non-accented *ä* /ə/ > *i* /əy/ (Peyrot 2008: 55-7), e.g. *astariñ̈ñe* (B586 4) for *astaräñ̈ñe* /astə́rəñ̈ñe/ 'purity', *miñcuṣka* (B400 a5) for *mäñcuṣka* /məñcuṣka/ 'princess', *bram-ñikte* (e.g. B107 a8-b1) for *brahm-ñäkte* 'god Brahma';[237] (3) the isolated word *āñme* > *āyme* 'soul, self'. Furthermore, a comparable phenomenon occurred in the prehistory of Tocharian B, where the Proto-Tocharian palatalised labials **ṕ* and **ḿ* transferred their palatalisation to a following **ə* causing its colouring to *i* (e.g. TchB *pilko*, A *pälk* 'thought' < PTch **ṕəlkå*; TchB

place is probably twofold: on the one hand, TchB *śray* is an accented monosyllable and the apocope of the final nasal could have happened earlier; on the other hand, dissimilation of the two palatals *ś…ñ* could have taken place.

[236] I found the following forms: (1) TchB *kāñ* (IT9 b1; B45 a2; THT1375.c a5) is a word of unknown meaning and etymology (DTB: 158); (2) TchB *luwāñ* is attested only once in IT395 b2 /// *mā luwāñ śau*///. If not an error for *luwāñ̈ñe* 'pertaining to animal' (as it seems not to be, since it is written with final *ä* and the virāma), this *luwāñ* can be a late nom.pl. of *luwo* 'animal' (regular nom.obl.pl. *lwāsa*, see §3.7.1.2), which has been analogically created after nouns of the *kantwo*-type (both with nom.sg. -*o*, obl.sg. -*a*); (3) on TchB *sāñ* 'skill', see Peyrot (2008: 83 and 170); (4) the hapax legomenon nom.pl. *läkle-lyakāñ* 'seeing suffering' (AS7E a6 [class.]; Sieg 1938: 22), a verbal governing compound of the *rita*-type, is not written as one would expect (cf. Malzahn 2012b: 114 "Widersprüchlich ist der Befund bei der Form B *läkle-lyakāñ* […]"; cf. further *yikne-ritañ*; *yolo-ritañ*; see also Fellner 2018); (5) TchB *yäktāñ* (B351 a6) is a sandhi-variant of *yäktāñm* 'feeble, weak'. Other instances of final -*āñ* are of no value (cf. the verbal forms with 1sg. *ñ*-enclitic, e.g. *krasāñ* in B400 b1 or *nautāñ* in B591 a7; *nervvāñä*/// B591 a3 is to be restored as *nervvāñä*(*ṣṣe*), cf. Peyrot 2013: 323).

[237] There may be a few examples of -*a*- /ə/ > -*i*- /əy/, e.g. in *lykiśke* (B192 b3, class.) for *lykaśke* /ĺkə́śke/ 'small, little, fine' (cf. Kim 2018: 53; Hilmarsson 1989: 85; Pinault 2011: 182 fn. 41). On TchB *ñaś* ~ *ñiś* 'I, me', cf. Peyrot (2008: 56) and now Malzahn (2017).

mit 'honey' < PTch **ṁətə* < PIE **méd^{h}u-*). All these developments occurred in different chronological stages and they are never the same development. Still, they are all similar and may perhaps form a kind of drift.

3.7.2.6. From Archaic Tocharian B to Late Tocharian B

In his book on variation and change in Tocharian B, Peyrot (2008: 78-84) dealt with variant forms that attest final *-ñ* alternating with final *-ṃ*. He has collected and commented on a large amount of data, which appears however quite inconsistent. Indeed, some cases may offer support for a *-ñ* > *-ṃ* development, while some others do not. He concluded that a sound law *-ñ* > *-ṃ* should be postulated in any case, at least for the late stage of Tocharian B. The main reason why Peyrot dealt with this problem of Tocharian B historical phonology is namely the attestation of variant forms in the nominative plural of Class VI (TchB *-ñ*). Krause and Thomas (TEB §185) have been the first to notice these variants, but they were not able to understand if *-ñ* > *-ṃ* was due to sound change or analogy.

Attestations of a nom.pl. *-ṃ* in place of the expected *-ñ* can also be found in the classes with pl. *-añ*, *-aiñ*, which are also the most frequent classes with nom.pl. *-ñ*.

Table III.19. Variant forms of the nominative plural in nouns with *ai*-stems

TOCHARIAN B STAGE	NOM.PL. FORMS	DOMINANT NOM. PL.
archaic	**ñ-plural (4):** *k$_{u}$ṣaiñä* (B275 b1, verse); *nauntaiñä* (B275 a3, verse); *klyotaiñä* (AS9B b7, prose); *pyāppyaiñ* (B275 a2, verse)[238]	*-aiñ*
archaic - classical	**ñ-plural (2):** *kotaiñ* (AS7H b4, verse) *pokaiyñ*(*o*) (B214 b3, verse)	*-aiñ*
classical	**ñ-plural (1):** *kaumaiño* (B45 b7, verse); **n-plural (14):** *oksaiṃ* (AS15B b3); *koraiṃ* (B577 b2); *nauntai*(*ṃ*) (AS17J b1), *nauntaino* (AS16.4.1 b5); *parśaiṃ* (AS16.1 b3, AS17G b6); *pyapyaiṃ* (AS8C b6; IT14 b2; AS6D a3); *swañcaiṃ* (IT107 a2, NS37 a1); *ṣitaiṃ*[239] (IT1094 b2); *tsaktsaiṃ* (AS16.8 a5?);[240] **Ø-plural (1?):** *swañcai* (THT1455 a3, frgm.)	*-aiṃ*

[238] Cf. also *nauntainä* in B394 b3. I have not included in this list the hapax legomenon TchB *kompaino* (B588 a1) of uncertain meaning (DTB: 216; Thomas 1997: 100). Malzahn (2012a: 62) interpreted it as a nom.pl. with *o*-mobile. If this interpretation is correct, then TchB *kampaino* should be considered as a nom.pl. in *-ain* from an archaic text (Hilmarsson 1996: 166).

[239] On TchB *ṣito* 'messenger', see CETOM (s.v. *ṣito*), Ogihara (2013a: 207-8), and Pinault (2017b).

[240] I have omitted *ṣpakaiṃ* 'pills', which is found several times in construction with the gerundive pl.f. *yamaṣṣällona* from *yam-* 'to do', though it seems to be inflected as a nom.pl., i.e. *ṣpakaiṃ yamaṣṣällona* "pills are to be made" (cf. DTB: 729-30).

late	–	*-aiṃ* / *-ai* (?)
colloquial	***n*-plural (4?):** (*o*)*ksaiṃ* (PK Bois B30 a1), *ok*(*s*)*ai*(*ṃ*) (PK Bois B19 a5), *oks*(*aiṃ*) (PK Bois B104 a3); *korraiṃ* (PK LC 11 b4?); **Ø-plural (3?):** (*oks*)*ai* (PK Bois B139 a2), *oksai* (PK reserve B 3.2. a1); *korai* (PK Bois B19 a4)	*-aiṃ* / *-ai*

The situation of the *okso*-type is complex, but clear enough. We systematically find *-aiñ* in archaic texts, *-aiṃ* in classical texts, and *-ai* in colloquial texts. Outside of archaic and archaic-classical texts, the only form with *-aiñ* is TchB *swañcaiñ* (B 108 [late]), which is however used as an oblique plural (Peyrot 2008: 80).

Table III.20. Variant forms of the nominative plural in the *arṣāklo*-type

TOCHARIAN B STAGE	NOM.PL. FORMS	DOMINANT NOM. PL.
archaic	***ñ*-plural (3):** *kercapañ* (B118 b3); *tvāṅkarañ* (AS9A b7); *mokośwañ* (B118 b3)	*-añ*
archaic - classical	***ñ*-plural (1):** *oṅkolmāñ* (NS30 b3)	*-añ*
classical	***ñ*-plural (3):** *mewīyañ*[ä] (IT195 a6); *yerkwantalañ* (IT195 a6); *taunaulykañ*[ä][241] (IT96 b2); ***n*-plural (1):** *arṣāklaṃ* (IT199 b2, damaged)	*-añ* / *-aṃ*
late	–	(?)
colloquial	***n*-plural (3):** *kercca*(*p*)*paṃ* (PK Bois B104 a3?), *kercapaṃ* (PK réserve 1517 B3.1 a4,), *kerccapaṃ* (PK Bois B20 a3?)	*-aṃ*

As far as the *arṣāklo*-type is concerned, the situation is clear. Except for the nom.pl. TchB *arṣāklaṃ* in a classical fragment for which I do not have a clear explanation, we systematically find the plural form *-añ* in archaic, classical, and classical-late texts. The only attestations of a variant *-aṃ* are from colloquial texts. If we consider Tocharian B agent nouns of the *aknātsa*-type, which attest a plural paradigm identical to the one of the *arṣāklo*-type, we find confirmation for this development, since I found nom. pl. *-añ* in several classical texts: *aknātsañ* (B263 a4, [arch.]; SI B 121(2) a2 [class.]; B2 b1 [class.]; B24 b3 [class.]; B31 a7 [class.]; B286 b2 [class.]) vs. *aknātsaṃ* (B23 b7 [class.]), *kauṣentañ* (AS7H a6 [arch. - class.]; AS17J b6 [class.]), *yokäntañ* (B248 a3 [arch. with late form]), *prekṣentaṃ*

[241] Adams (DTB: 295) interprets TchB *tanaulykaṃ* in B48 a5 as a nominative plural: *tanaulykaṃ ramt sektwetse pile ra ptark*(*aso*) "leave the suppurating wound [which you are buzzing around] like flies" (transl. by Adams). On the other hand, Sieg & Siegling (1949: 70-71) translates *tanaulykaṃ* as a regular oblique: "…also like the wound of pus [attracts] flies. Give up the…" (cf. Hannes A. Fellner apud CETOM).

(NS44 b3 [class.]), *kälpaucañ* (NS263 a1 [class.]), *kärsaucañ* (B597 a2 [class.]), *yaṣṣūcañ* (B78 a1 [class.]), *ynūcañ* (AS1A b1 [class.]; B45 a2 [class.]), *kleñcaṃ* (AS6a a2 [class.]), etc.[242]

The data just discussed confirm the sound law proposed by Peyrot but further add that *-aiñ* became *-aiṃ* earlier than *-añ* became *-aṃ*. The motivation that underlies this development is phonetic: the nasal in *-aiñ* lost its palatalisation earlier because it was in the proximity of a palatal (semi)vowel. The causative *pelkiñ* 'for the sake of' > *pelkiṃ* (cf. also *pelykiṃ* in PK DA M 507.7 a6, LC 6 a1; SI B Toch 11 a5; B108 b4; B177 a6) confirms this assumption. Other examples of *-iñ* > *-iṃ* can be found in the nominative plural of the *kälymiye*-type (TEB VI.1.), e.g. TchB *riṃ* 'cities' for *riñ** in THT1311 b6 *k$_u$cesa plkāntär toṃ riṃ no*/// "but how are these cities to be seen/visible" (cf. Malzahn 2010: 716); TchB *kälymiṃ* 'regions, directions' for *kälymiñ** in B108 b6 *śwāra kälymiṃ po prautkar nermi*(*t*)*eṃ* (*p*)*oyśintasa* "The four directions (became) filled up with artificial Buddhas" (cf. Meunier 2013: 156; but see also Peyrot's translation 2008: 133-4 "they [i.e. the beams] filled all four cardinal points with artificial omniscient (Buddhas)"). I found only one example of a nom.pl. in *-iñ* in Tocharian B, namely *kärtse-yamiñ* in B81 b5 (class.).[243] One cannot even rule out the possibility that depalatalisation of *-ñ* > *-n* only occurred in the proximity of a palatal vowel or semivowel, i.e. only before *-ai-* and *-i-*, and that the *arṣāklo*-type extended this new nom.pl. *-n* by analogy.[244]

Another interesting fact that, to my knowledge, has not been properly pointed out so far is that some nouns belonging to the *okso*-type are sometimes inflected as members of the *arṣāklo*-type in classical-late and late texts, and vice versa. Examples include: TchB *klyoto* (nom.pl. *klyotaiñä* AS9B b7 [arch.] and *klyotaiṣṣe** AS2A a5 [class. ~ late], AS3A a5 [class. ~ late] vs. *klyotañ* THT 500-502 b9 [late]), TchB *wrāko** (obl.pl. *wrakaiṃ* in AS17K a3 [class.] vs. *wrākañ̈eṃ* in NS18A a2 [late]), TchB *pānto* (perl.pl. *pantaintsā* in B274b4 [arch.] and *pantaitstse* in AS7K b1 [class.] vs. nom.pl. *pantañ* B108 a6 [late]), TchB *kraṅko* 'chicken' (*kräṅkaiñ̈e* 'stemming from chicken' in W14 a5 [class.], THT1520 a3 [arch.] vs. *kräṅkañe* in AS3A b3 [class. ~ late]), TchB *pyāpyo* 'flower' (gen.sg. *pyapyaintse* IT879 b3 [class.] vs. *pyapyantse* (?) W32 b2 [class.]),[245] and probably TchB *mantālo** '±malice' (*mantālaitstse** 'evil-minded' in IT51 be [class.?] and IT262 a1 [class.?] for expected

[242] Nom.pl. *-aṃ* for regular *-añ* is also found in the *wertsiya*-type (Peyrot 2008: 79-80): e.g. *wertsiyaṃ* in B221 (if a real nominative, as per Peyrot 2008: 79, but cf. also Thomas 1957: 172 who considered it as an oblique); *ploriyaṃ* in B289 a6. The nom.pl. TchB *s$_a$suśkañ* seems to be consistently written as such (e.g. in B25), and the voc.pl. always *s$_a$suśkaṃ* (B81 a1; B198 a5; B1573.a; B108 and probably THT3596 a4). Cf. also voc.pl. *ṣaiyyiśkaṃ*.

[243] The form *sākṣiñ* in B623 a3 is a hapax of uncertain meaning (see DTB: 744 for a suggestion).

[244] Indeed, it should be note that *-ñ* > *-ṃ* in the nominative plural mostly occurred in those classes with obl.sg. *-i* or *-ai*. One may therefore wonder whether this development originated in the *okso*-type and the *kälymiye*-type and then spread to other classes with obl.sg. in *-a-i* (e.g. *arṣāklo*-type, *wertsiya*-type, etc.).

[245] The fragment W32 is very fainted and a reading *pyapyaintse* cannot be excluded.

***mantālatstse*).[246] These variants may prove that there was confusion between the inflection of the *okso*- and *arṣāklo*-type even in the historical phase of (late) Tocharian B.

In addition, if we accept this sound law, then we can explain the irregular plurals *klyotañ* and *pantañ* in the late documents B500-502 and B108 a6 as hypercorrect forms, as already pointed out by Malzahn (2011: 95 fn. 31; cf. also *maiyyañ* in IT96 a5 [class.-late]; perhaps the perl.sg. *klañtsa* for *klaiñtsa* in B330a3 [late] and *wrākaññeṃ* for *wrākaiññeṃ** in NS18A a2 [late]). The data just discussed may be summarised as follows:

Table III.20. Evolution of the nominative plural in *okso*- and *arṣāklo*-type

	ARCHAIC	ARCHAIC-CLASSICAL	CLASSICAL	LATE	COLLOQUIAL
okso-type	*-aiñ*	*-aiñ*	*-aiṃ*	*-aiṃ* (>> *-añ*) / *-ai*	*-ai*
arṣāklo-type	*-añ*	*-añ*	*-añ* / *-aṃ*	*-añ* / *-aṃ*	*-aṃ*

3.7.2.7. Summary

To sum up the results of our investigation, we have seen that *okso*- and *arṣāklo*-types are two closely related inflectional classes in Tocharian B. They have similar case markers, but the former includes *ai*-stems, the latter includes *a*-stems. On the other hand, these Tocharian B classes correspond to only one inflectional type in Tocharian A, which includes *ā*-stems. After having considered several hypotheses to explain this mismatch, we have seen that Tocharian A has maintained the archaic state of affairs, as only one class can be reconstructed for Proto-Tocharian. This proto-type inflected as an **a*-stem. Therefore, I have investigated the split of this proto-type in Tocharian B, commenting on the origin of the *ai*-stems and the obl.sg. *-ai*. If, on the one hand, this ending can be traced back to a dat.sg. *-(*e*)h_2*-ei* and/or to a loc.sg. *-(*e*)h_2*-i*, on the other hand, the spread of *-ai* in both the inflection and the derivation of the *okso*-type has been explained as secondary. It is the outcome of a paradigmatic analogical levelling, which originated not only in the oblique singular, but also in the nominative plural, which evolved by sound change as follows: PTch *-*áñə*# > Pre-TchB *-*áʸñə*# > Archaic TchB *-áiñ*# > Classical TchB *-aiṃ*# > Late-Colloquial TchB *-ai*#. In partial accordance with the scholarly literature, the bulk of both *okso*- and *arṣāklo*-types is to be ultimately traced back to the PIE **ōn*-stems and to the hysterodynamic PIE *(*e*)h_2-stems.

[246] Another case could be TchB *āppo** 'dad'. The nominative singular of this noun is not attested so far, but all scholars agree in reconstructing it with final *-o*. And since it is disyllabic, we would expect it to be a member of the *okso*-type. However, a genitive singular *āppantse* (e.g. in B589 b4) and not **appaintse* is attested. But since this noun is mostly attested in the vocative (cf. B83 a5: *āppa ate yāmtsi päkn*(*ā*)*star-ñ*, 'Daddy, do you intend to give me away?'), one may think that the gen.sg. *āppantse* is actually based on the vocative form. Cf. also the derivative *appakke* 'dear dad', with *-*(k*)*ke* (with its variants, on which see Malzahn 2013: 112-4) forming hypocoristics. On this form and the alleged gen.sg. *pyapyantse*, cf. Hilmarsson (1996: 35).

3.7.3. THE *wertsiya*-TYPE

Tocharian B nouns with nom.sg. *-ʸa*, obl. sg. *-ʸai* and their Tocharian A correspondents

The most noteworthy formal characteristic of the *wertsiya*-type is that its members have a palatalised stem or a palatal stem final. Their inflection for the archaic period of Tocharian B was as follows:

Table III.20. Inflection of the *wertsiya*-type

INFLECTIONAL CLASS	NOM. SG.	OBL. SG.	NOM. PL.	OBL. PL.	STEM
wertsiya-type	*wertsiya-Ø*	*wertsiyai*	*wertsiyañ**	*wertsiyaṃ*	*wertsiya-*

If we compare this inflectional type with other classes examined so far, we can easily recognise that the *wertsiya*-type is halfway between the *aśiya-* and the *arṣāklo*-type: the singular is the same as the former, while the plural is like the latter (apart from the palatalisation).[247] In the history of the studies about Tocharian nominal morphology, the *wertsiya*-type has never received much attention. Even though several studies have referred to nouns from this class, a systematic investigation of their origin and evolution is still missing.

Peyrot (2008: 101, 2012: 189-90) divides this inflectional type into two subclasses: a class of disyllabic words (the so-called *wṣeññа*-type) and another one of trisyllabic words (our *wertsiya*-type). This subdivision is functional to the diachronic analysis of Tocharian B. Indeed, from archaic to classical-late Tocharian B, the nouns of the *wertsiya*-type developed a new nom.sg. in *-o*, analogically taken after the *arṣāklo*-type, with which the *wertsiya*-type shares the following characteristics: (1) number of syllables; (2) stem in *-a-*; (3) case markers, with the exception of the nominative singular.[248] Peyrot (2008: 101) further claimed that the disyllabic nouns of the *wṣeññа*-type could have had variants for the nominative singular, although they are not attested. Later, Peyrot (2012) changed his view, claiming that the *wṣeññа*-type did not develop a nom. sg. form in *-o*, because it consisted of disyllabic nouns.

Although I agree with this modified view, it is for my investigation not needed to split the *wertsiya*-type into two subclasses: this distinction is secondary, and it is not relevant for the reconstruction. Instead, I will analyse this inflectional type from an Indo-European comparative perspective, trying to reconstruct the PIE source from which the nouns of this

[247] Winter (1989) grouped the *arṣāklo*-type and the *wertsiya*-type in a single inflectional class. See Peyrot (2012: 190) for criticism.

[248] The only substantive this explanation cannot account for is TchB *peñiyo* ~ *-ya* 'splendor, beauty', which, according to Peyrot (2008: 100), is attested in a fragmentary archaic text (AS12K b4) in the variant *peñiyo*. However, Peyrot and I now believe that a reading *peñiyā* (archaic form for classical *peñiya*) cannot be excluded, though the line is very fainted.

type come. Therefore, with the single label "*wertsiya*-type", I will refer to both Peyrot's *wertsiya*- and *wṣeññā*-types.

3.7.3.1. Members of the *wertsiya*-type

Only a few nouns can be counted in this class. From a derivational point of view, they are formed by means of various suffixes, and can be presented as follows:

(1) TchB *-lya*, TchA *-lyi*: TchB *emalya*, A *omlyi* 'heat', TchB *kaccalya* 'joy';
(2) TchB *-'eññā*, TchA *-'eṃ*: TchB *weśeññā* (~ *-o*), A *waśeṃ* 'voice', TchB *wṣeññā* 'dwelling place';
(3) TchB *-oññā*: TchB *ścmoññā**, A *śmoññe* 'place';
(4) TchB *-auña*: TchB *katkauña* 'joy', TchB *läk$_u$tsauña* 'light', TchB *wrauña* '?';
(5) TchB *-ya* /-(ə)ya/, TchA *-i*: TchB *atiya**, A *āti* 'grass' (?), TchB *arśakärśa* 'bat', TchB *kremīya* '?', *krorīya** 'horn', TchB *newiya* 'canal', TchB *peñiya*, A *pañi* 'splendor', TchB *poṣiya*, A *poṣi* 'wall, side', TchB *ploriya** a wind instrument, TchB *preściya* 'time, occasion', TchB *śkwarya* 'creeper', TchB *yoñiya*, A *yoñi* 'path, track', TchB *wertsiya*, A *wartsi* 'council, gathering, assembly'.

I will deal with each member of this class. First, I will consider the nouns of the first four groups, while those of group (5), which is also the most productive, will constitute a separate section.

3.7.3.2. Analysis of the suffixed nouns

The derived abstract nouns ending in TchB *-lya*, TchA *-lyi* can be interpreted as substantivised feminine adjectives. A clear example is TchB *emalya*, A *omlyi* 'heat'. From a formal point of view, this abstract noun is the expected feminine form of the adjective TchB *emalle*, A *omäl* 'hot', which does not attest a feminine inflection either in Tocharian A or in B. We can therefore reconstruct for Proto-Tocharian an adjective **æməllæ* (m.), **æməĺĺa* (f.) 'hot', from which the feminine form has been substantivised as an abstract noun, 'hot' → 'the hot one' → 'hotness' (see Pinault 2017a for the etymology of the adjective). The noun TchB *kaccalya** 'joy' (attested twice as a perlative singular in AS16.5 a3 and B520 a3) can be analysed in the same way, by reconstructing an adjective *kaccalle** 'joyful' (gerundive of TchB *katk-* 'to rejoice, be glad', cf. also *ka*(*cca*)*lñ*(*e*)*ne* in NS29 a3).

On the other hand, TchB *wṣeññā* 'dwelling place' and TchB *weśeññā*, A *waśeṃ* 'voice' are abstract nouns from the verbal roots TchB *wəs-* 'to dwell' and from the noun TchB *wek*, A *wak* voice' < PIE **u̯ok$^{\text{w}}$-* (cf. Lat. *vōx*, Skt. *vā́c-*, OAv. *vāxš* [nom.sg.], Gk. **ὄψ*, etc.), respectively. The palatalisation of the stem in these derived forms is problematic. Pinault (2012: 190) assumes that both substantives were originally feminine agent formations in **-ēn-ih$_2$* > **-'æññā*, reanalysed as abstract nouns under the influence of the common abstract suffix TchB *-*(*äñ*)*ñe*. Otherwise, one can assume an old thematic derivative from

which an *ñe*-adjective was built and then substantivised (Kim 2007: 19 fn.30), but then the origin of the palatalised stem would be left unexplained (perhaps the palatalisation comes somehow from the verb; cf. also TchB *aiśeñca* from *ayk-* 'to know', TchB *keṣṣeñca* from *kəs-* 'to extinguish', TchB *ñäṣṣeñca* from *ñəsk-* 'to desire', etc.).

As regards TchB *ścmoññа* 'place', Pinault (2012: 190) reconstructs a secondary derivative in *-ññа* from an action noun **ścəmå* (< **stem-eh*$_2$?), itself derived from the verbal root TchB *stəma-* 'to stand' (see Winter 1962a: 27 for the reconstruction of the root). However, one may reconstruct also a derivative of the preterite stem |ścəma|, thus **ścəma-cæññа* > TchB *ścmoññа* (Peyrot 2010: 72).

From the aforementioned root TchB *katk-* 'to rejoice' we have also TchB *katkauña* 'joy' (older *katkewña*), probably based on an unattested adjective *kātke** 'joyful' or a derived noun PTch **katkœy* (cf. TchA *kācke* 'joy, happiness'; see §3.6.1.2). The suffix *-auña* is merely a feminine variant of the well attested abstract suffix *-auñe* (Pinault 2012: 190).[249] The second noun with the suffix *-auña* is TchB *läk$_u$tsauña* 'light' (older *läk$_u$tsewña*). It is matched in Tocharian A by *lukśone* 'id.' (probably reshaped for **luktsone* after *l$_u$käśnu* 'shining', as per Georges-Jean Pinault apud Malzahn & Fellner 2014: 70 fn.31). The basis of these nouns is the adjective TchB *lak$_u$tse* 'shining' (cf. also the noun TchA *lkäś* 'light').[250] However, the abstract suffix TchA *-one* is usually matched in Tocharian B by *-auñe*. There are two ways to account for this incongruity. One option is that PTch **-awñæ* is the older form and Tocharian A has preserved the archaic situation. Otherwise, one could claim that PTch **-awña* first developed to Pre-TchA **-on* and then was remarked under the influence of TchA *-one*. Nonetheless, the occasional attestation of the feminine variant TchB *-auña* may also be explained by appealing to an analogical influence after the formations in pl. *-auna* (like TchB *krentauna* 'virtue(s)').[251]

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[249] If of Tocharian origin, this suffix can derive from the weak stem of the heteroclitic suffix PIE suffix**-ur*/*n* (see recently Pinault 2011a). As pointed out by Kim (2007), in some Middle Iranian languages we find continuants of a similar suffix, cf. Sogd. *-ōni-*, Khot. *-auña-* / *-oña-* / *-ūña* (see Emmerick apud Emmerick & Skjærvø 1987: 16 and Degener 1989: 160). Since the Iranian suffixes share both formal and semantic similarities with the Tocharian one, it is possible that one language borrowed from the other (Kim assumes that Tocharian borrowed from Iranian).

[250] See Malzahn & Fellner (2015: 71). Apparently, TchA *lkäś* 'light' is a hapax legomenon attested in A249 a2. As Michaël Peyrot (p.c.) pointed out to me, one cannot rule out the possibility that this *lkäś* is misspelled for *l$_u$käś* (cf. TchA *l$_u$käśnu* 'shining' and the variants of *p$_u$kis* ~ *pkis*, the genitive of TchA *puk* 'all, every').

[251] Formally, TchB *wrauña* may belong here. It is a hapax legomenon attested in B28 b4. Most of the Tocharian dictionaries and lexicons (e.g. DTB: 673; Poucha 1955; Thomas 1964) assume that we are dealing with a sort of talking bird. This meaning has been suggested by Sieg & Siegling, who were the first translators of the fragment. The first part of line b4 runs as follows: (*k*)$_u$(*se*) *parśi-ne ksa tuk sū weṣy entwe mäkte ramt wrauña* "Wer immer ihn fragen sollte, genau dasselbe sagte er dann, gleich wie eine Prediger-Krähe (?)" (Sieg & Siegling's translation 1949: 47). The translation of *wrauña* as 'Prediger-Krähe' has rapidly been accepted by most of the scholars and it has been confirmed by Krause (1951a: 199), who suggested an etymological connection with Balto-Slavic, cf. Lith. *várna*

3.7.3.3. Analysis of the nouns in TchB *-iya*, A *-i*

In this section, I will investigate the origin of the productive group of derivatives in TchB *-iya*, A *-i*. As far as the form is concerned, one is tempted to connect the suffix with PIE *$*-ih_2$*, and in what follows I will attempt to prove that this connection is correct. As is well known, however, two different formations in *$*-ih_2$* can be reconstructed for Proto-Indo-European. They are usually named with Indian terms, the *devḗ*-type and the *vr̥kḗ*-type.[252] These two reconstructed formations shared some formal and semantic features, but they also had several differences. It is therefore worth recalling their functions before proceeding further.

As noticed above (§3.5.1.2), the *devḗ*-type inflected proterodynamically, with an unmarked nominative singular. It was used to form feminine nouns from athematic stems, including **i*- and **u*-stems. For this reason, we find continuants of the *devḗ*-suffix in the feminine inflection of both the **nt*-participles and the perfect participles in several Indo-European languages, including Indo-Iranian and Greek. The main functions of the *devḗ*-suffix are (Pinault 2014; Fellner 2014a):[253]

(1) forming possessive endocentric derivatives (e.g. Gk. μέλισσα 'bee' ← 'provided with honey' from μέλι, -τος 'honey; Gk. γλῶσσα 'tongue, language' ← 'provided with a peak' from γλῶχες 'beard of a corn');
(2) deriving oppositional feminine nouns from masculine ones (e.g. Ved. *jánitrī*- 'genitrix' from *jánitar*- 'genitor');
(3) forming verbal and nominal abstracts (e.g. Gk. φύζα 'flight, panic' from φεύγω 'to flee, escape'; Ved. *śacḗ*- 'power' from *śakrá*- 'powerful').

'crow', OCS *vrana*, Russ. *voróna*, etc. Adams (DTB: 673) goes a step further, as he proposes that TchB *wrauña* means 'myna (*Acridotheres tristis*)'. However, there are problems with such a connection from both a phonological and a semantic perspective. First, the Tocharian word cannot be the exact match of the Balto-Slavic forms. Van Windekens (1976: 583) suggested that the Proto-Tocharian outcome of a zero grade *$*u̯r̥n$*- was suffixed by **-auña*, with an evolution **wərn-auña* > TchB *wrauña* after dissimilation of the two nasals. I find this solution very improbable, especially because the suffix *-auña* is not productive and clearly forms abstract nouns. Furthermore, the reconstruction of a root *$*u̯or$*- on the basis of the Balto-Slavic evidence has been dismissed by Kortlandt (1985a: 121) and Derksen (2015: 490f.). They believe that the PIE root **kor*- (Gk. κόραξ 'raven', Lat. *corvus*) was replaced by **wor*- in Balto-Slavic. In addition, as far as I can evaluate, Sieg & Siegling's proposal is not supported by parallel passages (Sieg & Siegling put in fact a question mark after the alleged meaning of *wrauña*). Since we therefore lack any direct evidence for translating TchB *wrauña* properly, I consider the meaning of the word unsettled, just like the question of a possible etymological connection with the proper name TchB *Wrau* attested several times in secular documents.

[252] I agree with Pinault in reconstructing both suffixes for Proto-Indo-European. On the value of the laryngeal for the *vr̥kḗ*-type, see Pinault (2014).

[253] Functions (2) and (3) can be interpreted as an extension of function (1), which is to be considered as the original one.

As the *devī́*-type, also the *vr̥kī́*-type mostly formed feminine nouns, but from both nominal and adjectival thematic stems. A few masculine nouns occurred as well (e.g. Ved. *rathī́*- 'charioteer').[254] Furthermore, it is reconstructed with no ablaut. As already pointed out by Lohmann (1932: 69), the original meaning of the suffix was affiliation ("Zugehörigkeit").[255] Its main functions are (Rau 2007; Fellner 2014a):

(1) forming possessive exocentric derivatives, i.e. "genitival", as they are sometimes also named (OCS *sǫdii* 'judge' ← 'pertaining to the vedict' from *sǫdъ* 'verdict, court'; Ved. *rathī́*- 'charioteer' ← 'pertaining to the chariot' from *rátha*- 'chariot');
(2) deriving oppositional feminine nouns from masculine ones (Ved. *vr̥kī́*- 'she-wolf' from *vŕ̥ka*- 'wolf'; Ved. *arāyī́*- 'evil (female) spirit' from *árāya*- 'evil spirit');
(3) individualising formations (things or entities with the characteristic of the basic form), mostly from thematic adjectives (typically from colour or material terms, e.g. Ved. *kr̥ṣṇī́*- 'night' from *kr̥ṣṇá*- 'black'; ON *reyðr* 'rorqual' from *rauðr* 'red').

Let us now look at the Tocharian nouns of the *wertsiya*-type in light of the semantic patterns and the derivational mechanisms of the two suffixes *-*ih*$_2$.[256]

In my opinion, three nouns can be analysed as old derivatives of the *vr̥kī́*-type. They are: TchB *peñiya*, A *pañi*, TchB *wertsiya*, A *wartsi*, and TchB *preściya* (cf. the underived noun TchA *praṣt*).

