The Tocharian subjunctive

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4 ORIGIN

The aim of this chapter is to trace the origins of the Tocharian subjunctive in Proto-Indo-European; both form and meaning are to be explained, as well as the question whether the subjunctive continues one or more Proto-Indo-European categories, or whether it is a purely Tocharian creation.

4.1 INTRODUCTION

The archaic appearance of the Tocharian verb is miraculous in view of the dramatic and eventful prehistory of the language.

The three stop series **T*, **D*, **D*^{h} merged almost completely, leaving only a single series transcribed with voiceless stops; palatovelars and velars merged, and took some labiovelars with them; almost all final consonants were lost; in interconsonantal position, all laryngeals became *a*; the short vowels **i*, **e* and **u* merged with the vowel of syllabic resonants into *ə*, the first two causing regressive palatalisation; long **ē* and short **o* eventually merged into *e*, the former causing palatalisation; the (secondary) vowels **ā* and **ō* must have merged in many contexts. In addition, all hiatus, including recent instances from lost intervocalic glides, were resolved with contraction; vowels were subject to affection, syncope and apocope; palatalisation caused the rise of new consonants, but as the palatalisation system largely broke down again, more mergers followed; consonant clusters were epenthesised or simplified. Tocharian A, generally preserving consonant clusters a bit better, underwent further simplifications of the vowel system, with apocope of final *e* and *o*, and merger of the two into *a* in many other positions.

Facing such heavy changes in its phonology, any language would be compelled to reorganise its morphology. Yet, the Tocharian verb has a full inventory of different stems, endings, and base verbs and derived verbs.

This is the problem with Tocharian. At first glance, the verb is on a par with, for instance, Latin, in as far as the categories expressed are concerned. However, hardly anything is so old that it can be reconstructed mechanically: there is *always* a good deal of analogy involved. Apart from arguments of a general nature, as those above, the thick layer of restructurings and repairments is betrayed by occasional mismatches between the two languages that can only be understood with the assumption of sound laws that were undone in the majority of cases. Yet a much more alarming indication is the rigid way in which so many verbs pattern: it is the superficial regularity of the system that shows that it is the result of thorough mending. The challenge of Tocharian historical morphology is to find weak points in the system.

Below, I will recount the most important theories on the origin of the Tocharian subjunctive. Although Lane's 1959 article is not an independent piece of work, as it uses insights of e.g. Pedersen (1941), van Windekens (1944) and Couvreur (1947), it was the logical point of departure for the bulk of later studies. As its title *The formation of the Tocharian subjunctive* already shows, its merit is first and foremost that it treats the formation of the subjunctive in a reliable and lucid way because Lane is "of the opinion that in comparative linguistics we should attempt to establish an 'Urform' before we worry about its 'Urbedeutung'" (1959: 179), which was a major step forward especially compared to Pedersen. Since scholars have often repeated theories, or altered them only slightly, the sections below are structured according to the possible origins.

4.1.1 SUBJUNCTIVE

Following Pedersen (1941: 191-192) and Hahn (1953), Lane assumed that Proto-Indo-European had no subjunctive, or at least "in that dialect of Indo-European which we may call Pre-Tocharian, there was no subjunctive formally distinguished from the present indicative" (1959: 179). Yet, whereas some scholars have not taken a clear stand on the matter (e.g. Adams 1978: 277), others do derive some Tocharian subjunctive formations from original Proto-Indo-European subjunctives.

The best candidate for an old subjunctive is probably the subjunctive of the Tocharian verb for 'come', for which a pre-form **śəm'ə/e-* can be reconstructed (see 4.3.1, p 351), apparently a direct match of Ved. *gámati* (so e.g. Pinault 2008: 592; Kim 2007b: 190). In view of the high degree of irregularity of the verb 'come' in Tocharian and the isolated type of its subjunctive, it is likely to be old. Being the devil's advocate, one could try to connect **śəm'ə/e-* with the **ie/o-*present represented by Gk. βαίνω and Lat. *veniō*. To my knowledge, nobody has ever argued for such a derivation, and for good reasons: 1) even though a palatalised **ḿ* loses its palatal feature in the daughter languages, the **i* would probably have left a trace in Tocharian, yielding ***my*, and 2) the zero grade **gʷm-ie/o-* of the Greek and Latin formations is incompatible with the palatalised initial of the Tocharian, which can hardly be secondary.

Less certain because they form a category, but probable nevertheless, is the *'ə/e-*subjunctive of *s*-transitives (usually called *s*-causatives, class 8). Although details vary, this connection is supported by a relatively large number of scholars, e.g. Pinault (2008: 592), Kim (2007b: 190), and Ringe (2000: 132-133).[730] While I consider this derivation probable, it must be stressed that it involves a good deal of additional argumentation on the *s*-present and the *e*-present. The *'ə/e-*subjunctive is always

[730] Van Windekens (1982: 214) can be added, but his account is complicated. Whereas these subjunctives "sont tous des conjonctifs thématiques secondaires", whose "origine première [...] doit être située dans des thèmes de prétérit", he also claims that the type "a pu survivre [...] dans les conjonctifs radicaux athématiques" (l.c.).

found next to an *s*-present, so that its interpretation is dependent on that of the *s*-present, which is itself disputed. Further, an intransitive *e*-present verb (or sometimes an *o*-present verb) is often found next to it, which was even thought to be primary (see e.g. Krause and Thomas 1960: 174). Evidently, a theory that derives the $^{\text{ə}}/_{e}$-subjunctive from an old Proto-Indo-European subjunctive would work much better if the intransitive *e*-present verbs were secondary and the *s*-transitive verbs primary.

According to Hackstein (1995: 232-233, 240-241; see also Ringe 2000: 132, Kim 2007b: 190), an isolated inherited subjunctive is preserved in B594a1 /// *·k̲(◟) k· ṇṭą[rñ]· [s̲ą] ///*, so read by Sieg and Siegling (1953: 379). Even if this reading were secured,[731] it certainly leaves room for more interpretations than just *(akāl)k k(a)ntär ñ(i)* 'my wish will be fulfilled', and even if that restoration were correct, the form can only be interpreted with morphological arguments, "denn der sehr fragmentarische Kontext entzieht sich als Deutungsgrundlage" (Hackstein 1995: 232). In the unlikely event that the subjunctive *k(a)ntär* B594a1 is correctly identified, it need not be old. Hackstein argues that it reflects a Proto-Indo-European subjunctive **ǵenh₁-$^{e}/_{o}$-* with **ñt* > *nt*, but it could also be a backformation from the present {kənáˢˢᵊ/ske-} on the basis of the model prs. {awnáˢˢᵊ/ske-} : sbj. {awn-} of *awn-* 'hit'. After all, the regular subjunctive is {kəné-}, but *kən-* is the only verb of this small class with a $^{\text{ˢˢᵊ}}/_{ske}$-present instead of the regular $^{\text{ˢᵊ}}/_{se}$-present (only *təm-* 'be born' has something similar, a $nə^{\text{ˢˢᵊ}}/_{ske}$-present, but it displays several other deviations from the type): an adaptation of the pattern is therefore to be expected. In sum, the combination of a severely abraded tiny fragment and a beautiful hapax legomenon that proves the inheritance of an isolated old subjunctive is too much of a coincidence: the whole idea is best abandoned completely.

Strikingly, it has also been argued that certain Tocharian presents reflect Proto-Indo-European subjunctives. For instance, Jasanoff has argued that the Tocharian *s*-present goes back to a subjunctive of the *s*-aorist (1987: 101-102; 2003: 181-182), and Ringe (2000: 129-130, 136; Kim 2007b: 190) interprets two $^{\text{ə}}/_{e}$-presents as original subjunctives: Tocharian B $ĺə^{\text{śᵊ}}/_{ke}$- 'lie' and $kəĺ^{\text{ə}}/_{e}$- 'stand'. The history of the *s*-present is too complicated to give even a brief account here, but it is argued in 4.5.6 (p 419) that it rather goes back to the **-sk$^{e}/_{o}$-* present suffix. The reason why Ringe wanted to derive 'lie' and 'stand' from a subjunctive is obviously the $^{\text{ə}}/_{e}$-suffix, for which alternative explanations are available. In any case, it is semantically difficult to derive Tocharian presents from older subjunctives and it runs counter to the well established development of Proto-Indo-European presents to Tocharian subjunctives; with Adams (1994: 4), "This Worm of Ourobouros scenario is hardly compelling."

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[731] It can hardly be overemphasised that the reading is *not* secure, witness the brackets. It is even very unlikely that <rñ·> is correct; I would rather opt for <ññā>. <s̲ą> could also be <n̲ą> – among others – and as far as can be discerned, it is followed by an akṣara in virāma.

In sum, only for a small number of Tocharian subjunctives has it been argued that they derive from Proto-Indo-European subjunctives. Even if in some cases such a derivation is necessary indeed, it cannot be the explanation of the subjunctive category as a whole: many Tocharian subjunctives just have no *'ə/e*-suffix.

4.1.2 OPTATIVE

The Proto-Indo-European optative with the suffix **-ieh₁-* ~ **-ih₁-* is directly inherited in the Tocharian optative, as commonly agreed. Nevertheless, Lane (1959: 166) argued that it is also reflected in one Tocharian subjunctive class: class 4 of Tocharian B with the suffix *-'əyə/e-*. There are two problems with Lane's derivation: synchronically, the suffixes are different, namely sbj. *-'əyə/e-* vs opt. *-'əy-* (see also 4.8.1, p 469), and the meaning of the Tocharian subjunctive is different from that of the Proto-Indo-European optative. Although the semantic difference is perhaps not insurmountable, it adds to the formal problems. Last but not least, it is completely unclear why the optative suffix should have taken on subjunctive function only in class 4, or the other way round, what made class 4 adopt the optative suffix. In 4.8.1 (p 469), the *'əyə/e*-subjunctive is rather derived from the present.

4.1.3 PRESENT

In view of the formal similarities between the Tocharian subjunctive and present, it is not surprising that it is often argued that the Tocharian subjunctive goes back to Proto-Indo-European presents. However, the idea that *all* Tocharian subjunctives reflect earlier presents and that the contrast between present and subjunctive is a recent innovation of Tocharian cannot be maintained, pace Lane (1959: 179), who argues that:

> "in that dialect of Indo-European which we may call Pre-Tocharian, there was no subjunctive formally distinguished from the present indicative. In Proto-Tocharian such a distinction was only beginning to be made, as reflected by certain agreements in the two dialects. The distinction, so far as it existed, was made by using an alternate present formation as subjunctive."

In particular, this view is incompatible with the fact that there are verbs with a contrast between subjunctive and present where the present clearly goes back to an original rather than a secondary present, as for instance in the nasal presents. If Lane had been right, we would rather have expected that a typical present category such as the nasal presents had ended up as subjunctives with derived presents.

A stand similar to Lane's is taken by Adams (1978), who reconstructs a pre-stage of Tocharian with an independent iterative formation in **-ske/o-* that yielded presents, while pushing original presents into subjunctive function. However, he leaves open the possibility that the existence of the creation of the subjunctive predated this present → subjunctive shift: "If the category was not inherited from Indo-European,

this development led to the addition of the subjunctive to the moods of early Common Tocharian" (1978: 277).

Even though one would have wished for somewhat more precision, Jasanoff follows Lane's ideas, on the evidence of his statement that "The subjunctive in Tocharian is widely recognized to be a repository of older indicative forms that have acquired modal or future value" (2003: 161).

Although Lane's claim must be wrong in its most radical variant, a large number of individual subjunctives as well as some subjunctive classes have been derived from original presents indeed.

A striking case is the reduplicated subjunctive *tətta-* in Tocharian B, which is evidently cognate with Gk. τίθημι 'put' and Ved. *dádhāti* (e.g. Adams 1978: 279). Further, there are clear cases of nasal subjunctives with secondary presents, for instance the famous case of the Tocharian B subjunctive *kərná-* 'trade' (with the secondary present *kərnáṣṣə/ske-*), which can be equated with Ved. *krīṇā́ti* 'buys', OIr. *crenaid* 'id' etc, see for instance Jasanoff (2003: 161). However, it must be pointed out that, contrary to what Jasanoff suggests, this is an exceptional case (cf the correct formulation of Kim 2007b: 192) for which a good explanation is available (see 4.6.9, p 448). Along the same line of reasoning, we may add all subjunctives with the typical present suffix *-sk* that have an *sk*-present (i.e. with *sk_sk*, as in TB *yaskaskemar* 'I beg') next to them, see in particular Hackstein (1995: 167-202).

Apart from such incidental cases as listed above, the class of *e*-subjunctives (TEB class 3) has been argued to be of present origin; see for instance Lane (1959: 165), who identifies it with the *e*-present, which is identical in form. Likewise, present origin of the Tocharian A *ñä/a*-subjunctive class (TEB class 7) has been argued for, see for instance Lane (1959: 176), Hilmarsson (1991b), or Kim (2007b: 192). In addition, I will argue that the Tocharian B *i*-subjunctive (TEB class 4) in origin goes back to a present formation (4.8.1, p 469; rather than the optative, as argued by Lane, see 4.1.2 above, p 332).

Last but not least, it is argued in 4.4 (p 377) that present-subjunctives go back to presents. However, as I argued extensively in 2.6 (p 94) and 2.7 (p 117), these present-subjunctives are best analysed as presents with zero-derived subjunctives. Thus, if they can be called subjunctives at all, they derive from presents at a very shallow reconstruction level and they cannot be used as examples of a shift present → subjunctive; nothing is shifted, the usage of the present has only been extended.

4.1.4 "PRESENT-SUBJUNCTIVE"

Although he does not treat the origin of the Tocharian subjunctive in particular, the 2000 article of Ringe deserves a separate discussion because he makes interesting observations and claims about Tocharian and the Proto-Indo-European subjunctive. Investigating Tocharian thematic presents and subjunctives, he found that Tocharian has relatively few simple thematic presents and subjunctives that continue Proto-Indo-European stem formations. From the fact that in Tocharian thematic subjunc-

tives are better represented than thematic presents, he drew far-reaching conclusions about the structure of the Indo-European family tree and the development of the Proto-Indo-European verbal system.

According to Ringe, Proto-Tocharian original simple *ˀə/e*-presents, essentially only **ak*ˀə/e*- 'lead', **pərˀə/e*- 'carry' and **śawˀə/e*- 'live' are outnumbered by *ˀə/e*-subjunctives such as **kʷəmˀə/e*- 'come', **ləwkˀə/e*- 'shine', **wəykˀə/e*- 'drive off', and other members of the *s*-causative class (TEB present 8, subjunctive 2). Since Hittite has no simple thematic presents nor subjunctives at all, while thematic presents are numerous in all other branches of Indo-European, he claimed that Tocharian may represent a transitional phase in which the thematic suffix was developing. In his view, this supports the communis opinio that after Anatolian, Tocharian was the first branch to split off from the rest of Proto-Indo-European.

Whereas it is likely that Tocharian is indeed archaic in having preserved so few simple thematic presents, Ringe's conclusion that the function of the thematic suffix was originally only subjunctive is not supported by the Tocharian evidence. The fact that there are more *ˀə/e*-subjunctives than *ˀə/e*-presents need not be significant because the former are part of a relatively frequent, rigid pattern that may ultimately result from a small common source (see 4.8.4, p 478). Moreover, it is unclear how the semantic development from subjunctive to present should have proceeded; the opposite direction, as defended by e.g. Renou (1925b) and Kortlandt (1983a), seems much more attractive.

4.1.5 PERFECT

Since Lane's groundbreaking 1959 article on the subjunctive and Cowgill's unification of the *e* : *ə* gradation in *ə*|Ø-root subjunctives and the *a* : *ə* gradation in *ə*|*a*-root subjunctives (1967), the Proto-Indo-European perfect has often been considered the most likely source of the Tocharian subjunctive. The argument is based on two points of comparison, as put forward by Winter (1994a: 305-308; cf also e.g. Eyþórsson 1993; Hackstein 2004a: 92-93; Kim 2007b).

The first point concerns the gradation of the Tocharian subjunctive: since its gradation patterns can be unified as an original *e* : *ə* without initial palatalisation, it is argued that this must reflect **o* : Ø gradation in Proto-Indo-European. The PIE perfect displays exactly these root grades with the same distribution, namely *o*-grade in the singular and Ø-grade in the plural (Lane 1959: 160; Adams 1978: 278, 281; van Windekens 1944: 257; 1982: 192-193). The second point involves the initial accent found in many Tocharian B subjunctives, which is exceptional compared to other verbal and nominal formations. Winter argues that the accent was automatically fixed on the second syllable of each word at a pre-stage of Tocharian B, so that the exceptional initial accent of the subjunctive must be explained with an "extra first syllable" that was lost *after* the accent was fixed: a reduplication syllable as found in the Proto-Indo-European perfect.

The following extract from Winter's article contains these two main arguments:

> "Es ist seit langem bekannt, daß der sogenannte 'Konjunktiv' der tocharischen Sprachen dort, wo sich Ablaut beobachten läßt, die Abstufung des indogermanischen Perfekts zeigt: im aktivischen Singular findet sich die Widerspiegelung der indogermanischen *-*o*-Stufe, im aktivischen Plural und im gesamten Mediopassiv hingegen die der indogermanischen Schwachstufe. [...]
>
> Für die Formen von Tocharisch B, für die sich Aussagen über die Akzentstelle mit großer Sicherheit machen lassen, gilt nun, daß Formen des 'Konjunktivs' der ablautenden Paradigmen den Akzent grundsätzlich auf der Anfangssilbe tragen. Nimmt man Krauses Annahme (1952:10) ernst, daß der Wortakzent in Tocharisch B auf die zweite Silbe eines Wortes falle (retrahierte Akzente in zweisilbigen Formen können hier außer Betracht bleiben), und setzt man für mehrsilbige Formen mit Anfangsakzent zugrundeliegende morphophonematische Bildungen mit Reduplikation mit *|Cɨ-| an, deren *|-ɨ-| in offener Silbe schwinden mußte, so ergibt sich, daß die ablautenden 'Konjunktive' mit Formen des indogermanischen Perfekts nicht nur in der Ablautstufe, sondern auch in der zur Erklärung des Akzentverhaltens anzusetzenden Reduplikation übereinstimmten." (1994a: 305-306)

Both arguments start from important non-trivial assumptions. First of all, it is assumed that Tocharian non-palatalising *e*-grade directly reflects PIE **o*-grade and non-palatalising *ə*-grade PIE Ø-grade, despite the high functional load of palatalisation in Tocharian morphophonology, which implies that it was productive and therefore possibly secondarily present or absent in specific contexts. Secondly, although the Tocharian B accent must derive from a simple system with automatic accent assignment, as shown by its great simplicity, it is synchronically morphological (*not* phonetic) in the Tocharian B subjunctive, which proves that it was generalised. This raises the question whether other sources are conceivable, too. However, these counterarguments allow for alternative solutions at most: as far as the formal side is concerned, Winter's reasoning is in itself fully compatible with the data.

Nevertheless, there are serious problems of a different kind that the perfect theory has to address: the function, the endings, and the stem pattern.

As shown in chapter 3, the main function of the Tocharian subjunctive is to denote future events in main clauses and uncertain events in subclauses. Conversely, the Proto-Indo-European perfect had neither of these two functions, but rather an aspectual function: it had present reference, denoting a state resulting from a previous event. In many Indo-European languages, the perfect has developed into a past tense (a development comparable to that underlying the difference between the English perfect, e.g. *I have done* and the German perfect, e.g. *ich habe gemacht* 'I did'), but among the Indo-European reflexes of the perfect, the functions of the Tocharian subjunctive are not found. Consequently, the derivation of the Tocharian subjunctive from the Proto-Indo-European perfect is in need of an explanation for the alleged change in function. Since there are no functional overlaps between the two categories, the only possible path seems to be that the resultative aspect of the perfect was bleached out in favour of its present reference, and that it was pushed to its Tocharian modal function by the present, which must have existed next to it all

the time. How this might have happened is unclear to me, but in any case there is no concrete evidence within Tocharian *that* it actually happened.

Another problem of the function of the Proto-Indo-European perfect and the Tocharian subjunctive concerns valency. Whereas the Tocharian grading subjunctive is typically found with transitive verbs as found in the Tocharian present classes with an *s*-suffix or an *n*-infix, the Proto-Indo-European perfect denoted a state and it was typically intransitive; verbs that were otherwise transitive could be used in an absolute way, without object:

> "le parfait note l'état acquis et le mouvement effectué: «il est (actuellement) endormi, irrité, il est arrivé (et il est ici)». Cette valeur apparaît ainsi de préférence là où le verbe est par nature intransitif. Mais elle n'est pas exclue là même où le présent comporte un objet: en ce cas le parfait, conformément à la liberté d'emploi des racines indo-européennes, figure d'une façon absolue." (Renou 1925a: 7-8, based on Wackernagel 1904)

Only a small category of perfects could be used transitively, typically "Verbes signifiant «avoir, posséder, abandonner, faire»" (Chantraine 1927: 11). Thus, the Proto-Indo-European perfect does not in any way match the marked preference of the Tocharian grading subjunctive for transitive use.

As will be shown in section 4.2 (p 341), the Tocharian present endings, which are also found with the subjunctive, derive from a mixture of the Proto-Indo-European primary and secondary endings of the present-aorist system. By contrast, the endings of the Tocharian preterite derive from those of the Proto-Indo-European perfect. This suggests, evidently, that the Proto-Indo-European perfect became a past tense in Tocharian after all (see above), since it has supplied the endings of a past tense. Likewise, the present-aorist origin of the endings of the Tocharian subjunctive would in the first place suggest an origin of the subjunctive in the present-aorist system, not in the perfect. Thus, if the subjunctive were to be derived from the perfect, we seem to be obliged to assume that *both* the subjunctive and the preterite derive from the perfect, and that next to the "past tense" perfect with perfect endings a second perfect with present-aorist endings was created, which was to become the subjunctive.[732] Subsequently, the perfect features, namely reduplication and gradation, were given up in the past perfect, but preserved in the subjunctive perfect. Although heavy restructurings have certainly taken place, the developments sketched above are complicated and implausible.

The perfect theory is weak in that it makes no predictions about the stem patterns of the subjunctive: it does not explain the distribution of the grading subjunctive, neither compared to other subjunctive types nor compared to the other stems of verbs with a grading subjunctive. Yet, the grading subjunctive is not an independent type, as shown in chapter 2: it is tightly matched to specific present and

[732] The assumption that the Tocharian subjunctive continues the Proto-Indo-European perfect and the preterite continues the aorist only makes matters worse.

preterite types in one-to-one correspondences. As far as I know, nobody has argued that the *s*-preterite (always found next to an *ə*|Ø-root subjunctive) or the *ə*|*a*-root preterite (next to the *ə*|*a*-root subjunctive) have a special correlation with the perfect, nor, for that matter, $^{ṣa}/_{se}$-presents or *na*-presents, the respective present types.

On top of these three problems, there is also a difficulty on yet another level: there is virtually no comparative evidence of individual grading subjunctives matching old perfects; to use Jasanoff's term, there are no "word equations" in support of the perfect theory. It is my firm belief that comparative morphology should compare morphological types rather than set up etymologies, certainly with a language with so many rigid patterns as Tocharian. Nevertheless, a morphological explanation additionally supported by word equations is clearly preferable to one based on morphological types only.

4.1.6 *MOLŌ*-TYPE

As a variant of the perfect theory, Jasanoff has argued on several occasions that the Tocharian grading subjunctives derive from a slightly different type, which he mostly calls the "*molō*-type" or the "h_2e-conjugation" (e.g. 1992; 2003: 161-165 and passim). In brief, the *molō*-type is identical to the traditional perfect in its endings, in its *o*-grade in the singular, and in being a present, while it is different in having *e*-grade in the plural and lacking reduplication.

A full discussion of the *molō*-type is clearly beyond the scope of this study, but two points may be noted. First, in spite of Jasanoff's arguments (2003: 228-233), Ved. *veda*, Gk. οἶδα 'knows' etc (LIV2: 665-667) proves the existence of a perfect type without reduplication, as is also suggested by the two 3pl. endings *-r(s)* and *-ēr*, which must reflect a difference in accent patterns. If the difference between the *molō*-type and the traditional perfect is not the presence or absence of reduplication, the *e*-grade in the plural of the *molō*-type becomes extremely important, should the two types be different at all. This leads us to the second point: the evidence for *e*-grade in the plural is very scanty indeed, certainly in view of Kloekhorst's interpretation of the Hitt. *šākk-* ~ *šekk-* class (2008b: 141-143). He convincingly shows that the verb *šākk-* ~ *šekk-* itself was originally of a different type, namely *šākk-* ~ *šakk-*, thus offering no proof for an alternation *o* ~ *e*. The *e*-grade of the remaining verbs with *ā* ~ *e*, which all have a resonant in the root, is due to restoration of the Schwebeablaut in the plural, i.e. <re> (according to Kloekhorst, phonologically /rɨ/) replaces older **ar*. In fact, this weak point is inherent in Jasanoff's theory when he admits that "replacements of the type *TérT-* → *TṚT-´* are common in weak stems everywhere in the family" (1992: 143; similarly also elsewhere).

As far as the Tocharian subjunctive is concerned, the *molō*-type theory differs in only one important aspect from the perfect: the lack of reduplication. As explained above, one of Winter's *two* arguments to derive the subjunctive from the Proto-Indo-European perfect was its initial accent, which would preserve the original

reduplication syllable in an indirect way. Unfortunately, this point is not addressed by Jasanoff.[733]

Thus, the *molō*-type theory has no advantages over the perfect theory: it does not account for the initial accent, the initial palatalisation expected from *e*-grade in the plural is not found, and it offers no better explanation of the meaning of the Tocharian subjunctive.

4.1.7 PERFECTIVE PRESENT

As recounted in 3.1.1 (p 155), Couvreur and several other scholars have argued for an analysis of the subjunctive as a perfective variant of the present. This analysis was in all cases supported with arguments from morphology instead of syntax. In my discussion of the syntactic evidence in 3.8.4 (p 325), I have arrived at the conclusion that there is no evidence in the syntactic use of the subjunctive that proves or even suggests that it is a perfective present. However, I also suggested that the merits of this theory are rather to be expected on the diachronic than on the synchronic level.

Crucial in the application of the "perfective present" theory is the origin of the perfective stem. In principle, I see two possibilities: 1) the perfective present is a secondary result of the creation of new imperfective present, or 2) the perfective present is a present formed from an originally perfective stem. Unfortunately, in most of the accounts that I have been able to trace (Couvreur 1947: 73; Winter, e.g. 1982: 9, 1994a: 286-287; Hackstein 2004a: 90-92; Pinault 2008: 570), this point was not addressed explicitly.

The first option departs from a development comparable to that in Turkish, compare for instance the Uy. "uncertain present-future tense" in *-r-*, e.g. *maŋarmän* 'I will probably walk' with the "present progressive tense" in *-wati-*, e.g. *küliwatimän* 'I am laughing' (de Jong 2007: 129, 131): the former is the original present tense, usually termed "aorist" in the literal sense of Gk. ἀόριστος 'indefinite', while the second is formed with an extra imperfective suffix. Evidently, this interpretation requires that the Tocharian subjunctive reflects the Proto-Indo-European present, which is certain for a large number of instances, but untenable as an explanation of the subjunctive as a whole (see 4.1.3, p 332). Based on the typological framework developed by Haspelmath (1998), this option is discussed in detail in 4.9.2 (p 483).

The second option leaves room for the Tocharian present to derive from the Proto-Indo-European present, but it leads to the logical question where the perfective stem goes back to. This point is addressed by Kim (2007b), who makes the interesting – though evidently wrong – suggestion that the Proto-Indo-European perfect supplied that perfective stem (see 4.9.3, p 486). Obviously, Kim was not led

[733] As I argue against the derivation of the subjunctive from the perfect, it would have suited me to learn Jasanoff's opinion on the initial accent of the subjunctive. I have now offered my own explanation of the accent in 4.5.5 (p 413), which could in theory be used by proponents of the *molō*-type theory.

by semantic clues: his main objective was to reconcile the perfect theory with the perfective present theory.

The simple solution defended in this study is that the perfective present theory contains the key to the historical explanation of the subjunctive: the perfective stem on which it is based is just the old Proto-Indo-European perfective stem, the aorist.

4.1.8 AORIST INJUNCTIVE

If the Tocharian contrast between the imperfective present stem on the one hand and the perfective preterite and subjunctive stem on the other continues the Proto-Indo-European contrast between the imperfective present and the perfective aorist stem, the origin of the Tocharian subjunctive seems to be the Proto-Indo-European aorist injunctive. After all, there is little evidence of old subjunctives, including aorist subjunctives, so that the non-past injunctive seems to be the only option. In as far as the Tocharian subjunctive does continue old *$^{e}/_{o}$-subjunctives, their semantic contribution is not so much to be found in their subjunctive suffix, but rather in the fact that they are formed to the perfective aorist stem.

Thus, the theory defended in this study is identical to the following account of Pinault with respect to his derivation from the subjunctive and the injunctive. However, in as far as he includes the present and the perfect stem as possible origins, it is not:

> "L'inventaire des classes de subjonctif montre qu'il est rarement le descendant formel du subjonctif indo-européen: il s'agit d'une catégorie nouvelle, propre au tokharien, qu'on peut définir en synchronie comme «le non-passé de l'aspect perfectif» (Winter, 1994, p. 286; 1998, p. 164), et qui hérite à la fois du subjonctif (aoriste, parfait) et de l'injonctif (présent, aoriste, parfait), ce qui explique qu'il reçoit les désinences de présent, issues des désinences secondaires et primaires." (2008: 571)

The most explicit derivation from the aorist injunctive is probably that of Kortlandt (1994: 62), which I cite below. For the technical details of his derivation, I refer to 4.5 (p 403):

> "If the asigmatic forms in the *s*-preterite arose from the phonetic loss of **s*, the root subjunctive is best derived from the sigmatic aorist injunctive, a derivation which moreover explains the absence of an *s*-subjunctive."

As the derivation from the aorist injunctive is in fact a specific application of the perfective present approach mentioned above (4.1.7, p 338), it is compatible with most versions of the latter. It can also be reconciled with Lane's equation of the Tocharian *a*-subjunctive with the *a*-preterite, if this *a*-stem ultimately reflects an aorist formation (1959: 172). However, Lane's intermediate step that the *a*-formation with present endings became a present first is unnecessary: probably, such preterite-subjunctive stems were always accompanied by a derived present.

4.1.9 METHOD

Few methodological preliminaries are required: I try to keep to the generally accepted principles of comparative linguistic reconstruction without adopting a special theoretical framework. Whenever there is a choice between a regular morphological pattern and a morphological irregularity, the preferred solution takes the pattern to be the result of analogy and the irregularity the result of sound change. In my understanding of the historical development of Tocharian, both types of changes have drastically changed the appearance of the Tocharian languages: our basic task is to sort out which changes are due to sound law and which are due to analogy, and to look for independent clues to support interpretations.

As a consequence, I start my historical approach with irregular phenomena rather than rigid patterns. The first choice is only logical: irregular verbs, a selection of which is discussed at length in 4.3 (p 351). The second is perhaps less obvious: present-subjunctives (4.4, p 377). Although present-subjunctives are relatively frequent, certainly in Tocharian B, which does allow to establish certain patterns, the regular situation in Tocharian is that there is a contrast between present and subjunctive. Both the irregular verbs and the present-subjunctive allow to make breaches in the rigid system presented by many other subjunctive formations, for instance the much more regular root subjunctive to *x*|Ø-roots (4.5, p 403) and *x*|*a*-roots (4.6, p 430).

Since I was educated at Leiden University, it will not be much of a surprise that I adhere in principle to the reconstruction of the Indo-European proto-language of Beekes (1995). However, I am well aware of the potential of Tocharian: this branch might have preserved archaisms that force us to change or adapt elements of the reconstruction. Therefore, I will be cautious with the application of "Leiden" views or insights, and try to be open-minded towards the linguistic facts of Tocharian.

4.1.10 STRUCTURE

This chapter is organised as follows. In 4.2 (p 341), the personal endings of the verb are discussed in order to show that the Tocharian present endings continue the endings of the Proto-Indo-European present-aorist system, whereas the preterite endings continue the endings of the perfect. In 4.3 (p 351), a number of important irregular verbs is discussed, which gives important insights in the development of the verbal system as such. The Tocharian present-subjunctive is derived from the Proto-Indo-European present in 4.4 (p 377), which suggests that the subjunctive does *not* derive from the present. In 4.5 (p 403), the *x*|Ø-root subjunctive and the related *s*-preterite and *s*-present are discussed, to be ultimately derived from the *s*-aorist. In 4.6 (p 430), the *x*|*a*-root subjunctive and preterite and the related nasal presents are discussed. The chapter is concluded with the heterogeneous relic category of *ə*/*e*-presents with *e*-grade in the root (4.7, p 453), minor subjunctive types

(4.8, p 469), a discussion of the development of the meaning (4.9, p 480), and a brief conclusion (4.10, p 491).

4.2 ENDINGS

Whereas the debate about the origin of the different stems is fierce and undecided, the explanation of the personal endings is in broad outline commonly agreed upon (see in general e.g. Kortlandt 1979, 1981; Adams 1988: 51-61; and Pinault 2008: 619-630 with references). As these endings might contain information about the origins of the stems, but certainly need to be considered in any diachronic account of the Tocharian subjunctive, it seems best to start with them.

In a nutshell, Proto-Indo-European must have had three main types of endings: primary endings with present reference, secondary endings without present reference, and special endings for the perfect. The primary endings were of two types: athematic and thematic. In Tocharian, the difference between the Proto-Indo-European athematic and thematic primary endings was lost, as well as that between primary and secondary endings: traces of all three sets can be found in the Tocharian present endings. On the other hand, the perfect endings were kept distinct and came to be used as the preterite endings.

4.2.1 PRESENT ACTIVE

As must be immediately clear from the table presented in 2.2.1 (p 26), already the Tocharian B present endings alone cannot be just projected back to Proto-Tocharian, since they come in three different variants, and a comparison with those of Tocharian A makes a more detailed reconstruction of the Proto-Tocharian set necessary. If we focus on the active endings first, the differences between the present sets within Tocharian B concern the three singular persons, those within Tocharian A the third person plural, and those between the two languages all endings.

1sg

The Tocharian A ending is *-m* everywhere, and this ending is certainly mirrored by Tocharian B *-m* found in the imperfect-optative subset, and in *yam* 'I go'. TA and TB *-m* must continue PT **-mə*, continuing the PIE athematic primary ending **-mi*, as the PIE secondary ending **-m* would certainly have become *-Ø*. Another 1sg. ending is found only in Tocharian B: *-w*. Although it has repeatedly been suggested that PT **-mə* was in certain positions lenited to *-w* (e.g. Sieg and Siegling 1921: VI; Couvreur 1938b: 243-247; 1947: 42, 49, 55; Winter 1990b: 15-16), the conditions for such a development have not been stated satisfactorily, and I keep to the alternative derivation of TB *-w* from the PIE thematic primary ending **-oH* through **-ō* > **-u* (Pedersen 1941: 141), perhaps preserved in positions where it was covered by a clitic.

The Proto-Tocharian distribution of the two 1sg. endings is not fully clear, but both must have been found in the present and the subjunctive, since the TB relic

form *yam* proves that **-mə* was in use as a present or present-subjunctive ending. The isolated imperfects of 'be' and 'go' with *-m* in both languages, and the regular presence of this ending in all other imperfects and optatives of Tocharian B suggests that it was at home there, too. Whether the 1sg. *-m* and 1pl. *-(e)m* ever were homophonous in Tocharian B depends on the evaluation of the final *-s* of Tocharian A *-mäs*. If they were indeed homophonous, this further confirms that the imperfect-optative 1sg. ending was *-m* in Proto-Tocharian (see under 1pl.). On the other hand, the completely isolated present-preterites *latau* and *kamau* cannot possibly have replaced older forms in Proto-Tocharian **-m* (i.e., PIE **-mi*), since **-m* with its past function in the imperfect had certainly been the more regular ending.

In conclusion, it is very likely that **-m* was the only ending in the imperfect-optative, whereas in the present and the subjunctive both **-m* and **-w* were found, but how they were distributed there is uncertain so far. Isolated *yam* could indicate that *-m* was regular in athematic presents as in Proto-Indo-European, but other types of distribution are also possible.

In Tocharian B, the ending *-w* spread to athematic paradigms and the thematic vowel was restored in thematic ones, but the date of this development is unknown. It is possible that the spread of *-m* in Tocharian A was triggered by the opaque thematic forms in *-u* instead of *-eu*, i.e. original **ayəm* 'I give' and **akəw* 'I carry' may have been made transparent as **ay-ə-m* vs **ak-e-m* in Pre-Tocharian A and as **ay-ə-w* and **ak-e-w* in Pre-Tocharian B.

2sg

The normal 2sg. ending is *-t* in both languages, which suggests a straightforward Proto-Tocharian **-tə*. The problem is that this **-tə* can reflect none of the relevant endings usually reconstructed for Proto-Indo-European, and it is often supposed to reflect a particle or a shortened form of the pronoun **tuH* 'you' (e.g. Pedersen 1944: 5; Couvreur 1947: 55). As Pinault suggests (2008: 620), **-tə* might also reflect the perfect ending **-th₂* that would have yielded **-ta* (cf TB *-sta*), but this needs the assumption that somehow the *a* was removed, and the question is whether a model 1sg.prt. *-w-a* : 1sg.prs. *-w :* 2sg.prt. *-t-a* : X, X = *-t* is strong enough.

Another problem is what the new ending **-tə* replaced exactly. The athematic primary ending **-si* is excluded as something should have remained, probably ***-ṣ*, and if the thematic primary ending was indeed **-eh₁i* (based on Gk. -εις with analogical *-s* and Lith. *-ì* from *-íe*; Kortlandt 1979: 57), this ending would probably have become ***-'əy*. In fact, nothing seems to be wrong with an ending *-ṣ* or *-'əy*, although the latter would perhaps have fused with clitic pronouns as 1sg. *-ñ* or 2sg. *-c*, and certainly with a preceding optative suffix. The only remaining candidate is the secondary ending *-s*, which would certainly have disappeared completely, calling for restoration.

The idea that **-tə* replaces older *-s* is nicely confirmed by the present-preterite, where the actual ending is *-Ø* in Tocharian B. Of course this ending is normally derived from *-es* in the thematic aorist directly, but in view of the 1sg. ending *-w*, the

present-preterite must have been felt as a category on the same level as the present and the subjunctive, which suggests that this zero ending was actually there in the present and the subjunctive, too. Thus, the secondary ending *-*s* was generalised, and in its non-preterite function replaced by *-*tə*. Perhaps the rationale was that *-*tə* was better marked than the outcome of *-*si* or *-*eh₁i* or both. In that case, the spread of *-*s* is only apparent, the generalised ending being in fact the reshaped *-*tə*.

3sg

The 3sg. ending is always -*ṣ* in Tocharian A, which does not match any of the two endings in Tocharian B: neither -*n* in the present and the subjunctive nor -Ø in the imperfect-optative and the present-preterite. It is commonly agreed that TB -*n* represents a particle added to the more original zero ending -Ø (e.g. Winter 1987: 307[734]). This particle can perhaps be identified with the pronominal stem seen in Slav. *onъ*, or otherwise, as argued by Pedersen (1941: 142-143), with the element -*n* in the demonstrative pronoun TA *saṃ* of distall deixis and TB *seṃ* of intermediate deixis, as argued by Winter (see Peyrot 2008a: 121-124) or of recognition, as argued by Pinault (2009: 229 and passim).

The TA ending -*ṣ* has aroused some debate, as it was argued that it could reflect the PIE athematic primary ending *-*ti*. However, parallels were few and problems manifold, so that this idea is discarded by Pinault (2008: 620). I have difficulties accepting his alternative explanation, however, because the progressive palatalisation he has proposed (in this case *-*ed* > *-*əź*) is found only in a very limited number of contexts: it has no parallels to other developments in the phonological system, and it defies falsification as the end product is subsequently lost in Tocharian B. Therefore, I would identify -*ṣ* with the same element in the TA demonstrative pronoun of proximal deixis *säs* (*ṣ* e.g. in the n.sg. *täṣ*), after Pedersen (1941: 142-143).

The zero ending is commonly derived from the PIE secondary ending *-*t*, and rightly so, since that would certainly have been lost. However, if one follows Kortlandt's argument that OCS -*e*(*tъ*), Lith. -*a* and Gk. -ει point to a thematic primary ending -*e* for Proto-Indo-European, since the endings of all other languages can easily be explained by influence of athematic -*ti* (1979: 61; 1997: 134), that ending is certainly an option, too. In fact, such an ending -*e* would have merged with secondary -*t* after the thematic suffix, i.e. -*e*-*t*, at an early stage. Since this ending *-*e* from *-*e* and *-*et* would have merged also with the 3sg.pf. ending *-*e*, the 3sg. may have been a key form for the transition of perfects to present inflexion (see e.g. *ayk*- 'know' in 4.4.1, p 379, *yok*- 'drink' in 4.3.6, p 371, and perhaps *tək*- 'touch' in 4.7.5, p 464).

[734] However, his suggestion that the -*n* is the reflex of the secondary athematic ending *-*t* assimilated to a following pronoun starting with *n*- (1990b: 17-19) defies verification and must be discarded.

1pl

The 1pl. ending is *-m* throughout in Tocharian B, whereas Tocharian A has *-mäs* exclusively. Moreover, there is no difference between present and preterite endings in either language. Although *-s* is a frequent plural marker in the Tocharian A nominal and pronominal systems, it is not found elsewhere in the verbal endings. If not in some fashion taken over from the 1pl. pronoun *was*, this *-s* is probably to be identified with the final *-s* of the PIE athematic primary ending **-mes* (Skt. *-maḥ*; Skt. *-masi* probably has an analogical *-i* after *-mi*, *-si*, *-ti*, pace Pinault 2008: 621). However, the *-s* cannot have been preserved in exactly that form, but must have been covered by a particle or pronoun clitics. The generalisation of the *s*-form is easy to understand, since the *s*-less form merged with the 1sg. *-m* from PIE **-mi* (see above).

As the correspondence TA *-s* : TB *-Ø* is not regular phonologically,[735] TB *-m* must have another immediate origin. This could be the same ending **-mes*, but a variant of it that really lost the *-s*. If the two variant outcomes of **-mes* existed side by side, the *s*-less form was probably able to survive because it merged with the outcome of the secondary ending **-me* (Skt. *-ma*), or the reflex of an ending **-men* (**-mem*?), if that was the thematic primary ending.[736] In conclusion, Tocharian A *-mäs* may continue the athematic primary ending, and Tocharian B *-m* the same ending, and practically all others (except endings with *o*-vocalism, such as that probably evidenced by Lat. *-mus*), but there is no trace of any sort of distribution.

2pl

The problem of the 2pl. is easily stated and difficult to solve. In Tocharian A, we find *-c*, which could reflect PIE **-te* or **-th₁e* (Skt. *-tha*). The same ending *-c* is found in the preterite and imperative middle; the present middle *-cär* has the present marker *-r* added to the preterite ending. The problem is the Tocharian B ending *-cer*, which has a vowel *e* and a final *r* that are difficult to explain. The *-r* is common in the middle endings, but further only found in the 3pl.prt. (active); *e* is rare altogether, only found in the preterite middle. None of these categories is a likely source for the elements *-e-*, *-r*, or *-er*, or of the complete ending *-cer*. The 2pl. pronoun *yes* does not give a ready explanation either: if the combination *cy* was simplified to *c*, we would still have expected *-ces*, not *-cer*. Although *yes* was at a certain stage analysed as *ye-s*, as we see from the 2du. *ye-ne*, this would still leave the *-r* unexplained (pace Pinault 2008: 621, it cannot be identical to the *-r* in the TA prohibitive negation *mar*, since that is likely to reflect *-ra*, which would of course have given ***-cera* in Tocharian B).

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[735] The only comparable correspondence is between TA *-s* and TB *-n*, which reflects the cluster **-ns*.

[736] On the basis of OCS *-mъ*, Kortlandt rather reconstructs a PIE ending **-omom* (Kortlandt 1979: 63-64). Pinault discards *-me* as a possible source, since this would have yielded TB ***-mi* through **-mə* (2008: 621). However, the reflex TB *i* for PIE **e* is only found in positions where the "coloured shwa" would have been preserved, i.e. not word-finally.

But even if we found an explanation for *-er*, it is not clear altogether why an original *-c* (which is, after all, expected on the basis of Proto-Indo-European) should have been replaced or extended. Within Tocharian B, there is no ending with which it would have merged, and I do not see which kind of unacceptable problems it could have caused: ambiguity through combination with the 2nd singular clitic pronoun cannot have been too frequent (if only for pragmatic reasons), nor does it seem possible that confusion with the 3sg. ending with the 2sg. pronoun clitic, or phonological problems after palatalised consonants in thematic paradigms a sufficient reason. If the 3pl. ending was (also) *-nc*, this was close indeed, but probably not close enough.

3pl

The normal 3pl. ending is *-n* in TB, whereas we find *-ñc* in TA, with a marginal variant *-y*. Most scholars agree that the "basic" endings TB *-n* and TA *-ñc* are not reconcilable on the Proto-Tocharian level, and reconstruct PT **-n* < PIE secondary **-nt* for the former and PT **-nc(ə)* < PIE primary **-nti* for the latter (see Pinault 2008: 621; Pedersen 1941: 144). Since *-n* is found in TB throughout, also in the "peripheral" imperfect-optative and present-preterite, and, likewise, *-ñc* is found in all categories in TA, it is only on the basis of Proto-Indo-European that we can assume that TA continues the primary ending and TB the secondary ending; there is no proof for such a difference within Tocharian.

The TA ending that needs to be described synchronically as *-y*, looks in fact completely like a truncated *-ñc*: *träṅki* ~ *träṅkiñc* 'they say', *lke* ~ *lkeñc* 'they see', etc. The distribution of these short endings over the texts is marked, as 16 out of 22 occur in the Maitreyāvadānavyākaraṇa, and only 2 of these are found in prose (Sieg, Siegling and Schulze 1931: 326-327). However, any grammatical rule for their occurrence next to the long endings seems to be lacking; their use is "ohne erkennbare Regel" (o.c.: 326).

Most explanations go back to Sieg, Siegling and Schulze's suggestive reference to the loss of *-ñc* before the 1sg. pronoun clitic *-ñi*, and argue that the short ending could have been generalised from there (e.g. Itkin 2002: 14). Possible as this explanation is, it is not supported by the distribution of the forms; at most one can say that the *other* pronoun clitics are not found after the short endings, but that is hardly significant with these small numbers.

To my knowledge, Pinault was the first to suggest that the short endings are not truncated, but reflect a different ending. Indeed, the distribution between "real" presents and other formations, like subjunctives, present-subjunctives, etc, is not equal: real presents are *kumse* (2x), *tāse*, *(l)äṃ(t)se*, *lotäṅke* (2x), *tsäkse*, whereas *kärse*, *tāke* (2x), *te*, *yā(m)e*, *läñce*, *lotke*, and possibly *sälpe* are subjunctives; *cämpe* and *winäse* are present-subjunctives, and *träṅki* (3x), *ype*, and *lke* are suppletive

presents (the first and the last could be called subjunctives morphologically).[737] Of course, this distribution, if it is significant at all, is only useful if the ending *-y* is not the result of secondary truncation.

Pinault suggests that *-y* reflects the secondary ending *-nt* with loss of final *t* (*-t#* > *-d* > *-z* > *-Ø*) and loss of *n* with the diphthongisation effect as in TA *es* 'shoulder' vs TB *āntse*, both from **anse*. If one does not accept his development of final *-t* to *-z*, the only option remaining is to take recourse to sandhi, either before pronoun clitics or in larger syntagms. The latter context does not look promising as the short endings seem to occur more often before vowels and caesurae (Sieg, Siegling and Schulze 1931: 326), whereas for the first we end up with the 1sg. and 2sg. pronoun clitics again: **ləkan-ńə* and **ləkan-cə* would certainly produce the required *e* (as if from *ay*). These forms would both have merged with long ending forms, yielding *lkeñi* and *lkeñci*, but again extraction of *lke* seems only possible in the first.

All in all, it is in my view certain that there were two different 3pl. endings in Proto-Tocharian: **-n* and **-nc(ə)*. However, their distribution must remain uncertain; the evidence from the TA short endings is difficult to evaluate and eventually this ending could be secondarily extracted from the position before the 1sg. pronoun clitic.

conclusion

Although the differences between the 1sg., 1pl. and 3pl. endings of Tocharian A and B must certainly be projected back to Proto-Tocharian, it is not completely clear how the different endings were functionally distributed. The present-preterite certainly had secondary endings in Proto-Tocharian, even if it has assumed the 1sg. primary ending *-w*. Further, the 3sg. zero ending of the Tocharian B imperfect-optative proves that this category must have had secondary endings, too. The difference between the 1sg. present-preterite *-w* and the imperfect-optative *-m* suggests that the first is secondary; it can perhaps be explained by the thematic suffix in the former. The co-existence of two 1sg. present endings in Tocharian B points to a contrast between thematic and athematic paradigms for Proto-Tocharian. It remains highly doubtful whether there was a difference in the endings of the present and the subjunctive.[738] In sum, we can draw the following tentative scheme:

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[737] Perhaps it is worthy of note that of the real presents, *tāse*, *(l)äṃ(t)se* and *kumse* (once) occur outside the Maitreyāvadānavyākaraṇa.

[738] It cannot be excluded that there was, in fact, a difference between the prs.3du. *-ten* vs the sbj.3du. *-ys* in Tocharian B, but the evidence is so meagre and the forms must have been so marginal in the spoken language, too, that we can hardly draw conclusions from this difference.

	them. prs.	athem. prs.	ipf.-opt.	prs.-prt. (them.)
1 sg.	*-w*	*-m*	*-m*	*-w* << -Ø
2	*-tə*	*-tə*	*-tə*?	-Ø
3	-?	-?	-Ø	-Ø
1pl.	*-məs*	*-məs*	*-m*	*-m*
2	*-c*	*-c*	*-c*	*-c*
3	*-ncə*	*-ncə*	*-n*	*-n*

Many uncertainties remain. The distribution of the 1pl. and 3pl. endings is entirely based on their supposed origins in Proto-Indo-European. Whereas the zero ending for the 3sg. is secured for the ipf.-opt. and the prs.-prt., it is not clear whether TA *-ṣ* and TB *-n* were already in use in Proto-Tocharian times, and if so, whether one was for instance thematic and the other athematic. If the ipf.-opt. is to be taken together with the prs.-prt., it is likely that the 2sg. had a zero ending, but otherwise it was probably *-tə*, too. As the origin of the TB 2pl. ending *-cer* is unclear, it is doubtful whether it was, for instance, a variant in the present endings.

In the remaining ending sets, chiefly the present middle and the preterite, only minor differences within the languages are attested, and those between Tocharian A and B are much less prominent, too.

4.2.2 PRETERITE ACTIVE

Tocharian A 2sg. *-ṣt*, 3sg. -Ø, 1pl. *-mäs*, 2pl. *-s* and Tocharian B 2sg. *-sta*, 3sg. -Ø, 1pl. *-m*, 2pl. *-s* evidently reflect Proto-Tocharian 2sg. *-sta*, 3sg. -Ø, 1pl. *-m* (see above), and 2pl. *-s*. The remaining endings deserve more detailed comments. For the 1sg., Tocharian B *-wa* points to **-wa*, matched by the TA relic ending *-u*. The other Tocharian A endings are remodelled: *-ā* is contracted from **-awa* and **-wā* is the original *-w-* plus the contracted ending *-ā*, or old *-wā* as it was preserved before clitics; rare *-āwā* is formed from the ipf. stem formant *ā* plus the ending *-wā* (itself analogical; see Winter 1965b: 206-209). The 3pl. has two forms in Tocharian B, *-r* and *-re*, but Tocharian A shows only *-r*; also before pronoun clitics, we find no variant *-ra* (Sieg, Siegling and Schulze 1931: 335). Apart from "normal" levelling, the reason is of course that the expected long ending *ra* was at home in the *a*-preterites where it was always subject to vowel weakening.

The Tocharian preterite endings continue those of the Proto-Indo-European perfect. Straightforward are the 3sg. *-Ø* < **-e* (apparently with analogical removal of the palatalisation in e.g. the 3sg.prt. *-sa*, see 4.5.4, p 411) and 1pl. *-m* < **-me*. The 1sg. *-wa* goes back to **-h₂* with the addition of an element *-u-* from the preterite participle or perhaps the present ending *-w*; note, in any case, that with the spread of *-a-* as a preterite marker, a 1sg. *-a* was bound to be replaced by another, distinct ending. The 2sg. *-sta* goes back to **-th₂*, but with an additional *s*, either from the *s*-aorist, or otherwise perhaps a relic of the original secondary ending *-s*.

At least at first sight, the 2pl. ending *-s* is incompatible with an ending **-e* as required by Ved. *-a*, while it is strongly reminiscent of the element *-s-* in the Hittite 2pl. endings of the *hi*-verbs: prs. *-šteni* and prt. *-šten* (Kloekhorst 2008a). Since *-šteni* and *-šten* are likely to have been reshaped after the *mi*-endings *-tteni* and *-tten*, the combination of Hittite and Tocharian leads to the preliminary reconstruction of a 2pl. perfect ending *-su* (o.c.: 498-499). However, the isolated character of the Vedic ending suggests that it is old: it is completely unclear how it should have come to replace an earlier ending **-su*, if that ever existed. An alternative explanation of the Tocharian ending could take the *-s* to be from the *s*-aorist (which could have a parallel in the 2sg. *-sta*, see above), while the expected palatalisation of the ending *-e* was removed by analogy, similar to what must have happened in the 3sg. *-Ø* < **-e*.

The difference between the Tocharian B 3pl. endings *-r* for *s*-preterites and *-re* for preterites in *-a* is difficult to explain: apart from the differences in the 1sg. in Tocharian A, which are clearly secondary (see above), the ending sets are identical. Because of its accentual behaviour, *-r* has been derived from Proto-Tocharian **-rə* (Ringe 1990: 197-206): this would explain why e.g. *prekar* 'they asked' has final accent, i.e. {prekə́-rə}. However, such an original underlying shwa is not directly attested, since we never find forms with mobile *-o* or final *-ä* such as ***prekaro* or ***prekarä*. As an alternative, we might consider the possibility of ordinary levelling of the accented *ə́*, which is found in all active forms except the 3sg. *preksa*. This would allow to derive *-r* from PIE **-r* or **-rs* (Ved. *-uḥ*) in a straightforward way; in any case, Ringe's reconstruction **-r-nt* would not yield the proto-form **-rə* that we need, but ***-rən* instead.

The variant *-re* seems to reflect a PIE **-ro*, but such an ending cannot be reconstructed for the perfect (a typological comparison with Latin *-erunt* < **-ēr-ont* fails, again, on the final, which would have been preserved as ***-reṃ*). Because *-r* has a good etymology but *-re* has not, I suppose that the latter is secondary. However, a model and a motivation are not easy to find. The only motivation I can think of is the homonymy with the sg.mid. imperative ending *-r*. Before the spread of initial palatalisation in the *a*-root preterite (on which see 4.6.7, p 446), the difference with the sg.mid. of the imperative was only the prefix of the latter, e.g. sg.mid.ipv. **pə-kəlar* 'bring' vs 3pl.prt.act. **kəlar* 'brought'.[739] In the *s*-preterites, on the other hand, both forms were additionally characterised by a difference in suffix, e.g. sg.mid.ipv. **pə-awn-sa-r* 'hit' vs 3pl.prt.act. **awnə-r* 'started'. This difference in stem formation between the *a*-root preterite and the *s*-preterite explains why only the ending of *a*-root preterite was substituted. However, I do not know a suitable model for ending *-re*: it seems to have been reshaped after the corresponding middle end-

[739] Synchronically, there is also a difference in accent, i.e. {pə-kə́la-r} vs {śəlá-re}. Even if the accentual difference was already there at the time of the creation of the 3pl. ending *-re*, it may not have been a sufficiently salient distinction.

ing *-nte*, but I cannot explain how (possibly, the *-e* of *-nte* was analysed as the preterite marker, as explained below).

4.2.3 PRESENT MIDDLE

Tocharian A 1sg. *-mār*, 2sg. *-tār*, 3sg. *-tär*, 1pl. *-mtär*, 3pl. *-ntär* and Tocharian B 1sg. *-mar*, 2sg. *-tar*, 3sg. *-tər*, 1pl. *-mtər*, 3pl. *-ntər* point to Proto-Tocharian **-mar*, **-tar*, **-tər*, **-mtər*, **-ntər* (Kortlandt 1981: 132); on the assumption that PT **t´ẃ* yields TA *c*, TB *t*, **-t´ẃər* can be posited for the 2pl. With the *-r* as a present middle marker, the immediate pre-forms must have been 1sg. **-ma*, 2sg. **-ta*, 3sg. **-t*, 1pl. **-mt*, 2pl. **-t´ẃ*, 3pl. **-nt*. These formants are so close to those needed for the preterite middle that we can only discuss them after having seen the latter as well.

4.2.4 PRETERITE MIDDLE

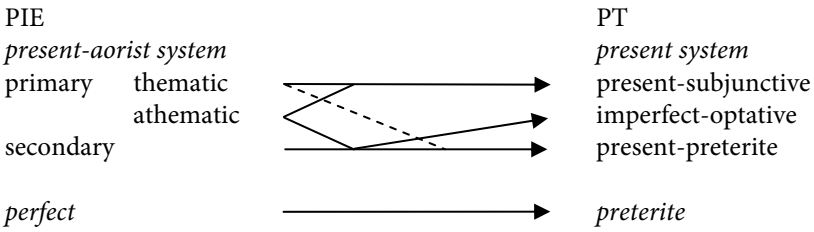
Again, the Proto-Tocharian state of affairs cannot have been very different from TA 1sg. *-e*, 2sg. *-te*, 3sg. *-t*, 1pl. *-mät*, 2pl. *-c*, 3pl. *-nt* and TB 1sg. *-may*, 2sg. *-tay*, 3sg. *-te*, 1pl. *-mte*, 2pl. *-t*, 3pl. *-nte*: they point to *-ay*, *-tay*, *-te*, *-mte*, *-t´ẃ*, *-nte*. The Tocharian A 1sg. ending *-e* may in fact reflect older **-away* (Schmidt and Winter 1992: 55) as the extremely rare ending *-we* is found in an archaic form, which suggests that is relatively old. However, eventually *-we* must have been formed after the active *-wa*, and the ending **-ay* that needs to be reconstructed on the basis of the comparison with Tocharian B *-may* may also be preserved directly in the regular ending *-e* < **-a* + *ay*. Compared to the present forms, the 3sg., 1pl. and 3pl. seem to contain a preterite marker *-e*, which was, however, not generalised throughout the paradigm. Perhaps the 2pl. was not affected because it had no *-t-*; of course, the *-e* could not be added to the 1sg. and 2sg. endings *-a* and *-ta* because it would have resulted in hiatus.[740]

If we combine the findings of the present and the preterite middle, the present marker *-r* must originate from the PIE 3pl. **-ntro*, whereas the preterite marker *-e* must have been subtracted from the 3sg. **-to* and the 3pl. **-ntro* (Kortlandt 1981: 133-134). Thus, the 1pl. *-mte* reflects **-med^{h}h$_2$o* with loss of the **h$_2$* before the *o*; 2pl. **-t´ẃ* goes back to **-d^{h}ue*. The 3sg. and the 3pl. were reanalysed and rebuilt with the 3sg. formant *t* and the 3pl. formant *nt*, enlarged with the present marker *-r* or the past marker *-e*. The 2sg. points to **-th$_2$*, whereas the 1sg. continues two forms: **-mh$_2$* for the present and **-h$_2$* for the past.

[740] It cannot be excluded that at some stage *ae* yielded *ai*, but I know of no other proof of such outcome.

4.2.5 CONCLUSION

Thus, as already shown by the "building blocks" outlook of the paradigms, the middle inflexions are the result of heavy remodelling: both the element *-r* and the element *-e* have been subtracted from old middle endings, but their function as present marker and preterite marker respectively is a complete innovation of Tocharian. On the other hand, the preterite active endings reflect the Proto-Indo-European perfect endings with only slight adaptations. The Tocharian present endings are a mixture of the Proto-Indo-European primary and secondary athematic as well as the thematic endings of the present-aorist system. The developments of the active endings are schematically represented below:



The fact that primary and secondary endings have merged into the Tocharian present endings has far-reaching consequences. In combination with the augment (the past tense prefix *$*h_1e$-), the Proto-Indo-European primary and secondary endings expressed the contrast between present and past tense, while in unaugmented forms they probably denoted present or actual events versus non-present or non-actual events. Since there is no functional trace of the augment in Tocharian, the distinction between the three Proto-Indo-European categories present, past and non-actual expressed by the endings and the augment was lost.

Evidently, this is the reason why the Tocharian preterite continues the old perfect endings: these were the only sufficiently distinct past endings available. As argued in 4.5 (p 403) and 4.6 (p 430), the stem of the Tocharian preterite generally goes back to the Proto-Indo-European aorist stem. Thus, when the aorist past tense lost its past tense marking through the merger of the primary and the secondary endings (and the loss of the augment), it took over the perfect endings to reintroduce a clear past tense distinction.

The merger of primary and secondary endings also invites the question what exactly is continued in the Tocharian present endings. If the Tocharian present goes back to the Proto-Indo-European present stem (as is argued in 4.3, p 351), is it then a reflex of the "present" with primary endings or of the "present injunctive" with secondary endings? In my view, this question is wrong in that it reverses cause and effect. The Tocharian present is not a mixture of the original present indicative and the present injunctive, but its endings are a mixture of primary and secondary endings: the loss of the present injunctive made the adoption of secondary endings

in the present possible. Although the same development must be responsible for the present endings of the Tocharian subjunctive, it is likely that the latter replaces a category with secondary endings, for details see 4.5 (p 403), 4.6 (p 430) and 4.9 (p 480).

4.3 SOME IRREGULAR VERBS

As mentioned above in 4.1 (p 329), the main problem with the Tocharian verb is that the many rigid patterns it displays are actually the result of countless and drastic mending operations. Therefore, the most promising weak point to attack are irregular verbs, of which a selection is discussed below. Without claiming that the remainder of the verbal system is perfectly regular, I do believe that these verbs represent a good deal of the most important irregularities.

4.3.1 'COME'

The verb 'come' without doubt belongs to the most irregular verbs, but on the synchronic level its forms are relatively straightforward, the reconstruction of the Proto-Tocharian stems being only slightly more difficult. The present forms are the easiest: they unambiguously point to a Proto-Tocharian **nəsk'ə/e*-suffix. In Tocharian A, the *n* is dropped in the cluster *mns*, as in *kumse* 3pl., but in larger clusters like in *kumnäṣtär* it was preserved because the *ä* was not syncopated; thus, Tocharian A forms a present {kʷäm-näṣä/sa-}. Since in Tocharian B the present is {kənməṣṣə/ske-}, which regularly goes back to a Pre-Tocharian B **kəm-nəsk'ə/e-*, we can reconstruct the Proto-Tocharian present as **kʷəm-nəsk'ə/e-*.

The etymology of **kʷəm-* is evident and the present **kʷəm-nəsk'ə/e-* can be derived from Proto-Indo-European directly (Klingenschmitt 1982: 64). A PIE *sk*-present **gʷm-skᵉ/o-* is well attested in Ved. *gácchati* 'comes, goes', YAv. *jasaiti* 'id', Gk. βάσκω 'come' and Alb. *n-gah* 'runs, hurries' (LIV2: 209-210). **gʷm-sk-* must have become **kʷən-sk-* at first, after which the root was restored, but the *n* was kept. The heavy cluster *mnsk* was resolved with *ə*-epenthesis to yield the attested **kʷəm-nəsk-*. Hackstein (1995: 306-7) rejected Klingenschmitt's solution because a cluster **-Nsk-* yields *-sk-*, as evidenced by e.g. *kəsk-* 'scatter' from **gʷʰn-skᵉ/o-* and *məsk-* 'be' from **mn-skᵉ/o-*. However, it is evident – as already pointed out by Klingenschmitt – that the *n* was not lost in this case, exactly *because* the *m* was reintroduced: it was saved by the necessary *ə*-epenthesis.