The comparison between TchB *peñiya* 'splendour' and TchA *pañi* 'id.' allows us to reconstruct a common ancestor PTch **pæñəya*. Possible Indo-European connections are difficult to find. Following Van Windekens (1976: 346f.), Adams (DTB: 423) argues that PTch **pæñəya* could come from **(s)pen-d-* 'to shine, glitter', a root otherwise attested only in Baltic, e.g. the verb Lith. *spindéti* 'shine' (cf. also *spingéti* 'id.', Derksen 2015: 421), the noun Lith. *spindà* 'splendor', etc. Cognates from other Indo-European languages are however missing and the Baltic root is itself problematic. On the other hand, Beekes (2010: 1546)

[254] Pinault (2014: 274) claims that the *vr̥kī́*-derivatives do not show any specialisation of gender, except for the fact that they are animate. Although masculine nouns are equally attested, the bulk of the *vr̥kī́*-derivatives is of feminine gender (Macdonell 1910: 269 lists only 11 masculines).

[255] It should be noted that the exact value of the laryngeal in the *vr̥kī́*-suffix is still at issue (some scholars have recently reconstructed the suffix as *-*ih*$_1$, see mainly Widmer 2005 with references). Also the relation between the *vr̥kī́*-suffix and the *devī́*-suffix has been the topic of debate. Some scholars, like Olsen (2000: 402), derive the former from the latter, while some others, like Stempel (1994: 205), have the exact opposite view. I assume that Proto-Indo-European already had both suffixes fully formed (cf. the discussion in Pinault 2014 with references).

[256] I will not discuss nouns that are too uncertain or otherwise useless from a historical perspective. This is the case of TchB *newiya* (probably a loanword from Iranian, cf. DTB: 364), TchB *atiya**, A *āti* (because of the unexpected lack of palatalisation), TchB *śkwarya* 'creeper' (etymology unknown), TchB *ṣaiweñña** (see Winter 2003), and TchB *śantālya* 'shepherd (?)' (unclear derivation; cf. Adams 2009a: 5-6; Ching 2015: 46).

has linked the Tocharian words with the productive PIE root *b^heh_2- 'to shine, appear' (Gk. φαίνω 'to make visible', Skt. *bhā́ti-*, etc.). From a comparative perspective, this root is well attested in nominal derivatives, usually followed by a nasal suffix, like in Ved. *bhānú-* 'beam of light', YAv. *bānu-* 'id.' < *b^heh_2-nu-* or Skt. *bhā́na-* 'das Leuchten, Erscheinung' < *b^haH-ana-* (?), OIr. *bán* 'white' < *b^he/oh_2-no-*. However, these derived protoforms cannot historically account for the Tocharian substantives. One could toy with the idea of loss of the laryngeal in *b^hoH-no- > *b^ho-no- > PTch *pænæ- 'shining', but this is very speculative. Despite these problems, the vowel correspondence TchB *-e-* : TchA *-a-* may be used as a tip to reconstruct a derivative of the *R(*o*)-(*o*)-type (of either the τόμος-type or the τομός-type), which was very productive in Tocharian (see Malzahn 2012). If so, an old *vr̥kí-* derivative from this hypothetical form works fine, because it would have been regularly derived from a thematic formation, i.e. **pænæ* → **pæñəya*.[257]

Similar considerations are possible for TchB *wertsiya*, A *wartsi* 'council'. Again, the vowel correspondence between Tocharian A and B allows us to reconstruct a form with **o*-vocalism in the root. If Adams (DTB: 665) is right in setting up a connection with PIE *(*H*)*u̯erd^h*- 'to grow' (LIV^2: 228), then we may reconstruct a noun *(*H*)*u̯ord^{h}o-* 'growth (in time and space)', from which a derivative in *-*ih*$_2$ 'pertaining to growth' → 'mass' would have regularly evolved PTch **wærtsya* 'group, reunion' > TchB *wertsiya*, A *wartsi*.[258]

Another noun that may be traced back to the *vr̥kí-*type is TchB *preściya* 'time, occasion'. It has no direct match in Tocharian A, where we find the underived noun TchA *praṣt* 'id.' instead. These two words clearly differ in their derivation.

The Tocharian A noun has been linked with Germanic, cf. OHG *frist* 'period of time', OE *first* 'id.', ON *frest* 'delay' (Pinault 2008: 203; Hartmann 2013: 465-6). It is possible that they come from the PIE root **steh*$_2$- 'to stand' (NIL: 637 and 646), prefixed with **pro-* 'beyond, forward' (cf. also Skt. *prastha-* 'elevated land' (late) or Skt. *pratiṣṭhí-* 'resistance', MIr. *ros* 'wood, height' < PCelt. **frosto-*, Matasović 2009: 142). To this list we can add TchA *praṣt* 'time', as if from PIE **pro-stH-o-* > **prosto-* , i.e. "what stand beyond" → "time" (Pinault 2008: 203; cf. also Lat. *postis* 'door-post', OHG *fast* 'firm, fixed'). In Proto-Tocharian, a feminine derivative was created, which may originally have had a slightly different meaning from **præstæ-* < **prosto-*, probably 'season' (← 'pertaining to time', cf. e.g. *smāyana preściyaṃts* 'of the summer seasons' = Skt. *grīṣmasya* 'of the summer', Ogihara 2011: 129).

Finally, Pinault (2014a: 207f.) has recently attempted to take the hapax legomenon TchB *arśakärśa* 'bat' (= Skt. *maṇḍilya*, B549 a6) as a *vr̥kí-*derivative. This word looks like an indigenous Tocharian compound. Pinault interpreted the first member *arśə°* as a cognate

[257] On the reconstruction of a Sievers' variant of the suffix *-*ih*$_2$ in these nouns, see Hilmarsson (1987a: 91).

[258] From a comparative perspective, the exact reconstruction of this root is notably difficult, as the following derivatives show: Skt. *ūrdhvá-* 'straight, upright', YAv. *ərəδβa-* 'raised up', Gk. ὀρθός 'straight, upright', OCS *rodъ* 'genus, birth' (IEW: 1167; GEW: II, 415-6; EWAIA: I, 243). The main problem lies in the shape of the first part of the root, since some languages point to the reconstruction of an initial **u-*, while some others of an initial laryngeal. See recently Barber (2014: 32-36).

of TchB *arkañe** 'darkness', as both referring to the notion of night (but cf. also Carling 2004 and Adams 2016a). The second member °*kərśa* can be historically analysed as a *vrkí-*derivative of the thematic noun **kur-ko-*, designing young or little animals (cf. Hitt. *kūrka-* 'colt, foal', the Iranian nouns MP *kwlk'*, NP *kurra*, Ossetic *kur* < PIr. **kurna-*, and probably some other derivatives in Nuristani languages, on which see Hegedűs 2002).

For all remaining nouns of the *wertsiya*-type it is more difficult to reconstruct an original thematic formation from which they could be derived. Sometimes, however, the underived base is still attested in Tocharian A. Examples include: TchB *kroriya** 'horn (?)' vs. TchA *kror* 'crescent of the moon'; TchB *poṣiya** 'wall', A *poṣi* 'side' vs. TchA *posac* and *posaṃ* 'below, next to'; TchB *yoñiya*, A *yoñi* 'path, zone' vs. TchA *yoṃ* 'trace'. As we will see, the evidence of these underived formations is of particular importance to the diachronic analysis of the nouns.

The hapax legomenon TchB *kroriya** 'horn' (B580 b4) is derived from the Proto-Tocharian antecedent of TchA *kror* 'crescent of the moon'. So far, two etymological proposals have been put forward. Hilmarsson (1985a) argued that TchA *kror* is cognate to Arm. *elǰewr* 'horn' and Hitt. *karāu̯ar* 'id.', which are said to reflect PIE **g^{h}reh$_{1}$-ur*. Although this derivation works formally fine for Tocharian, it relies heavily on the supposed strength of the etymological connection with Armenian and Anatolian. However, neither Arm. *elǰewr* 'horn' nor Hitt. *karāu̯ar* are self-evident continuants of PIE **g^{h}réh$_{1}$-ur*. Indeed, the palatalised consonant *-ǰ-* in Arm. *elǰewr* cannot be the outcome of the velar **g^{h}* (see Pisani 1950 and Scala 2003; the noun is not discussed by Martirosyan 2010), while for Hitt. *karāu̯ar* an etymological connection with PIE **g^{h}réh$_{1}$-ur* is openly rejected by several scholars (e.g. Rieken 1999: 349 fn. 1722; Kloekhorst 2008: 446f.). Thus, the reconstruction of a PIE noun**g^{h}réh$_{1}$-ur* 'horn' is fragile.

On the other hand, Adams (1991: 5-7) connects TchA *kror* with the Indo-European word for 'horn', PIE **ḱer-*. This root noun has been the subject of an exhaustive investigation by Nussbaum (1986), who also commented on most of the derived Indo-European forms. One of these formations is a heteroclitic paradigm with nom.sg. **ḱr̥h$_{2}$sr̥*. Starting with this reconstructed form, Adams claims that a final **-u* has been added in Tocharian, which in turn caused *u*-umlaut of the root vowel PTch **-a-* < **-h$_{2}$-*, thus * *ḱr̥h$_{2}$sr-u* > **k(ə)ra(s)ru* > **kroru* > TchAB *kror*(°). However, there is no evidence that *u*-umlaut has affected internal PTch **-a-* (Hilmarsson 1986: 21f.; Ringe 1996: 98-9). Thus, other possibilities need to be investigated.[259]

Kloekhorst (2008: 446-7) argues that the heteroclitic paradigm of Hitt. *karāu̯ar, karaun-* 'horn, antler' originated from the PIE basic stem **ḱer-* 'horn' (Nussbaum 1986: 1-18). He therefore posits PIE **ḱr-ó-ur/n-* for Hittite. As we have already seen (§3.6.1.2), there are strong indications that the sequence **-ur#* is reflected as a metathesised **-ru#* in Tocharian. If Tocharian inherited the same heteroclitic paradigm reconstructed by Kloekhorst for Hitt. *karāu̯ar*, then it should have regularly evolved as follows: **ḱr-ó-ur* >

[259] See also Kim (2019a: 145 fn.12) for additional criticism to Adams' etymology.

**ḱr-ó-ru* > **krœru* and finally TchAB *kror*(-) after *u*-umlaut and apocope of **-u*. Otherwise, if Melchert (1994: 86, 2014) was right in reconstructing PIE **-eh₂-ur* for the Hittite suffix *-āu̯ar*, then TchAB *kror*(-) may also be from PIE **ḱreh₂-ur*.[260]

At any rate, there is no doubt that TchB *kroriya** is derived from the ancestor of TchA *kror*. It may be ultimately analysed as the outcome of a *devī́*-derivative with an original endocentric meaning 'pertaining to the horn'.

Next to TchB *kroriya**, there is another noun that may be derived from an heteroclitic formation, i.e. TchB *ploriya**. According to Pinault (1994: 188f.), this noun refers to a kind of wind instrument, probably a flute (cf. also the derivative TchB *ploriyatstse** 'musician, flutist'). The obl.pl. TchB *ploriyaṃ* (in THT1104 a4) seems to correspond to Skt. *vāditra-* 'music instrument; instrumental music' (MW: 940) in a passage of the Karmavācana (Schmidt 2018: 97; cf. also Hannes A. Fellner & Theresa Illés apud CETOM: s. THT1104). Pinault is surely correct in seeing here a descendant of either PIE **bʰelH-* 'to roar' or **bʰleh₁-* 'to blow'. However, the type of derivation involved is unclear. Adams (DTB: 463) works with the second root and posits **bʰloH-ru-i̯eh₂*, but in my opinion this protoform could not have evolved in *ploriya*, but should have given **plāriyo* instead. On the other hand, Pinault (2008: 385 fn.11) claims that TchB *ploriya** represents "l'elargissement d'un nom d'action **plor* 'bruit, son' < **plœwär* ou **plåwär*". Although PTch **-w(ə)r* is easily derivable from the PIE heteroclitic suffix **-ur/n*, I cannot understand the first part of either of the two forms. On the one hand, if PTch **plœ-* is the outcome of **bʰleh₁-* > **bʰlē-*, then I would expect palatalisation of the lateral, thus **pĺœwr* > TchB **plyor-*. On the other hand, I cannot envision any protoform from which PTch **plå-* would have come. It is well known that Pre-PTch **-w-* is usually lost between vowels. If we therefore reconstruct the Pre-PTch suffix as **-uor*, instead of **-ur*, we could say that the vowel *-o-* in TchB *plor-iya* originated after contraction: **bʰloH-uor* > **bʰlōu̯or* > PTch **plår* > TchB *plor*○ (just like **kʷrih₂-u̯or* > **kʷryawœr* > TchB *karyor* 'trade'). Otherwise, a last possibility involves the reconstruction of a metathesised protoform **bʰleh₁-ur* > **bʰleh₁-ru-*, which yielded ** pĺœru-* > PTch **pĺåru* through *u*-umlaut, and then **pĺårəya* >> TchB *ploriya* (with depalatalisation of **-ĺ-* for dissimilation with **-y-*?, cf. TchA *klyokäś* vs. TchB *klokaśce* 'pore; opening of the body'; furthermore, I have found no instances of a sequence *plyo* /plo/ in Tocharian B). From a semantic point of view, the noun **pl(ˀ)or-* should have meant 'sound', while the derivative TchB *ploriya* underwent the semantic evolution 'having sound' → '±flute' (Pinault 2008: 385).

The selection of the *r*-stem instead of the *n*-stem in the derivational developments discussed above closely resembles the pairs Ved. *pívarī-*, Gk. πίειρα 'fat, fertile' vs. Ved. *pívan-* 'fat', Gk. πίων 'id.' as both derived from PIE **piH-ur, -uen-* (cf. Gk. πῖαρ 'fatness'). As

[260] TchAB *kror*(-) cannot be from PIE **ḱrh₂-uor* because the laryngeal was lost in this position (cf. **prH-uó-* > PTch **pərwœ* > TchB *parwe* '(at) first', A *pärwa-t* 'eldest'). On the correspondence TchB *-o-* : TchA *-o-*, see Burlak & Itkin (2003). Van Windekenes (1976: 236) reconstructs **krēru*, which may be from an older **kreh₁-ur* (cf. Lat. *crēscō* 'to grow').

pointed out by Fellner (2014a: 70-1), external derivatives usually select the strong stem, while internal derivatives usually select the weak stem.

The next word to be discussed is TchB *poṣiya**, A *poṣi*. These nouns slightly differ in their meaning: indeed, TchB *poṣiya* usually means 'wall', while TchA *poṣi* seems to have the more general meaning 'side' (Barbera 2000: 235f.), since it can refer to (1) the "sides" of human beings (e.g. A320 a3), (2) the "sides" of an animal (e.g. A12 b4), or (3) the "sides" of a house, i.e. its walls (e.g. A8 a3). These nouns must be derivations of a third noun. Evidence for this third noun comes from Tocharian A, where we find TchA *posaṃ* and TchA *posac* as postpositions governing both the genitive and the oblique (Meunier 2015: 345-6). There are two clues that allow us to reconstruct these postpositions as original nominal inflected forms. First, the fact that they govern the genitive is unusual. Indeed, as Carling (2000: 368 and 399) pointed out, the genitive as a governed case usually refers to living beings or abstract concepts. Second, an isolated form TchA *posā* is attested in A146 a5 *kᵤli tāṣ śālyās posā* "if a woman is at the right side". If Winter (1985a: 584-5) is wrong in reconstructing haplology for *poṣṣāsa*, then TchA *posā* can only be the perlative singular of an unattested noun TchA *pos**. One may therefore claim that inflected forms of TchA *pos** underwent a process of grammaticalisation, since they first became relational nominals and subsequently postpositions.

Several etymological proposals have been made for TchB *poṣiya*, A *poṣi*, and TchA *pos**.[261] The most solid is the one by Fraenkel (1932: 229), who connected the Tocharian words with Lith. *pùsė*, Latv. *puse*, OPr. *pausan*, *pauson* 'côte, moitié'. The common ancestor of these nouns is reconstructed with an ablauting paradigm **pou̯s-*, *pus-* '± half' (Fraenkel 1962: 676). It could therefore be argued that Lithuanian and Latvian continue the zero grade, and Old Prussian and Tocharian the full grade. Otherwise, the Tocharian word could come from the PIE root **peh₂-* 'to protect' (Skt. *pā́ti*, Av. *pā-*), which is attested with an *s*-extension in several Indo-European languages (Hitt. *paḫš-* 'to protect', Lat. *pāstor* 'to herd', OCS *pasti* 'to pasture'). The original meaning of TchA *pos** could have been 'what protects' → 'wall', and then the derivatives in *-iya* 'pertaining to the wall' → 'side (of humans, animals, and things in general)'. But this latter option is not entirely convincing.

There is another noun belonging to this class that attests (Tocharian) *o*-vocalism in the root. It is TchB *yoñiya*, A *yoñi* 'path, zone'. Again, Tocharian A shows continuants of the underived noun, TchA *yoṃ* 'trace, footprint'. If not a loanword from Iranian (cf. Khot. *gyūna-* 'gait, course, time', see Isebaert 1980: 142), the most straightforward comparison would be with Lat. *iānus* 'passage' (old *u*-stem) and *iānua* 'door' (Van Windekens 1976: 604). Accordingly, Latin and Tocharian would both continue an *n*-derivative of the PIE

[261] See Couvreur (1947: 11 fn. 14) and Klingenschmitt (1994: 313) for yet other proposals, none of which is phonologically satisfactory. See also Tremblay (2005), who improbably assumes a loanword.

root *$i̯eh_2$- 'to go', still attested in TchA *yoṃ*, while TchB *yoñiya* and TchA *yoñi* would be derivatives in *-ya* of this noun (with the meaning 'having traces' → 'path, caravan').[262]

The last noun to be discussed is TchB *kremīya*, a hapax legomenon attested in W5 a6 as a nominative singular. The meaning of this word is not easily detectable. For this reason, Filliozat (1948) and Broomhead (1962) do not translate it, while Adams (DTB: 234) only says that it would designate a plant part. The etymology of the term has not been ventured yet. Sometimes however understanding the etymology of a term can shed new light on its meaning.

The noun is attested in the following line: W5 a6 /// *-re · erkäntse yasoññaa kremīya · tsäṅkacca pyāpyo · śärt* (new transcription by Michaël Peyrot, p.c.). This fragment is very difficult to translate, since it contains a number of hapax legomena. The only noun that can be translated with confidence is *pyāpyo* 'flower'. TchB *tsäṅkacca*[263] may be derived from *tsaṅk** 'naked barley', and it seems to be an adjective in agreement with *pyāpyo*, thus 'flower of naked barley, spike (?)'. However, one has to note that the ending *-cca* is unexpected, since *-tstsa* would be the regular nom.sg. form (but cf. possibly nom.pl.f. *motarcca*(*na*) 'green' in THT1121 a3; see Schmidt 2018: 108). On TchB *erkäntse* and the possible reconstruction of a noun *erk*(*ə*)* 'decoction (?)', see Carling (2003: 89, 2004; *contra* DTB: 100). Finally, TchB *yasoññaa* might be derived from the noun TchB *yāso* 'desire, passion'.

Since the fragment contains a list of medical ingredients, TchB *kremīya* may indeed designate some kind of plant, as Adams proposed (DTB: 234).

Now, if we look at TchB *kremīya* in the light of the nouns discussed so far, we can safely leave the element *-iya* out from our historical discussion. This TchB *krem*(*e*)° has no clear formal match in Tocharian, though it is not completely isolated. Indeed, another comparable item might be *kremot*, attested in W37 a3: *tsikallona kremotsa āśne ya*(*maṣä*)*lle* "… are to be shaped; it is to be applied to the head with *kremot*" (cf. Filliozat 1948: 87). To my knowledge, Adams (DTB: 234) provides the only etymological attempt for TchB *kremot*. He does not point to the formal similarity with TchB *kremīya*, since he analyses TchB *kremot* as a compound of °*mot* 'alcohol' and *kare*° /kə́re/, a term that is usually translated as 'rank, dignity' (Adams) or 'good' (Winter 1968: 61; Hilmarsson 1996: 84). However, both 'alcohol of the dignity' and 'good alcohol' do not make any sense in this passage.

Formally, the protoforms from which TchB *krem*° may derive can be summarised by the two following notations: **Krom-*, **Kreh$_1$m-*, where **K* may represent any velar stop. I have therefore checked for Indo-European forms matching one of these protoforms and I

[262] One may also claim that TchA *yoṃ* 'trace, footprint' is the exact counterpart of Lat. *iānus*, as if both reflecting *$i̯eh_2$-n-u-*. If so, TchB *yoñiya* would regularly derive from **yånẃ-ya* > *yoñiya* (with **ẃ* > *y*) and TchA *yoñi* would have been borrowed from Tocharian B

[263] Broomhead (1962: I, 7) read *tsäṅkana*, which is impossible. On the other hand, Filliozat (1948: 66) read *tsäṅkantä*, which is the accepted reading (cf. DTB: 803; Blažek & Schwartz 2017: 62; Ching 2016: 55). This form is usually interpreted as a variant plural of the regular *tsäṅkana* (see also Ching 2010: 384). In any case, however, this *tsäṅkantä* is a mistake, since *tsäṅkanta* would be expected.

found a straightforward correspondence in Gk. κρόμμυον 'onion', with variant forms κρόμυον (Hom.) and κρόμβυον (pap.) (Chantraine 1999: 586; GEW: II, 23-24), MIr. *crem* '(wild) garlic', W *craf* 'id.', OE *hramsan* 'ramsons' (pl.) (Kroonen 2013: 242-3), Lith. *kermušẽ* 'wild garlic', OCS *črěmošъ* 'ramsons', Russ. *čeremšá* 'Allium garlic' (IEW: 80-1; Derksen 2015: 239-40), Yazghulami *gamš* 'wild onion', Tajik *kamč* 'Allium rubiginosium' (Steblin-Kamenskij 1982: 73). Greek and Germanic point to **krom*-, while Celtic and Balto-Slavic point to **krem*-. If Tocharian belongs here, as I think, TchB *krem*° could be ranged under the first group, as continuing PIE **krom*-. The original Proto-Tocharian formation from which TchB *kremīya* is derived is however unknown. Some of the forms just mentioned point to an extension in *-*us*-, while some others do not attest any direct medial *-*u*-.[264]

One may therefore wonder whether TchB *kremīya* and TchB *kremot* denote something linked to garlic or onion. As noticed above, the fragments where both words are attested are of medical content and therefore plants names are expected to be found. But unfortunately, it is hard to say which of the two meanings is correct. Indeed, neither the word for 'garlic', nor the word for 'onion' is attested in Tocharian. However, if TchB *kremot* has been correctly identified as a compound of *krem** (or the like) and *mot*, then a meaning 'garlic-based alcohol' is of course possible. A liquid brew based on garlic is widely used in Āyurvedic medicine. It is known as the Skt. *laśunādi*, a sort of garlic oil. Although several types of this composite herbal drug-oil are attested, the *laśunādi ghṛta* (attested in the seventh century's *Aṣṭāṇga hṛdaya*) is prescribed for neurological disease and thus seems to fit well in the context of the document (if so, "…are to be shaped (and) to be applied to the head with the *laśunādi*"). Returning to TchB *kremīya*, we can therefore conclude that it might mean both '±garlic plant' (if a noun) or 'pertaining to garlic' (if an inflected feminine adjective).[265]

3.7.3.4. Summary

To sum up, we have seen that the bulk of the members of the *wertsiya*-type can reflect formations in *-*ih*$_2$ of both the *devī́*- and the *vṛkī́*-types. Although the Indo-European comparison is either ambiguous or too meagre to ascertain the derivation of some of the *wertsiya*-nouns, it has become clear what the derivational processes involved were. An important analytical tool to investigate the nouns of the *wertsiya*-type has been the reconstruction of possible underlying underived formations. In some cases, Tocharian A clearly attests the noun from which a *ya*-derivative has been formed. One can assume that the formal and the semantic division between the *devī́*- and the *vṛkī́*-types became increasingly opaque in the history of Tocharian. The result of this process has implied that

[264] If TchB *krem*° is from **kromus*-, then the lack of *u*-umlaut would be surprising. But one may also invoke analogy after other case-forms without *-*u*- in the paradigm.

[265] Actually, a last possibility can be ventured. Indeed, if one interpreted TchB *kremiya* and TchB *kremot* as attesting two different bases, one could analyse TchB *kre*- in *kremot* as a loanword. The best formal match would be with Khot. *gūra*- 'grapes'. If so, *kremot* could be translated as 'wine (lit. grapes-alcohol)'.

these inherited formations have influenced each other, before they finally merged into a single category. As a matter of fact, this is not an isolated development, since the same formal and semantic merger of the *devī́-* and the *vr̥kī́-*type can be discerned in several other Indo-European languages and branches (see e.g. Cardona 2003: 161 for Indian, Johnsen 2005 for Germanic, and recently Piwowarczyk 2016: 115f. for Latin).

3.8. THE EVOLUTION OF THE PROTO-INDO-EUROPEAN NEUTER IN TOCHARIAN A HISTORICAL AND TYPOLOGICAL OVERVIEW

This section is aimed at clarifying how the PIE neuter gender evolved in Tocharian and to what extent it has been continued as the Tocharian *genus alternans* in the inflection of the noun. Much attention will be paid to the development of the thematic neuter and to cases of gender fluctuation caused by morpho-phonological mergers with the feminine and the masculine.

The section is divided in two parts: the first analyses the evolution of the neuter singular and the merger with the masculine; the second investigates the evolution of the neuter plural and the merger with the feminine.

3.8.1. THE EVOLUTION OF THE NEUTER SINGULAR

The classification of PIE neuter nouns is based on the shape of the stem. The stem could be thematic or athematic. Thematic are those stems that ended with **-o-*, rarely alternating with **-e-*. From the inflectional point of view, it is well known that the neuter did not mark any difference between the nominative and the accusative. In the athematic inflection, they were zero-marked in the singular. In the plural, thematic and athematic types shared the same ending PIE **-h_2*. The two inflections can be schematised as follows (Melchert 2014; Steer 2014; Lundquist & Yates 2018):

Table III.23. Nominative and accusative in the inflection of the PIE neuters

	ATHEMATIC	THEMATIC
NOM.ACC.SG.	**-Ø*	**-o-m*
NOM.ACC.PL.	**-h_2*	**-e-h_2*

From a diachronic point of view, an important difference between athematic and thematic neuter is that the latter is chronologically more recent than the former.

In fact, several athematic neuters can be reconstructed for the proto-language. They are generally continued as alternating in Tocharian. The absence of formal differences between the nominative and the accusative in PIE is perfectly mirrored in Tocharian, since alternating nouns are limited to Class I, II, and III (nom. = obl.). Examples are numerous (Pinault 2008: 491-97; Hartmann 2013: 523):

TchB *āsta* 'bones' (pl.) < PIE **Host-h₂* (YAv. *asti*, Lat. *ossa*)
TchA *waṣt*, B *ost* 'house' < PIE **u̯eh₂stu-* (Skt. *vā́stu-*, Gk. ἄστυ)
TchAB *or* 'wood' < PIE **doru-* (Skt. *dā́ru-*, Gk. δόρυ, Hitt. *tāru-*)
TchA *ysār*, B *yasar* 'blood' < PIE **h₁esh₂(ō)r* (Hitt. *ešḫar*, Skt. *ásr̥-k*, Latv. *asinis*)
TchA *ṣtām*, B *stām* 'tree' < PIE **sth₂mn-* (OIr. *taman*, OHG *stam* (adj.), Lat. *stāmen*, Ved. *sthā́man-*)

This short list is purely illustrative and could easily be extended. On the other hand, the reconstruction of the thematic neuters is a difficult task for Indo-European comparative linguistics. Indeed, only a very restricted set of thematic neuters can be traced back to Proto-Indo-European; most of them were developed independently by individual Indo-European languages. Some types are more archaic, even if they are still limited in number. Examples include: PIE **(H)i̯ugóm* 'yoke' > Lat. *iugum*, Hitt. *iuka-*, Skt. *yugám*, Gk. ζυγόν; PIE **pédom* 'place' > Hitt. *pēdan*, Gk. πέδον, Skt. *padám*; nomina instrumenti in PIE **-trom*, like **h₂erh₃-tro-m* > Lith. *árklas*, Lat. *arātrum* (lengthening based on *arāre* 'to plough'), Gk. ἄροτρον, Arm. *arawr*, MIr. *arathar*; PIE **u̯(e)rdʰom* 'word' > Lat. *verbum*, Goth. *waúrd*, and a few others. Apparently, these reconstructed nouns did not survive in Tocharian.

A related question is therefore where we can find Tocharian continuants of the PIE thematic neuter. If we approach this problem from a formal perspective, the nom.acc.sg. PIE **-om* is expected to have yielded nom.obl.sg. PTch **-œ* > TchB *-e*, A *-Ø*. There are two classes with this singular paradigm: the *yakwe*-type (nom.pl. *-i*, obl. *-eṃ*) and the *āke*-type (nom.obl.pl. *-e-nta*).[266] In the following paragraphs, I attempt to track down PIE neuter nouns in these inflectional types.

3.8.1.1. The *yakwe*-type

The *yakwe*-type is a productive class of masculine nouns with a differentiated plural nom.pl. TchB *-i*, A *-añ*, obl.pl. TchB *-eṃ*, A *-as* (TEB Class V.1). The origin of this class is generally well understood (TEB §179-180; Adams 1988: 112-3; Pinault 1989: 78-81): the bulk can be traced back to the PIE masculine **o*-stems, as it is made clear by TchB *yakwe*, A *yuk* 'horse' < PIE **h₁éḱu̯o-* (m.) itself (Skt. *áśva-*, YAv. *aspa-*, Gk. ἵππος, Myc. *i-qo*, Lat. *equus*, etc.).

[266] In addition, there is another class with nom.obl.sg. TchB *-e*, A *-Ø*, whose members point to old thematic neuters. This class may be labelled as the *kante*-type (TchB: sg. *-e*, pl. *-enma*; TchA: sg. *-Ø*, pl. *-ant*/*-antu*), and it consists of a few numerals (TEB Class II.2). The most prominent member is TchB *kante*, A *känt* '100 (num.)', which regularly comes from PIE **ḱm̥tom* (> Lat. *centum*, Gk. ἑκατόν, Skt. *śatá-* etc.). As pointed out by Winter (1992: 122), the plural formation of these numerals cannot be reconstructed for Proto-Tocharian with confidence, because it seems to be of recent origin in both Tocharian B and A. This is particularly clear in Tocharian B, since TchB *kante* mechanically selected the plural marker on the basis of the number of the syllables of the word (Winter 1992: 120). TchB *yaltse*, A *wälts* '1,000' and TchB *tmāne* ~ *tumane*, A *tmāṃ* '10,000' behave like TchB *kante*, A *känt*. On the other hand, TchB *pkante*, A *pkänt* 'hindrance' has been presumably included into this class for the formal resemblance with TchB *kante*, A *känt*.

From a morphological perspective, Malzahn (2012) showed that many nouns from this class can be ultimately analysed as derivatives of the τόμος-type (e.g. TchB *werke*, A *wark* 'hunt, chase' < **u̯órǵ-o-* 'work'; TchB *kene*, A *kaṃ* < **gʰu̯ón-o-* 'sound', etc.).

There are, however, some other nouns that do not continue this flourishing type of masculine nouns (TEB §180 p. 130).[267] Klingenschmitt (1994: 316) analyses TchB *yakne*, A *wkäṃ* 'way, manner' as the outcome of a neuter **u̯eǵʰ-no-m* (cf. OIr. *fén* 'wagon', W *gwain*; see further OHG *wagan* < **u̯oǵʰ-no-*). In all likelihood, it is the Tocharian A form that has brought him to this reconstruction. Indeed, TchA *wkäṃ* does not belong to the *yakwe*-type, being it an alternating noun with plural form *wäknant* (thus a member of the *āke*-type). Therefore, one may say that this noun was originally a neuter (continued as alternating in Tocharian A) and that it was reinterpreted as a masculine in Tocharian B, as a result of the morpho-phonological merger of masculine and neuter in the thematic paradigm of the singular. A clear case of a PIE neuter noun reinterpreted as a Tocharian masculine is TchB *ere* 'appearance' (obl.pl. *ereṃ*), if correctly identified as the outcome of a neuter *s*-stem **h₃eros-* (Gk. ὄρος 'mountain', see DTB: 99 and §3.6.1.1).

Another peculiar case that went the other way around is TchB *ṣpane* (pl. not attested), A *ṣpäṃ* 'sleep' < PIE **su̯ep-no-*. The Tocharian A noun has two plural variants: TchA *ṣäpnant* (*āke*-type, alternating) and TchA *ṣäpnañ** (*yakwe*-type, masculine, cf. loc. pl. *ṣäpnasaṃ* 'in the dreams' in A78 a1 and A56 b3). Comparative evidence points unambiguously to the reconstruction of a masculine noun (PIE **su̯ep-no-*, cf. Lat. *somnus* m. 'sleep, dream', Skt. *svápna* m. 'id.', Av. *xᵛafna-* m. 'id.'; Gk. ὕπνος m. 'id.', OCS *sъnъ* m. 'id.' and Alb. *gjumē* m. 'id.' continue **sup-no-*; cf. also OE *swefn* 'dream', which is neuter), which allows us to reconstruct the noun as masculine for Pre-Proto-Tocharian.