The Proto-Tocharian subjunctive must have been **śəm'ə/e-*. In Tocharian B, the *n* of the present has spread to some subjunctive forms, yielding a couple of variants (cf in detail Peyrot 2008a: 147-148). Although the proof of the *'ə/e*-suffix is not as firm as it would be with an attested alternation between palatalised and unpalatalised root-finals (*m* is unpalatalisable, see 2.5.4, p 64), its reconstruction is secured. In Tocharian B, forms like 3pl. *śanme(ṃ)* and prs.ptc. *śmemane* are very clear; even though the 3pl. ending may in fact be {-en}, witness *yāmeṃ* {yám-en} 'they will do', the 1sg.

śamau definitely proves the stem variant {śəme-}. Likewise, the Tocharian A 3pl. *śmeñc* proves the stem variant {śäma-}.[741] Mechanically reconstructed, Proto-Tocharian **śəmˀə/e-* goes back to **gʷem-e/o-*. This is exactly how a traditional thematic subjunctive from a root aorist is reconstructed: with *e*-grade in the root and the thematic suffix, just as we find it in Ved. *gámati* << PIIr. **ǰáma-* < **gʷem-e*. The important conclusion that Tocharian inherited a system with at least this type of subjunctive is inescapable.

It is especially the preterite of 'come' that is intriguing both on the synchronic and the diachronic level. The problems with this preterite concentrate on 2sg. and 3sg. *śem* in Tocharian B.[742] (In view of their bad attestation, I prefer to leave the imperative forms out of my treatment.)

It can hardly be overemphasised that the gradation and palatalisation pattern 1sg., 1pl., 3pl. {kəm-} vs 2sg., 3sg. {śem-} is completely isolated in Tocharian and must reflect something old. Although a pattern with *e*-grade in the singular and *ə*-grade in the plural is found in *ə*|Ø-subjunctives of the type 3sg. *prekäṃ* : 3pl. *parkäṃ*, a contrast between palatalised initials in the singular and unpalatalised ones in the plural is not found there. *ə*|*a*-root preterites have more or less the correct distribution of palatalised initials in the paradigm, but combining with different root grades: e.g. sg. **cərka-* vs pl. **tərka-* (see 4.6.7, p 446). The correct match between palatalised initials and root grades, but with a different distribution over the paradigm, is found in the *s*-preterite of the type TA 3pl.act. *casär*, 3pl.mid. *tsānt*, with **'e* in the active and **ə* in the middle. Thus, parallels are found mostly with the *s*-preterite and the *ə*|Ø-root subjunctive type, but they are never perfect. More importantly, these parallels offer no explanation for the 1sg. *kamau*.

Generally, the preterite of 'come' is considered to be too irregular to make a search for morphological parallels within Tocharian worth the effort, and explanations are rather sought in Proto-Indo-European directly. As commonly agreed, Proto-Indo-European formed a root aorist **gʷem- ~ *gʷm-*, as best evidenced by Ved. 3sg. *ágan*, 3pl. *ágman* (LIV2: 209). This formation is usually the source *śem* is derived from, for instance through a sound law with subsequent levellings.

Pinault, for example, has proposed that the long **ē* needed for *śem* was actually at home in the 1sg., where it could arise from **gʷem-m* through **gʷēm*, by means of a

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[741] Pace Hilmarsson (1991a: 105-6), the Tocharian B privative *ekamätte* does not prove the existence of a second subjunctive stem *kəm-* < **kʷəm-*, nor any alternating subjunctive of the type **kʷəm- ~ *śəm-*. Apparently the privative was, at least in this case, not formed from the subjunctive stem, but from the preterite or from the root.

[742] The preterite of Tocharian A is not attested. The only form that has been adduced is *kmāṃ* THT1411c.a4 (originally introduction to A399), which is extremely dubious because it lacks any context. If related, it presupposes a 3sg. *käm** or a 1sg. *kmā** with suffixed pronoun. Such a stem could easily be derived from the Tocharian B preterite, but does not itself add anything to the reconstruction.

variant of Stang's law[743] (1994: 201-204; hesitantly accepted by Hackstein 1995: 164 and LIV2: 210). From the first person, the long **ē* spread over the whole singular, but just in the first singular *śem-* was replaced by *kəm-* later; the model would have to be *latau* 'I went away'. Since synchronically the paradigm has an *ˀə/e*-suffix, a further motivation could be the fact that so all *e*-variants obtained the root form *kəm-*, i.e., a stem *kəme-*: 1sg. *kamau*, 1pl. *kmem*, 3pl. *kameṃ*.

The problem with this derivation of the long **ē* is that, in the end, it does not account for the peculiar distribution of the root form *śem*; that distribution needs its own additional explanation. More substantial criticism could be drawn from the fact that the required sound law has no exact parallels, let alone for this particular verb. Pinault argues that **emm* > **ēm* is parallel to an intermediate stage **Vmm* of Stang's law **Vwm* > **V̄m*, but the supposed intermediate stage cannot be ascertained independently.

Alternatively, Kim (2001) has suggested that not only the 1sg. **-m* caused lengthening of **e* to **ē*, but the the 2sg. **-s* and the 3sg. **-t*, too. In other words, 1sg. **gʷem-m*, 2sg. **gʷem-s*, 3sg. **gʷem-t* would have yielded 1sg., 2sg., 3sg. **gʷēm* by sound law (except for restoration of the final *-m*; for details see o.c.: 131-134). Evidently, this solution makes the derivation of *śem* easier, but it needs the same additional explanation for 1sg. *kamau*, and it heavily depends on the questionable sound law proposed, **VRC* > **V̄R*.

To my knowledge, Winter has been the only one to give a phonological explanation of *śem* in Tocharian terms. However, neither his sound law **e* > **ē* in monosyllables, nor his alternative development **eme* > **ēm* are substantiated with good parallels, and counterexamples are adduced by Hackstein (1995: 164).

Morphological explanations are surprisingly few. The oldest and most popular is without doubt the equation of *śem* with Lat. *vēnī* 'I came' (e.g. Krause and Thomas 1960: 253). However, the origin of the Latin type is disputed and the age and origin of the *ē* of *vēnī* are disputed. On the basis of apparently parallel Gm. **kʷēm-* as in Goth. 1pl. *qemum* 'we came', where the **ē* is the functional equivalent of Ø-grade in the plural compared to **o*-grade in the singular, it is often argued that the **ē*-grade forms replace reduplicated forms with difficult Ø-grades in the root (e.g. Brugmann 1916: 435; Meiser 2003: 153). Evidently, the restriction of **ē*-grade to the plural does not fit the distribution of our Tocharian "**ē*" at all. Consequently, a direct comparison of the stems *śem-* and *vēn-* is often rejected (e.g. Pinault 1994: 200-201; Schmidt 1997a: 257).

Based on his theory of the origin of the *s*-aorist **ē* in the 2sg. and 3sg. injunctive (1987), Kortlandt has offered a new interpretation of the *vēnī*-type. Since his explanation of the *s*-aorist is phonological, proceeding from automatic lengthening

[743] In its narrowest form, **Vwm* > **V̄m* within Proto-Indo-European. The key examples are the acc.sg. **diēm* '(god of the) day' and **gʷōm* 'cow' as reflected in e.g. Ved. *dyā́m* and *gā́m* vs nom.sg. *dyáuḥ* and *gáuḥ*.

in monosyllables, he assumes that the same lengthening took place in the root aorist (in particular Kortlandt 2004). His evidence consists among others of 1) *s*-aorist-like lengthened grade root aorist forms in Vedic, e.g. *adyaut* 'shone' (2004: 14); 2) the Latin *ē*-grade perfects like Latin *vēnī* next to apparently isofunctional *e*-grade forms like Osc. *kúmbened* 'it has been agreed' (2007: 155); 3) the Germanic type Goth. *qemum* 'we came' mentioned above; and 4), evidently, Tocharian B 2sg. and 3sg. *śem* 'came', which fit his theory perfectly (2004: 9).

If Kortlandt's reconstruction is correct, it explains the Tocharian forms neatly. Moreover, if the type survived into Tocharian on a larger scale, it might have influenced the gradation pattern of the *s*-aorist, which would account for the mysterious zero grade (non-palatalising *ə*-grade) that I reconstruct for a pre-stage of the Tocharian reflex of the *s*-aorist, instead of regular **e*-grade (see in particular 4.3.2, p 357, 4.5.3, p 408, 4.5.5, p 413). Although Kortlandt's explanation is attractive in principle, direct evidence for exactly the distribution he argues for is slim. In Germanic, the *ē*-grade is found in the plural; in Italic, it is found throughout the paradigm in Latin, and although Sabellic has *e*, it does not show the alleged distribution either; likewise, the *o*-grade preterite of the type Alb. *mblodha* 'gathered' shows that reflex of **ē* throughout the paradigm. Since it is conceivable that the distribution with lengthened grade in the 2sg. and 3sg. of the type Ved. *adyaut* is due to the fact that these forms could be reanalysed as *s*-aorists, the only language showing Kortlandt's pattern beyond doubt is Tocharian with *śem*.

In view of the above, it is better to be cautious with the identification of Tocharian *śem* with the lengthened grade root aorist reconstructed by Kortlandt. Therefore, I will investigate another option below, but it goes without saying that if his reconstruction is correct, it accounts for the Tocharian facts in a much simpler and better way.

The comparison with the *s*-aorist made by van Windekens (1982: 159, 185; cf more recently also Schmidt 1997a: 257-258) has remained rather obscure. Van Windekens' proof consists of the *s*-preterite actually found in the Tocharian middle,[744] the Tocharian *'e*-grade in *śem* (PIE **ē*) and the formation of the preterite participle TB *kekamu*, TA *kakmu*, compatible with an *s*-preterite. Evidently, a derivation of *śem* from a PIE *s*-aorist has not been and will not be accepted by other scholars because Proto-Indo-European just formed no *s*-aorist (pace Schmidt p 258; on the secondary middle *s*-aorist in Vedic, see Narten 1964: 106-107).

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[744] To my knowledge, Pinault is otherwise the only one to give an explanation for this *s*-preterite (1994: 193). He opts for an analogy between the present stem and the preterite middle, after the model 3sg.prs. *tänmastär* 'is born' : 3sg.prt. *temtsate*, with *ə*-grade in *kamtsate* after 3pl. *kameṃ* in the preterite active. It must be admitted that the present types *tänmastär* and *känmastär* are relatively close, but, on the contrary, the present and the preterite are not. Moreover, since this match between $^{ṣṣə}/_{ske}$-present and *s*-preterite is only found with *e*-grade in the preterite middle (as in *temtsate*), it is disturbing indeed that we find *kamtsate** and *kekamu* instead of ***kemtsate* and ***kekemu*.

Nevertheless, all inner-Tocharian morphological parallels point to exactly this formation, and if the explanation of the Tocharian A relic 1sg. *s*-preterites in *-u* is correct, this type could offer an explanation for the difference between 1sg. *kamau* vs 2sg., 3sg. *śem*: the *u*-forms have *ä*-grade, contrasting with *a*-grade in other forms of the active paradigm. However, since the alternation between *k-* and *ś-* does not receive a ready explanation, the parallel with the *s*-aorist or *s*-preterite seems to work only for the root grade. If for some reason the *s*-preterite alternated not only in root grade, but also between palatalised and unpalatalised initials *at a certain pre-stage of Proto-Tocharian*, the transfer from the root aorist to the sigmatic aorist can perhaps be understood. The alternation of palatalised and unpalatalised initials was namely (almost) identical.

Since this line of thought requires quite a number of difficult steps, *śem* was an untypical *s*-preterite, if it was one at all. I will first sketch a scenario of how the transfer to the *s*-preterite could have worked, and discuss the problematic first person in more detail. Only afterwards will I reframe the problem of the peculiarities of this *s*-aorist type, and then I will consider the transfer to the *s*-preterite in a larger perspective.

The mechanism for transfer to the *s*-preterite that I propose is the distribution of palatalised and unpalatalised initials. In the PIE root aorist, the active singular had *e*-grade and the 3pl. Ø-grade. Concerning the 1pl. and 2pl. the comparative evidence is not equivocal, but even within Tocharian, the root grades of these forms are difficult to establish. As I argue (4.6.7, p 446), Tocharian A forms of the type 3pl. *tarkar* replace PT **tərkare*, whereas the palatalised singular TA 3sg. *cärk*, TB 3sg. *carka*, was extended to the plural in TB 3pl. *cärkāre*. But even if the evidence is scanty, the easiest is to assume a simple contrast between **cərka-* in the singular and **tərka-* in the whole plural for Proto-Tocharian. Thus, we would expect a root aorist to have yielded the stem form **śəm-* from **g^{w}em-* in the singular, and **k^{w}əm-* from **g^{w}m-* in the plural. On the assumption that – after the loss of the sigmatic *s* – the *s*-preterite had the same plural forms, the two paradigms can have differed only in their root grade in the 2sg. and 3sg., and perhaps in the 1sg. The 2sg. and 3sg. **śəm* could easily be replaced by the *s*-aorist forms **śem*, and sooner or later the 1sg., initially also **śəm*, was replaced by **kəm*.

The idea that the *s*-aorist 1sg. may regularly have had Ø-grade (without palatalisation) follows from the *ä*-grade *s*-preterite forms in Tocharian A, which are very difficult to explain otherwise. Although these forms show no unpalatalised initial contrastive to palatalisation elsewhere in the paradigm, it is very likely that their different root grade was the same as the regular Ø-grade in *s*-preterites, that is to say, non-palatalising *ə* (4.5.9, p 427).

Whereas the characteristic **ē*-grade of the PIE *s*-aorist was originally at home in the singular active (see in more detail 4.5.9, p 427), the weak grade is normally set up as **e*, not *Ø. It goes without saying that this discrepancy is probably the most important drawback to the transfer scenario sketched above. The problem is taken up in another perspective in 4.5.3 (p 408), but I can refer to the root allomorphs in *-s*

of 'put', which, as I argue, must go back to only two root grades *$d^h\check{e}h_1$-*s*- and *d^hh_1-*s*-. At this stage of our investigation, we need not be concerned with the origins of this type in Proto-Indo-European, but we may content ourselves with the observation that this peculiar gradation system has parallels among the Tocharian *s*-preterites indeed.

Perhaps the essential question about the preterite of 'come' is why it did not remain a root aorist, as the type is continued in Tocharian. Several reasons can be adduced: 1) the verb was aniṭ, having no root-final laryngeal, and so it did not exactly match the root aorist subtype that eventually survived; 2) it did not have the regular *a*-subjunctive beside it, but rather the isolated *$ś\partial m^{\prime\partial}/_e$-; 3) it was certainly influenced by *lət-* 'go out'.

sub 1) This point is made clearest by asking the reversed question, namely why the root aorist is reflected in the *x*|*a*-root preterite. Obviously, the starting point was formed by seṭ verbs, where the *a*-reflex of the root-final laryngeal came to be analysed as a preterite marker; then, this *-a* could spread to other verbs, of course. However, 'come' just did not become such a preterite, as is most prominently evidenced by its endings, which are of a different set than the regular preterite endings.

sub 2) The *x*|*a*-root preterite forms a very solid system with *x*|*a*-root subjunctives beside them, and even the present could be of essentially only one of two types: the suffix *e* ~ *o* or a nasal infix. 'come' never had one of these features and so it was apparently not close enough to the *x*|*a*-root preterite type to be lined up with it.

sub 3) The preterite of 'come' is thematic, i.e. it has the $^{\prime\partial}/_e$-suffix, which cannot be inherited from Proto-Indo-European, nor is it possibly due to influence from the *s*-aorist. Since the semantically close *lət-* 'go out' has an $^{\prime\partial}/_e$-suffix as well, and it must be old there, 'come' must have taken over its suffix from 'go out'. The adoption of the inflexion of 'go out' must be the cause that the preterite of 'come' did not adopt the characteristic 3sg. suffix *-sa* on the one hand, and no preterite endings on the other. Thus, the 3sg. remained *śem* instead of becoming **śem-sa* or **kem-sa*, and e.g., the 2sg. did not become **śem-sta*.

Admittedly, my derivation of *śem* involves a large number of assumptions. However, these all have their parallels elsewhere in the Tocharian verbal system, and it is not necessary to have recourse to new sound laws or special morphological types on the Proto-Indo-European level.[745] Its advantage is that it accounts for the existence of the *s*-preterite middle and the deviating 1sg. *kamau*, and it opens perspectives on the evolution of the Tocharian *s*-preterite system as a whole.

[745] As pointed out above, *if* Kortlandt's reconstruction of a root aorist with lengthened grade in the 2nd and 3rd persons singular is correct, it accounts for *śem* in a much simpler way.

4.3.2 'PUT'

The verb 'put' displays a number of irregularities, some of which are unique. The most important are:
– *ə*-reduplication in the Tocharian B subjunctive;
– *e* : *a* root gradation in Tocharian B, *a* : *ā* gradation in Tocharian A;
– a root-final *s* that is found only in some stems;
– defective split-off verbs in both languages.

As is so often the case, a number of forms are difficult to analyse, which has long hampered a correct understanding of the structure of the verbs. An extensive account of both the synchronic state of affairs and the diachronic explanation is given by Hackstein (1995: 56-65). Evidently, the following presentation incorporates his results, and I will only make explicit reference in cases of important divergence.

The stem pattern of Tocharian A is irregular, but nevertheless rather straightforward:

sbj. {tā-}	prs. {tā^{ṣä}/$_{sa}$-}	prt. {^{ca}/$_{täṣ}$-^{Ø}/$_{(ṣ)ā}$-}
prt.ptc. *to*		ipv. {-t^{a}/$_{äṣ}$-}

There is only one point where I deviate from Hackstein: he claims that the subjunctive is both {tā-} and {tā^{ṣä}/$_{sa}$-} (the latter stem would be identical to the present stem). However, the 3sg.opt.mid. *tāṣiträ* A3a4-5, where the second subjunctive stem is based on, is restored from *tā·iträ* and can also be read *tā*(*w*)*iträ*, cf 3sg.opt.(act.) *tāwiṣ* A312a2.[746] Next to this complete verb, there is an isolated and frozen present participle *tāskmāṃ* 'like, as', which presupposes a present stem {tāsk-} or {tāskā-} (Hackstein 1995: 187-190).

The stem pattern of Tocharian B requires more detailed comments, especially since there are in fact some competing stems:

sbj. {təttá-}	prs. {ta^{ṣə}/$_{se}$-}	prt. {t^{e}/$_{əṣ}$-^{Ø}/$_{sa}$-}	ipv. {-t^{e}/$_{əṣ}$-^{Ø}/$_{(ṣ)a}$-}
prt.ptc. *tättā$_u$*, *-āṣ**		2nd prt. {tasá-}	2nd ipv. {-tása-}
		2nd prt.ptc. *tatāsau**, *-(aṣ)*	

Apart from the competing stems that call for an explanation, there is a number of individual forms that need special comment: 1) forms that seem to prove – again – a second subjunctive stem identical to the present, and 2) alleged present forms based on a stem {tə^{ṣə}/$_{se}$-}.

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[746] There is yet another form that could be adduced as proof of the alleged subjunctive stem: "*tāṣimār* Frgm." (Sieg, Siegling and Schulze 1931: 438). Probably, the fragmentary line they referred to is THT1138b2, which reads /// *rtā ṣi mā* r̲◟ **:** ·*l*· ///; it could in fact be the caus.opt. to any root in *-rt*.

In Krause's index (1952: 245; see also Hackstein 1995: 62), we find the following forms that are to prove a subjunctive stem {ta$^{ṣə}/_{se}$-}: 1sg.sbj. *(t)āsau* B85a6, 3sg.sbj. *tāṣän-ne* B255a6, 3pl.sbj. *tāseṃ* IT92a2, 3sg.sbj.mid. *tāṣträ* B559b1, 3sg.opt. *tāṣi* IT173b4, inf. *tāsi* IT258a1. As I will try to show directly below, none of these forms actually proves such a subjunctive stem.

B85a6 = NS355a4
mäkte ai(sk)au (uttareṃ ¦ ñä)kte-yokäṃ säs(uw)e(rśk)e ¦ amāskai rilye ·
mā ṣ keś (t)āsau ṣañ la(kle) ¦ ///
'How can I give [away] Uttara, my dear son of divine appearance who is difficult to let go? I do not pay attention to my own sorrow ...'[747]

Alternatively, Schmidt (2001: 314) takes the rhetorical question to continue with *(t)āsau*, which is also possible; it would prove that it is a present, of course, since *ai(sk)au*, which would then be completely parallel, is an unambiguous present form. However, even if Schmidt's interpretation is wrong, there is absolutely no need to take it as a subjunctive. Personally, I find 'I do not pay attention to my own sorrow, (but I cannot give away my own son)' or something similar more plausible than 'How can I give away my son and not pay attention to my own sorrow?'.

Although their overall sense is not completely clear, the following lines evidently express a general truth, very probably in the present; there is no need to take *tāṣän-ne* as a subjunctive.

B255a5-6 (= B254a4)[748]
se timi$_{[a6]}$*rä śaiṣṣentse ¦ san empelle añmäntse* [9c]
orkämñana nraintane ¦ yāmor eñcäl tāṣän-ne : 9
'This is the blindness of the world, a terrible enemy for oneself; in the dark hells the deed takes hold of it.'

The example below precedes the threefold refuge request of the Karmavācanā (*triśaraṇa*; see Chung 2004: 45), and it probably concerns the five principal interdictions of killing, stealing, sex, lying, and alcohol (o.c.: 46-48). Although I have not been able to identify a precise parallel, and other translations are possible (e.g. 'how they enter battles, thieves ...'), I see no need to take *tāseṃ* as a subjunctive.

IT92a2
/// -naṃ śaul peri tāseṃ mäkte ñke wetanne yänmaskeṃ lykūna [a3]
'... they put their lives in pledge; how thieves enter battles now ...'

[747] Cf Couvreur (1964: 240).
[748] Verse: metre 4 x 7 ¦ 7 (4+3 ¦ 4+3).

The content of the following example is highly enigmatic, though without doubt medical. I cannot make sense of the use of *təs-* here, but again there is no need to take this form as an optative rather than an imperfect.

IT173a4
/// ñantsa pittākänta tāṣi • ·e – ///
'... he put boils ...'

Although the text where the following extract is taken from is very difficult to decipher and understand, this particular syntagm is relatively clear and it must contain an infinitive of *təs-*. As it is a colloquial text, *tāsi* could stand for *tāṣtsi** {taṣə-t^{s}əy} (Peyrot 2008a: 87), which would indeed prove the existence of a subjunctive stem {ta^{ṣə}/$_{se}$-}.

IT258a1
eñciḻa̱n[e] tāsi yātkast(a)
'... you ordered to take hold of ...'

Apart from the morphological problem under discussion, this analysis has to cope with three additional difficulties: 1) *eñciläne* with "stretching" *ä* is by no means regular for a colloquial text (we would expect *eñcilne*), 2) on the evidence of B255a6, cited above, the construction is *eñcil təs-* rather than *eñcilne təs-*, 3) although some <n> and <t> are close in this manuscript, they are on the whole certainly not identical and *n[e]* of *eñciläne* looks more like *t[e]*. Thus, I would propose to read *t[ä]tāsi* instead: *ä*-vocalism seems possible as well, and the unusual spelling <tä> instead of <ṯa̱> may have to be classified as a colloquialism.[749]

tāṣträ B559b1 is evidently a present, since it is parallel to *yamasträ* B559a4.

In conclusion, none of the forms cited by Krause and Hackstein forces us to assume a second subjunctive stem {ta^{ṣə}/$_{se}$-}. If my explanation of the colloquial text IT258 is not accepted and *tāsi* is a linguistically real form nonetheless, it could be a late creation; as such it would not have special bearing on the analysis of the classical Tocharian B verb. Of the remaining forms with the stem {ta^{ṣə}/$_{se}$-}, many are found in unclear contexts, but some have evidently present function; as no one has claimed that they are subjunctives (or optatives), I will not discuss these here.

In spite of Schmidt's well-founded refutation (1974: 59; 1975: 289), Hackstein claims that beside the Tocharian B present stem {ta^{ṣə}/$_{se}$-}, there is also a variant {tə^{ṣə}/$_{se}$-} (1995: 62). The relevant forms are *taṣtar-ñ* B84a1 and *tsentar* B197a1 (would be for *tsentär* {təsé-ntər}). I fully agree with Schmidt that *tsentar* is found "in undurchsichtigem Kontext" (l.c.). Unfortunately, the manuscript is lost, but evidently

[749] It is less likely that an original *tättātsi* should have developed into *tetāsi* with *e* for *ä*, but cf *seswa* for *säsuwa* (Peyrot 2008a: 114; forth.b).

there was a problem with the reading, as the preceding *k· ly· p* is still waiting for an interpretation, too. Perhaps the word division is wrong: the *p* is written together with *tsentar̨*, whereas it is more usual that words are written separately in this manuscript. I would not exclude that the *t* is epenthetic as in *svabhāptsa* {svabháp-sa} in the same line, so that *-ptsentar* could be the last part of a 3pl.mid. of a *ṣə*/*se*-present to a root in *-p*.

Conversely, it is very plausible that *taṣtar-ñ* is a 2sg.prs. of *təs-*, and so it seems to stand for /táṣtar-ñ/ rather than expected *tāṣtar-ñ* /táṣtar-ñ/. Although the manuscript is classical and its spelling is quite regular in general, there are some problems with its *a*-vowels. These concern mainly <ā> for unaccented /a/, and sometimes <a> for unaccented /ə/, but still I would like to attribute the spelling *taṣtar-ñ* to this fluctuation and take it as /táṣtar-ñ/, despite its spelling.[750]

As to the competing stems with the root variant *tasa-*, these are simply there and cannot be explained away. However, their distribution is highly peculiar: they are all middle, and they are not found for all stems. If they formed a split-off verb, that verb would be defective in a very unusual way. For the preterite participle, the distribution is perhaps most striking: *tättā*$_u$ is well attested, but *tatāsau* is attested only once in a late text, where it is even partly restored: *tatās*(*aṣ*) B108a2. Nevertheless, the restoration in itself is plausible, cf Pinault (2008: 164). For the preterite middle, the situation is reversed: *tasá-* is attested at least 6 times, compared to *təssá-* 3 times. If there is a difference between the two, it is probably one of meaning: *tasá-* means 'show', apparently both transitive and intransitive, whereas *təssá-* in its three occurrences seems to be normal 'put'. Probably, the imperative stems *-tása-* and *-tə́ssa-* had the same semantic difference, but with only three fragmentary forms in total, this is difficult to prove.

Now that the synchronic stem patterns have become clearer, the reconstruction of the Proto-Tocharian verb is relatively straightforward. The two presents A {tā^{ṣä}/$_{sa}$-} and B {ta^{ṣə}/$_{se}$-} of course reflect a Proto-Tocharian present **ta^{ṣə}/$_{se}$-*. With loss of initial reduplication in Tocharian A, the subjunctives A {tā-} and B {təttá-} point to a Proto-Tocharian subjunctive **təta-*. Likewise, the preterite participles must go back to **təta-w*; the geminate *tt* is more likely to be the result of anti-lenition strengthening (cf Hitch 1993: 118-127), than restoration of the reduplication, since it is not at all clear on what basis that unique reduplication should have been restored from **tta-* (pace Hackstein 1995: 63). On the one hand, the palatalisation in the Tocharian A preterite active seems to be primary compared to its lack in Tocharian B, where the *t-* can easily have been restored (e.g. Ringe 1990: 186). On the other, it is striking that the imperative *ptas* shows no palatalisation. With the small number of imperative forms attested, it is difficult to decide whether the palatalisation can

[750] Schmidt's explanation is that the short vowel may have been taken over from other forms in the paradigm where it was regularly unaccented. This is difficult to disprove, but such analogies are not frequent in Tocharian B; if so, I would opt for orthographic "Systemzwang" rather than a linguistically real development.

have been removed analogically in the imperative only: in the *s*-preterite, initial palatalisation is found more often, but it is not clear whether it regularly combines with initial palatalisation in the imperative, too.

The reconstruction of the competing preterite stems *təssa-* and *tasá-* is more complicated. Hackstein argues that the stem *tasá-* is secondarily derived from *tes-* (with *a*-mutation), a root variant found in the active of the *s*-preterite and the singular active of the imperative (p 59-60).[751] However, no motivation or parallel is given; his remark that *tasá-* cannot be derived from the present {ta^{ṣə}/$_{se}$-} is true in itself, but of no use in this context, since it presupposes that *tasá-* is somehow secondary in the first place: it does not prove that *tasá-* is secondarily derived from *tes-*.

In my view, the proposed derivation path is not logical at all, and if the stem is really late, it is doubtful whether we would actually expect *a*-mutation. Further, it does not explain why the new stem was left like that instead of being accompanied by for instance a sbj. *tása-*, nor does it account for the specialised meaning or its middle inflexion.

Much easier is it to assume that *tasá-* is the old middle stem.[752] This explains at once that it is confined to the middle preterite (and the closely related middle imperative), and that its meaning is specialised. The creation of the "regular" middle stem *təssá-*, on the other hand, is of course exactly what we would expect: it follows the normal pattern of a middle with *ə*-grade next to an active with *e*-grade. I do not exclude that the introduction of the regular middle forms occurred independently in Tocharian A and B, but it is probable that Proto-Tocharian had two different middles; perhaps the semantic differentiation had already started by that time. Of course, the fact that Tocharian A abandoned the irregular **tasa-* does not need further explanation, as in this language the verb patterns are clearly more strict and regular than they are in Tocharian B, and there are virtually no overlaps between verbs or "fuzzy" stems (compare, e.g. the schemes of *läkā-* and its Tocharian B cognate in 2.5.5, p 78). Apparently, *tasa-* survived in the imperative as well, but to the isolated preterite participle *tatāsau* we should not attach too much importance, as it is from a late text. At least it proves that the stem *tasá-* was still productive.

Although the explanation of the marginal stem *tasa-* may seem a peripheral problem, it receives its due weight in the light of Hackstein's claim that the present {ta^{ṣə}/$_{se}$-} cannot be connected to the preterite because the stem allomorph *tas-* is not found there (1995: 65). Whereas the ultimate source of the subjunctive **təta-* is evidently the Proto-Indo-European reduplicated present, it is exactly the origins of the present and the preterite that are debated.

Apart from the question of the function, the derivation of the subjunctive **təta-* is straightforward: the PIE present **d^{h}e-d^{h}eh$_1$-*, **d^{h}e-d^{h}h$_1$-* is well attested, e.g. Gk. 1sg.

[751] Not only in the singular of the preterite active, as he states.

[752] See Pinault (2008: 596): "certainement plus ancien, parce qu'irrégulier en synchronie".

τίθημι, 1pl. τίθεμεν 'put' or Ved. 3sg. *dádhāti*, 3pl. *dádhati* 'id' (LIV2: 136-138). It is the zero grade variant *d^he-d^hh_1- that would yield the right Proto-Tocharian form, obviously with restoration of the reduplication initial from *$cəta$- to *$təta$- (if the preform was rather *d^hi-d^hh_1-, the development would have been the same[753]). The only formal problem is that all forms show the final -*a*, except for the Tocharian B opt. {təccə́y-}. As it is irregular morphologically, this optative formation must reflect some phonologically regular development. Perhaps the preform was *d^he-d^hh_1-ih_1-, possibly with loss of the first *h_1 through dissimilation, or otherwise with prevocalic loss in the sequence *-d^hh_1i-. It is also conceivable that the root had full grade: -d^heh_1-ih_1- would probably also yield the attested stem form.

All other forms are built on a grading root *$təs$- with different suffixes. The root form *ces- points to *$tēs$-, in turn from *d^heh_1s- or *$d^hēh_1s$-, whereas *tas- must go back to *d^hh_1s-. Whether Tocharian A *ptas* requires an old root variant *tes- is unclear, but if so, it is very probably analogical, i.e. from *ces- after *tas-; it can hardly go back to an original *d^hh_1os- or something similar. The age of the root form *$təs$- is uncertain, and it must be analogical: the only pre-form it could be compatible with is *d^hh_1es- with analogical depalatalisation.[754]

Hackstein derives the preterite from an *s*-aorist and the *s*-present from a desiderative. His argument to derive the preterite and the present from different sources is based on the idea that the *a*-vocalism of the present is not found in the preterite, as I mentioned above. He rightly observes that the *s*-aorist at the basis of the Tocharian *s*-preterite must replace the root aorist *d^heh_1- / *d^hh_1- actually to be reconstructed for the proto-language. He further reconstructs the desiderative as *d^heh_1-$s^e/_o$- on the basis of Gk. θήσω, suggesting that the zero grade that we actually need, i.e. *d^hh_1-$s^e/_o$- or its outcome, was introduced from the reduplicated present (which became the subjunctive in Tocharian). According to him, the Tocharian *s*-present was rather a subjunctive that came to be used as a present as well, which enables him to derive that "*s*-subjunctive" from the PIE desiderative directly.

Hackstein's argumentation suffers from two internal problems. First, he does not make clear why e.g. *d^hh_1-$s^e/_o$- is not a possible reconstruction for the Proto-Indo-European desiderative, which would make the derivation of the *s*-present (*s*-subjunctive in his conception) much easier. Second, the introduction of the zero grade in the desiderative root after the present is difficult to accept with such different root forms as *d^he-d^hh_1- and *d^heh_1-$s^e/_o$-, and it falsifies his argument that the *s*-present cannot be derived from the *s*-preterite because of the deviating vocalism, since a

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[753] On the basis of the Tocharian A 3pl. ending -*ñc* (see 4.2.1, p 345), we have to assume that *d^hi and *d^he both yielded *$cə$ at first.

[754] TB *taseṃ* B255b5 is from an archaic text, representing /tásen/, not /tə́sen/ (Schmidt 1974: 59; Peyrot 2008a, e.g. 33, 220); as argued above, the Tocharian present does NOT show a root variant *$təs$-. Thus, Kortlandt's reconstruction of an athematic *s*-present form *d^hh_1es- (1994: 64; repeated 2008: 228) cannot be substantiated with Tocharian present forms.

similar analogy would account for the "incompatible" difference in the respective root vowels.

Moreover, Hackstein's analysis is at variance with my own account for two reasons. First, the root vowels of the present and the preterite are not incompatible at all, as the root vowel *a* of the present is found in the old middle stem of the preterite, *tasa-*. Second, the *s*-present is only a present, not a subjunctive: **ta*$^{sə}/_{se}$- is not a subjunctive in Tocharian A, nor in Tocharian B, and most probably not in Proto-Tocharian either. There is no reason to assume that PT **təta-* was anything else than a subjunctive.

Thus, it seems best to rethink the whole matter, considering the following points:

– the Tocharian subjunctive derives from the Proto-Indo-European reduplicated present;
– the Proto-Indo-European root aorist is not inherited as such, and probably it would not have survived, as **ce-* / **ta-* is not "fit" for Tocharian inflexion;
– the Tocharian present **ta*$^{sə}/_{se}$- replaces the old Proto-Indo-European present: either that old present became a subjunctive first and dragged the new present into present function, or the new present pushed the old present into subjunctive function;
– the Tocharian present stem **ta*$^{sə}/_{se}$- and the preterite stem **ces-* / **tas-* are formally very close: they are lacking reduplication, have a root-final *-s* and share the root grade *tas-*.

Although it is not immediately clear from the verb 'put' alone, it appears that in general the Tocharian subjunctive has little affinity with the Proto-Indo-European present (see in particular 4.4, p 377). In addition, the Tocharian subjunctive and preterite are normally very close, whereas the present stem contrasts with both. 'put' deviates from this general tendency, which calls for an explanation. Thus, I consider it unlikely that the original PIE present first became a subjunctive and then *dragged* the new *s*-formation into present function: there is no morphological reason, nor a functional motivation why the present would turn up as a subjunctive. Instead, I would suggest that the original PIE present was *pushed* into subjunctive function by the newly formed *s*-present. This, in turn, means that the *s*-present must contain a present-forming element.

In spite of the archaic outlook of Tocharian 'put', the stems in *-s* must be secondary: at least the preterite must replace an old root aorist and for the present there is no formation to be compared directly at all. Consequently, the *s*-present and *s*-preterite must have been formed after the productive pattern of *s*-presents and *s*-preterites. As argued in 4.5.6 (p 419), the *s*-preterite continues the Proto-Indo-European *s*-aorist whereas the *s*-present ultimately goes back to a *sk*$^{e}/_{o}$-present through dissimilatory loss of the *k*. Following Couvreur, I assume that *k* was lost in certain clusters, at least in the cluster **ksk*, but certainly not when *sk* followed a vowel as in *tas-*. Thus, the *s*-present ~ *s*-preterite system must have been taken over after the rise of the *s*-presents. Since I assume that the *s*-presents continue *sk*-presents, that is, a category with explicit present value, it is no problem to assume

that the *s*-present pushed the old reduplicated present into its new subjunctive function.

In this way, the problem of the explanation of the *s*-stems of *tas-* is for a large part relegated to the *s*-present and *s*-preterite system as a whole. Nevertheless, the reconstruction of *tas-* is in fact important. First of all, it shows us very clearly that at the time the *s*-system was adopted, the root grades were **ē* and **Ø*: **tas-* must reflect a real Ø-grade **d^hh_1-s-* and cannot result from any kind of secondary depalatalisation of an *e*-grade stem as could still be a possibility in roots without (internal) laryngeal. Of course, **ces-* could theoretically also reflect *e*-grade, as **$d^hēh_1$-s-* and **d^heh_1-s-* would both become **tēs- > *ces-*, but there the roots without internal laryngeal show that was really **ē*, not **e*. Second, the fact that the present and the preterite stem are so close in form suggests that they were actually felt like *one* stem, which is very important for the understanding of the Ø-grade forms of the preterite. Apparently, the *s*-present stem had become identical with the Ø-grade variant of the preterite; thus, that Ø-grade can have been taken over from the present, where it was regular (on this problem, see in detail 4.5.3, p 408, and 4.5.6, p 419). Third, it raises important questions about the relative chronology of the developments, a point to be explained in more detail.

The fact that the final *-s* is found throughout the paradigms, and not just in the middle preterite and the 3sg. of the active shows that the adoption of the *s*-system occurred when the *s* was still felt to be part of the *s*-present stem, not of the ending. Likewise, the *a*-reflex of the interconsonantal **h_1* proves that *a* was still the productive Ø-grade of roots with an internal laryngeal, which in turn suggests that the laryngeal was still preserved either in the Ø-grade or in the *ē*-grade variant, or perhaps in both. The fact that the present is in *-s*, not *-sk*, suggests that it was adopted after the simplification of *ksk* to *sk* (see 4.5.6, p 419), but the isolated TA *tāskmāṃ* (see above) seems to reflect a stage before the simplication of *ksk* to *ks*.

As pointed out by Hackstein (1995: 189), there is a possibility that the stem of *tāskmāṃ* is of Proto-Indo-European age because it is mirrored by Hitt. *zikke/a-*, the imperfective of *dai-^{i} / ti-* 'put'. As shown by Kloekhorst (2008b: 808), the older variant *zaške/a-* proves that the imperfective was not derived from *dai-^{i} / ti-*, but directly from the root. Nevertheless, the imperfective is very productive in Hittite, and the *sk*-present is certainly not necessarily old. If *tāskmāṃ* is inherited from Proto-Indo-European, the Ø-grade *a* could have spread from there, which would allow for a later dating of the rise of the zero grade in the *s*-preterite system. If *tāskmāṃ* is not directly inherited, it must be relatively old on any account because it seems to reflect the older shape of the *s*-present suffix. In the latter case, we have to assume that 'put' adopted a system with an *s*-preterite and an *sk*-present, where the *sk*-present was at a later stage ousted by the productive *s*-present, except in this marginalised form. Alternatively, we could hypothesise that the *s*-system already contained *s*-present forms, but with *sk*-forms side by side. Although difficult to prove, this would seem to suggest that **-ksk'ə-*, the *'ə*-variant, lost its second *k* before it was lost in the *e*-variant **-kske-*.

4.3.3 'KNOW'

PT **kna-* 'know' is attested in TA *knā-* 'know, understand' and probably in TB *nana-* 'recognise'. Both the synchronic situation of especially TA and the history of the verb are complicated and have led to much debate. Hackstein's study (1993), whose results are incorporated in the following, has been a breakthrough. Best attested is TA *knā-*, which has a unique stem pattern with a *na*-prs. and an *s*-prt.: *nā*-prs. {knāna-} in 3sg.act. *knānaṣ*, 3pl.act. *knāneñc*, prs.ptc. *knānmāṃ*, *ñ*-ipf. {kñāññā-} in 3pl.mid. *kñāññānt*, $ñ^{ä}/_{a}$-sbj. {kñāañ-} in 3sg.mid. *kñāñtär*, *s*-prt. {kñas-} in 1sg.act. *kñasu*, 2sg.act. *kñasäṣt⸗*, prt.ptc. *kākkñäññu*. Of TB *nana-*, only a few forms are attested and their interpretation has long been problematic. Tamai's identification of *nanāṣale* as a gloss to Skt. *parijñeyaḥ* in Or15009/89 (2009: 661) is of utmost importance. *parijñeyaḥ* means "zu wissend, zu kennend, zu erkennend" (SWTF, III: 86, col. 2), which proves at once that the present stem was {nanáˢˢᵊ/ₛₖₑ-}, since it is only the present gerund that conveys necessity, and it confirms the meaning 'recognise' argued for by Schmidt (1994b: 272) instead of, or perhaps next to traditional 'appear' (thus e.g. Adams 1999: 333). Consequently, 3sg.mid. *nanātär* is a subjunctive. A *x*|*a*-root preterite is evidenced by 3pl. *nanāṃte*, whereas 3sg.prs.-sbj. *nānäṣṣäṃ-* must be from a causative 2 'show'.

The reconstruction of the Tocharian B forms is fairly straightforward: the v.adj. *nānāmo* (arch.), normally derived from the present stem, and the medial accent {naná-} rather than **{nána-} prove that *nana-* was originally a present, and the $^{ṣṣə}/_{ske}$-present must be recent. However, in view of the preterite *nana-*, it is necessary to set up the root as *nan-* or *nana-*. As the prt. *nana-* to a *na*-prs. *nana-* cannot be original, the only thing we can reconstruct from the TB forms is a *na*-prs. *nana-*; all other stems are secondary. TB *nana-* can be connected with TA *knā-* by assuming a development *#kn- > #n-* for PTB; the meaning 'appear' could have been made possible by the middle usage of the verb.

The reconstruction of the TA forms is more difficult. The *nā*-prs. {knāna-} can hardly have been built on the other stems, and since it agrees with the only stem reconstructable from TB, we can reconstruct a PT prs. **knana-*. The other old stem is probably the *s*-preterite, and for the same reasons: it cannot have been created on one of the other stems, so that we can reconstruct a PT *s*-prt. **kńes-*. All other TA stems are difficult to explain, but they must nevertheless be secondary. It is not clear whether a subjunctive **knā-*, in principle expected next to the *nā*-prs. *knāna-*, once existed. If so, it would be understandable that this formation was felt to be too short so that it was extended with the suffix of the most productive subjunctive category, the $ñ^{ä}/_{a}$-sbj. If there was no *ā*-sbj., it is also imaginable that a $ñ^{ä}/_{a}$-sbj. **knāñ$^{ä}/_{a}$-* was formed to the *nā*-prs.

The regular ipf. to the *nā*-prs. would have been **knāñā-*. Probably the *n* in these forms assimilated to the following *ñ* to yield *kñāñ-* and *kñāñā-*, and the *ñ* of the *s*-prt. *kñas-* may have favoured this assimilation. On the basis of the ipf. and the sbj., the prt.ptc., which should regularly be **kakñu* or **kaknu*, must have been reshaped to

become the attested *kākkñäññu*, i.e. as if it were formed to a prt. *kñäña-*. If the older prt.ptc. was *kaknu*, this replacement has a clear motivation, since *kaknu* is well attested as the prt.ptc. of *kän-* 'come about'. If the creation of *kākkñäññu* preceded the introduction of *ñ* in the sbj. and ipf. stems, and it first had the shape **kāknäññu*, the introduction of the *ñ* may have been favoured by this form too, since here *n* and *ñ* were in especially close contact.

Evidently, PT **kna-* goes back to PIE **ǵneh*$_3$- 'know', attested in all major branches of Indo-European (LIV2: 168-170). **ǵneh*$_3$- certainly formed a nasal present, which is attested a.o. in Ved. *jānā́ti* 'he knows', YAv. *-zānəṇti* 'they recognise' and Lith. *žinóti* 'know': PT **knana-* is without doubt to be identified with these formations. The question is how exactly the form **knana-* came about, since if it is projected back, it seems as if it contained two laryngeals instead of the single one we expect in a regular nasal present **ǵn-n(é)-h*$_3$-, which would yield **kna-*. This **kna-* can have been reshaped to **knana-* because a root *k-* was too short, but it is not entirely clear on what model the *na* would have been reintroduced: either the root *kna-* must have been found in other stems as well, so that *k* in *k-na-* was replaced by *kna-* to yield *kna-na-*, or the suffix *na* must have been still visible somewhere, so that *kna-* was enlarged with *-na* to become *kna-na-* (cf Hilmarsson 1991a: 125). It is also possible that already in PIE the double *nn* was simplified, and subsequently the present was reshaped to **ǵnh*$_3$*nh*$_3$-. The same doubling is namely found in Gm. **kunnan* 'know, can' and Ved. *jānā́ti*, but similar replacements can of course have taken place independently and more then once.

The existence of an *s*-aorist or *s*-prs. next to the nasal present and the root aorist (cf Lat. *(g)nōvī*, Gk. ἔγνων, Ved. 2sg.opt. *jñeyā́s*) is hotly debated. Sigmatic formations are attested in Ved. 1sg.aor. *ajñāsam* and Hitt. *kaneszi* 'knows'. The Toch. *s*-preterite {kñas-} has played an important role in the discussion about "Eichner's law", which states that PIE long **ē* was not coloured by a following laryngeal (Jasanoff 1988b). Indeed, a palatalising TA *a* grade normally goes back to a PT palatalising **e* grade, which projected back derives from PIE **ē*, so that one would reconstruct (late) PIE **ǵnēs-* for PT **kńes-*. However, as soon as the laryngeal was vocalised in the *nā*-present, the *ē*-vocalism might have been restored in **knas-*, if that is what one would expect as the phonologically regular reflex of **ǵnēh*$_3$*-s-*. On the other hand, I fail to see why **ēh*$_3$ and **ōH*, perhaps even including **ō* (?), would have merged at all *in Proto-Indo-European* if, with Lubotsky, **o* and **h*$_3$*e* have different reflexes in Indo-Iranian (1990). From this perspective, not-colouring of */ēh$_3$/ to *[ōh$_3$] or */ōh$_3$/ cannot be called a sound law: **ēh*$_3$ > **ē* > PT **'e* could be just a phonological development of Tocharian.

4.3.4 'GO'

The verb for 'go' certainly deserves ranking among the irregular verbs. In both languages, it is part of suppletive systems, and in Proto-Tocharian it was certainly defective. In Tocharian A, it supplies the present (including imperfect) of *kälkā-*,

whereas in Tocharian B it is a present-subjunctive (including imperfect; on its suppletive roots, see 2.5.5, p 78).

In Tocharian A, the present is formed from a straightforward {y-}, i.e. 1sg. *yäm*, 2sg. *yät*, 3sg. *yäṣ* etc, but the Tocharian B present is irregular: it has a unique 1sg. ending *-m* and an alternation between the stems {y-} and {yən-}:

{y-}		{yən-}	
1sg. *yam*	inf. *yatsi*	1pl. *ynem*	prs.ptc. *ynemane*
2sg. *yat*	ger. *yalle*	3pl. *yaneṃ*	ag.n. *ynuca*
3sg. *yaṃ*	vn. *yalñe*		ag.n. *yneñca*
2pl. *yacer*			v.adj. *ynamo*

With Hackstein (1995: 304-305), the explanation of this distribution is obviously that the 1pl. and 3pl. forms, which would have merged with the 1sg. and 3sg. respectively, were reshaped. The basis was evidently *yən*, the synchronic form of the 3sg. and the pre-form of the 3pl. Probably, the 3pl. was reshaped with the new ending *-en* extracted from $^{ə}/_{e}$-paradigms, *yən* >> *yənen*, and then the 1pl. was formed on the new stem *yən-* after the 3pl. It is a bit surprising that the *n* spread even to nominal forms, and it is often argued that the forms with *n* reflect a different formation; on this, see further below.

The etymology of the verb for 'go' is clear: it is to be connected with PIE **h*$_1$*ei-*, which formed a root present, witness Ved. *éti*, *yánti*, Gk. εἶμι, OLith. *eimì*, OPruss. *ēit*. Evidently, the original root present is reflected in the Proto-Tocharian present-subjunctive *yə-*; the pl. stem **h*$_1$*i-*, which regularly became **yə-*, was probably generalised, as the sg. stem **h*$_1$*ei-* would have yielded **yəy-* > TB *i-* (Adams 1999: 61).

As mentioned above, it has been argued that the *n*-forms found in Tocharian B prove the existence of a second formation with *n* that was conflated with the root present (e.g. Adams 1999: 61). Although this idea is difficult to disprove, the clear functional load of the *n*-forms suggests a recent formation instead. If any of the *n*-forms should be old, I would opt for the nominal forms *ynamo*, *yneñca* and *ynuca*, which are without doubt most distant from the finite verb. However, had they been formed from *y-*, they would certainly have been rather short and difficult to recognise, i.e. ***y*(*a*)*mo*, ***yeñca* and ***yuca* would have been liable to analogical reshaping.

For some reason, it is often thought that the *uca*-agent noun is formed from the preterite participle (e.g. Krause 1952: 44), which has led to the conclusion that *ynuca* points to an older preterite participle **ynu* (e.g. Winter 1992: 132). However, forms like sbj. {wáya-}, prt. {wayá-}, prt.ptc. {wa-wáya-w} and ag.n. *wayauca* {waya-wca} prove that there is no special relation between preterite participle and *uca*-agent noun: the sbj. and prt. are also built on *waya-* and the agent noun lacks the reduplication syllable of the preterite participle. Thus, *ynuca* is no evidence for an older preterite participle **ynu*. A second locus of the participle *ynu* is thought to be Tocharian A *maltowinu* 'first' (Winter 1992: 132; 1994a: 299-300). Although the

connection between TA *malt**, suggested by the adverb *malto* 'first', and TB *melte* 'elevation' is credible enough, the identification of the second part of *maltow-inu* as the preterite participle of 'go' is by no means self-evident and heavily depends on the identification of the same participle in Tocharian B (against which I argued above). After all, it is even possible that the morphological analysis should rather be *malto-winu*, as per Sieg, Siegling and Schulze (1931: e.g. 200).[755]

The verb for 'go' is further irregular because it has an anomalous imperfect, which it shares with the verb for 'be'. The completely parallel formations in Tocharian A and B show that this formation must be of Proto-Tocharian age at least: TA 1sg. *yem*, 2sg. *yet*, 3sg. *yeṣ*, TB 1sg. *yaim*, 2sg. *yait*, 3sg. *yai* with parallel forms of 'be', i.e. TA 1sg. *ṣem*, TB *ṣaim* etc. (Sieg, Siegling and Schulze 1931: 384-385). Because of the formant *-y-*, these imperfects are usually connected to other *y*-imperfects and optatives, and derived from an old optative (e.g. Pedersen 1941: 206-207; Winter 1994a: 294). As an alternative, Kortlandt has proposed to derive *yai* etc from an old imperfect **ēit* (1996: 172), which accounts for the fact that *yai* is largely confined to imperfect function, unlike regular imperfect-optatives. However, this derivation depends on the preservation of the imperfect as such, including the augment, for which there is no other evidence. As the explanation of *yai* and *ṣai* involves the discussion of a large number of other forms and a good deal of complicated reasoning, I have treated these imperfects elsewhere (Peyrot forth.d).

Further forms of interest are the Tocharian A imperatives sg. *piṣ*, pl. *pic*, *picäs*, which may contain the root *y-*, but since they are otherwise isolated, they are of no direct relevance for this study. Likewise, the Tocharian B preterite participle *yku*, *ykuweṣ* must contain a different root or some root extension, but the details do not concern us here (for a suggestion, see Adams 1999: 610).

4.3.5 'GO OUT'

The irregularities of the verb 'go out' concern unusual root allomorphs, and the isolated types for the subjunctive in Tocharian A and the preterite in both languages. Although both languages display irregularities, these match only to a limited extent.

In Tocharian B, the root variant for the present and the subjunctive is *lənn-*, the present being {lənnáṣṣə/$_{\text{ske}}$-} and the subjunctive just {lənn-}. The remaining stems have *lət-*, i.e. prt. {ləᶜə/$_{\text{te}}$-}, prt.ptc. *ltu*, *ltuweṣ*; the imperative is not well attested, but the pl. *platstso* {pə-lət-sə} has the stem {-lət-}. The preterite is special because it has the shape of a present (see 2.2.2, p 31).

In Tocharian A, most stems are built on the root form *länt-*. It is seen clearest in the present {läntäṣä/$_{\text{sa}}$-}, but it is also found in the subjunctive {läñcä/$_{\text{a}}$-}, where the root-final *nt* is palatalised. As the most frequent variant of the preterite participle,

[755] The restoration of *o* in the expected **maltawinu*, after the adverb *malto*, is plausible in itself.

lantu, has an unparallelled combination of *a*-grade and lack of reduplication, it probably developed out of *lalntu*, attested twice, by sound change. If the third variant, *laltu*, which is attested only once, is not another simplification of *lalntu*, it could be a regular {la-lät-w} formed from a root form *lät-*. The root allomorph *lät-* is further attested in the preterite {läc-, läcā-}, evidently with palatalised root-final.

The Proto-Tocharian preterite is without doubt the easiest to reconstruct because it is so isolated in Tocharian B that it must be old. On the other hand, the Tocharian A formation can be understood as a straightforward transfer to the more frequent *x*|*ā*-preterite type. Thus, the Proto-Tocharian preterite was **lət'ᵊ/ₑ-*, which was continued in Tocharian B, but reshaped in Tocharian A.

It is commonly agreed that the isolated Tocharian B present-preterite reflects a thematic aorist (e.g. Pinault 1994: 192-203; LIV2: 248), evidenced by especially OIr. 3sg. *luid* 'went', Gk. 1sg. ἦλυθον 'came', Ved. 3sg. *áruhat* 'has grown'. The formations just mentioned point to **(h₁e)-h₁lud^{h}-ᵉ/ₒ-*; this reconstruction receives firm support from Tocharian, whose **lət'ᵊ/ₑ-* must be old, certainly in view of the problems connected with the reconstruction of parallel 'come' (see 4.3.1, p 351).[756]

The synchronic analysis of the Tocharian B subjunctive has been clarified by Pinault (1994: 129-135) and Hilmarsson (1991b: 62-63; see also Hackstein 1995: 308).[757] Pinault discovered the 1sg. *lannu* and Hilmarsson recognised that this form does away with Krause's misconception of a class 7 *ñᵊ/ₑ*-subjunctive (Krause 1952: 140-141; evidently inspired by the *ñᵃ/ₐ*-subjunctives of Tocharian A) because it proves a subjunctive stem {lənn-} instead. In view of the persistent misunderstandings involving this stem, it is perhaps practical to recapitulate the paradigm: 1sg. *lannu* {lənn-əw}, 2sg. *lant*[758] {lənn-t}, 3sg. *laṃ* {lənn-n}, 3pl. *laṃ* {lənn-n}, inf. *lantsi* {lənn-tˢəy}, vn *lalñe* {lənn-lñe}. All forms with *ñ* or *ñ*ñ are optatives – they do not prove a stem *ləñ(ñ)-* for the subjunctive (*läññam* IT44a2 in a leaf full of errors is a mistake for 1sg.opt. *läññim* {lənn-'əy-m}).

Hackstein saw the parallelism of {lənn-} to the type 3sg.sbj. *auṃ* {awn-n} : 3sg.prs. *aunaṣṣäṃ* (l.c.). The parallelism is even greater than he thought, since *aunaṣṣäṃ* has a suffix *ᵊˢˢᵊ/ₛₖₑ*, not *nəᵊˢˢᵊ/ₛₖₑ* (as the root is *awn-*, not *aw-*). This is, I think, the key to the explanation of the Tocharian B root variant *lənn-*: synchronically, the root is *lənn-* with a root subjunctive and a *ᵊˢˢᵊ/ₛₖₑ*-present, but diachronically the present suffix must have been *nəᵊˢˢᵊ/ₛₖₑ*. This present suffix *nəᵊˢˢᵊ/ₛₖₑ* is without doubt parallel

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[756] The isolation of the thematic aorist in Proto-Indo-European suggests that this thematic aorist ultimately goes back to a root aorist (according to Kortlandt 2000b: 48 preserved in Arm. 3sg.aor. *el* '(s)he went out'), but it must have existed already in the proto-language; for Tocharian, a root aorist can offer no explanation, since there is absolutely no model for secondary thematisation (pace LIV2 l.c.).

[757] Pinault's article is an adaptation of a lecture held at the the 1990 Berlin *Arbeitstagung* on Tocharian. Although it was published only in 1994, Hilmarsson (1991b) could already make use of its findings.

[758] Attested THT1451b.a2; B384a4 is to be read *lantwe*.

to that found with *yəp-* 'enter', *kəm-* 'come', and probably also *təm-* 'be born', and it must have originated in 'come' (see 4.3.1, p 351, and 4.5.7, p 425). In view of the causative root *lənt-*, I suppose that the suffix *nəˢˢᵊ/ske* was added to a root *lənt-*, resulting in *lənn-* (such a development seems to be commonly accepted, e.g. Hackstein 1995: 309). For Tocharian B, we may even derive the root *lənt-* from *lət-* through the suffix *nəˢˢᵊ/ske*, as on the evidence of *käntaṃ* for expected *katnaṃ*, *tn* was metathesised to *nt* (Peyrot 2008a: 151). Thus, the present {lənnəˢˢᵊ/ske-} can be derived from *lət-* with adoption of the suffix *nəˢˢᵊ/ske* and subsequent restoration, even though synchronically the present is {lənn-əˢˢᵊ/ske-} with a ˢˢᵊ/ske-suffix.[759]

It is commonly accepted that the derivation of the present {lənnəˢˢᵊ/ske-} from the root *lət-* needs the assumption of a *nəˢˢᵊ/ske*-suffix at a certain stage: whatever its ultimate origin, this suffix is clearly there in the verbs of motion 'come' and 'enter'. The fact that the suffix was obscured by the phonological development to **ləntəˢˢᵊ/ske-* is shown by the reanalysis of the root as *lənt-*, clearly proved by the extension of the latter root variant to the causative. Once the suffix was no longer recognisable, it could be reintroduced yielding the attested *lənnəˢˢᵊ/ske-*. When the root variant *lənn-* came about as the result of yet another instance of reanalysis of the present *lənnəˢˢᵊ/ske-* as *lənn-əˢˢᵊ/ske-* instead of *lən(t)-nəˢˢᵊ/ske-*, it was apparently introduced into the subjunctive, no matter how the subjunctive was formed at that time. It is even conceivable that the subjunctive was completely formed after the pattern *auṃ* : *aunaṣṣäṃ*, which is, to be sure, the pattern it follows synchronically. Otherwise, it may have been parallel to *yopäṃ* : *yänmaṣṣäṃ*, with restoration of the root, either from *lət-* to *lənn-*, or from *lənt-* to *lənn-*.

The root *lənt-* may be as old as Proto-Tocharian, since we find it in Tocharian A as well. However, a metathesis *tn* > *nt* is without parallels in Tocharian A. Rather, *tn* yields *n*, on the evidence of prs. {räynā-}, {tˢäynā-} and {knā-} of *räytā-*, *tˢäynā-* and *kätā-* (Sieg, Siegling and Schulze 1931: 357; see 2.5.8, p 90). Theoretically, I see two ways to save the metathesis as a common development: 1) metathesis took place and the element *nā* was restored afterwards, with subsequent cluster simplification, *kätnā-* > *käntā-* >> *käntnā-* > *kännā-* > *känā-*, or 2) metathesis took place, but was undone, and at a later stage *tn* became *n*. I opt for the second possibility because I find it unlikely that with restoration of the *nā*-element the new root *käntā-* would have been kept (the case of *lənt-* ~ *lənn-*, for which I assume exactly that, is different because the verb fits no pattern and the preterite is completely isolated). For the second scenario, we could adduce parallels of *kn* > *nk*, a metathesis that has certainly left its traces in Tocharian A (4.6.4, p 440).

However one wishes to explain the infixed nasal in Tocharian A (and in Tocharian B; a common pre-form *lənt-* is probable anyhow), it must be a Tocharian innovation, pace LIV2, where a nasal present is posited on the basis of Tocharian alone

[759] Thus, the metathesis of *tn* to *nt* and subsequent assimilation of *ntn* to *nn* is different from the assimilation of *tñ* to *ñ* in TB *pañäkte* 'Buddha' < **pət-ńəkte* (pace Winter 1987: 302).

(p 248). A derivation of the internal nasal from the *nəśśə/ske*-suffix is further made likely by the fact that the verb is intransitive 'go out', which perfectly fits the class of verbs with a *nəśśə/ske*-present, whereas we would expect an original nasal present to be transitive (Hackstein 1995: 310).

The fact that Tocharian A {läntäṣä/sa-} was not resuffixed with *näṣä/sa* needs no special argumentation, I believe, but it must be noted that the link between *näṣä/sa* and verbs of motion is much weaker in Tocharian A: the *näṣä/sa*-suffix is much more frequent than in Tocharian B, comprising fewer verbs of motion, and the *ṣä/sa*-suffix is even more frequent, and therefore more neutral, than the corresponding suffix in Tocharian B.

Evidently, the Tocharian A subjunctive {läñcä/a-} cannot be derived from **läñät-*, contrary to what Hackstein argues (1995: 311; slightly adapted LIV2: 249). More likely is it that *läñcä/a-* reflects *länᶜä/ta-* with generalisation of the palatalised variant of the cluster as in *pañw-* etc (alternatively, the spread of *c* may have been favoured by the preterite *läc-*). This *länᶜä/ta-* probably reflects an old subjunctive **ləᶜə/te-* with introduction of the ubiquitous nasal, possibly after **śəm'ə/e-*, the sbj. of 'come' (TA {śämä/a-}.

4.3.6 'DRINK'

The verb 'drink' forms a *x*|Ø-root present-subjunctive in Tocharian B, cf inf. *yoktsi* and prs.ptc.mid. *yokamane* next to athematic forms attested as presents and subjunctives: 1sg. *yoku* (sbj.), 2sg. *yokt* (prs.). The preterite is of a completely isolated type: although there are two other present-preterites in Tocharian B, the vowel alternation *o* ~ *a* has no parallels: {yaśə/ke-} (Schmidt 1997a: 258-261). The preterite participle apparently follows this preterite stem: *yāku*, *yākoṣ* (Peyrot 2007b: 799). In Tocharian A, the verb is poorly attested with a *x*|Ø-root present stem in inf. *yoktsi* only (so next to the noun *yoktsi* 'drink'). It is in suppletive relation to the root *tsäwkā-*, which provides the subjunctive, preterite and imperative stems.

Evidently, the agreement between Tocharian A and B leads to the reconstruction of a present-subjunctive **yokə-* for Proto-Tocharian, and in view of the isolated character of the Tocharian B preterite we can safely add a preterite **yak'ə/e-*. Tocharian 'drink' is related to the root found in Lat. *ēbrius* 'drunk' and the Hittite verb 3sg. *ekuzi* /ekʷtˢi/, 3pl. *akuanzi* /əkʷantˢi/.

The problem with **yok-* ~ **yak'ə/e-* is that it can hardly be derived from a root present as found in Hittite: 3sg. **h₁egʷʰ-ti*, 3pl. **h₁gʷʰ-enti* would probably have yielded **yəkʷ-*, i.e. TB ***yak-* and TA ***yuk-*. The present-subjunctive stem **yok-* is probably best derived from **ēgʷʰ-* with rounding as in TA *okät*, TB *okt* '8' < **ekʷtə* < **ektu* < **oktō* (pace Kim 2000).