There is one further example that may prove the sporadic reinterpretation of thematic neuter nouns as masculine. It is TchB *twere** 'door' (pl. *tweri*), which must be related to the familiar PIE word for 'door', **dʰu̯ór-/dʰur-* (NIL: 130f.). This root noun has been extended with different suffixes in many Indo-European languages (NIL: 131; EWAIA: I, 764-5; Beekes 2010: 566). Among these derived forms, we find outcomes of a neuter *o*-stem **dʰu̯oro-* in Skt. *dvā́ra-* 'door, gate, passage', OP *duvara-*, Lat. *forum* 'market place, public space', OCS *dvorъ* 'courtyard', Lith. *dvãras* 'estate, village' (NIL: 131).[268] Indo-European languages do not attest a derivationally similar masculine stem. Based on this comparative evidence, we can therefore argue that TchB *twere** 'door' is the regular outcome of the neuter noun PIE **dʰu̯orom* and that its masculine gender and inflection are secondary.[269]

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[267] As pointed out by Nussbaum (2017), neuter forms of the type *R(*ó*)-*o-* are randomly found (cf. Ved. *rókam* vs. *rókaḥ* 'light', etc.), but evidence from Indo-European languages is too meagre for comparison with the Tocharian data.

[268] The Balto-Slavic forms are masculine, but the accentuation of the Slavic noun points to an old neuter (Illič-Svityč's Law; see Derksen 2015: 148-9 and Matasović 2014: 63-3, 72).

[269] Cf. also TchB *yetwe* (pl. *yetwi*) 'ornament', which is a derivative in **-u̯o-* of the verbal root TchB *yəta-* 'to adorn; be decorated'. This noun has been borrowed to Tocharian A as *yetwe*, but the two Tocharian languages differ again in the gender and the inflection of the respective nouns. Indeed, TchA *yetwe* is alternating, while TchB *yetwe* is masculine. Theoretically, one could think that, at the

In the following paragraph, we will verify whether inherited masculine nouns have been reanalysed as alternating.

3.8.1.2. The *āke*-type

All nouns belonging to the *āke*-type are alternating and have a plural ending in TchB *-enta*, A *-ant*. Some of them have a clear etymology.

TchB *āke*, A *āk* 'end, tip' is usually traced back to PIE **h₂eḱ-os-*, with a clear cognate in Lat. *acus*, *aceris* 'husk, chaff' (DTB: 40). Some other nouns of this class are said to go back to PIE *s*-stems, like TchB *ṣalype*, A *ṣälyp* (but pl. *ṣälypas*) 'oil', TchB *cake* 'river', TchB *īke* 'place', TchB *yarke*, A *yärk* 'honour, veneration'.[270]

TchB *ṣalype*, A *ṣälyp* (pl. TchA *ṣälypañ*) is usually connected with Gk. ἔλπος/ ἔλφος (Hesychius [with psilosis?]).[271] However, Beekes (2010: 415f.) pointed out that if ἔλπος is from **sélp-os-*, we should expect spiritus asper in Greek and no oscillation between internal -π- and -φ-.[272] Skt. *sarpíṣ-* 'molten butter, lard' is a secondary formation. Germanic points to the reconstruction of a feminine **salbō-* 'ointment' (cf. Goth. *salba*, OHG *salba*) and a neuter **salba-* (cf. OHG *salb*). If TchB *ṣalype* is not the exact cognate of Gk. ἔλπος/ ἔλφος, one could say that the Tocharian word was in origin an adjectival derivative of PIE **selp-* 'fat', subsequently substantivised as a neuter (cf. the type of Lat. *serum* 'whey' from **ser-ó-* 'flowing', Skt. *punaḥ-sará-* 'running back', beside **sor-ó-* > Gk. ὀρός 'whey').[273]

As far as TchB *cake* 'river' is concerned, the reconstruction of an *s*-stem from the verbal root **tekʷ-* 'to flow, run' is formally possible, but it is not supported by comparative evidence. In Germanic, the root has been nominalised as an *o*-stem in e.g. Got. *þius* 'servant', OE *þēow*, while in Balto-Slavic we find OCS *tokъ* 'current, course' and Lith. *tãkas* '(foot-)path' < PIE **tokʷ-o-* (Derksen 2015: 457). Both Germanic and Balto-Slavic seem to

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moment of the borrowing, Pre-TchB **yetwe* was alternating (< neuter) and that TchA maintained the gender of the borrowed word, while Tocharian B reinterpreted the noun as a masculine. However, since loanwords are typically inserted into Class III (alternating), it is more probable that the gender of TchA *yetwe* is an innovation.

[270] Another neuter *s*-stem continued in Tocharian is TchB °*kälywe* /kəĺwe/, A °*klyu* 'fame', attested only in the dvandva-compound TchB *ñem-kälywe*, A *ñom-klyu* 'renown' (← 'name' + 'glory'). It is from **kleu̯-os-* (cf. Ved. *śrávas-*, Gk. κλέος, OIr. *clú*, etc.). See Höfler (2012: 132f.).

[271] The shape of the Tocharian word is peculiar, because of the palatalised *-ly-* /Í/. Mechanically, TchB *ṣalyp-* /ṣəĺp/, A *ṣälyp* points to the reconstruction of **selep-* or perhaps **selpi-*, which are not found elsewhere in the Indo-European domain. However, on the basis of TchB *kəĺp-* 'to steal' < **kĺəp-* < PIE **klep-*, one can traced TchB /ṣəĺp-/, A *ṣälyp* back to PTch **ṣəĺp-* < * *ṣĺəp-* < **sleb-* (cf. Goth. *slepan* 'to sleep', LIV²: 565).

[272] Rieken (1999: 180) equates Gk. ὄλπη 'oil flask' with Skt. *sarpíṣ-*. The former would be the outcome of **solpeh₂*, and the latter would mirror a secondary *s*-derivative **sélp-h₂-s-*. She further thinks that Gk. ἔλφος is from **sélph₂-e/o-s-*, with -φ- from **-pH-*.

[273] One may even wonder whether PGerm. **salbō* < **selpeh₂* is to be ultimately interpreted as the neuter plural of **salba* < **selpom*.

match YAv. *taka-* 'flowing, course' (m.) morphologically. For Tocharian, I see two options: TchB *cake* is either the outcome of a thematic derivative **tek^{w}-ó-* 'flowing', substantivised as 'river' (cf. Lat. *serum*), or an original *nt*-participle from the same root, i.e. **tek^{w}-ont-* 'that which flows (nt.)' → 'river' (DTB: 267).

On the other hand, TchB *īke* 'place' (pl. *ikenta* ~ *ykenta*)[274] can unambiguously be compared with Lat. *vīcus* 'village', PGerm. **wīha-* < **u̯eiḱ-o-* (masculine *o*-stem, cf. also Gk. (ϝ)οἶκος 'house, household', Skt. *véśa-* 'house, brothel', de Vaan 2008: 675; see Kroonen 2013: 585 on the Germanic evidence).

Lastly, TchB *yarke*, A *yärk* 'honour, veneration' has been related to Skt. *arká-* 'ray, light, shine; song', and Arm. *erg* 'song, poem, playing' as reflecting PIE **h$_1$erḱ-o-* (m.). Schindler (1980: 84) questioned this derivation, claiming that, if from a masculine **o*-stem, this noun was not expected to be alternating in Tocharian. He therefore argued that the Tocharian noun points to an **s*-stem **h$_1$erḱ-os-* (cf. also Hilmarsson 1986d; Ringe 1987: 102; Pinault 2008: 497), but this reconstruction cannot be substantiated from a comparative perspective. I would rather claim that the merger of the masculine with the neuter in the thematic inflection has produced the reanalysis of old masculine nouns as alternating, since they both ended in PTch **-æ* in the singular. As a consequence, TchB *yarke*, A *yärk* 'honour, veneration' can be traced back to a masculine thematic type, which was transferred to the alternating class at a later stage (cf. below §3.8.1.3).[275]

A similar case is TchB *erepate* (pl. *-enta*), A *araṃpāt* 'shape (= Lat. *forma*)', a compound of TchB *ere*, A *araṃ* 'appearance' (see §3.6.1.1) and PTch **patæ* (pl. **patænta*). Since Pisani (1942-1943: 28), PTch **pate* has been compared with Skt. *bhā́ti-* 'splendor' as derived from PIE **b^{h}eh$_2$-* 'to shine'. Following Van Windekens (1976: 149), we may reconstruct a substantivised participle **b^{h}h$_2$-to-* > **bă̆to-* 'splendid, appeared'.

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[274] It seems that the distribution between the variants *ike*$^{(o)}$ and *yke*$^{(o)}$ is partially conditioned by the position of the stress, since the latter variant is only found in inflected or derived forms with more than two syllables, like in secondary case forms (e.g. *ykene* 90K-58F-01 a11, AS13C a2, AS17H b5, AS17I b2, NS36 and 20 b5, NS80.3 b3, B3 a6, B32 b6, B88 b2, B92 b3, B278 b1; *ykemeṃ* IT127 b1, B108 b2, B143 b2), in derived adjectives (*ykeṣṣa* B41 a3), in the plural (e.g. *ykenta* AS19.22 b5, SI B 121(2) b3, SI P 2 a3, B45 b3, B241 b4, THT3153 b2; *ykenta* /// B614 a1; *ykentane* 90K-58F-01 a2; DA M 507.37 and .36 a54, B88 b2, B302 b3, B427 b5, B506 b3; *ykentäne* B545 b3; *ykentameṃ* IT127 b1; *ykentaṣṣeṃ* B213 a1), and in the compound *yke-postäṃ* 'bit by bit' (e.g. G-Qm 1 a2, IT55 b7, IT188 b3, IT271 b4, IT723 a2, AS6C a1, AS7M b2, AS15A b4, AS17A a2, SI P 2 b6, B10 b7, B45 b4, B46 b3, B99 b2, B107 b9, B205 b2, B270 b1, B271 a2, etc.). Somewhat similarly we have TchB *ore* 'dust' vs. pl. *wrenta*.

[275] Pinault (2008: 30) reconstructs PIE **b^{h}ag-os-* (nt.) as the ancestor of TchB *pāke*, A *pāk* 'part, portion'. However, all other Indo-European languages point unambiguously to a thematic **o*-stem (cf. Ved. *bhága-* 'prosperity', YAv. *baγa-* 'lord, god; prosperity', OP *baga-* 'god'; Ved. *bhāgá-* 'share, portion', OAv. *bāga-* 'id', see Lubotsky 1981). The Slavic noun **bogъ* 'god' (cf. OCS *bogъ* 'id.', Russ. *bog* 'id.', etc.) is generally considered to be a loanword from Iranian (Derksen 2008: 50). In view of the semantic and formal similarities of TchB *pāke*, A *pāk* with IIr. **b^{h}āga-* and the absence of strong comparative evidence outside Indo-Iranian, borrowing of the Tocharian word from Iranian is most likely (cf. further Khot. *bāga-* 'part, portion'; see Van Windekens 1976: 636 and Tremblay 2005: 424).

A more complex case is TchB *śātre* 'grain'[276], which is usually taken as the outcome of an instrumental noun *$g^{w}i(e)h_{3}u$-*o*-*trom* '± Lebensmittel' (DTB: 682). Pinault (2008: 368-9) doubts this reconstruction, since the instrumental suffix *-*tro*- is usually not continued in Tocharian. He therefore reconstructs *$g^{w}ioh_{3}$-*tu*- (cf. OAv. *jiiātu*- 'life'), which, however, would require a heavy remodelling of the expected outcome (see Peyrot 2018: 257). For this reason, I still think that the classical etymology is to be preferred, despite the isolation of the suffix *-*tro*- in Tocharian.[277]

Another noun that can be reconstructed as neuter is TchB *wase*, A *wäs* 'poison'. Adams (DTB: 634) gives no plural forms, but Thomas (1964: 239) suggested *wsenta* as the plural of TchB *wase* (cf. also Van Windekens 1976: 563). In fact, this *wsenta* may be restored in B355 a5 /// *tarya wse*(*n*)*ta taśimme* "… may I touch three poisons for us", which also allows us to reconstruct TchB *wase* as an alternating noun. As far as the etymology of the noun is concerned, TchB *wase*, A *wäs* can be compared to Skt. *viṣá*-, Av. *vīša*- 'venom, poison' (nt.) < PIE *$u̯isom$, and, more distantly, to Lat. *virus*, Gk. ἰός.

There are some other words that may point to old thematic neuters, but their etymology is either too uncertain or comparative evidence is weak[278] (e.g. TchB *lakle* 'suffering, sorrow' < PIE *$luglo$- [m. or nt. ?], cf. Gk. λευγαλέος 'unhappy', λυγρός 'id.'; Lat. *lugēre* 'be sad').[279]

3.8.1.3. The mainstream development of the thematic neuters

In the previous paragraphs, we have seen that Tocharian inherited a few thematic nouns which comparative evidence allows to reconstruct as neuter. For the most part, they have been continued as alternating, and thus have converged in the *āke*-type. However, some

[276] For the meaning of the word, see Ching (2012: 308-9) and Peyrot (2018).

[277] Other hypothetical continuants of the PIE suffix *-*tro*- are TchB *enmetre* 'bark' and TchB *tsarātre* 'extract' (DTB: s.v.).

[278] According to Hilmarsson (1986b), TchA *klop* (pl. -*ant* ~ -*āntu*) 'misfortune' (= Skt. *duḥkha*) can be derived from *$g^{h}lobom$ with cognate in OIcel. *glap* 'mistake, misfortune'. On the other hand, van Beek (2013: 319) hesitantly tries to link TchB *yenme* 'gate, entry, portal' with Gk. εὐνή 'lair, bed' (cf. also Hilmarsson 1986: 52f.). He reconstructs PIE *$h_{3}ieb^{h}$-*mn*-*o*- denoting 'that into which one penetrates' as the ancestor of the Tocharian word and PIE *$h_{3}ieu̯mneh_{2}$- 'cave lair' as underlying Gk. εὐνή, with a special phonetic development of *$h_{3}ieb^{h}$-*mn*- 'to enter' > *Hieu-mn-. But all these explanations are difficult. On the paradigm of TchB *ore* '?', quoted by Krause & Thomas (TEB §167), see Winter (2003). Adams (DTB: 103-4) gives TchB *ewenta* as the plural of TchB *ewe* ~ *iwe* 'inner skin, leather', but I was not able to find this plural form. I wonder whether this alleged *ewenta* is actually a misreading for the adverb *eweta* 'in conflict (with)'.

[279] One could also be tempted to see in some adverbs ending in TchB -*e* the crystallisation of neuter forms. For instance, TchB *ñatke* 'urgently, quickly' (linked to *nətka*- 'to push away') can be interpreted as an original *R(*e*)-(*o*)-derivative, which is reconstructed by Malzahn (2012: 169) as **ñatke* 'pushing, holding off' (cf. the derived adjective *eñaktetse*, on which see Ogihara 2009: 396-8 and Malzahn l.c.). Cf. also TchB *lauke* 'far' from *$loṷkó$- 'free, light space' (Lith. *laũkas*, Skt. *lokā*-). In a similar way, TchB *ate* 'away' has been traced back to PIE *$h_{2}et$-*om* by Hilmarsson (1996: 51).

others have been reassigned to the masculine gender, as they synchronically belong to the *yakwe*-type.

The same kind of evolution can be seen in Latin, from the early stages. Some examples include (Loporcaro 2018: 19; Rovai 2012):

Lat. *dorsus* (m.) 'back' (Pl. Mil. 297) vs. regular *dorsum*, gen.sg. *dorsi* (nt.)
Lat. *corius* (m.) 'leather, skin' (Pl. Poen. 139) vs. regular *corium*, gen.sg. *corii* (nt.)
Lat. *lactem* (m.) 'milk' (Petr. 7.1.1) vs. regular *lac*, gen.sg. *lactis* (nt.)
Lat. *vinus* (m.) 'wine' (Petr. 41. 12) vs. regular *vinum*, gen.sg. *vini* (nt.)

Sporadic cases of the reverse development are equally attested. Examples are (Loporcaro 2018: 234-5):

Lat. *catilla* (nt. pl.) 'bowls' (Petr. 50.6) vs. regular *catillus* (m.)
Lat. *nasum* (nt.) 'nose' (Pl. Am. 444; Mil. 1265) vs. regular *nasus* (m.)
Lat. *puteum* (nt.) 'pit, well' (Pompon. Dig. 19.1.14) vs. regular *puteus* (m.)
Lat. *cāseum* (nt.) 'cheese' (Varro, Rust. 2.1.4.; Apul. Met. 1.5) vs. regular *cāseus* (m.)
Lat. *pāne* (nt.) 'bread' (Pl. Cur. 367) vs. *pānis* (m.)
Lat. *sale*/ *sal* 'salt' (nt.) (Varro, Gram. 64; Lucr. 4.1162; Ennius, Ann. 386, etc.) vs. *sāl, -is* (m.)

As this list shows, neuter variants of regular masculine nouns are attested from Archaic to Imperial Latin. However, real signs of the decline of the neuter begin to appear only at a later stage (with some earlier instances in Petronius; Adams 2011: 271f.). Indeed, with the gradual depletion of the neuter gender, the confusion between masculine and neuter gradually increased, and this caused a mix-up of the two inflections.

The same kind of doublets can in my opinion be reconstructed also for an unattested phase of Tocharian. That it is to say, after the morpho-phonological merger between masculine and neuter in the singular, it is reasonable to assume that some nouns started to shift inflectional class and gender. The case of Tocharian is more difficult to evaluate, because we do not have the attestation of this gender fluctuation and inflectional oscillation. Cases where original neuter nouns have been probably reassigned to the masculine gender in Tocharian are:[280]

PIE *$d^{h}\mu or$-*o*- (nt.) > **twœræ* (alt.) → (m.) > TchB *twere* 'door' (m.)
PIE *$\mu\acute{e}\acute{g}^{h}$-*no*- (nt. ?) > **ẃəknæ* (alt.) → (m.) > TchB *yakne* 'manner' (m.), TchA *wkäṃ* (alt.)
PIE *$h_3$er-os*- (nt.) > **æræ* (alt.) → (m.) > TchB *ere* 'appearance' (m.)

The last example matches the Latin type *corpus*, *corporis* 'body' (nt. III decl.), reanalysed in Late Latin as a masculine II declension noun *corpus*, *corpi*. It is very probable that other cases like these still wait to be discovered in Tocharian. Perhaps, the fact that the

[280] On TchB *ere* 'appearance', see also §3.6.1.1.

masculine and the neuter fluctuated for a while may be shown by some isolated forms. A good example is TchA *ṣpäṃ* 'sleep', which attests a plural inflection of both the *yakwe*-type (obl.pl. *ṣäpnas*, masculine) and the *āke*-type (*ṣäpnant*, alternating). However, we also have apparent cases of the reverse development, i.e. masculine nouns reassigned to the alternating gender:

PIE **h₁erḱ-o-* (m.) > **yərkœ* (m.) → (alt.) > TchB *yarke* 'honour' (alt.), A *yärk* (alt.)
PIE **tekʷ-o*(*nt*)- (m.?) > **cəkœ* (m.) → (alt.) > TchB *cake* 'river' (alt.)
PIE **bʰh₂-to-* (m.) > **patœ* (m.) → (alt.) > TchB °*pate* (alt.), A °*pāt* (alt.)

These data are contradictory only in appearance. Indeed, they simply point to variation in the gender assignment of (Pre-)Proto-Tocharian, showing that the system was flexible for a period of time before it was standardised and became more fixed. This development was caused by the formal merger of the masculine and the neuter in the thematic inflection of the singular. Another piece of evidence that may support a relation between the diachronic evolution of the gender systems of (Pre-Proto-)Tocharian and Latin is that some old neuters are inserted into new inflectional types, whose plural morpheme is the outcome of a reanalysis of the final part of the stem as part of the ending. The Tocharian classes with pl. *-wa* < **-u-a*, *-na* < **-n-a*, *-nma* < **-mn-a*, and *-nta* <**-nt-a* strongly resemble the Late Latin inflectional class with plural *-ora*. In central and southern Italian dialects and in Romanian, a second neuter plural form **-ora* > OIt. *-ora*, Rom. *-uri* has emerged. The source of this ending is to be sought in the morphological reanalysis of plurals of the type *corpus* : *corpora* 'body(s)', *tempus* : *tempora* 'time(s)', etc. This class became quite productive in the history of Old Italian, since it acquired some new members, like OIt. *cambio* 'exchange' : *cambiora* from *cambiare* 'to change', OIt. *campo* 'field' : *campora* from Lat. *campus*, *-ī* m. 'id.', OIt. *fuoco* 'fire' : *fuocora* from Lat. *focus*, *-ī* 'fireplace; heart', OIt. *prato* 'meadow' : *pratora* from Lat. *prātum*, *-ī* 'id.' , OIt. *orto* 'vegetable garden' : *ortora* from Lat. *hortus*, *-ī* 'garden' (Loporcaro, Faraoni & Gardani 2013; Ciancaglini & Keidan 2018: 50-1). Cf. also the productive neuter plural marker *-er* in German (old *s*-stems), as compared to the much rarer Dutch plurals in *-eren* (of the type *been* 'bone', pl. *beenderen*, *blad* 'leave', pl. *bladeren*). The same happened in Tocharian, where the plural forms ending in **-C-a* have been reanalysed as **-Ca* and then these new plural markers (particularly TchB *-nta*, A *-nt*, and TchB *-nma*) have been generalised to other formations that are etymologically unrelated to these endings.

To sum up, the development described above was caused by the morpho-phonological mergers between the three inherited genders. This produced fluctuation in the gender assignment. In the noun inflection, the outcome of this development caused the shift of the lexical gender of some nouns. The origin of this evolution is clear, but how exactly the gender reassignment has worked is not easily detectable from the data.

3.8.2. THE EVOLUTION OF THE NEUTER PLURAL

So far, we have focused on the development of the thematic neuter singular, investigating details of its formal and functional merger with the thematic masculine. In the following section, I will analyse the evolution of the neuter plural and its merger with the feminine. If I am correct, evidence of this merger may be found in the so-called *oko*-type, where old thematic plural forms may have been reanalysed as singular due to the formal merger of the neuter plural with the feminine singular.

3.8.2.1. The *oko*-type

From a synchronic perspective, the nouns belonging to the so-called *oko*-type constitute a coherent class. They are typically alternating and have no formal differentiation between nominative and oblique in the inflection of both the singular and the plural: nom.obl.sg. *-o* and nom.obl.pl. *-onta*. Since this is the only Tocharian B inflectional class with obl.sg. *-o* (with the exception of the unproductive and semantically marked *śana*-type), it follows that if a noun has an obl.sg. *-o* (or derived forms regularly based on the oblique stem) and does not refer to a female entity, it can be included into this class of alternating nouns.

From a diachronic perspective, they are problematic. As pointed out by Adams (2015: 179), in origin it is a heterogeneous group, which, for the most part, is represented by verbal nouns (both abstract nouns and *nomina actionis*). Synchronically, the nouns of the *oko*-type can be divided into two groups: (1) nouns that have cognate verbs; (2) nouns without any cognate verb attested. In the following, I will deal with these two groups separately.

Nouns with cognate verbs

The mechanism thanks to which the noun is derived from the verb is not always the same. Indeed, the root vowel of the noun does not often match the root vowel of the verb synchronically (Ringe 1987; Adams 2015: 179f.). See the following list (Tocharian A loanwords from Tocharian B are given in square brackets):

Table III.24. Nouns of the *oko*-type derived from verbs

VOWEL CORRESPONDENCE	NOUN	VERB
(1) *a* :: *a*	TchB *kāko* /káko/ ‘invitation’ TchB *krāso* /kráso/ ‘vexation’ TchB *plānto* /plánto/ ‘joy’ [TchA *plānto* ‘id.’]	TchB *kwa-*, *kaka-* ‘to call, invite’ TchB *krasa-* ‘to vex, annoy’ TchB *planta-* ‘to rejoice, be glad’

	TchB *yāso* /yáso/ 'excitement'[281]	TchB *yasa-* 'be excited'
(2) *ə* :: *ə*	TchB *palsko* /pə́lsko/ 'mind' TchA *pältsäk* 'id' TchB *raso* /rəso/ 'span' TchB *traṅko* /trənko/ 'sin'	TchB *pləska-* 'to think' TchA *pälskā-* 'id.' TchB *rəs-* 'to stretch' TchB *trənk-* 'to lament' or PTch **trənk-* 'to cling'[282]
(3) *aw* :: *aw*	TchB *pauto* /páwto/ 'flattery' TchA *poto*[283] 'id.'	TchB *pawta-* 'to flatter' TchA *pawtā-* 'id.'
(4) *ay* :: *ay*	TchB *laiko* /láyko/ 'lotion (?)'[284]	TchB *layka-* 'to wash'
(5) *əy* :: *ə*	TchB *pilko* /pə́ylko/ 'insight' TchA *pälk* 'id.' TchB *pirko* /pə́yrko/ 'rise' TchA *opärkā* 'at sunrise'[285] TchB *misko* /mə́ysko/ 'trading'	TchB *pəlka-* 'to see, look' TchA *pälkā-* 'id.' TchB *pərka-* 'to rise, come up' TchA *pärkā-* 'id.' TchB *məsk-* 'to exchange'
(6) *'əy* :: *əy*	TchB *ṣiko* /ṣə́yko/ '(foot)step' TchA *ṣik* 'id.'	TchB *səyka-* 'to take a step' TchA *säykā-* 'to be flooded'
(7) *yə* :: *wə*	TchB *yarpo* /yə́rpo/ 'merit'	TchB *wərpa-* 'to enjoy'
(8) *ay* :: *əy*	TchB *traiwo* /tráywo/ 'mixture'	TchB *trəywa-* 'to mix'

Let us ignore for a moment the question of the origin of the final TchB *-o* and let us focus instead on the mismatching root vowel between the noun and the verb. As can be seen, the nouns grouped in (1)-(2)-(3)-(4) merely repeat the root vowel of the underlying verbs. The relevant issue here is to understand whether the nouns are derived from the verbs or the derivation is to be interpreted the other way around. For groups (1)-(2), the first

[281] Adams (DTB: 533) glosses the word as feminine. It is only attested in two fragments (B155 b4 and B527 a4), where there are no agreement environments that allow us to establish the gender with certainty.

[282] See Adams (DTB: 332).

[283] See Pinault (2008: 434).

[284] The meaning follows Filliozat (1948) and Broomhead (1962). Adams (DTB: 610) proposes 'bath, washing'.

[285] This noun is a hapax legomenon attested in A265 a3. The meaning follows Krause & Thomas' "zur Morgenzeit" (TEB § 286). Sieg, Siegling & Schulze (SSS) translated it as "vielleicht = im Osten".

solution seems generally more plausible, but the case of TchB *krasa-* is problematic.[286] Malzahn (2010: 613) analyses it as a denominal verb from an unattested continuant of a PIE **o*-stem (but see DTB: 231 and Hilmarsson 1991: 142ff. for yet other suggestions). On the other hand, TchB *pawta-* 'to honour, flatter' is derived from an abstract formation **b^{h}ou̯d^{h}o-* 'listening, attention', which is however not directly attested itself (Malzahn 2010: 730). Otherwise, one might say that TchB *paut-o* is itself directly derived from PIE **b^{h}ou̯d^h-* and that the verb is denominal after this attested substantive.

The nouns sorted in the other groups have different root vowels with respect to the verbs to which they are related.

Nouns in (5)-(6)-(7) are the continuants of the PIE **e*-grade, while the underlying verbal roots go back to the zero grade (Winter 1988: 777f.). Indeed, labial consonants had a palatalised counterpart in Proto-Tocharian, which mostly resulted in the corresponding non-palatalised consonant with colouring of the following PTch **ə* to TchB *i*.[287] Therefore, the vowel mismatch between nouns and verbs in groups (5)-(6) is to be interpreted as an original paradigmatic opposition between the zero grade of the verb and the **e*-grade of the derived noun, which in turn caused palatalisation of the preceding consonant. A confirmation of this analysis is offered by TchB *ṣik-* 'footstep' < **seu̯̯ik-*, which shows palatalisation of the *s-* (cf. the underlying verb TchB *səyk-* < **sik-*). Furthermore, if TchB *yarpo* /yə́rpo/ (7) has been correctly identified as derived from *wərpa-* (Winter 1988: 777), we can account for the palatalisation of the initial **w-* by postulating an *e*-grade of the root **u̯̯erP-*.

The case of TchB *traiwo* 'mixture' (cf. the derived adjective *traiwoṣṣe**) and TchB *trəywa-* is difficult, because the etymology of the verb is debated. However, the type of vowel correspondence between the noun and the verb may allow us to think that the former derives from a form with **o*-vocalism in the root, while the underlying verb shows the outcome of the zero grade. If so, one may wonder whether this noun is to be interpreted as a derivative of the τομή-type (with lack of *o*-umlaut in roots with *ai-* or *au-*

[286] TchB *kwa-*/*kaka-* 'to call' has been correctly derived from PIE **ǵ^{h}uH-* 'to call' (cf. Skt. *hávate*, Van Windekens 1976: 192; Hackstein 1995: 24). Hilmarsson (1996: 200-1) reconstructs **ǵ^{h}uH-kH-* yielding **k^{w}aka-* > PTch **kaka-*, while a non-extended root **ǵ^{h}uH-* should have developed TchB *kwa-*. TchB *kāko* 'invitation' is historically derived from the subjunctive stem |káka-| of TchB *kwa-*. TchB *planta-*, A *plantā-* is from **sploH-nd-* (cf. Lat. *splendēo* 'to shine'). For the development PIE **-nd-* > PTch **-nt-* (instead of **-nt^s-*), see Malzahn 2010: 742; DTB: 459. TchB *yasa-* 'to be excited' is an intransitive verb derived from TchB *yəsa-* 'to excite (sexually)' < PIE **i̯̯es-* 'to seethe' (Gk. ζέω 'to boil', Skt. *yásati* 'to froth up', etc.). As for the verbs with *ə*-grade, TchB *pləska-*, A *pläskā-* is from **b^{h}l̥g-ske̯/o-* (cf. Lat. *fulgō*, Melchert 1978: 104), while for TchB *rəs-*, A *räsā-* 'to stretch' no clear etymology is available.

[287] TchB *palsko*, A *pältsäk* (with *t*-epenthesis) 'thought' may have derived directly from PTch **pəlsk-* < **b^{h}l̥k-ske̯/o-*. Otherwise, if from an original **e*-grade, one can say that the noun was originally **pĺ̥sko* (cf. 3sg.subj. *plāskaṃ*), which subsequently evolved into **pəĺ̥sko* > **pəlsko* with regular depalatalisation of **ĺ̥s* > *ls* (cf. TchB *pəlka-* 'to see' vs. TchB *pləska-* 'to think' and TchB *kərsa-* 'to know' [3sg.prt. *śārsa*] vs. TchB *krəsta-* 'to cut' [3sg.prt. *karsta*]). See Kim (2007b) and Peyrot (2013: 479-80).

diphthongs, cf. Peyrot 2013: 52; Pinault 2008: 433-38). But the isolation of the stem pattern in the vowel correspondences between the noun and verb invokes caution.[288]

The vowel mismatch described so far can be historically presented in the following terms:

Table III.25. Vowel correspondence between nouns and underlying verbs

TOCHARIAN VOWEL CORRESPONDENCE	PIE GRADE
'əy :: *ə*	**e* :: **Ø*
'əy :: *əy*	**e* :: **Ø*
yə :: *wə*	**e* :: **Ø*
ai :: *əy*	**o* :: **e* or **e*(h_i) :: **Ø*

Origin of the *oko*-type

It is now time to comment on the final vowel TchB *-o* and to discuss its origin. First, we need to clarify how these nouns were inflected in Proto-Tocharian. The comparison between Tocharian A and B yields a clear picture. See the following correspondences:

TchB *palsko* 'mind, thought', pl. *pälskonta* :: TchA *pältsäk*, pl. *pälskant*
TchB *wartto* 'forest', pl. *wärttonta* :: TchA *wärt*, pl. *wärtant*
TchB *parso* 'letter', pl. *pärsonta* :: TchA *pärs*, pl. *pärsant*
TchB *pilko* 'insight, view', pl. *pilkonta* :: TchA *pälk*, pl. *pälkäntu**[289]
TchB *ṣiko* '(foot)step', pl. *ṣikonta* :: TchA *ṣik*, obl. pl. *ṣikās*

[288] The underlying verb TchB *trəywa-* has been connected with the PIE root **terH-* 'to drill, rub' (Gk. τείρω, τρί̓βω, Lat. *terō* 'to rub', Lith. *tìrti* 'to investigate', etc. LIV²: 632), but the derivation and the ablaut grade from which it comes from are unclear. On the basis of the alleged participle *tattripu* in Tocharian A, Adams (DTB: 337) reconstructs PTch **trəyp-*, but Malzahn (2010: 671) claims that *p* for *w* could be secondary (likewise Peyrot 2013: 759 fn. 322). One can toy with the idea that the paradigm of the verb actually originated from the noun. Thus, TchB *traiwo* could be the outcome of either PIE **troH-i-* or **trHo-i-* (cf. ppp. Lat. *trītum* < **treh$_1$-i-*, de Vaan 2008: 616), enlarged with the resultative adjectival suffix *-u̯o-*, thus **troHi-u̯o-* or **trHoi-u̯o-* (cf. TchB *traiwe* 'mixture (?)', Malzahn 2012: 168). Our TchB *traiwo* would be the original neuter plural reanalysed as a (collective) singular. Otherwise, TchB *tri-w-* is from an athematic present PIE **trH-e̯i-* (de Vaan 2008: 616) followed by *-w-*. If so, a derived noun based on the *o*-vocalism of the stem was built in Pre-Proto-Tocharian. But this is of course very speculative. The adjective *triwaitstse**, based on a noun *triwo**, obl. sg. *triwai** is secondary and based directly on the verb. Compare also TchB *ṣərt-*, A *ṣärttw-* 'to incite, instigate' and the nouns TchB *ṣārtto** 'encouragement (?)' (obl. sg. *ṣārttai*), B *ṣertwe* 'instigation' (τόμος-type) and TchB *spartta-*, A *spartwā-* 'to turn' and the nouns TchB *spārtto* 'discipline (?)', TchB *spertte* 'behavior', A *spartu*, on which see Pinault (2008: 448) and Malzahn (2012: 169).

[289] Cf. TchA *pälkäntwäṣ* in A227-228 b7 and TchA *pälkäntwā-ṣi* in A222 a1.

Only five nouns attest a plural paradigm in Tocharian A. Three of them match the inflection of Tocharian B. On the basis of this correspondence, it is safe to reconstruct a Proto-Tocharian inflectional class with nom. obl. sg. *-*å* > TchB -*o*, A -Ø, and nom. obl. pl. *-*ånta* > TchB -*onta*, A -*ant*. The only two nouns that may invalidate this reconstruction are TchA *pälk* and TchA *ṣik*. As for the first noun, the plural -*äntu* is very productive in Tocharian A, so it can be interpreted as secondary (cf. also the alternation in the Tocharian B plurals *pärsonta* ~ *pärsanta* and *träṅkonta* ~ *träṅkanta*). The plural TchA *ṣikāñ* |-*ās* is more problematic. I will come back to this form later.

As pointed out by Hilmarsson (1986: 19) and Adams (2015: 179), the nucleus of this class is to be sought in deverbal nouns derived with the PIE abstract suffix *-*eh*$_2$. By assuming that the plural -*nta* is late, this reconstruction works phonologically fine, since an original paradigm nom.sg. *-*eh*$_2$, acc.sg. *-*eh*$_2$-*m* would have yielded nom.obl.sg. PTch *-*å*.

But there are two additional problems to be solved: (1) why do these nouns not inflect as members of either the *kantwo*-type or the *okso*-type? (2) Why are these nouns alternating and not feminine? I think that these two questions are linked, and a common answer can be offered.

In my view, some of the nouns of the *oko*-type can be historically analysed as neuter plural forms ending in *-*eh*$_2$ of corresponding thematic neuter formations in *-*om* of the following types: (1) PIE **i̯ugóm* 'yoke', pl. **i̯ugéh*$_2$; (2) PIE **h*$_2$*érh*$_3$*-trom* 'plow', pl. **h*$_2$*érh*$_3$*-treh*$_2$; (3) and perhaps **d*^{h}*eusóm*, pl. **d*^{h}*eu̯séh*$_2$, if this latter type is to be reconstructed for the proto-language (Goth. *dius* 'wild animal', ON *dýr*, OE *dēor* < **d*^{h}*eu̯sóm*, but cf. also OCS *duxъ* 'breath, spirit' < **d*^{h}*ou̯sóm*, Nussbaum 2017: 244ff.; cf. also PIE **u̯erd*^{h}*om* 'word', **u̯eg*^{h}*i̯om* 'vehicle').[290] Furthermore, they can also be the outcome of neuter nouns of the R(*ó*)-*o*-type. We have seen that these derivatives are typically masculine. However, neuter forms can be occasionally found in some Indo-European languages. An example is Hitt. *u̯arpa*- (nt.) 'enclosure', mostly used in the plural *u̯a-ar-pa* (Melchert 2014; Nussbaum 2017: 234). This noun can be compared in both the meaning and the formation with PTch **wærpæ* (cf. A72 b2 loc.sg. *tālont warpaṃ* "in a miserable enclosure"), which was the base of TchB *werwiye* 'garden' (colloquial spelling for *werpiye*, cf. the derived adjective *werpyeṣṣe**), TchB *werpiśke** 'garden', A *warpi* 'garden'. This reconstructed noun seems to be also the source of the verb TchB *warpa*-, A *wārpā*- 'to surround' (DTB: 637; Malzahn 2012: 167).

It follows that the *oko*-type can be traced back to either *-*eh*$_2$-formations or old neuter plural forms reinterpreted as singular.[291]

[290] Cf. also Hilmarsson (1986b: 115): "Perhaps in this case the -o : -onta flexion is based on an old neuter collective plural in *-ā?". For a theoretical framework of this merger based on Latin data, see Rovai (2012).

[291] If so, TchB *krasa*- 'to torment' may be a denominal verb from **g*^{h}*ros-om*, pl. **g*^{h}*ros-eh*$_2$ with the *a*-vocalism due to *a*-umlaut which in turn has been transferred to the noun TchB *krāso*. Also, TchB *traiwo* 'mixture' seems to be linked with *traiwe** 'id.' (hapax legomenon in IT3051 b3). Synchronically, they are two different nouns, but one could also toy with the idea that they originally

This development has been caused by the morpho-phonological merger between the singular inflection of the feminine in *-*eh*$_2$ and the plural inflection of the neuter thematic stem, both ending in *-*å* in Proto-Tocharian. This merger would have favoured the reanalysis of old neuter plural forms as singular. If this is indeed the case, we have to assume that words with *-*å*-inflection (from both the feminine *-*eh*$_2$ and the old neuter plural) had some variants forms in the ancestors of the classes with pl. ending TchB *-añ*/*-aiñ*, A *-āñ* and the *oko*-type for a while, with the subsequent victory of one of the paradigms at the end. Indirect evidence for such a reconstruction comes from other nouns with a formation parallel to the one of the *oko*-type but with different inflection, gender, and root grade. Some examples include (Adams 2017: 1374): TchB *prosko* f. 'fear' (obl. sg. *-ai*) : TchB *prəska-*, A *präskā-* 'to be afraid'; TchB *yoko* f. 'thirst, desire' (obl. sg. *-ai*) : TchB *yok-* 'to drink'; TchB *ṣārtto* (obl. sg. *-ai*) 'encouragement (?)' : TchB *ṣərtt-* 'to incite'; *tsāro* (obl. sg. *-a*) 'monastery' : TchB *tsər-* 'to separate'. The deviant plural TchA *ṣikāñ*| *-āṣ* '(foot)steps' for the expected **ṣikant* may be now interpreted in the same light.

Nouns without cognate verbs

According to Adams (DTB: s.v.) the few nouns of the *oko*-type for which no cognate verbs attested are: (1) TchB *wartto*, A *wärt* 'forest'; (2) TchB *miśo* 'urine; (3) TchB *oko*, A *oko* 'fruit'; (4) TchB *parso*, A *pärs* 'letter'; (5) and perhaps TchB *to* 'hair (?)'.

Under this short list, another noun needs to be ranged. It is TchB *pīto* 'price, cost', a loanword from the pre-form of Khot. *pīha-* 'price' < **pīϑa-* (Bailey 1967: 196-7, 1978: 242; Tremblay 2005: 428). Adams (DTB: 412) analyses the noun as masculine and gives the following paradigm: nom.sg. *pīto*, obl.sg. *pīto*, gen.sg. *pītantse*, obl.pl. *pitaiṃ*, with a derived adjective *pitaitstse* '±having a price'. This paradigm is truly bizarre, since it makes TchB *pīto* a concurrent member of the *oko*-type (cf. nom.obl.sg. *-o*), the *okso*-type (cf. obl.pl. *-aiṃ* and the derived adjective), and the *arṣaklo*-type (cf. the gen. sg. *-antse*). In the following, I will show that TchB *pīto* is a regular alternating noun of the *oko*-type, since all other deviant forms must be explained differently.

Let us have a closer look at the number of occurrences that each stem has. I found the following attestations:

belonged to the same paradigm that split into doublets after the morpho-phonological merger of the neuter with both the masculine and the feminine (note that TchB *traiwe* is masculine). A similar case might be TchB *pilke* 'copper' and TchB *pilko* 'insight', both derived from the PIE root *b^{h}*leg-* 'to burn, shine' (see also Malzahn 2012: 170).

Table III.26. Occurrences of the inflected forms of TchB *pīto* 'price'

STEM	OCCURRENCES
pito-/*pīto-*	nom.obl.sg. *pito* (IT574 b3; Ot 12 a14; AS7A a1; AS18A a4, a5, b5; DA M 507.5 b2; DA M 507.23 a10; DA M 507.37-.36 a76; DA M 507.38 a54; DA M 507.42-.40 a4; LC 39 a2; B99 b3; B100 a1; B315 b3; B337 a2, b3; THT1107 a5; THT1548.a a3, a5); nom.obl.sg. *pīto* (IT105 b2; IT134 a1; IT222 b2; AS18A a5; NS95 b2; B516 a2); nom.obl.sg. *p*(*i*)*t*(*o*) (DA M 507.38 a52); all.sg. *pitoś* (DA M 507.34 a26; DA M 507.38 a69); perl.sg. *pitosa* (B203 b4; B204 a3; B1460.a a2); perl.sg. *pītosa* (IT159 b5; THT 1548.b b3).
pīta-	gen.sg. *pīta*(*ntse*) (B94 b2).
pitai-	acc.pl. *pitaiṃ* (IT255 a2; B211 b2); der.adj. *pitaitse* (THT1663 b1).

As one can see, in all the non-plural forms this noun is consistently spelled *pito*(-)/*pīto*(-) (cf. also the perl.sg. *pitosa* in e.g. B204 a3 *śaulanmaṣṣe pitosa ce pernerñe kraupatai* "at the price of life you have collected this gloriousness").

The oblique plural *pitaiṃ* 'prices' occurs only twice: (1) IT253 a2 ///*śtwāra kälymiṃtsa yäkweceṃ pitaiṃ*/// "In the four quarters (of the heavens) the purchase prices in horses [are]..." (transl. by Broomhead 1962: I, 262); (2) B211 b2 *abhiṣekṣeṃ pitaiṃ*/// "prices of the ritual bathing..." (?).

On the other hand, the derived adjective *pitaitse* 'having price' is only attested in B316 a1 *snai preke pitaitse* "without time having a purchase price" (literal translation; cf. Broomhead's *pitaitse* 'having a purchase price', 1962: II, 179). Recently, however, Ogihara (2009; 2013a) discovered the new word TchB *ṣito* 'messenger' in the Berlin fragment B333.[292] This noun is a member of the *okso*-type and thus has all the non-nominative forms regularly based on the stem *ṣitai-*. Given that the akṣaras ‹pi› and ‹ṣi› are very similar in the Tocharian Brāhmī, one may wonder whether all the *pitai*-forms actually belonged to the paradigm of *ṣito* 'messenger' (Ogihara 2013a: 207-8; Peyrot 2007: n° 253): IT253 a2 ///*śtwāra kälymiṃtsa yäkweceṃ ṣitaiṃ*/// "In the four directions, horsed messengers (obl.)..."; B211 b2 *abhiṣekṣeṃ ṣitaiṃ* /// "consecrated messengers" (read so but emended to *pitaiṃ* by Sieg & Siegling 1953: 126); B316 a1 *snai preke ṣitaitse* /// "seasonably by the messenger" (= Skt. *akāla dūtasya*, cf. Ogihara 2009: 208-9).[293] It follows that all the *okso*-like forms of TchB *pito* 'price, cost' are ghosts.

As far as the *a*-stem is concerned, it would be attested once in B93 b2 ///*śpālmeṃ tsaiñ*(*enta*)*sa pīta*(*ntse*)/// "...with excellent ornaments of the price of...". As one can see,

[292] See Pinault (2017b: 138f.) for the etymology and the attested forms of TchB *ṣito*.

[293] Since the spelling gen. sg. *-tse* for *-ntse* is usually confined to late and colloquial texts (Peyrot 2008: 69), while B316 is an archaic-classical fragment, TchB *ṣitaitse* can also be interpreted as a derived *tstse*-adjective.

the gen.sg. *pītantse* is the outcome of a restoration by Schmidt (2001: 326) for the attested *pīta*///. This restoration has been recently accepted by Tamai (2018: 389), but it is untenable, because TchB *-antse* is the genitive singular of the *arṣāklo*-type, where only nouns with more than two syllables are included. One would rather expect *pitontse** (or at least **pitaintse*) as the gen.sg. of *pīto.* Furthermore, in similar context, we usually find the perl.sg. *pitosa* 'with the cost of, at the price of'. These problems have been solved by Hilmarsson (1991c: 76), who analysed TchB *pīta* < **pə-yəta* as the imperative of TchB *yəta-* 'to adorn' (cf. Malzahn 2010: 792). The line should therefore be translated as follows: "…adorn with excellent ornaments…".[294] All things considered, we can conclude that TchB *pīto* 'price, cost' is a regular alternating member of the *oko*-type.

Back to the other five nouns, the fact that, synchronically, no cognate verbs are attested does not imply that they never existed historically.

In this respect, a clear case is TchB *wartto*, A *wärt* 'forest'. Adams (DTB: 630) assumes an etymological connection with Skt. *vr̥ti-* 'surrounding, covering' (< PIE **u̯r̥ti-*) and OE *worþ* 'enclosed place' (< **u̯orto-*), but it is difficult from both the phonological and the semantic point of view. On the semantic side, the development 'enclosure' → 'sacred enclosure' → 'sacred grove' → 'forest' is not convincing; on the phonological side, from PIE **u̯r̥ti-* I would expect palatalisation or assibilation of PIE **-t-*.

A more elegant solution has been proposed by Hackstein in a communication delivered to the Thirty-Seventh East Coast Indo-European Conference (University of Michigan, June 14-17, 2018). He argues that TchB *wartto*, A *wärt* is to be derived from the verbal root **u̯re(H)dʰ-* 'to grow, be high', through the resultative verbal adjective **-u̯o-*, thus **u̯r̥(H)dʰ-u̯o-* 'grown, upright/high'.[295] This form would have been subsequently enlarged with the collective suffix **-eh₂*. The only problem with this etymology is that we should expect TchA *wärtu** instead of the attested TchA *wärt* as the outcome of the final Proto-Tocharian sequence **-wV*. I see two possible solutions to this problem. The first implies the reconstruction of the non-complex suffix **-eh₂*, instead of **-u̯eh₂*. If so, the cluster *-tt-* in Tocharian B could be explained by recurring to a secondary gemination of *-t-* in front of *-r-*, which is irregular but common enough (see §3.7.1.2). However, Indo-European nominal derivatives of the verbal root **u̯er(H)dʰ-* are very frequently suffixed with **-u̯o-* (e.g. **(u̯)r̥(H)dʰ-u̯-o-* > Ved. *ūrdhvá-* 'upright', YAv. *ərəδβa-* 'id.'; **(u̯)orHdʰ-u̯-o-* > Gk. ὀρθός 'standing', cf. the Hsch. gloss βορσόν· σταυρόν, Ἠλεῖοι, etc.; see Chantraine 1999: 818-9). The same type of suffixation is therefore expected for Tocharian too. A last possibility is to invoke some kind of contextual change, like the dissimilation of the sequence **w…w* to **w…Ø*, thus **wərtwå* > **wərtå*.

Be that as it may, one could also advocate that TchB *wartto*, A *wärt* is to be historically analysed as a neuter plural, according to the following path:

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[294] This sentence appears in an exchange of words between king Candramukha and king(-gardener) Araṇemi.

[295] See Barber (2014: 32-36) for the problems related to the reconstruction of this root.

(1) Resultative verbal adjective *$\underset{\circ}{\underset{\vee}{u_{r}}}Hd^{h}\underset{\vee}{u}o$- ‘grown, upright/high’;
(2) Substantivised thematic noun *$\underset{\circ}{\underset{\vee}{u_{r}}}Hd^{h}\underset{\vee}{u}o$-*m* (nt.) > **wərt(w)æ* ‘tree’, pl. *$\underset{\circ}{\underset{\vee}{u_{r}}}Hd^{h}\underset{\vee}{u}e$-$h_2$ > **wərt(w)å* ‘mass of trees’ (see Winter 1972: 385f.; Hackstein 1995: 29 for the loss of the laryngeal);
(3) Reanalysis of PTch **wərtå* as a singular with subsequent specialisation of the meaning as ‘mass of trees’ → ‘forest’;
(4) PTch **wərtå* ‘forest’ > TchB *wartto* /wɔ́rtto/, A *wärt*.

Another noun with no attested cognate verb is TchB *miśo* ‘urine’. This noun is to be linked with PIE *$h_3mei\underset{\vee}{g}^{h}$- ‘to urinate’ (Skt. *méhati*, Av. *maēzaiti*, Lat. *meiō*, perf. *mīxī*, Gk. ομείχω, ON *míga*-). This is a highly productive verbal root, which generated derived nouns in several languages. It is however quite remarkable that none of them is formed through the suffix *-eh_2. We may therefore etymologically link TchB *miśo* with OLG *migge* ‘Harn’ < PGerm **migja*- (nt.; see Seebold 1970: 348; NIL: 384) as both reflecting a neuter thematic noun in *-$\underset{\vee}{i}o$-. If so, the reanalysis of the plural *(h_3)$mi\acute{g}^{h}\underset{\vee}{i}eh_2$ > **mə́śå* as singular would have been favoured by the collective meaning of the noun. Otherwise, following Adams (DTB: 497), the Tocharian word is derived from an *$\underset{\vee}{i}e/o$-present (cf. Lat. *meiō*).

The next noun to be discussed is TchB *oko*, A *oko* ‘fruit’. The formal resemblance between Tocharian A and B strongly suggests that one language borrowed from the other. Van Windekens (1976: 332) advocates that Tocharian A is the source language, but this is improbable, since almost all the assured inner-Tocharian loanwords point to Tocharian B as the source language. For this reason, any formal link with the PIE root *$h_2e\underset{\vee}{u}g$- ‘to grow’ is difficult, because only in Tocharian A would **aw* yield *o*. This root is continued in Tocharian as TchB *awks*-, A *oks*- ‘to grow, increase (Gk. αὔξω ‘to increase’, Malzahn 2010: 547, cf. also Kümmel apud LIV^{2}: 288f., who sets up a PIE root variant with final *-*s*-). However, a last possibility in order to connect TchB *oko* with PIE *$h_2e\underset{\vee}{u}g$- is starting with a zero grade *h_2ug-*e*-h_2 (neuter plural or *eh_2-derivative), which would have yielded **ukå* > **åkå* (umlaut) > *oko* (cf. PIE **uksōn* > **ukså* > *okso*) quite regularly. Otherwise, Winter (2011: 229-30) suggests an etymological connection with OCS *agoda* ‘fruit’, Russ. *jágoda* ‘berry’, Lith. *úoga* ‘id.’ and Goth. *akran* ‘fruit’ (cf. also DTB: 115).

The origin of TchB *parso*, A *pärs* ‘letter’ is debated. Van Windekens (1976: 365-6) derives TchB *parso*, A *pärs* from TchB *pərsa*-, A *präsā*- ‘to sprinkle’, but this is semantically difficult. Tremblay (2005: 428) suggests a loanword from “Primitive Khotanese” **parsa*-, which is said to be the ancestor of Khot. *pa’sa*- ‘messenger, emissary (?)’. Bailey (1979: 224) claimed that this word comes from PIE **pel-*(*ḱ*)*-* ‘± to turn, wind’, but his reconstruction is doubtful because continuants of this verbal root are not attested in other Iranian languages and the Iranian origin of Arm. *parsem* ‘to throw (in a sling)’ is unproved and semantically difficult (Hübschmann 1897: 514). Furthermore, LKhot. *pa’sa*- is sporadically attested and only in late texts, where, moreover, a meaning ‘messenger’ does not always fit the context. Furthermore, there is no proof that in LKhot. *pa’sa*- the so-called subscript hook stands for OKhot. *-r*-. Therefore, I think that an etymological link between TchB *parso*, A *pärs* ‘letter’ and an alleged OKhot. **parsa*- is better to be abandoned. On the other

hand, one may wonder whether this word is part of the inherited lexicon. If so, it could be derived from the possible outcome of the PIE root **b^{h}ers-* 'hurry, haste', cf. Hitt. *parš-* 'to flee, escape', Lat. *festīno* 'to hurry', W *brys* 'haste, speed, hurry' (Schrijver 1990; Kloekhorst 2008: 640-1; de Vaan 2008: 216; Matasović 2009: 29).

The last noun to be discussed is very difficult to identify and to interpret historically. It is TchB *to*, whose meaning has been established as 'human body hair, pubic hair' by Adams (1987 and DTB: 327). This noun seems to be attested only once in the following documents:

AS8A b6

ārtärne	*päknāträ*	*klaiṃ*	*ekalmī*	*yāmtsi*
Ārdrā:LOC.SG	intend:3SG.SBJ	woman:OBL.SG	subjected to	do:INF
naine	*ysissi*	*yoñyeṣṣe*	*to*	*pwarne*
?	touch sexually:INF	?	?	fire:LOC.SG
hom	*yamaṣäle*	*sā*	*ekalmī*	*mäsketrä*
oblation:NOM.SG	do:GER.N.SG	this:NOM.SG.F	subjected to	be:3SG.PRS.ACT

Filliozat (1948: 65) and Adams (DTB: 237) give a second attestation in W2 a6, where they read the plural form *tonta*: *//weñ erkasenta lāni yamaṣṣälona kete*[296] *ratre krāke tonta alā///* "*erkasenta* and *lāni* are to be made; to whomever the red dirt and the *tonta*... (?)" (cf. Adams DTB: 237). The document W2 is damaged and very fainted, and the line a6 is particularly hard to read. What is pretty sure, however, is that †*tonta* seems not to be attested at all, because the line quite certainly reads *totka*, as Broomhead (1962: I, 4) already pointed out. The second part of line a6 should therefore be read as follows: *yamaṣṣälona • kete ratre krāke tokta alā(ṣṣäṃ)* "... are to be made; to whom a few red dirt (i.e. the menstrual blood (?)) is ailing ..." (?).

It follows that evidence for a noun TchB *to* comes exclusively from the fragment AS8A, which is also difficult to interpret and translate. It is a Sanskrit-Tocharian bilingual, but the Tocharian part is not a translation of the Sanskrit one; it is instead a detailed commentary on the practical aspects of a magical procedure named *brahmadaṇḍa* (Filliozat 1948: 95-7). As a consequence, the Sanskrit passage does not help to understand the content of the Tocharian section, which explains how this spell should be cast by enumerating for each lunar mansion all ingredients and oblations that one has to burn, in order to obtain the control over someone. In the passage cited above, a woman is to be subjected to someone and a *to* must be placed into fire to achieve this goal. On top of that, there are two other terms that are difficult to interpret. The first one is *taine*/*naine*. Filliozat (1948: 89-91) reads *taine* and interprets it as a locative plural of the demonstrative pronoun TchB *se* 'this' (p. 143). Adams (1986: 339-40) initially included this form into the paradigm of *to*, but then changed his mind, analysing TchB *taine* as a pronominal dual (DTB: 327). On the contrary, both Schmidt (1997: 256) and Pinault & Malzahn (apud CETOM: s. PK AS 8A) read *naine*, but their interpretations are different: on the one hand, Schmidt

[296] Filliozat (1948: 65) reads *kene*, but Broomhead's *kete* (1962: I, 4) is to be preferred.

connects this word with TchA *neyaṃ* and thus translates '(female) bottom', but there is no evidence in support of this meaning (cf. Tamai 2014: 392 who translates *neyaṃ* with 'on the mat (?)'); on the other hand, Pinault & Malzahn etymologically link TchB *nai** with Chinese *nǎi* 奶 'women's breast, nipple, milk' (see Pulleyblank 1991: 221 for the Middle Chinese reconstruction), which would fit well into the context (see also Kim 2018: 52 and 62 fn. 161).[297]

The second problematic word in the same passage is *yoñyeṣṣe*. Morphologically, it is clearly a derived *ṣṣe*-adjective, but the base *yoñye*° is not clear (cf. also the loc. sg. (?) *yoñyene* in AS8B a4). Adams analyses it as a new word with the meaning of 'pubis'. This would be etymologically connected with Skt. *yoni-* 'womb, vulva'. On the other hand, Sieg (1955: 78-80) interprets *yoñy{e}ṣṣe* as a mistake for TchB *yoñyaiṣṣe* 'pertaining to the path, domain'. However, with the current knowledge of Tocharian, this *yoñyeṣṣe* can be now interpreted as a late form of the regular *yoñyaiṣṣe*, without recurring to any emendation (cf. Peyrot 2008: 59). Adams (1986: 240) objects that both AS8A and AS8B do not show confusion between *-ai-* and *-e-*, but this is not true since another clear example that can be adduced is TchB *ce* for *cai* 'these' in AS8A b7. As a matter of fact, this text is not carefully written, since many misspellings, omissions of akṣaras, and colloquial forms can be found. From a formal point of view, a form *yoñyeṣṣe* is therefore totally justified. However, it could leave some problems with regard to the meaning. Indeed, if derived from TchB *yoñiya* 'way, path, domain', a meaning 'pertaining to the way, domain' does not fit, apparently, the context of the passage.

We can now turn back to TchB *to*. As for its etymology and meaning, Adams (1986 and DTB: 327) is the only one to discuss this noun from a historical perspective. He links TchB *to* with ON *dúnn* (m.) 'down, feathery stuff' (Danish *dun* 'id.') and further claims that PGerm. **dūna* is a thematisation of the weak grade from an original paradigm **d^{h}ouHon-*, **d^{h}uHn-* < PIE **d^{h}euH-* 'to move back and forth, shake'. On the other hand, Tocharian would reflect a form **d^{h}ouHōn* (a collective?), with the following phonological and semantic development: **d^{h}ouHōn* 'fluff' > **tæwå* 'down' > **tåwå* (umlaut) > *to* 'body-hair' (contraction?). I find this etymology quite difficult to accept. First, there is no straightforward evidence that allows us to reconstruct an *n*-stem for both Tocharian and Germanic (cf. Kroonen 2013: 109, who reconstructs PIE **d^{h}uh$_2$-no-* for Germanic). Second, this derivative cannot be found in other Indo-European languages and it is completely isolated in Germanic. Third, I cannot understand how a meaning 'body-hair' or 'pubic hair' could fit the context of the aforementioned fragment. As a consequence, I believe that another etymology for TchB *to* is needed.

As we have already seen, all the other members of the *oko*-type are derivatives of a Proto-Indo-European or a Proto-Tocharian verbal root. We have also seen that where not attested, it can at least be reconstructed on a comparative level. Keeping in mind this derivational pattern and the contexts where TchB *to* is attested, I have tried to find another possible verbal root from which it could have come. From both the formal and the

[297] For yet another hypothesis, see Thomas (1991: 298ff.), who interprets *naine* as an adverb.

semantic perspective, TchB *to* might be linked to the PIE root *$*d^{h}eh_{1}(i̯)$- 'to suck, drink mother's milk' (cf. Arm. *diem* 'id.', Skt. *dháyati* 'id.', *dadhúr* 'they have sucked', Gk. θῆσθαι 'suckle' (Hom.), aor. θήσατο 'he sucked', Lat. *fēlare* 'to suckle', etc.). This root is continued in nominal derivatives in several Indo-European languages. Some examples include: Skt. *dhénā*- 'stream of milk, breast', *dhā́yas*- 'the sucking', *su-dhā́*- 'juice, sap, nectar', Av. *daēnu*- 'female animal', Gk. θηλή 'mother's breast, nipple', θήνιον 'milk', Lat. *fēmina* 'woman, female' (← *'the nursing one'), Umbr. *feliuf* 'give milk', Lith. *dienì* 'pregnant', OCS *děva* 'girl, virgin'. If Tocharian can be inserted into this Indo-European group of nominal formations, then we can reconstruct a derivative of the type *$i̯ugóm$- (nt.), thus *$d^{h}Hóm$ 'breast milk', (pl.) *$d^{h}H\text{-}éh_{2}$, which evolved quite regularly in Proto-Tocharian as **tæ*, **tå* (or *$d^{h}oHi̯\text{-}om/\text{-}eh_{2}$, with possible loss of intervocalic *$\text{-}i̯\text{-}$ >* *-y-*; Ringe 1987: 129f.). This noun has been reinterpreted as singular for two reasons: (1) the increasing formal overlap between the feminine singular and the neuter plural favoured the reanalysis of the old neuter plural as singular; (2) the expected singular form TchB ***te* 'breast milk' would have been homophonous with the Proto-Tocharian nt.sg. of the demonstratives.

If Pinault and Malzahn are right in analysing TchB *naine* as a dual with the meaning of '(two) nipples', the passage in question may be translated as follows: "[If] one intends to bring a woman under one's control [and] to make [her] nipples excited, *yoñyeṣṣe* (breast) milk [is] to be made as an oblation in the fire: she will become subject". Although the new meaning of TchB *to* would fit well into the content of the fragment, I have to admit that also my new interpretation and etymology remain uncertain.

Conclusion

To summarise, the members of the *oko*-type can be historically analysed as verbal nouns. For some of them, the verb from which they derive is still attested. For all others, we have seen that a verbal root can be reconstructed on the basis of the comparison with the other Indo-European languages. The *oko*-type can ultimately be traced back to the PIE type in *$\text{-}eh_{2}$ and to old thematic neuter plurals reinterpreted as singulars. The reason behind this reanalysis has been partially explained in the previous paragraph. A thorough analysis of this evolution will be addressed in the following section.

3.8.2.2. On some Tocharian pluralia tantum and singularia tantum

In many languages, some nouns are inflected either only in the plural (like Eng. *clothes* and Lat. *dīvitiae* 'wealth') or only in the singular (like Eng. *dust* and Lat. *vulgus* 'folk'). These words are respectively labelled pluralia tantum and singularia tantum. In other words, they are nothing more than lexical plurals or singulars whose distinctive property is to have either no singular or no plural inflection (Acquaviva 2008: 15-6).

In Tocharian, there are many nouns that belong to these linguistic categories. Some rare cases of masculine pluralia tantum are TchB *kercci* (nom.pl.) 'palace' and TchB *meli*,

A *malañ* (nom.pl.) 'nose'. However, most of the Tocharian pluralia tantum are the outcome of old neuter forms. These lexical plurals generally have collective semantics.

Their paradigm can be exemplified with the noun TchB *mīsa* 'flesh', whose inflection is as follows:

Table III.27. Inflection of TchB *mīsa*

INFLECTIONAL CLASS	NOM. PL.	OBL. PL.	GEN. PL.	STEM
mīsa-type	*mīsa*	*mīsa*	*mīsaṃts*	*misa-*

To this paradigm, we can add the distributive plural *misaiwenta* 'pieces of meat'. This noun is to be linked with PIE **mēms-* / **mems-* 'meat' (cf. Skt. *māṃsá-*, Goth. *mimz*, etc.). Although this etymological connection is evident, some details on the phonetic evolution of this word are still to be clarified (in particular, PIE **-ms-* > **-ns-* would be expected to yield ***-nts-* in Tocharian B). A recent discussion on this word and the related issues can be found in Pinault (2013a: 350-353).

Like TchB *mīsa*, practically all other nouns included in this class have some problems in their historical analysis. For some of them, despite clear Indo-European cognates, the derivational process involved is unclear. Some others lack any clear etymology. In the previous sections, I have already discussed a productive group of pluralia tantum which show a plural in *-na* or -(*a*)*una*. They are: TchB *särwāna* 'face', TchB *krentauna* 'virtue(s)', TchB *ersna* 'from, beauty', TchB *yasna* 'treasury', etc. For a diachronic analysis of these nouns, I refer to the relevant section (§3.6.1). For a discussion of TchB *āsta* 'bones', see §3.7.1.2.

Other alleged pluralia tantum are: TchB *stmānma* 'pipes, tubes', TchB *proksa* 'grain (?)', TchB *āka* 'grain', TchB *tserekwa* 'deception', TchB *mekwa*, A *maku* 'nails', and TchB *par*(*u*)*wa* 'feathers'.

As regards the first noun, it is a hapax legomenon attested in AS6C a5 *wraṃtse stmānma* 'pipes of the water, gutters', but we have no evidence for analysing it as a plurale tantum, since its singular form could simply be unattested. If so, the singular of *stmānma* could be reconstructed as *stanmau**, parallel to TchB *śanmau*, pl. *śanmānma* (see Hilmarsson 1991: 153).

Two words, TchB *proksa* 'grain (?)' and TchB *āka* 'millet', refer to different types of grain. The former has been identified by Schmidt (2002: 3-4) in the document THT2998.3. However, both its meaning and etymology are unknown (see Peyrot 2018: 259-60 for critical remarks). On the other hand, TchB *āka* 'millet' is attested as both a plural and a singular. It is usually compared with Lat. *acus*, *-eris* 'husk' and Gk. ἀκοστή 'barley', both from **h_2eḱ-* 'sharp'. If belonging to this root, TchB *āka* seems to be an original neuter plural from **h_2eḱ-h_2* (see Pinault 2008: 371 and Peyrot 2018: 253-4 for different proposals). As we will see, the fact that TchB *āka* is both a singular(e tantum) and a plural(e tantum) is diachronically relevant.