The preterite stem is not explained as easily. With Schmidt (1997a: 261), we could perhaps derive the *a* from **ō*; the ultimate outcome **yak-* can easily contain a restored initial **y-*. **ēgʷʰ-* clearly points to a reduplicated **h₁e-h₁gʷʰ-*, whereas **ōgʷʰ-* might go back to **h₁e-h₁ogʷʰ-*. As Schmidt pointed out, a 3sg. perfect **h₁e-h₁ogʷʰ-e*

might have resulted in the attested 3sg. present-preterite form *yāś*, and if the paradigm was built on that form, 2sg. *yāś* was the regular replacement of a "real perfect" **h₁e-h₁og^{wh}-th₂e*. We may safely assume that any vowel alternation with the plural was eliminated: not only would it have yielded a completely aberrant paradigm, it would also have been disturbingly close to the attested present-subjunctive.

Indeed, the present-subjunctive may even be the result of paradigmatic split of a paradigm with *yak-* in the singular and *yok-* in the plural. Such a split would explain at least the *x*|Ø-root of the present-subjunctive, as none of the **h₁e-h₁g^{wh}-* forms would have had a palatalised final: 1pl. **h₁e-h₁g^{wh}-me*, 2pl. **h₁e-h₁g^{wh}-su* (the ending apparently needed for Tocharian, see 4.2.2, p 347), 3pl. **h₁e-h₁g^{wh}-r*. I do not know why *yok-* became a present (and subsequently a present-subjunctive because there was no separate subjunctive), whereas *yak-* became a preterite. However, there is evidence from a small number of verbs that the perfect could end up as a present, while it became a preterite in the majority of cases.

4.3.7 'GET' AND 'DO'

Although some of their stems are obviously secondarily formed according to productive patterns, Tocharian A *yom-*, Tocharian B *yənm-* 'get' and Tocharian A *yām-*, Tocharian B *yam-* 'do' are irregular to a very high degree. In fact, it is precisely the presence of secondary stems which proves that the verbs originally were even more irregular. The reason to discuss the two verbs together is that there is a possibility that they are related (as argued by Adams 1999: 492, 498), a matter which is taken up at the end of this section.

The verb 'do' is irregular in both languages (see also Winter 1977: 144-145), but for different reasons. Tocharian A *yām-* 'do' is irregular because it has a suppletive present from a root *ya- ~ ypa-* (not further discussed here) and because it forms two middle preterites, one with *sā* and one without, while the rest of the stem pattern does not fit that for *sā*-less preterites at all. Tocharian B *yam-* 'do' is irregular because it forms a preterite {yamáṣṣa-}, uniquely derived from the present (not from the subjunctive or the present-subjunctive), while the preterite participle *yāmu* and the ipv. act.sg. *pyām*, mid.sg. *pyāmtsar* do not match that preterite at all. The subjunctives are not especially irregular, but do not agree exactly: Tocharian B has a *a*|Ø-root subjunctive {yam-} and Tocharian A a $^{ä}/_{a}$-subjunctive {yām$^{ä}/_{a}$-}.

	Tocharian A	Tocharian B
present	*ya- ~ ypa-*	{yamá$^{ṣṣə}/_{ske}$-}
subjunctive	{yām$^{ä}/_{a}$-}	{yam-}
preterite	act. {yām$^{Ø}/_{sā}$-}: 1sg. *yāmwā*	{yamáṣṣa-}
	mid. {yām$^{Ø}/_{sā}$-}: 1sg. *yāmtse*	
	mid. {yām-}: 1sg. *yāmwe*	
preterite participle	*yāmu*	*yāmu*, *yāmoṣ*

	Tocharian A	Tocharian B
imperative	{-yām$^{Ø}/_{sā}$-}	{-yam$^{Ø}/_{sa}$-}

Historically, *yam-* must have been a defective verb. First of all, the Tocharian B preterite must be secondary, and it must replace something other than a normal *s*-preterite {yam-$^{Ø}/_{sa}$-} because such a preterite would certainly have been preserved. The coexistence of the two middle preterites in Tocharian A suggests that a recessive pattern was replaced by a productive one, and it is obviously the *sā*-less preterite that is old; in Tocharian B, where the *sa*-less type is not attested at all, such a preterite could indeed have been so irregular that it was replaced by the strange *yamáṣṣa-*. Second, it is utterly implausible that the Tocharian B pattern with a well marked present {yamə$^{ṣṣə}/_{ske}$-} would have been replaced by the suppletive pattern we find in Tocharian A. At the same time, the Tocharian B pattern is productive and could be secondary on any account. Thus, we have to reconstruct Proto-Tocharian **yam-* as a defective verb with a subjunctive **yam-* and a preterite **yam-* (without *sa*): the presents are secondary, as are all other preterite forms. The original subjunctive was probably *yam-* without $^{ə}/_{e}$-suffix, as Tocharian A *yām$^{ä}/_{a}$-* could easily be a secondary replacement of an original **yām-*: root subjunctives are a residual category in Tocharian A, as they are often extended with an *ñ$^{ä}/_{a}$*-suffix. The preterite participle **yaməw* could in fact be original; it fits to the reconstructed preterite **yam-*. Likewise, it is possible that the imperative **-yam$^{Ø}/_{sa}$-* is old.

The verb 'get' is fully-fledged in both languages, and the two languages agree in all relevant points. The verb is irregular because its stems, in themselves productive, pattern in a very unusual way. Tocharian A shows the extremely rare combination of a *nā*-subjunctive with a derived present, superficially matched by Tocharian B, although the nasal has become part of the root there. The rare combination of the subjunctive and the present is matched by an *s*-preterite in both languages, which is completely without parallels. Not only does this particular combination of the three stems occur only here, the combinations of preterite and present on the one hand, and of preterite and subjunctive on the other, are also unique.[760]

	Tocharian A	Tocharian B
present	{yomnā$^{ṣä}/_{sa}$-}	{yənmá$^{ṣṣə}/_{ske}$-}
subjunctive	{yomnā-}	{yənmá-}
preterite	{yom$^{Ø}/_{sā}$-}	{yonm$^{Ø}/_{sa}$-}
preterite participle	*yomu*	*yainmu, yainmoṣ*
imperative	*not attested*	

[760] Except, perhaps, the verb 'know', where we also find a *nā*-present and an *s*-preterite. The fact that the only possible parallel is found in another extremely irregular verb is alarming at any rate.

In Tocharian B, the nasal spread throughout the verb, without doubt because the suffix was obscured after the metathesis if *mn* to *nm* in, e.g., *yənma-* < **yəmna-*. On the other hand, the root vowel *o* must have been generalised in Tocharian A, as evidenced by the lack of weakening of the suffix vowel in *yomnā-* instead of the expected ***yomna-* (on Tocharian B *yonmäṃ* B432a2, secondary for regular *yaṃnmaṃ* /yə́nman/, see Peyrot 2008a: 152). Thus, TA *yomnā-* and TB *yənmá-* go back to **yəmna-*, whereas the preterites TA *yom*$^{Ø}/_{sā}$- and TB *yonm*$^{Ø}/_{sa}$- reflect **yom*$^{Ø}/_{sa}$-. The creation of the extended stems TA {yomnā$^{ṣä}/_{sa}$-} and TB {yənmá$^{ṣṣə}/_{ske}$-} is difficult to date, but they could easily have been formed independently. At any rate, **yəmna-* must ultimately go back to a present, be it in Proto-Tocharian or at a pre-stage of it. For the sake of clarity, I will assume that it was a present in Proto-Tocharian, the $^{ṣä}/_{sa}$- and $^{ṣṣə}/_{ske}$-formations having been created independently, but this matter is only relevant for the dating of the development, not for the understanding of the development itself. The preterite participle is not easy to reconstruct, since Tocharian B *yainmu* < **yeyənməw* presupposes *ə* grade preterite forms which are not attested: at first glance, it cannot have been formed from the preterite *yonm*$^{Ø}/_{sa}$-. On the other hand, it cannot have been built on *yənma-*, since we would then have expected *yänmau* < **yənma-w*. The evidence of Tocharian A *yomu* is difficult to interpret because it is the expected preterite participle next to a preterite *yom*$^{Ø}/_{sā}$- and thus it could be secondary. In sum, *yəm- ~ yom-* seems to have been defective as well: it must have had a present **yəmna-* and an *s*-preterite **yom*$^{Ø}/_{sa}$-, but apparently it had no subjunctive.

There are two reasons to consider the possibility that *yəm- ~ yom-* 'get' and *yam-* 'do' are etymologically related. First, there is an undeniable phonological similarity (see Adams 1999: 492, 498); second, both verbs must have been defective, but the reconstructible stems complement each other almost entirely. However, I am very cautious, calling this etymological relationship only a possibility to consider, because the meanings 'get' and 'do' are not obviously related and the alternation *a ~ o ~ ə* is unusual at least.

The complementary distribution of the reconstructible stems is best represented in a scheme:

	'get'	'do'
present	**yəmna-*	
subjunctive		**yam-*
preterite	**yom*$^{Ø}/_{sa}$- (act.)	**yam-* (mid.)
preterite participle	**yoməw*?	**yaməw*
imperative		**yam*$^{Ø}/_{sa}$-

Whereas the present and the subjunctive can easily be fit in one verb, the preterite is more difficult because it is reconstructible for both 'get' and 'do'. The only way to understand this double stem is to assume that the *get*-variant was at home in the active and the *do*-variant in the middle: after all, 'get' is active only, while the only

reliably reconstructible preterite stem for 'do' is middle. The preterite participle may have been **yaməw*: as noted above, the preterite participles of 'get' do not allow for a straightforward reconstruction and both seem to be secondary in one way or another. In addition, if the alternation *o* ~ *a* of the preterite suggested by this reconstruction is correct, we would, on the basis of the general pattern of the preterite participle, expect that the vocalism of the participle matches that of the preterite middle, i.e., *a* as in **yaməw*.

Continuing this line of thought, we would expect a similar alternation between *o* and *a* in the subjunctive and the imperative. If such alternations ever existed, they have left no traces as far as I can see; it is possible that the imperative of 'get' is just by chance not attested, but it could have been made secondarily at any point. The reason why these alternations have left no traces is without doubt that the alternation between *o* and *a* was too irregular, so that it was eliminated. If 'get' and 'do' really go back to one verb, this is the reason why they split in the first place, but it must also be the explanation why no subjunctive forms with *o*-grade are attested. Probably *a*-grade was found throughout the subjunctive except in the singular active, so that elimination of the *o*-grade forms was trivial. This in turn detached the preterite with *o*-grade from its subjunctive with *a*-grade and that must have been the beginning of the creation of two independent verbs, at first defective, and eventually supplied with new formations for the lacking stems.

The key question is how the meanings can be reconciled. It is my firm belief that the semantic connection is in principle possible, but the problem is that I cannot *prove* it; nothing forces us to connect the two verbs on the basis of their meanings. *yam-* is in both languages used as a semantically rather pale verb 'do', often even as a kind of auxiliary in circumscribed denominal constructions as TB *deśit yam-* 'confess', literally 'make a confession', but it can also mean 'make, construct'. Evidently, the latter, fuller meaning is original. The semantics of 'get' is more varied: the basic meaning seems to be 'get, obtain', as it often translates Skt. *adhigam-* "gelangen zu, erreichen, erlangen, finden" (SWTF, I: 34, col. 2) and *prāp-* (a.o.) "erlangen, erreichen, gewinnen" (SWTF, III: 231, col. 1). In his dictionary, Adams gives 'achieve' as the first translation (1999: 497), which yields good translations indeed: the verb is always constructed with an object that is desirable, and often the obtainment or fulfilment of such an object requires some action or investment on the part of the subject, though it may also be just granted (often by the Buddha).

Adams must be right that the semantic link between the verbs is between 'achieve' and 'make', which are close indeed. However, my analysis of the stem patterns is incompatible with his view that *yam-* is an "*ō*-grade iterative-intensive" to *yəm-* (1999: 492): I fail to see why 'make' should be the iterative-intensive counterpart of 'achieve', and the fact that the verbs can be reconstructed as *one* verb is a much stronger argument for their being related than the meanings or the shape of the roots. As already pointed out above, it is plausible that *yam-*'s widespread meaning 'do' developed from 'make', and as I will insist on 'obtain, get' next to 'achieve' for *yəm-*, I suppose that 'get' is the original meaning, secondarily extended

to 'achieve'. The development of 'achieve' to 'make' may have been favoured by the probable origin in the middle of the latter, but in my view the semantic connection can also be upheld without recourse to a difference in voice.

Unlike Adams (1999: 498), I consider Jasanoff's derivation of **yəm-* 'get' from **h₁em-* 'take' (1978: 32; see LIV2: 236) very likely, and in any case semantically more attractive than a connection with Skt. *yam-* 'hold' (LIV2: 312). Moreover, **h₁em-* is very well attested in other languages (e.g. Lat. *emō* 'take', Lith. *imù* 'id', OCS *imǫ* 'id', Goth. *niman* 'id', with *n-* through reanalysis of **gan-iman* as *ga-niman*), whereas *yam-* is found only in Indo-Iranian.

However, the Tocharian stem pattern must be secondary, and the explanation of the vocalic alternations is not made easier by this etymological comparison. Whereas **yəmna-* represents a regular Tocharian *ə*-grade, that is, with restoration of the initial **y-* from forms with initial **e-* or **ē-*, the alternations of the stems *yom-* and *yam-* are unexpected. One of them must represent a reflex of **ēm-*, the regular vowel grade in the singular active of the *ə*|Ø-root subjunctive and the active of the corresponding preterite. Thus, it is likely that **ēm-* is reflected in **yom-*, whereas **yam-* is a replacement of the expected *ə*-grade form **yəm-*. In any case, the morphological relation between **yom-* and **yam-* seems to be parallel to that of *e*-grade vs *ə*-grade. The problem of *o*-grade in general is taken up separately elsewhere (4.5.10, p 429), but it must have a special connection with the initial **y-*.

4.3.8 CONCLUSION

The scrutiny of some of the most irregular verbs has revealed a number of interesting points, even though many problems remain. The discussion of the verb 'come' (4.3.1, p 351) has shown that the Tocharian present may go back to a Proto-Indo-European present, and that a Tocharian subjunctive may go back to a Proto-Indo-European aorist (or root) subjunctive. At the same time, its highly irregular preterite must reflect an archaic type, as well as heavy restructuring; possibly, it reflects a pre-stage of the *s*-aorist. The derivation of the verb 'put' (4.3.2, p 357) has shown that the *s*-present and *s*-preterite system needs a Ø-grade stem form somewhere, and really presentic value of the *s*-present, as it has pushed the old Proto-Indo-European present into subjunctive function. The verb 'know' (4.3.3, p 365) reflects an archaic type of a nasal present combining with an *s*-aorist, as further only found in *yəm-* 'get' (4.3.7, p 372). If related to *yam-* 'do', the latter may offer additional evidence that there was a gradation type with *o* as full grade (normally Tocharian *e*-grade) next to *a* as weak grade (normally Tocharian *ə*-grade). The same alternation seems to require a different interpretation in the word for 'drink' (4.3.6, p 371), which is very difficult to interpret, but it might show that the Proto-Indo-European perfect could become a present as well as a preterite. At the same time, it suggests that a present became a present-subjunctive if it had no subjunctive beside it. The same functional development is much more evident in *y-* 'go' (4.3.4, p 366), which allows for virtually no other interpretation: its present-subjunctive must

reflect the old Proto-Indo-European root present. The verb 'go out' (4.3.5, p 368) has been subject to very heavy restructuring, as its present and subjunctive are for a large part modelled on those of *kʷəm-* 'come'. Conversely, the isolated present-preterite type of *lət-* 'go out' must be original, and its influence on the preterite of 'come' is ascertained; probably the preterite of *yok-* 'drink' was formed after 'come' and 'go out', too.

In sum, the discussion of the irregular verbs nicely illustrates that despite the many archaisms preserved, the impact of analogical developments is enormous.

4.4 PRESENT-SUBJUNCTIVE

The existence of the present-subjunctive has received the special attention of Winter, who claimed that if the subjunctive is primary, a secondary present is formed, but if the present is primary, no secondary subjunctive is formed. In other words, present-subjunctives are primary presents, syntactically used as present and subjunctive, but morphologically without subjunctive:

> "Liegt keine Suppletion vor, so läßt sich ein primärer (unerweiterter oder erweiterter) Stamm des 'Konjunktivs' durch Suffigierung zu einem sekundären Präsensstamm ausbauen; ein Ausbau in umgekehrter Richtung erfolgt nicht: einem primären Präsens ist grundsätzlich ein formgleicher 'Konjunktiv' zugeordnet" (1994a: 287).

According to Winter (l.c.), the difference between primary subjunctives and primary presents is one of aspect: verbs with a perfective ("momentan") Aktionsart have primary subjunctives, whereas verbs with an imperfective ("durativ") Aktionsart have primary presents.

In essence, this analysis is correct. However, as I have argued in chapter 3, the subjunctive is syntactically not perfective, nor is the present syntactically imperfective. Moreover, the distribution is not that clear, as there are many verbs with perfective Aktionsart among the present-subjunctives, as well as many others with imperfective Aktionsart among verbs with a difference between present and subjunctive. Although Winter admits "von diesem Prinzip ist es dem Anschein nach im Laufe der Sprachgeschichte zu Abweichungen gekommen" (1994a: 287), this is certainly not a sufficient explanation for a large category such as the *sk*-causatives in Tocharian B.

Thus, I take the value of Winter's analysis to be found essentially on the diachronic level. Of course, the question is what its diachronic value is. If Couvreur claims that the subjunctive is a present of the perfective stem (1947: 73), does this mean the subjunctive was originally a present and a new present was created next to it? Were those new presents only formed to verbs with a perfective Aktionsart? If so, is it correct to equate the primary subjunctives with the present-subjunctives since both are old presents?

In my view, the present-subjunctive is one of the most relevant categories for a better understanding of the Tocharian verb. What I will try to show below is that

both Winter's and Couvreur's analyses are correct. However, "primary subjunctive" and "primary present" are not to be understood in Tocharian terms, but in Proto-Indo-European terms: in principle, the perfective stem continues the Proto-Indo-European perfective stem usually called "aorist", whereas the imperfective stem continues the Proto-Indo-European imperfective stem called "present". In other words, primary presents, or "underived" or "root presents" (including $*^{e}/_{o}$-presents without accompanying aorist) are reflected in the Tocharian present-subjunctive. Its imperfective Aktionsart is a direct continuation of the imperfective Aktionsart of the Proto-Indo-European primary present.

An important consequence of this analysis is that the Tocharian present continues the Proto-Indo-European present whereas the subjunctive continues the aorist.

Below, comparative evidence of the present-subjunctives is reviewed. To this end, they are ranged under the following categories: $^{\prime ə}/_{e}$-suffix (4.4.1, p 378), *x*|Ø-root present-subjunctives (4.4.2, p 389), *x*|*a*-root present-subjunctives (4.4.3, p 393), $*ńń^{ə}/_{e}$-denominatives (4.4.4, p 394), the *lyāka*-type (4.4.5, p 395) and *sk*-causatives (4.4.6, p 398). The following present-subjunctives are discussed elsewhere: *kĺews*- 'hear' (4.7.2, p 457), *yam*- 'do' (4.3.7, p 372), *yə*- 'go' (4.3.4, p 366), and *yok*- 'drink' (4.3.6, p 371).

4.4.1 $^{\prime ə}/_{E}$-SUFFIX

Although the $^{\prime ə}/_{e}$-suffix forms not only presents, but also subjunctives and preterites, it is most of all a present marker: it is especially frequent with present-subjunctives. PT **kĺews*- 'hear', which also forms an $^{\prime ə}/_{e}$-present-subjunctive, is discussed in 4.7.2 (p 457); see further also the $*ńń^{ə}/_{e}$-denominatives (4.4.4, p 394) and the *sk*-causatives (4.4.6, p 398), which likewise contain an $^{\prime ə}/_{e}$-suffix.

TB $ana^{ṣṣə}/_{ske}$- 'breathe'

Although present-subjunctive function of Tocharian B {aná-$^{ṣṣə}/_{ske}$-} 'breathe' (without Tocharian A cognate) cannot be proved definitely, it is highly probable. First of all, subjunctive function is proved by inf. *anāst(s)i* THT1324b.b3 (if read correctly by Thomas 1972: 443; the reading is not completely certain) and the vn *anāṣṣälñe* B41a1, B41a6 etc. Further, both occurrences of the 3sg. *anāṣṣäṃ* in B41b2 are most probably presents. At any rate, the *sk*-suffix is a strong indication that the formation was in origin a present, which further suggests that it is a present-subjunctive. Following Schmidt (1982: 367), $ana^{ṣṣə}/_{ske}$- is to be derived from a preform $*h_2enh_1\text{-}sk^{e}/_{o}$-, an *sk*-extension of the root present $*h_2enh_1$- attested in e.g. Ved. *ániti* (LIV2: 267). Although a root *ana*- is possible in principle (cf also TB *onolme* 'being' < **ana-elme*, see Peyrot forth.a), the *sk*-suffix may have been added to make the present formation clearer: otherwise, the Tocharian B present-subjunctive continues the original Proto-Indo-European root present.

TB *ayśə/ke-* 'know'

Tocharian B *ayśə/ke-* 'know' has no Tocharian A cognate. Its infinitive *aiśtsi* and prs.ptc. *aikemane* together unambiguously point to an *'ə/e-*present-subjunctive; the same formation can reasonably be assumed for Proto-Tocharian. The verb has been connected to the Gm. prt.-prs. **aih* in e.g. Got. 3sg. *aih*, 3pl. *aigun* 'possess' and IIr. **Hi-Hić-* in Ved. *íśe* 'I am in command, I rule' and OAv. *isē* 'id' (Kümmel 2000: 124; LIV2: 223; Adams 1999: 101-102), which point to a root PIE **h₂eiḱ-*. Although the middle inflexion of the IIr. verb is still in need of an explanation (see Kümmel l.c.), it probably replaces an older perfect, as also reflected in the Gm. preterite-present. The meaning of the Tocharian verb obviously derives from 'possess' through 'possess knowledge'.

If we assume that perfect reduplication was inherited in Tocharian, as it is in the preterite participle, we could derive *ayk-* from the pl. stem **h₂e-h₂iḱ-* directly, and probably from the sg. stem as well (perhaps through an intermediate **oyk-* or **āyk-* from **h₂e-h₂oiḱ-*). If perfect reduplication was only inherited in the preterite participle and not in finite forms, *ayk-* can only be derived from a generalised singular stem **h₂oiḱ-* (see Peyrot 2008a: 58, pace Adams 1999: 102). The Proto-Indo-European verb must have been a perfect with present reference of Chantraine's type 12 ("Verbes signifiant «avoir, posséder, abandonner, faire»", 1927: 11) and the fact that it became a present in Tocharian is semantically only natural. Formally, the 3rd singular may have been a key-form: the original **h₂e-h₂oiḱ-e* should have become **ayśə*, which was identical with the preform of the 3sg. present *aiśträ* < **ayśə-tr*. This explains at once why the perfect should have ended up as an *'ə/e-*present. If it became a present early enough, it can have come to behave like a root present; in any case, there was never an aorist stem next to it, and so the verb became a present-subjunctive.

PT **katk'ə/e-* 'be glad'

On the basis of its morphological structure, it is likely that Proto-Tocharian **katk'ə/e-* was a present-subjunctive, but it is difficult to give definitive synchronic proof. In Tocharian A, a present stem {kā^{ckä}/$_{tka}$-} is suggested by 2pl. *kāckäc* and prs.ptc. *kātkmāṃ*, but subjunctive function can only be inferred from the morphology: *kāckäc* A31a3 is likely to be a present ('don't be glad about rebirth'), and 3sg. *kāckä(ṣ)* A192+145a4 is almost certainly a present in view of the neighbouring presents. In Tocharian B the situation is similar: the prs.ptc. *katkemane* proves that {ka^{ccə}/$_{tke}$-} was at least a present, but subjunctive function is not easily proved syntactically, and the relevant forms for a morphological argument (such as the vn or the inf.) are lacking. However, the prt. {kacc-á-} and the prt.ptc. *kakāccu* presuppose a subjunctive {ka^{ccə}/$_{tke}$-}, which in turn implies that that stem was a present-subjunctive. A further argument can be that at least in Tocharian B, there is no attested pattern for a subjunctive next to the present {ka^{ccə}/$_{tke}$-}.

The reconstructed Proto-Tocharian present-subjunctive **katk'ᵊ/ₑ-* was certainly a present in origin, as it must derive from earlier **katsk'ᵊ/ₑ-*, as if from PIE **gʰ₂dʰ-skᵉ/ₒ-*, an *sk*-present from the root preserved in Gk. γηθέω 'rejoice' (LIV2: 184).

TB *kamñᵊ/ₑ-* 'play'

Although Tocharian B *kamñᵊ/ₑ-* 'play' is not well attested, it is probably a present-subjunctive; in Tocharian A, the verb is not attested at all. An *'ᵊ/ₑ-*formation is proved by 3sg. *kañmäṃ* B613b2 (possibly a prs.) and 3pl. *kāñmeṃ* B2b2 (certainly a present because it is parallel to the prs. *spänteṃnträ*). The inf. *kañmatsi*[761] B370b6 can only be from the same stem if it represents /kañmátˢi/, which would then at the same time prove that the present and subjunctive stems are identical. However, prs.ptc. *kañmāmāne* B118a7 (arch.) must then be assumed to be a mistake for *kañmemāne* /kañmémane/; ger. *k(a)ñmalonasa* B370b2 'toys' can be regular /kańmə́lonasa/.

The peculiar root shape of *kañm-* suggests that it goes back to **kamńᵊ/ₑ-* through a metathesis comparable to that in TB *känmaṣṣäṃ* '(s)he comes' from **kʷəmnəṣṣə-* (van Windekens 1976: 194; Adams 1999: 150). **-ñᵊ/ₑ-* could ultimately be identical with the denominative suffix *-ññᵊ/ₑ-* (see 4.4.4, p 394), but further connections are unclear.

TB *kərˢˢᵊ/ₛₖₑ-* 'shoot; throw'

Following Adams (1999: 167; see also Hilmarsson 1996: 93), we can set up a Tocharian B verb *kərsk-* meaning 'throw (of flowers)' and 'shoot (of an arrow)'. Although no subjunctive forms are attested, the stem pattern proves that it must have formed a present-subjunctive {kərˢˢᵊ/ₛₖₑ-}. That this was the present stem is shown by the prs.ptc. *kärskemane*, whereas its subjunctive function needs to be inferred from the secondary *a*-preterite attested in 3sg.prt. *karṣṣa*, prt.ptc. *kekarṣṣu*.

The same root may be reflected in Tocharian A *pärra-krase* 'distance of an arrow-shot' (Hilmarsson 1996: 177; Adams 1999: 168). Whereas Adams argues that TA *-krase* presupposes a root **krəs-* that was apparently enlarged with *sk* in Tocharian B, Hilmarsson derives it from a Tocharian A root *kräs-**, which could in fact be the direct etymological match of Tocharian B *kərsk-*. The key question is whether the formation of *-krase* is so productive that it can have been formed after a development of **kərsk-* to *kärs-*. Since I know of no parallels for the scenario proposed by Hilmarsson, I would rather follow Adams in positing an original root **krəs-* that was enlarged in Tocharian B.

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[761] Sieg and Siegling transliterated *k(a)ñmatsi* (1953: 244), but *kāñmatsi* is definitely impossible, whereas other vowels (*e*, *i*, *u*) can probably be excluded, too (*ä* is excluded, too, in particular because we would expect it to be written <ka̮>).

If the Proto-Tocharian root was **krəs*-, the connection with Ved. *kiráti* 'scatters, pours out' etc, from PIE **kerH*- or the like (so LIV2: 353; see also Adams l.c.), is difficult to maintain. At all events, this etymology had to cope with the difficulty that the seṭ laryngeal apparently failed to vocalise: we would rather have expected something like Tocharian ***krask*-.

In spite of the difficulties involving Tocharian A *pärra-krase* and the Indo-European etymology of the verb, the present-subjunctive *kər*$^{ṣṣə}/_{ske}$- evidently goes back to a present formation as the *sk*-suffix is a present suffix.

PT **t´əmp*$^{ə}/_{e}$- 'can'

It is likely that Proto-Tocharian **t´əmp*$^{ə}/_{e}$- 'can' formed a present-subjunctive, but the evidence needs some discussion. In Tocharian B, the identity of the present and the subjunctive stem is best shown with the derived imperfect and optative because these occur in usually clearly different contexts, for instance: 1sg.opt. *cämpim* AS5Cb4, parallel to 1sg.opt. *stamo*(*ym*), and 3sg.ipf. *campi* B44a2, where the past context is indicated by *nauṣ* 'before', *wayā-ne* 'he brought him' and *maitar* 'they set out'. The underived stem was {cəmp$^{ə}/_{e}$-}, as is shown by 1sg. *campau* and 3pl. *campeṃ*, but it is hard to prove that this stem could be used both as a present and a subjunctive. Whereas present usage is ascertained from instances as 3pl. *cämpen-ne* AS7Ca3 (parallel to 3pl.prs. *yamaskenträ*, *tärkänaṃ*, and *cmenträ*), assessing subjunctive usage is more delicate because the verb is modal itself. In addition, decisive infinite forms such as the infinitive or the verbal noun lack altogether, the former apparently for reasons of construction. Nevertheless, an additional indication of the present-subjunctive stem is the fact that a distinct subjunctive stem is not attested despite the relatively frequent occurrence of the verb.

The preterite {cəmpyá-} is peculiar in that it seems to contain an element *-y-* that is otherwise only found in preterites derived from *'əy*-subjunctives. However, unlike those secondary preterites from *'əy*-subjunctives, the *y* of *cəmpyá-* is never spelled double, and perhaps it is somehow the reflex of the palatalisation that we historically expect. Although *py* cannot continue older **ṕ* phonologically, a secondary *py* may have been introduced after the pattern 1sg.prs.-sbj. *klyausau** 'I (will) hear' : 1sg.prt. *klyauṣawa* 'I heard'. If this argument is accepted, the preterite provides further support for the analysis of {cəmp$^{ə}/_{e}$-} as a present-subjunctive because it would be derived from a subjunctive {cəmp$^{ə}/_{e}$-}: {cəmp-'á-}.

In Tocharian A, the difficulties with the present and subjunctive forms are comparable to those for Tocharian B. However, the subjunctive stem is ascertained with the verbal noun *cämplune*, whereas the plausible restoration *(cä)mp[a]māṃ* A227/8b1 suggests that the present stem was identical to that subjunctive stem. The shape of the stem, {cämp$^{ä}/_{a}$-}, can be deduced from 3pl.prs.-sbj. *cämpe* and 1sg. *cämpam*. An *s*-preterite and a *ṣā*-imperfect are found beside it: 3sg.prt. *campäs*, 3pl.prt. *campär*, etc, and 3sg.ipf. *cämṣā*. The imperfect must have been formed from the preterite after the pattern 3sg.prt. *kos** : 3sg.ipf. *koṣā* or 3sg.prt. *nāksāt* : 3sg.ipf.

nākṣāt:[762] *cämp-* had no $^{ṣä}/_{sa}$-present, the formation this imperfect type historically derives from.

The Tocharian A *s*-preterite is difficult to explain because *cämp-* deviates from the usual *s*-preterite pattern in that it forms no $^{ṣä}/_{sa}$-present. The combination of a $^{'ä}/_{a}$-subjunctive with an *s*-preterite is rare, but it has parallels in at least *kāw-* 'kill', *träyk-* 'confuse' and *yām-* 'do' (see further 2.6.6, p 99). Thus, it is in principle possible that the *s*-preterite {camp-(sā)-} was formed after the present-subjunctive {cämp$^{ä}/_{a}$-}.[763] On the other hand, the Tocharian B preterite follows a much more productive pattern so that it could easily be secondary. The question is, then, which of the two was most likely to have been replaced in the other language.

In view of the good attestation of the pattern "*s*-preterite plus $^{'ə}/_{e}$-subjunctive" in Tocharian B, I would expect that it would have been preserved and enlarged with a $^{ṣə}/_{se}$-present. However, if an *a*-preterite **cəmṕa-* had been preserved in Tocharian A, it is likewise troublesome why it should have been replaced: the pattern is found with e.g. prs.-sbj. {pāṣ$^{ä}/_{sa}$-} and prt.(ipf.) {pāṣā-} (see 2.6.3, p 96). One might think that a replacement was favoured by the loss of the palatalisation of the **ṕ*, as all the other verbs except *śāwā-*, prt.(ipf.) of 'live' have palatalisable root-finals.

In sum, the reconstruction of the Proto-Tocharian preterite is difficult. One possible conclusion is that there was no preterite (nor an imperfect) at all and that it was created independently. If there was in fact a preterite, I am inclined to think that it was of the type reflected in Tocharian B: although I cannot find definite arguments for its replacement in Tocharian A, this is the pattern we would actually expect. In any case, the reconstruction of $^{'ə}/_{e}$-present-subjunctive is ascertained, as the two languages agree perfectly and the formation can hardly be secondary.

The Proto-Tocharian $^{'ə}/_{e}$-present-subjunctive **t´əmp$^{'ə}/_{e}$-* is probably related to Lith. *tempiù*, *teñpti* 'stretch', with a derived noun *ĺtampa* 'effort' (Pedersen 1941: 162; LIV2: 626). The stem reconstructions of LIV2, a PIE present **temp-$^{e}/_{o}$-* and an *s*-aorist **tēmps-*, are fully based on Tocharian; as the Lithuanian formation is productive, the formation of the Tocharian verb cannot be explained with recourse to comparison. (A connection between the **i$^{e}/_{o}$*-present of Lithuanian and the *y*-element in the Tocharian B preterite must be discarded because such a suffix should have left a trace in the Tocharian present, too.)

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[762] Although these verbs do not show the relevant gradation pattern, it must have been present in e.g. 3sg.prt. *markäs* : 3sg.ipf. *märkṣā** 'smudged', where the imperfect is unfortunately not attested.

[763] Winter hesitantly suggests that the *s*-preterite was formed to the $^{'ä}/_{a}$-subjunctive after the latter had been reanalysed as a root subjunctive (because the *a* of the suffix had become reanalysed as a part of the endings; 1977: 144). This account has to cope with a chronological difficulty, since the root subjunctive + *s*-preterite was recessive in historical times, so that it is doubtful whether such a reanalysis could have occurred early enough.

TB *ñəˢˢᵊ/ₛₖₑ-* 'desire'

Of the Tocharian B verb *ñəsk-* 'desire' only a stem {ñəˢˢᵊ/ₛₖₑ-} and a derived preterite {ñəṣṣ-á-} are attested, which in itself points to present-subjunctive function for {ñəˢˢᵊ/ₛₖₑ-}. However, whereas present forms are attested in abundance, and its present function is further corroborated by the prs.ptc. *ñäskemane*, unambiguous subjunctive forms are difficult to find. In my view, the best candidate is *ñäskau-ne* NS32b2, which is preceded and followed by clear subjunctives (*lakau*, *kārsau-ne*, see Couvreur 1955: 112), but even here it is not excluded that the present is used to express that the event is about to take place. A further difficulty is the frequency of {ñəṣṣəy-} in imperfect rather than optative function: usually the optative is more frequent, but for *ñäṣṣi-* I have found not one good example. On top of this, the derived preterite seems to have the slightly different meaning 'summon', cf for instance B16b5 *ñaṣṣa po ti*(*rtheṃ walo*) 'the king summoned all *tīrthya*s', which has a parallel in the Pāli Dhammapada commentary "Thereupon the king caused the heretics to be summoned before him" (Burlingame 1921: III, 191).

In sum, there are problems with the present-subjunctive status of {ñəˢˢᵊ/ₛₖₑ-}, but we would expect it in principle. If it was one, the explanation is clearly that it was originally a present, as it must contain a present suffix **-skᵉ/ₒ-*. Malzahn (2007) connects the verb to Gk. νέομαι 'get home safely' etc from PIE **nes-* (LIV2: 454-455; Adams 1999: 267-268). As she points out, this connection requires the assumption of a "Narten" weak grade **nes-* because zero grade is regular in *sk*-presents: the usual formation would have been **ns-skᵉ/ₒ-*, which would not yield the attested form. However, apart from the implausible pre-form **nes-skᵉ/ₒ-*, the real problem resides in the semantics, which is simply too far off to be compelling.

TB *nask'ᵊ/ₑ-* 'bathe'

nask- 'bathe' is attested in Tocharian B only, forming an *'ᵊ/ₑ*-present-subjunctive, witness prs.ptc.mid. *naskema*(*ne*) and inf. *nāṣtsi*. The analysis as a present-subjunctive is further supported by the coexistence of 3sg.opt. *nāṣṣi* AS3Bb6 and 3pl. *nāskeṃ* IT52a3, which is probably a present since it translates Skt. *snānti* 'they bathe' Uv17.8c. Tocharian B *naˢˢᵊ/ₛₖₑ-* must be connected to Ved. *snā́ti* 'bathes', Lat. *nāre*, MIr. *snaïd*, etc, which go back to a PIE root **sneh₂-* (LIV2: 572; the connection of an alleged Hittite cognate is rejected by Kloekhorst 2008b: 721). Since PIE **sN-* is normally preserved in Tocharian (cf especially *smәy-* 'laugh' in 4.4.2, p 389), we have to assume an ad hoc dissimilation *s_s* → *Ø_s* for Tocharian (unless one would want to posit a PIE *s*-mobile on the basis of Tocharian only). Although PIE **sneh₂-* formed certainly a root present (most probably without derived aorist beside it), as shown most clearly by Vedic, it was in Tocharian enlarged with the ubiquitous present formant **-skᵉ/ₒ-*. The newly formed *sk*-present had no subjunctive beside it and became a present-subjunctive.

PT *pask'ə/e- 'protect'

Proto-Tocharian *pask'ə/e- 'protect' can confidently be reconstructed as a present-subjunctive for Proto-Tocharian because it is attested as such in both languages. This can be seen from the vn *pāṣlune*, the inf. *pāssi* and the prs.ptc. *pāsmāṃ* in Tocharian A, and the ag.n. *paṣṣeñca* and inf. *pāṣtsi* in Tocharian B. The difference in root shape between TA *pās-* and TB *pask-* is explained by the regular merger of *s-* and *sk-*presents in the former. Proto-Tocharian *pask'ə/e- has clear relatives in e.g. Lat. *pāscō*, Hitt. *pahs-i* and Ved. *pā́ti* (LIV2: 460). The Tocharian root clearly goes back to the *sk*-present *ph₂-skᵉ/o- also found in Latin (where the *ā* is secondary after the perfect *pāvī*, see LIV2 l.c.). Evidently, Tocharian *pask'ə/e- was a present only – apparently the corresponding aorist was lost – which became used as a present-subjunctive.

PT *pər'ə/e- 'bring'

In both languages, the present of 'bring' is part of a suppletive system, see 2.5.5 (p 78). It is unlikely that a straightforward suppletive pattern like in Tocharian A, with a present *pärä/a-* next to a prt.-sbj. stem *kāmā-*, would have been replaced by the confusing multiple suppletion of Tocharian B (where the subjunctive is taken from the middle of *ay-* 'give' and perhaps the imperative from *asa-*). Therefore, I suppose that the combination of a prs. *pər'ə/e- (on the precise shape see below) with a prt. *kama-* is old, but that a subjunctive was lacking. In Tocharian A, the preterite root came to be used as a subjunctive, too, but in Tocharian B the verb remained defective until incomplete suppletion from otherwise independent verbs came about.

Although it is certain that *pər'ə/e- was originally a present, it is difficult to prove that it was also used as a subjunctive in Proto-Tocharian. In any case, the etymology is clear: *pər'ə/e- goes back to the Proto-Indo-European primary present *bʰérᵉ/o-, otherwise attested in e.g. Gk. φέρω (next to aor. ἤνεγκον) or Lat. *ferō* (next to pf. *tulī*; the Ved. *s*-aor. *abhār* is secondary).

On the basis of the PIE *e-vocalism in the root, one would expect that Proto-Tocharian had a palatalised initial, i.e. *pə́r'ə/e-. However, on the basis of e.g. TB *piś* '5' < *pə́ńśə and TB *mit* 'honey' < *mə́tə (borrowed into MChin. as 蜜 *mjit* > MoChin. *mì*) we would expect that this *pə́- had yielded **pi- in Tocharian B, whereas it seems that the immediate preform was rather *pər'ə/e- (Ringe 1996: 141). Perhaps the loss of palatalisation is to be attributed to suffix accent or syncope of the shwa in the root, i.e. *pə́ŕə́n-ne > *pərə́n-ne or *prə́n-ne; removal of the palatalisation by analogy always remains a possibility, but Ringe (l.c.) does not offer a model. In any case, I consider it highly unlikely that the absence of *i*-colouring is to be explained from levelling of root variants with different vowel grades (pace Kim forth.a) – Proto-Indo-European thematic presents were simply not grading.

PT *yərsʾə/e- 'honour; speak with reverence'

A Proto-Tocharian present-subjunctive *yərsʾə/e- 'honour; speak with reverence' can safely be reconstructed. In Tocharian B, it is the combination of prs.ptc. *yärsemane* AS12Da2 and the vn *yärṣalñe* (e.g. THT1574a1, THT4063a5) that proves a prs.-sbj. {yərˢᵊ/se-}. In Tocharian A, a subjunctive stem {yärˢä/sa-} is shown by vn *yärṣlune*, whereas prs.ptc. *yärs[m](ā)ṃ* A167a2 would prove that the same stem is also a present (Malzahn forth.b). Even if the evidence of the latter form is considered uncertain, present usage is proved by 3pl.mid. *yärsanträ* A276b6, which is certainly a present in view of the preceding present, e.g. *yp(e)ñc* and *pikiñc* – in spite of the OUy. conditional *tapınsar* MayT16.14a4 (Müller and Sieg 1916: 403; Tekin 1980: 142).

A connection of *yərs-* with TA *yärk*, TB *yarke* 'reverence' is semantically attractive, and the *-s-* must then be a suffix. The original verb is probably preserved in Tocharian *yärk-* 'revere', which forms at least a ˢä/sa-present (see the inf. *yärkässi*), and possibly an *s*-preterite as well, if 3sg.mid. *yä(rk)s(ā)t* A62a3 is restored correctly. If *yərs-* is indeed to be connected to *yərk-*, the *k* must have been lost between *r* and *s* or *ṣ* (**s*ʾ). As a parallel I can adduce TB *prekṣäṃ*, TA *prakäṣ* 'asks', which must be secondary in view of the root vocalism, so that it is tempting to reconstruct an immediate preform **pərsʾə/e-* from **pərksʾə/e-*.[764] I assume that *yərs-* results from paradigmatic split when the forms where the *k* was lost had become unrecognisable: apparently, the split-off verb was built on present forms, so that the result was a present only, which then came to be used as a present-subjunctive.

In sum, the present-subjunctive **yərˢᵊ/se-* is likely to be a Tocharian innovation. Ultimately, *yərs-* and *yərk-* go back to Proto-Indo-European **h₁erkʷ-* 'sing, praise', attested in Hitt. *ārku-ᶻⁱ* 'chant' and Ved. *arc-* 'sing, praise' (Kloekhorst 2008b: 205; LIV2: 240).[765]

TB Ləˢᵊ/ke- 'lie'

The Tocharian B stem {Ləˢᵊ/ke-} 'lie' is a present-subjunctive, as can be seen from the combination of the prs.ptc. *lykemāne* B118a2 and the vn *lyśalyñe* B108b5 (cf also the priv. *elykatte* THT1271a2, adduced by Malzahn forth.b). In addition, 3sg. *lyaśäṃ* B606.2 is certainly a present in view of the parallel *wäskantär* 'moves' and *lkāṣṣäṃ* 'looks', whereas *(lya)śä(ṃ)* IT368b5 is certainly a subjunctive because it translates Skt. *adhiśeṣyate* Uv1.35b 'will lie upon' (Peyrot 2008b: 85). The Tocharian B present-subjunctive *Ləˢᵊ/ke-* is directly related to Goth. *ligan* 'lie', Fal. *lecet* 'lies', the Hesychius

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[764] Although it is probable that the root-final **-ḱ* was lost in the Proto-Indo-European present **prskᵉ/o-* from **prḱ-skᵉ/o-*, it must have been restored in Tocharian at an intermediate stage; otherwise the rise of the *s*-present cannot be explained (see 4.5.6, p 419).

[765] Evidently, I disagree with Adams' (1995: 500; see also van Windekens 1941: 168) connection with Gk. ἔρως 'love' and ἐράω 'love', which was phonologically difficult anyhow: a PIE **h₁erh₂-* (so LIV2: 240) would certainly have yielded ***yəra-* or the like.

entry λέχεται 'lies', and OIr. *laigid* 'lies'[766] (LIV2: 398). On the basis of these formations, a Proto-Indo-European present **leg^{h_e}/$_o$-* can be reconstructed, which was probably not accompanied by an aorist: if, with Harðarsson (1993: 204-205), Gk. λέκτο 'lied down' goes back to an *s*-aorist formation, it must be secondary, and OCS *ležati* and *lĕgati* are derived from *lęgǫ* 'I lie down', inf. *lešti*, where the nasal is probably secondary since it follows a pattern similar to that of *sędǫ* 'I sit down' and *bǫdǫ* 'I will be' (Stang 1957: 162; Kortlandt 2009: 187).

PT **wəynask'^{ə}/$_e$-* 'honour'

A Proto-Tocharian present-subjunctive **wəynask'^{ə}/$_e$-* 'honour' can safely be reconstructed. In Tocharian A, we find a prs.ptc. *wināsmāṃ* next to a vn *wināṣlune*, and in Tocharian B the inf. *wināstsi** (attested are late *wīnāssī* and arch. *winastsi*) is matched by for instance 3sg. *winaṣṣäñ-cä* IT80b2 (a present parallel to *prekṣäñ-cä*). With the regular reduction of **-sk'^{ə}/$_e$-* to *-^{ṣä}/$_{sa}$-* in Tocharian A, we can reconstruct **wəynask'^{ə}/$_e$-* for Proto-Tocharian.

Although a connection with Ved. *vā́ñchati* 'desire' from PIE **unH-sk^e/$_o$-* (with the *n* analogically reintroduced; the same *sk* is seen in Gm. **wunska-* 'wish', OHG *wunsc*, see LIV2: 682-683) is attractive, it encounters serious difficulties on the phonological level. In principle, we would expect a preform **unH-sk^e/$_o$-* to have resulted in **wənask'^{ə}/$_e$-*, without *əy* or *i* in the first syllable. It is conceivable that the verb *wəynask-* and the noun *wina* 'pleasure' (as it is attested in Tocharian B) exerted mutual influence, but the vocalism in the noun is not easy to explain either. If we assume that TB *wina* reflects a root noun of the shape **uenH*, we need to assume restoration of the initial *w-*, which should have become **ẃ- > **y-*. However, it is not obvious how this could have resulted in colouring of the following **ə* to **i*, nor does it explain the same vocalism in Tocharian A. Nevertheless, the Tocharian A noun *wañi* 'pleasure', which must replace the original Tocharian A match of Tocharian B *wina*, shows a root without *-y-*, thus suggesting that the *i* of *winask-* etc is somehow secondary after all.

In sum, the etymology of **wəynask-* remains difficult and the relation to the nouns TB *wina*, TA *wañi* is unclear. Nevertheless, the origin of the present-subjunctive is obviously an old present formation, as could already be seen from the suffix **-sk^e/$_o$-*.

Tocharian A *käntsāṣ^{ä}/$_{sa}$-* 'confess' could be a parallel formation (Hackstein 1995: 100-101); probably, the predecessor of *winās-* served as a model.

PT **weńə/$_e$-* 'speak'

The Proto-Tocharian verb for 'speak' must have formed a present-subjunctive **weńə/$_e$-*. This is shown by the suppletive system in Tocharian A, where *weñ-* sup-

[766] If with *aig* for older *eig*.

plies the preterite and the subjunctive stems, whereas the present is formed from a root *tränk-* (see 2.5.5, p 78). It is highly unlikely that this suppletive system replaces a straightforward pattern as found in Tocharian B, with a prs. {we^{ssə}/$_{ske}$-}, a sbj. {weñ^{ə}/$_{e}$-} and a derived preterite {weñ-á-} (on the variant *wñā-* see Peyrot 2008a: 148-149). The possibility to derive the Tocharian B present from the subjunctive with loss of *ñ* as in the sbj.ger. *welle* and the vn *welñe* eliminates half of Krause's subjunctive class 7 (1952: 141; see Winter 1977: 148 and Hilmarsson 1991b, passim, who also eliminates the other half, namely *lənn-* 'go out', see 4.3.5, p 368).[767]

Although the palatal *ñ* of the root is regularly depalatalised before dentals, i.e., in TB 2sg. *went*, 3sg. *weṃ*, 2sg.mid. *wentar*, 3sg.2pl.mid. *wenträ*, inf. *wentsi*, whereas it is unrecognisable in 2pl. *weñcer*, it is doubtful if this is enough to explain the lack of an alternation between *-ñə-* and *-ne-*, in principle expected in an *^{ə}/$_{e}$-*stem. The correct solution for this problem, at the same time offering an etymology, was proposed by Winter (1977: 147, after Lane 1953: 287): the simple *ñ* may derive from a geminate *ññ*, identical with the denominative suffix **-ńń^{ə}/$_{e}$-*, from earlier **-ni^{e}/$_{o}$-* (as proposed in essence already by Pedersen 1941: 170). Since the connection of *weñ-* with **wek* 'voice' (TB *wek*, TA *wak*) requires loss of **k* before *ñ* (see Winter 1977: 134), the two must have been in direct contact (without an intervening shwa), and I think that the original geminate **ññ* was simplified in exactly this constellation: **-kññ-* > **-kñ-* > **-ñ-*. In this particular case, the denominal formation may be directly compared with OHG *giwahanen* 'mention'.

As pointed out by Winter (1977: 147), the denominal origin of the verb explains that **weñ^{ə}/$_{e}$-* was originally a present. In Proto-Tocharian, it had probably become a present-subjunctive before new presents were formed independently in the daughter languages, by means of an *sk*-suffix in Tocharian B, and a suppletive verb *tränk-* in Tocharian A.[768]

PT **wlans^{ə}/$_{e}$-* 'carry out'

Proto-Tocharian **wlans^{ə}/$_{e}$-* 'carry out' can safely be reconstructed as a present-subjunctive, as it is attested as such in both languages. In Tocharian A, the combination of the inf. *wlessi* with the prs.ptc. *wlesmāṃ* proves a present-subjunctive *wlāy^{sä}/$_{sa}$-*.[769] In Tocharian B, a subjunctive stem {lan^{sə}/$_{se}$-} is shown by the inf.

[767] Winter (1977: 151) claims that "If B *weskau* derives from *weñ-* plus a thematic suffix *-sk-*, then a corresponding pre-A present stem should contain **wayñ-* plus a thematic suffix *-s-*." This overrating of the evidence of Tocharian B leads him to posit remarkable scenarios for the loss of that alleged Tocharian A present, involving homonymy avoidance with *wes* 'excrement'.

[768] As argued above, there is no need to assume that one of the two presents had already been formed in Proto-Tocharian times (pace Winter p 184-185 and passim).

[769] The vocalism *āy* instead of *e* is needed for the preterite participle *wāwleṣu*.

lāṃṣtsi, whereas present usage is attested with *lāṃṣtär* IT396b2[770] in a saṃghāvaśeṣa rule where we normally find presents and *lāṃṣtär* B551a4, which is probably parallel to the prs. *mäsketär*.

Whereas the reconstruction of the rhyme is straightforward, with TA *es* < **ans* as in *es* 'shoulder' < **anse* (TB *āntse*), the initial TA *wl-* ~ TB *l-* is slightly problematic. For correspondences *wl-* ~ *wl-* as in TA *wlāwā-* 'control' ~ TB *wlawa-* 'id' we may probably assume syncope of an initial syllable **wəl-*, but TA *länt* ~ TB *länt*, obl.sg. of 'king', shows loss of *w* in both languages: the nom.sg. is TA *wäl* ~ TB *walo*. If we reconstruct **ẃl-* for the TA *l-* ~ TB *l-* correspondence in the word for 'king', a preform suggested in any case by TA *wlāṃñkät* 'Indra' ~ TB *ylaiñäkte* 'id' (Lubotsky 1994[771]), *wl-* is still a possible reconstruction for TA *wles-* ~ TB *lans-*, and I will adopt it here.

The verb **wlans'ə/e-* is clearly derived from a noun **wlans* 'work', attested in TA *wles* 'work' (pl. *wlesant*), TB *lāṃs* 'id' (pl. *laṃsūna*). Thus, the *'ə/e*-suffix could apparently be used to derive denominal verbs, which yielded presents that came to be used as present-subjunctives, just like the other denominal type in **-ńńə/e-*. Unfortunately, the etymology of **wlans* is unknown.

PT **śaw'ə/e-* 'live'

The *'ə/e*-present-subjunctive of the Tocharian word for 'live' is indicated by the inf. *śotsi*, vn *śolune* and 3pl. *śāweñc* in Tocharian A and the inf. *śaitsi*, ag.n. *śayeñca* and 3pl. *śāyeṃ* in Tocharian B. At a pre-stage of Tocharian B, the original paradigm must have been **śawe-* ~ **śayə-* from **śawe-* ~ **śaẃə-* < **śaw'ə-*, but the *w*-variant disappeared through levelling in the finite base verb forms (see Krause 1952: 65; Winter 1988; Peyrot 2008a: 138-140). Proto-Tocharian **śaw'ə/e-* has long been correctly connected with Gk. ζώω, Lat. *vīvō*, Ved. *jī́vati*, Sl. *živę-* and OPruss. *giwa*, which can be reconstructed as **g^{w}ih$_3$-u-* (LIV2: 215-216);[772] the Tocharian present-subjunctive goes back to a thematic paradigm with Ø-grade in the root. 'live' is a clear case of a Tocharian present-subjunctive deriving from a Proto-Indo-European present without aorist beside it.

TB *soyə/e-* 'be saturated'

Although it is often so classified, in fact present-subjunctive function cannot be ascertained for Tocharian B {soyə/e-} 'be saturated'. The prt.ptc. *sosoyu*, the prt. {soy-á-}, and, most of all, the vn *soylñe* and the inf. *soytsi* prove subjunctive function,

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[770] And *lāṃṣtar* IT396b3, IT396b4; in both instances to be corrected to *lāṃstär*.

[771] Winter, who does not mention all the correspondences given here, assumes that **wl-* became *l-* in both languages (1987: 306).

[772] The Greek may not fit the picture if a sound development **g^{w}ih$_3$u-* > ζω- is not accepted. To solve this problem, LIV2 posits an *e*-grade stem **g^{w}ieh$_3$-u-* with athematic inflection.

but in order to prove present function one would have to rely on 2pl. *soycer* B12b4, for which present use is likely, but hardly certain.

As argued by Hackstein (1995: 299-300) and Adams (1999: 703; see also Kloekhorst 2008b: 691), *soy-* must be cognate with e.g. Hitt. *šāḫ-i* 'stuff' and Gk. ἄμεναι 'satiate', from a Proto-Indo-European root *seh_2- (LIV2: 520-521). Tocharian B *soy-* must go back to *seh_2-$i^e/_o$-, a present formation possibly mirrored in Gk. ἄεται 'is satisfied'.

Next to Tocharian B *soy-*, there is another verb TB *səyn-*, TA *säyn-* 'be satiated', which is discussed in 4.8.2 (p 472).

4.4.2 *X*|Ø-ROOTS

Although the number of instances is smaller than for $^{ə}/_{e}$-formations, there were certainly also *x*|Ø-root present-subjunctives. Additional cases are *yam-* 'do' (4.3.7, p 372), *y-* 'go' (4.3.4, p 366), and *yok-* 'drink' (4.3.6, p 371).

TA *ken-* 'call'

TA *ken-* 'call' may go back to an earlier present-subjunctive: it supplies the present to the preterite and subjunctive root *kāka-*. In principle, *ken-* could reflect a preform **kayn-* with PTA **ay* from Proto-Tocharian **ey*, **oy*, or **ay*. Unfortunately, further connections are unknown and the interpretation of this verb remains uncertain (the scenario sketched by Hilmarsson 1996: 127-128 is highly implausible).

PT **kəln-* 'resound'

Tocharian A attests a present stem {käln-} 'resound' with prs.ptc. *(kä)lnm[ā]ṃ* and 3pl. *kälnīñc* A299b3 (parallel to the prs. *nuseñc*). This stem might be matched in Tocharian B, although both forms attested could in fact also belong to an $^{ə}/_{e}$-paradigm: 3pl. *kalneṃ* and 3sg. *kalñi*. The first of these is probably a present and the second certainly an imperfect, which proves present function for that stem. The comparison with Tocharian A suggests a root present {kəln-} for Tocharian B, too, which in turn makes likely that {kəln-} was a present-subjunctive because there is no pattern for a different subjunctive next to it.

As shown by Malzahn (forth.b), TB 3sg.mid. *kälnsāte* IT19b3, B617a4 must mean 'resounded' as well (which excludes a theoretically possible alternative reading *kältsāte*). However, these forms are extremely difficult to fit together with *kalneṃ* and *kalñi*: the only parallels with a root present and an *s*-preterite are found in Tocharian A *tränk-*, *cämp-* and *tˢäyp-*, where the *s*-preterite is unlikely to be of Proto-Tocharian age. The only way out seems to assume that *kälnsāte* belongs to a transitive verb (cf 3pl. *kälnaskeṃ* AS7Mb4), here intransitive because of its middle inflexion.

With Schmidt (1992: 112), **kəln-* may continue PIE **ḱlneu-*, a *neu*-present to *ḱleu-* 'hear', attested in Ved. *śr̥ṇóti* 'hears', *śr̥ṇvé* 'he is known', YAv. *surunaoiti* 'hears',

OIr. *ro-cluinethar* 'id' (LIV2: 334-335; obviously, the unpalatalised root-final of Tocharian must go back to **-nu-* and the variant **-neu-* disappeared through levelling). Although the change from 'hear' to 'resound' is not evident, in spite of Schmidt (l.c.), this etymology offers a good explanation for the root present **kəln*, as noted by Hackstein (1995: 322). At the same time, it accounts for its present-subjunctive function, which is uncertain, but plausible if problematic *kälnsāte* is interpreted correctly.

PT **trənk-* 'lament'

A Proto-Tocharian present-subjunctive **trənk-* 'lament' can safely be reconstructed on the basis of Tocharian B {trənk-}, present-subjunctive as proved by the combination of the prs.ptc. *träṅmane* and the vn *träṅkalyñe*, and further confirmed by the match of the rare preterite type {trəncá-} attested by *träñcā-neś* THT1507b5 with *lyañca* to *lənk-* 'hang'. In Tocharian A, the corresponding stem {tränk-} supplies the present of the verb *weñ-* 'speak', demonstrably a recent case of suppletion in view of the imperfect 3sg. *craṅkäs*, which is formally an *s*-preterite (see Lane 1953: 284). This *s*-imperfect is further only found with *cämp-*, *tsäyp-*, and possibly **kəln-*.

Unfortunately, the etymology of *trənk-* is uncertain, so that we can only hypothesise that the present-subjunctive is to be explained from a root present (for suggestions on the etymology, see Adams 1999: 314 and Malzahn forth.b).

TB **pəkʷ-* 'trust'

A Tocharian B present-subjunctive {pəkʷ-} 'trust' is proved by the combination of the prs.ptc. *pkwamane* /pəkʷə́mane/ and the vn *pkwalñe* /pəkʷə́lñe/ (for denominal *pəkʷəññə/e-*, a different – though related – verb, see 4.4.4, p 394). The etymology of *pəkʷ-* is unclear; the suggestion of Janda (2000: 48; taken over by LIV2: 469) to set up a root **pekʷ-* 'trust' for Ved. *pāká-* 'guileless, trusting', Gk. ὦ πέπον 'my dear' and Tocharian *pəkʷ-* is improbable. We might rather think of a connection to **pəka-* 'intend', though the exact derivation pattern remains obscure: if *pəkʷəññə/e-* points to a noun *pəkʷ-*, this could theoretically be a derivation from **pəka-* or its preform **pək-*, but I am not aware of parallel cases where a root present is derived from a noun without further change (for a denominal *'ə/e-*present, see **wlans'ə/e-* 'carry out' in 4.4.1, p 387).

PT **pəlk-* 'shine'

Proto-Tocharian **pəlk-* 'shine' is well-attested as an *ə*|Ø-root present in both languages: TB 3sg. *palkäṃ* (B91b5, B178a2 and B178a3 probably present) and TA 3sg. *pälkäṣ*, 3pl. *pälkiñc*. Since there is no subjunctive attested next to it in either language, and in Tocharian B no possible subjunctive formation exists, this present may have been a present-subjunctive. In any case, the verb is probably to be connected with Gk. φλέγω 'burn (tr./intr.); shine', Lat. *fulgō* 'shine' and Gm. **blakjan* in OHG *blecchen* 'shine', which go back to a root **bʰleǵ-* or **bʰleg-*. As

argued by Hackstein (1995: 113), Greek and Latin point to a root present because of the different root grades *$b^{h}le^{(}\acute{g}^{)}$- and *$b^{h}l^{(}\acute{g}^{)}$-, which fits the Tocharian perfectly: we only have to assume that the expected root variants with palatalised *$\acute{l}$ from *le or *$\acute{s}$ from *$^{(}\acute{g}^{)}e$ were eliminated. It is probable that *pəlka-* 'see' and *pəlk-* 'burn' are split-off verbs from the same root (Hackstein p 112-113).

PT *$lənk$- 'hang'

The isolated Tocharian B prs.ptc. *läṅkamane* /lənkámane/ presupposes a present stem {lənk-}. No subjunctive to this stem is attested, and there is no pattern by which such a subjunctive could be formed, which points to a present-subjunctive {lənk-}. This interpretation may be further supported with *lyañca* from the fragmentary line IT702b1 /// – *9 tu lyama tu lyañca* – /// (Peyrot 2007a: №702) 'this sat, this hung (?)'. Although the meaning cannot be established with certainty from this passage, it is clearly a 3sg.prt., and the only possible morphological connection is with *lənk-*. The remarkable preterite formation is without doubt to be compared with {trəncá-} to *trənk-* 'complain', a parallelism that further supports the analysis as a present-subjunctive. 1pl. *laṅkäm-c* AS18Ab3 does not seem to be from this verb because it is clearly transitive (see 3.6.1, p 251, and Malzahn forth.b).

In Tocharian A, the same present stem {länk-} is proved by prs.ptc. *läṅmāṃ*. Although this present stem could theoretically have been matched by an *ā*-subjunctive {länkā-} (which is not attested in any case), it supports the analysis of the Tocharian B verb, whose present-subjunctive must therefore go back to Proto-Tocharian.

Proto-Tocharian *$lənkə$- may have to be derived from Proto-Indo-European *h_1leng^{wh}-, as attested in a.o. Ved. *raṁhate* 'is swift, moves swiftly', YAv. *rəŋjaiieiti* 'makes fast', OIr. *lingim* 'jump' and OHG *gi-lingan* 'succeed' (LIV2: 247-248). The proto-meaning is set up as "sich mühelos bewegen" by LIV2, but 'be light' seems better, certainly in view of the obviously related adjective *$h_1leng^{(w)h}$-u- 'light' (Ved. *raghú-* 'fast', Gk. ἐλαχύς 'small', and TB *laṅkᵘtse* 'light', which corroborates the reflex *ṅk* from *ng^{wh}): the notions 'easy' and 'fast' etc are easily derived from 'light'. The meaning of the Tocharian verb, 'hang', may derive from an intermediate 'dangle', as possibly preserved in the fixed combination e.g. TB *läṅkamñane päścane* NS102b3 'dangling breasts'.

Although *h_1leng^{wh}- seems to have formed a primary present (without aorist), which fits the Tocharian situation well, this present might have had a *$^{e}/_{o}$-suffix as seen in the Indo-Iranian and Old Irish forms cited above. Since the Tocharian root present can hardly be derived from an older *$^{e}/_{o}$-formation, one would seem to be forced to reconstruct a Proto-Indo-European root present on the basis of Tocharian.