The other nouns to be discussed end in TchB *-wa.* Pinault (2008: 25) interprets TchB *tserekwa* 'deception(s)' as a plurale tantum. A possible clue for such an analysis lies in the fact that it occurs frequently with TchB *snai* 'without', an adverb which usually combines with singular nouns. If so, it could be translated with a singulative meaning, i.e. 'deception' (but cf. Adams DTB: 810 translates TchB *tserekwa* with a plural meaning, i.e. 'deceptions'). The noun is related to the verb TchB *tsere-ñ̃ñ-* 'to deceive, trick', whose base seems to be borrowed from Khot. *jsīr-* 'to deceive' (cf. also *jsīrgyā-* 'deception', see Bailey 1979: 115-6; cf. also Hilmarsson 1991a: 87-8).[298]

The two remaining nouns are also those with stronger Indo-European comparisons, even if their derivation and formal shape are not as one might expect. TchB *mekwa*, A *maku* 'nails' (both plural, *pace* Blažek 2001: 192, cf. A321 a2 *tsres maku āṅkaräsyo* "with hard nails and fangs") is connected to the familiar Indo-European noun for 'nail', PIE *$*h_3nog^hu$-* (or *$*h_3nog^{wh}$-?) > Lat. *unguis* 'claw', *ungula* 'hoof', Gk. ὄνυξ 'talon', Arm. *eṙungn* 'nail', OHG *nagal* 'nail', etc. The unexpected *m-* is usually explained through labial assimilation *$*nækwa$* > *mækwa* (DTB: 502 with references; cf. also Blažek 2001, who postulates a compound *$*sm̥-h_3nog^h$-u̯o-* or *$*sem-nog^h$-u̯o-*). Another problem is the lack of *a*-umlaut (cf. TchB *yākwa* 'body hairs' < *$*yækwa$*). I see two possible ways to explain this irregularity. If the plural TchB *-wa* is original, then one could invoke analogical levelling after an unattested singular of this noun. However, if we reconstructed a Proto-Tocharian singular *$*mækw$-*, then we would expect *u*-umlaut, as in TchB *or* 'wood' < *$*æru$* < PIE *$*doru$-*. A second hypothesis is that TchB *mekwa* has been inserted into this inflectional type at a later stage (DTB: 502), when *a*-umlaut ceased to operate. As a matter of fact, this noun is not expected to be alternating in Tocharian because all other Indo-European languages point either to a masculine or to a feminine (Adams l.c.).

The last noun to be discussed is TchB *paruwa* / *parwa* (?) 'feathers'. This noun is attested four times with different spellings: (1) *parwā* in B282 b1; (2) loc.pl. *parwāne* in B282 a5 (cf. Peyrot 2013: 815 fn.819); (3) *parwa* in B89 a4; (4) *paruwa* in W32 b3. On the basis of these forms, it is unclear if the root vowel was /ə/ or /a/. Indeed, B282 is an archaic text, where the spelling *parwā* seems to stand for /parwa/ (likewise *parwāne* /parwane/, cf. Pronk 2009: 88 and Peyrot 2008: 33-39). The other occurrences are from classical texts: on the one hand, *parwa* in B89 a4 speaks for /pə́rwa/, while, on the other hand, *paruwa* in W32 b3 speaks for /paŕəwa/. However, one should note that B89 has various misspelled forms, like *ksā* (b6) for *ksa* 'some, any', *tāmp* (b6) for *tamp* 'that', *träṅko* (a1) for *traṅko* 'sin', *käryaurtto* (b6) for *käryorttau* 'merchant', so that *parwa* might stand for *pārwa* here. In addition, as pointed out by Hannes A. Fellner (apud CETOM: s. THT1105), one is tempting to relate the hapax legomenon TchB *pār* /pár/ 'plumage (?)' in THT1105 b3 to the plural

[298] Michaël Peyrot (p.c.) pointed out to me that TchB *tser-ek** (pl. *tserekwa*) 'deception(s)' might be compared to TchB *tärr-ek* (TchA *trak*) 'blind; blind person', which is usually considered to be a compound with TchB *ek*, A *ak* 'eye'. One may claim that the verb TchB *tsereñ̃ñ-* is from *$*tserek^{(w)}$ñ̃ñ-* through assimilation. However, the comparable case of TchB *weñ-* 'to say, speak' < *$*wek-ñ̃ñ-$* shows that degemination of *$*-ñ̃ñ-$* > *-ñ̃-* is to be expected.

TchB *parwa*. In light of the above, I consider TchB *paruwa* 'feathers' to be phonologically analysed as /paráwa/.

The historical analysis of TchB *paruwa* is equally uncertain. Indeed, within a comparative framework, the reconstruction of the PIE word(s) for 'feather, wing' is notoriously difficult. As summarised by Pronk (2015a: 335), we can subdivide the Indo-European languages into two groups. Some languages point to **p(t)er-*: Gk. πτερόν 'wing, feather', CS *pero*, Hitt. *partāu̯ar*, *-aun-*, etc.; some other languages attest an *n*-suffix: Skt. *parṇá-*, YAv. *parəna-*, Lith. *spařnas*, OE *fearn* 'fern'. Latin *penna* < **pet-na* can be put in the middle. Beside these forms, Hittite has an heteroclitic paradigm *pattar*, *pattan-* (or *pettar*, *pettan-*; cf. also OW *eterin* 'bird' and *atan* 'wing'), and Sanskrit has a thematised derivative Skt. *pátra-* 'wing', which is also attested in Germanic, cf. OHG *fedara*, OE *feðer*, etc.

Kloekhorst (2008: 659) points out that all these words may be interpreted as showing traces of an old **r/n*-stem. If these forms (or at least a great part of them) are to be ultimately connected with a PIE heteroclitic paradigm, then several analogical adjustments were independently developed in the Indo-European languages. In this context, the position of TchB *paruwa* is unclear, since none of the Indo-European cognate words just mentioned points to the reconstruction of a *u*-stem. Pronk (2015a: 336) reconstructs PIE **pth$_2$-er-u-* or **pt(h$_2$)-or-u-h$_2$* but these are ad hoc reconstructions. It is further unclear to me what the fate of PIE **pt-* would be in Tocharian, but I am not aware of any counterevidence for postulating an outcome PTch **p-*. I therefore see two possible solutions for TchB *paruwa*. The first is reconstructing a root **(s)perH-* 'to move; fly', subsequently extended with a *u*-suffix and inflected as a neuter (as per Adams DTB: 383, on the basis of CS *pero*, ORuss. *pero*, etc.). Otherwise, one can relate TchB *paruwa* to the PIE root **péth$_2$-* 'to fly' (LIV^2: 479). If PIE **pt-* developed PTch **p-*, then TchB *pār* 'feather' (?), pl. *paruwa* could be the outcome of an heteroclitic paradigm **péth$_2$-ur*, **pth$_2$-uén-*, which, with analogical adjustments, would have become **paru-* in Proto-Tocharian (metathesis of PIE **-ur* > **-ru* in word-final position and generalisation of the *r*-allomorph in the weak steam). However, some Indo-European languages clearly speak for the reconstruction of a heteroclitic paradigm with the non-complex suffix **-r/n*, thus **péth$_2$-r*, **pth$_2$-én-* (Kroonen 2013: 138-9; Pronk 2015a). In this case, it is possible that the outcome of this paradigm has been influenced by nouns of Class I.2 with sg. **-ər(u)*, pl. **-ərwa* (of the type *kwarsär* 'league, vehicle', pl. *kwärsarwa*, see §3.6.1.2 and further Isebaert 2004).

As briefly hinted above, the case of TchB *āka* 'millet' is important, because it is inflected both as a singulare (cf. HWB74(1).3 *āka laś* 'millet has been spent', cf. Ching 2010: 309-10) and a plurale tantum (cf. SI P 136.b a3: *āka lateṃ* 'millets went out', cf. Ching 2010: 324-6). This irregularity in the inflection becomes relevant if related to another class of nouns that show an ending TchB *-a* in both the nominative and the oblique singular.

In this regard, another good example is TchB *wīna* 'pleasure'. This noun occurs several times in the texts, especially in constructions with the verbs *yam-* 'to do' and *kəlp-* 'to obtain' (Meunier 2013: 170-2). However, it is never attested in agreement with any modifier

that may let us understand its gender and number.[299] For this reason, TchB *wīna* could be either a singulare or a plurale tantum (DTB: 654; Malzahn 2011: 85 fn. 7).[300] In Tocharian A, it is matched by *wañi*, but the two words, though related, cannot go back to the same protoform. From a derivational point of view, TchA *wañi* might match Lat. *venia* 'favour, permission' and possibly OIr. *fine* 'kindred' < PIE **u̯enH-ih₂*. However, Tocharian A points to the reconstruction of either **o*-vocalism or **ē*-vocalism in the root. In the first case, TchA *wañi* can be interpreted as a derivative in **-ih₂* of a noun of the τόμος-type from **u̯enh₁-* 'to desire'.[301] Otherwise, according to Adams (DTB: 654) a vr̥ddhi-derivative **wēnH-i̯o-* might be reconstructed.

As for TchB *wīna*, a mechanical reconstruction would be **unh₂*, which is ad hoc and does not account for the internal *-i-* /əy/. A last possibility, though very tentative, is to reconstruct a root noun with long vowel in the strong cases for the proto-language, thus **u̯ēnH-*, **unH-* 'desire' (nt.?) (see de Vaan 2008: 662 for indirect evidence in support of this reconstruction). From this paradigm, a derivative in **-i̯o-* would lead to the Tocharian A noun. Indirect evidence that the non-derived form survived in Tocharian A comes from the denominative verb TchA *wäynās-*, B *wəynask-* 'to venerate' (see Hackstein 1995: 101; Hilmarsson 1991a: 85ff.; DTB: 906). On the other hand, in Tocharian B this ablauting paradigm would have led to aberrant outcomes with palatalisation of **-w-* in the strong

[299] Hilmarsson (1991a: 85-6) claims that the nominative singular of TchB *wīna* is not attested. On the contrary, Adams (DTB: 654) gives the nominative as TchB *wīna*, but he does not provide any attestation. A possible example could be found in IT233 a4(=SI B 75 a7): *taiknesa pälskontse wīna erepate*, "thus, the face (is) a pleasure for the mind". That *wīna* is an apposition of *erepate* 'face' is confirmed by the Sanskrit parallel: *tathā manoramaṃ bimbaṃ jarayā hy abhimarditam* "because a face gratifying to the mind is destroyed by old age" (Uv. 1.29c-d; cf. Bernhard 1965: 106; Peyrot 2013: 309 fn.275). See Wilkens, Pinault & Peyrot (2014: 12-13) for yet another possible attestation. I therefore agree with Adams that this noun has an undifferentiated nom.obl. *wīna*. The following attestation may play relevant to the understanding of the number of *wīna*: /// *no wīna tākoṃ* "(how then) pleasure should arise?" (SI B 75 b7, cf. Pinault apud CETOM and Skt. *kā nu teṣāṃ ratir bhavet* "how then should there be pleasure for them" Uv. 1.33b). If this passage has been well understood, then TchB *wīna* is the subject of the sentence, in agreement with *tākoṃ* (3pl. opt.). If so, TchB *wīna* is to be considered as a plurale tantum and not a singulare tantum.

[300] The grammatical number of TchB *kerekauna* 'flood' and TchB *särwāna* 'face' is clear (*contra* Malzahn 2011: 84-5 fn. 7): the former is a singular (cf. *ce$_u$ orocce kerekau*(*na*) "this great flood" in Or.15009/296 b4, cf. Tamai 2009), and the latter is a plural (cf. *kaklaiksauwa särwan*(*a*) "the face is wrinkled" in B405 b3, cf. Hilmarsson 1989a; Saito 2006: 225). On these words, see Hartmann (2013: 330 and 369).

[301] TchA *wañi* is said to be masculine on the basis of the agreement in YQ II.13 a4: *mäñcaṃ klyom wañi te napeṃsam* "What is the noble pleasure among the mortals?" (cf. Ji et al. 1998:131). If this passage has been well interpreted and translated, then the adjective *klyom* 'noble', inflected as a masculine singular, agrees with *wañi* (Hartmann 2013: 319; Poucha 1955: 285). However, Peyrot's translation "Oh noble one, is there somehow pleasure among men?" (2018c: 85) is probably to be preferred, because it is perfectly compatible with the Old Uyghur parallel and the question particle TchB *te* usually marks polar questions (cf. also Geng, Laut & Pinault 2004: 364).

cases, lack of it in the weak cases, and different vowels in the two stems (strong stem ****yena*** vs. weak stem ****wəna***). As a consequence, the entire paradigm would have been normalised in favour of the weak stem ****wən-***, with secondary colouring of ****ə*** to ****i***, analogically taken from the strong stem. But this reconstruction is speculative.

Next to TchB *wīna*, there are a few nouns that may have had an undifferentiated ending *-a* in both the nominative and the oblique singular. They are not numerous. According to Malzahn (2011) and Pinault (2012), the members of this class are TchB *yasa*, A *wäs* 'gold', TchB *śalna* 'quarrel', TchB *weta** 'battle' (fem.), TchB *śarka** 'song, music', TchB *keta** 'estate', TchB *śāmpa** 'conceit; pride'.[302] Their formal structure invites to consider them as old collective plural forms in PIE **-h_2*. This may be true at least for TchB *yasa*, A *wäs* (gender unknown, *contra* Malzahn 2011: 88) and TchB *śalna*.[303] Some others, however, seem to have added the morpheme **-a* at a later stage. There are three indications in favour of this claim. The first is that *weta** and *keta** do not show *a*-umlaut (Pinault 2012: 197). The second is that the Tocharian A equivalents of these nouns have different suffixation and inflection (cf. TchA *wac* 'battle' ≅ B *weta* and TchA *tsärk* ≅ B *śarka*). The third is that at least one noun, i.e. TchB *keta** 'estate', is a loanword from Prākrit *khetta-* (cf. Skt. *kṣetra-* 'field'; von Hinüber 2011: 183), as pointed out by Tamai (2004: 100-1) and Pinault (in class and 2012: 197).

Malzahn (2011) has attempted to etymologise some of these nouns, but for many of them she could not find any clear derivation. For some others, she tried to see either influences from an "informal styles of Tocharian B" or analogical influences from rhyming words.[304] I would rather agree with Pinault (2012: 198) that "the most likely assumption would be that this suffix **-ā* (nom. = obl. sg.) was extracted from the old pluralia tantum of the type TB *mīsa* 'flesh' […]", and that it became productive for a while.

If so, a cross-linguistic comparison with Latin and Romance languages becomes significant again. Indeed, in the gradual transition between Classical Latin to modern Romance languages, several neuter plural forms became feminine singular, such as Classical Lat. *arma, -ōrum* 'arms, weapons' (nt.pl.) > Late Lat. *arma* 'weapon' (fem.sg.) > It. *arma* 'weapon' (fem.sg.), Sp. *arma* 'id.', Port. *arma* 'id.'. Another comparable type is Classical Lat. *folium* 'leaf' (nt.sg.), whose paradigm split into doublets: the original neuter singular *folium* was reinterpreted as masculine with the meaning 'paper' (cf. It. *foglio*, Sp. *hoja*, etc.), while the original neuter plural *folia* was continued as a feminine noun and maintained the original meaning of the Latin word (cf. It. *foglia*, Sp. *hoja*, but cf. Fr. *feuille* 'leaf; sheet of paper').

Tocharian A points to the same development. In this language, we find just a few pluralia tantum and, to my knowledge, they cannot be traced back to old neuter plurals.

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[302] Given the fact that the nom.sg. of some of these nouns is not attested, one cannot exclude that they actually belong to the *kantwo*-type (with nom.sg. *-o*, cf. §3.7.1 and Malzahn 2011).

[303] See Malzahn (2011: 99-100) for a probable etymology of the second noun.

[304] For instance, she advocates that TchB *śarka* derived from the informal style, where PTch ****ts'ərka*** might have evolved into *śarka*.

What has happened is that collectives in PTch *-*a* have been mostly reinterpreted as singulars and transferred to other inflectional classes. Some examples include: TchA *paloṃ* (sg.) vs. TchB *palauna* (pl.), TchA *tārśoṃ* (sg.) vs. TchB *tarśauna* (pl.), and perhaps TchA *araṃ* (sg.) vs. TchB *ersna* (pl.) (see Carling 2009: 15).

A more intricate case is TchA *wmār* 'jewel', a feminine noun with count plural *wmāri*. This noun is matched in Tocharian B by *wamer* 'jewel' (pl. *wmera*), a masculine noun. As is clear, the two Tocharian words differ in both the gender and the inflection. Recently, Pinault (2011: 160-64 and 171-3) has commented on these forms and he has reconstructed an alternating noun with singular **wəmær*, and plural **wəmæra*. After the dissolution of Proto-Tocharian, this word has undergone independent developments in both Tocharian languages. On the one hand, TchB *wamer* took over the masculine gender from the (quasi-)synonym TchB *yetwe* 'ornament'; on the other hand, a more significant development took place in Tocharian A. The plural form **wəmæra* first evolved into **wəmara* (through *a*-umlaut), and then was reanalysed as a feminine singular, thus **wəmara* > TchA *wmār*. The expected singular PTch **wəmær* > TchA ***wmar* vanished. The new singular *wmār* has then been provided with a new countable plural *wmāri*. In my view, Pinault's explanation is impeccable, and it allows us to insert TchA *wmār* into the group of Tocharian A nouns coming from original collective formations. As a general tendency, the reanalysis of old plural forms as singulars has been more extensive in Tocharian A. The reason is relatively easy to envisage. Indeed, after the general apocope of final vowels, these substantives would not have had any clear plural marker. Furthermore, given the fact that the great majority of these nouns had a clear collective meaning, the reanalysis of these plurals as singulars is easy to understand.

3.9. SUMMARY AND CONCLUSION

The main questions addressed in the introduction to this chapter were related to the historical evolution of the feminine and the neuter genders in the Tocharian inflection of the noun. In each section, it has been attempted to discuss and solve several issues related to these questions. In particular, I have identified and commented on those inflectional types that have been variously connected to the feminine gender, in order to trace their evolution from Proto-Indo-European to Tocharian. In parallel, the problematic status of the Tocharian *genus alternans* and its historical link to the PIE neuter has been discussed. These two points will be synthetically recapitulated below.

3.9.1. EVOLUTION OF THE FEMININE IN THE TOCHARIAN NOUN

First, I have tried to understand what the evolution of the PIE inflection in *-eh_2 > *-*ā* has been. To this end, I have firstly identified the Tocharian inflectional classes in which we can find synchronic continuants of this reconstructed type. The identified classes are: the *kantwo*-type, the *okso*-type, the *arṣāklo*-type, and, in part, the *oko*-type. Afterwards, I have discussed the etymological and the derivational problems connected to the members of

these classes. The results of my investigation show that Tocharian has inherited and generalised an hysterodynamic ablaut paradigm in *-(*e*)h_2 throughout the inflection of the nouns. The outcome of this reconstructed paradigm has been maintained in the Tocharian B *kantwo*-type, where the singular paradigm nom. -*o*, obl. -*a* can mirror the PIE opposition between strong stem *-*eh*$_2$(-), and weak stem *-h_2-. In Tocharian A, the formal differences between the Tocharian B *okso*-type, *arṣāklo*-type, and *kantwo*-types does not exist. Indeed, the majority of Tocharian A nouns matching these Tocharian B inflectional types are *ā*-stems (< PTch **a*-stems). I have therefore tried to understand whether this mismatch is to be interpreted as an archaism or an innovation. In other words: what was the Proto-Tocharian state of affairs? In order to answer to this question, I have discussed contradictory evidence revealed by a closer comparison between Tocharian A and B. It has been attempted to reconstruct a single inflectional type for Proto-Tocharian, which has tripled in Tocharian B. There are several developments that have caused this split. In short, we can say that some endings and forms are the outcome of specific marks of the *h_2-inflection, some others of the **ōn*-inflection, and yet others have originated after sound changes that are peculiar to Tocharian B. Finally, we have seen that some *(*e*)h_2-stems may have been continued in the so-called *oko*-type, where they have been reinterpreted as alternating.

Second, I have discussed the distribution, the origin, and the evolution of the two **ih*$_2$-formations reconstructed for the proto-language, i.e. the *deví*-type and the *vr̥kí*-type. We have seen that the poorly represented *śana*-type can be traced back to the former type, with the exception of TchB *śana*, A *śäṃ* 'wife' itself, whose singular paradigm nom. -*a*, obl. -*o* mirrors the PIE stem type *g^{w}*énh*$_2$-/-*éh*$_2$-. On the other hand, the origin of the so-called *aśiya*-type can be traced to a more recent Proto-Tocharian stage, since the members of this class seem to have calqued their inflection from that of the adjectives. In addition, we have also seen that the formal and the functional distinctions between the *deví*-type and the *vr̥kí*-type ceased to exist in Tocharian: the final result of this merger has led to the merger of these formations, the outcome of which is continued in the *wertsiya*-type.

3.9.2. EVOLUTION OF THE NEUTER IN THE TOCHARIAN NOUN

As for the development of the PIE neuters, we have confirmed the common assumption that they are in principle continued as the Tocharian *genus alternans*. Our attention has been focused on the evolution of both the thematic and the athematic neuter paradigms.

On the one hand, I have investigated the formal merger of the thematic neuter with the masculine inflection in the singular and with the feminine inflection in the plural. This development must have been quite scattered and gradual, since cases of fluctuation in the gender assignment of (Pre-)Proto-Tocharian can be reconstructed. This led to sporadic cases of shifting of inflectional classes and genders of some nouns.

On the other hand, I have also analysed in detail the outcome of some athematic neuters that have played an important role in the creation of new endings (like the alternating plural marker TchB -*na*, A -*äṃ*) and to the evolution of the Tocharian gender

system in general, like the heteroclitic stems in *-*r*/*n*, the *s*-stems, and the neuter *n*-stems. Special attention has been devoted to the evolution of the heteroclitic stems in *-*r*/*n* and *-*ur*/*n*. I have also laid the basis for the postulation of a new sound law PIE *-*ur* > *-*ru* in Tocharian (probably occurred already in the proto-language?), and I have showed that, through this metathesis, we can historically account for (1) the source of *r*-stem nouns with plural in TchB -*wa*, A -*u* (-*wā*, -*unt*), (2) the unexpected *o*-vocalism in some isolated forms, and (3) the origin and the spread of the plural marker TchB -*una*.

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 *ñäś*, A *näṣ* '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„se*, A *kus* 'who, which';
- Pronominal adjectives, e.g. TchB *allek*, A *ālak* '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 *äntsaṃ* 'which',[305] the pronominal adjectives TchB *makte*, A *mättak* 'self' and TchB *allek*, A *ālak* 'other', the personal pronoun TchA *näṣ* 'I' [fem. *ñuk*]), some other according to number and case (e.g. the personal pronouns TchB *ñäś* '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]*näṣ* 'I'; [B]*se* [A]*säs* 'this'; [B]*su* [A]*säm* '(s)he'; [B]*samp* [A]*saṃ* 'that'; [B]*seṃ* '±this'; [A]*äntsaṃ* 'which'; [B]*mäksu* 'which'; [B]*makte* [A]*mättak* 'self'; [B]*allek* [A]*ālak* 'other'
NUMBER-CASE	[B]*ñäś* 'I'; [B]*tuwe*, [A]*tu* 'you'; [A]*kus* 'which'
CASE	[B]*ksa* 'some'; [B]*intsu* 'which'; [B]*k„se* '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 *äntsaṃ*, 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 *äntsaṃ* 'which' are only attested in the oblique singular *äntāṃ* (cf. A4 a5 *äntāṃ tkanā* "in which land/where on earth" and A70 a2 *äntāṃ kälymeyaṃ* "in which direction"). This pronoun can be traced back to PTch **ən-sœ-nə* (m.), **ən-sa-nə* (f.), where **-sœ-*, **-sa-* are the reconstructed outcomes of the PIE demonstrative **só*, **séh$_2$* (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	*su, sā$_u$, tu*	≈	*säm, sām, täm*	'he, she, the'
Proximal	*se, sā, te*	≈	*säs, sās, tāṣ*	'this'
Remote	*samp, somp, tamp*	≈	*saṃ, sāṃ, taṃ*	'that'
Medial (?)	*seṃ, sāṃ, teṃ*			'± 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.), **séh$_2$* (fem.), **tód* (nt.), which can unambiguously be compared with Ved. *sá* ~ *sáḥ, sā́, tád*, Av. *hə̄* ~ *hō, hā, taṯ*, Gk. ὁ, ἡ, 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 **sœ* < 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 **sœ-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 **sœ-*, **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, **sœ-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 *omp* ~ *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.	*se*	*sa-*| *sä-*	*sā*	*sā-*	*te*	*ta-*| *tä-*
OBL. SG.	*ce*	*ca-*| *cä-*	*tā*	*tā-*	*te*	*ta-*| *tä-*

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 **-eį*, 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 *śana*-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 prove 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 **-œ* > **-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* ~ **sœ* 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. *sáḥ*, OAv. *hə̄*, 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. *ἡ* etc. However, such a straightforward origin is problematic, since the regular outcome of PIE **-eh₂* > **-ā* should have been PTch **-å* > 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* > **să* > PTch **sa* > TchAB *sā* (as per Ringe 1996: 94-96);
(2) loss of the laryngeal in *pausa* (Kuiper's law), thus PIE **séh₂* > **să*(*h₂*) > PTch **sa* > TchAB *sā* (as per Pinault 2008: 542; Fellner 2014: 13);
(3) final PTch **-å* has been replaced by **-a* through analogy with the athematic inflection (as per Fellner 2014: 13, but with hesitation);
(4) lowering of PTch **-å* > **-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 *-*å* to *-*a* – explanation (3) – is difficult, since in the adjectival inflection we find nom.sg. -*ʸa* 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 **å*. Kümmel (2009: 173) adduces PIE **méh₁* '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 **sih₂* (cf. possibly Goth. *si*, OIr. *sí*, Skt. *sī-m*, OAv. *hī*) 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 **tå*(*m*) < PIE **téh₂-m* should be expected, since in internal position **-eh₂-* should have yielded PTch **-å-* > TchB *-o-*.[318] Considering that a shortening of the original **ā* in an accented monosyllable is quite improbable, TchB *tā* must be the result of an analogical replacement of **tå* 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 **sih₂*, see Sihler (1995: 389), Kloekhorst (2008: 750f.), Kortlandt (2017: 100-1). According to Fellner (2014: 14), the reconstruction of PIE **sih₂* is phonologically (but not comparatively) possible, given the fact that he does not accept that the suffix **ih₂* 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. **ih₂* plus **s-*.

[318] For the outcome TchB *-o* from PIE **-eh₂m* compare the TchB *ṣe* '1' with its obl.sg.f. *somo*, which is from PTch **sœmå* < PIE **someh₂-m.* The plural TchB *somona*, A *ṣomaṃ* '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.	*cem*	*tom*
säm	obl.	*cesäm*	*tosäm*
Proximal	nom.	*ceṣ*	*toṣ*
säs	obl.	*cesäs*	*tosäs*
Remote	nom.	*ceṃ*	*toṃ**
saṃ	obl.	*cesäṃ*	*tosäṃ*

From a synchronic point of view, these paradigms are easy to describe. All enclitic elements (*-m*, *-ṣ*/*-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 **-ṣ*, 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 **ṣas* [B *ṣe*]). 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.	*caim*(*p*) - *ceym*	*toym**
samp	obl.	*cemp**	*toym*

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.]).[319] The nominative plural *ceym* has only one

[319] As pointed out by Stumpf (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 aiṣṣäṃ* "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* /cempə́nts/, 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.	*cai, cey*	*toṃ*
su	obl.	*ceṃ*	*toṃ*
Proximal	nom.	*cai, cey*	*toy*
se	obl.	*ceṃ*	*toy*
Remote	nom.	*cai, cey*	*toyna*
seṃ	obl.	*ceyna, cenäṃ*	*toyna*

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* ~ *cenäṃ*.[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. *cenäṃ* 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 *ṃ*-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*, *seṃ*, 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 *ceṃ* 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 **tói̯* (Ringe 1996: 86, cf. Skt. *té*, Gk. οἱ); TchB *ceṃ* is from PIE **tóns* (cf. Skr. *tā́n*, Gk. τούς). The palatalised allomorph *c-* is a Tocharian innovation. Going back to Tocharian A, the nominative plural *ce-* shows regular monophthongisation of the PIE diphthong **-oi̯* > 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 *toṃ* 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 *toṃ* in archaic documents:

toṃ: 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***(***ṃ***): B240 b1; ***toṃn***: B274 a3; ***ton***: U23 a4; B291.a a1; B365 a2; ***toṃtsā***: B563 b6; ***tonmeṃ:*** B274 a4; ***tontsa***: B135 a4; ***tonts***: B274 a1.

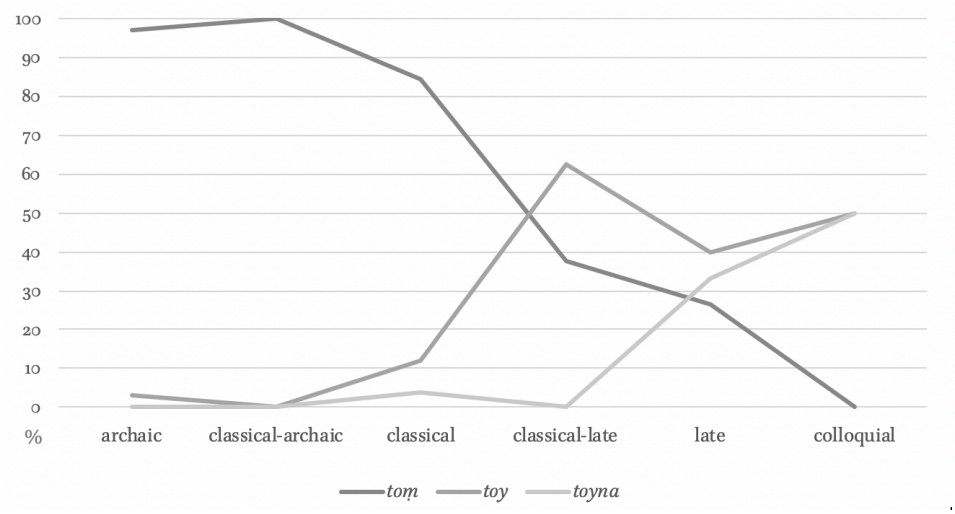
On the other hand, the nom.pl. *toy* and the obl.pl. *toyna* are both new formations. The former might be attested only once in a fragmentary archaic document (IT853 a2, cf. the spelling *träṅko* at line a3), but it became the standard nominative form in classical-late texts. Finally, on the model of *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*:

mäktoṃ: Or8212.163 b5 [arch.]; NS54 a3 [class.], THT2386.j and.s a5 [class.]; IT174a6 [class.] (*mäkt*(*o*)*ṃ*); IT733a3 [class.], THT1603.a b2 [class.] ((*mä*)*ktoṃ*); NS76b5 [class.] (*mä*(*kt*)*oṃ*); ***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 *śana*- and *aśiya*-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 *toṃ* 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 *toṃ* 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 /tonə́kə/ < **tonə́kə*, which is from **ton* + the emphatic particle **-kə* (with *ä*-epenthesis), rather than /tónak/ (Thomas 1984: 224; Peyrot 2008: 126). Furthermore, if *toṃ* 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-ṃ* 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-äṃ*) can go back to the same protoform: both TchA *tos-* and TchB *toṃ* allow us to reconstruct an ancestor PIE **téh₂-ns* > **tāns*.[322] The outcome of the PIE accusative plural **-ns* (> TchB *-ṃ*, A *-s*) is clearly attested in the nominal inflection, where the historical interpretation is widely accepted. Alternatively, one might want to explain TchB *toṃ*, A *tos-* as the result of an analogical development on the basis of the masculine obl.pl. TchB *ceṃ*, A *ces-*. However, analogy is in my view unnecessary. Since in the masculine **-ns* developed into TchB *-ṃ* /-n/, A *-s*, we would expect the same correspondence for the feminine (but see also §4.3.4.4).

The vowel match in TchB *toṃ* : TchA *tos-* could be a problem, since it is generally assumed that PTch **å* 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 **-å-* > TchB *-o-*, TchA *-a-* (e.g. PIE **bʰréh₂tēr* > 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 **å* 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. *toṃ* 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 **tåns* is TchA **tes*, through intermediate **tå^{i}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. *toṃ* 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. *toṃ* 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 **tå* (< PIE **téh₂-m*), parallel to PTch **allå-* (< PIE **h₂eḷieh₂-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 **tå* < 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 *toṃ*. 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 *toṃ* in an archaic document is *toṃ läklenta tne cmelants ṣärmtsa 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 **tå* >> **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.	**só*	>	**sœ*	**séh₂*	>	**så* or **sa*	**tód*	>	**tœT*
	acc.	**tóm*	>	**tœm*	**téh₂m*	>	**tåm*	**tód*	>	**tœT*
pl.	nom.	**tói̯*	>	**tœy*	**téh₂s*	>	**tås*	**téh₂*	>	**tå*
	acc.	**tóns*	>	**tœns*	**téh₂ns*	>	**tåns*	**téh₂*	>	**tå*

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 **œ*; (3) PIE **eh₂* > PTch **å* (4); merger of the PIE series of stops into a single voiceless series (here, PIE **d* > PTch **t*).[325] The different outcome of PIE **séh₂* depends on the two possible interpretations of TchAB *sā* /sá/: either it is the outcome of the loss of the laryngeal through Kuiper's law, or it first became **så* and then **sa* by lowering in final word position. If we accept the second hypothesis, then an outcome **så* 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.	**sœ*	>	**sœ*	**så* or **sa*	>	**sa*	**tœT*	>	**tœ*
	acc.	**tœm*	→	**cœ*	**tåm*	>	**tå*	**tœT*	>	**tœ*
pl.	nom.	**tœy*	→	**cœy*	**tås*	>	**tå*	**tå*	>	–
	acc.	**tœns*	→	**cœns*	**tåns*	>	**tåns*	**tå*	>	–

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 *toṃ* and TchA *tos-* go back directly to PTch **tåns*, 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 **dṷoh₁* 'two' > **dwū* > PTch **wu* > TchA *wu*); (2) PTch **-t* in some other consonant clusters (e.g. PIE **neu̯d-* 'to push' > **nət-* + *-sk-* > PTch **nətk-* > TchB *nətk-* 'to thrust away'). See also Ringe (1996: 64f. and 146f.).

PTch *tå* 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.	**sœ*	>	*sa-*	**sa*	>	*sā-*	**tœ(T)*	>	*ta-*
	obl.	**cœ*	>	*ca-*	**tå*	→	*tā-*	**tœ(T)*	>	*ta-*
pl.	nom.	**cœy*	>	*ce-*	**tå*	>	*to-*	–	>	–
	obl.	**cœns*	→	*ces-*	**tåns*	>	*tos-*	–	>	–

As we have already seen, Tocharian A recharacterised the basic outcome of the demonstrative by adding the enclitic suffixes **-mə* (anaphoric), **-ṣə* ~ **-sə* (proximal) and, perhaps, *-nə* (remote). As far as the phonological evolution is concerned, we note regular monophthongisation of the Proto-Tocharian diphthong **œy* > TchA *e* in the nom.pl.m., and regular outcome of PTch **œ* > TchA *a* (e.g. PIE **ǵomb^{h}o-* 'tooth' > PTch **kœmœ* > 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.	**sœ*	>	*se*	**sa*	>	*sā*	**tœ*	>	*te*
	obl.	**cœ*	>	*ce*	**tå*	→	*tā*	**tœ*	>	*te*
pl.	nom.	**cœy*	>	*cai*	**tå*	→	*toṃ*	–	>	–
	obl.	**cœns*	>	*ceṃ*	**tåns*	>	*toṃ*	–	>	–

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 *säṃ* 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 **sœ-nə* 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 *samp* 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* < ***tå*, 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	**cœi*	**cœns*	**tå*	**tåns*	PTch
II	**cai*	**cen*	**to*	**ton*	Pre-TchB
III	*cai*	*ceṃ*	***toṃ***	*toṃ*	Archaic TchB
IV	***cey***	*ceṃ*	*toṃ*	*toṃ*	
V	*cey*	*ceṃ*	***to-y***	*toṃ*	↓
VI	*cey*	*ceṃ*	*toy*	***toy-na***	
VII	*cey*	***cey-na***	*toy*	*toyna*	Late TchB

In the masculine inflection, we see the preservation of the diphthong **cœi* > *cai* in the nominative plural (stage I-III). The oblique plural of the feminine TchB *toṃ* is the regular outcome of PTch **tåns* < 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. *ṣai* 'was' > *ṣey*, Stumpf 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 B50a4) 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 *cemp**, 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 *toṃ*, through assimilation of the dental nasal before the labial nasal. This reconstruction is confirmed by the oblique of the masculine *cemp** < *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. *arṣāklaimeṃ*; *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 "*ālyek̲* = alius" in Sieg & Siegling 1908: 927). All these cognate formations can be traced back to PIE **h₂eli̯os* (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 *ālak*

		MASCULINE		FEMININE	
		TCHB	TCHA	TCHB	TCHA
SG.	NOM.	*allek*	*ālak*	*alyāk*	*ālyāk*
	OBL.	*alyek*	*ālyakäṃ*	*allok*	*ālyäkyāṃ*
PL.	NOM.	*alyaik*	*ālyek*	*alloṅk*(*na*)	*ālkont*
	OBL.	*alyeṅkäṃ*	*ālykes*	*alloṅkna*	*ālkont*

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 *alyeṅk*, 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 *-eṃ* /-en/.[330] Still, in the plural, an isolated nom.pl. *alyaiṅk* is found in B580 b1 (late frgm.), which may have acquired the nasal from the rest of the plural paradigm, cf. obl.pl.m *alyeṅkäṃ* and pl.f. *alyoṅk*(-).

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*(*ai*)*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*(*ai*)*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 *alloṅk* (with the graphic variant *alloṃṅk* in B173 a5) is only attested as a nominative, *alloṅkna* (frequently written *alloṅna*; cf. also *ālloṅkna* 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* ~ *mäktoyna*. 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, *ālloṅ*[*kna*] in B133 a5, *alloṅk* in B379 b2, and *alloṃṅk* in B173 a5). There is further one additional form that Broomhead (1962: I, 24) read *alloṅna*, in a context that clearly requires a nominative:

IT195 a6

///yerkwantalañ	*mewīyañ*	*alloṅna*	*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 *alloṅtä* in this line, which he interprets as a mistake either for *alloṅna* or for *alloṅkä*. However, there is not sufficient evidence for arguing that a nom.pl.f. *alloṅkna* 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 **allœ-*. This particle is often suffixed to pronominal and other deictic words (cf. TchB *ykāk* 'still, TchB *ṣek* '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. *alyekepi*). 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 *ālak*, 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. *ālakäṃ* (cf. nom.sg.m. *ālak*) vs. *ālyakäṃ* (for expected ***ālyak*); obl.sg.f. *ālyäkyāṃ* (< **ālyākyāṃ*, cf. nom.sg.f. *ālyāk*); obl.pl.m. *ālyekäs* (cf. nom.pl.m. *ālyek*) vs. *ālykes* (for expected **ālyesk*), etc. The plural paradigm of the feminine has been totally remade by the addition of *-ont* to the stem *ālk-* (< **ālak-*). A similar recharacterisation affected also the f.pl. TchA *mätkont* vs. B *mäktona** 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 *ālak* 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 /ĺ/. A different

analysis is provided by Malzahn (2010: 5). She argues that PIE **lḭ* became **ĺĺ* and later it could have two different outcomes: (1) it has become palatalised *-ly-* /Ĺ/ 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 **ĺĺ* 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 **lḭ* 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 **lḭ* > PTch **-ll-*. Indeed, he claims that the expected outcome of PIE **lḭ* 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 **lḭ* > 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), *ālek* (B221 a3); classical: *ale*(*k*) (THT1109 b1), *aloṅkna* (THT1115 a1); classical-late: *alekä* (B289 b3); late: *alekä* (B197 b1), *alekak* 'in addition' (OT12.1 a5), *aloṅkna* (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 *alokälymi* 'leaving all other things aside' (= Skt. *ekānta*), and TchB *āläṃ* '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 *āläṃ* with PIE **alḭo-*). In the case of TchB *alokälymi*, we also find the variant *āllokälymi* in the archaic fragment B125 a1 and *all*(*o*)*kä kälymīsa* in THT1520 a1 (arc.), which might be used as an argument that an original phrase *allok kälymi* (obl.sg.f.) was univerbated in **allokəkəĺmi* > ** allokəĺmi* > **alokəĺmi* 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 **aĺĺ-* 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 *-*eh*$_2$ yielded TchB -*a* and assumes that TchB *alyāk* is the regular outcome of PIE **h*$_2$*eli̯eh*$_2$. 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 **h*$_2$*eli̯eh*$_2$ would have merged morpho-phonologically with that of PIE**h*$_2$*eli̯eh*$_2$*-m*, both resulting in **allå-*.

In the feminine plural, the stem TchB *alloṅk-* 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 *alloṅk* 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 **allåns*, which in turn is the direct continuant of the acc.pl. PIE **h*$_2$*eli̯eh*$_2$*-ns*. The nom.pl. *alloṅk* obviously cannot go back to PIE **h*$_2$*eli̯eh*$_2$*-es* > **ali̯ās*, given that it should have evolved into PTch **allå-* > 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 *alloṅk-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 **h*$_2$*el-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.	*$h_2el̥os$	> *allæ	> *allæ-kə	> *alle-kə	> *allek*
	A.SG.	*$h_2el̥om$	> *allæ	>> *aĺ(ĺ)æ-kə	> *aĺ(ĺ)e-kə	> *alyek*
	N.PL.	*$h_2el̥oi$	> *allæy	>> *aĺ(ĺ)æy-kə	> *aĺ(ĺ)ay-kə	> *alyaik*
	A.PL.	*$h_2el̥ons$	> *allæns	>> *aĺ(ĺ)æns-kə	> *aĺ(ĺ)en-kə	>> *alyeṅk-äṃ*
FEM.	N.SG.	*$h_2el̥eh_2$	> *allå	>> aĺ(ĺ)a-kə	> *aĺ(ĺ)a-kə	> *alyāk*
	A.SG.	* $h_2el̥eh_2m$	> *allå	> allå-kə	> *allo-kə	> *allok*
	N.PL.	*$h_2el̥eh_2es$	> *allå	> allå-kə	>> allon-kə	> *alloṅk*
	A.PL.	* $h_2el̥eh_2ns$	> *allåns	> allåns-kə	> allon-kə	>> *alloṅkna*

PIE. Reconstructed PIE paradigm of *$h_2el̥$-*ḭo*-;

PRE-PTCH. Regular outcome of the paradigm, where the sequence PIE *$l̥i$ regularly evolved into **ll*;

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 *-na*. Perhaps, on the model of this new case form, the obl.pl.m. was remarked by *-äṃ* /-ən/, according to the following diachronic proportion: obl.pl.f. *alloṅk-na* :: obl.pl.m. *alyeṅk* >> obl.pl.f. *alloṅkna* :: obl.pl.m. *alyeṅk-äṃ*.

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 *ālak* 'other' can be directly traced back to Proto-Indo-European. Furthermore, I have adduced new evidence in support of the scenario provided by Stumpf (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 *$téh_2$-*es* > **tās* evolved regularly into Tocharian A *to*-, while the accusative plural PIE *$téh_2$-*ns* > **tāns* yielded Tocharian A *tos*-. The archaic Tocharian B plural form *toṃ* 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 morpho-phonologically 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

iprerāntse	[T]*ānte*	*snai*	*tärkarwa*	[C]*astare*	*klautka*
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](*pe*)*laiknetse*	[C]*kreñcepi*	[C]*stamalñeṣṣe*	[T]*akālksa*
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

lwāke	*tatākau*	*mä*(*sketär*)	(*s*)*u*
pot:NOM.SG	be:PRT.PART.NOM.SG	be:3SG.PRS.MID	this:NOM.SG.M
cm(*e*)*lane*	[C]*kreṃt*	[T](*pe*)*laiknetse*	
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 *käṣṣīññe* 'related to a teacher' from *käṣṣī* '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 *eṃṣketstse* 'lasting, permanent' from *eṃṣke* '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*	TchB *-eṃ*	TchB *astari* |*-eṃ* 'pure'
	[A *-e*]	[A *-es*]	[A *āṣtre* |*-es* 'id.']
II.	TchB *-ñ*	TchB *-(nä)ṃ*	TchB *klyomoñ* |*-oṃ* 'noble'
	[A *-ṣ*]	[A *-ñcäs*]	[A *klyomäṣ* |*-äñcäs* 'id.']
III.	TchB *-ñc*	B *-ntäṃ*	TchB *perneñc* |*-entäṃ* 'worthy'
	[A *-ṃś, -ṣ*]	[A *-ñcäs*]	[A *parnoṣ* |*-oñcäs* 'id.']
IV.	TchB *-ṣ*	TchB *-ṣäṃ*	TchB *yāmoṣ* |*-oṣäṃ* 'having done'
	[A *-ṣ*]	[A *-ñcäs*]	[A *yāmuṣ* |*-uñcäs* '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. *klyomoṃ* vs. TchA *klyomänt*; obl.pl.m. TchB *klyomoṃ* vs. TchA *klyomäñcäs*, see Peyrot 2010; nom.pl.m. TchB *klyomoñ* vs. TchA *klyomäṣ*, 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)/ < **-œñə* < **-on-es* vs. A *täpre* < **-œy* < **-oi̯* from TchB *tapre* /tápre/, A *tpär* < **d^hub-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 **krœnt* (but cf. also the Tocharian A variant *krañcäṃ*, which has taken over palatalisation from the nom.pl.), or nom.pl.m. TchB *poñc*, A *poñś* 'all' < PTch **påñcə*. A productive section of this class can be traced back to the PIE possessive formations in **-u̯ent-*, where in Tocharian A the expected nom.pl.m. **-ñś* < **-ñc* has been remade in *-ṣ* after the preterite participle.

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

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. **-oi̯*; obl.pl. TchB *-eṃ*, A *-es* <

PTch *-*æns* < acc.pl. PIE *-*o-ns* (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 *āṣtär* 'pure');
(2) *lle*/*l*-adjectives, i.e. the gerundives (e.g. TchB *pralle*, A *präl* 'to be carried');
(3) *tte*/*t*-adjectives, i.e. the privatives (e.g. TchB *etaṅkätte*, A *atäṅkät* '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 *ñäkci* 'divine');
(6) *ṣṣe*/*ṣi*-adjectives (e.g. TchB *oraṣṣe*, A *orṣi* 'wooden');
(7) *ññe*/*ṃ*-adjectives (e.g. TchB *lwāññe*, A *lweṃ* 'pertaining to an animal');
(8) *tstse*/*ts*-adjectives (e.g. TchB *kramartstse*, A *krāmärts* 'heavy');
(9) *ñci*-adjectives (only in Tocharian A, e.g. TchA k_u*leñci* '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* (*ṣṣe-*, *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 *aṣanīke*, A *āṣānik* 'worthy, arhat [epithet of the Buddha]' from TchB *aṣāṃ*, A *āṣāṃ* 'worthy' ← Khot. *āṣaṇa-* 'id.'; TchB *eynāke* ~ *aināke*, A *enāk* 'vulgar' derived from an Iranian source related to Christian Sogd. *ʾyn'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

ADJECTIVES			PALATALISATION		PLURAL PARADIGM	
CLASS	TCHB	TCHA	PHONOLOGICAL	MORPHOLOGICAL	MASCULINE	FEMININE
I.1	*-re*	*-r*	NO	NO		
	-	*-ts*	NO	NO	nom. TchB *-i*, A *-e*	nom. TchB *-ona*, A *-aṃ*
	-lle	*-l*	NO	YES	obl. TchB *-eṃ*, A *-es*	obl. TchB *-ona*, A *-aṃ*
	-tte	*-t*	NO	YES		
	-te	*-t*	NO	YES		
I.2	*-ñña*	*-Vṃ*	YES	NO		
	-ṣṣe	*-ṣṣi*	YES	NO	nom. TchB *-i*, A *-ñi*	nom. TchB *-ana*, A *-āñ*
	-iye	*-i*	YES	NO	obl. TchB *-eṃ*, A *-näs*	obl. TchB *-ana*, A *-ās*
	-tstse	-	YES	NO		
	-ñci	-	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 *rtär* 'red' < PIE **h₁rud^{h}-ró-* (cf. Gk. ἐρυθρός, Lat. *ruber*, etc.), TchB *swāre*, A *swār* 'sweet' < PIE **suh₂d-ró-* (cf. Gk. ἡδύς, Skt. *svādú-*, etc.), TchB *pärkare*, A *pärkär* 'long' < PIE **b^{h}ŕǵ^{h}-ró-* (cf. Arm *barjr* 'high', Hitt. *parkuš* 'id.', Skt. *bṛhánt-* 'id.', etc.). Isolated *re*/*r*-adjectives derived from verbal bases can seldom be found (e.g. TchB *kätkare* 'deep, far', possibly from *kətk-* 'to put down (?)'[334], if the root is to be set up with this form and meaning; TchB *cäñcare* ~ *ciñcare*, A *ciñcär* 'charming, pleasant' from TchB *cənk-* '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. *amṛ́ta-* 'immortal', Gk. ἄμβροτος 'id.'; Ved. *ákṣita-* 'imperishable', Gk. ἄφθιτος 'id.'; Lat. *invictus* 'invincible' (Pinault 2015c: 162). The general construction is as follows: **ŋ̍-*[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. *kəm-* 'to come') < **œ(n)-k^{w}ə́mə-tœ* 'not (yet) come' < **ŋ̍-g^{w}m̥-tó-*; TchB *etaṅkätte*, A *atäṅkät* 'unhindered' (cf. TchB *tənk-*, A *täṅk-* 'to stop') < **œ(n)-tənkə-tœ* 'not stopped' <**ŋ̍-tŋ̍g^{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 *piṅkte*, A *pänt*, all from **penk^{w}to-* 'fifth' (Winter 1992: 129f.).

The adjectives in TchB *-tstse*, A *-ts* form possessive derivatives (e.g. TchB *oktatse*, 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 |kərsə́na-|, A |kärsnā-|); the second derives from the subjunctive stem (e.g. TchB *karsalle*,[335] A *kärsāl* 'knowable' from the subj. TchB |kársa-| ~ |kə́rsa-|, TchA |krasā-| ~ |kräsā-|). 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 *kärsālle* in archaic THT134 a4, but cf. the verbal abstract *karsalñe* /kə́rsalñe/ and the infinitive *karsatsi* /kə́rsatsi/.

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.	*-re*	*-r*	*-rya*	*-ri*
OBL. SG.	*-re*(*ṃ*)	*-räṃ*	*-ryai*	*-ryāṃ*
NOM. PL.	*-ri*	*-re*	*-rona*	*-raṃ*
OBL. PL.	*-reṃ*	*-res*	*-rona*	*-raṃ*

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.	-(*t*)*te*	*-t*	-(*c*)*ca*	*-ci*
OBL. SG.	-(*c*)*ce*	*-cäṃ*	-(*c*)*ai*	*-cāṃ*
NOM. PL.	-(*c*)*ci*	*-ce*	-(*t*)*tona*	**-taṃ*
OBL. PL.	-(*c*)*ceṃ*	*-ces*	-(*t*)*tona*	**-taṃ*

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 *eṣlyāṃ* vs. TchA *rtäryāṃ*, from *eṣäl* 'to be given' and *rtär* 'red'. In the former, the cluster *-ṣly-* is formed by biconsonantal /-ṣĺ-/, while, in the latter, the cluster *-try-* is formed by triconsonantal /-try-/, otherwise we would have had ***rätryāṃ*.

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.	*-lye, -(l)le*	*-l*	*-lya*	*-lyi*
OBL. SG.	*-lye, -(l)le*	*-läṃ*	*-lyai*	*-lyāṃ*
NOM. PL.	*-lyi*	*-lye*	*-(l)lona, -lyana*	*-laṃ*
OBL. PL.	*-lyeṃ*	*-lyes*	*-(l)lona, - lyana*	*-laṃ*

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 **-liu̯o-*.[337] Accordingly, the masculine plural paradigm of both Tocharian languages would have continued the formations in **-liu̯o-*. On the other hand, the singular paradigm would have been independently remade in the two Tocharian languages: nom.obl.sg. TchB *-lye* < nom.sg. **-liu̯os*, acc.sg. *-liu̯om* (masculine), while the nom.sg. TchB *-lle* and the nom.sg. TchA *-l,* obl.sg. *-l*(*äṃ*) < 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 /-ÍÍ-/. 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 **-liu̯o-* 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 **- liu̯o-* 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 /-ÍÍ-/, 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 īkene*, "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 **-li̯o-* (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 **-li̯-* was PTch **-ll-*, which evolved regularly in TchB *-ll-* and TchA *-l-* (cf. Gk. ἄλλος 'other' < PIE **ali̯os*). 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 *yamäṣäle*; IT122 a3 (*yama*)*ṣṣälle*; IT157 b2 *yamäṣälle*; IT234 b3 *pralle*; IT268 a2 *tsrelle*; AS7N a4 *sarkäṣṣälle*; AS9A b8 *sonopälle*; AS12C a2 *yänmālle*; AS12D b4 *yātalle*; B123 b2 *källālle*, b7 ///*ṣṣälle*; B134 a5 *prekṣälle*; B135 b7 *aiṣälle*; B139 a5 *srukālle*, b6 *tsäṅkāll*(*e*); B140 b3 *kly*(*eu*)*ṣṣälle*; B118 b4 *srukalle*; B127 a4 *yātalle*; B132 a4 *weṣṣälle*, etc.; B240 b1 *släṅkäll*(*e*); B251 a3 *klyelle*; B279 b4 *śmälle*; B291.a b6 (*kata*)*lle*; B336 a5 *śwale*; THT1193 b5 *yatalle*(?); THT1536.a *källalle*; THT1540.i *källālle*; THT1184 a2 *paṣṣälle*; THT1535.d a1 *yamäṣälle*.

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 /ÍÍ/. Indeed, evidence for a palatalised geminate /ÍÍ/ 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.]), *paṣṣallyi* (B67 b5 [class.]), *lkaṣṣällye* (THT3599.a b3 [arch. ~ class. (?)]), *trīwäṣällya* (W39 b1 [class.]), *naṣṣallyanasa* (B324 a5 [late]), *—ṣṣäll(y)i* (B133 b8 [arch.]), ///-*llyi* (IT289 a2 [class.]) and in the paradigm of TchB *allek* ‘other’, e.g. *allye*(*ṅkaṃtso*) (B137 a7 [arch.]), (*a*)*lly*(*e*)*kämpa* (B144 b3 [arch.]), *āllyaik* (B273 a1 [arch.]), and *allyeṅkä* (THT1860 a4 [arch.]). One has to note that the spellings with geminate *-lly-* /ÍÍ/ occur specifically in the inflection of both gerundives and TchB *allek* ‘other’. This may indicate that *-lly-* /-ÍÍ-/ is a secondary palatalisation of geminate **-ll-* /-ll-/ only. On the contrary, in the inflection of e.g. the *ekṣalye*-type (nom.sg. *-lye* /-Íe/, obl.sg. *-ly* /-Í(ə)/, nom.pl. *-lyi* /Íəy/, obl.pl. *-lyäṃ* /Íən/) 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-äṃ* instead of the expected ***-ly-äṃ* can easily be explained diachronically: PTch **-lyæ* > Pre-TchA **-ly* (apocope) > **-l* (depalatalisation in word-final position, cf. PTch **-ññæ* > TchA *-ṃ* /-n/) >> TchA *-läṃ* (regular recharacterisation of the inherited oblique, cf. obl.sg.m. *-rä-ṃ* << 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.	*-tstse*	*-ts*	*-tstsa*	*-tsi*
OBL. SG.	*-cce*	*-tsäṃ*	*-tstsai*	*-tsāṃ*
NOM. PL.	*-cci*	*-tse*	*-tstsana*	*-tsaṃ*
OBL. PL.	*-cceṃ*	*-tses*	*-tstsana*	*-tsaṃ*

[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 **æn-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. *empelyeṃ* (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 **-åna*).[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 *-ṣṣe* 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 |tˢenke-| 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 **-åna* for Proto-Tocharian, which regularly yielded TchA *-aṃ*. Then, in the prehistory of Tocharian B, the sequence **-tsona* (and not the

[340] The contrast invoked by Fellner (2014c: 50 fn.3) between pl.f. TchA *-tsāṃ* and *-tsaṃ* is illusory. Tocharian A rather attests a differentiated plural set nom.f. *-āñ*, obl.f. *-ās* (cf. *knānmune pñintu* [...] *palketsāñ* "wisdom [and] virtue are bright" in A17 b5-6; *palketsās tom* "these [are] bright" A148 a2-a3; *wärtsāñ* [...] *śanweṃ* "the jaws [are] broad" in A292 a6; *//lkātsāñ* in A158a2; *ṣoṅkātsāñ* THT1136 b3; *tspoktsāñ* 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 *tiṃ* '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 **dékm̥* 'ten' > **dᵉ'əkə* > 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 |tˢəlpé-| < PTch **|tˢ'elpʾ/ₑ-| from TchA *tsälpā-*, B *tsəlpa-* 'pass away; be redeemed', see Peyrot (2013: 846); reduplicated preterite [class 2] |śaśämā-| from TchA *täm-* 'to promote'; the imperfect stem |śäkā-| from TchA *tsäkā-* 'to pull out', on which see Peyrot (2012a).

expected **-*ccana*) was analogically adapted to -*ñña* and -*ṣṣana* 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. -*tsaṃ*, which clearly point to -*tsåna*; (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 -*ṃ*, 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.	-*e*	-*Ø*	<	**-œ*
OBL. SG.	-*e*(*ṃ*)	-*ä*-*ṃ*	<<	**-œ*(*ṃ*)
NOM. PL.	-*i*	-*e*	<	**-œy*
OBL. PL.	-*eṃ*	-*es*	<	**-œns*

On the other hand, the Proto-Tocharian feminine paradigm poses a special problem, which involves the oblique singular. Indeed, the correspondence TchB -^{y}*ai* : A -^{y}*āṃ* 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 -^{y}*ai* is to be compared with the gen.(-dat.) sg. TchA -^{y}*e*.[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. **-*^{y}*an*, 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 **-*^{y}*ay* 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 *-^{y}*ai* or *-^{y}*an*, but as an unmarked ending *-^{y}*a* (see Peyrot 2012: 203-4 and the evidence from the TchA (*ṣ*)*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.	-^{y}*a*	-*i*	<	*-^{y}*a*
OBL. SG.	-^{y}*ai*	-^{y}*āṃ*	<<	*-^{y}*a*
GEN. SG.	–	-^{y}*e*	<	*-^{y}*ay*
NOM. PL.	-*ona*	-*aṃ*	<	*-*åna*
OBL. PL.	-*ona*	-*aṃ*	<	*-*åna*

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 *-*i̯o*-, used for the formation of adjectives of appurtenance (cf. PIE *med^{h}-*i̯o*- 'middle' > Ved. *mádhya*-, Gk. μέ(σ)σος, Lat. *medius*, etc., cf. Meillet 1937: 261f.). A good comparable example is TchB *patarye* 'paternal', Skt. *pítrya*- ~ *pítriya*-, Gk. πάτριος, 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 -*ṣṣe*, A -*ṣṣi* 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 -*ṣṣe*/*ṣi* 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 *läkleṣṣe* 'sorrowful' |ləklé-ṣṣe|, pl. TchB *läklentaṣṣe* |ləklénta-ṣṣe| 'pertaining the pains, painful'; sg. TchB *paiyyeṣṣe* |payyé-ṣṣe| 'pertaining to the foot', du. *paineṣṣe** |payné-ṣṣe| '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*)*i̯o*- (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*)*i̯o*- (cf. Arm. -*c*ʿ*i*, 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*)*ṃ*. 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 *ñäś* 'I'; TchB *taññe* 'your' from the genitive of *tuwe* 'you'; TchB *ṣañäññe* 'own; nature, essence' from *ṣañ* 'id.'). Additionally, they can rarely be derived from terms for body parts (TchB *paiyyeññe* 'related to the foot' from *paiyye* 'foot'; TchB *śpālaññe* 'related to the head' from **śəpal* 'head' (vel sim.), cf. TchA *śpāl* 'id.' and TchB *śpālmeṃ* 'superior, excellent', originally an ablative of **śpāl*) and inanimate concrete nouns (TchB *pyapyaiññe* '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' : *ñäkteñña* '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*)*ṃ*, *-ññi* and TchB *-ññe*. These suffixes have traditionally been traced back to PIE *-*n*(*i*)*i̯o*-. Hilmarsson (1987a, followed by Pinault 2011a) dealt with the history and the distribution of the suffixal alternations *-*i̯i̯*/-*i̯*- and he argued that Tocharian developed two variants of this suffix, i.e. *-*ni̯i̯o*- and *-*ni̯o*-, which were originally conditioned by Sievers' Law. According to him, PIE *-*ni̯i̯o*- and *-*ni̯o*- yielded PTch *-*ñəyæ* and *-*ñæ* respectively. Later, they merged in Tocharian B *-ññe*,

[346] One can notice that the Khotanese suffix *-īña* has suspicious similarities with TchB *-ññe*, A -(*e*)*ṃ*. Konow (1932: 62) argued that Khot. *-īña* 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. *dahīña-* 'belonging to a man' from *daha-* 'man'; Khot. *kavīña-* '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. *-īña* is limited to a handful of derivatives, while TchB *-ññe*, A -(*e*)*ṃ* 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 *nāgeṃ* 'snakelike, related to the Nāga-' : Khot. *nāgīña-* 'id'; TchA *kinnarñā-* '(female) Kinnara-' (probably from TchB *kinnaräññā**) : Khot. *kindarīña-* 'id.'.

while Tocharian A maintained them distinguished, i.e. *-*ñəyæ* 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 *-*nḭ̊*- never palatalised the nasal in Tocharian. Accordingly, Tocharian would have inherited only *-*niḭ̊o*-, which evolved TchB -*ññe*, A -*ñi*. He based this reconstruction on the non-palatalised nom.sg.f. TchB *sana*, A *säṃ* 'I', which he traced back to PIE *$smih_2$ (cf. Gk. μία, Arm. *mi*) > *smya > PTch *səṇya- (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 *kḷyomña* : A *kḷyomiṃ* 'noble' (Class II.5); (3) the noun TchB *śamñā-ṃ-śka* : A *śomiṃ* 'girl'; (4) the noun type TchB *weśeñña* : A *waśeṃ* 'voice'; (5) the adjectives TchB *pokaiñña* '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 *säṃ* 'I', 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 *-*V^{i}ññV* (raising of anaptyctic **i*) > *-*V^{i}ñə* (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 *ostañña* /ostə́ññe/ 'related to the house' vs. TchA *waṣtiṃ* < Pre-TchA **wastə^{i}ñə* < PTch **wåstəññæ*;[348] (2) TchB -*añ*- :: A -*en*, TchB *lwāññe* /lwáññe/ 'related to an animal' vs. TchA *lweṃ* < Pre-TchA **lwā^{i}ñə*

[347] Despite the fact that an evolution PIE *-*m*- > *-*n*- in front of the semivowel *-*i̯*- is sometimes attested in other Indo-European languages (cf. Gk. βαίνω, Lat. *veniō* < PIE **g^{w}ṃ-i̯e/o*-), Fellner's path PIE **$smih_2$* > **smya* > PTch **səṇya*- is without parallels in Tocharian. On the possible origin of TchB *sana*, A *säṃ*, see further fn. 388.