PT *$səlp$- 'glow'

The Tocharian B verb for 'glow' forms a present-subjunctive {səlp-′}, as proved by the combination of the prs.ptc. *sälpamane* /səlpámane/ and the inf. *säl(p)at(s)i*

/səlpə́tˢi/. In Tocharian A, the corresponding stem {sälp-} has only present function, e.g. prs.ptc. *sälpmāṃ*, whereas {sälpā-} provides the subjunctive, cf especially sbj.ger. *sälpālyi*. Since derived *ā*-preterite-subjunctives are actually found in Tocharian A (see 2.6.3, p 96), the stem in *-ā* could be secondary, which would imply that the Tocharian B present-subjunctive can be reconstructed for Proto-Tocharian. However, Tocharian A *ā*-preterite-subjunctives are relatively rare, and, in view of the absence of a good etymology, the age nor the origin of the present-subjunctive can be established with certainty.

PT **sməy-* 'smile'

In Tocharian B, we find safe indications for a present-subjunctive {səmy-} 'smile' with a prs.ptc. *smimane* and a vn *smilñe*. In Tocharian A, that stem shape is confirmed by the prs.ptc. *smimāṃ*, and although it is theoretically possible that there was an *ā*-subjunctive {smäyā-} beside it, the latter must in that case have been secondary, so that we can reconstruct a Proto-Tocharian present-subjunctive **səmy-*. This present-subjunctive clearly goes back to a Proto-Indo-European root present **smei-* as attested in Ved. *smáyate* 'smiles', Latv. *smeju*, inf. *smiêt* 'laugh', and OCS *směję sę*, inf. *smijati sę* 'id' (LIV2: 568-569).

PT **tˢəyp-* 'dance'

Proto-Tocharian **tˢəyp-* 'dance' can probably be reconstructed as a present-subjunctive, but further connections are unclear. In Tocharian B, it forms a root present which suggests that it was a present subjunctive, but explicit subjunctive forms are not found: prs.ptc. *tsipamane* /tˢipə́mane/ and 3sg.prs. *ts(i)päṃ* B118a7 (if parallel to *rättäṅkäṃ*). In Tocharian A, a present {tˢäyp-} is proved by 3pl. *tsipiñc* A283a3 (parallel to *klyanträ*), and an *s*-preterite in imperfect function is attested in 3pl. *śepär* A301b3 (parallel to *ypār*). This peculiar *s*-preterite-imperfect is found further only for *tränk-*, *cämp-*, and possibly **kəln-* (see Lane 1953: 284).

PT **tˢop-* 'prick'

Proto-Tocharian **tˢop-* 'prick' may have formed a present-subjunctive, but its etymology is unclear and it is possibly of onomatopoetic origin. In Tocharian A, a root present {tˢop-} might be attested with 3pl. *tsopiñc* (alternatively, it could be an optative, which would also allow for a subjunctive {tˢopä/$_{a}$-} or {tˢopa-}). In Tocharian B, a root present {tˢop-} or {tˢopə/$_{e}$-} is attested with the historical present *tsopaṃne* B88a1 and *tsopäṃ-ne* B127a5 (parallel to the present *pautoträ*). If TA *tsopiñc* is really a present, a Proto-Tocharian present-subjunctive **tˢop-* is likely, otherwise it is just a possibility.

4.4.3 WITH ROOT-FINAL *A*

Good examples of present-subjunctives with root-final *a* are hard to find. The best cases are offered by the *lyāka*-type, which is discussed in 4.4.5 (p 395).

TB *kʷa-* 'call'

Tocharian B {kʷa-} supplies the present to preterite-subjunctive *kaka-* 'call', cf prs.ptc. *kwāma(ne)*. In view of clear parallel cases like prs. *pər-* 'bring' with preterite-subjunctive *kama-* (see 4.4.1, p 384), it is plausible that {kʷa-} ultimately goes back to a present, perhaps through an intermediate state where it was a present-subjunctive. Whether it was a present-subjunctive at an intermediate stage or not, *kʷa-* is clearly to be connected to Ved. *huvé*, *hávate* and OCS *zovǫ*, *zъvati* etc, which go back to a Proto-Indo-European root **ǵʰeuH-* (LIV2: 180-181). In all probability, it is a direct continuation of the root present reflected in Vedic: the root-final *-a* must reflect the root-final laryngeal (probably zero grade **-uH-*), whereas the *-w-* may have preserved in full grade root variants such as **ǵʰeuH-*, where the unpalatalised initial was levelled.

PT **prəska-* 'be afraid'

Proto-Tocharian **prəska-* 'be afraid' probably formed a present-subjunctive, but especially the Tocharian A verb seems to have been subject to restructurings. In Tocharian B, a present-subjunctive is relatively certain, but the problem is that it shows root gradation as otherwise only found with subjunctives: {prᵃ/ₔska-}. With unambiguous infinite forms lacking (the alleged vn *pärskal(ñ)e* B124a6 could also be a prs.ger. *pärskal(l)e*), present-subjunctive function of that stem can only be shown syntactically: most forms for which the function can be determined are presents, like 3sg. *prāskaṃ* AS7Cb5 (cf *yamaskeṃ* and *tärkänaṃ*) or B255a1 (cf *aiskeṃ*), but 3pl. *parskaṃ* AS7Ca5 (parallel to *yamanträ*) is subjunctive. The other stems of the verb, the prt. {prəská-} and the prt.ptc. *pärskau*, also suggest that {prᵃ/ₔska-} had at least subjunctive function.

In Tocharian A, a present stem {praska-} is proved by the prt.ptc. *praskmāṃ*, 1sg.mid. *praskmār* and 3pl.mid. *praskanträ*, whereas a stem shape {präskā-} is shown by the ger. *pärskāl*. The latter form was classified as a subjunctive gerund by Sieg, Siegling and Schulze (1931: 450), in which they were followed by later scholars, but as far as I can see, this decision must have been based on morphological considerations: syntactically it is possible, but not compelling. The analysis of {präskā-} as a subjunctive stem is supported by the prt. stem {präskā-} as attested in the 3sg.prt. *pärsäk* and the prt.ptc. *pärsko*. Finally, the 1sg.prt. *prasku*, discovered by Schmidt and Winter (1992), is very difficult to fit in the stem pattern established so far: it rather points to an *s*-preterite, perhaps of the imperfect subtype.

The relationship between Tocharian A {praska-} and {präskā-} is matched by a small group of *a*-grade root presents, e.g. *śama-* and *śalpa-* to *tsämā-* 'grow' and

tsälpā- 'pass away'. However, it is not certain whether *praska-* can be compared to this isolated pattern because its initial *pr-* cannot bear palatalisation. In addition, it is striking that no present gerund *praskal*** or subjunctive forms like 1sg. *pärskāmār*** should be attested. Therefore, the verb could well be what it seems to be at first sight: an irregular present stem, probably also used as subjunctive.

The combined evidence of Tocharian A and B requires both a stem **preska-* and a stem **prəska-* for Proto-Tocharian, and it is most economical to assume that these were found in one grading stem **pr^{e}/$_{ə}$ska-*. The Tocharian A stem must have been lined up with *a*-grade root presents when PTA **praska-* from **preska-* became indistinguishable from the type *planta-* from **plonto-*. Possibly, this process was favoured by the existence of a noun **praska* from **prosko* (~ Tocharian B *prosko*), as must have stood at the basis of the adj. *praskañi* 'fearful'. The 1sg. *prasku* is probably secondary, despite its archaic outlook. It may have been formed after the *subjunctive* stem *praska-* (although the generalisation of this stem form made it parallel to presents), reanalysed as an *a*-subjunctive (~ Tocharian B *e*-subjunctive); a direct parallel could have been prs. *mäska-* 'be', 3sg.prt. *maskäs* (where *mäska-* < **məske-* must at some point have been analysed as an *a*-subjunctive).

Proto-Tocharian **prəska-* is evidently to be connected with Gm. **furhtō* 'fear' as in OHG *forhta* (Hackstein 1995: 193-194; LIV2: 491). Apparently, it was lined up with roots with final *-a*, whereby it even took over the characteristic gradation as for instance in *pləska-* 'think', close both in form and in meaning. In view of the Tocharian B pair *kərsa-* 'know' (3sg.prt. *śarsa* < **k'ərsa*) and *krəsta-* 'cut' (3sg.prt. *karsta* < **kr'əsta*), ultimately from the same root, *Rə*-roots could develop secondarily from *əR*-roots if *əR* was followed by a consonant cluster (cf in great detail Kim 2007a). Thus, there is no reason to project the Tocharian position of the gradation vowel back to Proto-Indo-European (pace LIV2, l.c.). The isolation of this root in Indo-European is remarkable, though one might want to consider a connection with Lat. *parcō* a.o. 'refrain from' (neither the etymology by LIV2: 476, nor that by de Vaan 2008: 445 is any better).

4.4.4 **ŃŃə*/$_{E}$-DENOMINATIVES

Although there are only few matches between the two languages, the *ńńə*/$_{e}$-suffix is a productive denominative suffix in both languages and the relation with the base noun is generally transparent. Both in Tocharian A and B, these denominative verbs have a present-subjunctive with a derived preterite, e.g. prs.-sbj. TA {täwnkäyñña/$_{a}$-}, TB {tənk^{w}əññə/$_{e}$-}, prt. TA {täwkäyñn-ā-}, TB {tənk^{w}əññ-a-}, both derived from the word for 'love', TA *tuṅk*, TB *taṅkw*.

The present-subjunctive function of the *ńńə*/$_{e}$-stems is especially clear from the combination of ag.n. *täṅwaññeñca* and inf. *täṅwantsi* of 'love' in Tocharian B, and from the prs.ptc. *tuṅkiññamāṃ* and the inf. *tuṅkiñtsi* vs the vn *tuṅkiñlune* of the corresponding verb in Tocharian A. Further evidence is offered by the Tocharian B subjunctive stem formations *ykāṃṣälñe* (vn of 'loathe'), *winālñe* (vn of 'honour'),

and *skwäntsi* (inf. of 'be happy') compared to 3sg.mid. *ykāṃṣanträ* AS7Cb5 (parallel to *yamaskeṃ*), *wināññentär* B11b4 (probably parallel to *arsen-ne*) and *skwañññenträ* B11b5 (parallel to *arsen-ne*) with present function. For Tocharian A, one may adduce inf. *kāṣiñtsi* vs the opt. *kāṣiññiträ* of 'scold' and the vn *śewiñlune* next to 3sg. *śewiṃträ* A6a6 (present; parallel to *yaṣ*).

Evidently, this system of denominal primary *ńńᵊ/ₑ*-formations with a present-subjunctive and a derived preterite can be reconstructed for Proto-Tocharian. The system may have been inherited by the daughter languages through the carrier formations **səkʷəńń-* of **səkʷ* 'pleasure' and **tənkʷəńń-* of **tənkʷ* 'love', although the first was replaced by a secondary formation with the enlarged suffix *aṣiññ* in Tocharian A, cf *ₛᵤkaṣiñtär* A51b3 (obviously through some metanalysis, where not the noun *suk*, but its adjective *ₛᵤkaṣi* 'happy' was taken as a basis). Striking is the large portion of emotional meanings in both languages like affective 'love', 'be happy', 'wish' or 'desire' and negative 'be ashamed', 'express sorrow' etc. This is also reconcilable with a starting point at **tənkʷ* 'love' and **səkʷ* 'happiness'.

As noted by Pedersen (1941: 170), denominative suffix **-ńńᵊ/ₑ-* must go back to a preform **-niᵉ/ₒ-*, which is strongly reminiscent of Ved. denominatives in *-anyá-* and Gk. -αιν-. That similarity may be only superficial though, because that suffix is itself probably the result of metanalysis, since it is often found next to *n*-stems. If so, one would have to assume that a similar reanalysis has taken place in the prehistory of Tocharian; in view of the ubiquitous traces of nasal suffixes in the nominal inflexion, this is plausible enough.[773]

Although the suffix is found in a few isolated verbs such as *weñ-* 'speak' or perhaps Tocharian B *kañm-* 'play', it is probably not related to the Tocharian A *ñᵊ/ₐ-* suffix of subjunctive class 7 (pace especially Hilmarsson 1991b).

4.4.5 *LYĀKA*-TYPE

A marginal and poorly attested group of verbs that I will call the *lyāka*-type has no difference between present and subjunctive. Since I have discussed the type in detail elsewhere (Peyrot forth.d), I will here only summarise the most important findings.

The type is best attested in Tocharian B, where we can identify four verbs: *pləw-* 'complain', *lək-* 'see', *ləw-* 'rub', and *śəw-* 'eat'. The type was originally characterised by

1) a present-subjunctive with non-palatalising *ə*-grade and accented root-final *a*: {pləwá-}, {ləká-}, {śəwá-} (that of *ləw-* is not attested);
2) a preterite with palatalising *a*-grade and accented root-final *a*: {pĺawá-}, {ĺaká-}, {ĺawá-}, {śawá-};
3) a preterite participle without root-final *a*:

[773] The suffix **-ńńᵊ/ₑ-* cannot be directly connected with the intensive suffix Ved. *-anyá-*, Hitt. *-annḭe-* (Oettinger 1994) because the latter has a very different function.

pepälyworsa, *lyelyakormeṃ*, *lyelyuwormeṃ*, *śeśuwermeṃ*, *śeśwormeṃ* (all absolutives).

A number of peculiarities have to be noted:
1) in the active only, *lək-* 'see' was provided with a secondary present {ləkáˢˢᵊ/ₛₖₑ-} (the middle is present-subjunctive {ləká-});
2) *śəw-* 'eat' has *a*-grade in the present participle *śawāñca* {śawánca};
3) *śəw-* 'eat' has created a late preterite with *ə*-grade on the basis of the present-subjunctive, i.e. class. *śāwa*, late *śuwa* (Peyrot 2008a: 145-146);
4) *śəw-* 'eat' has a hapax legomenon 1sg.prs.-sbj. *śū* (Pinault 1994: 136-184, in particular 170-171).

Whereas the active present {ləkáˢˢᵊ/ₛₖₑ-} (1) and the *ə*-grade preterite *śuwa* (3) are clearly secondary, *śawāñca* (2) and *śū* (4) seem to be old; however, since *śū* is a hapax legomenon, it might be just a mistake for the expected *śūwau*.

Tocharian A *śwā-* 'eat' and *läkā-* 'see' are clear pendants to the Tocharian B verbs, although their morphological patterning is different. *śwā-*, which does not show any kind of gradation, supplies the present to *tāpā-*, which provides the preterite, subjunctive and imperative stems of the verb. The full grade **śawa-* is preserved in the noun *śālyi* 'left' (Pinault 2002b: 248-254), originally 'food hand', with contraction of **āwā* to *ā* (Winter 1985: 590); although it shows a different root grade, Tocharian B *śwālyai* must be cognate. *läkā-* is also part of a suppletive verb, being the present to *pälkā-*, which provides the preterite, subjunctive and imperative stems. *läkā-* further provides the imperfect with a root shape identical to that of the corresponding Tocharian B preterite: {Ĺākā-}. That the imperfect is formed from the present stem is the normal procedure, but this particular type is rare; it is called the "strong imperfect" (whether *śwā-* was parallel in this respect is impossible to say, as its imperfect is not attested).

Of the remaining two Tocharian B verbs, *pləw-* 'complain' might find a match in the Tocharian A isolated noun *plā* 'complaint' (?), whereas *ləw-* 'rub' is matched by the thoroughly restructured *Ĺā-* 'brush away' (on the Tocharian B ghost verb *lyyā-*, see Peyrot forth.d). Tocharian A *plā* occurs in a fixed expression *sne plā* 'without *plā*', but its exact meaning is difficult to extract from the texts (for a discussion, see Peyrot forth.d and for other suggestions, see Peyrot forth.e). If its meaning is something similar to 'complaint', we have to assume contraction across *-w-* and reconstruct a form **plāwV* with a remarkable *non*-palatalising *ā*-grade (unlike Tocharian B). Tocharian A *Ĺā-* 'brush away' is quite well attested; its root form *Ĺā-* must go back to **Ĺāwā-* with contraction across *-w-* and all other stems are built on this root, so that we have little information about the original inflexion of the verb: prt. and sbj. {Ĺā-}, prs. {Ĺāˢᵃ/ₛₐ-}, prt.ptc. {ĹāĹo} (< **Ĺā-Ĺā-w*). An isolated noun *lyu-wram* 'brush', very probably from older 'brush thing', presupposes a variant with a different grade: *ä* (< *ə*) with palatalisation, i.e. **Ĺəw V*.

Although the evidence from Tocharian A is scanty, it is enough to prove the Proto-Tocharian age of the type as a whole. The fact that *läkā-* 'see' and *śwā-* 'eat' are presents in suppletive verbs suggests that they were defective at a certain stage, which is readily explained with the assumption of a Proto-Tocharian present-subjunctive. The strong imperfect of *läkā-* proves that the special preterite with palatalising *a*-grade of Tocharian B was also found in Proto-Tocharian, no matter whether it functioned as an imperfect or as a preterite there.

An historical explanation of the *lyāka*-type faces two essential questions:

1) what is the origin of the past tense with palatalising *a*-grade which seems to reflect old **ē*-grade?, and
2) how should one account for the present-subjunctive in *-a*?

As the explanation of the past tense directly touches upon complicated matters of Indo-European comparison, while it does not seem to be immediately relevant for the present-subjunctive, only the latter question is addressed here.[774]

Although root-final *a* is a morphological marker in almost all categories where it occurs, it must ultimately go back to root-final laryngeals of Proto-Indo-European seṭ-roots. Since the *lyāka*-type is marginal and displays several anomalies compared to other, more frequent classes, it is unlikely that the root-final is merely a morphological marker in this class; therefore, it is only natural to see if the root-final *a* can be derived from a root-final laryngeal. Indeed, if we take a look at the etymologies of the four verbs, three of them are seṭ, so that the root-final *a* will actually go back to a root-final laryngeal. The three verbs where the *-a* could directly reflect **-H* are the verbs in *-w*: **pləw-* 'complain' is plausibly derived from **mleuH-* 'speak' (e.g. Ved. *brávīti*, see LIV2: 446); as I have argued (Peyrot forth.d), **ləw-* 'wipe away' is probably related to Lat. *lavō* 'wash' and Gk. λούω 'id', commonly reconstructed as **leuh$_3$-* (LIV2: 418); and the connection of **śəw-* 'eat' with e.g. CS *žьvati* 'chew', OHG *kiuwan* 'id' from PIE **ǵieuH-* 'chew' is generally accepted (LIV2: 168). For **lək-* 'see' there are two competing etymologies, which both derive the verb from aniṭ-roots in Proto-Indo-European: either it goes back to **leǵ-* 'gather' (Lat. *legō* 'read', Gk. λέγω 'gather'; LIV2: 397), or to **leuk-* 'shine' (e.g. Hackstein 1995: 251).

If the root-final *a* belongs to the root, as is very likely in view of the seṭ-origins of three of the verbs, this means that, in Tocharian terms, the present-subjunctive is a root formation: the endings are added directly to the root. This situation may well be

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[774] The moot point is whether the palatalising *a*-grade can be identified with the long vowel perfect (or preterite) of the Lat. type *legō*, *lēgī*, the Gm. type Goth. *bairan*, *bērum* (< **b^{h}er-*, **b^{h}ēr-*), and the frequent Albanian type *mbledh*, *mblodha* (< **-leǵ-^{e}/$_{o}$-*, **-lēǵ-*), as reconstructed by Brugmann (1916: 433), but the subject of much debate ever since. The recent solution to take these long vowel formations as "Narten imperfects" offers no explanation for the distribution of the vowel grades (Weiss 1996: 674; Jasanoff 2003: 193), but it does lead to a steep rise of "Narten roots", of which there can actually have been only very few in Proto-Indo-European, if they existed at all (de Vaan 2004).

old: for **mleuH-* 'speak' a root present is ascertained by Ved. 3sg. *brávīti*, 3pl. *bruvánti* < **mleuH-ti*, **mluH-enti*. For **ǵieuH-* an original root present is a good possibility as well because it seems that two root grades **ǵieuH-* and **ǵiuH-* are needed, but the evidence is definitely less certain. The verb for 'wash' is a difficult case because Lat. *lavō* presupposes *o*-vocalism, as it is also found in Greek. Although the Greek root form λο(ϝ)ε- is usually derived from **lewo-* < **leuh$_3$-* through metathesis, there is no ready solution for the Latin formation. Since the formation of **lək-* 'see' must at least in part be secondary (because the root-final *a* cannot be old), it is better left aside for the moment.

The inflexion of the Tocharian present-subjunctive can of course be easily explained from an older root-present; a little bit of paradigmatic levelling is all that is required. That is to say, the non-palatalised initial of the Ø-grade form of the plural was levelled against the palatalised initial of the *e*-grade singular allomorph, e.g.: sg. **mleuH-*, pl. **mluH-* > sg. **pĺəwa-*, pl. **pləwa-* >> sg. *and* pl. **pləwa-*. However, this does not yet account for the lack of a distinction between present and subjunctive. In my view, the fact that present and subjunctive are identical is to be interpreted, once again, as a present with no subjunctive beside it, since **mleuH-* and **ǵieuH-* probably formed only a present in the proto-language. As long as the *o*-vocalism of **leuh$_3$-* 'wash' – which is certainly not reflected by the Tocharian forms – is not explained satisfactorily, the analysis of the original stem pattern of that verb remains difficult.

An additional argument for deriving the four present-subjunctives from older root presents comes from semantics. Two denote inherently iterative actions in Tocharian: 'complain' and 'rub'. Although with the generally recognised proto-meanings 'speak' and 'wash' the iterative component is perhaps less salient, the first has definitely imperfect aspect whereas for the second, which principally applies to cleaning of the body, we can safely assume that it was done by means of repeatedly rubbing the skin. 'eat', which is not clearly iterative as such, must derive from the evidently iterative 'chew'. Whether 'see' derives from an iterative verb depends on its etymology, of course; but again, this verb does not fit perfectly to the others that end in *-w*. We definitely need to reckon with the possibility that these four verbs influenced each other, but all in all, the derivation of the present-subjunctives of these four verbs from a Proto-Indo-European present is plausible.

4.4.6 *SK*-CAUSATIVES

Although within the verbal system present-subjunctives generally belong to non-productive patterns, the majority of the Tocharian B present-subjunctives belong to the productive category of *sk*-causatives.[775] In Tocharian A, the situation is different:

[775] That this category was productive is evident from the statistics: I have counted about 100 instances in Tocharian B (including a small group without base verb), against about 30 certain examples in Tocharian A, to which, however, the bulk of *s*-presents for which the subjunctive is uncertain must be added.

the *s*-causative offers a clear match to the Tocharian B *sk*-causative, but its present and subjunctive are formally distinct. However, as pointed out in 2.5.1 (p 51) and 2.6.6 (p 102), the distinction in Tocharian A is unique in the system, not to say abnormal: superficially, it seems that the subjunctive is derived from the present stem, e.g. prs. {räytw$^{ṣä}/_{sa}$-} of 'connect', with an *infix* {‹ā›}, i.e. sbj. {räytw‹ā›$^{ṣä}/_{sa}$-}. Since an *ā*-infix has no parallels elsewhere in the system, I felt compelled to analyse the present as having a suffix {-$^{ṣä}/_{sa}$-} and the subjunctive as having a suffix {-ā$^{ṣä}/_{sa}$-}.

Both the unique subjunctive formation in Tocharian A and the present-subjunctive in Tocharian B need to be explained historically. It has long been noted (e.g. Krause 1952: 86-87, although the way he puts it is not very precise) that in Tocharian B any root-final *a* of the non-causative verb is dropped in the derived causative: e.g. base verb *rəytta-* 'be connected', prs.-sbj. of the causative {rə́yttə$^{ṣṣə}/_{ske}$-}, *not* **{rə́ytta$^{ṣṣə}/_{ske}$-}. Thus, any historical treatment of the causative will need a sound law that accounts for the loss of root-final *a* in the Tocharian B present-subjunctive, and if possible, the same sound law should offer an explanation for the contrast between *ä* in the present and *ā* in the subjunctive in Tocharian A. Since in Tocharian B the causative is systematically accented on the root, whereas otherwise suffix accent is the norm, e.g. *anāṣṣäṃ* /anáṣṣən/ 'breathes' vs *ānäṣṣäṃ* /ánəṣṣən/ 'makes breathe', the loss of the root-final *a* is to be sought in the initial accent.

Recently, Malzahn (forth.a) has made the important discovery that in quite a number of Tocharian B causative forms – both present and subjunctive – the root-final *a* is in fact preserved, which allows a specification of the conditions for the sound law. A scrutiny of the 46 forms she lists shows that the vast majority has the suffix variant {-ṣṣə-} (including the variants *ṣ* with syncope and *s* before *t*); the only forms with {-ske-} are prs.ptc. *triwaskemane* B322b5, 1sg.prs.-sbj. *prutkaskau* B93b4, 1sg.prs.sbj. *rittaske$_u$* AS12Fa2, prs.ptc. *laṅkaskemane* B322a4, and 3pl.prs.-sbj. *spārttaskeṃ* AS7Ba4. Therefore, the conditions of the sound law as suggested by the data from Tocharian B are 1) *a* is directly preceded by the accent and 2) followed by a (heavy) syllable containing *e*. Without doubt, the phonetic background was that in forms such as 3pl. **ánasken* the last syllable had a secondary accent, i.e. [ˈanasˌken], which made the middle syllable with *a* weaker than in e.g. 3sg. **ánaṣṣən* [ˈanəṣṣən] without secondary accent on the ending.

Malzahn also adduced Tocharian B 3sg.sbj. forms with weakening of root-final *a* to *ə*, e.g. *krāstäṃ* B33a3 or *naukäṃ-nne* B407a2. According to her, these forms prove that the conditions of the sound law were 1) *a* is directly preceded by the accent and 2) it was found in a closed syllable. Although these conditions could in fact account for the 3sg.sbj. forms of the type *krāṣtäṃ*, they cannot explain the causative forms. Since no Tocharian B word starts with a geminate, the syllable break in the sequence *aṣṣə* must have been halfway the geminate, i.e. *aṣ.ṣə*, and probably the same was true of *aske*, i.e., *as.ke*. If in any of the two sequences the *a* was in an open syllable, it was probably *a.ske*. Thus, we would then expect to find remnants of *a*-vocalism before *sk*, not before *ṣṣ*. As to the explanation of the 3sg.sbj. forms, I have no clear-cut solution. Although the phenomenon is probably linguistically real (as Malzahn argues), and

not the result of spelling mistakes, it is very rare indeed, and perhaps not connected to the loss of *a* in the causatives. My conditioning would in fact work for *naukäṃ-nne* B407a2 (< *$^{|}$*nawkan*$_{|}$*ne*) as well, but since that is the only 3sg.sbj. form with weakening that is suffixed, all others would have to be analogical.[776]

Evidently, the loss of medial *a* in the Tocharian B present-subjunctive and the Tocharian A present is too similar not to be captured by the same rule. Probably, the sound law took place in Proto-Tocharian, yielding a mixed paradigm with an alternation between *əsk*-forms and *ask*-forms. On the evidence of the distribution to be gathered from Tocharian B, this mixed paradigm was 1sg. *CáCə-ske-w*, 3pl. *CáCə-ske-ncə*, etc with medial *ə* vs 2sg. *CáCa-sk'ə-tə*, 3sg. *CáCa-sk'ə-*, etc with medial *a*. Apparently, Tocharian A took advantage from this alternation to mark the subjunctive in an unambiguous way. Since *ā* was the most frequent subjunctive marker, the forms with *ā* (< **a*) were generalised as subjunctives and those with *ä* as presents. In other words, the unique infix marker *ā* arose from paradigmatic split of a mixed paradigm with *-āṣä-* : *-äsa-* allomorphy.

Contrary to what has been argued above, Hackstein rather thinks that the Tocharian A causative subjunctive is old, going back to the Proto-Indo-European desiderative suffix **-h$_1$s^e/$_o$-* (2004a: 90; seemingly accepted by Kim 2007b: 193). In my view, his comparison is too rash: it does not explain that the *ā^{ṣä}/$_{sa}$*-suffix is confined to the causative, nor how it could disappear in Tocharian B. If Proto-Tocharian had had such a clear-cut distinction between present and subjunctive as we find in Tocharian A, there would have been no reason why the distinction would have been given up in Tocharian B. Since the causative forms with medial *a* discovered by Malzahn are equally distributed among presents and subjunctives, but show the salient phonological distribution outlined above, we can now be sure that the causative formed a present-subjunctive as in Tocharian B, and the distinction in Tocharian A is secondary.

The causative preterite has been the issue of a long debate since Schulze (1924). The moot point is whether the Tocharian A reduplicated preterite {ra-räytw(ā)-} (e.g. 1sg. *raritwā*, 3sg. *raritu* 'connected') can be reconciled historically with its Tocharian B pendant with palatalising *a*-grade, but without reduplication, e.g. 3sg.mid. *raittate* {ráytta-te} (with palatalisation, e.g. 2sg. *śāmasta* {ś(c)áma-sta} 'you put' of *stəm-*$^{caus.}$). Alternatively, the Tocharian B preterite type was connected with the type *lyāka*, which also has palatalising *a*-grade (cf e.g. Pinault 2008: 600). Since the functional match between the Tocharian A and B causative preterites is perfect, whereas the *lyāka*-type has no causative value whatsoever, and, moreover, the two

[776] Forms like *mänta* B284b7 (arch.) < *mā nta* /má nta/, adduced by Hackstein (2004b: 289, referred to by Malzahn l.c.), may be parallel if the combination was unstressed and enclitic *nta* made *mā* 'medial'. It must be noted that the sound law formulated here occurred in Proto-Tocharian and was no longer operative in Tocharian B: in counterexamples such as TB *kalatar* /kə́latar/ 'you will bring' (adduced by Hackstein 1995: 33), the root-final *a* was evidently restored, e.g. from other forms with light syllable endings.

types differ in their accent (see Peyrot forth.d and above 4.4.5, p 395), the Tocharian A and B causative preterites must reflect the same formation.

Evidently, the Tocharian A causative preterite type with reduplication is more original than the Tocharian B type without. However, how exactly the Tocharian B type is to be derived from an older reduplicated type is a complicated matter, and it is not our primary concern here; for a detailed account that starts from roots with inital *y-* and *w-*, see Kim (2003; 2009: 38-41).

The assumption of older reduplication in the Tocharian B causative type is often used to explain two other phenomena: 1) the consistent initial accent and 2) the gemination in preterite participles with simple obstruent initials, i.e. the type *ceccalor* to the causative preterite *cāla* '(s)he carried' (2.5.8, p 90; Winter 1994a: 302-303). The explanation of the initial accents starts from the idea that the accent was fixed on the second syllable – the root – when the reduplication was still there, which became the first syllable when the reduplication was lost, for instance **rV-rə́yttəṣṣə-* 'connects' > *rə́yttəṣṣə-n* <rittäṣṣäṃ>. The gemination in the preterite participle is explained by restoration of the reduplication: the geminate represents the original reduplication *cəcəl-*, where the *ə* was syncopated, *ccəl-*, and the reduplication restored: *ce-ccəl-* (Schulze 1924: 172-173). Alternatively, one could say that the reduplication vowel was lost in the present-subjunctive, but through an initial geminate: **tətə́ləṣṣən* 'lifts up' > **ttə́ləṣṣən*. This geminate then spread throughout the causative verb, but it could be preserved only in the preterite participle since it was intervocalic because of the reduplication there.

Although the above account of the preterite had to remain brief, the relationship of the preterite with the present-subjunctive is relevant for the study of the Tocharian subjunctive. Whereas the relationship between the Tocharian A and B causative preterites has always drawn the attention, not many words were wasted on the present-subjunctive. As an exception we can quote Couvreur, who compared the Tocharian present to the Sanskrit causative in *áya* and the preterite to the Skt. reduplicated aorist (1938a). However, the functional agreement between the present formations is only of typological value as the suffixes are clearly different. Moreover, as it is found in all types of presents, the Tocharian *ṣṣə*/*ske*-suffix has no causative value, pace Couvreur, who claims "c'est avant tout en tocharien que *ske/o* revêt une valeur essentiellement causative" (1938a: 96). The correct interpretation is rather that the *ṣṣə*/*ske*-suffix marks presents, whereas the causative is distinguished by its initial accent (Winter 1980a: 440; Hackstein 1995: 3).

Although the identification of the Tocharian preterite with the Sanskrit reduplicated aorist is at first sight attractive indeed, it copes with the problem that the Sanskrit type is secondary (see e.g. Harðarsson 1997; Kim 2003). With Harðarsson (1997: 101), we seem to be forced to derive the Tocharian reduplicated preterite from the imperfect of the transitive reduplicated present that stood at the basis of the Sanskrit reduplicated aorist as well. As Kim puts it (2009: 40), it is likely that "the Tocharian Cl. II preterite and Indo-Aryan (transitive-)causative aorist reflect a common formation, [...] although their grammaticalization took place separately".

In view of the above, a theory of the relationship between the present-subjunctive and the preterite of the causative should explain 1) why the *ssə/ske*-suffix marks the present, not the causative; 2) why the causative is characterised by initial accent throughout; 3) why only the preterite has a morphological match outside Tocharian; and 4) why in causatives the present is not distinct from the subjunctive. In addition, the causative system as such needs to be explained: as Proto-Indo-European clearly did not have such a system, why does Tocharian have systematically distinct causative verbs at all?

In my view, the solution is rather simple: Tocharian inherited only a reduplicated formation which came to be used as a causative preterite, and the present was secondarily derived from the preterite with the *ssə/ske*-suffix. As there was no subjunctive, the present became a present-subjunctive by default. The old age of the preterite compared to the other stems is shown in the synchronic situation that it is the only primary preterite with a derived present-subjunctive. Normally, it is rather the other way round, namely present-subjunctives have derived preterites. As outlined above, a separate subjunctive was created in Tocharian A, whereas in Tocharian B the original reduplication is reflected only indirectly in the form of the initial accent. Before the addition of the present, the causative preterite may have been defective; afterwards, the "causative system" had been established.

4.4.7 CONCLUSION

A considerable number of present-subjunctives can be reconstructed for Proto-Tocharian: for isolated verbs and restricted classes, as well as for categories of unlimited productivity such as the *sk*-causatives. Although their origins are diverse, all can be derived from present formations, which confirms Winter's idea that they are presents without subjunctive. *ə/e*-formations are by far the best represented, but typical "subjunctive classes" are found, too, notably *x*|Ø-root and *x*|*a*-root formations. In general, *x*|Ø-root and *x*|*a*-root present-subjunctives reflect root presents to aniṭ roots (without root-final laryngeal) and seṭ roots (with root-final laryngeal) respectively, whereas *ə/e*-present-subjunctives reflect **e/o*-presents without aorist beside them.

Original root present-subjunctives are at least PT **pəlk*- 'shine', PT **smәy*- 'smile' (both 4.4.2, p 390 and p 392, respectively), PT **yə*- 'go' (4.3.4, p 366) and the whole *lyāka*-type (4.4.5, p 395), and possibly PT **lənk*- 'hang' (4.4.2, p 391) and TB *kʷa*- 'call' (4.4.3, p 393). PT **prəska*- 'be afraid' is certainly secondary because it has *a* added to the *sk*-suffix.

Tocharian B *ayśə/ke*- 'know' (4.4.1, p 379) very probably continues an old perfect, and possibly PT **yok*- 'drink' (4.3.6, p 371) as well.

Original **e/o*-presents are reflected in at least PT **pask'ə/e*- 'protect', PT **pər'ə/e*- 'bring', TB *Ləśə/ke*- 'lie', PT **wəynask'ə/e*- 'honour', and PT **śaw'ə/e*- 'live' (all 4.4.1, p 378). The **e/o*-present-subjunctive of PT **yərs'ə/e*- 'honour' (4.4.1, p 385) must be a Tocharian innovation, just like the *sk*-causatives (4.4.6, p 398) and the denomi-

natives (4.4.4, p 394), including PT **weñ$^{ə}/_{e}$-* 'speak' (4.4.1, p 386). Verbs like PT **katk$^{ə}/_{e}$-* 'be glad', TB *ñəs^{s}$^{ə}/_{ske}$-* 'desire', TB *nask$^{ə}/_{e}$-* 'bathe' (all 4.4.1, p 378) show the *sk*-suffix, an innovation of Tocharian, but they could nevertheless go back to original primary presents.

4.5 ə|Ø-ROOT SUBJUNCTIVE

The prehistory of the Tocharian ə|Ø-root subjunctive and the related *s*-preterite system is perhaps the most debated issue in Tocharan historical linguistics. Although all three important stems, namely preterite, subjunctive and present, have been the subject of a number of studies, the system as a whole has received little attention, which is all the more surprising since the patterns were already pointed out by Lane (1959: 165). There are essentially two types: 1) a type that was originally only active, with an *s*-present, a root subjunctive and an *s*-preterite, and 2) a type that was originally only middle, with an *s*-present, an *e*-subjunctive and a root preterite. Further, next to the *s*-present verbs, there is a small category with *sk*-presents instead.

Tocharian B		active	middle		active	middle
present	$^{ṣə}/_{se}$	*nək$^{sə}/_{se}$-*	*nək$^{sə}/_{se}$-*	$^{ṣṣə}/_{ske}$	*awnə́$^{ṣṣə}/_{ske}$-*	*kənə́$^{ṣṣə}/_{ske}$-*
subjunctive		*n$^{e}/_{ə}$k-*	*nəke-*		*awn-*	*kən$^{ə}/_{e}$-*
preterite		*nek-$^{Ø}/_{sa}$-*	*nek-sa-*		*awn-$^{Ø}/_{sa}$-*	*ken-sa-*

Tocharian A	active	middle
present	*näk$^{sä}/_{sa}$-*	*näknä$^{sä}/_{sa}$-*
subjunctive	*n$^{a}/_{ä}$k-*	*näka-*
preterite	*ñak-$^{Ø}/_{sā}$-*	*nak-*

In the next section, I will briefly introduce the main problems of these stems and their patterns.

4.5.1 INTRODUCTION

Although the historical explanations of the root subjunctive, the *s*-preterite and the *s*-present all present serious and intricate problems, it can hardly be overemphasised that it is in the first place the way they pattern, the system, that must be focused on. The *s*-present is *not* an independent category, nor can the root subjunctive and the *s*-preterite be analysed without taking the other stems into account. Therefore, it is striking that most treatments have concentrated on one stem only, proposing atomistic solutions. Below, I will first discuss some approaches to the root subjunctive, before I proceed to the *s*-present and the *s*-preterite, which have received most attention.

root subjunctive

The root subjunctive is very likely to represent something archaic. First of all, it has no suffix (unlike the preterite, not even a suffix *-sa-* in the 3sg.): it is a genuine root formation. Second, it displays vowel gradation in the root, with *e*-grade in the active singular and *ə*-grade elsewhere. Although the *e*-grade is reminiscent of the *e*-grade in the preterite, it does not go together with palatalisation in this category: a mechanical reconstruction is inevitably **o*, not **ē*.

For the root subjunctive, not many different explanations have been offered. Mostly, scholars focus on the *e* : *ə* gradation. As they find no initial palatalisation, they conclude that it reflects a pre-type with **o* : Ø gradation, for which in the classical reconstruction of Brugmann only the Proto-Indo-European perfect qualifies (1916: 436). As Winter has argued (1994a: 305-306), the perfect could additionally be used to explain the initial accent of the subjunctive, which would reflect the original reduplication of the perfect in an indirect way.

Others attach more weight to the evidence of Tocharian, arguing that exactly this Tocharian type could preserve something old that was lost in the central branches. For instance, **o*-grade is found in the verb for 'grind' (Lat. *molō*, Gm. **malana-*) in a number of languages, which has led Jasanoff to set up an inflectional type with **o* : **e* gradation (e.g. 1988a: 59-60). Whether Tocharian provides reliable evidence for such a type is discussed further below, but evidently the initial palatalisation caused by the **e*-grade should then have disappeared through levelling of the unpalatalised initial of the original **o*-grade. Such a levelling seems trivial, and perhaps it is indeed, but we should then ask ourselves if there is any good reason to exclude levelling in the opposite direction, which would allow for a reconstruction with **ē* : Ø gradation, for instance.

Yet a third approach derives the subjunctive from the *s*-aorist, see below under "*s*-preterite".

s-present

The *s*-present is peculiar as such, as the formation is rare in Indo-European (see e.g. Kuiper 1934), but it is most of all its frequency in Tocharian that is striking. However, compared to the preterite and the subjunctive, it has the simplest root shape (with stable *ə*-grade, without gradation or palatalisation) and a clearly distinct suffix: it does not seem to be the kernel of the *s*-preterite system.

The *s*-present has been the topic of an extensive and highly reliable study by Hackstein (1995). His approach was to take a selection of *s*-present verbs with good etymologies and compare the stem patterns with those in the other Indo-European languages. His main conclusion is that the *s*-suffix turns intransitive verbs into transitive verbs and that it leaves transitive verbs transitive. He finds no special correlation between the *s*-present verbs and the Proto-Indo-European *s*-aorist; the *s*-present verbs rather seem to correspond to root aorists in Proto-Indo-European.

Whereas others have argued that the *s*-present continues a Proto-Indo-European *s*-aorist subjunctive (Jasanoff 2003: 180-182, Pinault 2008: 603), i.e. in Tocharian terms an *ˀə/e*-derivation of an *s*-stem (probably the *s*-preterite), Hackstein considers this impossible because the non-palatalising *ə*-grade of the Tocharian *s*-present is incompatible with the supposed **e*-grade of the *s*-aorist subjunctive in Proto-Indo-European.

Then he concludes that any scenario for the rise of the *s*-presents and their connection to the *s*-preterites must be hypothetical and unverifiable: "Trotz der funktionalen[777] Affinität der *s*-Morpheme im tocharischen Präsens VIII und Prt. III bleibt eine historische Verbindung beider spekulativ." (1995: 165). How Hackstein's objections to the formal side of a derivation of the *s*-present from the *s*-aorist subjunctive are to be evaluated is discussed below, but the semantic problems should not be overlooked: although a wide range of Tocharian subjunctives reflect older presents in one way or another, presents do not normally continue subjunctives (see Adams 1994: 4).

s-preterite

Of the three principal stems of the root subjunctive system, it is the origin of the *s*-preterite that has received most attention. The problem with the *s*-preterite is that it has some, but not all features of the Proto-Indo-European *s*-aorist. That is to say, the characteristic **ē*-grade reflected in Ved. 2sg./3sg. *aprāṭ* 'asked' seems to be matched by the palatalising *a* of Tocharian A 3sg. *ñakäs* 'destroyed', but the *s*-element itself is found only in the 3sg. of the active and in the middle. The intransitive root preterite counterpart TA 3sg.mid. *nakät* 'perished' even lacks the *s* altogether, whereas the root vocalism is at first sight incompatible with any reconstructed root grade of the *s*-aorist: mechanically reconstructed, it points to **o*.

The history of the *s*-preterite has been dealt with by a number of scholars. There are essentially three approaches: 1) the *s*-preterite is a conflation of the Proto-Indo-European *s*-aorist and the perfect; 2) the *s*-preterite derives from a special formation of which it is itself one of the best representatives; and 3) it derives from the *s*-aorist only, but the *s*-element is lost in most forms.

The first approach has been the standard for decades, cf e.g. van Windekens (1982, especially p 160; Adams 1988: 82-83). The assumption that the *s*-aorist and the perfect are conflated in the Tocharian *s*-preterite is thought to explain the mixture of forms with and without *s*: the *s*-forms are derived from the *s*-aorist and the *s*-less forms from the perfect. The disbalanced representation of the two categories could perhaps be attributed to the stronger resistance of the 3sg., i.e. the *s*-preterite was originally an *s*-aorist, but in all forms except the 3sg. (and the middle, apparently) it was replaced by perfect forms. An evident advantage of this approach is that the endings of the preterite derive from the perfect (4.2.2, p 347), but a disadvantage is

[777] Apparently, his "funktional" refers to their function in morphology, not in syntax.

that the precise mechanism of merger remains mysterious. Moreover, the root grades themselves – which are the same for the 3sg. with *s* and the other forms without – would then have been adapted from the *s*-aorist, whereas the suffix part derives from the perfect.

The second approach has principally been advocated by Jasanoff (1988a). It attaches much value to the limited distribution of the *s*-element and connects it to the Hitt. 3sg. *ḫi*-preterite ending *-š*. According to Jasanoff, the correspondence between Hittite and Tocharian points to an original paradigm with *-s* only in the 3sg., which was the basis for the genuine *s*-aorist with *s* throughout that developed in the central branches after Hittite and Tocharian split off. Although his suggestion that the *s*-aorist developed from a 3sg. with an *s*-element is difficult to falsify, the evidence for exactly the pattern of inflexion he reconstructs is meagre. As Kloekhorst shows (2008b: 142-143), Hittite offers no proof for a paradigm with **o* : **e* gradation. The alleged gradation pattern is not proved by Tocharian either because no paradigm displays non-palatalising *e*-grade contrasting with palatalising *ə*-grade. Needless to say, paradigms of the type 1sg./2sg. **noḱ-*, 3sg. **nēḱ-s-*, pl. **neḱ-* (Jasanoff 1988a: 66) contain enough alternations to produce the attested forms of Tocharian as well as those of the other languages, but no Tocharian morphological alternation, nor any specific stem pattern type points to such distinctions.[778]

The third approach has been developed by Ringe (1990) and Kortlandt (1994), independently of each other, so it seems.[779] Both assume that the *s*-preterite is to be derived from the Proto-Indo-European *s*-aorist only and that the *s*-element is lost in most forms. Apart from salient differences in style (the extremely succinct text of Kortlandt finds its diametric counterpart in the detailed argumentation of Ringe), the two scholars mainly diverge on the exact principles of the loss of *s* and the scope of their explanations.

Ringe assumes that the synchronic preterite endings were taken over from the perfect one by one to compensate for several mergers of different persons in the original *s*-aorist paradigm. This forces him to offer an explanation for the loss (by sound law) or removal (by analogy) of the *s* in all forms of the paradigm, which is not in all cases easy.

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[778] While for instance Pinault leaves open the possibility that Jasanoff's theory contains useful elements (2008: 605), Adams (1994) accepts it in part, but reconstructs an old *is*-aorist instead. Although one could argue indeed that the Tocharian *sa*-suffix is preceded by *ə* (I have a different view, expounded in 4.5.5, p 413), Adams' sound law *is* > *əs* – without palatalisation – is highly questionable: a suffix *is* would, in my view, simply not yield the required forms in Tocharian. Moreover, the comparative evidence of at least the Hittite can be discarded (see Kloekhorst 2006 on the *dai*-type).

[779] The chronological difference is explained by the delay in the publication (eventually 1994) of the contributions of the 1990 Berlin *Arbeitstagung* on Tocharian, where Kortlandt presented his paper. He had already assumed loss of *-s-* in the Tocharian reflex of the *s*-aorist in earlier articles (1984: 181-182; 1985: 116-117).

Conversely, Kortlandt assumes that the replacement of the Proto-Indo-European secondary endings by the perfect endings is part of a larger process, which allows him to assume that the *s*-preterite paradigm was built on one or two forms only, so that he does not need to explain the loss of *s* for all forms separately. As he assumes – unlike Ringe – that the *s*-aorist had **ē* : **e* gradation, he is able to link the disappearance of the *s* to the rise of the root subjunctive with *e* : *ə* gradation. However, his account is so brief on a number of relevant points that it has not met with many positive reactions (see e.g. Adams 1994: 7-8). Especially his reference to the correlation between initial palatalisation and transitivity (as noted by Winter 1980a) to explain the lack of initial palatalisation in the root subjunctive is unsatisfactory: this correlation is confined to *ə|a*-root preterites and has not spread beyond that class.

main aim

Below, I will follow Kortlandt's approach because it has the greatest explanatory value concerning the stem pattern. However, his account of the depalatalisation in the subjunctive is untenable and I will argue for an original paradigm that reflects **ē* : Ø gradation. Although I will make suggestions for the origin of this peculiar gradation pattern, the main aim of this section is to show how the attested forms can be derived from it.

4.5.2 THE PRETERITE-SUBJUNCTIVE

As argued in chapter 2 (especially 2.10, p 153), the *s*-preterite and the *x*|Ø-root subjunctive are so closely related that they should actually be analysed as *one* stem. That is to say, the two stems are identical and one is to be derived from the other by means of zero derivation. For instance, the Tocharian B subjunctive of 'ask', {pr^{e}/$_{ə}$k-} has the two stem forms {prek-} and {prək-} and the preterite has the basic stem {prek-} and the extended stem {prek-sa-}; since the extension {-sa-} is only found in the 3sg. (and in the middle), we should take it as an inflectional feature of the preterite stem {prek-}. Although in Tocharian A many *x*|Ø-root subjunctives have been replaced by *ñ^{ä}/$_{a}$*-subjunctives, a small number is preserved there as well (2.6.7, p 105) and they allow for the same analysis as the Tocharian B forms. Without doubt this situation can be projected back to Proto-Tocharian: in terms of affixation, a grading root subjunctive *C^{e}/$_{ə}$C-* was matched by an identical preterite stem with an extended variant in *-sa-*.

However, two other morphological distinctions between the subjunctive and preterite stem are found, one in Tocharian A and one in Tocharian B. In Tocharian A, the initial is palatalised in the preterite but not in the subjunctive (2.5.4, p 67) and in Tocharian B the subjunctive has initial accent whereas the preterite has a peculiar accent, mostly on the root, but underlyingly on a root-final shwa. Whereas the initial palatalisation of Tocharian A is part of a larger problem with the initials, discussed

below (4.5.4, p 411), the accent difference in Tocharian B requires a more thorough look at the nature and history of the accent, for which I refer to 4.5.5 (p 413).

4.5.3 GRADATION AND PALATALISATION

Although the gradation patterns of the subjunctive and the preterite are not identical, the differences are in fact slight. To begin with, both stems have two gradation variants: *e* and *ə*. Thus, if initial palatalisation is not considered, neither of the two stems has a uniquely characterised form. In the middle, both have *ə*-grade throughout, and in the singular active both have *e*-grade. The difference is confined to the plural active, where the subjunctive has *ə*-grade, whereas the preterite has *e*-grade.

While gradation does not distinguish the subjunctive and the preterite, palatalisation clearly does. That is to say, in Tocharian B the unpalatalised initial was levelled, without doubt through influence from the middle on the active paradigm, but Tocharian A must represent the original Proto-Tocharian situation, as is commonly recognised (e.g. Ringe 1990: 185-189): the whole subjunctive has an unpalatalised initial, e.g. *nak-* ~ *näk-*, whereas we find in the preterite a contrast between palatalised initials in the active versus non-palatalised initials in the middle. Two verbs with an archaic pattern suggest that the non-palatalised middle had *ä*-grade: 'ask' with act. {prak-} vs mid. {präk-sā-} and 'put' with act. {cas-} vs mid. {täsā-}. The *s*-less middle, only attested in Tocharian A, conformed to this pattern with non-palatalised initials, but diverged with its *a*-grade (Proto-Tocharian *e*-grade), e.g. act. *ñak-* vs mid. *nak-*.

Although the gradation of the Tocharian A *s*-less middle is puzzling, all the more in view of the poor attestation of the active *a* : middle *ä* gradation type, it is very probable that the regular pattern of the preterite was that of 'ask' and 'put'. This latter pattern is corroborated by Tocharian B: the initial palatalisation in the active has been removed, but the gradation is much better preserved than in Tocharian A.

The picture emerging is that of a correlation between *e*-grade and initial palatalisation on the one hand, and *ə*-grade and non-palatalised initials on the other. The correlation between transitivity and initial palatalisation as noticed by Winter (1980a) cannot explain this pattern, as it is nowhere as strong as exactly here; obviously, this pattern was one of the sources of that correlation, not the target. Analogical removal of the palatalisation in the middle is further made unlikely by the laryngeal reflex in *tasa-*, the split-off stem of *təs-* 'put': any kind of depalatalisation would have yielded *təs-*, not *tas-* (for details, see 4.3.2, p 357).

The most economical approach to the subjunctive is to take the *e*-variant and *ə*-variant as originally identical with those of the preterite: the *e*-variant *nek-* would derive from an earlier **ńek-*, while the *ə*-variant *nək-* would have remained unchanged. In the hypothetic paradigm **ńek-* : **nək-*, we would have to assume that the initial was levelled at the expense of the palatalised variant. I am convinced that such levelling needs no specific motivation: allomorphy reduction is a frequent and

natural process. However, it may be worthwhile to point out that initial palatalisation alternations within paradigms are rare in both languages: usually, palatalisation distinguishes stems, not the active from the plural, for instance. The only other instance of such an alternation was found in the *ə|a*-root preterite, where the unpalatalised variant was levelled in Tocharian B, while it was transformed into a double contrast with gradation and palatalisation in Tocharian A.

The hypothetic alternating paradigm is not attested directly, except for the irregular *ʾə/e*-preterite of *kəm-* 'come' in Tocharian B, discussed in detail in 4.3.1 (p 351). As I have argued, the best explanation for this irregular preterite is to assume that it was lined up with the *ə|Ø*-root preterite-subjunctive. That irregular paradigm could serve as additional evidence for the alternating subjunctive paradigm uncovered here, but the explanation of *kəm-* is complicated and it might not be accepted by everyone. Therefore, I would like to point out that it offers only *additional* evidence for the alternating subjunctive paradigm that I reconstruct: in my view, the arguments given above are in themselves sufficient.

The preservation of the palatalised initial in the preterite – at least in Tocharian A – needs no special motivation, since levelling is never compulsory. However, it is striking that the active of the preterite has no *ə*-grade. If the plural stem of the preterite active was replaced by the singular, the logical outcome was an *e*-grade stem with initial palatalisation throughout, with little chances of levelling in the first place. If the *e*-grade in the preterite plural is original, it was without doubt matched by initial palatalisation; in that case, the spread of the unpalatalised initial in the subjunctive is even easier to understand because the subjunctive would then have been the only paradigm with palatalisation alternation.

The historical interpretation of the two stems **ńek-* and **nək-* is not evident. First of all, even apart from all other arguments against a derivation from the Proto-Indo-European perfect, these stems find no ready explanation in the perfect: the palatalised initial of **ńek-* cannot be derived from a set **noḱ-* ~ **nḱ-*. Needless to say, Jasanoff's *molō*-type has exactly the reverse of what we need: his **noḱ-* ~ **neḱ-* would yield **nek-* ~ **ńək-* in Tocharian, instead of **ńek-* ~ **nək-*. As seen by many other scholars, **ńek-* points to a preform **nēḱ-*, found e.g. in the *s*-aorist (on the loss of *s*, see below). The problem is that the only other root variant this category originally had was **neḱ-s-*, not **nḱ-s-*.[780] Thus, as a reflex of the *s*-aorist we would expect **ńek-* and **ńək-*, ultimately from **nēḱ-s-* and **neḱ-s-*, respectively.

If Kortlandt's derivation of Tocharian B *śem* 'came' from a root aorist with lengthened grade in the 2nd 3rd person singular is correct (see 4.3.1, p 351), it is possible that this pattern influenced the *s*-aorist pattern, especially when the *s*-aorist started losing its *-s-*. Consequently, the weak grade **e* of the *s*-aorist could have been replaced by the weak grade Ø of the root aorist. The existence of a Tocharian root

[780] Zero grade forms in Vedic ultimately derive from older root aorists, as shown by Narten (1964: 23-28).

aorist type with **e* : Ø gradation (see 4.6.5, p 442) is no counterargument because this type is confined to seṭ roots. Since Kortlandt's theory starts from an originally phonetic lengthening in monosyllables, this lengthening cannot have affected seṭ roots since the 2nd and 3rd singular injunctive were not monosyllabic there. However, as noted in 4.3.1 (p 351), it is better to remain cautious with the application of Kortlandt's theory because the comparative evidence for the expected distribution of **ē* in the root aorist is slim.

In my view, the solution to the problem of the weak grade of the Tocharian *s*-preterite system must be sought in the non-palatalising *ə*-grade of the accompanying *s*-present. As I argue below (4.5.6, p 419), this *s*-present derives from an *sk*-present with regular non-palatalising *ə*-grade from Proto-Indo-European zero grade. Even if my account of the *s*-present is not accepted, its root grade may have been the model for the non-palatalised stem variant **nək-* in the preterite-subjunctive: in both languages, its initial is synchronically unpalatalised. Problems arise only when an alternative solution would need the initial of the *s*-present to have been depalatalised on the basis of the preterite-subjunctive: as far as I can see, there is no other possible source for a non-palatalising zero grade; neither in the Tocharian present-subjunctive system, nor in the Proto-Indo-European *s*-aorist. Why the preterite-subjunctive stem variant **ńək-* was adapted to the *s*-present stem variant **nək-* I do not know, but the merger of two phonetically close stems of a rigid verbal pattern is in itself plausible enough.

A problem on a different level is the distribution of the *s*-aorist stem forms **nēḱ-s-* and **neḱ-s-*. It is generally thought that the strong stem **nēḱ-s-* was at home in the strong stem domain of e.g. the athematic present and the root aorist, i.e. the active singular. The weak stem **neḱ-s-* must then have been found in the active plural and the middle and in derived forms. However, such a pattern is not directly attested: Vedic, for instance, has the reflex of **ē* throughout the active (also in the plural), and **e* in the middle. This dilemma was voiced already by Brugmann (1916: 394[781]), and the discussion seems to be ongoing (LIV2: 20, for instance, assumes that the active plural had **e*, whereas Jasanoff 2003: 175, 205 opts for **ē*).[782] The reconstruction of the Proto-Indo-European *s*-aorist is not a task set for the present study. However, in view of the structural plausibility of the contrast singular **ē* : plural **e* and the possibility to derive a pattern active **ē* : middle **e* from it, I am of the opinion that the evidence from Tocharian presented here tips the scales in favour of the former.

[781] Frankly, only if we read "Vollstufe" for "Schwundstufe": "Dafür, dass im Indik. Plur. Du. ursprünglich die Schwundstufe geherrscht habe, ist demnach überhaupt kein sicherer Beweis zu erbringen, wenn es auch an sich als sehr wahrscheinlich zu bezeichnen ist."

[782] For Kortlandt's theory that *ē*-grade was original only in monosyllabic forms, namely the 2sg. and 3sg. injunctive (**nēḱ-s-s*, **nēḱ-s-t*), see 4.5.9 below (p 427).

4.5.4 *-S-* AND *-SA-*

As Kortlandt has pointed out (1994: 61, 62), the *-s-* of the *s*-aorist has been preserved in three archaic *s*-preterites formed to roots in a vowel: TA *kñas-* 'know', TA *cas-* and TB *tes-* 'put' and TA *wäs-* and TB *wəs-* 'give'. On the one hand, these verbs prove that the *-s-* was really there at a certain stage; on the other, they suggest that it was found in all person-numbers, not just in the third singular.

If the *ə*|Ø-root subjunctive is derived from an *s*-aorist, the obvious question is how the *-s-* could disappear; likewise, the rise of the *sa*-suffix in the corresponding preterite needs to be explained. In my understanding, the *ə*|Ø-root subjunctive is a category with the regular present-subjunctive endings, and the *s*-preterite is a category with the regular preterite endings. Thus, with Kortlandt (1994), I see no need to explain how the *-s-* disappeared in all individual forms: after it was lost in some key forms, the *s*-less stem form could have been generalised if in the remaining forms the *s* was still analysed as a part of the stem, or the normal endings could have been generalised if in the remaining forms the *s* had become analysed as a part of the ending. As a consequence, I disagree with Ringe (1990) in his basic approach, but I will start from his detailed discussion of the different possibilities of *s*-loss.

On the basis of Tocharian A *ṣäk* '6' < **sueḱs*, Kortlandt supposes that word-final obstruents were lost, which must have resulted in forms like **prēk* < **prēḱ-s-t* (1994: 61). He further argues that *s* was lost in interconsonantal position, as in *tk*-roots from **-T-sk-* (1994: 62-63). While the first observation is certainly correct, the second is imprecise: it does not follow from the sound law **tsk* > **tk* (Melchert 1977, Pinault 2006) that **kst* became **kt*, for instance. Indeed, Ringe rather argues for an outcome **kəst* with *ə*-epenthesis, as in TA *ṣkäṣt*, TB *ṣkaste* '6th' from **sueḱsto-* (1990: 193). Although numerals, both cardinals and ordinals, are certainly liable to heavy mutual influence, the *s* in the Tocharian ordinal *skəste* must be relatively old: the restoration of **ṣək* to *ṣkas* in Tocharian B not only shows that there was an *s* in the ordinal, but also that the analysis was **skəs-te*, not **skə-ste*. Ringe assumes two other sound laws without direct parallels, but probable in themselves: **ḱsm* > **km* (p 195) and **ḱsr* > **kr* (p 205). In view of Kortlandt's condition "interconsonantal", we may assume that he would agree on these sound laws, too. Although it is disturbing that good parallels are lacking for the last two sound laws, the pattern is not difficult to grasp: *s*-clusters were extremely vulnerable, and they were reduced (e.g. *tsk* > *tk*) unless they were resolved with *ə*-epenthesis (e.g. *kst* > *kəst*).

Assuming that the difference between the subjunctive and the preterite predates the loss of *-s-*, the loss of word-final obstruents would have yielded the following active forms without *-s-*: 2sg.sbj. **prek* < **prēḱ-s-s*, 3sg.sbj. **prek* < **prēḱ-s-t*. *ə*-epenthesis would have affected at least the 2pl.sbj. **prəkəs-cə* < **preḱ-s-te* and the 2sg.prt. **prekəsta* < **prēḱ-s-th*$_2$. As noted by Ringe (1990: 207-208), the 2pl.prt. could have lost its stem *-s-* if the ending was **-sə*.

Up to this point I have not worked with unparallelled sound laws, but if in addition Ringe's **ḱsm* > *km* is correct, the *s* was also lost in the 1pl.sbj. **prəkmə* <

preḱ-s-mes, the 1pl.prt. **prekmə* < **prēḱ-s-mes*, and possibly in the 1sg.sbj. **prekm(ə)* < **prēḱ-s-mi* (if the *s* was lost before *mi* became *m*: synchronically, the reflexes of **mes* > *mə* and **mi* > *m* are different). In fact, a possible parallel for the sound law **ḱsm* > *km* proposed by Ringe has been adduced by Schmidt (1978: 154), who compares the plural pronoun suffix Tocharian A *-m*, Tocharian B *-me* with Hittite *-šmaš* with the remark, "**-s-* könnte wohl in Konsonantengruppen ausgedrängt worden sein". Although I have my doubts on the probability of a development 3pl.prt. **prēḱ-s-r* > **prekər* (even if the ending was *rə*), it is hard to exclude that the *s* was lost there, too.

In the active, the following forms must at first have kept their *-s-*: 1pl.sbj. **prəksən* < **preḱ-s-nt*, 1sg.prt. **preksəwa* < **prēḱ-s-u-h₂*. The only form for which we have concrete evidence that the *-s-* was ultimately preserved is the 3sg.prt. **preksa*. The prehistory of this form is discussed below, but it is clearly made up of the *-s-*, which must have been preserved at a certain stage, and the ubiquitous preterite marker *-a-*.

Schematically:

subjunctive			preterite		
probable loss of *-s-*					
2sg. **prek*	<	**prēḱ-s-s*	2pl. **prekəs*	<	**prēḱ-s- + sə*
3sg. **prek*	<	**prēḱ-s-t*			
possible resegmentation					
2pl. **prəkəs-cə*	<	**preḱ-s-te*	2sg. **prekəsta*	<	**prēḱ-s-th₂*
possible loss of *-s-*					
1sg. **prekm(ə)*	<	**prēḱ-s-mi*	1pl. **prekmə*	<	**prēḱ-s-mes*
1pl. **prəkmə*	<	**preḱ-s-mes*	3pl. **prekər*	<	**prēḱ-s-r*
probable preservation of *-s-*					
3pl. **prəksən*	<	**preḱ-s-nt*	1sg. **preksəwa*	<	**prēḱ-s-u-h₂*
			3sg. **preksa*	<	**prēḱ-s- + a*

From these forms, the attested stems can be derived in a relatively straightforward way. The subjunctive singular is the easiest, and the rise of the "athematic subjunctive" may have started there. After the 2sg. and the 3sg. had become **prek*, the only analogy required was removal of the *-s-* in the 1sg.; in the course of time, the 2sg. received its historical ending *-t*, whereas the 3sg. was furnished with *-ṣ* in Tocharian A and *-n* in Tocharian B. If *-s-* was indeed lost in the 1pl., the subjunctive plural may have lost its *-s-* through similar levelling of the *-s-* in the 3pl.; although it is by far the strongest plural form, the *-s-* may well have been ousted by the two other plural forms, aided by the singular. If the *-s-* was not lost in the 1pl., I see no other way out than to assume that the *s*-less stem spread from the singular. This kind of levelling is natural enough, but the delicate detail is that the gradation should have been preserved. As gradation was a frequent and productive morphological marker, this must have been possible: the *-s-* in the plural could have been felt to be more irregular than the gradation.

In the preterite, the strong 3sg. must have become marginalised formally because it had obtained the suffix *-sa-*. Once the 3sg. was no longer part of the paradigm, the 1sg. **preksəwa* was probably lined up with the 2sg. to become **prekəwa*; subsequently, the only possible analysis of the 3sg. was **prek-sa* (as it is to be analysed synchronically in both languages). The explanation of the preterite plural not only depends on the proposed sound laws **ḱsm* > **km* and **ḱsr* > **kr*, but also on deeper questions of reconstruction. If the preterite was grading, too, we would probably expect that gradation to have been preserved if the *-s-* was lost by sound law in all three forms. If on the other hand, the plural stem was just taken over from the singular, a phonological explanation of the loss of *-s-* is not necessary, and any information about the original root grade is lost. On this matter, see the discussion of the gradation pattern (4.5.3, p 408).

The problem with the 3sg. in *-sa* is that we would rather expect the regular stem with a zero ending, i.e. ***prek* rather than *preksa*. The 3sg. suffix *-sa* obviously contains the preterite marker *-a*, and the basis must have been a form **preks*. The simplest scenario seems to be the following. First, the 3sg.pf. ending **-e* became *-Ø* after *-a*, the most frequent stem-final element in the preterite (see 4.2.2, p 347). This Ø-ending may have replaced any preform of the 3sg. of the *s*-preterite, but at a stage when the *s* was still found in e.g. the 1sg. **preksəwa* and the 2sg. **preksta* or **prekəsta*, the result being **preks-Ø*. At a later stage, this zero ending was apparently deemed insufficiently characterised and extended with the preterite marker *-a-*, a development that may have been favoured by the presence of *-a* in the 1sg. and 2sg. endings. Alternatively, it is possible that *-sa-* replaces the regular outcome of **prēḱ-s-e* with an original non-zero ending. Perhaps the resulting **preks'ə* was analogically depalatalised to become **preksə*, which then received the preterite marker *-a-*.

As the middle paradigm is formed from the secondary stem in *-sa-*, the loss of *-s-* there does not need to be explained. The *s*-less middle is altogether a different matter, since it not only lacks the *-s-*, but it is also formed from a different stem with *e*-grade. On this formation, see 4.8.3 (p 476).

4.5.5 ACCENT

One of Winter's arguments to derive the Tocharian grading subjunctive from the Proto-Indo-European perfect was the initial accent of the former in Tocharian B, which would be an indirect reflex of the reduplication of the latter. The development would have been approximately as follows:

**pe-proḱ-e* > **ṕə-preśə* >> **pə-prekə* > [ACCENT ASSIGNMENT] **pə-prékə* > [LOSS OF REDUPLICATION] **prékə* > TA *prakä-ṣ*, TB *prekä-ṃ* '(s)he will ask'

While I think that the explanation of initial accent from older reduplication is possible in itself – a good case is presented by the causative preterites discussed in 4.4.6 (p 398) it is in my view not correctly applied here.

My criticism is aimed at two main points: 1) Winter's theory breaks down the obvious parallels between subjunctive and preterite, and 2) it proceeds from the untenable basic assumption that Tocharian went through a stage with fixed second syllable stress. The first point is based on arguments laid down in detail in a.o. 4.5.2 (p 407) and 4.6.2 (p 431), and need not be dwelled upon here. The gist is that if the subjunctive has initial accent because of earlier perfect reduplication, it cannot derive from the same source as the preterite, since the preterite has no initial accent.[783] The second point will be elaborated below.

As explained in 2.5.7 (p 85), accent is only detectable in Tocharian B. It may be difficult to assess because it is not written itself, but reflected in the spelling of the vowels /ə/ and /a/. Further, there are accent movements within paradigms that are commonly derived from a fixed (columnar) accent with a one syllable regressive shift (i.e. to the "left") from certain final syllables (this theory has been worked out in detail by Marggraf 1970, a student of Winter's[784]). At first sight, this formulation is not evident: most accent movements within paradigms allow both for a system with regressive shifts and for a system with progressive shifts. If we take a basic example of accent movement, 1sg.prt. *takāwa* /takáwa/ 'I was' vs 3sg.prt. *tāka* /táka/ '(s)he was', we could either say that the accent is shifted backward (to the left) in *tāka*, or that it was shifted forward in *takāwa*. While both formulations are natural enough, hard proof to give priority to the regressive shift is scarce; both would account for the general observation of Krause (1952: 10):

> "Der Akzent der westtochar. Wörter scheint normalerweise auf der ersten Silbe zu ruhen, sofern das betr. Wort ein- oder zweisilbig ist, auf der zweiten Silbe dagegen, wenn es dreisilbig, meist auch, wenn es vier- oder fünfsilbig ist".[785]

Regressive shift (to the left) instead of progressive shift is suggested by the contrast between e.g. 3sg.sbj. *tākaṃ* '(s)he will be' and 3sg.sbj.-3sg.suff. *tākaṃ-ne* '(s)he will have' vs 3sg.prt. *tāka* '(s)he was' and 3sg.prt.-3sg.suff. *takā-ne* '(s)he had': whereas the preterite allows for a progressive shift (to the right) interpretation, the subjunctive does not because the accent is not shifted forward in the form with suffix. From the

[783] Acknowledging this problem, Winter unconvincingly suggests that the preterite goes back to the perfect indeed, but with the accent of the aorist (1994a: 306).

[784] Marggraf's formulation of the condition for the backward shift is: "Der Akzent steht auf der letzten Silbe eines Wortes nur dann, wenn diese nicht auf einen Vokal auslautet, selten, wenn der auslautende Konsonant *l*, *r* oder Anusvara (*ṃ*) ist." (1970: 16).

[785] As Winter observed earlier, this formulation invites the conclusion that Tocharian B had automatic stress on the penultimate syllable (1970: 95). As mentioned further below, he later changed his view, arguing that the accent was automatically fixed on the second syllable.

nominal domain, one could adduce for example the gen.pl. suffix {-nt^{s}ə}, which "attracts" the accent in e.g. *ñäkteṃts* /ñəktént^{s}/ vs nom.sg. *ñakte* {ñəkte/ 'god, lord', but not in *pälskontaṃts* /pəlskóntant^{s}/ vs (nom.-obl.)pl. *pälskonta* /pəlskónta/ 'thoughts'. Further indications are contrasts of the type *ṣamāne* /ṣamáne/ 'monk' vs *brāhmaṇe* /bráhmaṇe/, which show that accent placement was not automatic. However, the accent type of *brāhmaṇe* is exceedingly rare and it is certainly no coincidence that it is a recent loanword: witness the loan phonemes /b/, /h/ and /ṇ/. Historically, the initial accent is certainly due to the long *ā* of Skt. *brāhmaṇa*, if the long <ā> of Tocharian B is not even another loan phoneme /ā/.

In spite of the relatively good descriptive value of Marggraf's regressive shift (to the left) representation, it has internal problems. In particular, it cannot capture the variation between 3sg.prs. *āśäṃ* /áśən/ '(s)he leads' and 3pl.prs. *ākeṃ* /áken/ 'they lead', 3sg.prs.-pl.suff. *aśan-me* /aśənme/ '(s)he leads them' and 3pl.prs.-3sg.suff. *aken-ne* /akénne/ 'they lead him/ her' and 3sg.prs.mid. *āśtär* /áśtər/, which is regular in $^{ə}/_{e}$-presents. As pointed out by Marggraf (1970: 21), the active forms can be explained from a stem {a$^{śə}/_{ké}$-}, with "unshifted" accent in *aśan-me* and *aken-ne* and "shifted" accent in *āśäṃ* and *ākeṃ*, but the middle 3sg. *āśtär* cannot: {aśə-tr} or the like simply does not yield the attested form.

While the correct approach was already given by Marggraf (l.c.), Winter has tried to patch this defect with a rule that deletes "underlying accented "shwa" before dental" (1993: 197). The problem with this rule is that it is phonologically implausible, synchronically as well as diachronically. When applied to such rare 3sg.prt. forms as *otkasa-me* B366b5 /otkásame/ {(w)otk-sa-Ø-me} '(s)he decided for them' and *yonmasa* B29a3 /yonməsa/ {yonm-sa-Ø} '(s)he obtained', it even invites the conclusion that the shwa could remain because "it appears that a deletion would have resulted in a three-consonant cluster with two first elements that could not occur in syllable-final position" (1993: 200). The obvious rationale is that the accented shwa was not deleted before dental in forms like 3sg. *neksa* {nek-sa-Ø} '(s)he destroyed', but epenthesised in the longer forms to resolve the difficult clusters *-tks-* and *-nms-*, respectively. The historical reversal of Winter's rule implies a progressive accent shift to explain inner-paradigmatic accent movements, which is exactly what Marggraf had argued for.

From the initial accent of the type *āśtär* Marggraf concluded: "Der Akzentwechsel im thematischen Präsens läßt sich [...] nicht nach einer Regel auf der phonologischen Ebene erklären" (1970: 21). In other words, within the framework of his theory of the Tocharian B accent, such forms are simply irregular. He did not just frankly admit this, he also offered a simple historical explanation: the accent was originally fixed on the root, as in *āśäṃ* and *ākeṃ*, but shifted forward (to the right) when another syllable followed, as in *aśan-me*, *aken-ne*. For the type *āśtär* he assumed syncope just like Winter would do more than twenty years later, but he noted: "Die Akzentverlagerung von der Wurzelsilbe auf das Stammsuffix ist jünger als die Synkopierung des /ə/ in offener Silbe" (p 21). An additional argument for the early syncope of the *ə* of $^{ə}/_{e}$-presents is the variant *s* before *t* of the *ə*-variant suffix

{-ˢˢᵊ/ₛₖₑ-} (see 2.5.1, p 54): **k'* was dropped in the cluster **sk't* only after syncope had taken place (but before *s* was affected by palatalisation!, see Couvreur 1947: 63[786]), i.e. **sk'ət > *sk't > *st*.[787]

To sum up, while Marggraf's regressive shift (to the left) theory is to be preferred on the synchronic level, it cannot be used as a diachronic explanation. Rather, exceptions indicate that historically a progressive shift took place. This historical reversal has the additional advantage that it offers an explanation for the rise of the accentual system as such. Conversely, Winter's view that the accent was in principle always fixed on the second syllable (1994a: 306) not only needs the assumption of a cross-linguistically rare stress pattern (cf Hyman 1977: 41, 61; Goedemans forth.), it also leaves the development of this pattern from Proto-Indo-European mobile stress unexplained. Possibly, the change of a progressive shift analysis to a regressive shift analysis was "sprachwirklich" to a certain extent, i.e. for some forms or for some speakers: the key forms must have been exactly those that now require a regressive shift analysis.

Now that it has become clear that salient initial stress patterns need not reflect earlier reduplication, it is time to take a look at the accent contrast between subjunctive and preterite stem to see if an alternative explanation can be found. In my view, the ultimate origin of the accent contrast may be very simple: the active present endings generally do not enlarge the number of syllables of the word, whereas most others add a syllable.

	no extra syllable	one extra syllable
present active	1sg. *-w*, 3sg. *-n*, 3pl. *-n*	2sg. *-tə*, 1pl. *-mə*, 2pl. *-cer*
present middle		1sg. *-mar*, 2sg. *-tar*, 3sg. *-tər*, 1pl. *-mtər*, 2pl. *-tər*, 3pl. *-ntər*
preterite	3sg.act. -Ø	1sg.act. *-wa*, 2sg.act. *-sta*, 1pl.act. *-mə*, 2pl.act. *-sə*,[788] 3pl.act. *-r(e)*, 1sg.mid. *-may*, 2sg.mid. *-tay*, 3sg.mid. *-te*, 1pl.mid. *-mte*, 2pl.mid. *-tə*?,[789] 3pl.mid. *-nte*

[786] Couvreur's simple account is to be preferred over Winter's (1994a: 290).

[787] Evidently, the view taken here is incompatible with the complicated scenarios developed by Ringe (1987b, 2003).

[788] Pace Winter (1993: 201), *lautso* B431b2 can hardly be a 2pl. preterite: apart from the unexpected accent, the unpalatalised initial suggests that it is an imperative form instead, certainly compared to 3pl.prt. *lyautar* 'they drove away' in the same line. I translate *(awā)sikeṃ päst lyautar tumeṃ caiy pälskāre wes yes lautso weś* [b3] 'they drove away the āvāsikas. Then they thought, «Let us drive you away! ...»'. It is not clear how *wes* should fit into the sentence if *lautso* was a preterite.

[789] This ending is so rare that its accent behaviour cannot be established. For instance, *yamaṣat* B35a3 'you have made' is not diagnostic because the accent is fixed on the middle syllable of the stem: {yamə́ṣṣa-}.

If we assume that the seat of the accent was originally determined by the number of syllables, namely on the first syllable of disyllabic and on the second of trisyllabic words, it is clear that the majority of the forms would have received suffix (medial) accent, except for the 3sg.prt.act., which has no medial accent in historical Tocharian B, and the strong third person forms of the present active. Subsequently, fixed stress must have been introduced, possibly to disambiguate a form like 1pl. (sbj.&prt.) **takámə*; the initial accent of the eventual 1pl.sbj. *tākam* < **tákamə* could of course easily be taken over from 1sg. *tákaw*, 3sg., 3pl. **tákan*. Possibly only after all person-numbers of the subjunctive had received initial accent, it must have come to cover also forms with a suffix such as *tākaṃ-ne* '(s)he will have', in my view from earlier **takán-ne*.

Admittedly, the number of ambiguous forms of the type 1pl. (sbj.&prt.) **takámə* must have been relatively small, and I would welcome additional forms motivating the shift of mobile and phonologically induced accent into fixed and morphologically organised accent. It is possible that this shift was favoured not just by completely ambiguous forms, but that the contrast between the subjunctive and preterite was further enlarged. In a nutshell, this is exactly how the morphological system works synchronically: there are many different types of marking that all make their little contribution to important contrasts, but often combined with other types of marking. In any case, this assumption explains why the accent was not fixed on the root in $^{ə}/_{e}$-formations: these never had an identical preterite stem next to them.

Perhaps unnecessarily, I would like to emphasise that the account of the Tocharian B accent outlined above – we may term it "Marggraf's theory" – is more economical than Winter's theory. As already remarked, it explains how the fixed accent could derive from earlier mobile accent, whereas Winter's fixed accent is an ad hoc introduction into the development of Tocharian. It is further economical in that it remains closer to the actually attested forms. Winter needed to derive a form like *palsko* /pálsko/ {pəlskó-Ø} from an earlier **pəlskó*, whereas in Marggraf's view *palsko* reflects just **pálsko*. For forms with the accent to the right ("unshifted" synchronically, "shifted" historically) there is no difference, as both would derive *pälskonta* /pəlskónta/ from **pəlskónta*.

Whereas the accent contrast between the *x*|*a*-root preterite and subjunctive stems is explained straightforwardly with the above account, the complicated accent of the *s*-preterite needs an additional comment. If we concentrate on the root forms, that is, those without *-sa-*, there is only one disyllabic form with a deviating accent: the 3pl., e.g. *prekar* /prekə́r/. This form can of course without any problem be secondary after regular 1sg. *prekuwa* /prekə́wa/, 2sg. *prekasta** /prekə́sta/, 1pl. *prekam** /prekə́m/ {prekə́-mə}, 2pl. *prekas** /prekə́s/ {prekə́-sə} (on Ringe's reconstruction **-rə* to account for the final accent, see 4.2.2, p 347). With the 3sg.act. *preksa* /préksa/ nothing is wrong either: it has the only accent it could possibly have. The only additional assumption we need is that longer forms with the element *preksa-*, e.g. *preksa-ne* /préksane/ '(s)he asked him/ her' or 3pl.mid. *parksante-ne* /pə́rksantene/ 'they asked him/ her' took over the accent of the unsuffixed 3sg. instead of the ex-

pected phonologically regular mobile accent. In itself, this assumption is not far-reaching, as the whole middle must have been built on the 3sg. active (see the preceding section, 4.5.4, p 411). Also in this respect, Marggraf's theory is simpler than that of Winter: the derivation of *preksa* from an earlier **prekə́sa* is not only implausible, it offers no explanation whatsoever for the suffixed form *preksa-ne* /préksane/, which would have to derive from something like **prekə́-sa-ne* with a highly remarkable shift of the accent. In addition, the *s*-preterite middles *tässāte* '(s)he put' and *wässāte* '(s)he wore' are likely to be archaic because they are isolated; their deviant suffix accent is regular within Marggraf's approach, but for Winter they "show the effects of a very early reduction" of *səs* to *ss* (1993: 201) that is unmotivated otherwise.

As Marggraf noted, there are some *s*-preterites to *a*|Ø-roots without fixed initial accent (1970: 33-34), for which Winter simply assumed "'Konjunktive' ohne Stammabstufung sind in der Regel als reduplikationslos zu identifizieren" (1994a: 307). In as far as the assumption of the lack of reduplication cannot be supported independently, this explanation is evidently circular; it invites the question, for instance, why non-grading *a*|*a*-root subjunctives do exhibit fixed initial accent. While the examples given by Marggraf (l.c.) and Winter (l.c.) are in themselves correct, the rule is in need of correction: {ay-ˊ} 'give', {awn-ˊ} 'hit', {yam-ˊ} 'do' and {yok-ˊ} 'drink' have suffix accent, but stems like {nák-} 'reproach', {pyák-} 'smash' and {plák-} have root accent. In my view, the stems without fixed initial accent are archaic and have just not morphologised the accent contrast regularly found in other subjunctives. For three of these verbs, the explanation is straightforward: they are highly irregular and even without an accent contrast, the subjunctive stems are sufficiently distinct from the corresponding preterites, cf {wəsa-} 'give', {yamə́ṣṣa-} 'do' and {ya^{śə}/$_{ke}$-} 'drink'. For *awn-*, the explanation may be that this verb has two quite different meanings, 'hit' in the active and 'begin' in the middle, which made it possible that the original – phonologically regular – suffix accent in the subjunctive middle forms was kept.

There is one more problem of the accent that has received little attention. As is well known, intransitive *e*- and *o*-presents are in complementary distribution: *e*-presents are formed to *ə*|*a*-roots and *o*-presents to *a*|*a*-roots. Both types form a root subjunctive. In the *ə*|*a*-type of the *e*-present, the accent is always on the suffix, whereas it is always on the root in the *a*|*a*-type of the *o*-present, i.e. inf. *triwātsi* 'to mix' with *ə* in the root and medial accent vs inf. *kārpatsi* 'to descend' with *a* in the root and initial accent. Obviously, both are subjunctives and both are intransitive, so that the difference cannot have been caused by absence of reduplication in the preform of *triwātsi* and presence of reduplication in the preform of *kārpatsi*, nor by a contrast between transitive with initial accent vs intransitive with medial accent, as argued for by Winter (1980a, e.g. 439-440).

Within the framework of Marggraf's theory as elaborated above, the accent of the type *triwātsi* is regular because the class was completely middle in the present, and predominantly middle in the subjunctive: there were only trisyllabic and no disyl-

labic forms. Thus, the accent of the type *kārpatsi* needs to be explained. Obviously, *kārpatsi* was adapted to the frequent subjunctive type with initial accent because that is the only similar type. In itself, this requires no special argument because the contrast sbj. {kárpa-} vs prt {karpá-} perfectly fits the frequent type sbj. {táka-} vs prt. {taká-}. The question is rather why the type *triwātsi* could retain an accent that was regular (phonologically) at an earlier stage but had become irregular (morphologically) when most other subjunctives had received initial accent.

To my knowledge, the relevant differences between the two types are the vowel in the root and the fact that there are many more active subjunctive forms in the *kārpatsi*-type. The latter difference in particular may have favoured the accent shift in the *kārpatsi*-type: as it has a much larger number of medio-actives than the *triwātsi*-type, there were many more active subjunctive forms where the initial accent was phonologically regular. As far as the root vowel is concerned, I assume that full grade became associated with initial accent, perhaps when at an intermediate stage the subjunctive active had regularised initial accent, e.g. **térka-* ~ **tárka-*, but the middle still had the old medial accent, e.g. **tərká-*. This explains at once the exceptions to the generalisation that *e*-presents combine with subjunctives with medial accent, cf the *e*-presents 3sg.prs. *märsetär* '(s)he forgets' and 3sg.prs. *sruketär* '(s)he dies', the grading subjunctives 3sg.sbj. *mārsaṃ* '(s)he will forget' and 3sg.sbj. *sraukaṃ* '(s)he will die', and the initial accent of the subjunctive stem as in inf. *marsatsi* /mə́rsatˢəy/ 'to forget' and *srukatsi** /srə́wkatˢəy/ 'to die' (well attested is vn *srūkalñe* /srə́wkalñe/ 'death').

4.5.6 THE *S*-PRESENT

For the explanation of the *s*-present I follow a scenario developed by Couvreur (1947: 62-63), which takes them as originally dissimilated from *sk*-presents after root-final stops. Although this scenario works with a considerable amount of prehistoric developments that are not directly verifiable, it is clearly preferable to the alternatives that have been proposed.

The derivation from an *s*-aorist subjunctive as proposed by Jasanoff and Pinault is fine phonologically, if the lack of initial palatalisation can be explained. However, it fails on the semantics: there is no affiliation whatsoever between the meaning of the Tocharian present on the one hand and the Proto-Indo-European aorist on the other, nor between that of the Tocharian present and the Proto-Indo-European subjunctive.

The derivation from a desiderative, as discussed on several occasions by Hackstein (e.g. 1995: 160), but eventually rejected because of the lack of initial palatalisation, has to cope with the same problems: there is no desiderative component in the meaning of the Tocharian present. It rather seems that in many cases the *s*-present has explicit present meaning, as it appears to push other formations away to the Tocharian subjunctive; compare in particular the case of the original present **tətta-*

'put', which was functionally shifted to become a subjunctive because of the *s*-present **tas'ə/e-* (see 4.3.2, p 357).

Kortlandt's derivation from a Proto-Indo-European *s*-present (e.g. 1994: 63-64) is functionally fine, but his reconstruction with an athematic *s*-suffix[790] is not supported by the Tocharian material. Moreover, a derivation of the Tocharian *s*-present from a Proto-Indo-European athematic *s*-present does not explain much, since the Tocharian *s*-present is in the end derived from an *s*-present, while the characteristic athematic inflexion would have to be lost in favour of the Tocharian *'ə/e*-inflexion.

Couvreur's solution to derive the *s*-present from the *sk*-present is rather simple, but it is not easy to find in his *Hoofdzaken*: not only because it is in Dutch (cf the English summary 1947: 99), but also because it is formulated in a very concise way. In addition, *s*- and *sk*-presents are discussed together under their old class number 9 (see footnote 3), whereas nowadays *s*-presents (TEB class 8) and *sk*-presents (TEB class 9) are usually treated separately.

> "*s k e / o* - p r e s e n t s (c l a s s I X). The formant is *-s-* (before IE *o*) and *-ṣ-* (before IE *e*) in [Tocharian] A, [and] in [Tocharian] B [it is] *-sk-* (before IE *o*) next to *-ṣṣ-* (before IE *e*) after vowel stems and similarly *-s-* next to *-ṣ-* predominantly (31 out of 36 instances) after consonant stems. In the second case, an original *-sk-* in B has been reduced to *-s-* after a consonant (often *k*)." (1947: 62, translation mine)[791]

Couvreur makes two claims about the distribution of the *s*- and *sk*-presents, namely that the former are found after consonant stems and the latter after vowel stems. If these claims are correct, the two types were originally in complementary distribution, which in turn suggests that they go back to one single type. I will first contrast Couvreur's argument with the material to see whether it can be substantiated with concrete examples, and then I will adduce additional arguments for his theory.

Couvreur's claim that *s*-presents are predominantly found with verbs ending a root-final consonant can easily be shown to be correct: with 24 instances, root-final *-k* is clearly overrepresented, with an additional 5 for root-final *-p*. The complete lack of verbs with root-final *-t* is conspicuous, but this, too, receives a meaningful interpretation with Couvreur's theory: in view of the development of **-T-sk^e/o-* to *-tk-* (Melchert 1977), we would expect not to find roots in *-t* among *s*-presents if they go back to *sk*-presents. However, if they go back to some sort of *s*-formation, there is no reason why *-t* should be absent.

With root-final stops we find:

-k: *tənk^{ṣə}/$_{se}$-* 'stop', *trəyk^{ṣə}/$_{se}$-* 'err', *nak^{ṣə}/$_{se}$-* 'criticise', *nək^{ṣə}/$_{se}$-* 'destroy; perish', *pək^{ṣə}/$_{se}$-* 'boil, ripen', *pəlk^{ṣə}/$_{se}$-* 'burn', *prek^{ṣə}/$_{se}$-* 'ask', *prəwk^{ṣə}/$_{se}$-* 'overlook', *plak^{ṣə}/$_{se}$-* 'agree', *plənk^{ṣə}/$_{se}$-* 'sell', *yəwk^{ṣə}/$_{se}$-* 'overcome', *rək^{ṣə}/$_{se}$-* 'cover', *rənk^{ṣə}/$_{se}$-* 'rise; lift', *lənk^{ṣə}/$_{se}$-* 'hang oneself on', *Ĺəyk^{ṣə}/$_{se}$-*, *ləyk^{ṣə}/$_{se}$-* 'wash',

[790] He continues the work of Pedersen (1921) and Kuiper (1934; 1937: 36-40).

[791] Likewise, though only for *prek-* 'ask', Klingenschmitt (1982: 62).

ləwk$^{sə}/_{se}$- ‘light up, illuminate’, *wak*$^{sə}/_{se}$- ‘distinguish’, *wəyk*$^{sə}/_{se}$-, ‘avoid; keep away from’, *sak*$^{sə}/_{se}$- ‘leave back [?]’, *t*^{s}*ak*$^{sə}/_{se}$- ‘shine’, *t*^{s}*ək*$^{sə}/_{se}$- ‘burn’, *t*^{s}*ək*$^{sə}/_{se}$- ‘take off; skin’, *t*^{s}*ənk*$^{sə}/_{se}$- ‘raise’, *t*^{s}*əwk*$^{sə}/_{se}$- ‘water’;

-p: *ayp*$^{sə}/_{se}$- ‘cover’, *krəmp*$^{sə}/_{se}$- ‘disturb, check’, *yərp*$^{sə}/_{se}$- ‘respect’, *ləwp*$^{sə}/_{se}$-, ‘make, get dirty’, *ṣərp*$^{sə}/_{se}$- ‘point out; explain’.

Although *-k* is overrepresented, the distribution is certainly not perfect, since we find also root-final resonants (1 x *-n*, 2 x *-m*, 2 x *-r*, 3 x *-l*) and vowels: once *-a* and four times *-w* (i.e., *-u* or a *u*-diphthong):

-n: *ṣən*$^{sə}/_{se}$- ‘count’;

-m: *nəm*$^{sə}/_{se}$- ‘bend’, *t*^{s}*əm*$^{sə}/_{se}$- ‘increase’;

-r: *ar*$^{sə}/_{se}$- ‘abandon’, *er*$^{sə}/_{se}$- ‘evoke’;

-l: *kəl*$^{sə}/_{se}$- ‘bear (act.); goad (mid.)’, *məyl*$^{sə}/_{se}$- ‘damage’, *yel*$^{sə}/_{se}$- ‘examine’?;

-V: *kaw*$^{sə}/_{se}$- ‘kill’, *kəw*$^{sə}/_{se}$- ‘pour’, *ta*$^{sə}/_{se}$- ‘put’, *pləw*$^{sə}/_{se}$- ‘float’, *rəw*$^{sə}/_{se}$- ‘open’.

For *ke*$^{sə}/_{se}$- ‘extinguish’, we would expect an *s*-present for structural reasons (see 2.7.9, p 132), but the root must definitely be set up as *kəs-* (cf e.g. prt.ptc. *kekesu* with *-s-*), so that the only possible analysis is {kes-$^{ˀə}/_{e}$-}. Probably an original *s*-present was obscured after the root-final *-s*: **kess*$^{ˀə}/_{e}$- > **kes*$^{ˀə}/_{e}$-.

The converse claim, namely that *sk*-presents are predominantly found after vowel stems, is not substantiated so easily. First of all, the *sk*-present type is less frequent and statistics are therefore less reliable, but roots in *-k* are relatively well represented in this category, too. However, the situation is markedly different from the *s*-present type: the majority of the roots ends in *-n* (6x). *-k* follows with 5 instances, *-t*, *-y* and *-l* with one each.

-n: *awná*$^{ssə}/_{ske}$- ‘hit (act.); start (mid.)’, *kənáṣṣə*$/_{ske}$- ‘come about’, *kləynáṣṣə*$/_{ske}$- ‘be necessary’, *rəynáṣṣə*$/_{ske}$- ‘give up; leave’, *saynáṣṣə*$/_{ske}$- ‘rest on’, *səynáṣṣə*$/_{ske}$- ‘be depressed’;

-k: *enkáṣṣə*$/_{ske}$- ‘seize’, *kərkəṣṣə*$/_{ske}$- ‘bind’, *trenkáṣṣə*$/_{ske}$- ‘cling’, *Ĺáytkəṣṣə*$/_{ske}$- ‘remove’, *sətkəṣṣə*$/_{ske}$- ‘extend’;

-t: *Ĺəwtáṣṣə*$/_{ske}$- ‘remove; drive away’;

-y: *ayṣṣə*$/_{ske}$- ‘give (act.); take (mid.)’;

-l: *aləṣṣə*$/_{ske}$- ‘keep away’.

The unequal distribution of roots in *-n* is striking indeed, and strongly in favour of Couvreur’s theory.[792] As concerns the verbs in *-k*, the obvious question is whether those in the *s*-present group are somehow different from those in the *sk*-present group. The large *s*-present group is somewhat diverse, but the smaller *sk*-present group has one common feature: all roots end in *-Ck*. Indeed, out of 24 instances in

[792] That the *n* actually belonged to the root (as in Tocharian B) rather than to the suffix (as sometimes in Tocharian A) is argued in 4.8.2 (p 472).

the *s*-present group, only 6 do not end in a single *-k*: *tənk^{sə}/$_{se}$-* 'stop', *pəlk^{sə}/$_{se}$-* 'burn', *pləənk^{sə}/$_{se}$-* 'sell', *rənk^{sə}/$_{se}$-* 'rise; lift', *lənk^{sə}/$_{se}$-* 'hang oneself on', *t^{s}ənk^{sə}/$_{se}$-* 'raise'.

If the distribution noticed above contains the key to a further specification of the sound law responsible for the rise of the *s*-presents, I would interpret it in the following way. Since single *-k* prevails before *s*, we can safely assume that *ksk* yielded *ks*. In view of the survival of *sk* after *k*-clusters, *sk* must have remained in some of them at least. Phonetically, the preservation of a larger cluster and the reduction of a smaller cluster was evidently caused by the insertion of an epenthetic vowel in the former. A priori, it is not strange to suppose that some *Cksk* were epenthesised and others were not, but with the few examples listed above, it is difficult to extract a distribution. As nasals are completely homorganic with a following *-k*, I would opt for *nksk* to have remained at first, so that it was later reduced to *nks*, whereas e.g. *tksk* could have become *tkəsk*, where *sk* could stay. The predominance of *-nk* among the *s*-presents with *k*-clusters supports this hypothesis, but for the 5 *sk*-presents to roots in *-k* levelling must be assumed in any case.[793]

All in all, Couvreur's dissimilation theory can be substantiated by the material, but several impurities in the distribution force us to assume that the sound change took place at an early stage, with a good deal of reshuffling afterwards.[794] Admittedly, the partly imperfect distribution is a relatively weak point in Couvreur's theory, but it explains several completely independent other matters. This greatly enhances its explanatory value, which is, in my view, decisive proof of its correctness. In addition to explaining the distribution between *s*-presents and *sk*-presents to *s*-preterites, it accounts for:

- the *s*-present as such, since in any historical account of the Tocharian verb *sk*-presents must play a major role;
- the fact that the *s*-present is a subtype of the *^{ə}/$_{e}$*-presents, since all *sk*-presents belong to that type;
- the lack of initial palatalisation in the *s*-present because Ø-grade was regular in *sk*-presents: in Proto-Indo-European and – as non-palatalising *ə*-grade – in Tocharian;
- the lack of *s*-presents to roots in *-t* because there the *sk*-present must have been reduced to *-k-*, yielding *tk*-roots (as noted above).

In relation to the *s*-preterite system, the theory has the following advantages:

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[793] In view of the instability of *sk*-clusters, I wonder whether the exceptional *e*-grade of TB {prek^{šə}/$_{se}$-}, TA {prak^{šä}/$_{sa}$-} could perhaps be due to mending when the cluster *rks* or even *rksk* yielded problems in the original present **pərks(k)^{ə}/$_{e}$-* from **prḱ-sk^{e}/$_{o}$-* (of course, this **prḱ-sk^{e}/$_{o}$-* would have to be a restored form itself, as the **ḱ* was probably lost in Proto-Indo-European, see LIV2: 490-491).

[794] The derivation of *tk*-roots from roots in a dental followed by an *sk*-suffix (Melchert 1977), which has become generally accepted, works with a distribution that is often even worse.

– it explains why the *s*-present and the ə|Ø-root subjunctive are affiliated because root-final *-k* must have been a decisive factor in the rise of both categories: apparently *ks*-clusters were especially vulnerable;
– if Tocharian inherited an *s*-aorist with **ē* : **e* gradation in the root, the Ø-grade of the *s*(*k*)-present may well have favoured the spread of non-palatalising *ə*-grade (as if from *Ø) at the expense of palatalising *ə*-grade (as if from **e*);
– there is comparative evidence for at least some *sk*-presents next to *s*-aorists, though this was probably not the situation in early stages of Proto-Indo-European.

Some of these points need more detailed comments, others may seem obvious, but I will treat them all below.

As the *sk*-presents are ubiquitous in the Tocharian verbal system, any theory that incorporates this productive category is economical. Whatever the ultimate reasons for the spread of the *sk*-present, the fact that it spread is beyond doubt. Therefore, the derivation of the *s*-present from an *sk*-present has no need to explain the existence of such an *sk*-present, but only the distribution of the *s*-present subtype. Functionally, it has the great advantage that the *sk*-present really was a present, and nothing else; it was so presentic that it could easily have pushed older presents to neighbouring categories, for instance. There is no need to assume any kind of semantic development other than bleaching of the suffix to a general means to form presents.

It may seem evident that the Tocharian *s*-present is of the *ə*/*e*-type, but for alternative explanations it is in fact a problem. The Proto-Indo-European *s*-present as set up by Pedersen (1921) and Kuiper (1934) was a consonant stem with a full grade *e* moving from the suffix to the ending, i.e. 3sg. **tr-es-ti*, 3pl. **tr-s-enti*. This *s*-present theory has been defended explicitly by Kortlandt on several occasions, and Melchert (2000: 146) evidently considers it worth investigating, too. Although one might claim that the addition of an element *-ə*/*e*- to such a suffix *-(e)s-* is a trivial matter, *ə*/*e*-presents are not at all frequent in Tocharian – unless *sk*-presents and their combinations are counted as well. In any case, the derivation of the Tocharian *s*-presents from a Proto-Indo-European *s*-present needs the unverifiable additional assumption that it was extended with an *ə*/*e*-suffix. Other problems of the *s*-present theory are of course that, although the existence of an *s*-suffix seems ascertained, the exact age, function and distribution of this element remain obscure to a high degree.

The lack of initial palatalisation is only a minor point that could, I am convinced, have come about secondarily in many ways. Nevertheless, the fact that Ø-grade in the root is normal for *sk*-presents makes the derivation of the *s*-present from an *sk*-present easier than from e.g. a desiderative with *e*-grade. The latter solution was discarded by Hackstein for exactly that reason.

There are several kinds of distribution "under the surface" of the verbal system; correlations, for instance, between inflexion classes and root types. The *s*-present has a lacuna for roots in *-t*, which is neatly explained if it goes back to an *sk*-present:

roots in *-t* would never have ended up among the *s*-presents because the *sk*-cluster was resolved differently, becoming *tk* (Melchert 1977).

The condition that *s*-presents arose after stops, in any case *-k*, provides a solution for the close link between *s*-presents and *ə*|Ø-root subjunctives, at least within the framework of the theory of Kortlandt that the latter arose after stops, principally *-k* (1994). Evidently, the match between the *s*-present and the *s*-preterite receives the same explanation; in this case, the conditioning factor *-k* was also argued for by Ringe (1990).

I subscribe to Jasanoff's criticism (2003: 181) of Hackstein's reluctance to accept palatalisation levelling (1995, e.g. 161; see also Penney 1998: 93-94) in e.g. the *s*-present; such levelling can be demonstrated to have taken place time and again in different categories, mostly – though not exclusively – at the expense of the palatalised variant. Thus, I attach relatively little weight to the advantage of a Ø-grade in the root which the *sk*-present theory offers over a derivation from an *e*-grade desiderative or an *s*-aorist subjunctive. Nevertheless, my own explanation of the *ə*|Ø-root subjunctive system requires (PIE) Ø-grade instead of **e*-grade in the weak form, and it is improbable that the Proto-Indo-European *s*-aorist had this Ø-grade in the active plural. The close link between the *s*-present and the *ə*|Ø-root subjunctive allows us to assume that the present was instrumental in the spread of the Ø-grade: it may have been the source of the levelling of unpalatalised initials, not the target.

In view of the overwhelming productivity of *sk*-presents at different stages of Tocharian, including early ones, I am of the opinion that comparative evidence for the derivation of the *s*-presents from *sk*-presents is not of utmost importance. Indeed, as most scholars view the Proto-Indo-European verbal system, primary presents combined with secondary aorists and secondary presents with primary aorists. The *s*-present ~ *ə*|Ø-root subjunctive system as it is reconstructed here, reflects a stage with a secondary present derived with the suffix **-sk$^{e}/_{o}$-* combined with a secondary aorist derived with the suffix **-s-*. Because such a pattern cannot be old, it is a priori not to be expected that one would find many perfect morphological matches outsides Tocharian. Nevertheless, at least one archaic Tocharian verb, *prək-* 'ask' has cognates with *sk*-presents, a.o. Ved. *pr̥cchá*ti, Arm. 3sg.aor. *eharc'*, Lat. *poscō* (see in particular Klingenschmitt 1982: 62).

Continuing this line of thought, I would like to stress that the theory of the *s*-present developed above accounts for a *pattern* in the Tocharian verb, for the *s*-present *system*. It is not an explanation for each and every individual Tocharian *s*-present, and such an explanation is not feasible. The Tocharian *s*-presents form a system that remained productive well into the historical period, and had been productive before. Therefore, the distribution over the root types is not perfect, comparative evidence is scarce, and, perhaps most importantly, the use of these Tocharian *s*-presents for comparative ends is severely limited.

4.5.7 *NƏSK'ə/$_E$*-PRESENTS

Although they are as class 10 treated together with *nask'ə/$_e$*-presents in the *Elementarbuch* (Krause and Thomas 1960: 214), *nəsk'ə/$_e$*-presents are fundamentally different. While *nəsk'ə/$_e$*-presents are extremely rare in Tocharian B, three subcategories can be distinguished in Tocharian A. As one of the Tocharian A subcategories finds good correspondences in Tocharian B, this will be treated first; the remaining two are discussed further below.

In Tocharian B, there are three certain examples of *nəṣṣə/$_{ske}$*-presents: {kənmáṣṣə/$_{ske}$-} to *kəm-* 'come', {tənmáṣṣə/$_{ske}$-} to *təm-* 'be born', and {yənmáṣṣə/$_{ske}$-} to *yəp-* 'enter'. As noted in 2.7.9 (p 135), it is conspicuous that all three show a root variant with *-m-* and metathesis of *-mn-* to *-nm-*. The only conclusion can be, so it seems, that the *nəṣṣə/$_{ske}$*-suffix is preserved here *because* it caused irregularities. In the case of 'be born', there are even two analyses possible: on the evidence of the sbj. {cəmé-} and the prt. {tem$^{(Ø)}$/$_{sa}$-}, the *n* is part of the present suffix, but on the evidence of the derived causative *tənm-*, it was rather part of the root. A fourth case that is often cited is similar to *təm-*: {lənnáṣṣə/$_{ske}$-} to *lət-* 'go out'. Although the present clearly contains a nasal – two, to be precise – the sbj. {lənn-} shows that the present *suffix* is actually *-ṣṣə/$_{ske}$-* (see 4.3.5, p 368): the root *lənn-* of the present and the subjunctive is different from the root *lət-* of the preterite (the relation between the two roots is "irregular").

While the verb for 'enter' is only imperfectly attested in Tocharian A, the other verbs show similar formations: {kʷämnäṣä/$_{sa}$-} to *kʷäm-* 'come', {tämnäṣä/$_{sa}$-} to *täm-* 'be born', and {läntäṣä/$_{sa}$-} to *länt-* 'go out'. On the evidence of the sbj. {läncä/$_a$-}, the present of 'go out' is a *ṣä/$_{sa}$*-present rather than a *näṣä/$_{sa}$*-present, but since the root clearly contains an extra nasal, the present must ultimately go back **lət-nəsk'ə/$_e$-* (see 4.3.5, p 368).

As argued in 4.3.1 (p 351), the *nəsk'ə/$_e$*-present of **kʷəm-* 'come' can comfortably be derived from Proto-Indo-European **gʷm-skᵉ/$_o$-*. In view of the similarity in meaning between 'come', 'go out' and 'enter', it is attractive to assume that the *nəsk'ə/$_e$*-suffix originated in 'come', spreading to the other verbs afterwards. If 'be born' is to be understood as 'enter the world' or 'be born into the world' (2.7.9, p 135), it can have received the suffix as a part of the same development.

The second subcategory where the suffix is found in Tocharian A is discussed in detail in 4.8.2 (p 472). In these verbs, there is a nasal in several stems, of which it is not always clear whether it belongs to the root or to a suffix. It is argued that the *-n-* was most probably part of the root in Proto-Tocharian, but it was lost in the *s-*preterite of e.g. *räy-* 'give up': *risāt* < **räynsāt*. As a consequence, the *n* of the present and the subjunctive could be analysed as a part of the suffix, which led to the rise of the *ñä/$_a$*-subjunctive. This development was probably favoured by the existence of *näṣä/$_{sa}$*-presents elsewhere, and of course it helped creating this small subcategory of *näṣä/$_{sa}$*-presents, as the analysis of the present as *-n-ṣä/$_{sa}$-* had become excluded.

The third Tocharian A subcategory of *näˢä*/*sa*-presents is formed according to a rigid pattern: *näˢä*/*sa*-present, *a*-subjunctive, *sā*-less preterite, e.g. prs. {näk-näˢä/sa-}, sbj. {näka-}, prt. {nak-} of *näk-* 'perish' (see also 4.8.3, p 476). The present is attested for {näk-näˢä/sa-} 'perish', {päk-näˢä/sa-} 'boil', {wäl-(l)äˢä/sa-} 'die', and {tˢäk-näˢä/sa-} 'burn (intr.)'. The root of *kän-* 'come about' contains a nasal itself, so that its present {känäˢä/sa-} can probably be analysed both as {kän-ˢä/sa-} and as {kän-näˢä/sa-} (see 2.6.6, p 100). The present of {käsa-} 'extinguish' is not attested.

In view of the relatively small number of verbs in question, I assume that they took over the *näˢä*/*sa*-suffix from *täm-* 'be born'. In Tocharian B the *e*-subjunctive class shows little cracks, notably *ˢə*/*se*-presents for some members, namely {nəkˢə/se-} 'perish', {pəkˢə/se-} 'boil' and {tˢəkˢə/se-} 'burn', but *ˢˢə*/*ske*-presents for others, namely {kənáˢˢə/ske-} 'come to be', {tənmáˢˢə/ske-} 'be born', while {keˢə/se-} to *kəs-* is probably out of line because the root ends in *-s* (see 4.7.3, p 458). Conversely, the same class in Tocharian A follows only one rigid pattern. Thus, I assume that Tocharian B preserves the older situation. If the distribution between *ˢə*/*se*-presents and *ˢˢə*/*ske*-presents can be projected back to Proto-Tocharian (which is argued for in 4.5.6, p 419, above), it is likely that the *nəskʾə*/*e*-suffix spread to **kən-* at first – if that verb did not already allow both analyses – and to the other verbs when the *sk-* and *s*-presents merged altogether.

On TA *kĺos-* 'hear' with its secondary present {kĺos-näˢä/sa-}, see 4.7.2 (p 457).

4.5.8 Hittite 3sg. *ḫi*-prt. *-š*

With the derivation of the Tocharian *s*-preterite from a regular Proto-Indo-European *s*-aorist (following Kortlandt and Ringe, see above), the equation of the *-s* of the Tocharian A 3sg.prt. *campäs* 'could' with the *-š* of the Hittite 3sg. *ḫi*-prt. *akkiš* 'died' (Pedersen 1941: 146; Winter 1982: 9) is reduced to a typological parallel at best. Consequently, the 3sg. *ḫi*-preterite ending is no longer a problem of the comparative study of Tocharian and Hittite, but a matter to be dealt with in the reconstruction of Proto-Anatolian, or, for that matter, Proto-Indo-European. It is not of immediate concern to the study of the Tocharian subjunctive, nor to Tocharian studies as a whole. Nevertheless, a small note may be justified.

If we take a look at the *mi-* and *ḫi*-endings as posited by Kloekhorst (2008a: 498), it is not so much their differences that are striking, but rather the similarities, which betray thorough remodelling:

	mi-inflexion		*ḫi*-inflexion	
	present	preterite	present	preterite
1sg.	*-mi*	*-(n)un*	*-ḫḫe*, *-ḫḫi*	*-ḫḫun*
2	*-ši*	*-š*	*-tti*	*-tta*
3	*-za*, *-zi*	*-t(ta)*	*-e*, *-i*	*-š*
1pl.	*-weni*	*-wen*	*-weni*	*-wen*
2	*-tteni*	*-tten*	*-šteni*	*-šten*
3	*-anzi*	*-er*	*-anzi*	*-er*

Whereas, as commonly agreed, the contrast between present endings with *-i* and preterite endings without *-i* is a direct continuation of the proto-language in the *mi*-endings, it is secondary in the *ḫi*-endings. In other words, the difference between *ḫi*-present and *ḫi*-preterite seems to be modelled after the same difference in the *mi*-inflexion. Indeed, the only two endings where the difference between *ḫi*-present and *ḫi*-preterite is not expressed by the *i*-element are the 3sg. and the 3pl. Of these, the latter cannot possibly continue an old contrast between present and preterite, as the present ending *-anzi* clearly goes back to the PIE present ending **-nti* and the preterite ending *-er* to the PIE perfect ending **-ēr*. The only *ḫi*-ending remaining, then, with a "serious" difference between present and preterite is exactly our 3sg. *-š*.

As argued by Kloekhorst (2008b: 688), the expected 3sg. *ḫi*-ending without *i* is zero: the Proto-Indo-European perfect ending **-e* would have been apocopated. Therefore, he concludes, the ending must have been restored in one way or another and as a source he proposes the *s*-aorist, otherwise largely lost.

Thus, the Tocharian and Hittite 3sg. *s*-endings cannot be compared directly. The Hittite ending *-š* is a secondary creation to enlarge the formal contrast between the *ḫi*-present and the *ḫi*-preterite, which is secondary itself.

4.5.9 1SG. PRETERITE

The stem shape of the vast majority of the 1sg. preterite forms in both languages is not different from that of other forms of the *s*-preterite paradigm. Tocharian A differs from Tocharian B in having initial palatalisation if possible, but in both languages there are no stem changes within the active paradigm: in Tocharian A we find *a*-grade throughout, e.g. *ñak-*, and in Tocharian B *e*-grade, e.g. *nek-´*. There are two exceptions: the 1sg. *kamau* 'I came' in Tocharian B and relic *u*-forms in Tocharian A.

The evidence of *kamau* is in itself very clear, but uncertain for a couple of reasons. It is clear because there is no competing form in the same paradigm and the stem variant *kəm-* is also attested in the plural (2.5.2, p 56, 4.3.1, p 351). It is uncertain because *kamau* is by no means a "normal" *s*-preterite form, because it is not well attested, and because it could be secondary. As I have argued above (4.3.1, p 351), the preterite of 'come' is perhaps best analysed as an *s*-preterite, but it must have replaced a Proto-Indo-European root aorist and it was itself replaced by an *ᵊ/e-*

preterite, so that it is a very untypical *s*-preterite. Although the preterite paradigm of 'come' is well known for the other forms, it is exactly the 1sg. that is attested only once in a small fragment which makes the mere existence of the form less certain. If *kamau* is a genuine form indeed, it could have been reshaped after other *e*-variants of the paradigm after the proportion 2sg. *śem-ə-*, 3sg. *śem-ə-* : 1pl. *kəm-e-*, 3pl. *kəm-e-*, 1sg. X-*e-*; X = *kəm-* (see Pinault 1994: 196). It is questionable, however, if such an analogy is plausible if the preform was *śem-e-*; it seems that the match with the other singular persons is so strong that there is no need to create a unique irregularity in the sg. stem. All in all, the evidence of *kamau* is complex, but in view of the highly archaic alternations in its paradigm it should be taken seriously.

Schmidt and Winter have proved the existence of a Tocharian A 1sg. *s*-preterite ending *-u* next to well attested, but historically secondary ending *-wā* (1992). The forms in question are *kñasu* 'knew', *campu* 'could', *trīkū* 'was confused', *prasku* 'feared', *wīyu* 'was frightened', to which *āwu* 'hit' must be added (Peyrot 2007b: 800). The problem with *wīyu* and *trīkū* is that the root grade is "wrong": in an *s*-preterite paradigm we would rather expect *a*-grade throughout, i.e. ***weyu* {way-w} and ***treku* {trayk-w}. It is a little disquieting that no other forms of their respective paradigms are attested, but taken at face value, these two forms seem to require a paradigm *trīkū*, *trekäṣt**, *trekäs**, and so on. Although it can be excluded that *trīkū* and *wīyu* are in fact preterite participles, an alternative explanation could take the *ä*-vocalism (in this case, *ī* /äy/) as secondary after the preterite participles; after all, the forms have long been wrongly categorised as preterite participles and for the speakers of Tocharian A such an analysis must have been a very natural one as well. It is remarkable, however, that the forms would have remained in their original domain of use despite a different analysis, and since they must be archaic anyhow because of their ending, the vocalism could certainly be old as well.

Although the evidence is scanty and alternative explanations are available, it is possible that the 1sg. of the *s*-preterite had another root grade than the rest of the paradigm. If we combine the evidence of Tocharian B *kamau* with that of Tocharian A *trīkū* and *wīyu*, it appears that the original root grade was probably **ə* without preceding palatalisation. This non-palatalising *ə*-grade is matched by the zero grade needed for the stem variant *tas-* of *təs-* 'put' and thus finds a parallel within Tocharian.

Incidentally, Kortlandt has argued on completely independent grounds that the original locus of the lengthened grade **ē* in the Proto-Indo-European aorist were monosyllabic forms as were found only in the 2nd and 3rd persons of the active singular of the injunctive (1987). Given the fact that in Tocharian the equivalent of the non-lengthened grade is apparently non-palatalising *ə*-grade, the match between the distribution he assumes and the distribution we actually find in Tocharian B *kamau*, *śem*, *śem* could not be better. I am inclined to see this unexpected match as additional proof for the correctness of Kortlandt's theory. However, I would like to point out that the root grade of the 1sg. is *not* essential for my explanation of the *s*-preterite as a whole: other analyses of the Tocharian data are possible; if one does not

accept Kortlandt's theory that *ē-grade was originally found only in the 2/3sg. injunctive, this does not affect my derivation of e.g. the grading root preterite from the *s*-aorist.

4.5.10 *O*-GRADE

Tocharian B *o*-grade is one of the great puzzles of the verbal system. It seems to occur in two variants: 1) as an alternative full grade next to *ə* in certain contexts, i.e. as a variant of *e*, 2) next to *a*, apparently also as full grade.

The first type is found in *yəp-* 'enter', which follows a normal gradation pattern except for the full grade *yop-* instead of expected **yep-*, possibly with a parallel in isolated TA *yowäs* 'entered'; in *otk-*, the preterite stem of *wətk-* 'decide', where we would rather expect *wetk-*, but if the immediate preform of *otk-* is **wotk-*, the change *wo-* to *o-* has a parallel in *ost* 'house' < **wostə* (TA *waṣt*); and in *yəm-* 'achieve', which has *yom-* instead of expected *yem-*, and the stem *yom-* is apparently generalised throughout in Tocharian A *yom-*.

The second type is found in *kow-* ~ *kaw-* 'kill' in 3sg.sbj. *kowän* and 3sg.prt. *kowsa*, where we would expect *e*-grade in ə|Ø-roots, although we do not expect gradation at all in this *a*|Ø-root; in *or-* ~ *ar-* 'give up' in 3sg.sbj. *oräñ-c* and prt. 1sg. *orwa*, 2sg. *orasta*, 3sg. *orsa*, where we would expect *e*-grade in ə|Ø-roots, although the *a*-grade in the 3pl.prt. *arar* is unexpected; in prs.-sbj. *yok-* 'drink' vs prt. *yak-*; and in *yom-* 'achieve' ~ *yam-* 'do', if these verbs are related, as I suggested in 4.3.7 (p 372).

It is striking that we find three roots starting with *y-*, one starting with a vowel and one starting with *w-*, that is, initials possibly liable to contraction if they become intervocalic, but it is difficult to discover a system in this range of forms.

Although it does not meet the exact conditions for the sound law *we* > *o* as I have formulated them (Peyrot forth.a), 3sg. *otkasa* is nevertheless strongly reminiscent of that development. Since this would probably require the ad hoc assumption that **wetk-* become *otk-* in sandhi position after a consonant, one might prefer to take *otk-* to reflect **wotk-*, a form possibly analogical after e.g. *yopsa* 'entered'.

yom- and *yop-* look parallel and would seem to need one explanation. Such an explanation should probably depart from rounding of **e* before a following labial, even though sound laws of this type have been discussed at length in the literature, and mostly dismissed for Tocharian B. Nevertheless, such a development would explain the Tocharian A forms rather nicely (see in particular Ringe 1990: 222-226), and it seems that the shared context *y-* is hardly a feasible option for an explanation.[795]

[795] Hilmarsson, whose main endeavour was to explain Tocharian *o*-vocalism, has proposed several solutions. While his suggestion that the *o*-grades derive from an earlier *o*-subjunctive (analogous to the class 4 *o*-present; see 1986: 63) is clearly wrong, he dismisses his own explanation of *o* from earlier **e* through *u*-affection in the 1sg. of the subjunctive (e.g. 1989:

Although *o* ~ *a* gradation in principle allows for a Proto-Indo-European reconstruction with *o* < **eh*$_2$ and *a* < **h*$_2$ (see e.g. Kim 2000), it is questionable whether such an origin would account for any of the attested instances of *o* ~ *a*. Rather, with Hackstein (1995: 42) and Adams (1999: 48, 208), it seems attractive to view the gradation of *kaw-* and *ar-* as neo-gradation, a specifically Tocharian innovation.

Whereas I have hesitantly accepted Schmidt's idea that *yok-* ~ *yak-* 'drink' reflects old perfect gradation (see 4.3.6, p 371), I have for *yom-* ~ *yam-* rather opted for a analogical zero grade *a* on the basis of the full grade *yom-*, in the sense of Ringe (apud Kim 2000: 156). *yam-* takes the place of *ə*-grade forms, compared to *yom-* for *e*-grade forms, but on the evidence of the stem variant *yəm-* of *yom-*, the *a*-grade of *yam-* must be an innovation.

4.6 *ə*|*A*-ROOT SUBJUNCTIVE

Apart from the grading *ə*|Ø-root subjunctive, there is one other grading type: the *ə*|*a*-root subjunctive. In Tocharian A, the gradation pattern is identical to that of the *s*-preterite, whereas in Tocharian B it is affected by the following *a*: we find *a* : *ə* gradation instead of *e* : *ə* gradation. Since this subjunctive has initial accent – just like the *ə*|Ø-root subjunctive – it has also been argued that it goes back to the Proto-Indo-European perfect: the *e* : *ə* gradation was seen as a reflex of PIE **o* : Ø gradation, and the initial accent was thought to be an indirect continuation of the original reduplication syllable. Below, it is argued that the grading *ə*|*a*-root subjunctive is an analogical formation after the grading *ə*|Ø-root subjunctive.

4.6.1 GRADING SUBJUNCTIVE

There seems to be universal agreement that the *ə*|Ø-root subjunctive and the *ə*|*a*-root subjunctive continue one type: the *a* : *ə* gradation in Tocharian B is a secondary consequence of the root-final *a*. Thus, if the one is derived from the Proto-Indo-European perfect, the other should be derived from the perfect, too; if, conversely, one seems to go back to the aorist, the same should be true of the other as well. The problem is that on the one hand the perfect theory can offer no explanation for the systematic match between the *ə*|Ø-root subjunctive and the *s*-preterite, whereas on the other no one will be able to maintain that forms like TB 3sg. *tārkaṃ*, 3pl. *tarkaṃ* 'will let go' are *s*-aorists. Although this is a very serious problem indeed, I think that it can be used to make a breach in the system of grading subjunctives. That is to say, the only way out seems to assume that either the perfect-based subjunctive type spread to the *s*-preterite system, or the *s*-aorist-based subjunctive spread to *ə*|*a*-roots.

104, 122) as "difficult to accept" (1986: 62) or even "highly unlikely" (1996: 115). The same *u*-affection is assumed by Hackstein as an explanation for *yopu* and *yopsa* (1995: 311-312).

On the basis of the assumption that the grading subjunctive is original in only one of its subtypes, I will argue that the *ə|a*-root subjunctive is formed after the *ə|Ø*-root subjunctive with the following arguments:

– as set out in the introduction of this chapter in section 4.1.5 (p 334), and further elaborated in 4.9.3 (p 486), the meaning of the Tocharian subjunctive is not easily derived from that of the Proto-Indo-European perfect, and the perfect origin of the Tocharian preterite endings seems to suggest that the perfect rather became a past tense;
– just as with the *ə|Ø*-root subjunctive, the perfect theory does not explain why the "perfect subjunctive" should be confined to two grading types, nor why the *ə|a*-type should pattern the way it does;
– just as with the *ə|Ø*-root subjunctive, there is virtually no comparative evidence that the individual grading subjunctives attested continue perfect formations;
– since an explanation of the gradation pattern from the *s*-aorist is available for the *ə|Ø*-root subjunctive, but not for the *ə|a*-root subjunctive, the latter is likely to have been shaped after the former.

As the first point has already been treated in 4.1.5 (p 334), I will concentrate on the stem patterns of the grading *ə|a*-root subjunctive, on some of the comparative evidence, and on the exact way the transfer of the grading type is most likely to have come about.

4.6.2 STEM PATTERN

With only very few exceptions, the grading *ə|a*-root subjunctive follows only one pattern: it combines with a *ə|a*-root preterite and a nasal present. This nasal present, in turn, divides into two basic categories: the most frequent variant, the *na*-present, has an *n*-infix directly before the root-final *a* (traditionally class 6) and the other, the *ṅk*-present, has an *n*-infix directly before the last consonant of the root (traditionally class 7). Both types are well attested in both languages. A minor class in Tocharian B is formed by verbs with *ññᵊ/e*-presents, whereas both languages have a couple of verbs with an *e*-present (Tocharian A *a*-present).

The nasal present pattern is not one of several ways in which grading subjunctives take their present, but *the* basic pattern. This is all the more true because there is also a reversed relationship: if possible, nasal presents always take a grading subjunctive. Thus, nasal presents are not a means to form a present to a grading subjunctive, but they correspond in an almost one-to-one pattern; it would be equally correct to claim that nasal presents take a grading subjunctive.

Counting certain and probable instances, I have found 43 *na*-presents in Tocharian B and 35 *nā*-presents in Tocharian A. In Tocharian B, these 43 *na*-presents are matched with 10 grading subjunctives, and an additional 2 with the characteristic *ə|a*-root preterite with initial palatalisation. While some subjunctive stems are lacking, all other *na*-presents are formed to *a|a*-roots, or only forms of the subjuntive are attested where *ə*-grade is regular in any case. In Tocharian A, we find

7 grading subjunctives and an additional 3 grading preterites corresponding to the 35 *nā*-presents. Whereas most *nā*-presents have no subjunctive attested beside them, others have only regular *ä*-grade forms or are formed to *ā*|*ā*-roots. The only Tocharian A verb that really does not fit the pattern is the irregular verb 'know' with a sbj. {kñāñ$^{ä}/_{a}$-}. Thus, although the number of grading subjunctives attested next to *na*-presents is modest, there are no indications whatsoever that the *na*-presents are matched with different subjunctive *types*; at least, if *a*|*a*-roots are taken as a morphophonological subcategory (which they evidently are).

The *ṅk*-present is clearly less frequent in both languages, with 10 instances in Tocharian B and 15 in Tocharian A. Those 10 in Tocharian B are matched with 5 grading subjunctives and 1 additional *ə*|*a*-root preterite with initial palatalisation; next to the 15 nasal infix presents of Tocharian A, 3 grading subjunctives and 1 additional grading preterite are found. Again, all other *ṅk*-presents are formed to *a*|*a*-roots, or the relevant forms might be missing due to chance: the subjunctive-preterite system is of one single type. Moreover, apart from the formation of the present, there is no difference to the subjunctive-preterite type of the *na*-presents.

The *ññ*$^{ə}/_{e}$-presents in Tocharian B seem to match rather with non-grading subjunctives, and this problem will be discussed separately (4.6.10, p 450). Likewise, grading subjunctives next to *e*-presents are rare; they are also treated below (4.6.8, p 447).

In conclusion, there is a strong affiliation, almost a one-to-one correspondence, between the nasal present, the grading *ə*|*a*-root subjunctive, and the *ə*|*a*-root preterite with initial palatalisation in both languages (and, additionally, gradation in Tocharian A). Consequently, an explanation of the grading *ə*|*a*-root subjunctive must address the problem of this salient distribution.

4.6.3 COMPARATIVE EVIDENCE

Whereas the origin of the grading *ə*|*a*-root subjunctive is debated, that of the *na*-presents is not: it is generally accepted that the nasal presents of Tocharian go back to nasal presents in Proto-Indo-European. However, there are two important things to be noted: first, the nasal presents have resulted from the generalisation of different types and, second, they have been productive in pre-stages of Tocharian. Yet this does not in any way undermine the ultimate derivation of the nasal presents from Proto-Indo-European nasal presents; moreover, some nasal presents do have good cognates outside Tocharian. Perhaps the definitive argument for the derivation from Proto-Indo-European nasal presents is that there is simply no other source the nasal presents could go back to.

Phonologically, *na*-presents continue Proto-Indo-European nasal presents to seṭ-roots, where the nasal was infixed before the root-final laryngeal; this root-final laryngeal was then vocalised to *a*. Thus, Toch. √-*na*- derives from PIE *√-*nH*-, where the *n* was an infix in a root in *-*H*: *√*H*- → *√‹*n*›*H*-. In Proto-Indo-European, a full grade *e* moved from the root to the ending, i.e. 3sg. **CCnéH-ti*, 3pl. **CCnH-énti*.

Further, the type was not restricted to roots in *-H*, but it was originally probably also found with roots in *-u*, e.g. 3sg. **CCnéu-ti*, 3pl. **CCnu-énti*; at least, it is suggestive to derive the independent suffix *-neu-* from a wrong segmentation of such a nasal present. In Tocharian, *na*-presents display no traces of older gradation: if any vowel alternation arose, e.g. **no* ~ **na* < **neh₂* ~ **nh₂*, it was ultimately neutralised, as well as consonant alternations like **ńe* ~ **na* < **neh₁* ~ **nh₁*. The *neu*-present type has not been preserved as such and at least some must have ended up as *na*-presents (others may have been extended to become *nəsk*-presents).