[348] Perhaps, one may also add TchB *warñe**, A *wriṃ** 'aquatic' < PTch **wərəññæ*, which is used in both Tocharian languages as a modifier of the word for 'animal', thus 'aquatic animal(s)', cf. B588 a4 *wärñi lwasā*; A154 a4 *wrināñ lwā*; A394 a2 *wrinās lwā*. As one can see, in B588 the adjective *wärñi* 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 **lwaññæ*; (3) TchB *-eñ-* :: A *-en*, TchB *weśeññа* 'voice' vs. TchA *waśeṃ* < Pre-TchA **waśa^{i}ñə* < PTch **wæśæññæ*; TchB *weñ-* 'to say' vs. TchA *weñ-* < Pre-TchA **wa^{i}ñə* < 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 *aśśeṃ* [< **āśyā^{i}ñə* < **aśya^{i}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(i̯)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 *kaśśi* (*kaśśi 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-cmolṣi* 'pertaining to the human birth'). It is generally assumed that this adjective is the counterpart of TchB *eṅkwaññe* '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. *ypeṣi* 'pertaining to the land' from *ype* 'land'; *pekeṣi* 'pertaining to the drawing' from *peke* 'drawing').[350]

[349] Cf. further TchB *oṅkolmaiñe*, A *oṅkalmeṃ* 'of the elephant' and TchB *rṣäkañe* : 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 **oṅk-i* > **oñśi* > *oñi*, although the reduction **-ñś-* > *-ñ-* is, to my knowledge, unattested (cf. also 3sg.opt. *nśitär* 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 *eṅkwañ̈ñe* and TchA *oñi* < **onk-ñi* cannot be questioned (the loss of **k* is parallel to TchB *epiṅkte* : A *opänt*, TchB *piṅkte* : A *pänt*, see Peyrot 2013: 538f.; cf. also TchA *āñcäṃ* 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 *-ñ̃æ* took place, due to the fact that **-ñ̃æ* was reduced to **-ñæ* in consonant clusters, i.e. **ænkñ̃æ* > **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 *$k_u$leñci* 'womanly, female' from *$k_u$li* 'woman' (obl. sg. *$k_u$le*) and *ātläñci* 'manly, masculine' from *ātäl* 'man'. These formations are sometimes matched in Tocharian B by the *ñ̃ñe*-adjectives, as in TchA *atroñci* 'of a hero' : TchB *etre$_u$ñ̃ñe** 'id.'. In fact, TchA *-ñci* and TchB *-ñ̃ñe* 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 *ṣuktante*, A *ṣäptänt* '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*, *-ṣṣe*, and *-ñ̃ñe* inflected according to the following paradigm:

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

	MASCULINE	FEMININE
NOM. SG.	*-$^{(Ć)}$Će*	*-$^{(Ć)}$Ća*
OBL. SG.	*-$^{(Ć)}$Će*	*-$^{(Ć)}$Ćai*
NOM. PL.	*-$^{(Ć)}$Ći*	*-$^{(Ć)}$Ćana*
OBL. PL.	*-$^{(Ć)}$Ćeṃ*	*-$^{(Ć)}$Ćana*

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 *-ṣi* (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 *ṣi*-adjectives in Tocharian A

	MASCULINE	
	SINGULAR	PLURAL
NOM.	-(ṣ)*i*	-(ṣ)*iñi* [-(ṣ)*iñ*]
OBL.	-(ṣ)*i* -(ṣ)*iṃ* -(ṣ)*inäṃ*	-(ṣ)*inäs* [-(ṣ)*is*]

The obl.sg. -(ṣ)*i* is common and coexists with the nasal variants (SSS §111-2). Examples from the *i*-adjectives include: *ñäkci* 'divine' (A13 b3) ~ *lāñciṃ* (A17 b1, b5), *ñäkciṃ* (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 *waṣt* 'palace', so it cannot be excluded it is in compounding with the noun (cf. also *lāñci waṣtantu* "royal palaces" in A319 b5). In the plural, the variants nom.pl. -(ṣ)*iñ*, obl.pl. -(ṣ)*is* are not frequent, and they are mostly used with substantivised adjectives (cf. A1 b6 *māski kätkäläṃ ktäṅkeñc* ***tsraṣiñ*** *sāmuddrä*, "the energetic ones cross the ocean that is hard to traverse", cf. Thomas 1952: 34, but cf. also A447 b5 (*ṣñi*)*kek nu cem* ***tsraṣiñ*** *ṣeñc*, "…hingegen waren sie energisch", Knoll 1996: 17). I found the following examples: nom.pl. *-ṣiñ* (*tsraṣiñ* A1 a3, b6; A447 b5, from *tsraṣi* 'energetic'), *-iñ* (*kaśśiñ* A341 a4; A340 a4 (?), from *kaśśi* 'hungry', cf. TchB *keściye*), obl.pl. *-ṣis* (all.pl. *tsraṣis-ac* A1 a3; perl.pl. *tsraṣis-ā* A354 b3), *-is* (instr.pl. *kärpis-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 *-eṃ* and *-i* used as feminine plurals. The former is attested in A378.1 *wsāṣy-ople{ṃ} tsākkiñ* "tsākkis 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 *wsāṣy-opleṃ* was an uninflected adjectival compound. The second is *lāñci waṣtantu* "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*	*-yāñ, -ṣṣāñ*
	-(ṣ)iṃ	*-(ṣ)ināñ*
OBL.	*-(ṣ)i*	*-yās, -ṣṣās*
	-(ṣ)iṃ	*-(ṣ)inās*
	-(ṣ)ināṃ	
	-(ṣ)yām, -ṣṣāṃ	

In the nominative singular, *-(ṣ)i* alternates frequently with *-(ṣ)iṃ*, 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$_u$leyac* "to the royal woman" in A6 b5; (2) *ñ(ä)kci naweṃsi(n)e* "of divine and human…" in A410 b4; (3) *kn(āṃ)muneṣi kapśiññis* "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)iṃ* is more frequently attested but it is not the standard variant (SSS §112 counted 9 attestations in total), because *-(ṣ)ināṃ* represents the most productive obl.sg.f. For the last variant, I found the following attestations: *ñäkcyāṃ* A35 b1, A63 a6, A208 a3, THT3020a2; //*-ṣāṃ* A5 b1 (?); *puttiśparṣṣāṃ* A257 a3, A313 a2, A338 a2, THT2399 a6, YQII.12 a8 (from *puttiśparṣi* 'relating to Buddhahood'); *añcwāṣṣāṃ* A340 a7 (from *añcwāṣi* 'related to iron'); *wsāṣṣāṃ* A378 5 (from *wsāṣi* 'golden'); *oñi-cmolṣāṃ* A379 a3 (from *oñi-cmolṣi* 'related to the human birth'), *ñemiṣyāṃ* 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 *ñäkci* 'divine' and TchA *lāñci* 'royal'. The former consistently has a nom.pl. *ñäkcyāñ* (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. *ñäkcyās* (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); *puttiśparṣṣās* ~ *puttiśparṣās* A25 b4, YQII.12 a6; *parnoreṣṣās* YQII.12 a6 (from *parnoreṣi* 'of splendor'); *arkämnāṣṣās* A375 b5 (from *arkämnāṣi* '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 ñäkteññänac* as an obl.sg. of an *i*-adjective in agreement with *ñäkteññänac* '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*.

kapśiṃñāṣās A7 b5-6 (from *kapśiññāṣi* 'related to the body'); *napeṃṣās* YQI.2 a4, YQIII.6 a3 (from *napeṃṣi* 'of a human being'); *wlaluneṣṣās* A454 b3 (from *wlaluneṣi* '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 -(*ṣ*)*i*-, and the other on an extended nasal variant -(*ṣ*)*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. *astareṃ*); (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. *täprenäṃ*).[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 -(*ṣ*)*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*)*ṃ*-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.	-(*e*)*ṃ*	-
OBL. SG.	-(*e*)*ṃ* -(*e*)*näṃ*	-(*e*)*nāṃ*
NOM. PL.	-(*e*)*ñi*	-(*e*)*nāñ*
OBL. PL.	-(*e*)*näs*	-(*e*)*nās*

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*, *-ṣi*, where a new stem *-(*ṣ*)*in*- was created, probably based on a recharacterised oblique singular *-(*ṣ*)*in*. The masculine paradigm nom.pl. -(*ṣ*)*iñi*, obl.pl. -(*ṣ*)*inäs* can indeed be descriptively interpreted as the oblique singular -(*ṣ*)*in*- plus the palatalising nom.pl. *-i* on the one hand (< PTch *-*'əyə*) and plus the "athematic" obl.pl. *-äs* on the other hand (< PTch *-*əns* < PIE -*ḗns*). 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 *-ṣi*, *-i* : B *-ṣṣe*, *-iye* (< *-*ṣṣ*^{y}*æ*, *-(*ə*)^{y}*æ*)
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*, *-ṣyāṃ* (> *-ṣṣāṃ*);[354] nom.pl.f. *-yāñ*, *-ṣṣāñ*, obl.pl.f. *-yās*, *-ṣṣās*.

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 *-ṣyā-* > *-ṣṣā-* is an inner-Tocharian A gemination, cf. perl. sg. *poṣṣā* from *poṣi* 'wall, side', nom.pl. *āśyañ* ~ *aśśāñ* from *aśi* 'nun'.

[355] *Pace* Fellner (2014: 8), there is no nom.obl.pl. †-*^{y}āṃ* 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 *-*åna* (= 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 -*aṃ* 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 *-*añə* (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.	*-$_{(Ć)}$*Ć^{y}a*	*-$_{(Ć)}$*Ć^{y}ana*
OBL.	*-$_{(Ć)}$*Ć^{y}a*	*-$_{(Ć)}$*Ć^{y}ana*
GEN.(-DAT.)	*-$_{(Ć)}$*Ć^{y}ay*	–

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.	*-*Ć*^{y}*a*	> *-*Ć*^{y}*ā*	> *-*Ći*	> -*Ći*
OBL.SG.	*-*Ć*^{y}*a*	>> *-*Ć*^{y}*ān*	> *-*Ć*^{y}*ān*	> -*Ć*^{y}*āṃ*
GEN.SG.	*-*Ć*^{y}*ay*	> *-*Ć*^{y}*ay*	> *-*Ć*^{y}*e*	> -*Ć*^{y}*e*
NOM.PL.	*-*Ć*^{y}*ana*	> *-*Ć*^{y}*āna*	> *-*Ć*^{y}*ān*	>> -*Ć*^{y}*āñ*
OBL.PL.	*-*Ć*^{y}*ana*	> *-*Ć*^{y}*āna*	> *-*Ć*^{y}*ān*	>> -*Ć*^{y}*ās*

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 *kauṣenta*, A *koṣant* 'killer, killing'); (4) TchB *-uca* (TchB *kärstauca* '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 devise);
(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 °*plaṅṣi* 'seller, selling' (from *plənk-* 'to sell'); TchB °*nakṣi* 'destroyer, destroying' (from *nək-* 'to destroy); TchB °*pilṣi* 'listening' (from *pəyl-* 'to listen'); TchA °*käṃṣe* 'occurring' (from *kän-* '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-näkṣi*** *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 *käṣṣinta* '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) *poysiñña* 'all-knowing'; (2) *pkänte-yamiñña* 'hindering'; (3) *käryor-pläṅṣiñña* '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 *pkänte-yamiñña* is only found in agreement with *wäntarwa* 'things', thus *pkänte-yamiññana wäntarwa* "hindering things" (in IT27 b4; AS19.8 b1; THT1111 a4; THT1113 b5); TchB *poyśiñña* is found several times without context (nom.sg. *poyśiṃña* AS17B a5; obl.sg. *poyśiññai* THT1247 b5, THT1260 b4; pl. *poyśiññana* IT272 a2), but in all other attestations it modifies a head-noun (*poyśiññai ekṣalympa* "with the feast of the all-knowing" IT2 a2; *poyśiññana rekauna* "the words of the all-knowing" IT144 b5; *poyśiññana ekṣalyänmeṃ* "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 *ñña*-adjectives. Clear evidence in support of this analysis is that the adjective TchB *poyśiñña* '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.	*ārkwi*	*arkwiñ**	*arkwañña*	*arkwīna*
OBL.	*arkwiṃ*[358] (?)	*arkwināṃ*	*arkwaññai*	*arkwīna*

In Tocharian A, this adjective shifts to the *nt*-inflection in the plural (class III), cf. nom.pl.m. *ārkyaṃś*, nom.obl.pl.f. *ārkyant*, possibly taken over after TchA *arkant-** 'black', B *erkent-* < PIE **h₁rg*^{w}*-ont-* (Carling 2009: 15-6; DTB: 101). The identification of TchB *ārkwi*, A *ārki* with Gk. ἀργός, Skt. *árjuna-*, 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. *ḫarki-*; Gk. ἀργι- in compounds and further ἄργιλλος ~ ἄργιλλα 'herbe à chèvres', ἀργινόεις 'whitish, shining' [Hom.; Plut.], ἀργαίνω 'to be white', Chantraine 1933: 249), sometimes with **-u-n-* or **-u-r-* (Skt. *árjuna* 'white', Gk. ἄργυρος 'white, silver', ἄργυφος '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. *arkwināṃ* (acc.pl. < **-n-ns*) and nom.sg.f. TchB *arkwañña* /ark^{w}áññа/, A *ārkiṃ*, which can be interpreted as the direct cognate of Ved. *árjunī-*, 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 *tseṃ* '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. *tuceṃ*, obl. pl. *tucenäṃ* (DTB: 318), and some *we*-adjectives, like *maiwe*

[358] The obl.sg.m. is allegedly attested in IT170 a2 *saiwaisa arkwiṃ tseñceṃ* "on the right, white and blue (?)" in a difficult context, because no head-noun is attested which *arkwiṃ* may be in agreement with and *tseñceṃ* 'blue' is a hapax legomenon based on the stem of *tseṃ* 'id.'. As a matter of fact, this *arkwiṃ* 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 **kĺəwmå* < PIE **kĺeumōn*, cf. Av. *sraoman-* 'hearing', Skt. *śromata-* 'reputation', OHG *hliumunt* 'id.'), which was inflected as follows (TEB §238):

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

	MASCULINE		FEMININE	
	TchB	TchA	TchB	TchA
NOM. SG.	*klyomo*	*klyom*	*klyomña*	*klyomiṃ*
OBL. SG.	*klyomoṃ*	*klyomänt*	*klyomñai*	*klyomināṃ*
NOM. PL.	*klyomoñ*	*klyomäṣ*	*klyomñana*	*klyomināñ*
OBL. PL.	*klyomoṃ*	*klyomäñcäs*	*klyomñana*	*klyominās*

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 **-mn̥ih₂-* > PTch **-məñ^{y}a-*. Subsequently, Tocharian B has degeminated the palatal nasal **klyomәñña-* > **klyomñña-* > *klyomña-*, while Tocharian A underwent the following development: **klyomәñña* > **klyomə^{i}ñña* (raising) > **klyomə^{i}ñ* > *klyomiṃ* (depalatalisation).[359] This form has been generalised to the rest of the feminine paradigm through paradigmatic levelling. The contrast in the plural TchB *klyomñana* : 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 **-məñ-* to TchB *-mñ-* is testified by several other formations, like the abstract nouns TchB *cämpamñe* 'ability, power' < PTch **cəmpəmәññæ*, TchB *aiśamñe* 'wisdom' < **ayśəmәññæ*, TchB *orkamñe* 'darkness' < **orkamәññæ* (Pinault 2011: 454; vs. TchB *arkwañña* /ark^{w}áñña/ 'white', TchB *eṅkwaññe* /enk^{w}áññe/, TchB *täṅkwaññe* /tənkwáññe/ 'pleasing, lovely'). The same reduction can be seen in the type TchB *cäñcarñe* 'love' from *cäñcare* 'lovely, agreeable' and in the *ñña*-adjectives, cf. TchB *gautamñe* 'pertaining to Gautama' from *gautame* 'Gautama', TchB *eṣerñe* 'related as a sister' from *ṣer* 'sister' vs. TchB *ostañña* 'domestic' from *ost* 'house', TchB *yäkweñña* 'related to horse' from *yakwe* 'horse' (Kim 2007).

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

	SINGULAR	PLURAL
NOM.	*-*məñña*	*- *məññana*
OBL.	*-*məñña*	*- *məññana*
GEN.(-DAT.)	*-*məññay*	–

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, πάν, 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. *poñcäṃ*, obl.sg.f. *pontsāṃ*. 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. *pontsāṃ* and the singular feminine paradigm of the *nt*-adjectives, nom. TchB *-ntsa*, A *-ṃts*, obl. TchB *-ntsai*, A *-ntsāṃ*).

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 *-*u̯ent-*. This suffix has undergone various modifications, depending on the stem final vowel on which it has been attached (cf. TchB *perne*$_{u}$, A *parno* 'worthy' from the ancestor of TchB *perne*, A *paräṃ* '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* ~ *kräṃtso* 'beautiful, pretty', see Kim (2019b).

təll- '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 *ārkwi* 'white', the singular continues the feminine singular **-ntya-* < **-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.	**-ntsa*	**- nta*
OBL.	**-ntsa*	**- nta*
GEN.(-DAT.)	**-ntsay*	–

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.	**-œ*	**-œy*	**-ʸa*	**-åna*
OBL.	**-œ(ṃ)*	**-œns*	**-ʸa*	**-åna*

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

	MASCULINE		FEMININE	
	SG.	PL.	SG.	PL.
NOM.	**-œ*	**-œy*	**-a*	**-ana*
OBL.	**-œ*	**-œns*	**-a*	**-ana*

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 in 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.	**-Ø*	**Ća*	**-C^{y}a*	**-Ca*
OBL.	**-Ca*	**-Cəns*	**-C^{y}a*	**Ca*

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 **-məññana*.

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.	*-*o*-*s*	*-*o*-*m*	>	*-*œ*
ACC. SG.	*-*o*-*m*	*-*o*-*m*	>	*-*œ*

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 *-*œ* had *-*œn* as a variant form, which originally marked only a direct object characterised as [+human] (like in the substantives, cf. obl.sg.m. *ṣamāne-ṃ* 'monk' vs. obl.sg.m. *yakwe* 'horse').[364] This reconstruction would also explain the lack of any continuant of *-*œn* > **-*aṃ* in Tocharian A adjectives, where we find instead -*äṃ* (e.g. obl.sg. *āsträṃ* 'pure' vs. -*aṃ* in the noun, e.g. *oṅkaṃ* '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. *-*œ* 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 śaul ś*(*a*)*ye*(*ñc*)*ai* "one who lives a pure life" (IT579 b4) and *se laiko yetse as*(*tar*)*e yamaṣäṃ* "this lotion makes the skin pure" (W11 b1) vs. *śīlne stmoṣo astareṃ* "remaining in the pure moral behaviour" (NS55 b4) and (*śīla*)*ṣṣ=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 *-*oi̯*, as has happened in e.g. Gk. -οι, Lat. -*ī*, OCS -*i*, etc. This regularly yields PTch *-*œy* > TchB -*i*, A -*e*.

On the contrary, Kim (2018: 64-5) and Ringe (1996: 81-2) believe that PIE *-*oi̯* monophthongised very early in the pre-history of Tocharian, resulting in a front vowel PTch *-*ę* (in their notation) before palatalisation ceased to operate. According to them, proof of this early monophthongisation of PIE *-*oi̯* 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 *-*oi̯*, 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* /kokáʎəy/ 'chariots' vs. obl.pl. *kokaleṃ** /kokálen/ ~ *kokleṃ*; (2) nom.pl. TchB *kerc*(*c*)*i* /kérc(c)əy/ 'swords' vs. obl.pl. *kert*(*t*)*eṃ* /kért(t)en/; (3) nom.pl. TchB *trici* /tráycəy/, 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. *triceṃ* or nom.pl. *waci*, obl.pl. *waceṃ*, 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) *sūryakāṃtṣi kercci ram no läktsecci* "like bright sūryakānta-swords" (Thomas 1968: 211; Couvreur 1954: 103; Adams 2012: 28); AS17D a2 *ylaiñäkti ñī kerci ra aiskeṃ 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' (< **kerc*(*c*)*əyi*, cf. obl.pl. *kerc*(*c*)*i̯yeṃ*), 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. *kokleṃ* 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 *kokalyiśke** '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 *ṣäṣwaśkañ* ~ *ṣäṣuśkañ* 'dear sons' from *ṣäṣuwa*, 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* /Ĺəy/.[367]

Additional evidence against the sound law PIE *-*oi̯* > PTch *-*ę* is that palatalisation never occurs in those nouns that continue PIE **oi̯*-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 *-*oi̯* > (as if) *-*ę* must have been maintained throughout the entire paradigm. I am therefore skeptical to accept an early monophthongisation of *-*oi̯* > *-*ę*, 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 *-eṃ* unambiguously continues PTch *-*æns* < PIE *-*ons*, the obl.pl. TchA *-es* is historically less clear. If we consider the equation TchB *-eṃ* : 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 *-^{i}s-* as corroborated by unambiguous examples: TchB *āntse*, A *es* (< Pre-TchA **a^{i}sæ*) 'shoulder' < PTch **ansæ* < PIE **ōmso-* (?) (cf. Gk. ὦμος, GEW: II, 1148); gen.sg. e.g. TchB *-entse*, A *-es* (< Pre-TchA **-æ^{i}sæ*) < PTch **-ænsæ*; TchB *klə̄ntsa-*, A *kläysā-* (< Pre-TchA **klə^{i}sa-*) 'to sleep' < PTch **klənsa-* < PIE **ḱleį̄-* 'to rely on' (Malzahn 2010: 625); cf. also TchA *wlāys-*, B *lans-* 'carry out' (cf. also the noun TchA *wles*, B *lāṃs* 'work, service'),[369] TchA *eṣäk*, 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 *-^{i}s* word-finally. Indeed, one has to note that the equation obl.pl. TchB *-eṃ* : A *-es* is never found in the inflection of the noun, where

[367] Oscillations between *-li-* /ləy/ and *-lyi-* /Ĺəy/ are frequently attested: TchB *lyipär* 'remainder, residue' (e.g. B119 b3; B99 b2, IT187 a5) vs. *lipär* (AS15C a1; B44 b6; THT1579 a3); *añcāli* '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 *-*oi̯* > *-*ę*. It is more convenient to say that PIE **h$_2$elį̄-oi̯* regularly evolved into Pre-PTch **allœy* (or **aĹœy*, with analogical palatalisation) and then the diphthong PTch **œy* yields TchB *ai* because it was protected by the newly added PTch **-kə*.

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

TchB *-eṃ* 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 **-œy* < PIE **-oi̯*, 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 **h₁éḱu̯o-*). 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 **^{i}s* was only found in internal position, we should assume that the unconditioned development of PTch **-œns* (< 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 *meñäṃ* 'moons' < PTch **mœñəns*; TchA *konäs*, B *kaunäṃ* 'suns' < PTch **kawnəns*; TchA *lāñcäs*, B *lāntäṃ* 'kings' < PTch **lantəns*; TchA *poñcäs*, B *pontäṃ* 'all' < PTch **påntəns*; TchA *tos*, B *toṃ* 'these (f.)' < PTch **tåns*, etc.) and not the ***-is* < Pre-TchA **-ə^{i}ns* we would expect if raising took place (cf. TchA *waṣtiṃ* 'related to the house' : TchB *ostaññe*; gen.sg. TchA *-is* : TchB *-äntse* /-əntse/, *-antse* /-ə́ntse/; TchA *kläysā-* 'to sleep' : TchB *kləntsa-*).

Possible counterexamples could be the gen.pl. TchB *-ṃts*, A *-is* and TchB *weṃts*, A *wes* 'excrement, urine'. However, the former had a final shwa in Proto-Tocharian, as the spelling *-ṃtsä* and *-ṃtso* (with *o*-mobile) in poetic and/or archaic passages of Tocharian B clearly show (cf. e.g. *krentäṃtsä* in B15 b4 and *krentaṃtso* in B416 a3; *onolmeṃntsä* Or 8212.163 b6 and *onolmeṃtso* in IT183 b1, see Malzahn 2012a: 64ff.). As far as TchB *weṃts* 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^{i}sə^{i}sœ* ?) in A150 b6; in Tocharian B, nom.obl.sg. *weṃts* is always found together with its derivative *weṃṣiye* 'excrement, urine' (B42 b6; B522 a4; B524 a8; THT4122 b4), while the perl.sg. *weṃtsa* is attested three times (AS3A b4; B497 b4; W2 a5). Its etymology is unknown, but Adams (DTB: 662) traces it back to PTch **wœn(ə)sə*. Be that as it may, I think that TchB *weṃts*, A *wes* is not a strong example for claiming that PTch **-ns* yields TchB *-nts*, A *-^{i}s* also word-finally.

Therefore, in the adjectival paradigm of Tocharian A the following developments can be outlined: PTch nom.pl. **-œy*, obl.pl. **-œns* > 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. **-œy* 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. **-oi̯* 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 **-æy*, while Tocharian A developed *-añ*, adding the productive nom.pl. *-ñ* to the stem final vowel *-a* < PTch **-æ*. 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 **-oi̯* 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.	**-ōs*	>> **-oi̯*	> **-æy*	> *-i*	> *-e*
ACC. SG.	**-ons*	> **-ons*	> **-æns*	> *eṃ*	> **-as* >> *-es*

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*/*-i̯eh₂* of the *devī́*-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.	**-ros*	>	**-ros*	>	-ρος	*-raḥ*	*-rus*	**-ræ*
fem.	**-reh₂*	>	**-rā*	>	-ρᾱ	*-rā*	*-ra*	**-r^{y}a*

As one can see, while Greek, Latin, and Sanskrit have the regular outcome of *-*reh*$_2$, no continuant of the same ending can be reconstructed for Proto-Tocharian, since this would be expected to have yielded PTch *-*rå* > 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 *devḱi*-suffix as the only standardised feminine marker in the adjectival inflection;
(2) Tocharian analogically extended the outcome of the *devḱi*-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 *-*eh*$_2$ 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 *ih_2/$i̯eh_2$ (of the *devḱi*-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 *-*ih*$_2$ and *-*eh*$_2$ 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 *-*ih*$_2$ and *-*eh*$_2$".

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 *$*\text{-}^{y}a$* 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 *$*eh_2$*-stems were continued as an inflectional class only and that the PIE suffixes *$*ih_2$* and *$*(e)h_2$* 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 *$*ih_2$* had been grammaticalised earlier than *$*(e)h_2$* 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 *$*\text{-}^{y}a$* < *$*\text{-}ih_2$* and that "the reflex of PIE *eh_2*-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 *$*ih_2$* 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 *$*\text{-}h_2$* 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 *$*(e)h_2$* and the latter took *$*ih_2$*. Only after the split of Tocharian, the so-called "Inner Indo-European" languages would have grammaticalised the opposition between *$*eh_2$* and *$*ih_2$* 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 *$*iH_2$* as a distinct feminine marker was more logical than the introduction of the predicative ending *$*H_2$*, 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 *$-rih_2$ > 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 *$-tih_2$ > *$-tə̣ă$, 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 $-ci$ < PTch *$-cca$ (not *$-tsa$), and the *lle*/*l*-gerundives, nom.sg.f. TchB $-ḻya$, A $-ḻyi$ (not *$-lla$).[376] This evidence strongly speaks in favour of a secondary generalisation of the pattern *$-_{[+\text{pal.}]}a$, 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.

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[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 *$lḭ$, *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 *$-ntsa$ < PIE *$-nt$-ih_2 (Class III).

Furthermore, there exist some inherited adjectival forms in Tocharian that unambiguously show the expected outcome of the PIE *eh_2-inflection. Out of the demonstratives, we find some relics in the obl.sg. *allok* 'other', pl. *alloṅk-* (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 *$h_2el̥o$- 'other' and *$du̯itó$- 'second' are concerned, Kim's opinion is not altogether clear. On the one hand, he advocates the reconstruction of a feminine paradigm with *ih_2/$i̯eh_2$ for *$h_2el̥o$- '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 *$h_2el̥o$- 'other' and *$du̯itó$- 'second' could have maintained *-eh_2 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. *h_2eli-$i̯eh_2$-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 *-ih_2!" (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-ṃ* (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 *-eh_2- > PTch *-*å*-. In order to account for this problem, Kim (2014: 122) traced the vowel *-*å*- back to the PIE neuter plural *-e-h_2 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 *-eh_2 in the thematic inflection and *-h_2 in the athematic inflection, while the feminine was only marked by the suffix *-ih_2 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 *-eh_2 in word-final position is not clear (cf. also Kim 2018: 105f.). If TchB *-o-*, A *-a-* in TchB *-ona*, A *-aṃ* is from the thematic neuter plural, then PIE *-eh_2 must have yielded PTch *-*å*, 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 *-eh_2 is effectively reduced to *seh_2 (> PT *sa) and the neuter plural". With "neuter plural", he is not referring to TchB *-ona*, A *-aṃ*, 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 *-h_2 or *-eh_2 (cf. also Ringe 1996: 94-7; *contra* Pinault 2008: 491-497). On the outcome of word-final *-eh_2, 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 became 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 **å* > 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* > **ʲa*) 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*/-*i̯eh₂*- (of the *devḗ*-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 **å*. 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*$_2$ > PTch *-*a* > TchB -*a*;[381] (2) on the other hand, some other scholars (e.g. Hilmarsson 1986; Pinault 2008: 421f.; Fellner 2014, 2014a) maintain PIE *-*eh*$_2$ > PTch *-*å* > 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 *-*å* 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*, -*ṣṣa*, etc. (Ringe 1996: 94; Hajnal 2005; Malzahn 2011: 89);
(2) the *Motionsfemininum* TchB -*a* in e.g. *oṅkolma* '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 *wertsiya*-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 *wertsiya*-type (5) as reflecting formations of either the *devḱi*-type or the *vr̥kḱi*-type (§3.7.3). In these nouns, the final sequence -^{y}*a* is to be interpreted as reflecting *-*ih*$_2$. On the other hand, the regular outcome of a nom.sg. *-*eh*$_2$ > PTch *-*å* > 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 *-*å* in any case. Also, there is no evidence for claiming that the feminine suffix TchB -*a* (2) of the *oṅkolma*-type (cf. *oṅkolma* 'she-elephant' vs. *oṅkolmo* 'elephant' et sim.) is the outcome of

counterexample that is sometimes adduced is TchB *mācer* /mácer/ 'mother' > PIE *-*meh*$_2$*tēr*, instead of the expected **-*mocer* (cf. Skt. *mātár*, Av. *mātar*, Gk. μήτηρ, Lat. *māter*), but an analogical *a* from TchB *pācer* /pácer/ '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 *-*eh₂*, 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. *-*eh₂*. Indeed, in the noun inflection it is consistently found as the outcome of athematic neuter formations, whose nt.pl. is reconstructed as PIE *-*h₂* > *-*ă* (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 *-*eh₂*-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. -*ṣṣe* | f. -*ṣṣa*, 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 *-*eh₂* 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 **newyă* < *neu̯ih₂*). 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 **-å.* 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:

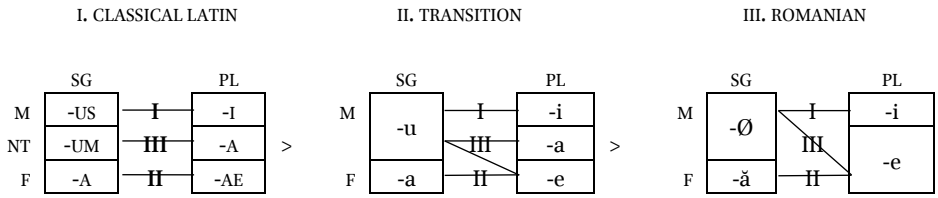
Table IV.38. Evolution of the feminine singular and the neuter plural in the thematic inflection

**eh₂*-DECLENSION		PIE	PTCH
	nom. sg.	**-eh₂*	> **-å*
	acc. sg.	**-eh₂-m*	> **-å*
THEMATIC NEUTER		PIE	PTCH
	nom. pl.	**-eh₂*	> **-å*
	acc. pl.	**-eh₂*	> **-å*

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):

Table IV.39. Transition of the gender system from Latin to Romanian



Loporcaro claims that in a transitional phase between Classical Latin and Romanian, the third gender value (old neuter) has experienced a double optional agreement set in the plural (f.pl. and nt.pl.). In this stage, the neuter displayed full syncretism with the masculine in the singular, "[…] with optional preservation of the contrast in the plural, where dedicated agreement targets persisted alongside the innovative option, that is, feminine plural agreement […]" (Loporcaro, loc. cit.). Comparative evidence from Old Italian, and other (West) Romance languages and dialects confirms this reconstruction (cf. Old Italian *ill-a brachia* 'those arms' vs. *ill-e brachia* 'id.' in the *Codice Diplomatico Longobardo*; see Loporcaro, Faraoni & Gardani 2014 and Loporcaro & Paciaroni 2011).[383]

On the strength of this diachronic comparison, one may therefore wonder whether the rise of the Tocharian *genus alternans* started out in the merger between the masculine singular and the neuter singular and between the neuter plural and the feminine singular. A possible scheme of this development is given below:

Table IV.40. Morpho-phonological mergers between the masculine, the feminine, and the neuter

	PIE		PTCH
	MASC.SG.	NT.SG.	
NOM.	**-o-s*	**-o-m*	> **-œ*
ACC.	**-o-m*	**-o-m*	> **-œ*

	PIE		PTCH
	FEM.SG.	NT.PL.	
NOM.	**-eh₂*	**-eh₂*	> **-å*
ACC.	**-eh₂-m*	**-eh₂*	> **-å*

Nonetheless, a special problem is posed by the evolution of the feminine plural paradigm. While, on the one hand, the nom.pl. **-eh₂-es* is expected to have evolved into **-ās* > PTch **-å*, the evolution of the acc.pl. **-eh₂-ns* is more intricate, from both an Indo-European and an Inner-Tocharian comparative perspective. Indeed, the reconstruction of this case form for Proto-Indo-European is not clear. A summary of the various reconstructions can be

[383] See also Paciaroni, Nolè & Loporcaro (2013), and Maiden (2011: 172-3; 2016: 12-3). As Faraoni (2016: 383-4) clearly states: "[I]l toscano antico, e con esso le tante varietà centromeridionali antiche e moderne analogamente analizzabili, possedeva un sistema a tre generi. Certo, […] tale sistema non era in tutto e per tutto simile a quello del latino, dove anche i sostantivi neutri, al pari di quelli maschili e femminili, disponevano di un paradigma di accordo specifico, con marche dedicate e non sincretiche come accede per il neutro alternante rumeno e italo-romanzo".

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

(1) Ved. *-āḥ* and OAv. *-å* point to IIr. **-ās* (*contra* e.g. Kuryłowicz 1927: 222-3);
(2) Attic-Ionic Gk. -ᾱς is ambiguous (cf. also Lesbian -αις), but Cretan Gk. -ανς 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. *-ōs* < **-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*, *-jǫ* is from **-(i̯)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 **-VH*N* > **-V̄*N* (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 *toṃ* : A *tos* < PTch **tåns* clearly speaks for the reconstruction of **-eh₂ns* (cf. also TchB *alloṅk* < **allåns*(-); 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-n̥s* (< **-*eh₂-m̥s*)[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 *alloṅk*(-) 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-n̥s* 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 *-*åns* (just as PIE *-*ons* > PTch *-*æns*). The reason why this ending has disappeared in favour of PTch *-*å-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 *-*å*, 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 *-*å*). After the formal merger of the two genders, the new remarked neuter ending *-*å-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 *-*åna* as *-*å*- (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 *-*V̄ns* had undergone two different changes depending on the prosodic environment: in non-accented position *-*V̄ns* > *-*V̄ⁿs* > *-*V̄s*; in accented position *-*V̄ns* >

[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?)".

*-$\acute{V}$ⁿs > *-$\acute{V}$ns.[387] This would explain why in the pronominal inflection the cluster *-ns* was maintained in the acc.pl. **tắns* > PTch **tắns* > 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 *-$\acute{V}$ns in word-final position that may prove the genuineness of this sound law.[388]

Since I take the reconstructable obl.pl.f. **-ån̊s* in the pronominal inflection as an archaism, I believe that Tocharian inherited the acc.pl. of the **eh₂*-stems as **-āns*, and that this ending was lost in the adjectival inflection either morphologically (replaced by the neuter **-å-na*) or phonologically (reduction of **-āns* > **-ās* 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.