As in many other Indo-European languages, *na*-presents must have been productive in Tocharian. There are some Tocharian verbs with a *na*-present and a good Indo-European etymology, where the Proto-Indo-European verb formed no nasal present. In other cases, Tocharian *na*-presents are found with secondary roots, so that it is certain that the *na*-presents are secondary, too. As an example of a *na*-present that is probably secondary for etymological reasons, we may cite TB *kərsa-*, TA *kärsā-* 'know', which is related to Hitt. *karaššiezzi* /karsiiet^{s}i/ 'cuts' (through 'distinguish'; see LIV2: 355; Kloekhorst 2008b: 454-455); there is no proof of a nasal present for this verb. Nasal presents to secondary roots are relatively frequent, found to roots in *-sk*, *-tk*, *-t* and to denominative verbs. Verbs in *-sk*, discussed in detail by Hackstein (1995: 167-202), go back to *sk*-presents, so that *na*-presents like TB {pləsk-na-} to *pləska-* 'think' must be secondary; the same is true of nasal infix verbs in Tocharian A like {mās‹n›kā-} to *māska-* 'be difficult' (on which see below). Likewise, verbs in *-tk* go back to *sk*-presents to roots with a final dental, as shown by Melchert (1977). Although most of these have become *ṅk*-presents, TB has *na*-presents such as {kətk-na-} to *kətka-* 'cross'; both the *na*-presents and the more frequent nasal infix presents to these secondary *tk*-roots are themselves secondary, too. Verbs with a *t*-extension are not frequent, but TA {kräṣt-nā-} to *kräṣtā-*, TB {krəst-na-} to *krəsta-*, both 'cut' are related to *kərsa-* 'know' cited above, and TA {kot-nā-} to *kota-*, TB {kawt-na-} to *kawta-* 'chop', as well as TA {koṣt-nā-} to *koṣtā-* 'kill' are evidently related to TB *kaw-*, TA *kāw-* 'kill'. How exactly the *t*-extensions arose is unclear, but most probably they originally formed a stem, for instance the present; consequently, *na*-presents to *t*-roots are very likely to be secondary. In the same vein, TA {spālt‹n›kā-} to *spāltkā-* 'try' must be a secondary nasal infix present because the verb is obviously derived from the noun *spaltäk* (TB *speltke*), a loan word from Iranian (Adams 1999: 719).

Despite the partly secondary character of the *na*-present (because allomorphy was levelled) and its partly secondary distribution (because many verbs have acquired a *na*-present at a later stage), there are some convincing etymologies that show that the type as such is old.

TA *kätā-* and TB *kəta-* 'strew' form a *na*-present: TA {knā-} (for {kätnā-}) and TB {kətna-} (with an older variant {kənta-}). The verb is to be derived from PIE **(s)kedh₂-*; the Tocharian *na*-present is matched by a.o. YAv. *sciṇdaiieiti* 'breaks, destroys', OKhot. *ha-tcañäte* 'id', Gk. σκίδνημι 'scatter' and possibly Lith. *kedènti*, *kedìnti* 'pick, trousle' (LIV2: 550).

TA *tärkā-* and TB *tərka-* 'let go' form a *na*-present: TA {tärnā-} (for {tärknā-}) and TB {tərkna-}. The verb has a good cognate in Hitt. *tarna*^{i}- 'let go', which also forms a nasal present. Kloekhorst reconstructs the root as *$ter^{(\acute{k})}h_{1/3}$- (2008b: 846-848; see also LIV2: 635): in principle, one would reconstruct a PIE **TerKH-*, but 1) the velar can only drop in Hittite if it is **k* or **Ḱ*, 2) Tocharian excludes **d* which would become *t*^{s}, 3) **h*$_2$ would have yielded *ḫ* in Hittite, and 4) **d*^{h} and **k* or **Ḱ* are not tolerated in one root.

TA *kälā-* and TB *kəla-* 'lead, bring' have gemination in the present that must reflect a *na*-suffix, cf TA {källā-} from {kälnā-}. In Tocharian B, the present was recharacterised with an *sk*-suffix: {kəlla$^{\S\S ə}$/$_{ske}$-} from older {kəlla-} for original {kəlna-}. The verb probably goes back to PIE **kelH-* (LIV2: 349; Hackstein 1995: 315; Kim 2009: 15), further attested in Lat. *excellō*, *-ere* 'excell' and Lith. *keliù*, *kélti* 'lift, raise'. The *na*-present could have a parallel in the Lat. present.

TA *mäwsā-* and TB *məwsa-* 'lift' form a *na*-present: TA {mäwsnā-} and TB {məwsna-}. The verb is probably to be connected with Skt. *moṣ*$^{(i)}$- 'take away, rob' (LIV2: 445), which matches the Tocharian *na*-present with a nasal present 3sg. *muṣṇā́ti*.

Next to the TA and TB causatives of TA *täl-*, TB *təl-* 'lift up' (TA inf. *tlässi*, TA 3sg.prt. *cacäl*, TB inf. *talästsi*, TB 1sg.prt. *cālawa*), a poorly attested base verb 'lift, bear' is only found in Tocharian B. Active present forms show a geminate *ll* which suggests an older *na*-suffix, i.e. {təlla-} from {təlna-}, and middle present forms seem to be built on a stem {tləna-} (3sg.prs.mid. *tlanatär-ñ*, 3pl.prs.mid. *tlanantär-ñ*), although a crossed stem {təlləna-} is attested in at least one form, *tällanantär-ne*. Despite the uncertainties about the synchronic analysis, an older nasal present is ascertained, and it finds its parallel in e.g. Lat. *tollō* 'lift', OIr. *tlenaid* 'steals, carries away', and probably Gk. ἀνατέλλω 'bring forth, make rise up', all from well attested PIE **telh*$_2$- 'lift' (LIV2: 622).

TB **səyka-* 'take a step' – without Tocharian A cognate – forms a *na*-present {səykna-}. The verb must go back to PIE **seik-* 'reach', attested in a.o. Gk. ἱκά̓νω, ἱκνέομαι 'come, reach' and Lith. *síekti* (*siẽkti*) 'strive for, try to reach' (the acute of *síekti* is unexpected; LIV2: 522). On the basis of the Gk. prs. ἱκνέομαι we can reconstruct a *neu*-prs. for Proto-Indo-European, which was apparently replaced by a *na*-prs. in Tocharian.

TB *t*^{s}*aka-* 'prick, bite' – without Tocharian A cognate – forms a *na*-present {t^{s}akna-}. The traditional etymology of this verb connects it with Gk. δάκνω 'bite; sting' and Skt. *dáśati* [3sg.prs.] 'bite', root *daṃś-*, which go back to PIE **denḰ-* 'bite' (e.g. Adams 1999: 731; LIV2: 117-118). For Tocharian, we have to assume that the nasal in the root was dissimilated before the nasal suffix, also found in Greek. Now that Ringe has proposed an alternative etymology (1991: 71; 1996: 23, 24) the match of the Greek and Tocharian nasal present has become less valuable. With the argument that the meaning fits better, he rather connects Lat. *fīgō*, *-ere* (OLat. *fīvō*, *-ere*) 'fix, fasten, stab' and Lith. *dýgti* 'sprout', which derive from PIE **d*^{h}*iHg*^{w}- 'stab' (LIV2: 118, 142). In my view, both connections are possible as far as the meaning is concerned:

'cause pain', one of the meanings posited by Ringe for Tocharian, is of course easily derived from 'prick', and it is even found in Greek as well, where δάκνω can also mean 'wound'. However, Ringe's etymology has the slight advantage that it accounts for stable *a* in the Tocharian root; even though it offers no explanation for the Tocharian stem pattern, it is at least a possible alternative.

Despite its irregularities, the *na*-present of 'know', TA {knāna-}, is evidently old, too.

In sum, a large part of the *na*-presents is demonstrably secondary, but the type as such is certainly old: a small nucleus of *na*-presents can be shown to have good morphological cognates in Indo-European.

4.6.4 *ṅk*-PRESENTS

Next to the *na*-presents discussed above, both languages have a category of *ṅk*-presents where the nasal is infixed before a root-final *-k*, e.g. TB *pəyk-* 'write' → prs. *pəy‹n›k-* or TA *kätkā-*, TB *kətk-* 'cross' → prs. TA *kätäṅkā-* from {kät‹n›kā-} and TB *kəttəṅk-* from {kət‹n›k-}. As it turns out, the first type with one closing consonant (not counting the *y*) is extremely rare compared to the second type with two closing consonants. With only very few exceptions, the first type is inherited and the second type is secondary: it is especially frequent with secondary root types like *tk*-roots (in Tocharian A and B) and *sk*-roots (in Tocharian A only). The second type must be a later subtype of the *na*-presents.

There are two arguments that the *ṅk*-present type is largely secondary: 1) functionally, it is completely identical to the *na*-present type, semantically (both are transitive) as well as morphologically (both pattern with the same subjunctive and preterite stems); 2) *ṅk*-presents are only found with roots in *-k*, so that they are almost fully in complementary distribution with the *na*-present type. Below, I will discuss the second argument; for the first, I refer to 2.6.9 (p 111) and 2.7.9 (p 136), respectively.

ṅk-presents are formed to a limited set of roots that share formal characteristics: in Tocharian A, 8 verbs have a root ending in *-tk*, 5 have one in *-sk*, 1 in *-lk* and 1 in *-rk*; in Tocharian B we find 6 in *-tk*, 1 in *-k*, 1 in *-lk* and 1 in *-rk*. This peculiar distribution strongly suggests that the division between *na*-presents and *ṅk*-presents is secondary. Theoretically, it can have come about in two ways: either nasal infix presents were lost except in particular roots ending in *-k*, or they arose by some development conditioned by a final *-k* of the root. In the former case the category of nasal infix presents is archaic, in the latter it is recent. As I will argue, both principles have been at work, but most of the nasal infix presents are recent and only three are archaic.

First, I will discuss the verbs with an old nasal infix present, and then I will discuss the relationship between the *na*-presents and the secondary *ṅk*-presents.

TA *päyk-*, TB *pəyk-* 'write'

The word for 'write' is strikingly parallel in both languages: TA *päyk-* 'write' as well as TB *pəyk-* 'id' have a preterite-subjunctive stem in *a* with *a*-grade (TA *ā*-grade) and a corresponding preterite participle: TA *peka-*, ptc. *pāpeku*, TB *payka-* (sbj. *páyka-*, prt. *payká-*), ptc. *papaikau*. The difference is confined to precisely the present, where Tocharian B has a nasal infix present {pəynk-}, but Tocharian A has {päyk-}, a rare formation, certainly in view of the preterite-subjunctive. Since the Tocharian B verb stands out among the nasal infix presents in having a rare gradation pattern and only a single closing *-k* instead of a cluster in *-k*, it is not likely to be secondary; consequently, the nasal must have been lost in Tocharian A.

As there is no morphological model for the loss of the nasal in Tocharian A, it must have been lost through sound change. The cluster *nk* <ṅk> is abundantly attested with good correspondences to Tocharian B cognates, so that a following *k* cannot be a sufficient condition. However, heavier clusters of the type *nkt* and *nkts* were indeed resolved: *nkt* became *nt* as in TA *opänt* 'in the middle' ~ TB *epiṅkte* 'within' and TA *pänt* 'fifth' ~ TB *piṅkte* 'id';[796] *nkts* became *nts* as in TA *ents-* 'seize' from **enks-* (cf TB *enk-*; see Adams 1999: 78; Peyrot 2007b: 800). Thus, a preform like 3sg. **piṅkträ* or inf. **piṅktsi* must at first have developed into **pinträ*, **pintsi*;[797] subsequently, the *k* was restored at a time when the cluster *ṅkt* was still not tolerated, so that the result had to be *kt*. The fact that there are many words where we find clusters with *ṅk*, like *ṅks*, *ṅkṣ*, *ṅkt* and so on, is no decisive counterargument, since in all these words there is always alternation with variants with lighter clusters: in *päyk-*, it must have been the limitation of the *n* to the present that made the generalisation of *n*-less variants possible.

The etymology of Proto-Tocharian **pəyk-* is obvious: it is related to a.o. Skt. *piṁśati* [3sg.prs.act.] 'adorn, form' and Lith. *piešiù*, *piẽšti* 'draw, write', Sl. *pišǫ*, *pьsati* 'write', which go back to PIE **peiḱ-* 'form' (LIV2: 465-466). Also clearly related is Lat. *pingō*, *-ere* (LIV2: 464), which received its *g* instead of *k* through the nasal infix. Thus, we can equate the Proto-Tocharian nasal infix present with the ones found in Sanskrit and Latin.

TA *läyk-*, TB *layka-* 'wash'

The reason to discuss the verb for 'wash' here is first of all Tocharian A *läyk-* (tr.), which has a peculiar stem pattern only matched by *päyk-* 'write' and *säyp-* 'anoint' (on which see below): prs. {läyk-}, prt.-sbj. {lāyka-}, prt.ptc. *lāleku* (see also 2.6.8, p 109). In Tocharian B, there are two verbs, a transitive $^{ṣə}/_{se}$-prs. {ləyk^{ṣə}/$_{se}$-} and an intransitive *o*-prs. {layko-} with prt.-sbj. {layka-}. In spite of the difference in

[796] In this case, it is also possible that the ordinal suffix *-t* was added directly to *päñ* 'five'.

[797] Similar constellations may have been found in the 2sg. **piṅktār*, 2pl. **piṅkcär* and possibly 1sg. **piṅkmār*. The 1pl. and 3pl. very probably had an epenthetic vowel, i.e. **piṅkämträ* and **piṅkänträ*, respectively.

valency, the latter is probably to be compared with the Tocharian A verb, its *o*-present being a productive formation to the prt.-sbj. *layka-*, which can directly be equated with the Tocharian A stems.

Evidently, the reconstruction of an old nasal infix present **ləynk-* for Tocharian A *läyk-* is less certain than that of **pəynk-*, but it is the most economical explanation of the strange pattern, and, moreover, there are parallels in Indo-European. Proto-Tocharian **ləyk-* can be connected with the Lat. nasal infix present *pollingō*, *-ere* 'wash off (corpses)' and Lat. *liqueō*, *-ēre* 'be fluid' (Hackstein 1995: 122-123), which on the evidence of OIr. *fliuch* 'humid' goes back to PIE **uleik^{w}-* (LIV2: 696-697).

As noted above, a third Tocharian A verb with this pattern is *säyp-* 'anoint': its present is {säyp-} and the preterite-subjunctive {sāypa-}. However, the historical explanation of this verb is full of problems: Tocharian B *sanapa-* 'anoint' offers a fine semantic match and a certain similarity in form – including, indeed, a nasal – but details are difficult. Most problematic is the absence of any trace of *y* in the Tocharian B verb. Further connections of *säyp-* are also doubtful, the best being an improbable root **seib-* 'let flow' with *-b* (LIV2: 521). Even if Greek εἴβω 'let flow' is not related and the Germanic family of a.o. MDu. *sipen* 'drip' and MHG *sîfen* 'flow' can be explained from a geminated **-p* or **-b^{h}*, the comparison does not inspire confidence because of the late and poor attestation of the root.

PT **sərk-* 'be good; make good'

In both languages there are forms with an apparently nasal-infixed root *sərk-*, *srənk-*. Only few forms are attested and it is difficult to establish the meaning and the stem pattern of these verbs. As shown by the Sanskrit parallel to the passage where one of the key forms, *srañciyeṃ*, is attested, the meaning traditionally assigned to TB *srənk-*, "in Wallung bringen" (Thomas 1964: 254), is wrong. Pinault (2008: 117-118) rather argues for "être soucieux, préoccupé de", whereas Schmidt (2008: 330) opts for "[eine Speise] zubereiten".[798] In my view, the latter is correct because it yields a transparent and straightforward rendering of the relevant passage, in line with the Sanskrit parallel.

B107a1
tāu oṅkorñ(aï) srañciyeṃ
'They prepared the porridge.'[799]

[798] His translation on p 321, "sich daran machen, zuzubereiten", suggests that the Tocharian verb has an additional semantic component 'begin'. Although this nuance is indeed found in the Sanskrit parallel, it is not inherent in the meaning of the Tocharian verb.

[799] Gnoli (1977: 109, l. 17-19): *tatas tā aṣṭau dohayitvā sphaṭikamayyāṃ sthālyāṃ ṣoḍaśaguṇitaṃ madhupāyasaṃ sādhayitum ārabdhāḥ* 'Then, after they had milked the eight [cows], they began to prepare the milk porridge, sixteen times concentrated, in a rock-crystal bowl.' (Pinault 2008: 160; Schmidt 2008: 321).

Another relatively good passage is the following, where anything like 'boil' is evidently excluded. Although the precise meaning unfortunately remains obscure to me, it is certain that the overall sense of line 18c is positive, whereas fear for old age is negative: apparently fear for old age is tempered.[800]

AS7Ma2[801]
/// kektseñmeṃ päst ¦ palsko skainaṃ tsalpästsi • [18b]
cmelaśc alloṅkna ¦ sraṅkäṃ proskai ktsaitsñe(sa) • [18c]
yneś ran(o) lkāṣäṃ ¦ ktsaitsñe tsuwai (sru)kalyñ(e) 18
'... he tries to free [his] mind from the body; for other births, he settles [his] fear for old age; and manifestly he sees old age up to death.'

The situation in Tocharian A is still worse, the following being the best passage.

A343a2
(kᵤya)l (pa)t ñi enaṣlune mā (kaś to)räṣ el essik ats sräṅkā(t) ///
'Or why do you prepare to give gifts ..., not paying attention to my command?'[802]

Malzahn (forth.b) discovered a possible causative to this verb, in a passage where again the correct translation is not obvious.

AS7Na3-4
śak pärkawänta pyapyai ailyñentse tuk-yaknesa sarkäṣṣälle •
'The ten profits of donating flowers can be achieved [?] in this way.'[803]

With the few but nonetheless varied examples it is difficult to give a unified meaning of the verb – on the assumption that they actually belong together, of course. In my view, three of the examples above can be captured with an abstract 'make good; put in order'. This sense is perfectly compatible with B107a1, where anything from 'prepare' to 'put in order' would do; in AS7M 'settle' yields an acceptable translation, and it can easily be derived from 'put in order', 'make right'; the example in AS7N might be understood as 'be organised; be fixed'. The most difficult is A343, but if that clause is translatable as we have it (in fact, a crucial part may be lacking), 'prepare' in the sense 'plan to' is certainly an option; alternatively, one might think of 'want; insist' or 'continue'.

[800] AS6Ea1 *sārmäśke wi sräṅken-ne* • is of no use.
[801] Verse: metre 4 x 5 ¦ 7 (5 ¦ 4+3).
[802] Schmidt's most recent translation (2008: 330) is not better, only more vague: "(Oder warum) läßt du es dir unter Mißachtung meines Befehls angelegen sein, eben dennoch Gabe zu geben?".
[803] Perhaps we can compare Lévi (1932: 149; Sanskrit Mahākarmavibhaṅga 74) "Telles sont les dix qualités qu'on a si on donne une simple fleur."

If the example in AS7N is judged particularly problematic, it could be argued that *sarkäṣṣälle* is not related, after all. However, there are independent arguments to take the other forms as nasal infixed presents, so that they must derive from a root *sərk-* in any case:

1) no non-present forms *with* an internal nasal are attested – such forms would prove that the nasal belonged to the root and not to a suffix;
2) a root **srənk-* is too "heavy", both from a Proto-Indo-European and a Tocharian perspective – the only way to make it "light" again is to analyse the nasal as an infix;
3) the correspondence between TB {s(ə)rənk-} without final *a* and TA {sränkā-} with a final *ā* is only regular if both are nasal infix presents.

Thus, if one wanted to exclude *sarkäṣṣälle*, this would automatically imply the existence of *two* roots *sərk-*.

As far as its form is concerned, the root *sərk-* is immediately reminiscent of *ṣərk-*. The latter verb is found in both languages, usually glossed as 'excel, surpass' (cf Thomas 1964: 149, 250, "übertreffen"). Both TA *ṣärk-* and TB *ṣərk-* are completely regular *sk*-causatives without base verb, cf e.g. TB 3sg.mid.prt. *ṣārkate*, prt.ptc.2 *ṣeṣṣirku*, *-oṣ*, and TA 3sg.mid.prs. *ṣärkäṣträ*, prt.ptc.2 *ṣaṣärku*. If *sərk-* and *ṣərk-* are related, the latter must have been the causative to the former (see Winter 1980b: 555[804]), but not on the synchronic level. That is, TB *sarkäṣṣälle* is probably the synchronic causative to TB *sərk-*: *ṣərk-* must be the old causative and *sarkäṣṣälle* a new one (for the initial palatalisation, cf 2.5.4, p 73). Semantically, the relationship between *sərk-* and *ṣərk-* can be understood as 'make good' versus 'be good' (i.e. 'be better'). The problem with this comparision resides in the valency: the base verb *sərk-* is transitive, whereas the derived causative *ṣərk-* is intransitive. Without having a definite solution for this problem, I propose the following: all forms of *ṣərk-* are middle, which could have cancelled one actant;[805] the fact that *sərk-* is transitive must have been caused by the nasal infix present. Unfortunately, it cannot be decided whether **ṣərk-* was derived from this nasal infixed transitive verb, or from yet another verb that was intransitive; in the latter case, the intransitive value of the causative would be easier to understand.

The Tocharian root *sərk-* has a probable etymology in Hitt. *šarku* 'eminent, powerful', *šarni(n)k-zi* 'compensate', *šarkiške/a-zi* 'be good' and Lat. *sarciō* 'patch up, repair' (LIV2: 536; Kloekhorst 2008b: 734-735, 736-737; originally Kronasser 1957: 127),

[804] However, his "steigen lassen" for *srənk-* can be discarded. In a later article, he seems no longer to believe in a connection between *srənk-* and *ṣərk-*, which makes him abandon the connection with Hittite (1997: 189).

[805] The only active form I know of is *ṣarkṣäṃ* IT524b2. As its context is fragmentary, *ṣarkṣäṃ* could actually be transitive.

which presuppose a root PIE **serḱ-* (or **serk-*).[806] Probably, the root **serḱ-* meant 'be good', which is directly reflected in Hitt. *šarku* and *šarkiške/a-^{zi}*. The Tocharian nasal present can be compared to the *nin*-infix present of *šarni(n)k-^{zi}*, which may reflect a Proto-Indo-European formation.[807]

secondary *ṅk*-presents

Since secondary *ṅk*-presents are phonologically distributed, their explanation must involve a sound law. In view of the sound developments with nasal clusters, namely *tn* > *n* in Tocharian A and *tn* > *nt*, *pn* > *nm* in Tocharian B, the assumption of a metathesis of *kn* to *nk* is only natural. Questions to be addressed are:

1) do the two languages display the same outcome of the sound change;
2) why do we find <ṅkā> in Tocharian A and <ṅkä> in Tocharian B;
3) how should we explain the existence of *na*-presents to roots in *-k*;
4) why do we find *na*-present forms next to *ṅk*-present forms in TB?

I will try to treat these questions, of which some are connected, systematically below.

sub 1) All instances are found with roots in *-k*, and in both languages roots in *-tk* are the most frequent. Thus, Tocharian A and B agree in a having undergone a sound change *tkn* > *tnk*. Apart from *-tk*, we find *-rk* and *-lk* each once in both languages, and several instances of *-sk* in Tocharian A only. As I argued above, TA *sräṅkā-*, TB *srəṅk-* might be old and need not be secondary. Although independent proof is not available, I am inclined to take *-lk* to be parallel to *-rk*: it is also isolated, and phonologically comparable. Consequently, there is no proof of metathesis after resonants. Tocharian A *-sk* is a different matter. It is conceivable that a metathesis

[806] In view of the new interpretation of the meaning, Adams' connection of TB *srəṅk-* with Gk. στραγγός 'twisted' (1999: 722), for which he assumes a development 'twist' > 'whirl' > 'boil', can be discarded.

[807] Evidently, I cannot accept Schmidt's connection with Lith. *sérgėti* 'guard', Skt. *sūrkṣati* 'care about' and OIr. *srengaid* 'pull' (2008: 330). According to him, the semantic link between 'pull' and 'care for' is supported by the Tocharian B – Old Uygur bilingual pair **:** *sarkoy*◌̂ **:** *tartsar*◌̂ **:** U5208a5. Although the reading is relatively clear, the interpretation is not – contrary to what Schmidt's presentation suggests. The text consists of Tocharian B words followed by Old Uygur equivalents, but it is not a dictionary: in a number of cases, the entries clearly belong together, forming a story. As long as the relationship between the different entries is not clarified, the interpretation of the word pairs remains uncertain. Schmidt correctly interprets *sarkoy* as a 3sg.opt., apparently of a subjunctive stem *sárka-*, which would in fact fit the forms of *sərk-* given in the main text; and indeed, *tartsar* is a 3sg. conditional form of *tart-* 'pull' (Clauson 1972: 532). However, a translation 'if he pulled' for *sarkoy* is not in line with the other attestations of *sərk-*. As far as I can see, the only way the Tocharian and the Uygur words can be matched, is to take *tart-* in one of its many extended meanings (among which 'weigh; take; bring'), namely 'procure, draw together' (Clauson l.c.). Otherwise, I would consider *sarkoy* to stand for *tsarkoy* and take *tart-* to mean 'suffer' (Clauson 1972: 533). Of course, it cannot be completely excluded that there was a second verb *sərka-* meaning 'pull, draw'.

skn > *snk* was undone in Tocharian B, but since all nasal infix presents, including the original ones, were found with *-k*, it is also possible that the type was further regularised in Tocharian A.

sub 2) In Tocharian B, all *ṅk*-presents end *-ṅk-*, while in Tocharian A, all end in *-ṅkā-* except *päyk-* and *läyk-* (which are synchronically no nasal presents); in both languages, all non-present stems end in *-ka*. Evidently, the lack of *ā* in TA *päyk-* and *läyk-* must be original since it is exceptional. Conversely, the regularity in the other verbs suggests analogical restructuring. In my view, a sound law whereby *kna* would have become *nk* is improbable. As alternative explanations, we could assume that a) *ṅk*-presents were lined up with the original nasal infix verbs in *nkə* in Tocharian B, b) another sound law is responsible for the change of *nka* to *nkə*, c) some verbs originally had no root-final *-a* (**nə* < **-nu-*) and this type was generalised in Tocharian B, or d), as a variant of c), the type originally had *nk* throughout, but root-final *ā* was generalised on the basis of the other stems in Tocharian A. In view of the regularity of the type, option c) can be discarded; d) is not very likely either because *tk*-verbs originally had no root-final *a*, so that it was most probably introduced at once and in all stems. For b), the only sound law I can think of is the reduction of *a* to *ə* in posttonic position, preceding a heavy syllable (4.4.6, p 398). Although all *nka* were found in posttonic position, there were not many forms where it was followed by a heavy syllable; notably, not more than in any other paradigm in *-a*. If b) offers no solution, the only remaining option is a), although it is disquieting that the number of original nasal infix verbs is so small. Nevertheless, they clearly formed a type and there was no other comparable type, which made the new *tnk*-type liable to influence.

sub 3) (exclusive) *na*-presents to roots in *-k* are not infrequent at all in either language. However, most of these have simple *-k*, not a *k*-cluster: these verbs need not concern us here (TB *pəynkə-* is no counterexample because it must be old). The same reasoning can be applied to roots in *-rk*, as there is no proof that *rkn* was ever metathesised to *rnk*. This rids us of the only remaining example in Tocharian A, {tärnā-} to *tärkā-* 'let go', and of {kərkna-} 'rob', {tərkna-} 'let go' and {tˢərkna-} 'torment' in Tocharian B. In Tocharian B, there is one *na*-present form to a *tk*-verb without nasal infix forms next to it, 3pl.ipf. *latkanoyeñ-c* 'they stripped you', but we may safely assume that those nasal infix forms are not attested by chance. Two Tocharian B verbs in *-sk* remain: {pləskna-} 'think' and {mrawskna-} 'feel weary'. For the discrepancy between Tocharian A and B in *sk*-verbs, I refer to point 1) above, and to 4.6.10 (p 450) below.

sub 4) The variation of Tocharian B *ṅk*-present forms with *na*-present forms has no clear chronological distribution (Peyrot 2008a: 144-145), and I am unable to see any morphological difference between forms with *-ṅk-* and the ones with *-na-*. Therefore, if one would want to argue that the metathesis of *tkn* to *tnk* took place only in some forms of the paradigm, so that both metathesised and original forms could survive, this is impossible to prove. Consequently, I opt for the simplest solution, that is, all *na*-forms result from secondary restoration of the *na*-suffix.

Evidently, as soon as some *na*-forms had been created, the difference could be used for all kinds of ends, including metrical purposes.

conclusion

As shown above, at least three nasal infix presents with root-final *-k* are original: *pəyk-* 'write', *ləyk-* 'wash' and *sərk-* 'make good'. Their archaic character is not only implied by the isolated root structure in Tocharian (with a single root-final *-k* or *-rk*) and by the unique gradation pattern of *pəyk-* and *ləyk-*, but additionally by comparative evidence of Indo-European. Conversely, most other nasal infix presents are certainly secondary, resulting from a sound change that affected a subset of *na*-presents to roots in *-k*. The *ṅk*-presents to roots in *-tk* inevitably arose by sound change, whereas for roots in *-sk* the evidence is contradictory: either they came about by sound change, or the nasal infix type eventually spread to these roots by analogy.

My investigation of the *ṅk*-presents has revealed no special connection with the Proto-Indo-European perfect; instead, it seems that as a type, *ṅk*-presents reflect Proto-Indo-European nasal presents, just like *na*-presents. There is no comparative evidence suggesting that the grading subjunctive corresponding to TA {kät‹n›kā-}, TB {kətt‹n›k-} 'cross' as attested in TA 3sg. *katkaṣ* {katka-ṣ}, 3pl. *kätkeñc* {kätkā-ñc}, or TB 2sg. *kātkat* {kátka-t}, inf. *katkatsi* {kətka-tˢəy} reflects a Proto-Indo-European perfect.

4.6.5 ROOT AORIST

The Tocharian nasal presents correspond to a root preterite with root-final *-a*. In addition, this preterite is characterised by palatalisation of palatalisable initials, in Tocharian B in the whole active and in Tocharian A in the singular of the active; the remaining forms have no palatalisation. As the palatalisation must have spread secondarily in Tocharian B, and the *a*-grade active plural forms of Tocharian A are secondary, too (see below, 4.6.7, p 446), the original paradigm must have had palatalisation only in the active singular: act.sg. **cərka-*, act.pl. and mid. **tərka-*. As noted already by Pedersen, this alternation must go back to the **e* : Ø gradation of the Proto-Indo-European root aorist, whereas the characteristic root-final *-a* of the Tocharian preterite reflects the root-final laryngeal of Proto-Indo-European seṭ-roots (1941: 185). Although direct comparative evidence for this derivation is scarce (cf already Pedersen l.c.), the explanation of the pattern as such is generally accepted (cf especially Schmidt 1982: 368-371; further, e.g. Pinault 2008: 597-598; Kim 2009: 14-16).

Thus, if we adhere to *tərka-* as the example verb, the active singular reflects **terḱH-* and the other forms **trḱH-*:

	PT		PIE		PT		PIE
sg.act.	**cərka-*	<	**terḱH-*	sg.mid.	**tərka-*	<	**trḱH-*
pl.act.	**tərka-*	<	**trḱH-*	pl.mid.	**tərka-*	<	**trḱH-*

Unfortunately, the root aorist of this verb is not directly attested elsewhere, and the same is true of many other verbs. Nevertheless, some examples of correspondences can be adduced: TB 3sg. *ścama* 'stood (up)' ~ Skt. aor. *ástambhīt* 'supported' < *(*h*$_1$*e*-)*stemb*^{h}*H-t* (LIV2: 595); TB 3sg. *śata** (2sg. *śtasta*) 'strew' ~ Gk. ἐσκέδασα (with usual replacement by the σ-aorist; LIV2: 550) < *(*h*$_1$*e-s*)*kédh*$_2$*-t*; TA 3sg.mid. *musāt* 'lifted up' ~ Ved. 2pl.sbj.mid. *móṣathā* 'you will rob' from a stem **m*(*e*)*usH-* (LIV2: 445).

The fact that exact correspondences are relatively few, even compared to the small number of nasal presents with direct matches, is partly due to remodellings or loss of the root aorist in other Indo-European languages, but most of all to the regularisations at the basis of the Tocharian pattern. Although the origins of the nasal present type and the root aorist type are evident, both have spread beyond their original domains: nasal presents have been uniformised to a *na*-type with *x*|*a*-roots. That is to say, in many verbs the root-final *-a* is *not* the reflex of a root-final laryngeal, at least not a direct one: it is a feature of the root concomitant with the *na*-present.

Nevertheless, the pattern is clear: Tocharian nasal presents continue Proto-Indo-European nasal presents, and the corresponding root preterites continue root aorists. This origin is suggested first of all by structural parallels between Tocharian and Proto-Indo-European, but additionally by comparative evidence. Importantly, there is no special link with the Proto-Indo-European perfect other than the gradation pattern and the initial accent; indeed, it is not easy to fit the perfect in the neat correspondence to a well-known Proto-Indo-European type of nasal presents and root aorists (see Strunk 1967).

4.6.6 TRANSFER

As pointed out above in 4.6.1 (p 430), the parallelism between the grading ə|Ø- and ə|*a*-root subjunctives can hardly be explained without recourse to analogical spread from one category to the other. Since the gradation of the ə|Ø-root subjunctive can be accounted for including its stem pattern, whereas that of the ə|*a*-root subjunctive cannot, the spread must have proceeded from the former to the latter. In this section, I will try to give an answer to the question how and why this transfer may have happened.

First of all, such a transfer was phonologically possible. It is usually said that the *e* : ə gradation of the ə|Ø-root subjunctive must show reflexes of Proto-Indo-European **o* and Ø grade because there is no initial palatalisation. As shown in 4.5.3 (p 408), the *e* : ə gradation in the Tocharian *s*-preterite reflects pre-Tocharian **'e* and **ə* grade, i.e., projected to Proto-Indo-European, **ē* and Ø grade. If the same grades are assumed for the ə|Ø-root subjunctive, no more than simple levelling of the unpalatalised initial is needed to account for the *e* : ə gradation *without* initial palatalisation. Phonologically, a transfer of this gradation to ə|*a*-roots needs no further patchwork. It is the most economical to assume that the unpalatalised initial was levelled in the

ə|Ø-subjunctive while the gradation type spread to *ə*|*a*-roots only afterwards, and this is what I think happened. However, even if one had to assume that the gradation transfer preceded the palatalisation levelling, the latter could have taken place independently in the two grading subjunctives.

An important matter is why the gradation type should have spread to exactly the category where we find it. Here I think the answer must be sought in a combination of morphological and semantic properties. As shown by Winter (1980a), *na*-presents and the corresponding grading subjunctives, including subjunctives with initial accent, are predominantly transitive. The same has been claimed for *s*-presents by Hackstein (1995). Of course, *s*-presents do not only combine with grading root subjunctives, but also with *ʾə*/*e*-subjunctives, yet both types are predominantly transitive: although, e.g. *pləw-* 'glide' is intransitive, most others are transitive indeed. Thus, the semantic link between the two root-subjunctives may have been transitivity. The importance of this semantic property in the Tocharian verbal system has been amply demonstrated by Winter in the article referred to above; consequently, it is very plausible that certain regularisations have taken place on the basis of this feature.

Morphologically, the two types are closely connected as well: they are both root subjunctives, the only difference being the root type, i.e. *x*|Ø or *x*|*a*. Although this is a clear formal link between the two categories, it is not exclusive: *e*- and *o*-presents also form root subjunctives. Why these root subjunctives did not shift to the same grading type at first (the spread of the grading type in Tocharian A is clearly secondary compared to its restricted distribution in Tocharian B) may be due to one or more of several reasons: they belong to a different morphological type, with different presents and slightly different preterites; they are intransitive instead of transitive; and they are recent.

Although *e*- and *o*-presents are commonly termed "base verbs" or "Grundverbe", they are secondarily derived intransitives, at least for a large part (Winter e.g. 1961: 92; 1990c: 2535). This must be the reason why they have no initial palatalisation in the preterite and no gradation in the subjunctive, as convincingly argued by Kim (2009). Winter observed that transitive root preterites have initial palatalisation whereas intransitive ones have not, while transitive root subjunctives have gradation and initial accent, unlike intransitive ones (1980a). In itself correct, this formulation is a reversal of what happened historically: as recent creations, *e*- and *o*-presents lacked these morphological distinctions, and because they were intransitive, those morphological distinctions could be reanalysed as markers of transitivity. Thus, *e*- and *o*-presents have no grading subjunctive because their subjunctives are secondary. Conversely, gradation spread from *ə*|Ø-root subjunctives to *ə*|*a*-root subjunctives at an earlier stage, when it was still a productive marker. Only after the break-up of Proto-Tocharian, the grading type was further generalised in Tocharian A, reaching the bulk of derived intransitives as well (on isolated instances of the same development in Tocharian B, see 4.6.8, p 447); however, the initial palatalisation of the root preterite remained restricted to its original domain, so that we

find intransitive grading preterite-subjunctives without initial palatalisation, like TA 3sg.sbj. *kalkaṣ* '(s)he will go', 3sg.prt. *kälk* '(s)he went'.

The question *why* the grading subjunctive spread to *ə|a*-roots reaches the limits of the verifiable. The essential point is whether the grading subjunctive replaced another type of subjunctive or not, which touches upon the prehistory of the Tocharian subjunctive as such. If there was no subjunctive before, the grading subjunctive must have been introduced on the basis of the root preterite. For some reason, a distinction between present and subjunctive was deemed necessary also for this category – since the type spread from *ə|Ø*-roots, we may assume that the category "subjunctive" already existed. If there was a subjunctive before, the problem is that we do not know what it looked like. The simplest assumption is that it was a preterite stem with present endings, or, in other words, a second present from a shorter stem; which is, in fact, how the Tocharian subjunctive can still be described. It is this assumption that I will elaborate upon below, realising that it is just one of many possibilities.

With *tərka-* 'let go' as an example, the Proto-Tocharian inflexion of the *ə|a*-root preterite was *cərka-* in the active singular and *tərka-* in the middle, as attested by both languages. They diverge in the active plural: we find {cərká-} in Tocharian B, and {tarka-} in A. As argued below, the Proto-Tocharian active plural stem form was *tərka-*. If the stems of the "second present" and the preterite were identical, the paradigms could have been:

	act.sg.	prs.	prt.	act.pl.	prs.	prt.	mid.sg.	prs.	prt.	mid.pl.	prs.	prt.
1	*cərka-*	*m*	*wa*	*tərka-*	*mə*?	*mə*	*tərka-*	*mar*	*ay*	*tərka-*	*mtr*	*mte*
2	*cərka-*	Ø	*sta*	*tərka-*	*cə*	*sə*	*tərka-*	*tar*	*tay*	*tərka-*	*cwər*	*cwə*
3	*cərka-*	Ø	Ø	*tərka-*	*n*	*r*	*tərka-*	*tr*	*te*	*tərka-*	*ntr*	*nte*

If such or similar paradigms ever existed, they contained few internal problems: most forms are neatly distinct because of the endings. Of course one might further speculate that quite a few of the middle endings were identical at an earlier stage because they show the results of heavy restructurings (see 4.2.3-4.2.5, p 349), but the introduction of the grading subjunctive stem would never have remedied that, as it was not different from the preterite at all in the middle (the same is true of the possibly identical 1pl. *tərkamə*). The only subset where the grading subjunctive could have been useful is the active singular, since this is where it made the subjunctive different from the preterite. Indeed, we find some homophonous forms there: the 3sg. subjunctive and preterite and the 2sg. subjunctive. The latter may have received its ending *-t* at an early stage, as it is attested in both Tocharian A and B, but the first two must have been homophonous at any rate, since the Ø-ending is still attested in the Tocharian B optative. Possibly, the ambiguity in the 3sg. was sufficient reason, as it is the most frequent and strongest form. Here, the introduction of gradation could have had a high remedial impact: the difference between a 3sg.sbj. *terka-Ø* and a 3sg.prt. *cərka-Ø* would have been sufficiently marked.

4.6.7 PRETERITE PLURAL

An old problem of Tocharian historical grammar is the stem variant of the preterite plural forms of Tocharian A *ä|ā*-root presents. Instead of the expected *ä*-grade we find *a*-grade without preceding palatalisation, i.e. *krasar* 'they knew' vs TB *śärsāre*.[808] Evidently, a simple Tocharian B paradigm without gradation and with palatalisation throughout the active, i.e. 3sg. *śarsa* {śərsá-Ø} and 3pl. *śärsāre* {śərsá-re}, could hardly have been replaced by a paradigm like that in Tocharian A with 3sg. *śärs* and 3pl. *krasar*, even if there had been a good model: there is simply no motivation for such an irregularisation. On the other hand, most scholars are reluctant to project the Tocharian A forms back to the proto-language (cf e.g. Pedersen 1941: 185), since this would ultimately result in reconstructing Proto-Indo-European *o*-grade without comparative evidence.

In my view, the correct solution has been put forward by Jasanoff (1983: 55-57; accepted by Pinault 1989: 147-148). According to him, the Tocharian A pl. stem is secondary, analogically formed after the singular of the accompanying grading subjunctive: sbj.sg. *krasa-*, sbj.pl. *kräsā-* : prt.sg. *kräsā-*, prt.pl. X, X = *krasa-*. I suppose that the reason why Jasanoff's explanation has not found general acceptance is on the one hand that the kind of analogy proposed was considered unusual, and on the other that a good motivation was wanting. Although I cannot improve on the model as such, a motivation for Jasanoff's development can actually be offered.

As I have shown in 2.5.2 (p 56), the synchronic functional load of the prt. stem form *krasa-* is very high: it distinguishes its 1pl. *krasamäs* from the 1pl.sbj. *kärsāmäs*, its 2pl. *krasas* from the pl.ipv. *pkärsäs*, and its 3pl. *krasar* from the sg.mid.ipv. *pkärsār*. The essence of my argument is simple: since it solves so many potential problems through the prevention of stem merger, this stem variant is likely to be a solution to these problems. The forms it would merge with all have the stem variant *kräsā-* (surfacing as *kärsā-*), which is exactly the form we would expect in the plural of the preterite on etymological grounds. Since on the one hand it could not have had the same solution value if the stem form of the plural had been *śärsā-* before, and, on the other, there had been no need whatsoever to replace a stem like *śärsā-*, the pre-form of the preterite plural must have been of the type *kräsā-* or *kärsā-*. Thus, the number of preterite stem variants in Proto-Tocharian is reduced to two, as the same *kärsā-* was already attested for the middle paradigm; the spread of the palatalised initial in Tocharian B is of course trivial.

Although it is not completely excluded that the spread of the palatalised variant in Tocharian B occurred after the introduction of the full grade form, in this case *karsá-* or the like, such a scenario is extremely implausible. First of all, such a

[808] Although Sieg, Siegling and Schulze (1931: 368) list only 3pl. forms, with one 2pl. form restored with a question mark, *tsaramäs* A347a2 proves that the 1pl. and 2pl. were parallel to the 3pl., not to the singular (Schmidt 1974: 50-51; Malzahn 2009: 64).

scenario contains *two* heavy restructurings instead of only one. Second, Tocharian B seems to have been much more tolerant towards ambiguous forms than Tocharian A (see 2.5.2, p 56) so that one may ask whether such a reparation of contrasts should have taken place altogether. Third, the subjunctive and the preterite are in Tocharian B also distinguished by a difference in initial accent for the subjunctive stem and suffix accent for the preterite stem (although admittedly in some cases the accent alone appears not to be sufficiently distinctive). Therefore, the *a*-grade of the Tocharian A plural cannot be used to explain phenomena also found in Tocharian B; at least such explanations should address the problem of the age of that stem variant: in the end, it is definitely secondary, as already shown by Jasanoff.

4.6.8 *E*-PRESENTS

Occasionally, we find grading subjunctives next to *e*-presents, apparently a deviation from the more widespread pattern of grading subjunctives next to nasal presents. Whereas the number of instances is small in Tocharian B, there are quite a number of verbs with this pattern in Tocharian A, if grading preterites are taken as an indication of grading subjunctives, too.

In Tocharian B, we find *srəwka-* 'die' with a present {srəwké-} and a grading subjunctive {sr^{a}/$_{ə}$wka-}; *tˢənka-* 'rise' with a present {tˢenke-} and a grading subjunctive {tˢ^{á}/$_{ɔ}$nka-}; *ləwa-* 'send' with a present {Ĺewe-} and a grading subjunctive {l^{á}/$_{ɔ}$wa-}; and *mərsa-* 'forget' with a present {mərsé-} and a grading subjunctive {m^{á}/$_{ɔ}$rsa-}. As these verbs all have exceptional initial accent in the subjunctive, we could perhaps add *nəwa-* 'roar' with a present {ñewe-} and a subjunctive {nə́wa-}. In 4.7.4 (p 462), I argue that the *e*-grade *e*-presents {ñewe-}, {Ĺewe-} and {tˢenke-} might belong or have come to belong to the *kläp*-type, their *e*-present being a secondary replacement of an earlier ^{ə}/$_{e}$-present.

We are then left with *mərsa-* 'forget' and *srəwka-* 'die'. The verb for 'forget' is a striking member of the *e*-present class because it is transitive, unlike most other *e*-presents. While Winter dismisses *mərsé-* as an innovation for the nasal present attested with Tocharian A 3pl. *märsneñc* (1980a: 430), he has correctly shown that it is the Tocharian B form that is strange, so that one must have a good reason to take it as an innovation; no such reason is offered by Winter. Rather, we must credit Klingenschmitt (1982: 127) for having observed that the Tocharian A form (a hapax legomenon) is in fact uncertain, and for pointing out that the Armenian nasal present *moṙanam* 'forget' is secondary (l.c.), contrary to what Winter argues. The only way out seems to assume that *mərsé-* owes its *e*-suffix to its semantic "middle" properties: just like 'break', 'forget' denotes an event that takes place all by itself, without influence of an agent.[809]

[809] This was argued by Iļja Seržants (now Bergen, Norway) in a lecture at the 2008 Fachtagung of the Indogermanische Gesellschaft in Salzburg.

Thus, there is nothing "wrong" with the *e*-presents of *mərsa-* 'forget' and *srəwka-* 'die': there is no reason to assume that they represent recent innovations. Consequently, we are forced to take their grading subjunctives as analogical after the regular transitive grading subjunctive. Perhaps it was first a transitive verb like 'forget' that was affected by this change, while *srəwka-* followed.

In Tocharian A, the situation is different altogether. Whereas initial palatalisation seems to correlate systematically with transitive nasal presents (Winter 1980a), gradation has spread beyond its original domain. Not only has the full grade spread to the preterite plural, the grading type has become the standard *ä|ā*-root preterite-subjunctive type, on the evidence of such a large number of intransitive *a*-present verbs: *träyk-* 'be confused', *tsälp-* 'be freed', *mläwsk-* 'escape', *läyt-* 'fall off', *wätk-* 'be separated', *wäyk-* 'dwindle', *säyk-* 'overflow', *sätk-* 'spread', *spänt-* 'trust'.

4.6.9 *NASK'ə/E*-PRESENTS

Whereas Sieg, Siegling and Schulze had kept Tocharian A *näsä/sa*-formations (1931: 357-358, class 8) strictly separate from *näsä/sa*-presents (p 361-362, class 10), they are heaped together in the *Elementarbuch* (Krause and Thomas 1960: 214). This is extremely unfortunate because they are not only different phonologically: their stem patterns have nothing in common either. *nask'ə/e*-presents (to take a Proto-Tocharian notation) and the frequent *na*-subjunctives beside them are often adduced to prove that many Tocharian subjunctives are old presents, with new presents created next to them (e.g. Jasanoff 2003: 161). In itself the observation is correct, but it is a serious misrepresentation of the reality of Tocharian verbal patterning: all these verbs have something strange. In this way, the verbs in question give a salient warning that their pattern is recent; indeed, there are so many irregularities that the existence of the whole type can be doubted.

The reason why the type arose was not the lack of an original subjunctive, or the relegation of the present to the subjunctive because of a newly created present. The essence is that there were troubles with the regular type, which called for the recharacterisation of the present, the subjunctive, or both.

In three verbs, the irregularities can be claimed to be of Proto-Tocharian date: TB *pəknaṣṣə/ske-* and TA *päknāsa/ṣä-* 'intend', TB *yəknáṣṣə/ske-* and TA *yäknāsa/ṣä-* 'be careless', and TB *yənmáṣṣə/ske-* and TA *yomnāsa/ṣä-* 'reach'. All these verbs have remarkable *na*-subjunctives. 'reach' is a special case because in that verb almost everything is irregular; it is discussed in detail in 4.3.7 (p 372). The other two, *pəkna-* and *yəkna-*, do not only rhyme, they are also the only two verbs with the aberrant *nāśi*-optative in Tocharian A. I do not know how these two verbs acquired a *na*-subjunctive and the corresponding present, but I suppose that since they form a pair, one of the two verbs is analogical after the other. In order to account for the fact that the *na*-suffix came to adopt subjunctive function, I would assume that the verbs were originally present-subjunctives that shifted to the *na*-present class. As the need was felt to split the present-subjunctive in a present and a subjunctive, the *na*-formation

became the subjunctive and a new present was created beside it. The reasons for the shift to the *na*-class are unclear to me; the best I can think of is adaptation to *pəlskna-* 'think', which is formally and semantically close to *pəkna-*. From there, *yəkna-* could have been affected. I consider it less likely that the two presents *pəkna-* and *yəkna-* preserve something old: the former has only a doubtful etymology in PIE **speḱ-* 'watch' (Adams 1999: 369; LIV2: 575-576), the latter a reasonable one in Lat. *egeō* 'lack', which reflects PIE **h₁e(ǵ)(H)-* (Adams 1999: 494; LIV2: 231), but neither of them offers an explanation for the peculiar stem formation of the Tocharian verbs.

In Tocharian A there is one more example of uncertain value: *yärnā^{sa}/$_{ṣä}$-* 'bathe'. A nasal formation to this verb seems ascertained by the fragmentary line *sāt wäryo yärnā///* THT1154a3 'wash with hot water'; the only other form is inf. *yä(rn)āssi* A227/8a2, where exactly the *nā^{sä}/$_{sa}$*-suffix is restored. However, there are not so many possibilities, as a form with a single *r* would have been subject to syncope (***yrāssi*), and it is very doubtful whether we should posit a form with double *rr* if we have no parallels for that cluster, while we actually have *yärnā///* attested (pace Hackstein 1995: 318). The solid etymology with Hittite *ārr^{i}* 'wash' (which together with the Tocharian points to **h₁erh₁-*) offers no explanation for the possible nasal formation of *yärā-*.

In Tocharian B, we further find the following instances: *kərná^{ṣṣə}/$_{ske}$-* 'deal', *kəllá^{ṣṣə}/$_{ske}$-* 'bring', and perhaps *tərra^{ṣṣə}/$_{ske}$-* 'appease' (yet another probable case, *məllá^{ṣṣə}/$_{ske}$-* 'oppress', is discussed in 4.7.1, p 455). In all verbs, the *na^{ṣṣə}/$_{ske}$*-present was formed when the root or the suffix of the original formation became obscured.

In all non-present stems, Tocharian B *kəla-* (prs. *kəlá^{ṣṣə}/$_{ske}$-*) corresponds perfectly to Tocharian A *kälā-* (prs. *källā-*), a regular *na*-present with grading subjunctive and so on. Both languages show assimilation of the cluster *ln* in the *na*-present, but apparently the geminate could function as a present marker in Tocharian A, whereas the present needed to be recharacterised in Tocharian B. The obvious present marker was *-^{ṣṣə}/$_{ske}$-* and the *ll*-geminate was downgraded to an irregularity without specific morphological function.

With *tərra^{ṣṣə}/$_{ske}$-* and *məllá^{ṣṣə}/$_{ske}$-*, the same principle has probably been at work, but here exact Tocharian A correspondents are unfortunately lacking. If the meaning of *tərra^{ṣṣə}/$_{ske}$-* is approximately correct, it may be related to Hitt. *taranzi* 'they speak' and Lith. *tariù*, *tarýti/ tařti* 'say', Russ. *torotórit'* 'prattle' and go back to a PIE **ter-* (LIV2: 630; Vasmer 1953-58: III, 126); unfortunately, the Tocharian nasal formation has no parallels.

In the case of *kərná^{ṣṣə}/$_{ske}$-*, it was not the suffix that was obscured, but the root, cf the prt. *kəryá-*, the prt.ptc. *käryau*, and e.g. *käryorttau* 'merchant' (TA *kuryart* 'id'). The lack of *y* in the prs. *kərná^{ṣṣə}/$_{ske}$-* and the sbj. *kərná-* shows that it was somehow lost between *r* and *n*; probably, the original subjunctive was **kərya-* (or even grading **kārya- ~ *kərya-*) with a present *kərna-*. The preference to match the roots of both formations led to the spread of the present root *kərna-* (with its present-*n*) to the subjunctive, which called for a new present *kərná^{ṣṣə}/$_{ske}$-*. In any case, the *na*-present reflected in the TB sbj. *kərná-* is likely to be old, as the nasal present is well attested

in other Indo-European languages: Ved. *krīṇā́ti* 'buys', OIr. *crenaid* 'id', OW *prinit* 'id' and e.g. ORuss. *krъnju*, *krenju* 'buy' all go back to a PIE **k^{w}ri-n(e)-h$_2$-* (LIV2: 395-396).

To conclude, in spite of the undoubtedly Proto-Tocharian subjunctives **pəkna-* and **yəkna-*, the system of *na*-subjunctives and *na^{ṣṣə}/$_{ṣkə}$*-presents is marginal and secondary at all events. The pattern is no proof of the allegedly secondary character of the Tocharian present system as such. If anything, it proves that on the synchronic level the contrast between the present and the subjunctive was essential: it could be repaired or recharacterised even at the cost of the match between the subjunctive and the preterite stem.

4.6.10 OTHER PRESENTS

There are two classes that seem to have something to do with nasal presents, but synchronically they are clearly different: the derived *ññ^{ə}/$_{e}$*-presents in Tocharian B and zero *ä|ā*-root presents in Tocharian A. Whereas I have found no systematic treatment of the latter, the former have been discussed in great detail by Hilmarsson (1991b). The reason to discuss the first type here is that it contains a nasal, and, what is much more important, there are some correspondences with regular Tocharian A nasal presents. Inclusion of the second type can only be argued for in an indirect way: it shows some correspondences with Tocharian B *ññ^{ə}/$_{e}$*-presents, and prt.-sbj. *pāla-* ~ prs. *pällā-* 'praise', which displays a geminate *ll*, probably from *ln*, fits actually only here.

Tocharian B *ññ^{ə}/$_{e}$*-present

An overview of the relevant Tocharian B type is found in 2.7.9 (p 136); careful and detailed discussions of the pattern and individual forms can be found in Hilmarsson (1991b: 77-82). The verbs in question are: *kəsk-* 'scatter', *klənt^{s}-* 'sleep', *nəytt-* 'break down', *mənt-* 'destroy', *məyw-* 'tremble', *rəs-* 'stretch', *wəsk-* 'move', and *t^{s}əyk-* 'form'. Whereas *kəsk-* and *nəytt-* have no attested Tocharian A cognate, *klənt^{s}-*, *rəs-* and *wəsk-* correspond to nasal presents: {klisnā-} 'sleep', {räsñā-} ipf. of 'pull', supposing a prs. {räsnā-}, and {wās‹n›kā-} 'move'. In addition, the prt.ptc. *tsātseku* 'formed', cognate of TB *t^{s}əyk-* 'form', could fit a nasal present, but the present is not attested. A clear match to the other Tocharian A type is offered by TB *mənt-*, which corresponds to the Tocharian A prs. {mäntā-}, as opposed to the prt.-sbj. {māntā-}. Whereas the pattern of TB *məyw-* is not completely certain, its Tocharian A cognate prs. {me-}, prt.-sbj. probably {māywā-} is irregular, as the present shows no *w*.

Although there are only three etymological matches with Tocharian A nasal presents, it is striking that all three end in *-s*. In view of the gradation pattern of *kəsk-*, we can probably add this verb as well: it shares all relevant characteristics. If we further discard the verbs without Tocharian A cognate, namely *nəytt-* and *t^{s}əyk-*, and leave out *məyw-* because it is irregular, the statistics are clearly in favour of a connection with the nasal presents. Moreover, there is another argument: with

"regular" nasal presents, it was impossible to decide what happened to Tocharian B verbs in *sk*; possibly, they ended up here, for reasons still to be explored.

If this class has indeed started out as a subtype of normal nasal presents, the question is why it came about in the first place, and, naturally, how. In the case of *sk*-roots, there seems to be little wrong with a sequence *snk* or *səṅk*, if that was the result of a metathesis of *skn*. However, it is possible that *skn* caused problems because it was *not* subject to metathesis. This is certainly true of some of the other verbs, like *mənt*-, which would certainly have lost its *t* in a combination like *məntna*-; likewise, problems will have arisen in *klənsna*- or *klənᵗsna*- and probably in *məywna*-, too. Theoretically, there are many possibilities: in *skn* the *k* may have been lost, which made restoration necessary, one of the *n*'s of *klənsna*- could have been dissimilated, or the *w* may have been lost in *məywna*-. With the small number of examples I dare not formulate sound laws to account for the class shift, but I consider it likely that something of this kind happened.

It is not much easier to pinpoint *how* the class arose. Because of the geminate *ññ*, it is unlikely that the new suffix simply developed out of the original one: there is no reason why, e.g. an *ˀə/e*-suffix should have been added to *na* or some variant of it, and such an extension would not have given the actual present marker. Therefore, the *ññə/e*-suffix must have been taken over from somewhere else, probably the *ññə/e*-denominatives, to provide a new present, or to mark the actual present in a better way. In this process, the root-final *-a* was apparently lost: we find *kəska*- etc in all stems, except in the present {kəskəññə/e-}. It seems best to see in the disappearance of this *a* an instance of analogical removal; perhaps the *ə* came along with the present suffix. Otherwise, one would have to operate with the loss of *a* by sound change as discussed in 4.4.6 (p 398). The latter solution is problematic because it requires initial accent, e.g. 3pl. *kə́skaññen*, whereas the actual accent is *kəskáññen*, which makes it unverifiable.

Tocharian A *ä|ā*-root present

The Tocharian *ä|ā*-root present is a small category of poorly attested verbs. Whereas the existence of the type is absolutely certain, the appurtenance of several of its members is putative. The class is characterised by root-final *ā* throughout, and a difference between *ä*-grade in the root in the present versus *ā*-grade in the preterite-subjunctive. The verbs that I have assigned to this class (2.6.10, p 115) are prs. {päywā-} ~ prt.-sbj. {pāywā-}* 'blow', prs. {plänkā-} ~ prt.-sbj. {plānkā-}* 'pinch', prs. {mäntā-} ~ prt.-sbj. {māntā-} 'hurt', prs. {räpā-} ~ prt.-sbj. {rāpā-} 'dig' (and possibly a homophonous *räpā*- 'make music' next to it), and prs. {pällā-} ~ prt.-sbj. {pālā-} 'praise'.

Because this type shows a remarkable similarity to the *lyāka*-type, discussed in 4.4.5 (p 395), it is perhaps convenient to point out the differences. In the first place, the *lyāka*-type has a present-subjunctive, whereas this type has a preterite-subjunctive – the make up of the stems is different. Second, the *ā*-grade of the *lyāka*-preterite goes together with initial palatalisation, of which there is no trace here. Third, the

preterite participles are completely different, as root vowel and root-final vowel are *ə* in both cases in the *lyāka*-type, but *ā* in both cases in this type. Fourth, whereas there is comparative evidence of nasal presents for this type, the *lyāka*-type has nothing to do with nasal presents at all.

Links with nasal presents are found in a couple of instances: *mäntā-* corresponds to Tocharian B *məntə́ññ$^{ə}/_{e}$-*, *räpā-* 'dig' corresponds to Tocharian B *rapə́na-*, and *pällā-* has a geminate *ll*, which points to earlier *ln*. Although *päywā-* shows a remarkable structural similarity to TB *məywa-*, the verbs pattern in partly different ways and their exact relationship is difficult to evaluate. The two remaining verbs *plänkā-* and *räpā-* 'make music' have no Tocharian B cognate and can be left aside for the moment.

Thus, there is a clear comparative link with nasal presents, even though the statistics do not tell much with such a small number of verbs. The idea that the type has something to do with nasal presents is further strengthened by the fact that the explanation of the attested forms is straightforward. A nasal present like **mäntnā-* should certainly have become **männā-* or **mänā-*, where restoration of the root would have resulted in the attested *mäntā-*. For *pällā-*, the derivation has already been given above: this stem can have developed from **pälnā-* by sound change only. *räpā-* is a bit more difficult because it concerns a cluster not otherwise known to be problematic in Tocharian A, but on the basis of Tocharian B developments, we may suppose that **räpnā-* became **rämnā-* or the like; here, too, reparation of the root must have yielded the attested *räpā-*. In spite of the lack of comparative evidence, the derivation of *plänkā-* is easy: **plänknā-* could certainly not have survived as such. If the *k* was lost, the result being **pläṅnā-* or **plännā-*, it is restoration of the root which would again give us the attested present stem.

Although it is irregular synchronically, Tocharian B *pəlla-* 'praise' fits this type perfectly; it must derive from *pəlna-* (on the spread of the *a*-grade, see directly below).

gradation

Peculiar to both the Tocharian B *ññ$^{ə}/_{e}$*-presents and the Tocharian A *ä|ā*-root presents is the widespread *a*-grade outside the present stem. In view of the grading preterite-subjunctive stem of *kəsk-*, with a subjunctive active singular *kaska-* and *kəska-* for the other subjunctive forms and the whole preterite, it is likely that the type originally followed the normal gradation pattern of nasal presents. In the bulk of the verbs, we find a different pattern, namely *ə*-grade in the present and *a*-grade elsewhere. This split must have been caused by the irregular behaviour of the present stem: once that stem was isolated, the other stems were lined up as one non-present stem. This explains the gradation of prs. *mäntā-* vs prt.-sbj. *māntā-* in Tocharian A as well as that of prs. *wəskə́ññ$^{ə}/_{e}$-* vs prt.-sbj. *waska-* in Tocharian B. The same development must have taken place in 'write', where we find prs. TB *piṅkäṃ*, TA *pikträ* vs prt. TB *paika*, TA *pekat*. Here we see that phonological problems in nasal

presents have laid the basis for the creation of completely new types such as the *ä|ā*-root present in Tocharian A.

4.7 *E*-GRADE PRESENTS

In both languages, there are a couple of verbs that form an *ˀᵊ/e*-present with *e*-grade in the root (Tocharian A *a*-grade). The prime interest of these verbs for the study of the subjunctive is this *e*-grade itself, its relationship to initial palatalisation, and the different subjunctive and preterite formations that are found beside it. The relevant verbs display an impressive range of rare morphological alternations and irregularities; in addition, some split-off verbs show that the alternation patterns were felt to be (too) isolated.

In Tocharian B, we can distinguish three main types on the basis of the subjunctive and preterite stems:

1) preterite-subjunctive in *-a*, but not formed from the present: the root-final consonant is not palatalised and *e* in the root is affected by *a*-mutation, e.g. prs. *kĺepᵊ/e-* 'touch', prt.-sbj. *klapa-*. A subtype with grading preterite-subjunctive is proved by 3sg.sbj. *pānnaṃ* 'will stretch' vs prt.ptc. *pännau**.
2) a present-subjunctive with a secondary preterite, attested with certainty only for prs.-sbj. *kĺewˢᵊ/se-* 'hear', prt. *kĺewṣá-*;
3) a *ə|Ø*-preterite-subjunctive, e.g. prs. *ceˢᵊ/ke-* 'touch', sbj. *tᵉ/ək-*, prt. *teksa-*.

Types 1 and 2 are also found in Tocharian A, but type 3 is not attested with the same patterns; it must be noted, however, that the cognates of the Tocharian B verbs of the third type are poorly attested, so that perhaps the type is not attested by chance.

Type 1 consists of the following verbs (all Tocharian B unless explicitly noted): *klep-* 'touch', *tresk-* 'chew', *pənn-* 'stretch' with TA *pänw-* 'id', *mens-* 'be sad'. Only on the basis of Tocharian A, we can perhaps add *wal-* 'cover' (Tocharian B *wala-*), and for structural reasons one could compare Tocharian A *nas-* 'be' and its prt.ptc. *nāntsu*, which fits to a preterite **{nāsā-} (2.6.9, p 110). The inflexion of TB *meĺ-* 'oppress' and TA *maĺw-* 'id' is not completely clear, but the verb could belong to type 1 because of TB stems *malla-*, which are from another verb synchronically. The addition of *cepy-* 'tread on' (?) remains very uncertain.

As remarked above, type 2 is with certainty represented by TB *kĺews-*, TA *kĺos-* 'hear' only, but perhaps TB *resk-* 'flow' belongs here as well (for TB *śewk-*, see below).

Type 3 is in Tocharian B represented by *kləṅk-* 'doubt', *tək-* 'touch', *tənk-* 'stop', and *plətk-* 'increase, flow out', and possibly *śewk-* 'call'. On the basis of its inflexion in Tocharian A, we may further add TB *wəs-*, TA *wäs-* 'dress'.

In addition there are some verbs from other classes that share some characteristics with the types discussed here, e.g. TA *sparcwäṣ* 'turns'.

Since there are many irregularities and uncertainties in all subtypes, they will be discussed in more detail below.

4.7.1 *KLEP*-TYPE

**klep-*

Since Adams (1989: 242), the analysis of the Tocharian B verb *klep-* 'touch' has become quite straightforward: the present is {kĺep^{ə}/$_{e}$-} in Tocharian B, and the other stems have the base *klapa-*: sbj. {klápa-}, prt. {klapá-}. Next to this verb, there are a couple of other forms that could be related. First of all, *kəĺp-* 'steal' can be compared, if the meanings can be united as 'lay hand to' (Adams 1989: 242; 1999: 172). *kəĺp-* forms an *'əy*-subjunctive {kəĺpə́y-}, a derived preterite {kəĺpəyá-} and a preterite participle *kekalypoṣ* B282a1 without *'əy*-suffix, but with palatalised *ĺ*, so that the original shape of the root was perhaps **kĺəp-* with *ĺ* (see also 4.8.1, p 469). On the other hand, a noun *klepe* 'theft' shows no palatalisation of *l*. None of the above words has a cognate in Tocharian A, but, as argued by Adams (1989), TB *kəlpa-* 'obtain' could be related too, which is also very well attested in Tocharian A: *kälpā-*. However, *kəlpa-* is a regular *na*-present which provides no new morphological information.

**tep-*

None of the verbs is so uncertain as Tocharian B *tep-*. The only certain forms attested are prs.ptc. *cepyemane* and prs.ger. *ceppile*, which point to a present stem {cepp(ə)y-}. An argument, though hardly sufficient in itself, to add *cepp(ə)y-* to the group of presents under discussion is its *e*-grade. An additional problem is that the meaning is uncertain, probably something like 'step on' or 'take place on'. It was Winter (2001: 134) who saw that Tocharian B *tappa-*, usually glossed 'consume' on the basis of Tocharian A *tāpā-* 'eat' (in suppletion with *śwā-*), but attested with only one form *tāppoṃ*, can hardly mean 'consume'. However, his solution to connect TB *təp-* 'proclaim' (TA *täp-*) remains difficult as well, as it does not account for the root vocalism of *tāppoṃ*, nor for its double *pp*, nor does it semantically make much sense. Perhaps *tappa-* is related *cepp(ə)y-* in some fashion, if the former means 'take place; appear' (see also 3.7.5, p 294), the latter could mean 'take place on'.

**tresk-*

Tocharian B *tresk-* 'chew' is attested with only two different forms: a 3sg.prs. *treṣṣäṃ* and a vn *trāskalye*, which point to a prs. {tre^{ṣṣə}/$_{ske}$-}, a sbj. {tráska-} and a prt. {traská-}*. The stem *traska-* is matched by Tocharian A, where we find a prt.ptc. *tāträ(sku)ṣ* {tā-trāskā-w-} and a 3sg. *trāskaṣ-äṃ* A4b4, which is probably a subjunctive. The shape of the Tocharian A present is unclear; if it followed a frequent pattern, we could expect e.g. *traskatär** or *trāsäṅkāṣ** (see Hackstein 1995: 180).

**nes-*

The pattern of TB *nes-*, TA *nas-* is very difficult to assess since it is the suppletive present to TB *taka-*, TA *tākā-* and no fully-fledged verb. However, the Tocharian A suppletion pattern is very unusual, as the preterite participle *nāntsu* is formed from the present root rather than the prt.-sbj. root; the regular preterite participle would probably have been ***tākku* from **tā-tākā-w*. If such a ***tākku* had existed at a certain stage, it might have been replaced because of the *kk* for *tk*, but it is completely unclear why the new form would have been formed from the present, and why according to this rare pattern. The only conclusion can be that *nāntsu* was formed before *nas-* was merged with *tākā-*. Consequently, *nāntsu* need not have been formed to *nas-* directly, but it was probably made on the basis of an intermediate preterite **nāsā-*.

**pənw-*

TB *pənn-* 'stretch' and TA *pänw-* 'id' point to an originally quite regular verb of the *klep*-type with gradation in the subjunctive, but due to sound changes, it was prone to derailments in Tocharian B. In Tocharian A, the present is a regular {pañw$^{ä}/_{a}$-}, and the 3pl.prt. *panwar* with the prt.ptc. *pänwo* point to a sbj. {p$^{a}/_{ä}$nwā-}, prt. {p$^{ä}/_{a}$nwā-}. In Tocharian B, the subjunctive is also grading: sbj. {p$^{å}/_{ə}$nna-}, prt. {pənná-}. Problems are found in the present, where we expect {peññ$^{ə}/_{e}$-}, but we find *ə*-grade in the 3sg. *päññän-m⸗* B253b2 and the 3pl.ipf. *päññīyeṃ* AS16.6Bb6. If the uncertain form *piñña* B429a5 is a 3sg.prt., it would show spread – without doubt secondary – of the palatalised *ññ* to the preterite-subjunctive stem (with colouring of *ə* to *i* before *ññ*). Otherwise it could perhaps be another subjunctive form with *ə*-grade; in other words, it could be a mistake for *piññaṃ*. Since the *ə*-grades do not fit a system and there are no indications for grading present stems anywhere else, I suppose that the *ə*-grade forms are secondary, apparently caused by the confusion resulting from the irregular relationship between the present *peññ-* with *ññ* and the prt.-sbj. *pənna-* with *nn*.

**məlw-*

A verb *məlw-* can only be arrived at through reconstruction. In Tocharian A, we only find a present {maĺw$^{ä}/_{a}$-} 'press', and in Tocharian B a comparable situation with {meĺ$^{ə}/_{e}$-} 'grind', but in both languages we find forms of other verbs that are obviously related. Useful discussions of the forms of the related verbs are those by Hackstein (1995: 316-317) and Adams (1999: 456-457, 462, 470). It appears that apart from the presents TA {maĺw$^{ä}/_{a}$-} 'press' and TB {meĺ$^{ə}/_{e}$-} 'grind' above, there is 1) a verb TB *məlla-* a.o. 'oppress, disdain' (here I follow Hackstein p 316 rather than

Adams p 457) with a prs. {məllá^{ṣṣə}/$_{ske}$-}, a sbj. {málla-},[810] and possibly a prt.ptc. *mamālau*, *-aṣ*;[811] 2) a derived causative 'deny, argue' with a prs. {məllə^{ṣṣə}/$_{ske}$-},[812] probably matched by *mläsmār* A413b2 'I suppress', which might be from a stem {mälläṣ^{ä}/$_{sa}$-}.

It is usually assumed that the stems with *ll* reflect a nasal present, but as far as the Tocharian B forms are concerned, older **lw* would probably yield *ll* as well. If so, it is attractive to take *məlla-* as a split-off verb from an original **məlw-*: the present must have been **melw^{ə}/$_{e}$-*, while the preterite-subjunctive **məlwa-* may have been of the grading *pənw*-type. The only problem with this assumption is that Tocharian A *mläsmār* can hardly reflect a form with *w* in the root. Perhaps it is not related at all: the context is so fragmentary that is difficult to exclude that it is rather the causative to *mlamāṃ* etc of another verb 'overwhelm, be filled with' (after Adams 1999: 456). In any case, the combination of verb stems with and without root-final *-w* is without inner-Tocharian parallels whatsoever, so that it is economical to derive all stems related to **melw^{ə}/$_{e}$-* from exactly that stem.

**mens-*

The verb *mens-* 'be sad' is only attested in Tocharian B.[813] Although the verb fits the type very well, there are some "superfluous" forms that indicate paradigmatic split. The present {men^{ṣə}/$_{se}$-} is well attested (often as a translation of Skt. *śocate* 'is sorrowful'), but – although it does not fit the *klep*-type at all – *meṃṣīmar* AS5Ba1 (Pinault 1990: 61, 65) can hardly be anything else than an optative, among all the optatives in the Udānastotra. Likewise, both a regular subjunctive {mánsa-} and a regular preterite {mansá-} are attested (often with epenthetic *t*, e.g. vn *māṃtsalyñe*), but an unexpected *na*-present is found next to it: {mansə́na-}. Strictly speaking, therefore, we should set up two verbs: *mansa-* with a *na*-present and *mens-* with an ^{ə}/$_{e}$-present-subjunctive. Since no difference in meaning can be established and a split from an original prs. *mens^{ə}/$_{e}$-*, sbj.-prt. *mansa-* is easily imaginable, the subjunctive use of {men^{ṣə}/$_{se}$-} must be secondary, while the present {mansə́na-} can only be a recent creation.

TB *mentsi* 'sorrow' is a noun in *-i* derived from the stem *mens-*, parallel to *teki* 'illness' from *tək-* 'touch' (stem variant *tek-*).

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[810] Although the relevant form in B362a7 reads *māl··* (Sieg and Siegling 1953: 237), the presence of a second consonant in the akṣara is ascertained (as they have already indicated) and there is hardly any other option than <ll>.

[811] The relevant form in B159b6 reads *m(a)[m]ā[l](·)[o](ṣ)* (Sieg and Siegling 1953: 88), but as correctly pointed out by Adams (1999: 456), such a form is unexpected.

[812] For this stem, we would of course expect initial accent, but the forms are difficult to interpret.

[813] There is a certain likeness with TA *msär* 'heavy' and *mäsrats* 'shy', but these words cannot be connected on formal grounds, since *mens-* and *mans-* would have yielded ***mes-* and *məns-* would have become ***mis-*; no form with *-ns-* could have become *mäs-*.

**wel-*

Although the root is attested in both languages, there is effectively only one Tocharian A form that proves the appurtenance to the type under discussion: *walyänt* A292a7 in (*ṣo*)*lāraṃ poñcäṃ akmalṣi mañ walyänt wär*(*tsi käntu*).[814] As a part of the Maitreyasamitināṭaka, act 26, this phrase is in Old Uygur rendered as MayH26.10[=B] b20-22 *yeti otuzunč* [b21] *keŋ yadvı yılınčga yumšak kop yüz*[b22]*lüg tilgänin örtgüči tilin körür* '27th: he sees his broad, long and soft tongue, that can cover the whole wheel of his face' (cf Geng, Klimkeit and Laut 1998: 62, 136). Thus, the Tocharian passage can be translated as '(the tongue) is broad, covering the whole moon of [his] face untill ...' (Couvreur 1946: 593). Consequently, *walyänt*, apparently an agent noun, must be from a present stem {waĺ-}, rendered by OUy. *örtgüči* 'covering'.

All other forms are from stems based on *wala-*: Tocharian A with a prt. {wālā-}, presupposing an identical sbj., and Tocharian B with a sbj. {wála-}, a prt. {walá-}, and a *na*-present {walәna-}. Even without considering the *wala*-forms, TA *waly-* would point to an *e*-grade *ʾə/e*-present because of its *a*-grade, and the *wala*-forms suggest the *kĺepʾə/e- ~ klapa-* subtype. In spite of its rudimentary attestation, the Tocharian A verb may still have had this inflexion, whereas it was apparently replaced by the frequent *na*-present type in Tocharian B.

4.7.2 *KĹEWS*-TYPE

As mentioned above, type 2 is ascertained for *kĺews-* 'hear' only. For this verb, a present-subjunctive **kĺewsʾə/e-* can easily be reconstructed, as Tocharian B has a present-subjunctive. In Tocharian A, a secondary distinct *näṣä/sa*-present has been created, but derived forms such as the inf. *klyossi* show that the distinct present was a recent creation. It is unclear why the new present is formed with exactly this suffix, as it is not especially frequent; actually, this present-subjunctive pattern is further only found with 'come', prs. {kʷämnäṣä/sa-} vs {śämä/a-}. Perhaps the transfer was was facilitated by the fact that both these verbs lack a "real" preterite, but have only an imperfect: {kʷämṣā-}, {kĺoṣā-}. Further, phonologically difficulties in the more frequent present type *-ṣä/sa-* may have played their part: this suffix is only very rarely found after *s* or *ṣ*.[815] The *e*-vocalism in the root is only visible in a couple of forms, but nevertheless certain:

1) in archaic Tocharian B we find older *eu*-vocalism (Peyrot 2008a: 45);
2) the *e*-reduplication in the TB prt.ptc. *keklyauṣu* and the *a*-reduplication in TA *kaklyuṣu* exclude a PT *au*-diphthong (witness TB *kakraupau*, prt.ptc. of *kraup-* 'gather' and TA *kākropu*);

[814] Sieg, Siegling and Schulze (1931: 467) cite a second instance *w*(*a*)*ly*(*ä*)*nt* A151b2, which is not only reconstructed, but lacks any useful context too.
[815] I could find only *śärsäṣt* 'you let know', *tsäṣ* '(s)he provides' and *wärsäṣ* '(s)he breathes'.

3) TA *kaklyuṣu* shows reduction of *o* to *u*, which must be from **kekĺeuṣu* through **kakĺauṣu* > **kakĺuṣu* (cf *kākropu* from **kakraupau* through **kākrāupau* > **kākraupu*; Winter 1994b: 412-413);
4) the privative *eṅklyauṣätte** shows no *a*-affection (to ***aṅklyauṣätte*; Hilmarsson 1991a: 110).

kĺews- is different from the other verbs because it forms a present-subjunctive and a secondary preterite TB {kĺewṣá-}, TA {kĺoṣā-}. There is another verb, TB *klawa-* 'be called', TA *klāwā-* 'id' (TB prs. {klowo-}), that is obviously somehow related, but because of the lack of the root-final *s*, *klawa-* cannot be compared with stems such as *klapa-* to *kĺep-* directly directly.

TB *resk-* 'flow' is only attested with present forms, so that we cannot be sure of its pattern. It may be parallel to *kĺews-*, but in fact type 1 is more frequent, so that perhaps a subjunctive-preterite *raska-* is slightly more likelier than a present-subjunctive *reṣṣə*/*ske-* and a secondary preterite {reṣṣá-}.

4.7.3 *TƏK*-TYPE

For type 3, I have found no evidence in Tocharian A, whereas in Tocharian B the pattern seems to be quite rigid.

**kəwk-*

Although the combination of an *ˀə*/*e*-present with *au*-vocalism in the root makes an analysis *śewśə*/*ke-* (rather than *śawśə*/*ke-*) likely, the appurtenance of *śewk-* 'call' to this group has long remained just a possibility. Adams (1999: 180) has ingeniously added *kuśi-ñ* S8 (M500.1) b2, which is certainly possible, but hard to prove definitively because the context of that form is not completely clear. If Adams is right, however, *kuśi-ñ* can only be the optative to a subjunctive {ke/əwk-}, which in turn makes the verb completely parallel to e.g. the verb *tək-* 'touch'. Accordingly, we would expect a preterite {kewk-Ø/sa-}*.

**kəs-*

The Tocharian B verb *kəs-* 'extinguish' is not of the *tək*-type, but it displays some of its characteristics, which can easily have come about secondarily. Because of its rare subjunctive {kəsé-} and the stable *e*-grade in the preterite (3pl.mid. *kessante* B421.1b), *kəs-* certainly belongs to the type *nək-* 'perish' etc. However, that type mostly has a *ṣə*/*se*-present with *ə*-grade in the root, whereas *kəs-* forms an *ˀə*/*e*-present with *e*-grade in the root, parallel to the *tək*-type. The solution is without doubt that the *ṣə*/*se*-suffix somehow merged with the root-final *-s* (the original geminate is perhaps preserved in the agent noun *keṣṣeñca* B295a9, although this manuscript has many unexpected geminates). The *e*-grade in the present is probably to be explained in a similar vein: either it was adapted to the *tək*-type (to which the verb had become identical except for the subjunctive), or it spread from the preterite when the stem pattern had

become obscured because of the change in present class. (TB *kəs-* is matched by TA *käs-* of the same meaning, but since the present stem is not attested there, it is of no relevance for this problem.)

**klənk-*

The Tocharian B verb *kləṅk-* 'doubt, argue' has been added to this class by Malzahn (forth.b). As she observes, the 3sg.mid. forms *klyeñkträ* B255a5 and *klyenträ* B254a3 cannot be *e*-grade variants of the subjunctive stem implied by inf. *klaṅktsi*, vn *klaṅkälyñe*, since in a grading paradigm the middle always has *ə*-grade, and the same is true of the imperfect *klyeñci* AS6Da6.[816] She rightly concludes that this stable *e*-grade points to an $^{\text{'ə}}/_{e}$-present, but her explanation of *klyeñkträ* and *klyenträ* cannot be correct. In an $^{\text{'ə}}/_{e}$-present, we would of course expect palatalisation of the root-final consonant in the 3sg.; Malzahn explains its lack here with a depalatalisation rule before *t* (she expects *klyeṅ(k)trä*). Since *k* ~ *ś* is never subject to depalatalisation before *t*, the two forms should rather be explained as writing errors. Although the manuscript is generally very easy to read, Sieg and Siegling have correctly transliterated *klyeñkträ* B255a5 as <klyeñ[k]tṛ̣ạ> (1953: 156) because the second *k* is quite deformed indeed. In fact, it is not much closer to a <k> than to an <ś>, so that we could also read <klyeñ[ś]tṛ̣ạ>, which would at the same time account for the bizarre *ñ* instead of *ṅ*. Although the *n* of *klyenträ* B254a3 is very difficult to read too – Sieg and Siegling (p 154) transliterate <klye[n]tṛ̣ạ> – even a deformed *ś* is excluded; here I have to side with Malzahn, who supposes that this akṣara was damaged or otherwise unclear in the original. Thus, the present must have been {kĺen$^{ś\text{ə}}/_{\text{ke}}$-}, the subjunctive {kl$^{e}/_{\text{ə}}$nk-} (the *e*-grade variant is implied by the *tək*-type inflexion), and the preterite, completely deduced, was probably {klenk-$^{\varnothing}/_{\text{sa}}$-}, which fits to the prt.ptc. *keklaṅku* THT1500b1 discovered by Malzahn.

The Tocharian A forms inf. *kläṅkässi* A454a2 and 1pl.mid.opt. *kläṅkñimäs* A349b2 on the one hand, and the prt.ptc. *kläṅkoṣ* A395b1 on the other, cannot belong to the same paradigm synchronically. However, all could theoretically replace older formations comparable to those attested in Tocharian B, if these are old at all. *kläṅko* presupposes a preterite {klänkā-}, which could have been formed after *pänwo* next to 3sg.prs. *pañwäṣ*. As Hilmarsson suggested (1991b: 71), *kläṅkñimäs* could replace the root subjunctive found in Tocharian B, and *kläṅkässi* could be from a derived causative, or match *kläṅkñimäs* and a corresponding *s*-preterite (as must be deduced for Tocharian B). However, all three forms follow frequent patterns and they can hardly be used to prove any older pattern for Tocharian A. In any case, a difference between causative (i.e. *kläṅkässi* and *kläṅkñimäs*) and non-causative forms (i.e. *kläṅkoṣ*) is difficult to extract from the texts (likewise, Hilmarsson l.c.).

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[816] Pace Malzahn, Schmidt's restoration *klyeñci(tär)* (1974: 28) is impossible. The next akṣara reads *tu* instead of *ṭạ*, but also the metre proves that *klyeñci* is a complete word, as it stands immediately before the caesura in this 13 syllable pāda (7 ¦ 6).

**təkˑ-*

Tocharian B *təkˑ-* 'touch' is well attested; in fact, all relevant stem variants are preserved, which makes the analysis of the whole type in Tocharian B much easier. The present is {ce^{śə}/$_{ke}$-}, the subjunctive {t^{e}/$_{ə}$k-}, the preterite {tek-^{Ø}/$_{sa}$-} and the preterite participle *teteku** (e.g. abstr. *tetekor*). The situation in Tocharian A is much more complicated: far fewer forms are attested, and they are also more difficult to analyse. The most certain form is *tkālune* 'touching', evidently a verbal noun to a stem {täkā-}, perhaps to be compared with the subjunctive {p^{a}/$_{ä}$nwā-} etc. The meaning of this noun is secured twice: one attestation (MY2.10b2) in the Maitreyasamitināṭaka is translated by Old Uygur *börtär* MayH2.11b26 'touches', and another (A384b5) translates Skt. *vicāra*, here approximately 'examination'. A couple of other forms with root shapes *tkäl-* and *tkāl-* probably belong to another verb that means 'illuminate' (see especially Pinault forth.). Of the 3pl. *ckeñc*, attested twice (A151b1, A324a1), the meaning cannot be established. If *ckeñc* should be related, it cannot be from the same verb as *tkālune* in a regular way. It is conceivable, however, that it is the result of some kind of paradigmatic split: it seems to combine the palatalised initial of the Tocharian B present with the *ä*-grade of the Tocharian B subjunctive. If it forms one (irregular) verb with *tkālune*, it is more likely to be a present, for instance {cä^{śä}/$_{ka}$-}, than a subjunctive, since otherwise the subjunctive would display the bizarre alternation *cäkā-* ~ *täkā-* within one stem.

**təṅkˑ-*

A Proto-Tocharian *təṅkˑ-* 'stop' can easily be reconstructed because the verb is attested in both languages. However, the *təkˑ*-present is found only in Tocharian B, where we find a present {cen^{śə}/$_{ke}$-}, a grading subjunctive {t^{é}/$_{ə}$nk-}, and a prt.pc. *täṅkuweṣ* NS45a2. Although the prt.ptc. is different from that of *təkˑ-* 'touch', i.e. *täṅku** instead of ***teteṅku*, the preterite was most probably 3sg. *teṅksa**, 3pl. *teṅkar**. This deduced preterite has a perfect match in Tocharian A, where 3pl. *caṅkär* proves a prt. {cank-^{Ø}/$_{sä}$-}, whereas the TB subjunctive has an exact parallel in the root subjunctive {tänk-} required by the vn *täṅklune* and the privative *atäṅkat*, clearly archaic vis-à-vis the productive *ñ^{ä}/$_{a}$*-subjunctive attested with 3sg. *täṅkñ(ä)ṣ* A302a1. However, the Tocharian A present {tänk^{ṣä}/$_{sa}$-}, regular compared to the other stems, deviates from the TB {cen^{śə}/$_{ke}$-} mentioned above.

In sum, the two verbs clearly have the same origin, but the Tocharian B present is not matched by Tocharian A. If the Tocharian B is original, replacement in Tocharian A would be easy to account for, exactly because it follows the productive *s*-present + *s*-preterite pattern.

**plətk-*

Although only relatively few forms are attested, the *tək*-pattern can be ascertained for Tocharian B *plətk-* 'increase, be much',[817] whereas in Tocharian A only the prt.ptc. *paplätku* is attested, which fits to an *s*-present + *s*-preterite pattern. The Tocharian B present is attested with only one form, the prs.ptc. *plyetkemane* B183b4, which proves a stem {pĺe$^{cc\text{ə}}$/$_{tke}$-} because of the palatalised *ĺ*; the subjunctive is {pl^{e}/$_{\text{ə}}$tk-} on the evidence of 3sg. *ṣletkäṃ* (for *pletkäṃ*) B591b6, and 3pl.opt. *placyeṃ* Pe2b6, matched by a prt. {pletk-$^{\varnothing}$/$_{sa}$-} with 3pl. *pletkar-c* S8b2 (=S8a4?) and a prt.ptc. *plätku*, *plätkweṣ*.

**wəs-*

Proto-Tocharian *wəs-* 'dress' can be added on the basis of the *a*-grade in the Tocharian A present, attested in prs.ger. *waṣlaṃ* A2a4 and the inf. *wassi* MY3.6a3 (Schmidt 1999: 283), which require a present stem {wa$^{ṣ\ddot{a}}$/$_{sa}$-}.[818] The preterite *wsā-* and the optative *wsi-* point to a preterite-subjunctive {wäsā-}, whereas the prt.ptc. *wasu* apparently finds its match only in *walu* 'died' to the *s*-preterite 3sg. *wläs* etc. As the preterite is only attested with middle forms, it is possible that it "hides" an *s*-preterite, i.e. the 3sg.act. *could theoretically* (since the verb is middle only) have been ***wasäs* (like 3sg.act. *casäs* '(s)he put' vs 3sg.mid. *tsāt*).

Its obvious Tocharian B cognate *wəs-* is irregular: the subjunctive, preterite and preterite participle are formed from a root *wəs-*, but the present is {yə$^{ṣṣ\text{ə}}$/$_{ske}$-}. The subjunctive is {wəs-} on the basis of 3sg.mid. *wasträ* NS95b1 and the inf. *wastsi*; the preterite is {wəs-$^{\varnothing}$/$_{sa}$-} with a 3sg.mid. *wässāte* B107b4[819] and a corresponding prt. ptc. *ausu* from **we-wəs(ə)w*. The present forms are 3pl.mid. *yäskeṃträ* THT1105a1, 3sg.ipf.mid. *yäṣṣitär* AS6Ba6, and prs.ger. *yäṣä(lle)* B320b4, which point to the present stem {yə$^{ṣṣ\text{ə}}$/$_{ske}$-} mentioned above. The only way to unify the present and the other stems is to assume that the $^{ṣṣ\text{ə}}$/$_{ske}$-suffix of the present obscured the final *-s* of the root, i.e. {yə(sə)$^{ṣṣ\text{ə}}$/$_{ske}$-}. Although it is conceivable that the $^{ṣṣ\text{ə}}$/$_{ske}$-suffix was added to recharacterise the present after it had become difficult to recognise because of the initial palatalisation of *w* to *y*, it is not clear how the different root grades should be explained: in Tocharian A, we find *a*-grade, which would go together well with initial palatalisation, but for Tocharian B we have to assume that *ə*-grade was generalised throughout *without* restoration of the initial. The original root grade might have been preserved in the word *yesti* 'garment', discovered by Malzahn

[817] This meaning accounts best for the attested passages. Moreover, it is in line with the OUy. gloss *artu(r)sar* 'if he prolongs' deciphered by Maue (forth.), after a manuscript joint of Hirotoshi Ogihara (Paris), which has yielded *pläkkätär* B331a2.

[818] Thus, pace Winter (1977: 143), there is no reason to emend *waṣlaṃ* to **wäṣlaṃ*.

[819] An alleged 3pl. *wäṣṣāre* IT130b4, which did not fit the pattern at all (cf e.g. Schmidt 1974: 28; Winter 1977: 143), was a misreading for *ñäṣṣāre* (also by me; I have corrected the reading in the 2010 third version of my edition; see Peyrot 2007a: №130).

(2003). While *yesti* evidently requires a preform **ẃestəy*, a suffix **təy* is not found elsewhere in Tocharian, which supports Malzahn's direct connection of *yesti* with Lat. *vestis* (in purely Tocharian terms we would rather have expected a ***yestsi*, later replaced by *wastsi*). Nevertheless, it is possible that the root grade *e* of the verb influenced the noun if the latter was originally **ẃəstəy* or the like.

In sum, I would reconstruct a subjunctive-preterite stem *wəs-* for Proto-Tocharian, which may have been parallel to the *tək*-type, but because it is middle only, the *e*-grade forms are not there. The present was probably *ẃes'ə/e-*, with full grade throughout on the basis of the persistent *a*-grade in Tocharian A (also in forms which have *ä*-grade in grading stems). This requires the assumption that Tocharian B has not only recharacterised the present with a *ṣṣə/ske*-suffix, but also eliminated the expected *e*-grade in the verb. Perhaps the original *e*-grade is preserved in the isolated noun *yesti* 'garment'.

4.7.4 *SPARCWṢ*-TYPE

A number of forms from Tocharian B *e*- and *o*-presents and Tocharian A *a*-presents display patterns similar to the *klep*-type. I term this subtype the "*sparcwṣ*-type" because Tocharian A *spartw-* 'turn' shows clear remnants of the *klep*-type. In Tocharian B, we find a regular sbj. {spártta-} and prt. {sparttá-} with a prs. {sportto-}, but in Tocharian A the "normal" preterite-subjunctive {spārtwā-} is matched by an irregular present {sparcwa-} with root-final palatalisation. On top of this, there is one active form, the 3sg. *sparcwṣ-äṃ* A253b1, next to the less irregular 3sg.mid. *sparcwaträ* etc. Since the root gradation pattern of the *klep*-type is exactly parallel to that of the *a*-presents with *a*-grade in the root, namely prs. *a*, prt.-sbj. *ā*, the root-final palatalisation is a strong indication for older *klep*-type inflexion.

If we assume older *klep*-type inflexion for TA *spartw-*, the present must at a certain stage have been alternating between an *'ä*-variant *sparcwä-* and an *a*-variant *spartwa-*. However, parallel to what must have happened to *maĺw-* and *pañw-*, the untypical alternation of the first consonant *t* ~ *c* of a cluster ending in unpalatalisable *w* was eliminated to reduce the alternation to the suffix vowel: *sparcwä-* ~ *sparcwa-*. Perhaps at this point, or perhaps when the medial *a* of *sparcwa*-forms became weakened to *ä* before heavy syllables, this alternation was eliminated as well, so that the verb became part of the Tocharian A *a_a* class (corresponding to Tocharian B *o*-presents). For the other stems, no adaptation was needed, since both types would have *spārtwā-* (i.e. *spārtwa-* after weakening). Whether we expect initial palatalisation, i.e. *ṣparcwäṣ*, is not fully clear, but if so, it could have been removed analogically at any point.

For Tocharian B, there are no irregularities in the inflexion of *spartta-* itself, and, consequently, no indications for an originally different type of inflexion. However, with the information from Tocharian A, it can be explained quite easily. If we assume that the present originally had the variants **spertw'ə-* (at first probably **spertẃə-*, later **spert´ẃə-*) and **spertwe-*, this would certainly have yielded some-

thing irregular, perhaps **sperccə-* ~ **sperto-* (see Peyrot forth.a; Penney 1978: 79). It is then easy to imagine introduction of the root-final *tt* < *tw* from the subjunctive-preterite *spartta-* < **spartwa-*. I do not think that the *e* of the present could somehow have been affected by the following *w* to become *o* (pace Lubotsky 1985: 7), but with the *o* in the suffix generalised, the verb could only end up as an *o*-present, the root vocalism being adapted accordingly.

Additional evidence for this course of events is offered by the causative, which displays quite a number of *ə*|*x*-features. Had TB *spartta-* been an *a*|*a*-root, the causative should have been prs.-sbj. {spárttəˢˢˢ/$_{ske}$-}, prt. {spárttəṣṣa-}, prt.ptc. *paspārtäṣṣu*. Instead, we find a whole series of *ə*|*x*-forms: a prt. {ṣpyárta-}, prt.ptc. *peṣpirttu*, a priv. *eṣpirtatte*, and a prs.-sbj. with variation between *sp-* and *ṣp-*, where the first has *a*-vocalism in the root, and the latter probably *ə*-grade, as Malzahn has shown: {spartəˢˢˢ/$_{ske}$-} and {ṣpərtəˢˢˢ/$_{ske}$-}. All these forms point to an *ə*|Ø-root, which can only be derived from a base verb with an *ə*|*a*-root. In Tocharian A, the causative is largely regular, except for a 3sg.prt. *saspärtu* A357.2, marked with a "sic" in Sieg, Siegling and Schulze (1931: 480); their remark must concern the vocalism, which is characteristic of an *ä*|*x*-root instead.[820]

With this new analysis of the vocalism and stem patterns of the verb, there is no reason any longer to derive it from the noun reflected by TB *spertte* 'function' and TA *spartu* 'curl', which are probably formed from the verb instead (pace Adams 1999: 716).

None of the other possible verbs in this category offer so many and clear indications as TB *spartta-*, TA *spārtwā-*, but with the latter as a parallel, some can receive better explanations indeed.

Tocharian B

On the basis of their deviant root vocalism, three Tocharian B verbs with *e*-presents may be considered as possible parallels to *spartta-*: *nəwa-* 'roar' with prs. {ñewe-}, *ləwa-* 'send' with prs. {Ĺewe-}, and *tˢənka-* 'arise' with prs. {tˢenke-}. Additionally, {ñewe-} and {Ĺewe-} display unexpected initial palatalisation, which may structurally be assumed for {tˢenke-} with an unpalatalisable *tˢ-* (2.5.4, p 73; see also Winter 1988: 218). In view of the root-final *-w* in the first two verbs, it is tempting to look for a phonological condition. If both verbs conformed to the *klep*-type at a certain stage, we expect this *w* to have yielded irregularities in Pre-Tocharian B, e.g. *e*-variants **ńewe-* and **Ĺewe-* vs *'ə*-variants **ńeyə-* and **Ĺeyə-* from **ńewə-* and **Ĺewə-*, respectively. It is conceivable that the *e*-variant forms were generalised to restore the root-

[820] In a similar way, Kortlandt (apud Lubotsky 1985: 7) derives the class marker *o* of the whole *o*-present class from an element *-w-* followed by the *e*-suffix of the *e*-presents (see also footnote 831). As I have shown above, TA *sparcwatär*, which figures prominently in his argumentation, cannot be equated with the other verbs of the *o*-class because it has a deviant ending *-ṣ*, deviant medial palatalisation, and deviant *ä*-grade root forms.

final *w*, which automatically made them end up as *e*-presents (with the obligatory middle inflexion). However, such an explanation for a transfer of *tˢenke-* from the *klep*-type to the *e*-present is not available, as no difficulties would have arisen from a stem {tˢenˢᵊ/ke-}. Tocharian A is of no great help, as *nəwa-* and *tˢənka-* have no cognate there, and the present of *läwā-* (~ TB *ləwa-*) was probably {läwnā-} instead of **{ĺawa-}.

Tocharian A

In Tocharian A, three candidate verbs are found, which are structurally comparable to TB *tˢənka-*, although the latter is not attested in Tocharian A. The verbs in question start with *tˢ-* as well, but seem to have no phonological conditioning at the *end* of the root: *tˢämā-* 'grow' with prs. {śamā-}, *tˢälpā-* 'be redeemed' with prs. {śalpā-}, and prs. {śalcā-}, possibly related to TB *tˢalta-* 'consume'. Since the pattern of the latter verb in Tocharian A is not known, it will not be considered below ({śertā-} next to *tˢārtā-* 'weep' might also belong here, but the relationship between the two stems is very difficult to understand).

Just as for Tocharian B *tsenke-*, no ready phonological solution derives the Tocharian A *tˢ*-verbs from *klep*-type predecessors, but it can hardly be coincidental that we have *tˢ* once in Tocharian B, and at least two, possibly four times in Tocharian A. The only phonological difficulty with an *ʾä/a*-present we could expect is the disappearance of the palatalisation after *p* and *m*, but this phenomenon is so frequent among *ʾä/a*-presents that it can hardly have played a decisive role. If *śalca-* {śalcā-} is of the same type, it offers strong evidence because of its root-final palatalisation, of course, but at this point I see no better solution than to suggest that the other verbs were added analogically after it.

4.7.5 DIACHRONIC NOTES

In the preceding, I have treated *e*-grade presents as if they formed a coherent category, albeit with three subcategories, but they are certainly of diverse origin. Below, I will only indicate some of the possible origins, and suggest paths of analogy along the lines of the shallow reconstruction approach of sections 4.7.1-4.7.4 (p 454).

Obviously, the largest problem is the presence or absence of initial palatalisation: in principle, a stem like PT **nes-* without initial palatalisation must reflect old **o-*grade, whereas e.g. PT **kĺews-* with initial palatalisation must reflect old **ē-*grade. Although the initial palatalisation may have been lost (by sound law) in one instance or another, whereas it may occasionally have been removed (by analogy) elsewhere, this is probably in broad outline the correct explanation of the initials.

tək-type

If we first focus on the small and relatively coherent *tək*-type, we see that all its member have – or must have had – palatalised initials: **śewkʾᵊ/e-* 'call', **kĺenkʾᵊ/e-*

'doubt', **cek'ə/e-* 'touch', **cenk'ə/e-* 'stop', **pĺetk'ə/e-* 'be much', and probably **wes'ə/e-* 'dress'. Whereas reliable etymologies are lacking for 'doubt' and 'stop', reasonable connections are available for the others: 'call' is probably related to Lith. *šaukiù* 'shout', in spite of the alarming isolation of the etymon (LIV2: 331); 'touch' is obviously related to Lat. *tangō* 'touch' etc (LIV2: 617); 'be much' must be an *sk^e/o-* derivative of the root **pleth₂-* attested in e.g. Lith. *plečiù* 'spread' (LIV2: 486); 'dress' has long been identified with well-known PIE **ues-*, a.o. E. *wear* (LIV2: 693).

At this point, 'be much' must be put aside because it has an extended stem (see also below under "*sk*-presents", p 468),[821] and the long **ē* of 'call' cannot be explained with the help of the etymology above. For 'dress', I see two possible solutions: 1) the root was upgraded when the stative **ues-to* (Ved. *vaste* 'wears') was reinterpreted as the weak grade, so that the full grade had to become **uēs-*, or 2) because of its root-final *-s-*, the verb came to be reinterpreted as an *s*-aorist with the concomitant lengthened grade **ē* (after all, it *is* an *s*-preterite in Tocharian B; see further under "*s*-presents" below, p 467). Whereas 'stop' may be completely analogical after 'touch', to which it is close both in form and meaning, the verb 'touch' itself deserves a more detailed comment.

After Kortlandt (2000a), Tocharian B *ce^ś^ə/ke-* is probably to derived from a reduplicated perfect, with a certain parallel in Germanic, e.g. Goth. *tekan* < **tēk-* < **dēg-* < **dedg-* << **tedg-* < **tetg-*, and another possible match in the Lat. pf. *tetigī* 'I touched'. Although Gk. τεταγών is an aorist participle, one wonders if it could go back to a perfect formation as well (see Adams 1999: 289-290).[822] Whether or not the Proto-Indo-European root originally contained a laryngeal, i.e. **teh₂g-* (so LIV2: 616-617), a preform *with* laryngeal can explain none of the Tocharian stems actually attested: we would then expect ***tak-* < **th₂g-* and ***tok-* < **teh₂g-*. Thus, the Tocharian forms point to a root without internal **h₂*, which might have arisen through occasional loss in the cluster **-th₂g-*, similar to the development in Germanic. Proceeding from a reduplicated formation **tetg-* without laryngeal, we would have to push the parallel with Germanic one step further and assume that the *t* was lost with compensatory lengthening. Within the Leiden framework (cf e.g. Kortlandt 1983b), such a development may be understood as assimilation of **tg* to **dg*, with subsequent loss of the buccal component of **d*, which resulted in **h₁g* or **ʔg*.

Evidently, this series of assumptions is not yet enough to explain the whole verb *tək-*, but at least it yields the stem form **cek-* < **tēk-*. In my view, this is clearly to be preferred over alternative solutions that deny a genetic link with the Greek and Latin words or have recourse to the utterly implausible scenario that the Tocharian verb was borrowed from Germanic or vice versa (Ringe 1991: 105-115).

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[821] The long **ē* reflected in the Lith. inf. *plė̃sti*, pret. *plė̃stė* might contain the key to the explanation of *pletk-*, but it belongs to a regular category (Senn 1966: 276-277), which seems to have replaced the *s*-aorist (Stang 1966: 384), so that it is questionable whether it can be used to explain the exceptional, irregular shape of the Tocharian verb.

[822] Alternatively, the Tocharian verb might derive from a reduplicated aorist as well.

For the make-up of the Tocharian verb itself, I tentatively suggest the following. Like *$ay^{śə}/_{ke}$- 'know' (see 4.4.1, p 379), the perfect *$tēg$- may have ended up as a thematic present through the key 3sg. form *$tēg$-e > *$ceśə$ >> TB *ceśäṃ*. For this assumption, it is necessary that any alternation between the singular and the plural of the perfect was eliminated, but if the explanation of *$tēg$- is correct, this already requires spread from the plural allomorph *$tetg$- to the singular (obviously, this happened *because* that form resulted in *$tēg$-). The subjunctive may have been formed from the stem *cek*- because it had a palatalised initial itself (as argued in 4.5.3, p 408): on the basis of the prs. *$cek^{ə}/_{e}$-, a sbj. sg. *cek*- ~ pl. *tək*- was created. The other stems, i.e. the preterite *tek-sa*- etc are concomitant with the grading subjunctive and need not be explained separately. According to the regular developments, the unpalatalised initial was levelled throughout the paradigm to yield the attested subjunctive singular allomorph *tek*-.

An alternative derivation of the subjunctive *tek*- ~ *tək*- from the singular allomorph of the perfect is difficult if the root originally contained an internal *h_2. If that *h_2 was never there, or the perfect was still functional after it was lost, it is difficult to exclude that *te-tog- > *$cə$-tek- >> *$tə$-tek- > *tek- served as the basis of the subjunctive. In that case, we have to assume that the *s*-preterite was formed when this *tek*- was lined up with the regular subjunctive pattern, so that e.g. a preterite with initial palatalisation and an *ə*-grade subjunctive allomorph could be formed.

w-presents

In view of the heterogeneous character of the *klep*-type verbs, it is best to turn first to a relatively clear subgroup: *w*-presents. Strictly speaking, the root grade of the most prominent *w*-presents is unknown: Proto-Tocharian *$penw^{ə}/_{e}$- 'stretch' and *$melw^{ə}/_{e}$- 'crush' could also be set up as *$ṕenw^{ə}/_{e}$- and *$ḿelw^{ə}/_{e}$- because *$ṕ$ and *$ḿ$ would lose their palatalisation without a trace in this context. Further, PT *$spertw^{ə}/_{e}$- 'turn' can hardly be considered definite proof since it is so thoroughly rebuilt. Nevertheless, there is no positive evidence for old *$ē$, and especially the Indo-European verb for 'grind' (Tocharian 'crush') is famous for its *o-grade formations, e.g. Lit. *malù*, Goth. *malan* (LIV2: 432-433). For the *w*-present of 'crush', a parallel formation is found in e.g. Goth. *gamalwjan* 'oppress' (LIV2: 433), likewise with *o-grade. Thus, I assume that the *e*-grade in Tocharian *w*-presents reflects old *o-grade.

For 'stretch', too, parallels can be adduced, albeit rather with *e-grade: Arm. *henowm* 'weave' (*hanowm* is analogical after the aorist, according to Klingenschmitt 1982: 235) and a.o. Goth. *spinnan* 'spin' (Klingenschmitt l.c.).

For *$spertw^{ə}/_{e}$-, I would suggest that it is to be derived from *$sperd^{h}$- 'run away', with a.o. Hitt. *išpar-^{zi}* 'escape', Ved. *spárdhate* 'contends', Arm. *sprdem* 'escape' (LIV2: 580; Kloekhorst 2008b: 410). Unfortunately, there is no parallel for the Tocharian *w*-present, nor for its *o-grade. The only tentative solution that I can offer is that both were taken over from e.g. 'stretch' and 'crush' because of the iterative, non-terminative meaning of Tocharian 'turn; move' compared to the terminative 'run away' that seems to be needed as a proto-meaning.

Evidently, *ləw-* and *nəw-* do not fit the other *w*-presents: the most important difference is that they have initial palatalisation. Since the long grade present **lēuH-* posited especially for Tocharian (LIV2: 417 under **leuH-*, a.o. Gk. λύω 'let go') calls for an inner-Tocharian solution, I would nevertheless suggest that the initial palatalisation is due to influence from the other verbs in *-w*. Of course, such influence was only possible after **p* and **m* had merged with **ṕ* and **ḿ*: at that stage, it had become possible to reanalyse **penw'ə/e-* and **melw'ə/e-* as parallel to e.g. **kĺep'ə/e-*. In principle, such a late shift of *nəw-* and *ləw-* to the *w*-presents is possible because they are not attested in Tocharian A (we have even evidence of a different present formation {läwnā-} there). However, if the sound changes **ṕ* > **p* and **ẃ* > **y* occurred around the same time, this would mean that the verbs took over a rather "difficult" paradigm with **-yə-* ~ **-we-* alternations.

s-presents

Apart from the *w*-formations discussed above, it is striking that four verbs end in *-s*: *kĺews-* 'listen', *nes-* 'be', *mens-* 'be sad', and *wəs-* 'wear'. With Hackstein (1995: 322, 324), the *-s-* of *kĺews-* must originally have been a suffix in view of forms like TB *ñem-kälywe*, TA *ñom-klyu* 'fame', PT **kəln-* 'resound' (see 4.4.2, p 389) and TA *klāwā-*, TB *klawa-* 'call'. As he argues, **kĺews-* must go back to **klēus-* (i.e. **klēu-s-*), a form that is strongly reminiscent of an *s*-aorist. The problem is just *how* we can explain **kĺews-* with the help of the *s*-aorist, since Hackstein's scenario (p 324) that a regular preterite **kĺewsa* was adapted to **kĺewṣa*, which in turn was the basis for the prs.-sbj. **kĺewṣ'ə/se-*, simply cannot be correct.

Unfortunately, I do not have a definite solution either. Perhaps the correct explanation can be brought a bit closer with the assumption that the "*s*-subjunctive" played its part, that is to say, the grading *ə*|Ø-root subjunctive of the type *tek-* ~ *tək-* 'touch'. For instance, it is possible that a **kĺews-* ~ **kləws-* was no longer recognisable as an *s*-subjunctive when the *-s-* was lost in the regular grading subjunctive pattern, which might have favoured the abolishment of the root gradation. For some reason then – perhaps *because* of its strange *'e*-grade – it would have adopted *'ə/e*-inflexion. Otherwise, one could argue that the whole paradigm was formed to the strong singular form **klēws*, which must initially have been the phonologically regular result of the 2sg. and 3sg. *s*-aorist injunctive forms **ḱlēuss* and **ḱlēust*. Perhaps the ambiguity of this **klēws* was resolved by adding the **e/o*-suffix; otherwise, the suffix may have been added at a later stage, when the *-s* of **klēws* had to be restored when word-final *-s* was lost.

For **mens-*, a similar development may have taken place, if a derivation from **men-* 'think' (LIV2: 435, a.o. Gk. μαίνομαι 'be angry') is considered possible. While **wəs-* is not exactly parallel because the *-s-* belongs to the root, it may have become so similar to the other *s*-presents that was lined up with them; at least it forms an *s*-preterite in Tocharian B.

I do not mean to say that this is exactly what happened, nor that it happened independently in **kĺews-*, **mens-* and **wəs-*. However, it is likely that the lengthened

grade *$\bar{e}$ is connected to the suffixal *-s-*, which leaves little room for a completely different origin of the type.

Conversely, *nes-* is not likely to be of the same type because it has no initial palatalisation. With Jasanoff (1978: 14; see also Adams 1999: 345; LIV2: 454), *nes-* may be derived from a perfect **ne-nos-*, related to **nes-* 'be saved', attested in a.o. Goth. *ganisan* 'be cured, saved' (LIV2: l.c.).

sk-presents

There are three probable *sk*-presents: *tresk-* 'chew', *plətk-* 'be much', and *resk-* 'flow'. As I indicated above (under "*tək*-type", p 464), no ready explanation is available for *plətk-* (however, see footnote 821), and since the etymology of *resk-* is unknown, it cannot be of any use, unfortunately. Conversely, *tresk-* has a good etymology in Gk. τρώγω 'gnaw' from **treh*$_3$$^{(}$*ǵ*$^{)}$- (LIV2: 647; Arm. *t'urc* 'cheek' might be related too). However, as far as the root vocalism is concerned, I can only quote Hackstein, who claims that it is "neologisch" (1995: 180); I would expect a regular *sk*-present **trh*$_3$$^{(}$*ǵ*$^{)}$*-sk*^{e}/$_{o}$- to have become **trask*$^{\text{'}ə}$/$_{e}$-. Perhaps the *a* was the original, regular root vocalism and the present was formed analogically after the *klep*-type?

preterite-subjunctive

The *e*-grade presents were at first, for the purpose of a shallow reconstruction, classified according to their preterite-subjunctive stem, namely **kĺep*$^{\text{'}ə}$/$_{e}$- 'touch' with **klapa-*, **kĺews*$^{\text{'}ə}$/$_{e}$- with a present-subjunctive and a secondary preterite **kĺews'-a-*, and TB *ce*^{śə}/$_{ke}$- 'touch' with an *s*-preterite stem pattern sbj. *t*^{e}/$_{ə}$*k-* : prt. *tek-*(*sa-*). Then, in this section, I rather classified them according to their suffix or root-finals, which yielded a slightly more complicated picture.

As remarked at the beginning of this section (under "*tək*-type"), the relatively small *tək*-class shows a constant match between initial palatalisation in the present and an *s*-preterite stem pattern. As I argued, the preterite-subjunctive may have been formed after the present in those cases, but in any case, there is a clear correlation between old *$\bar{e}$-grade and the *s*-preterite and root subjunctive. This correlation matches well with Kortlandt's explanation of the root subjunctive as an original *$\bar{e}$-grade *s*-aorist (see 4.5.3-4.5.4, p 408). In any case, it is highly unlikely that the present should have been formed to the preterite-subjunctive because of the frequent and regular match of that preterite-subjunctive type with *s*-presents.

The verb for 'hear' is the only verb to form a (synchronically) secondary preterite, which suggests that the verb had no preterite at an earlier stage, or all other stems were lost.

As to the *klep*-type, its preterite-subjunctive is clearly formed to the present, even though that is impossible synchronically because of the *'ə*/$_{e}$-suffix in the present. At an earlier stage, it was apparently possible to "undo" that present suffix in derived stems. Because most members of the *klep*-type do not show initial palatalisation in the present, such a derivation does not yield problems with the initial in most cases;

however, at least for the verb **klep-* itself, we have to assume that either the palatalisation was also undone in this derivation process, or that the palatalisation in the present is itself secondary. In view of the grading pattern of the preterite-subjunctive of **pənw-* 'stretch', we even have to assume that the present *e*-grade itself could be undone. Alternatively, the *ə*-grades needed for this subtype could have to be explained with older *e* : *ə* gradation in the root. Such a gradation would not be unexpected historically, since *w*-presents sometimes have cognates with **e*-grade *u*-presents elsewhere in Indo-European (see above under "*w*-presents").

4.8 MINOR TYPES

In this section, I discuss four minor subjunctive types that have not been treated so far. In 4.8.1 (p 469), I discuss the specifically Tocharian B *'əy^{ə}/$_{e}$*-subjunctive (see also 4.1.2, p 332), in 4.8.2 (p 472) the specifically Tocharian A *ñ^{ä}/$_{a}$*-subjunctive, in 4.8.3 (p 476) the TA *a-* and TB *e*-subjunctives, while I return to the classical *'^{ə}/$_{e}$*-subjunctive in 4.8.4 (p 478).

4.8.1 *'əY^{ə}/$_{E}$*-SUBJUNCTIVE

The *'əy^{ə}/$_{e}$*-subjunctive (class 4) is only found in Tocharian B and it is not very well attested. Nevertheless, its pattern seems to be relatively clear: the suffix is found in the subjunctive, e.g. {laĺəy^{ə}/$_{e}$-} 'exert', and in the derived preterite, e.g. {laĺəy-a-}, whereas it is mostly lacking in the preterite participle, e.g. *lalālu*, *-oṣ*, and the derived *ṣṣ^{ə}/$_{ske}$*-present. Synchronically, difficulties in the description are 1) the demarcation with the optative, 2) the absence or presence of root-final palatalisation in the preterite participle, and 3) the apparent spread of the derived "*iya*-preterite" beyond this class.

sub 1) Although some forms of the *'əy^{ə}/$_{e}$*-subjunctive are indeed identical to optative forms, the two must have been distinct originally. Whereas the *'əy^{ə}/$_{e}$*-subjunctive was clearly thematic, cf especially 1sg. *wṣiyau* THT1681b5 and 1sg. *lalyyau* AS6Ab1, the *'əy*-optative was athematic, cf especially the 1sg., e.g. 1sg.opt. *klyauṣim*, *ākṣim*, and the short 3pl., e.g. *tākoṃ*, probably from **tákoyən* (Peyrot 2008a: 144) and further the 3pl. in Tocharian A, act. *-iñc*, mid. *-inträ*.

sub 2) Root-final palatalisation is found in *aukṣu* 'grown' (matched by TA *okṣu*, Winter 1977: 138), *auṣu* 'dwelled', *kekarśu* 'cut', and *kekalypoṣ* 'stolen', whereas *āklu* 'learned' and *lalālu* 'exerted' have unpalatalised root-finals (see 2.9.2, p 148). Apart from the basic observation that the two preterite participles without palatalisation have root-final *-l*, the small number of verbs attested does not allow for useful generalisations.

sub 3) Although the *iya*-preterite is certainly the regular preterite to the *'əy^{ə}/$_{e}$*-subjunctive (no competing forms are attested), it is also found with three verbs for which no such subjunctive is attested: 3sg.mid. *kraṣiyate* IT248b4 (= IT137b3) 'was upset', 3sg. *pruśiya* B42a5, *pruśya* B53a1 'skipped', 3sg. *śawiya* B576a4 '?'. It is possible

that the relevant subjunctive forms are not attested by chance; otherwise one would have to assume the *iya*-preterite was an "extra" preterite next to more regular patterns. Since no special grammatical function of the *iya*-preterite can be established (Winter 1961), whereas the *i*-stems (subjunctive and preterite) are sometimes found next to other, obviously related verbs with similar meanings (see especially the root *kəlp-*, 4.7.1, p 454), it is probably best to set up separate verbs for *kraṣiyate* and *pruśiya*. Problematic *śawiya*, which is found in a fragmentary context that does not allow to establish its meaning, might belong to *śay-* 'live' (i.e. its old stem *śaw-* that is also found in the causative, see 4.4.1, p 388) or to *śəw-* 'eat' (i.e. its preterite stem variant *śaw-*, see 4.4.5, p 395). Since for both verbs a preterite is already attested, *śawiya* would have to be from a related, possibly split-off verb.

Since the suffix of the *'əy^{ə}/$_{e}$-*subjunctive is distinct from the optative suffix (see above under 1), and "optatif et subjonctif restent en tokharien des catégories distinctes" (Pinault 2008: 588), a derivation from the Proto-Indo-European optative is implausible (pace Lane 1959: 166; van Windekens 1982: 224). Alternatively, the *'əy^{ə}/$_{e}$-*subjunctive and the corresponding preterite have been derived from a denominative **i^{e}/$_{o}$-*suffix and original **i^{e}/$_{o}$-*presents (see especially Hackstein 1995: 219-220).

As pointed out by Winter (1961: 95), a denominal origin seems to be suggested by the existence of a number of related nouns with an *'əy-*suffix: *lal-* 'exert' vs *lalyiye* 'effort', *akl-* 'learn' vs *akalye* 'teaching' and *wəs-* 'dwell' vs *yṣiye* 'night' (< **ẃəṣəye*, cf TA *wṣe* 'id'). However, a reverse relation is more likely: the verbs display shorter stems without *-'əy-* so that they cannot be derived from e.g. *laĺəy-*, whereas the nouns have an additional component nom.sg. *-e* (e.g. *lalyiye*), nom.pl. *-ñ* (e.g. *lalyiñ**) etc, which makes it possible to take them as derivations from the verbs.

More fruitful are comparisons of verbs with nouns without *'əy-*element, e.g. *śerwe* 'hunter' vs *śer-* 'hunt' (sbj. {śeráy^{ə}/$_{e}$-}, see Adams 1988: 74; Hackstein 1995: 220; Pinault 2008: 588-589); the *-w-* must have been lost before the *'əy^{ə}/$_{e}$-*suffix, i.e. **śerw-'əy^{ə}/$_{e}$- > *śerẃəy^{ə}/$_{e}$- > śerəy^{ə}/$_{e}$-*. Further, Winter convincingly adduced *akl-* 'learn' and *lal-* 'exert' as denominal formations from nouns containing a suffix *-l* as in *camel* 'birth' to *təm-* 'be born' (1990a: 376-377; see also Hackstein l.c.).[823]

However, next to the denominal *'əy^{ə}/$_{e}$-*subjunctives discussed above, there are others that are very likely to be primary, in particular *wəs-* 'dwell' and *awks-* 'grow', which obviously reflect PIE **h$_2$ues-* 'stay, dwell' and **h$_2$uegs-* 'grow' without any intermediate noun. Hackstein convincingly argues that Tocharian B *awkṣəy-* was shifted from original present into secondary subjunctive function (1995: 343), but he does not make clear how and why an "Ersatz von **-e/o-* durch **-i̯e/o-*" (l.c.) should have come about. We might rather consider the possibility that the **i^{e}/$_{o}$-*suffix is old, as it is also found in OAv. *uxšiieitī* 'grows', whereas Ved. *úkṣant-* 'growing' is likely

[823] Winter derives the intermediate nouns from **h$_2$eǵ-* 'say' (Lat. *aiō*, see Hackstein 1995: 332-334 and footnote 834; LIV2: 256; Pinault 2008: 589) and **leh$_1$-d-* 'let' (Goth. *letan*, cf LIV2: 400; van Windekens 1976: 256-257; see in particular Hackstein 1995: 221-222).

to go back to an earlier **úkṣyant-* because of its initial accent (LIV2: 288-289). If Gk. ἰαύω 'rest' really contains a **i^{e}/$_{o}$*-suffix, as argued by e.g. Hackstein (1995: 220; see also LIV2: 293), this could be a parallel for *wəṣəy-* 'dwell' as well, but the case is certainly not as strong as for 'grow'.

Less clear is the situation of *kəlp-* 'steal', which has been argued to be a derivation from *klepe* 'theft', but could alternatively be a direct reflex of PIE **klep-* 'steal' (LIV2: 363). Although LIV2 argues that Gk. κλέπτω 'steal', which reflects an older **klep-i̯^{e}/$_{o}$-*, replaces the original **^{e}/$_{o}$*-present attested in Lat. *clepō* 'id' and Goth. *hlifan* 'id', it could in fact be parallel to the Tocharian subjunctive (Adams 1989: 243; wrong Hilmarsson 1996: 71; on this verb, see also 4.7.1, p 454).

The evaluation of *kərśəy-* 'cut' is uncertain because it could also be an optative to a sbj. *kərk-* or *kərst-* (Winter 1977: 140; Hilmarsson 1996: 94). For *al-* 'keep away', the evidence for an *'əy^{ə}/$_{e}$*-subjunctive is extremely weak. Schmidt (1975: 291-292) argued that the relevant form, *ālyinträ* B255b7, is a subjunctive because the regular optative would have been ***alyiyenträ*, parallel to a form like 3pl.opt. *aklyiyenträ* B605b4 'may they learn'. The problem with Schmidt's analysis is that the subjunctive stem is certainly {al-} on the basis of the inf. *āltsi* (well attested), whereas we would rather expect a contrast between *-i-* and *-iye-* in the 3pl. to be exactly the reverse: the optative suffix was originally just *-'əy-* whereas the subjunctive suffix was *-'əy^{ə}/$_{e}$-* (see above). Thus, I would take *ālyinträ*, which is from an archaic text, as the older variant of the classical optative ***alyiyenträ*. Consequently, Hackstein's derivation of *aĺəy-* (1995: 215) can no longer be upheld.

Uncertain is the evaluation of a number of preterites with *y* or unexpected root-final palatalisation: {cəmpya-} 'can', {trənca-} 'say', {ĺənca-} 'hang'. Because these verbs have no other morphological parallels to the *'əy^{ə}/$_{e}$*-subjunctives, while even their preterite formation is not identical (forms like *aklyyamai* 'I learned' and *wṣīya* 'he stayed' really show an extra syllable or at least a consonant *-y-*, not just palatalisation), I think this preterite pattern is not related to the *'əy^{ə}/$_{e}$*-subjunctive.

In sum, I agree with Hackstein (1995: 219-220) and Pinault (2008: 588) that the *'əy^{ə}/$_{e}$*-subjunctive finds its origin in **i^{e}/$_{o}$*-presents, in part denominal derivations and in part older verbal formations; there is no connection with the optative. Although the present must have become the most prominent, "basic" stem, which is shown already by the mere fact that it became a subjunctive, the present stem is derived from a shorter form of the root, without *-'əy-*. Perhaps this shorter form was originally preserved in the preterite, since we do not find the *'əy-*element in the preterite participle. Although *akl-* 'learn' and *lal-* 'exert' are most probably secondary *'əy^{ə}/$_{e}$*-formations compared to e.g. *awks-* 'grow', their preterite participles *āklu* and *lalālu* may have preserved the original pattern. In any case, the type *aukṣu* cannot be explained from the subjunctive because it has no *-y-*; with Winter (1961: 35), it is better to explain "die Palatalisierung durch Analogie zu den finiten Präterialformen", possibly through "[e]ine zusätzliche Einwirkung von anderen Partizipialformen mit Palatalisation (*kakāccu*, *lalāṃšu*, usw.)". This development must go back

to Proto-Tocharian because the isolated Tocharian A *okṣu* has a palatalised *ṣ* as well (Winter 1977: 138).

4.8.2 $\tilde{N}^{\ddot{A}}/_{A}$-SUBJUNCTIVE

The $\tilde{n}^{\ddot{a}}/_{a}$-subjunctive (class 7) is discussed in great detail by Hilmarsson (1991b: 61-75, 106-117; see also Hilmarsson 1991c), whose synchronic treatment I warmly recommend even though I disagree with his historical explanation. Whereas this class is well attested in Tocharian A (Sieg, Siegling and Schulze 1931: 343), it was thought to be represented in Tocharian B by two members only: *lət-* 'go out' and *weñ-* 'say' (Krause 1952: 140-141). As Hilmarsson has shown, Tocharian B *lət-* 'go out' rather forms a root subjunctive {lənn-} (1991b: 62-63), so that Tocharian B class 7 was reduced to only one member, which he deemed "somewhat suspicious" (o.c.: 106). Although I agree with Hilmarsson that *weñ-* 'say' must contain the same denominative suffix as e.g. *tənk^{w}əñ-* 'love' (cf *taṅkw* 'love'; see in detail 4.4.4, p 394), I see no difficulty at all in analysing it as an $^{\text{ə}}/_{e}$-subjunctive, parallel to *yask-*: sbj. *weñ$^{\text{ə}}/_{e}$-* : *ya$^{ṣṣ\text{ə}}/_{ske}$-*; prs. *yaskə$^{ṣṣ\text{ə}}/_{ske}$-* : *we$^{ṣṣ\text{ə}}/_{ske}$-* (with loss of *ñ*); prt. *yaṣṣ-á-* : *weñ-a-*. Thus, a Tocharian B $\tilde{n}^{\text{ə}}/_{e}$-subjunctive does not exist.

It has long been noted that Tocharian A $\tilde{n}^{\ddot{a}}/_{a}$-subjunctives often correspond to root subjunctives in Tocharian B, which leads to the logical conclusion that Tocharian A represents a later stage where the subjunctive was recharacterised. Telling examples are the Tocharian A subjunctives {tänk-}, {tänkñ$^{\ddot{a}}/_{a}$-} of 'check' and {träṅk-}, {träṅkñ$^{\ddot{a}}/_{a}$-} of 'hang', which correspond to Tocharian B {t$^{\acute{e}}/_{ɔ}$nk-} of 'check' and {trenk-} 'of cling'. In these two cases, it is clear that the Tocharian A root subjunctives are older: for both verbs, they are attested in the "more nominal" verbal nouns *täṅklune* and *träṅklune*, which are more likely to have preserved something old than the "more verbal" forms, where indeed the $\tilde{n}^{\ddot{a}}/_{a}$-stems are found.[824] Thus, the question is where the $\tilde{n}^{\ddot{a}}/_{a}$-suffix may have arisen before it spread to the root subjunctives where it is clearly secondary.

Once Tocharian A $\tilde{n}^{\ddot{a}}/_{a}$-subjunctives that correspond to Tocharian B root subjunctives are discarded, there are not many verbs left, which is direct proof of the high productivity of the suffix. In all instances where other analyses are also possible, the verb contains a nasal, which sometimes seems to belong to the root, and sometimes to a suffix.