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[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 *ṣe*, A *sas*, continues PIE **sém̥s* > **sém̥s*. However, I agree with Pinault (2006) that Gk. εἷς '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. **sem-s* > **sens*, which lost the nasal in Greek, with compensatory lengthening of the vowel (cf. Gort. εν[δ] δ- from ἕνς δ-, see GEW: I, 471; Beekes 2010: 394). The vocalism of the Tocharian forms cannot therefore mirror *-*ē*-, but rather originated by analogical leveling with the rest of the paradigm, which is built on the thematic stem **sœmœ-* < **somo-* (Ved. *samá-*, OP *hama-*, Gk. ὁμός, Goth. *sama*, etc.). The feminine form TchB *sana,* A *säṃ* testifies that the nasal in the masculine survived for a while. Indeed, it cannot directly mirror PIE **smih₂* (cf. nom.sg.f. Gk. μία), because the internal *n* must have been introduced from the nom.sg.m. The expected palatalisation caused by **-ih₂* may have been lost when the palatalised **ń* was replaced by the non-palatalised **n*. To my knowledge, there is no evidence for Fellner's evolution **smih₂* > **sm̥ya* > **sənya* (2014a: 66 fn.6). On the other hand, a possible section of Tocharian historical morphology that may support the reconstruction of **-$\bar{V}$ns* > *-$\bar{V}$s* is the development of the sequences acc.pl. **-ōn-n̥s* vs. **-on-n̥s* in the nasal inflection. Indeed, the former sequence evolved **-ōns* > TchB *-aṃ*, and the latter **-on-n̥s* > 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. *śrānäṃ* 'elders' as if from PTch **śəranəns* < **keră-n-n̥s* < PIE **ǵerh₂-n-n̥s* (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 *devī́*-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 recurred 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 vr̥ddhi formations. The starting point of this evolution would have been the opposition between PIE **deiu̯-o-* 'god' (Lat. *deus* 'god, deity', *dīvus* 'godlike', Ved. *devá-*, Av. *daēuua-*, etc.) and **deiu̯-ih₂* 'goddess' (Ved. *devī́-*, Gk. δῖα), both independently derived from PIE **di̯eu̯-*/ **diu̯-* 'sky, heaven'. According to Fellner, "Pre-Proto-Tocharian speakers" reworked the relation between these two isolated words and generalised the pattern of **deiu̯-o-* : **deiu̯-ih₂-* to the whole adjectival system, abstracting the element **-ih₂*. This analogical change would first have affected other vr̥ddhi 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 *devī́*-type with vr̥ddhi 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 **deiu̯-o* and **deiu̯-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 vr̥ddhi 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 *-*ih*$_2$- as the feminine suffix".

Another way to account for the spread of *ih_2 must therefore be investigated. I essentially agree with Pinault (2008: 516f.) that the generalisation of the *devíˊ*-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 *ih_2 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 *-*ih*$_2$ evolved in Proto-Tocharian. Comparative evidence allows us to reconstruct the *devíˊ*-type as characterised by paradigmatic ablaut: the allomorph *-*ih*$_2$- was characteristic of the strong stem, and *-*i̯eh*$_2$- of the weak stem. Nonetheless, no direct continuant of the allomorph *-*i̯eh*$_2$- > *-^{y}*å*- 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-h*$_2$, and Class II.1 f.pl. TchB *arkwina* < *-*n-h*$_2$).[39°] 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 **klyomə̆ñña*- < **kl̥e̯umn-ih*$_2$-), 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 *-^{y}*å*- (< *-*i̯eh*$_2$-) might have survived for a certain period in the plural can be adduced.

We first turn to the spread of *ih_2 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

[39°] One has to note that historical forms of the neuter plural are mostly preserved when the feminine is assibilated (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 *-*i̯o*-/-*i̯o*-). 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 *-^{Ć}*a*- (< *-*C-ih*$_2$-), in the singular, and *-^{Ć}*å*- (< *-*C-i̯eh*$_2$-), 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 *-^{Ć}*å*- (< *-*Ci̯-eh*$_2$-) in the thematic type, and *-^{Ć}*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 *-^{Ć}*å*- with the athematic *-^{Ć}*a*- in the singular. The feminine has therefore evolved according to the following analogical proportion:

ATHEMATIC		THEMATIC
sg. *-^{Ć}*a*- : pl. *-^{Ć}*å*-	=	sg. *-^{Ć}*x*- : pl. *-^{Ć}*å*-

x = *-*a* << *-*å*

Taking the continuants of the thematic formations in *-*n*(*i*)*i̯o*- and the athematic formations in *-*men*- as examples, the following evolution can be outlined: nom.sg. PIE *-*mnih*$_2$ > *-*mni̯ă* > PTch *-*məññə* :: nom.sg. PIE *-*n*(*i*)*i̯eh*$_2$ > *-*ni̯ā* > *-*ññå* >> PTch *-*ññə*. 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_1*rud^{h}*ro*-). 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.	*-$^{[+pal.]}$*a*	*-*åna*
OBL.	*-$^{[+pal.]}$*a*	*-*åna*

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 *-*å*-. 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.	*-^{ć}*a*	*-^{ć}*åna* >> *-^{ć}*ana*
OBL.	*-^{ć}*a*	*-^{ć}*åna* >> *-^{ć}*ana*

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 *-*å*- and no palatalisation of the suffix (thus *-*åna*), while in the latter it was preceded by *-*a*- with palatalisation of the suffix (thus *-^{y}*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 *-*åna*. This marker was already accompanied by etymological palatalisation in the second group of derivatives (continuing the PIE type in *-(*i*)*i̯o*-). When the ending *-^{y}*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, *-^{y}*ana* replaced *-^{y}*åna* (Class I.2), while, in the first group, *-*åna* 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 *deví*-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 *eh_2-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 athematic inflection of the *deví*-type. Among the continuants of the PIE thematic type, those adjectives with etymological palatalisation of the suffix substituted *-^{y}*å* (< PIE *-(*i*)*i̯eh*$_2$-) with *-^{y}*a*- (< PIE *-*ih*$_2$-). 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 *-$^{[-pal]}$*å*- 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. *-$^{[-pal.]}$*å-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

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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.

CHAPTER FIVE

RETROSPECTIVE AND CONCLUSION

This study has dealt with the Tocharian grammatical gender, its synchronic description, and diachronic evolution. The main findings are recapitulated below.

5.1. SYNCHRONIC ANALYSIS

The main questions to be answered in Chapter 2 were whether the *genus alternans* is a real gender value and, consequently, how many genders Tocharian has. After a general introduction to the linguistic typology of grammatical gender (§2.1) and a short description of the reconstructed Proto-Indo-European gender system (§2.2), the synchronic analysis of Tocharian gender has been discussed (§2.3). In §2.4, the mechanism of synchronic gender assignment has been examined, individuating inflectional, derivational, and semantic strategies to predict gender of Tocharian nouns.

On the basis of typological and cross-linguistic comparisons with Romance languages in general and Standard Italian and Romanian in particular, it has been demonstrated that Tocharian has three gender values, including the *genus alternans* (§2.3.1). The reasons behind this analysis are recounted below:

(1) alternating nouns have specific agreement patterns, which are different from those of the masculine and the feminine;
(2) alternating nouns belong to individual inflectional classes, whose peculiarity is that they have no formal distinction between nominative and oblique in either the singular or the plural;
(3) alternating nouns form a productive group: loanwords and inherited words are inserted into this class of nouns;
(4) alternating nouns are only inanimate;
(5) the agreement of an alternating noun provides for a nominal concord where a controller agrees with a target inflected as masculine in the singular but as feminine in the plural. This agreement set is respected even when coordinated NPs headed by alternating nouns agree with nominal modifiers or pronouns. Indeed, they regularly select a feminine plural agreement.

Finally, in §2.3.2, terminological problems of naming the third Tocharian gender have been discussed. It has been shown that the label "alternating", as opposed to "neuter", is to be preferred. Indeed, although alternating nouns historically derived from PIE neuters, the Tocharian *genus alternans* is the outcome of formal and functional mergers between the

three inherited genders. In Tocharian, the term "neuter" is more appropriately used for a relic class of forms limited to pronouns and ordinal numerals. Although these relics derive from the PIE neuter, they do not form a distinct gender from a functional-synchronic perspective, since they do not share any exponent in any agreeing word class: they are used for non-gender reference.

5.2. DIACHRONY OF THE MASCULINE

The evolution of the PIE masculine in Tocharian is not complex. Nouns reconstructed as masculine for the proto-language are synchronically continued as masculine in Tocharian, in both the thematic and the athematic type.

In the singular inflection, the opposition between nom.sg. *-*s,* acc.sg. *-*m* was lost, caused by the Proto-Tocharian apocope of final consonants. This produced the formal merger of the nominative and the oblique (< PIE accusative) in the singular. In the thematic type, they coalesced in PTch *-*œ* < PIE *-*o*- (§3.8.1.1).

In the inflection of the noun, a distinction between nominative and oblique was reintroduced, through the addition of PTch *-*n* to the obl.sg. This new obl.sg. *-*æn* (thematic) ~ *-*ən* (athematic) was confined to male human beings (cf. obl.sg. TchB *eṅkweṃ*, A *oṅkaṃ* 'man'; obl.sg. TchB *lykaṃ* /lkán/, A *lykäṃ* 'thief'). In Tocharian A, the obl.sg. -*ṃ* /-n/ became more productive and it was used for feminine nouns as well. On the other hand, some other types continuing the athematic inflection generalised the original weak steam to the oblique in order to remark the opposition (cf. TchB *pācer* 'father' < PTch *pacœr < PIE *ph₂tēr vs. obl. *pātär* < PTch *patər < PIE *ph₂tr-; TchB *maśce* 'fist' < PTch *məścœ < PIE *mustē(i̯) vs. obl. *maśc* < PTch *məścə < PIE *musti-; TchB *yriye* /yráye/ 'lamb' < PTch *ẃərəyœ < PIE *u̯erh₁ēn vs. obl. *yari* /yárəy/ < PTch *ẃərəy < PIE *u̯erh₁en-). Usually, Tocharian A levelled the paradigm with the generalisation of one of the two stems (cf. nom.obl.sg TchA *pācar* 'father').

In the inflection of the adjective, different strategies have been employed. In particular, analogical palatalisation was introduced after the inflection of the demonstratives (§4.3.1, §4.3.3). The palatalisation affected all the masculine paradigm with the exception of the nom.sg., thus remarking the opposition between nominative and oblique (cf. e.g. TchB *allek* [A *ālak*] 'other' vs. obl. *alyek* [A *ālyak-äṃ*]; TchB *trite* [A *trit*] 'third' vs. obl. *trice* [A *tricäṃ*], TchB *ayāmätte* 'not done, not able to do' vs. obl. *ayāmäcce*, etc.). On the other hand, those adjectival suffixes which could not have any palatalised counterpart took the obl.sg. marker *-*n*, which, in the adjectival inflection, became a mandatory ending after the Proto-Tocharian period (§4.3.3.1, §4.3.4.1; cf. TchB -*eṃ* vs. TchA -*äṃ* [not **-*aṃ*] in TchB *astareṃ*, A *āṣträṃ* 'pure'). Indeed, in Tocharian A the obl.sg.m. -*ṃ* has been generalised only after the Tocharian A loss of final vowel (cf. TchA obl.sg. *tricäṃ* 'third' [cf. TchB *trice*] < Pre-TchA *tric < PTch *tricœ; TchA gerundival obl.sg. -*läṃ* [cf. TchB -*lye*] < Pre-TchA *-*l* (apocope and depalatalisation) < PTch *-(ĺ)ĺœ; cf. also TchA obl.sg. -*i* vs. -*iṃ* in the *i*-adjectives, TchA obl.sg. *ñäkci* 'divine' [cf. TchB *ñäkc*(*i*)*ye*] vs. *ñäkciṃ*).

In the plural inflection, the thematic nom.pl. *-*oi̯* has been clearly continued in adjectives and pronouns. In Proto-Tocharian, it evolved into *-*œy*, and was then monophthongised in TchB -*i*, A -*e* (non-palatalising; see §4.3.4.1). In Tocharian B, word-final PTch *-*œy* was maintained only in monosyllables (cf. nom.pl. PIE **toi̯* 'these' >> PTch **cœy* > Archaic TchB *cai* > Classical TchB *cey*; du. PIE **toih*$_1$ 'these (du.)' > PTch **tœy* > TchB *tai*). There is no evidence for an alleged early monophthongisation of PIE *-*oi̯* > (palatalising) PTch *-*e̯*.

In the noun inflection, the nom.pl. -*i* is the marker of a productive class of Tocharian B *e*-stems, which can be traced back to the thematic type (§3.8.1.1). On the other hand, nom.pl. TchA -*e* cannot be found in the noun inflection (with the exception of *pracre* 'brothers', where it is unexpected). Indeed, the Tocharian A counterparts of Tocharian B *e*-stems probably remade the expected nom.pl. *-*e* with TchA -*añ*, levelling the *a*-vocalism of the stem (< *-*æ*- < PIE *-*o*-; cf. obl.pl. -*as*). In the athematic type, the PIE nom.pl. *-*es* caused palatalisation of the preceding consonant. When apocope took place in Proto-Tocharian, this palatalised consonant was reanalysed as the nominative plural marker (cf. nom.pl. TchB -*ñc*, A -*ṃś* < (*-*ñc*) < PTch **ñcə* < PIE *-*nt-es*; nom.pl. TchAB -*ñ* < PTch *-*ñə* < PIE *-*n-es*).

As far as the development of the thematic oblique plural is concerned, I side with those scholars who claimed PIE *-*ons* evolved into PTch *-*œns* > TchB -*eṃ*, A -*as* (without vowel raising in Tocharian A; §4.3.4.1). In Tocharian A, the obl.pl. -*as* can be regularly found in the continuants of the PIE *o*-stems. On the other hand, in the adjectival and pronominal inflection we find obl.pl. TchA -*es*. It has been attempted to explain the *e*-vocalism in this marker as the result of analogical levelling from the nom.pl. -*e*. In the athematic type, PIE *-*n̥s* regularly evolved into PTch *-*ənə* > TchB -*äṃ*, A -*äs* (without vowel raising in Tocharian A).

5.3. DIACHRONY OF THE FEMININE

Among the issues discussed in the thesis, the evolution of the feminine gender has been a central point of study. Indeed, it has recently been claimed that Tocharian inherited a gender system different from that reconstructed for the other Indo-European languages: in this system, the feminine had either not yet risen as a grammatical category, or marked by the suffix *-*ih*$_2$/*-*i̯eh*$_2$- in both thematic and athematic declension. As a matter of fact, in the thematic inflection of Tocharian several endings seem to continue a declension in PIE *-*ih*$_2$, which is conversely attested in the athematic inflection in the other Indo-European languages. These theories have been scrutinised in §4.3.4.3, where it has been concluded that they cannot account for the Tocharian evidence; therefore, another solution was needed.

In §4.3.4.5, the generalisation of the **ih*$_2$-inflection in place of the non-ablauting **eh*$_2$-inflection in the adjectival paradigm is explained as a secondary innovation, internal to Tocharian. This has been caused by a gradual and heterogeneous set of developments caused by formal and functional mergers of the feminine within the inherited

*eh_2-inflection and with the neuter plural in the thematic paradigm (§4.3.4.4). At this stage, endings and forms that originally belonged to the neuter paradigm started to shift to the plural paradigm of the feminine, which, synchronically, does not attest any differentiation between nominative and oblique plural (e.g. f.pl. TchB *-na*, A *-ṃ* < PTch *-*na* < PIE *-*nh_2 or f.pl. TchB *-nta*, A *-nt* < PTch *-*nta* < PIE *-*nth_2). In order to solve these mergers in some case markers, the thematic type took over endings from the athematic type, reintroducing a distinction between singular and plural in the feminine paradigm. The process involved can be interpreted as a "synergetic drift", i.e. a set of changes aimed at reorganising linguistic traits through new parameters governing them (Lazzeroni 1997).

The drift began when the Proto-Indo-European opposition between the feminine *eh_2-inflection of the thematic derivatives in *-(*i*)*i̯o*-, and the feminine *ih_2-inflection of the athematic stems started to be conveyed only by the difference between *-$_{[+pal.]}$*å*- vs. *-$_{[+pal.]}$*a*- in the singular. In an attempt to solve the cases of homophony mentioned above, the vowel *-*a*- (< *-h_2-) has been generalised, in place of the inherited *-*å*- (< *-eh_2-). This ending must have become too ambiguous, being used to mark e.g. the nominative singular (< *-eh_2), the oblique singular (< *-eh_2-*m*), the nominative plural (< *-eh_2-*es*), as well as the plural of the thematic neuter (< *-eh_2). The generalisation of *-*a*- first affected those thematic formations that continued Proto-Indo-European suffixes derived with *-(*i*)*i̯o*-. The pattern *-$_{[+pal.]}$*a* was then abstracted as a morphological marker of the feminine singular, and it spread to the rest of the thematic type (§4.3.4.5). The opposition between the new singular stem *-$_{[+pal.]}$*a*- and old plural stem *-$_{[-pal]}$*å*- has been retained in those derived adjectives whose suffix was not etymologically palatalising (cf. sg. TchB *-rya*, A *-ri* vs. pl. TchB *-rona*, A *-raṃ*; sg. TchB *-lya*, A *-lyi* vs. pl. TchB *-llona*, A *-laṃ*; sg. TchB *-cca*, A *-cci* vs. pl. TchB -(*t*)*tona*, A -(*t*)*taṃ*), but it has been lost in the other types formed with *-(*i*)*i̯o*-, which have levelled the vowel *-*a*- also in the plural (cf. sg. TchB *-ṣṣa*, A *-ṣi* vs. pl. TchB *-ṣṣana*, A *-ṣāñ*| *-ās*; sg. TchB *-ñña*, A -^{i}*nāṃ* (obl.) vs. pl. TchB *-ñña*na*, A -^{i}*nāñ*| *-ās*). The final result of this process was the attested bipartition of the feminine inflection of Class I, which continues the PIE thematic type (§4.3.4.6). The mismatching plural paradigm TchB *-ana* vs. TchA *-āñ*| *-ās* has been explained as a secondary innovation of Tocharian A (§4.3.3.1).

The diachronic evolution of the pronominal inflection has been investigated in §4.2.3, where it has been demonstrated that the majority of the endings of Tocharian demonstratives and pronominal adjectives can directly be traced back to Proto-Indo-European.

A main point in Chapter 3 was to track down the PIE *eh_2-type and the PIE *ih_2-type in the Tocharian noun morphology. It has been argued that Tocharian inherited and generalised a hysterodynamic ablaut paradigm in *-(*e*)h_2 throughout the inflection of the noun. The outcome of this reconstructed paradigm has been maintained in the Tocharian B *kantwo*-type (§3.7.1), where the PIE opposition between strong and weak stem *-eh_2/-h_2- has produced the contrast between nom.sg. *-o* (PIE *-eh_2) and obl.sg. *-a* (< *-h_2-). A similar paradigm has also been reconstructed for the Proto-Tocharian ancestor of the *okso*-type (*ai*-stems with nom.sg. *-o*, obl.sg. *-ai*), and the *arṣāklo*-type (*a*-stems with nom.sg. *-o*,

obl.sg. *-ai*). The original situation has been preserved in Tocharian A, where the three inflectional types mentioned above more clearly correspond to just one type with an *ā*-stem (< PTch **a*-stem). In §3.7.2, I have investigated the possible conditions that caused the merger between *(*e*)h_2-stems and **ōn*-stems. Finally, some *(*e*)h_2-stems may have been continued in the *oko*-type, where they have been reinterpreted as alternating as a result of the morpho-phonological merger of some case endings of the *(*e*)h_2-stems (cf. nom.sg. PTch **-å* < nom.sg. PIE **-eh*$_2$ and acc.sg. PIE **-eh*$_2$*-m*) and the neuter plural (cf. nom.obl.pl. PTch **-å* < nom.acc.pl. PIE **-eh*$_2$).

The members of the *śana*-type have been traced back to two different PIE stem types, which both inflected proterodynamically in Proto-Indo-European (§3.5.1): TchB *śana*, A *śäṃ* 'wife' is from a stem in PIE **-h*$_2$/*-eh*$_2$-, while TchB *lāntsa*, A *lānts* 'queen' and TchB *ṣarya* '(beloved) lady' are from a stem in PIE **-ih*$_2$/*-ieh*$_2$- (of the *devī́*-type). Also in this class, the contrast between nom.sg. *-a*, obl.sg, *-o* mirrors the ablauting alternation between strong and weak stem of the suffix *-(*i*)h_2/-(*i̯*)*eh*$_2$. The generalisation of the PIE weak stem in some Tocharian obliques has been caused by the formal merger of the inherited nominative and accusative in many inflectional types. To solve this homophony, a trend of development in the evolution of Tocharian nominal morphology has been to reanalysed the inherited genitive or dative singular as the new oblique (cf. obl.sg. TchB *-a* < gen.sg. PIE **-h*$_2$*és* vs. nom.sg. TchB *-o* < nom.sg. PIE **-éh*$_2$; obl.sg. *-ʸo* < gen.sg. PIE **-i̯éh*$_2$*s* vs. nom.sg. *-ʸa* < nom.sg. PIE **-ih*$_2$; obl.sg. *-ai* < dat.sg. PIE **-h*$_2$*éi̯*).

On the other hand, it has been shown that, apart from few exceptions, the nouns of the *aśiya*-type are all of recent origin and they have calqued their paradigm from the adjectives of Class I.2. (§3.5.2, §4.3.3.1). From the adjectives, the *śana*-type and the *aśiya*-type also took the plural marker PTch **-na*.

Furthermore, it has been argued that Tocharian inherited the feminine suffix **-ih*$_2$ of both the *devī́*-type and the *vr̥kī́*-type, and that these two formations merged in Proto-Tocharian. The outcome of this merger formed the inflection of the *wertsiya*-type (§3.7.3).

5.4. DIACHRONY OF THE *GENUS ALTERNANS*

The Tocharian *genus alternans* reflects the PIE neuter, but it originated after morpho-phonological mergers, of which its peculiar alternating agreement is a direct outcome.

As suggested by a typological comparison with languages with similar gender systems and further confirmed by a close reconstruction of the Proto-Tocharian adjectival paradigms, the thematic neuter must have become homophonous with the masculine singular in the singular and with the feminine singular in the plural. This coalescence first took place in the adjectival system, and it was a gradual process. Indeed, in some pronouns and adjectives, we still find relics of crystallised neuter forms. Synchronically, they are either used adverbially or with pronominal function (i.e. non attributively). Since these relics are found in paradigms where, in the masculine, the contrast between nominative and oblique singular has been secondarily remarked by analogical palatalisation, the

neuter probably survived for a while also in the inflection of the modifiers, where it was differentiated from the masculine in the oblique singular. When the new alternating agreement was grammaticalised, these old neuter forms could not correlate any more with any neuter nouns and were reanalysed. On the other hand, in the plural inflection, historical neuter forms have spread to the feminine in some adjectival paradigms.

In the noun inflection, the development of both the thematic and athematic neuter has been analysed. It has been attempted to track down PIE thematic neuters in Tocharian: some of these have been continued as alternating and thus have converged in the *āke*-type, while some others have been reassigned to the masculine gender, as they synchronically belong to the *yakwe*-type. This fluctuation has been caused by the formal merger of the PIE masculine and neuter in the thematic paradigm of the singular. A similar coalescence also characterised the PIE neuter plural and the feminine. Evidence of this merger can be found in the *oko*-type, where old thematic plural forms may have been reanalysed as singular (§3.8.2.1).

I have also investigated in detail the outcome of those athematic neuters that have played an important role in the creation of new endings and in the evolution of the Tocharian gender system in general. In particular, isolated pluralia tantum and lexical plurals have been discussed in §3.8.2.2; *s*-stem formations and neuter root nouns have been treated in §3.7.1.2.

Particular attention has been paid to the evolution of an archaic class of nominals, the heteroclites in PIE **r*/*n*. We have seen that some heteroclitic stems have been continued in Class II.1 (pl. TchB *-na*, A *-äṃ*), where Tocharian A has maintained both the *r*-stem of the singular and the *n*-stem of the plural. The final outcome of this development was a blended plural with the *r*-form as the stem and the *n*-form as the ending (§3.6.2). The evolution of the PIE **ur*/*n*-stems has been carried out in §3.6.1.2, where the basis for the postulation of a sound law PIE **-ur* > **-ru* has been laid. This metathesis can account for the origin of *r*-stem nouns with plural in TchB *-wa*, A *-u* (*-wā*, *-unt*), the unexpected *o*-vocalism in some isolated forms, and the origin and the spread of the plural marker TchB *-una*.

5.5. OUTLOOK

In this thesis, it has been argued that, despite the many peculiarities of its gender system, Tocharian has not preserved a more archaic gender marking than the other non-Anatolian Indo-European languages. Indeed, these peculiarities have been caused by internal developments that took place within the historical evolution of the language. Therefore, Tocharian inherited a regular three-gender contrast. In a nonattested stage, formal mergers took place, and the masculine, the feminine and the neuter influenced each other morphologically, before being fixed in the attested agreement classes. These mergers caused the functional loss of the neuter as a target gender, the rise of the new alternating agreement class, and other morphological developments aimed at remarking the

feminine. Therefore, the results of this study indicate that the gender system cannot be used to support the early split-off of Tocharian.

It is generally assumed that Tocharian offers relatively little of Indo-European interest in the domain of nominal morphology. Although the nominal system has certainly innovated and eroded, the statement that Tocharian is of only minor importance for the reconstruction of the PIE nominal system has been proven to be wrong. We have seen that extensive reductions and phonological changes have caused several irregularities in the nominal paradigms, which have mostly been solved by analogical changes to restore regularity in morphological patterns. This has led to a heavy restructuring in morphology. However, both in the regularities and in the irregularities of its nominal system, Tocharian has mostly used and refunctionalised inherited material. It is hoped that new studies will do justice to the Tocharian nominal system in the future, as this thesis has tried to do.

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INDEX VERBORUM

This index contains a reasoned number of words cited in the thesis. This includes members of compounds (°*x* or *x*°), deduced forms (*x**), and ghost words (†*x*). Restored Tocharian forms are cited without brackets.

The order of the languages is: (1) Tocharian A, (2) Tocharian B, (3) Old Indian (both Vedic and Sanskrit), (4) Avestan, (5) Old Persian, Middle Persian, and West Iranian languages, (6) Khotanese, (7) Sogdian, (8) Khwarezmian, (9) Old Church Slavonic, (10) Lithuanian, (11) Latvian, (12) Old Prussian, (13) Hittite, (14) Armenian, (15) Ancient Greek dialects (and Mycenaean Greek), (16) Latin, (17) Romanian, (18) Italian, (19) Gothic, (20) Old High German, (21) Old Norse, (22) Old English, (23) Celtic languages.

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ENGLISH SUMMARY

Tocharian is the name given to two closely related Indo-European languages, Tocharian A and Tocharian B, known from manuscripts discovered in the Tarim basin (present-day Xīnjiāng Uyghur Autonomous Region, China), dating from the 5th to 10th centuries CE. Despite its late attestation, Tocharian has proved to be archaic, particularly in some sections of the morphology. However, the exact relationship of Tocharian with the other Indo-European branches remains an unresolved issue. The problem is that a strong impact of language contact and internal drift has resulted in an intricate combination of archaisms and innovations that are often difficult to be disentangle.

Examining the category of gender, this thesis contributes to the investigation of archaisms and innovations in Tocharian nominal morphology. It aims at providing a comprehensive treatment of the Tocharian gender system, describing how it historically derived from the Indo-European proto-language and why it typologically deviates from most of the other Indo-European languages.

Next to the masculine and the feminine, Tocharian has a third category, which is named *genus alternans*. Nouns pertaining to this category combine agreement traits of the masculine and the feminine, taking masculine agreement in the singular and feminine agreement in the plural. Using a cross-linguistic approach, the synchronic analysis could show that Tocharian has a three-gender system, with the *genus alternans* being a gender value of its own.

The largest part of the thesis deals with the diachronic investigation of a large number of nominal and adjectival classes whose endings and forms are relevant to the historical analysis of the Tocharian gender system. These classes are analysed from the point of view of their derivation and inflection, in order to clarify for each of them the origin and the development.

The evolution of Tocharian gender is a long-standing problem, which has recently become even more pressing because of the scholarly debate on the chronology and the relative order of the split of the Indo-European proto-language into the various branches. It is sometimes assumed that Tocharian has split off second after the Anatolian branch and that the gender system has retained evidence of this early split. In order to test this claim, the origin of the Tocharian gender system in nominal, adjectival, and pronominal morphology has been discussed. It has been argued that, despite the many peculiarities of its gender system, Tocharian does not require the reconstruction of a more archaic gender marking system than the other non-Anatolian Indo-European languages. The peculiarities of Tocharian have been caused by internal developments that took place within the evolution of the language, which have often blurred the boundary between inherited archaisms and internal innovations.

NEDERLANDSE SAMENVATTING

Tochaars is de naam die is gegeven aan twee nauw verwante Indo-Europese talen, Tochaars A en Tochaars B, bekend dankzij handschriften die zijn ontdekt in het Tarim-Bekken (tegenwoordig de Oeïgoerse Autonome Regio Xīnjiāng, China) en dateren van de 5e tot de 10e eeuw van onze tijdrekening. Ondanks zijn late attestatie is het Tochaars archaïsch gebleken, in het bijzonder in sommige onderdelen van de morfologie. De precieze verhouding van het Tochaars tot de overige takken van het Indo-Europees blijft echter een onopgelost vraagstuk. Het probleem is dat de enorme effecten van taalcontact en interne drift hebben geleid tot een ingewikkelde combinatie van archaïsmen en innovaties die vaak moeilijk te ontwarren is.

Deze dissertatie onderzoekt de categorie genus en draagt zo bij aan de studie van archaïsmen en innovaties in de Tochaarse nominale morfologie. Er wordt getracht alle aspecten van het Tochaarse genussysteem te behandelen, de historische ontwikkeling vanuit de Indo-Europese oertaal te beschrijven, en te verklaren waarom het typologisch afwijkend is vergeleken met de meeste andere Indo-Europese talen.

Naast het mannelijk en het vrouwelijk heeft het Tochaars een derde categorie, die het *genus alternans* wordt genoemd. Naamwoorden die tot deze categorie behoren combineren congruentiepatronen van het mannelijk en het vrouwelijk, want ze congrueren als mannelijke naamwoorden in het enkelvoud en als vrouwelijke in het meervoud. Op basis van een typologische vergelijking met meerdere andere talen wordt betoogd dat het Tochaars drie genuswaarden heeft, waarbij het *genus alternans* een eigen genuswaarde is.

Het grootste gedeelte van de dissertatie onderzoekt vanuit diachroon perspectief een groot aantal klassen van zelfstandige en bijvoeglijke naamwoorden die uitgangen hebben die relevant zijn voor de historische analyse van het Tochaars genussysteem. Deze klassen worden geanalyseerd vanuit het oogpunt van hun derivatie en inflectie, om zodoende voor elk de oorsprong en de ontwikkeling in kaart te brengen.

De ontwikkeling van het Tochaarse genussysteem is een klassiek probleem, dat onlangs nog nijpender is geworden vanwege het wetenschappelijke debat over de chronologie en de relatieve volgorde van de opsplitsing van de Indo-Europese oertaal in de verschillende takken. Er wordt soms aangenomen dat het Tochaars als tweede is afgesplitst, na het Anatolisch, en dat het genussysteem bewijs heeft bewaard voor deze vroege afsplitsing. Om deze aanname te testen is de oorsprong van het genussysteem in de nominale, adjectivische en prominale morfologie besproken. Er wordt betoogd dat het Tochaars ondanks de vele bijzonderheden in zijn genussysteem geen reconstructie van het genussysteem vereist die archaïscher is dan die van de andere niet-Anatolische Indo-Europese talen. De bijzonderheden van het Tochaars zijn veroorzaakt door interne ontwikkelingen die hebben plaatsgevonden in de geschiedenis van de taal, en die ervoor hebben gezorgd dat de grenzen tussen geërfde archaïsmen en interne ontwikkelingen vaak zijn vervaagd.

CURRICULUM VITAE ET STUDIORUM

Alessandro Del Tomba was born on July 14, 1991 in Rome. He attended the Liceo Classico Anco Marzio from 2005 to 2010, when he took his High School Diploma in Classics. The same year he was admitted to University of Rome La Sapienza, where he obtained a Bachelor's degree (with honours) in Humanities in 2013, with a thesis about Mycenaean verbal morphology. At the same institution, he continued his studies with a Research Master in Linguistics. In 2015 he defended a thesis about Tocharian morphology (with honours). In 2016, he won a public Ph.D position in Linguistics from University of Rome La Sapienza. In the same year, La Sapienza and Leiden University signed a cotutelle contract in order to jointly supervise his doctoral thesis. During his doctoral period, he has published peer-reviewed articles in *Indogermanische Forschungen* and *Indo-European Linguistics*, read papers at conferences and workshops, and taught university courses at La Sapienza. At present, he is an academic tutor for Linguistics and Classical Studies at Marconi University of Rome.