[824] The evaluation of 3sg.mid. *träṅktär* A115b1 is uncertain: it could be a relic root subjunctive of 'hang', or else it could belong to *träṅk-* 'say'.

	TA present	TA subjunctive	TB present	TB subjunctive
'hit'	{āwnä$^{ṣä}/_{sa}$-}	{āwñä/a-}	{awnáṣṣə/ske-}	{awn-}
'be necessary'	{kläynä$^{ṣä}/_{sa}$-}	{kläyñä/a-}[825]	{kləynáṣṣə/ske-}	{kləyn-}
'give up'	{räynä$^{ṣä}/_{sa}$-}	{räyñä/a-}	{rəynáṣṣə/ske-}	{rəyn-}
'be satiated'	{säynä$^{ṣä}/_{sa}$-}	{säyñä/a-}	{səynáṣṣə/ske-}	{səyn-}
'rest on'	{se$^{ṣä}/_{sa}$-}	{señä/a-}	{saynáṣṣə/ske-}	{sayn-}

In Tocharian B, the synchronic analysis of these verbs is straightforward: the nasal is found in all stems and clearly belongs to the root. Consequently, the subjunctives are root subjunctives and the presents are *ṣṣə/ske*-presents, not *nəṣṣə/ske*-presents. Conversely, the analysis of the Tocharian A forms is troublesome, as pointed out in 2.6.9 (p 114): sometimes the *n* belongs to the root, sometimes it does not, and sometimes the data is contradictory. Of the verbs above, *räy-* 'give up' shows no *n* in the preterite and the preterite participle, so that the present is {räy-nä$^{ṣä}/_{sa}$-} and the subjunctive {räy-ñä/a-}; *āw-n-* 'hit' shows an *n* in the preterite participle but not in the preterite, and *säy-n-* has an *n* in the preterite but not in the preterite participle, so that the shape of the root of both verbs, as well as the analysis of their present and subjunctive stems is uncertain; *se-* 'rest on' shows an *n* only in the subjunctive, so that the present is {se-$^{ṣä}/_{sa}$-} and the subjunctive {se-ñä/a-}. Since the status of the nasal was apparently so instable, it is very likely that the *ñä/a*-suffix started out in this category, probably through metanalysis.

As shown by Hackstein (1995: 299-300), the nasal of TA *säy-n-* and TB *səyn-* 'be satiated' must originate in a suffix, probably the zero grade variant of a *neu*-present suffix, i.e. **səynə-* < **s(h₂)i-nu*. The problematic reflex of the root as **səy-* is probably to be explained with influence from the present stem **soyə/e-*, synchronically a split-off verb in Tocharian B (see 4.4.1, p 388): both the absence of palatalisation of **si-* to **ṣ-* and the preservation of **i* as against the expected development to **ə* may be due to restoration on the basis of **soy-*.[826]

Likewise, TA *kläyn-* and TB *kləyn-* 'be necessary' have a good etymology in PIE **ḱlei-* 'lean', so that the *-n-* must go back to a suffix. Such a nasal suffix is indeed well attested, found in a.o. Gk. κλῑ́νω (Lesb. κλίννω) 'lean', YAv. *-sirinaoiti* 'leans', Lat. *dē-clīnō, -āre* 'deviate', OHG *hlinēn* 'lean' (LIV2: 332, where Lith. *šlinù* 'lean' is taken as a secondary formation). Although the expected shape of a nasal present is **ḱlnei-* ~ *ḱlni-* (so also LIV2: l.c.), such a preform cannot account for the Tocharian forms, since we would than expect *ñ* in all stem forms, whereas we find some with *n*, some with *ñ*. Again, the most likely preform from the Tocharian point of view is **ḱlneu-*,

[825] The subjunctive stem is partly deduced: 3sg.mid. *klintar* A343a4 (for *klintär*), and *klyinträ* A400b3 could theoretically also be from a sbj. stem {kläyn-} (the initial palatalisation of *klyinträ* is secondary on any account).

[826] It is less likely that the intervening laryngeal of **sh₂i-* should have blocked the palatalisation. In any case, this would not yet account for the *i*-reflex. For the etymology of the root, see 4.4.1 (p 388).

which has a parallel in the Avestan nasal present (on the vocalism, see de Vaan 2003: 515; Lesb. -νν- proves *-νj- instead of *-νϝ-).

While the origin of TA *āw-n-* and TB *awn-* 'hit, start' is uncertain, a reasonable etymology can be offered for TA *räy-* and TB *rəyn-* 'give up': PIE *$*h_3$rei-* as attested in a.o. OCS *rějǫ* 'flow', and, with a nasal suffix, Ved. *riṇáti* 'makes flow, run', or rather 'whirl' (Praust 1998: 90), Gk. ὀρίνω, Lesb. ὀρίννω 'excite, stir', Goth. *rinnan* 'run', and Russ. *rínut'* 'flow' (Adams 1999: 536; LIV2: 305). The only problem with this connection is presented by the meanings, which are a bit far apart; however, 'give up' can easily be derived from 'let go, let flow, make run'. Again, it is unlikely that Tocharian continues a regular nasal present *$*h_3$rnei-* ~ *$*h_3$rni-*; it rather needs a preform *$*h_3$rneu-*, a formation supported by Germanic, where *-nn-* reflects *-*nw-* (on Lesb. -νν-, see above).

Now that the source of the $ñ^{ä}/_{a}$-subjunctive has been established, two important questions need to be answered. First, it needs to be clarified how the suffix could spread beyond its original domain; second, the difference in inflexion between Tocharian A and B must be accounted for.

The main reason why the $ñ^{ä}/_{a}$-suffix could spread has already been given above: it was unclear whether it was part of the root or an independent suffix. Evidently, it could spread *because* it was analysed as a suffix. I can see two ways in which that suffix analysis can have come about: either the nasal element was analysed as a subjunctive suffix because the preterite stem simply had no nasal in origin (after all, it seems to go back to a nasal suffix eventually), or the nasal was lost before the *s* of the preterite (according to the sound law shown by e.g. TA *es* 'shoulder' ~ TB *āntse* 'id' < PT **anse*).

If we assume that the nasal was lost before the *s* of the preterite, this has the advantage that the Proto-Tocharian stem system was rather simple, similar to Tocharian B. The basic stem was the *n*-subjunctive, from which an $^{śś ə}/_{ske}$-present was derived, as well as an *s*-preterite. The disadvantage is that we have to assume analogical removal of the nasal in a number of forms, e.g. *s*-less preterite forms such as *āwu* 'I hit' (of which there cannot have been very many because apart from 'hit' only middle preterite forms are attested) and the preterite participles *raryu* 'give up', *sasyu* 'satiated' (as opposed to *onu* 'hit'). In view of the close connection between the preterite and the preterite participle, adaptation of the participle to the preterite is certainly conceivable. It may be no coincidence that the only verb for which active preterite forms are attested, *āw-n-*, shows the *-n-* in its participle *onu*: apparently, the preterite participle is a relic of an earlier stage where the *s*-less preterite forms still contained an *-n-*.

If, on the other hand, we assume that the occasional absence of a nasal in the preterite and preterite participle forms is a relic of an earlier stage, the explanation of the subjunctive is straightforward, but other problems are encountered. For instance, it becomes difficult to explain the preterite formation as such, if it is not derived from the subjunctive: the Tocharian *s*-preterites have no parallels elsewhere. Further, it is very difficult to explain why the *-n-* spread from the subjunctive (or even the

present) only to the preterite participle *onu* in 'hit': if preterite and preterite participle are incompatible, it is more likely that the latter preserves the older state of affairs since it is not part of the finite verb, but a nominal form. Thus, the spread of the *n*-subjunctive was favoured by loss of the *n* in the preterite rather than by old *n*-less forms.

The discrepancy between Tocharian A *-ñ$^{ä}/_{a}$-* and Tocharian B *-n-* has probably come about through levelling of *-ñ-* and *-n-* in either direction. First of all, we expect a suffix **-neu- ~ *-nu-* to have yielded both forms with *ñ* and with *n*; the phonologically regular **-ńəw-* and **-nə-* must have been levelled to **-ńə-* and **-nə-* at first, and then to **-ńə-* in Pre-Tocharian A and to **-nə-* in Pre-Tocharian B.[827] The palatalised variant seems to be needed for Tocharian B *auñento* 'beginning' (~ Tocharian A *oñant*), which must follow a derivation path where a suffix with *-e-* is added to a palatalised base, like *aiśaumye* 'wise' from *ay$^{ś ə}/_{ke}$-* or *weñenta* 'speaker' from *weñ$^{ə}/_{e}$-*. The unpalatalised variant is certainly needed for the Tocharian A present, since the present suffix *-(n)ä$^{ṣä}/_{ṣa}$-* shows no trace of *-ñ-*. The *$^{ä}/_{a}$*-alternation of the *ñ*-suffix must be secondary after e.g. *ññ*-formations; possibly, traces of the earlier type are preserved in forms like *riñmār* 'I will give up' for expected ***riñamār*.[828]

Finally, I would like to put forward the hypothesis that the isolated Tocharian A *iññ$^{ä}/_{a}$*-subjunctives (that is, as opposed to the frequent *iññ$^{ä}/_{a}$*-present-subjunctives discussed in 4.4.4, p 394) replace the *'əy*-subjunctive still found in Tocharian B (see 4.8.1 above, p 469). Only two verbs form an *iññ$^{ä}/_{a}$*-subjunctive: *āks-* 'announce' and *oks-* 'grow', prs. {āksäy$^{ṣä}/_{ṣa}$-}, {oksäy$^{ṣä}/_{ṣa}$-} vs sbj. {ākṣäññ$^{ä}/_{a}$-}, {okṣäññ$^{ä}/_{a}$-} 'grow'. My argument is based on two observations: 1) *okṣäññ$^{ä}/_{a}$-* corresponds to Tocharian B *awkṣəy-*, and 2) the present *oksäy$^{ṣä}/_{ṣa}$-* contains an element *i* /äy/ that is otherwise inexplicable. That the pattern of at least Tocharian B *awks-* goes back to Proto-Tocharian is also suggested by the neat correspondence between the TB prt.ptc. *aukṣu* and isolated TA *okṣu*, see Winter (1977: 138). Thus, I assume that the prs. *oksäy$^{ṣä}/_{ṣa}$-* is ultimately an extension of the original sbj. *okṣäy-*, either with dissimilation *ṣ_ṣ* to *s_ṣ* or with reintroduction of the unpalatalised *-s-* from elsewhere. The subjunctive suffix probably had a single *ñ* at first, i.e. **okṣiñ$^{ä}/_{a}$-* (cf perhaps

[827] This spread of *ñ* is recent because it postdates the depalatalisation of *ñ* before *t* in view of forms such as 3sg.mid. *oñtar* A231a5 '(s)he will start', 3sg.mid. *kñāñtär* A352a1 '(s)he will know', 3sg.mid. *nākäñtär* MY3.3a8 '(s)he will reproach' as opposed to e.g. 3sg.mid. *śewiṃträ* {śewäyñnä-tr} with the "old" *iññ$^{ä}/_{a}$*-suffix.

[828] If an alternative solution for the palatalisation of Tocharian B *auñento* can be found, another explanation of the *ñ* of Tocharian A can perhaps be offered. It is possible that it originates in a *$^{'ä}/_{a}$*-subjunctive to a root in *-n*, after the model of prs. *läñcä$^{ṣä}/_{ṣa}$-* : sbj. *läñc$^{ä}/_{a}$-* 'go out', prs. *kāw$^{ṣä}/_{ṣa}$-* : sbj. *kāw$^{ä}/_{a}$-* 'kill' etc, which must have been much more widespread in Pre-Tocharian A than in the language as it is actually attested. This second option is less likely because it offers no explanation for the type *riñmār* and the spread of the *-ñ-* is perhaps less plausible in a paradigm with a regular *$^{'ä}/_{a}$*-alternation.

ākṣñam next to regular *ākṣiññam* 'I will announce'), but was then adapted to the *iññ*$^{ä}/_{a}$-present-subjunctive. Since Tocharian B *aks-* 'announce' forms no *'ə*$y^{ə}/_{e}$-subjunctive, Tocharian A *āks-* 'announce' may have taken over its pattern from *oks-* 'grow', to which it was so close in form. Possibly, the unpalatalised *s* of the presents *āksäy*$^{sä}/_{sa}$- and *oksäy*$^{sä}/_{sa}$- was taken over from there (if it is not due to dissimilation as suggested above).

4.8.3 *E*-SUBJUNCTIVE

As commonly acknowledged (and once more set out in 2.5.1, p 47), the *e*- and *o*-presents of Tocharian B are in complementary distribution: the former are found with *ə*|*a*-roots, the latter with *a*|*a*-roots. Evidently, this distribution can be traced back to Proto-Tocharian, as the Tocharian A *ā*|*ā*-root presents with *a*-grade (see 2.5.2, p 56 and 2.6.10, p 116) are clearly secondary:[829] prs. {asā-} /asa-/ 'dry out', for instance, goes back to older **oso-*, just like Tocharian B {oso-} 'dry out'. Since they are in complementary distribution, they will go back to a common source. The extreme regularity of the *e*- and *o*-present classes, as well as the frequent match with more complex patterns such as the *s*-present, suggest that they are secondarily derived, as noted already by Winter (1961: 92).

Conversely, the *e*-subjunctive does *not* seem to be secondary because it is formed to a much smaller group of verbs with more varied patterns. Since – except for the fact that it is a subjunctive – the *e*-subjunctive is completely identical to the *e*-present, the *e*-subjunctive must be the origin of the *e*-present. The *e*-present in turn must be the source of the *o*-present, on which see further below.

Just like the *e*-present, the *e*-subjunctive is exclusively middle, it has *ə*-grade in the root, and all verbs are intransitive (exceptions to the latter pattern are sometimes found with the *e*- and *o*-presents, not with the *e*-subjunctive). In Tocharian A, the *a*-subjunctive (i.e. ~ TB *e*-subjunctive) combines with a rare preterite type that cannot be secondary: a middle-inflected root preterite with *a*-grade in the root, but without initial palatalisation, e.g. 3sg.sbj.mid. *nkatär* '(s)he will perish' : 3sg.prt.mid. *nakät* '(s)he has perished'. Even if some sort of analogical origin of this type could be found, it must have been of Proto-Tocharian age at least, as shown by the otherwise anomalous *e*-grade in the Tocharian B match 3sg.prt.mid. *neksate* '(s)he has perished'. Further, it must have been more widespread, since it is attested in a relic preterite formation of a verb of a different class, TA *yām-* 'do': e.g. 2sg.prt.mid. *yāmte* 'you have made'.

There are various theories on the origin of the class marker *-e-* (for references, see e.g. Ringe 1996: 58 and Pinault 2008: 578-579). Since the most widely accepted variant (Ringe 1987a; strongly overvalued in LIV2 because the productivity of the

[829] That the formulation above reflects the actual language situation is shown by shifts such as that of *sparcwṣ* to *sparcwatär* (see 4.7.4, p 462).

suffix is disregarded) proceeds from *ə|a*-roots as found with the secondary *e*-presents instead of *ə|Ø*-roots as found with the primary *e*-subjunctives, it can be discarded.[830] In my view, the correct solution has been advanced by Jasanoff, who has made these middle classes to a central theme in his understanding of the Tocharian verb. He suggested that the *e*-classes in essence reflect the 3sg. ending **-o* of what he calls the middle root aorist (1978: 42-43 and passim), i.e. the type Ved. *śáye* 'lies' < **ḱei-o + i*, often called "stative". Formally, this derivation is impeccable; the main problem is why a complete paradigm should be built on just one form. The reason must be that the relevant verbs predominantly occurred in the 3sg., cf *kən-* 'come about', *kəs-* 'extinguish', *nək-* 'perish', *pək-* 'boil', *tˢək-* 'burn'; only *təm-* 'be born' is not a typical "middle" in the sense of Kemmer (1993). In any case, the fact that the *e*-suffix is inert – not itself grading, not combining with gradation in the root – proves that the paradigm results from a thorough regularisation; this is neatly accounted for with a derivation from just one 3sg. form.

Whether the *e*-subjunctive had become a subjunctive *before* it spread to the *e*-presents I do not know. However, since it was a present in origin, it is easier to assume that the Tocharian B middle *s*-present and the Tocharian A middle *näˢä/ₛₐ*-present are relatively recent completions of the *e*-paradigm, so pushing the *e*-formation to subjunctive function. In the *e*-presents, a different strategy was followed to make a fully-fledged verb, apparently because the characteristic root preterite of the *e*-subjunctive was not taken over: instead, the ubiquitous *a*-suffix was used to form an *a*-preterite-subjunctive.

As to the origin of the *o*-presents I have a tentative solution that is close to Ringe's explanation (1987a), but not identical with it. As is shown by the deviant initial accent in the subjunctive, *o*-presents are secondary to *e*-presents. While this initial accent may in part be due to the markedly higher frequency of medio-actives among *o*-presents compared to *e*-presents (see also 4.5.5, p 413), the very fact that they have more medio-actives in itself shows that they are secondary. Thus, I assume that *o*-presents ultimately result from the addition of the suffix *e* to an already existing stem in *a*: the resulting combination **ae* was certainly contracted to *o*.

The explanation offered above takes the complementary distribution between the *e*- and *o*-presents to be secondary: whereas in the *e*-presents the present stem is primary and the preterite-subjunctive is derived with *-a* (with *-e + a* yielding *-a*), the preterite-subjunctive of the *o*-presents is primary and the present is derived with *-e* (with *-a + e* becoming *-o*). If this asymmetric derivation pattern is not accepted, I

[830] Ringe argues that the zero grade of the stative suffix **-eh₁-* followed by a **iᵉ/ₒ*-suffix contracted to **ö*, a compromise between *e* and *o* that yielded TB *e* in principle, but affected a preceding *a* to become *o*, after which it was affected by that new *o* to become *o* itself. Although I agree that **aye* > **ae*, and perhaps also **ayə* > **aə*, would result in *o* (see Peyrot forth.a), I do not see how such a sequence could become *e*. In a later article, Ringe has himself withdrawn his theory: "I am no longer convinced that Ringe 1996:56-9 is even approximately the correct solution to this puzzle" (2000: 137).

can only think of the following. Both present classes were formed to original *x*|*a*-roots, and the combination of *a* and *e* yielded *o* in both classes. However, the *o* caused *o*-affection only in *a*|*a*-roots, while the root vowel of *ə*|*a*-roots remained the same. Then, the *e*-suffix of the *ə*|*a*-roots was restored after e.g. the *e*-subjunctives, but *because* of the *o*-affection, the salient *o_o*-presents were left intact: the *o* in the root blocked restoration. A similar principle seems to have been at work in *onolme* 'being' < **ana-elme* where the *o* in the root blocked restoration of the suffix as in *wpelme* 'spider' < **wəpa-elme* (Peyrot forth.a).[831]

For the root preterite I have no solution. Jasanoff's comparison with the Indo-Iranian passive aorist with **o*-grade (e.g. 2003: 155, 213 and passim) is formally and functionally splendid, but it depends on the doubtful age of that formation (cf e.g. Kortlandt 1981: 127[832]), unless one is prepared to accept Jasanoff's explanation with the *h₂e*-conjugation. An inner-Tocharian "Schwebeablaut" explanation fails on the lack of a sufficient number of verbs with the suitable *ReC*-structure, it seems: only *nakät* < **nekte* itself could theoretically result from the adaptation of an earlier **enkte* from **nḱ-to*. As a last option, one could consider Kortlandt's suggestion that the *e*-grade reflects the **ē*-grade of the *s*-aorist (1994: 63); the lack of initial palatalisation would have to be explained as analogical after *ə*-grade middles.

4.8.4 $^{\prime ə}/_{E}$-SUBJUNCTIVE

Although the only Proto-Indo-European formation that could qualify as "subjunctive" was formed with the suffix *-$^{e}/_{o}$-, subjunctives with an $^{\prime ə}/_{e}$-suffix are only a minor category in Tocharian. First of all, the present-subjunctives discussed in 4.4.1 (p 378), 4.4.4 (p 394) and 4.4.6 (p 398) are actually presents (such as TB $pa^{ṣṣə}/_{ske}$-, TA $pā^{ṣä}/_{sa}$- 'protect'), or recent derivations from presents (such as TB $weñ^{ə}/_{e}$-, TA $weñ^{ä}/_{a}$- 'say'). Then there is another category of $^{\prime ə}/_{e}$-subjunctives with clearly secondarily derived presents next to them, which must therefore go back to presents as well (discussed directly below). The only "real" $^{\prime ə}/_{e}$-subjunctives are found with **kʷəm*- 'come' (see 4.3.1, p 351) and the "*s*-causatives", which form the main topic of this section.

In Tocharian B, we find {$ak^{sə}/_{se}$-} 'announce', {$a^{sə}/_{se}$-}, probably 'fetch', and {$ya^{ṣṣə}/_{ske}$-} 'beg'. All three verbs form an evidently secondary $^{ṣṣə}/_{ske}$-present:

[831] Lubotsky (after Kortlandt) argues that the *o*-present reflects a *we*-present (with *we* > *o*; see 4.10.3, p 493), which might in origin be a re-inflected perfect participle form (1985: 7). While the assumption of an old nominal formation is semantically fine and neatly compatible with the morphologically inert character of the class, it is offers no explanation for the *e*-subjunctive and the *e*-present, nor for the stable *a*-vowel in the root of *o*-presents. As I argue, his key example TB *sporttotär*, whose TA cognate *sparcwäṣ* shows in fact a *-w-*, is to be explained otherwise (see 4.7.4, p 462).

[832] Kortlandt argues that it is in origin a denominal formation, which is supported by Migron's observation (1975) that the passive aorist is often impersonal.

{aksə́^{ṣṣə}/$_{ske}$-}, {ásə^{ṣṣə}/$_{ske}$-},[833] and {yaskə́^{ṣṣə}/$_{ske}$-}. In addition, 'announce' and 'beg' form the secondary *a*-preterites {akṣ-á-} and {yaṣṣ-á-}. Thus, these ^{ʾə}/$_{e}$-subjunctives must reflect earlier presents. While 'fetch' lacks a reliable etymology, the *sk*-suffix of 'beg' is a clear indication of its present origin (see Hackstein 1995: 185-186). However, the *s*-extension of *ak*^{ṣə}/$_{se}$- 'announce' is difficult to explain, as it has no parallels in other Indo-European languages, in spite of the relative good attestation, e.g. Gk. ἦ 'said', Lat. *aiō* 'say' and Arm. *asem* 'say' (LIV2: 256; Hackstein 1995: 332-335; Martirosyan 2010: 117-118). Hackstein argues that *ak*^{ṣə}/$_{se}$- reflects a desiderative *$h_2eǵ$-$s^e/_o$-*,[834] which is theoretically possible because it is in fact a subjunctive, but hardly plausible because it would be the only example. I would rather compare *aks*- with *aksa*- 'wake up' and *awks*- 'grow': it cannot be a coincidence that all these verbs with an "extra" *-s-* go back to roots ending in *-k*. Possibly, at least one (*awks-*), perhaps more, built an old *s*-present (in the sense of Kuiper 1937: 36-40), which was taken over by the other verb(s). In view of the apparent condition that the root ends in *-k*, it could also be argued that the *-s-* reflects an earlier suffix *-sk-* (see 4.5.6, p 419), but the patterns of the above three verbs are different: we would have to assume that the whole stem pattern was based on the (original) present stem, while the *k* must have been reintroduced to yield the secondary cluster *ksk* from a non-present stem that is not preserved.

In Tocharian A, we find {kāw^{ä}/$_{a}$-} 'kill', {yām^{ä}/$_{a}$-} 'do', and {läñc^{ä}/$_{a}$-} 'go out'. The subjunctive of 'go out' is discussed in 4.3.5 (p 368), where it is argued that is analogical after {śäm^{ä}/$_{a}$-} 'come' (see 4.3.1, p 351). For the subjunctive of *yām-* 'do', I have argued (4.3.7, p 372) that it probably replaces the root subjunctive found in Tocharian B because the *x*|Ø-root subjunctive seems to be systematically removed in Tocharian A; to the subjunctive of 'kill' the same explanation could apply.

The "real" ^{ʾə}/$_{e}$-subjunctives that remain are those formed to the "*s*-causative". In Tocharian B, it is a regular category with *ə*-grade in the root and initial palatalisation if possible. In Tocharian B, we find {trəy^{śə}/$_{ke}$-} 'err', {tsər^{śə}/$_{ke}$-} 'torment', {pəl^{śə}/$_{ke}$-} 'burn', {pl̂ən^{cə}/$_{ke}$-} 'sell', {məw^{ṣə}/$_{se}$-} 'make disappear'?, {wəy^{śə}/$_{ke}$-} 'avoid', {ṣərp^{ə}/$_{e}$-} 'point out', {ṣpər^{śə}/$_{ke}$-} 'disappear', and {l̂əw^{śə}/$_{ke}$-} 'light up'. In Tocharian A, it is a relic category that was being replaced by the productive *ñ*^{ä}/$_{a}$-subjunctive discussed above (4.8.2, p 472). As noted in 2.6.6 (p 99), the earlier existence of the type is nevertheless proved by such forms as the verbal nouns *triślune*, *pläślune* and *tsärślune* from {träy^{śä}/$_{ka}$-} 'err', {päl^{śä}/$_{ka}$-} 'burn' and {t^{s}är^{śä}/$_{ka}$-} 'torment', respectively. The verbal noun *eñlune* A11a5 'instruction' to the verb *en-* 'instruct' is ambiguous as to whether it is a ^{ʾä}/$_{a}$-subjunctive or a *ñ*^{ä}/$_{a}$-subjunctive (thus Carling 2009: 73), but in view of its replacement by the productive *enäṣlune* it was probably not clear

[833] If 3sg. *āṣṣäṃ* B591a4 is {ásəṣṣən}.

[834] Because of the Tocharian *a-*, Hackstein reconstructs the root with initial *h_2 instead of the traditional *h_1 based on Greek ἦ (e.g. Rix 1976: 204; Schrijver 1991: 26-28).

enough for the speakers, which makes it unlikely that it was of the productive *ñ*$^{ä}/_{a}$-type (see also Sieg, Siegling and Schulze 1931: 378).

The problem with this $^{\prime}ə/_{e}$-subjunctive type is that its stem pattern is hardly any different from the *x*|Ø-root subjunctive: both form an *s*-preterite and *s*-present. The only difference is that the $^{\prime}ə/_{e}$-subjunctive does not combine with $^{śś ə}/_{ske}$-presents, a subcategory found with *x*|Ø-root subjunctives. However, in the light of Couvreur's theory that the *s*-present arose through dissimilation after stops, at least *-k* (see 4.5.6, p 419), there is no reason whatsoever to expect $^{śś ə}/_{ske}$-presents in this $^{\prime}ə/_{e}$-subjunctive class: 7 out 9 end in *-k*.

In view of the rigid regularity of this subclass, it is plausible that it goes back to only a small source, which in turn suggests that the *x*|Ø-root subjunctive was the more original, primary type. How and where this secondary $^{\prime}ə/_{e}$-type arose I do not know. The one certain old $^{\prime}ə/_{e}$-subjunctive of 'come' may have been the model, but its **nəsk*$^{\prime}ə/_{e}$-present is in fact different from the *s*-present found here (Tocharian A *länt-* 'go out' is a different case because it does form a *näś*$^{ä}/_{sa}$-present). One could argue that regular *ə*-grade $^{\prime}ə/_{e}$-presents caused the shift to $^{\prime}ə/_{e}$-inflexion, as they are synchronically indistinguishable from $^{\prime}ə/_{e}$-subjunctives: both have initial palatalisation (2.5.4, p 68 and p 73). If this vague analogy is not accepted, there seems to be no other option than to derive these subjunctives from old $^{*}e/_{o}$-subjunctives. After all, they are formally completely compatible with such a derivation, too, and in that case it is even conceivable that some of the original $^{\prime}ə/_{e}$-subjunctives were ousted by the better represented *x*|Ø-root subjunctive. Such a shift would be especially attractive because it explains why there are no $^{\prime}ə/_{e}$-subjunctives with other root grades than the regular *'ə* from $^{*}e$.

4.9 MEANING

As argued in chapter 3, the meaning of the Tocharian subjunctives in main clauses is future and that in subclauses is uncertainty. While the uncertainty meaning and the future meaning are evidently linked, they cannot be unified synchronically because the subclause subjunctive is not a future and the main clause subjunctive does not denote uncertainty. It was further suggested that it is probably the future meaning that derives from that of uncertainty, if the two meanings are diachronically to be derived from one proto-meaning.

The simple formulation of the meaning of the Tocharian subjunctive above is not meant to conceal its wide range of uses. Especially in view of the lack of competing categories other than the optative, whose meaning is neatly distinct, it can hardly be overemphasised that the meanings FUTURE and UNCERTAINTY in principle allow for a derivation from various sources. Since the uncertainty meaning is probably older than the future meaning, any grammatical category denoting uncertainty, possibility or probability would qualify. In addition, it is difficult to *exclude* certain paths of development: *will* meanings could perhaps be a source as well, and even future

meanings could eventually stand at the basis. Likewise, I consider it theoretically possible that the subjunctive goes back to an old present.

4.9.1 SUBJUNCTIVE

As already noted in section 1.3 (p 16), the meaning of the Tocharian subjunctive is in principle compatible with that of the Proto-Indo-European subjunctive. However, there are three serious problems: 1) the reconstruction of the Proto-Indo-European subjunctive is full of problems, 2) in as far as it can be reconstructed, its meaning is difficult to establish, and 3) the Tocharian subjunctive cannot formally be derived from it. In this section, the semantic equation is my main concern.

The meaning of the Proto-Indo-European subjunctive has been the subject of a long and ongoing discussion, from early studies such as Delbrück (1871) up to recent ones such as Tichy (2006), who discusses the history of the debate at length (p 1-50). Whereas the languages that have preserved the subjunctive – as an independent category or in traces – agree in great outline in its use in subclauses, the uses in main clauses vary greatly. In subclauses, the subjunctive has often a faint meaning only, to the extent that it does not seem to add any meaning at all, but merely serves to construe a subordinate clause. In main clauses, the meanings encountered range from future and expectancy to will and generic use. As far as I can judge, the weight attached to the different languages has had a great impact on the reconstruction of the proto-meaning, as so often with the reconstruction of the proto-language in general.

Renou has argued that apart from its usual volitional function, in which it expresses the will of the subject, the Vedic subjunctive denotes subordination and dependency:

> "À côté du subjonctif modal – final, consécutif, hypothétique, volitif – on est en droit de poser un subjonctif éventuel, dont le seul motif apparent est de présenter l'affirmation comme générale, indéterminée, implicitement subordonnée" (1932: 9).[835]

In the same article he has shown that the Vedic subjunctive must in origin have been an independent formation, not taking part in the aspect contrast between the imperfective present stem and the perfective aorist stem: "il y a lieu de poser pour le védique des subjonctifs indépendants, sans autre caractéristique que la voyelle *-a-*, étrangers aux systèmes verbaux fixés" (p 28).

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[835] Admittedly, Renou's notion of an "éventuel" is a bit vague, but I am convinced that this is not due to Renou, but rather to the subjunctive itself. In my view, it is a fallacy to conclude from any vagueness in his description that it is wrong. Compare in this respect the strange statement of Hahn (1953: 147), who claims "In Vedic the subjunctive and optative seem hopelessly mixed up with each other, as well as with the future indicative and the imperative."

Whereas the Greek subjunctive shows great similarity to the Vedic modal subjunctive (excluding Renou's "éventuel" for the moment), it can also be used as a future. In addition, there are some irregular futures that are historically subjunctives, the most prominent example being ἔδομαι 'I will eat'. Whereas the meaning of the Latin subjunctive is of little use for our purpose because it largely derives from the Proto-Indo-European optative, the fact that it has some futures of the same sort is often adduced in support of an old future meaning of the Proto-Indo-European subjunctive.

On the basis of the evidence so briefly presented above, I would be inclined to attach most weight to the Vedic subjunctive, and thus to the "éventuel" which seems to be a relic meaning. I have doubts about the value of the Latin evidence as a whole because the Latin future certainly has other sources beside the subjunctive, and those other sources seem to be much more important, so that the only thing needed is a subjunctive with a meaning that allowed it to become part of the future system – obviously, there are many such meanings. Even if the Latin subjunctive-futures originally had future meaning, which is certainly possible as this notion is also found in Greek, it could easily have developed from a volitional. The latter development is amply recorded, in English with its *will*-future as well as in many other languages (cf the statistic approach of Bybee, Perkins and Pagliuca 1994: 254-257).

The problem, then, is whether the volitional (*will*) subjunctive can be derived from the "éventuel" posited by Renou, or whether it should rather be the other way round. As hinted at above, I think that the synchronic analysis of the Vedic usage points to an old "éventuel" meaning or subordinating function: after all, the volitional use is attested in Vedic itself. Thus, if the "éventuel" seems to be a relic use within Vedic, the volitional is likely to derive from it, and so it could in e.g. Greek.

To mitigate the evidence of Vedic, it could be argued that it does not display the original state of affairs because the use of the subjunctive is influenced by neighbouring categories. Indeed, "Le Veda baigne dans le mode et, à l'intérieur du mode, dans les échanges modaux" (Renou 1937: 9), and on top of that it has a precative, a *sya*-future, and a desiderative. However, denoting a wish of the speaker, the precative was competing with the optative rather than with the subjunctive; the *sya*-future was marginal in the earliest period, so that it can hardly have influenced the use of the subjunctive in any important manner; and the desiderative was only competing with the subjunctive in the first person, since it denoted a wish of the subject, unlike the subjunctive, which could denote the will of the speaker, not of the subject.[836] Thus, the large number of modal and future-like categories in Vedic is striking and differences are often delicate, but it is not clear how the "éventuel" use should have been caused entirely by shifting through pressure from other categories.

[836] In a recent study, Heenen has argued that the desiderative does not merely express the wish of the subject, but depicts an action as about to take place (2006: 49 and passim). Naturally, this sets it further apart from the subjunctive.

Nevertheless, I cannot but remain very cautious with conclusions about the original meaning of the Proto-Indo-European subjunctive. The main reason is that on the one hand it is not clear what the exact role of neighbouring categories was, and on the other hand, it is in general hardly possible to make definite statements about what is a possible semantic development and what is not: reasoning is rather in terms of what is more or less likely. In spite of these uncertainties, I will maintain my view that the meaning of the Proto-Indo-European subjunctive allows for a connection with its Tocharian counterpart. If it was a subordinator, it matches the Tocharian subjunctive in subclauses perfectly; if it was a future, it corresponds well to the Tocharian future subjunctive in main clauses; if it was volitional, it may by all means have developed into a future subjunctive.

An important reason to give priority to Renou's "éventuel", a non-modal, non-future function, is the obvious similarity of the subjunctive with the *$^{e}/_{o}$-present, which makes a non-modal origin of the subjunctive likely if one does not want to derive that present from the modal form. The probable connection of these two categories is one of the reasons why the reconstruction of the subjunctive is uncertain: if it developed from a present, the logical question is when that happened. This question receives even more weight if the second difficulty of the reconstruction is taken into account: the subjunctive is best preserved in the "central branches" Greek and Indo-Iranian, with traces in Latin, but apparently not elsewhere. Thus, it is conceivable that it is a relatively recent creation in Indo-European, which was not found in Proto-Indo-European proper (understood as the ancestor of all branches).

In this light, it is highly interesting that Tocharian has in fact inherited the subjunctive, at least morphologically. However, it has not inherited the subjunctive as a category, but only in isolated forms that are now found among the Tocharian subjunctive formations. Thus, if the meaning of the Tocharian subjunctive were inherited from Proto-Indo-European, those few morphological subjunctives would need to have kept their original meaning and all other Tocharian subjunctives would have been created secondarily. It is here that great difficulties arise: if the system Tocharian inherited had been so straightforward as in e.g. Greek, it is hardly possible that such a radical restructuring could have taken place. In addition, the verb for 'come', which has without doubt the most prominent old subjunctive, deviates from regular stem patterns in such a profound manner, that we can only understand the survival of its subjunctive as an incidental phenomenon. It is unlikely that this small group stood at the basis of the subjunctive as a whole.

4.9.2 PRESENT

In theory, a possible semantic source of the Tocharian subjunctive is an old present, as argued by Couvreur (1947: 73) and others. The idea is that the current subjunctive goes back to an old present, which adopted subjunctive function because a new present was created next to it: a push chain development. Indeed, not only the

meaning of the Tocharian subjunctive would fit such a development, but we also find at least one of the diagnostic features Haspelmath has convincingly worked out (1998: 30-33, cited extensively below):

1) *markedness violations*: the future or subjunctive has an unmarked form whereas the present is marked, e.g. Udmurt *myn-iśk-o* 'I am going' vs *myn-o* 'I will go';
2) *irregular verbs*: some synchronic futures or subjunctives seem to be presents morphologically, e.g. Lezgian prs. *q̃aču-zwa* '(s)he takes' and fut. *q̃aču-da* '(s)he will take' vs prs. *kič'e-da* '(s)he is afraid' with the "fut. suffix" *-da*;
3) *unexpected polysemy*: the future or subjunctive also expresses some other meaning that does not seem to be directly linked, e.g. the Lezgian future *-da* cited above is also used as an habitual present;
4) *unexpected special uses*: the future or subjunctive has occasionally different meanings in older texts, proverbs, or fixed expressions.

The Tocharian subjunctive displays certainly feature 1) and possibly 2).

The markedness violation is obvious and widespread (see also, e.g. 1.2, p 15). Typical examples are TA *tarkaṣ*, TB *tārkaṃ* '(s)he will let go' with an unmarked form vs TA *tärnāṣ*, TB *tärkanaṃ* '(s)he lets go' with a marked form, or TA *pärkmār*, TB *preku* 'I will ask' vs TA *prakäsmār*, TB *preksau* 'I ask'.

The second principle is more difficult because the Tocharian subjunctive shows a wide variety of subjunctives that look like presents, but much less presents that look like subjunctives. However, a good example can be found: TB 3sg. *prāskaṃ*, 3pl. *parskaṃ* is a present-subjunctive with the root gradation otherwise typical for subjunctives; it is perhaps no coincidence that it means 'be afraid', just like the Lezgian example above. Other forms that could qualify are for instance *lyāka*-type present-subjunctives as 3sg.pl.prs.-sbj. *palwaṃ* of 'complain'. Nonetheless, the essential problem is that there is no unique marker for subjunctives, so that the forms in question could theoretically also be presents – which is, in fact, what they historically are.

The essential question is whether we are allowed to reverse Haspelmath's principle and adduce subjunctives that look like presents. Evidently, we are not: the principles are meant as diachronic clues and a subjunctive that looks like a present is obviously what it looks like, namely an old present. The mere fact that we find present-like subjunctives with derived presents beside them, like TB *weñau* 'I will say' vs *weskau* 'I say', shows that old presents could become subjunctives, but it does *not* prove that other subjunctives that do not look like presents are old presents as well. Thus, I conclude that the question whether the second principle applies invites debate, but in the end the evidence is very weak indeed.

The third and the fourth feature are not found in Tocharian: there are no by-meanings or relic meanings of subjunctive forms that would show that they go back to older presents.

Even if the only explicit indication of a present → subjunctive shift is the markedness of the present, the lack of Haspelmath's other features does not prove that Tocharian is *not* an example of his path of development: any of such irregular-

ities could have disappeared in the course of time. What is more, none of the indications is absolutely necessary. However, positive evidence for the present → subjunctive shift is in fact meagre, certainly if an alternative explanation of the markedness of the present can be found.

The definite argument against Couvreur's theory does not come from semantics, but from comparative morphology: since it can be shown that the Tocharian category present derives from the Proto-Indo-European present, it cannot be a secondary creation that pushed some old present into subjunctive function. In the case of the nasal presents this is the clearest: if Couvreur's theory is thought through, the subjunctive *tārkaṃ* should be an old present and *tärkanaṃ* should be a new present. Evidently, this leads to serious problems because 1) the nasal present is old and ascertained by comparative evidence, 2) there is no source for a present *tārkaṃ*, and 3) the nasal presents are left unexplained if it is assumed that they were secondarily created: on the basis of what?

Thus, the essence of the subjunctive system cannot be a shift from old presents to subjunctives. Nevertheless, a number of subjunctives must be explained by exactly this development:

- subjunctives in *-s-*, at least *ak^{ṣə}/$_{se}$-* 'announce', *awk^{ṣə}/$_{se}$-* 'grow' (Hackstein 1995: 327-354);
- subjunctives in *-sk-* in as far as they have a longer present next to them (Hackstein 1995: 167-202);
- PT *weñ^{ə}/$_{e}$-* 'speak', clearly an old present as shown by the new presents TA *träṅk-* and TB *we^{ṣṣə}/$_{ske}$-* (Winter 1977: 135-136 and passim);
- *na*-subjunctives, see 4.6.9 (p 448);
- *e*-subjunctives, see 4.8.3 (p 476);
- *i*-subjunctives, see 4.8.1 (p 469);
- TB *ləka-* 'see', certainly an old present-subjunctive because it is still preserved in the middle, and because it is parallel to *śəwa-* 'eat' etc (4.4.5, p 395);
- PT *tətta-* 'put', on the basis of the comparison with Indo-European (4.3.2, p 357).

The varied character of this phenomenon suggests that it is a secondary development that has nothing to do with the rise of the subjunctive as such. In some cases, we dispose even of hard proof because of relic forms or mismatches between the two languages. Thus, those subjunctives from old presents were not pushed to subjunctive function in the "strict sense": the category was already there and their present origin only attests of a drift in Tocharian to fit all verbs in a rigid present : subjunctive pattern. This drift has affected almost the complete verbal lexicon in Tocharian A, while Tocharian B shows the older stage in many instances, but the principle has been at work at the pre-stages of both languages as well as in Proto-Tocharian.

4.9.3 PERFECT

As argued directly above, the Tocharian subjunctive cannot go back to *the* Proto-Indo-European present, that is, the Proto-Indo-European present is in principle continued by the Tocharian present. However, there were perhaps more present-like categories in Proto-Indo-European, the best candidate of which is the perfect. As recounted in 4.1.5 (p 334), the Proto-Indo-European perfect originally was a resultative, denoting a present state as the result of a past event; in many languages, it developed further into a past tense. If Tocharian inherited a perfect which had become a past tense, I see no way to derive the meaning of the Tocharian subjunctive from it. However, if the perfect it inherited was still a present, it is worthwhile exploring whether it could have undergone a shift from present to subjunctive as sketched in the preceding section.

The essential problem with a derivation of the subjunctive from a second present is that it is not clear how a push chain should have functioned. If the two presents existed side by side, they must originally have had a certain relevant difference because otherwise there would be no need of a second present. Then this difference must have disappeared so that the second present had to move away, apparently towards a subjunctive meaning, or it was transformed into the contrast between present and subjunctive as actually attested in Tocharian.

Kim (2007b) has explored exactly this path of reasoning when he wanted to apply Couvreur's idea (in line with a long tradition, he attributes it to Winter instead, e.g. 1994a: 287). In a nutshell, he has argued that the perfect was a second present in Proto-Indo-European, which filled the blank "non-past + perfective" traditionally reconstructed (e.g. Brugmann 1916: 48):

	imperfective	perfective
non-past	*present*	? = PERFECT
past	*imperfect*	*aorist*

Just like Couvreur, Kim draws a parallel with Slavic, where imperfective and perfective aspect determine the character of the whole verbal system. In northern Slavic languages, a morphological present of the perfective stem does not have present, but rather future reference.[837] Thus, if the perfect was a second present

[837] An older meaning of the perfective present is found in South Slavic languages, e.g. Serbo-Croatian, which has a separate future formed with the auxiliary 'want', 1sg. *ću* etc. The SCr. perfective present does not denote a future, but it is used 1) in general statements, 2) as a historic present in narratives to convey rapid action, or 3) in subclauses, where it often has future reference (Meillet and Vaillant 1952: 283-284). Although the auxiliary construction is certainly secondary, relics of the same meaning are found in other Slavic languages such as Russian (Vaillant 1977: 155-156).

comparable to the perfective present of Slavic, it could offer a possible source for the meaning of the Tocharian subjunctive.

Evidently, others had seen the "non-past + perfective" blank before and there are obvious reasons to reconstruct it: the imperfective is formed from the present stem and the perfective from the aorist stem, and the aorist stem has no regular non-past. Conversely, the perfect has its own stem that has nothing to do with the present-aorist system; even its endings are of a completely different set. Thus, there are no morphological reasons to take the perfect with the present-aorist system at all: the two systems are clearly separate (e.g. Brugmann 1916: 427-428).

Prohibitive of Kim's theory, however, is the fact that the perfect was just not the perfective counterpart of the present: it denoted a state. Although the perfect was perfective in the sense that it denoted a state that is the result of a recent *change*, as opposed to the stative, where the starting point of the state is irrelevant, it cannot have filled the "perfective present" blank in the present-aorist system because these formations did not denote states. In my view, the fact that the perfect does neither morphologically nor semantically allow for an analysis as the perfective counterpart of the present is too great an obstacle for Kim's theory.

I see two alternative courses to explain the subjunctive from the perfect: either the subjunctive should go back to the resultative present meaning directly, or the perfect became a perfective present first. Both scenarios are difficult to exclude completely, so that the question is first and foremost how likely they are.

It is not easy to derive the subjunctive from the stative present meaning directly. On the one hand, unlike the Tocharian subjunctive, the perfect certainly had no future reference, and an uncertainty by-meaning can likewise be ruled out. On the other hand, the subjunctive has no present meaning, nor does it refer to states in particular. Thus, "direct derivation" can at most be true in a relative, not in an absolute sense: there are no shared elements of meaning. This again does not lead us much further: the resultative meaning must have been lost anyhow, which leaves us with a present that should have become a subjunctive. As possible ways in which such a shift could have come about, I see only the push chain type of the last paragraph, or the perfective present, for which see directly below. The problem with a push chain development is that it is completely unclear how it should have worked: I would not know how to understand a situation wherein two presents pushed each other so that one became a present without one of them having been different in a certain respect. And here I have to repeat myself: the present turns up as a present, so that it cannot have had another meaning, and the perfect was different in meaning, but not in such a way that it was likely to become a subjunctive.

What seems to be a more attractive path at first sight is to assume that the perfect, which originally was no perfective present, as argued above, became one in the prehistory of Tocharian. The only way such a radical change could have come about, in my view, is a complete merger of the perfect with the perfective stem, the aorist. This has often been proposed before to explain the preterite, which was derived in part from the perfect, in part from the aorist. As the perfect was not

perfective and the aorist not a present, it requires a smooth merger, resulting in a category with the aspect of the latter and the tense of the former.

Although I think that such a scenario would be adequate semantically, I see great morphological difficulties: it presupposes not only that the perfect has been preserved as a present tense, but also that the aorist has been preserved as a past tense. Both are wrong. Admittedly, the perfect must have merged with the aorist in a certain sense, but the result seems to have been exactly the reverse: the perfect origin of the Tocharian preterite endings suggest that the perfect had become a past tense, whereas an explanation of the endings of the present-subjunctive system requires the inclusion of secondary endings as were found in the aorist. Thus, although the preterite and the subjunctive have characteristics of the perfect and the aorist indeed, there are no indications whatsoever that the perfect became a perfective present, and eventually the Tocharian subjunctive.

4.9.4 INJUNCTIVE

The category that in my view is the most likely source of the Tocharian subjunctive is the aorist injunctive. As an independent category, the injunctive is only preserved in Vedic, but the general view is that it is old and has disappeared in the other languages. It is principally defined morphologically: it is a past tense form without the augment, a prefixed past tense marker (Gk. ἐ-). Without the augment, those forms are not automatically presents because the contrast present : past is double-marked: the present has special present-marking primary endings and the past is characterised by non-present secondary endings and the augment. The injunctive is peculiar in that it takes an intermediate position, combining non-present endings with the lack of the augment, which marks it as non-past.

The meaning of the injunctive is even more difficult to describe than that of the subjunctive. Except for its obligatory use in prohibitive clauses, its meaning is strikingly faint. It can be used in different temporal contexts without explicitly referring to a definite point in time, and in different modal contexts without adding an explicit value of its own. Thus, parallel to its negative morphological definition, Hoffmann describes its meaning in negative terms as "zeitstufenlos, nicht-modal, nicht-berichtend" (1967: 278).

Although with such negative characteristics it shows no clear similarity to the Tocharian subjunctive semantically, the meaning of the latter can easily be derived from it. Any of its non-past or modal meanings may have stood at the basis, but since it is unclear whether such meanings belong to the semantic nucleus of the formation, I would rather opt for the "second present" scenario as discussed in detail in 4.9.2 (p 483) above. In short, the aorist injunctive combines the two most important formal characteristics of the Tocharian subjunctive: in Tocharian terms, it is a preterite stem with present endings, i.e. the originally non-present secondary endings that have merged with the other endings of the present-aorist system in Tocharian (see 4.2, p 341).

As argued by Couvreur, the Tocharian present stem is imperfective and the subjunctive stem is perfective. In Proto-Indo-European, the present stem is likewise imperfective, and since it is continued by the Tocharian present, it would be understandable if its perfective aorist stem is reflected in the Tocharian preterite-subjunctive stem. Indeed, the Tocharian preterite-subjunctive stem shows a number of striking similarities with the Proto-Indo-European aorist stem.

As details are treated elsewhere, notably in 4.5.3-4.5.4 (p 408) and 4.6.5 (p 442), I will here only emphasise an important general agreement: just like the Tocharian present stem, the Proto-Indo-European present stem is mostly marked vis-à-vis the aorist. A quick look in e.g. Brugmann (1916) or LIV2 shows a wide variety of patterns that derive presents from aorists, but only very few that derive aorists from presents, notably the *s*-aorist and the reduplicated aorist. The first type is "demarked" by sound law, that is, the *s* is lost in Tocharian, which turns the originally derived stem into what must be synchronically analysed as a root formation (4.5.4, p 411). The second type is probably reflected in the causative preterite, although causative reduplication is transformed into initial accent in Tocharian B (4.4.6, p 398). Thus, in as far as the Proto-Indo-European aorist was not a root formation already, it has become one through the developments leading to historical Tocharian.

Synchronically, the Tocharian subjunctive looks like a present because of its endings, but diachronically those endings reflect a mixture of the Proto-Indo-European primary endings with present reference and the secondary endings with non-present reference (4.2, p 341). In other words, the non-present – or past, if you will – endings turn up as present endings in Tocharian. This development is highly remarkable if we had to assume that the vehicle category for the secondary endings had been the regular aorist or the imperfect: how could such a past tense have furnished non-past endings? On the assumption that it was rather the injunctive that carried the secondary endings up to their merger with the primary endings, this problem is avoided: the injunctive was not a past tense.

The semantic development will then have been one comparable to that sketched – but rejected – for the perfect in 4.9.3 (p 486). The merger of the primary and the secondary endings threw the aspect contrast between the present stem and the aorist stem (which was to become the preterite-subjunctive stem) into relief: the stem difference became the only difference between two categories that were formerly distinguished by their stem *and* their endings. This led to the rise of a second, perfective present that ultimately became the subjunctive.

In sum, the derivation of the Tocharian subjunctive from the Proto-Indo-European aorist injunctive explains that it is formed from the preterite-subjunctive stem, that it has present endings, as well as its non-markedness compared to the marked present. It further explains that there is no $^{\prime}\!/_{e}$-subjunctive analogous to the Proto-Indo-European "$^{*}\!/_{o}$-subjunctives", and it accounts for the present-subjunctive, which goes back to presents with no aorist beside them.

4.9.5 SEMANTIC SOURCES OF THE TOCHARIAN SUBJUNCTIVE

In the above, I have discussed four possible Proto-Indo-European source categories of the meaning of the Tocharian subjunctive: subjunctive, present, perfect and aorist injunctive. Although a present could well develop into a category like the Tocharian subjunctive, which denotes future in main clauses and uncertainty in subclauses, it can be excluded as the ultimate source because the Proto-Indo-European present is continued as the Tocharian present (4.9.2, p 483). A number of Tocharian subjunctives must go back to earlier presents, but since the presents that are found beside them are obviously secondary, this was a late development, when the subjunctive category already existed.

A derivation of the subjunctive from an old perfect encounters insurmountable problems both on the semantic and the morphological side (4.9.3, p 486). While the meaning of the perfect seems rather to be continued in the preterite system, that is, both in the finite preterite and in the preterite participle, it has also furnished the endings of the finite preterite and the morphological design of the preterite participle as a whole.

The subjunctive and the injunctive are not so readily dismissed as possible sources: the subjunctive is so close in meaning that it could have developed into the Tocharian subjunctive directly, whereas the injunctive may have developed into a second present, which is certainly a plausible semantic source. For both categories, we have to restrict ourselves to the aorist stem in order to explain the affinity of the subjunctive stem and the preterite stem in Tocharian. Whereas some isolated formations and probably one category continue aorist "$*^{e}/_{o}$-subjunctive" patterns, it is questionable whether these allow to explain the ensemble of the subjunctive system: the asymmetric make-up of the verb for 'come' compared to regular patterns, for instance, suggests that the survival of the subjunctive in that verb is a relic. In addition, the bulk of the other subjunctives show no traces of a subjunctive suffix and there are no indications for a loss of that suffix.

The injunctive, on the other hand, seems to have all necessary characteristics: it had no suffix of its own and the merger of the primary (present) and secondary (non-present) endings in Tocharian explains that it became a kind of present. Apparently, it merged functionally with the subjunctive in the course of time, whereas in many cases the lack of a contrast between present and preterite-subjunctive stem was compensated through the creation of new presents that allowed the old presents to become subjunctives. Thus, the Tocharian subjunctive is morphologically a mixture of aorist injunctives, aorist "$*^{e}/_{o}$-subjunctive" and old presents, but the origin of the category as a whole is probably to be sought in the first. Both morphologically and semantically, the aorist injunctive is the most likely source of the Tocharian subjunctive.

4.10 CONCLUSIONS

In this chapter, the Tocharian subjunctive has generally been traced back to the Proto-Indo-European aorist. Besides, a considerable number of verbs have a present-subjunctive, which must go back to an older present. In addition, a small number of isolated subjunctives and some minor subjunctive classes with evidently secondary present formations must be derived from the present as well.

4.10.1 ORIGIN

The origin of the Tocharian subjunctive is diverse: in broad outline, it reflects both aorist and present formations, the Proto-Indo-European perfective and imperfective stems respectively. I have found only little evidence for old perfects. Whereas the perfect had become a past tense in the prehistory of Tocharian, as shown by the Tocharian preterite endings, which reflect the endings of the Proto-Indo-European perfect, its stem formation was replaced by that of the aorist. This replacement must have taken place because the primary (present tense) endings of the present-aorist system merged with the secondary (non-present, often past tense) endings. When the contrast was between present and past endings was restored with the introduction of the perfect endings in the aorist, the perfect itself was apparently abandoned. The most salient trace of the perfect is found in the preterite participle, which has preserved both the characteristic reduplication and the perfect participle suffix *-*uos*-; however, the stem shape of the preterite participle has been adapted to the preterite. Some individual verbs may reflect old perfects: TB *ay*$^{ś\partial}/_{ke}$- 'know', TB *ce*$^{ś\partial}/_{ke}$- 'touch' and PT **yok*- 'drink'. Possibly, the 3sg.pf. in -*e* was reinterpreted as a 3sg. of the $^{\partial}/_{e}$-suffix.

The meaning of the subjunctive can be derived from the aorist through a kind of second present development, as suggested by Couvreur (1947: 73) and others, along the lines of the typological study of Haspelmath (1998). While the Tocharian present in principle continues the Proto-Indo-European present, the aorist was apparently reinterpreted as a kind of present when its endings merged with those of the "real" present. Whether the aorist sources of the Tocharian subjunctive are to be looked for among aorist subjunctives or rather aorist injunctives is not completely clear. However, there are only very few subjunctives with an $^{\partial}/_{e}$-suffix of a reasonable age, so that a derivation from the aorist injunctive seems more plausible in principle. The meaning of the Tocharian subjunctive need not have completely resulted from a reinterpretation of the second "perfective" present: the Proto-Indo-European injunctive may have developed into the Tocharian subjunctive directly. In addition, the scarce remnants of "original subjunctive", i.e. *$^{e}/_{o}$-formations in Tocharian may point to a pre-stage where the aorist subjunctive had a wider usage, so that it contributed its part in the ultimate semantics of the Tocharian subjunctive.

Although at first sight the number of subjunctives from earlier presents is considerable, they are all clearly secondary formations that result from a strong tenden-

cy, a drift, to supply all verbs with a present, a subjunctive and a preterite. At an earlier stage of the language, there must have been many verbs without a distinction between present and subjunctive (for an overview, see 4.9.2, p 483). As shown by a fairly large number of present-subjunctives, this situation is continued in part in Tocharian B, while Tocharian A has preserved enough individual cases and remnants to ascertain that the phenomenon goes back to Proto-Tocharian. While certain present suffixes, notably TB *-ṣṣə/ske-* and TA *-ṣä/sa-*, have been extremely frequent in the creation and restoration of present : subjunctive contrasts, synchronic peculiarities of Tocharian A are evidence of different strategies as well. For instance, the large number of suppletive verbs shows that the present : subjunctive contrast was often restored at the cost of suppletion (see 4.4, p 377), while the subjunctive suffix *-āṣä/sa-* illustrates that the distinction was so important that completely new suffix patterns arose (see 4.4.6, p 398).

4.10.2 FORMATION

While the above considerations have played only a minor role in the discussion about the origin of the Tocharian subjunctive, most of the treatments have taken the gradation pattern of the root subjunctive (TEB classes 1 and 5) as their point of departure. It was argued (by Lane 1959: 160 and many others) that the gradation pattern sg.act. *e* : other forms *ə* without initial palatalisation could only be derived from the Proto-Indo-European perfect, which had **o*-grade in the singular and Ø-grade in the plural. A variant of this theory is the derivation from the *h₂e*-conjugation as reconstructed by Jasanoff, where the original **o* : **e* gradation was replaced by **o* : Ø gradation at an early stage if the expected initial palatalisation in the plural was not removed analogically on the basis of its absence in the singular in the prehistory of Tocharian.

Although the most important arguments against the perfect theory are its problems with the development of the Tocharian verbal system as a whole and the meaning of the Tocharian subjunctive in particular, another major weakness is that it offers no explanation for the tight connection between the grading subjunctive to the *s*-present and *s*-preterite system on the one hand or the *n*-present and *x*|*a*-root preterite system on the other. The connection with the *s*-preterite system was neatly accounted for by Kortlandt (1994), who assumed that the grading *x*|Ø-root subjunctive goes back to the *s*-aorist.

Kortlandt's assumption that the *-s-* of the *s*-aorist was lost in several contexts, especially word-finally and between consonants, is largely compatible with Ringe's derivation of the Tocharian *s*-preterite from the *s*-aorist (1990). However, for his explanation of the Tocharian gradation pattern *e* : *ə* from Proto-Indo-European **ē* : **e* he needed to assume that the vocalism was influenced by the perfect. On the basis of especially the root grades prt.act. *'e* vs prt.mid. *ə*, strongly reminiscent of sbj.sg. *e* vs sbj.pl. (etc) *ə*, I assumed that the original root grades of the subjunctive were **'e* and **ə*. As this gradation pattern cannot be explained from the Proto-Indo-

European *s*-aorist, I had to assume that the subjunctive plural allomorph owes its unpalatalised initial to influence of the *s*-present, where *ə*-grade was regular. Subsequently, the unpalatalised initial of the subjunctive plural was levelled at the expense of the palatalised initial of the subjunctive singular. From the *x*|Ø-root subjunctive, the pattern was taken over analogically by the *x*|*a*-root subjunctive. While together the two types made up the core of the subjunctive as such, this spread may at an initial stage further have been favoured by the close semantic match between the two classes: both were predominantly transitive.

4.10.3 TOOLS AND METHODS

Throughout this study, I have tried to keep to the principle that regularity is the result of analogy, while irregularities must be due to sound change. The importance of this working principle in linguistic reconstruction in general can hardly be overestimated, and in view of the complicated prehistory of Tocharian, it must constantly be borne in mind when issues of the reconstruction of Tocharian are addressed. The large number of rigid morphological patterns in Tocharian proves that many and drastic analogical processes have taken place. Although the correctness of an assumed analogical development defies a completely objective verification in the end, necessary requirements are always a model and a motivation, which I have been trying to provide at every occasion.

In spite of my primarily morphological approach, I have not been able to avoid the use of certain sound changes, of which I will briefly highlight a selection below.

For the explanation of the *s*-present, I have adopted Couvreur's dissimilation of **ksk* to **ks* (1947: 62; cf also Klingenschmitt 1982: 62). The precise conditions for this dissimilation are difficult to establish because original **ksk* developed into **sk* (see Hackstein 1995: 74-75), so that it affected only secondary **ksk* as could arise in *sk*-presents when the root was restored. Still, from the distribution of *s*-presents and *sk*-presents it appears that apart from simple *ksk*-clusters, a following *k* was lost after *ps* and *nks*, whereas it remained after *ns* and *Tks*, in the latter context without doubt because the cluster had first been subject to *ə*-epenthesis. Couvreur's dissimilation provides a neat explanation for the absence of roots in *-t* among *s*-presents, which must have lost their *s* between *t* and *k* according to the sound law discovered by Melchert (1977).[838] A similar cluster simplification may account for PT **preks'ə* 'asks', if it reflects earlier **pərks'ə* where the *k* was lost, and PT **yərs-* 'honour' from **yərks-*.

The explanation of the causative system depends completely on Malzahn's discovery that the medial *a* of *sk*-causatives was not lost in all forms (forth.a). The

[838] The discrepancy between the sound laws *ksk* > *sk* and *tsk* > *tk* must be explained by the better preservation of *ts*: perhaps it first merged into t^s before the *s*-element was lost. Conversely, *ks* could not merge into one phoneme, so that the *k* had to be dropped.

preservation of *a* in certain contexts allows us to search for the conditions of this loss of medial *a*. As I argued in 4.4.6 (p 398), the double condition was probably that the *a* had to be preceded by the accent and followed by a syllable with a heavy vowel (in any case *e* and not *ə*).

As an alternative to Winter's implausible deletion of accented shwa before dentals (1993), I have adopted Marggraf's brief historical account of the Tocharian B accent (1970: 21), which entails a forward shift by one syllable in trisyllabic words compared to the automatic initial accent in disyllabic words (see 4.5.5, p 413). This forward shift explains the difference between e.g. the medial accent of subjunctives next to *e*-presents vs the initial accent of subjunctives next to *o*-presents, and between the initial accent of root subjunctives vs the medial accent of the corresponding preterites. In the paradigms with initial accent, the automatic initial accent of the dominant disyllabic forms was generalised, whereas the medial accent was fixed in the paradigms with predominantly trisyllabic forms.

Of various minor sound changes I will here only mention the loss of *k* in Pre-Tocharian A clusters such as *nkt* and *nks* that results in *nt* and *ns*. Again I had to assume a slightly different sound law for secondarily restored *nkt*, which becomes *kt* as in TA *pikträ* 'writes'. Further, the delicate role of *ə*-syncope and *ə*-epenthesis is illustrated by examples such as TA 1sg.prs. *kumsam* 'I am coming' vs the 3sg.mid. *kumnäṣtär*, where the shorter combination *mns* was simplified in the former, but the longer *mnäṣt* survived because *ṣt* blocked *ä*-syncope. Likewise, **nsk* was evidently simplified to **sk*, but the longer cluster **mnsk* received epenthesis in **kʷəmnᵊsk*- 'come' so that the *n* could remain. While combinatory sound laws such as the development of *we* to *o* (Penney 1978: 79; see also Peyrot forth.a), have had only a minor effect on morphology (see 4.7.4, p 462), the rigorous restructurings called forth by changes in *n*-clusters are overwhelming. Many of them, like *tn* > *nt*, *kn* > *nk*, *ln* > *ll* or *ntn* > *nn*, are well known, and their impact on morphology is enormous, as they stand at the basis of several new categories such as *ṅk*-presents (see 4.6.4, p 435), the subjunctive of 'go out' (4.3.5, p 368), several apparent *n*-subjunctives (4.6.9, p 448), and completely new present types in Tocharian A and B (4.6.10, p 450).