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Tocharian and Samoyed: on the question of Uralic substrate influence in Tocharian

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7 Participial systems

The participles of Tocharian, while derived from Proto-Indo-European, do not align with the other Indo-European languages in terms of their orientation. Rather than being inherently oriented as active or passive participles, Tocharian participles instead show a tendency for contextual orientation. This is not easily established for all participles, however, so that a detailed discussion is required. An analysis of Tocharian participles as contextually oriented opens up a new avenue for comparison with Samoyed, since contextual orientation is also found in the majority of Samoyed participles. The Tocharian and Samoyed participial systems will be discussed in turn to more closely investigate the similarities between them, which appear to extend beyond the basic contextual orientation, and to determine if the innovative aspects of the Tocharian participial system can be understood as the result of early Samoyed influence.

7.1 Introduction

Three participles are usually reconstructed for Proto-Indo-European: an active participle with the suffix **-nt-*, a middle participle with the suffix **-mh₂no-*, and an active perfect participle with the suffix **-uos-* (e.g., Beekes 2011: 279–280; Lundquist & Yates 2018: 2169–2170). The verbal adjective in **-to-* creates participles in many branches as well. The labels active, middle and perfect are in line with the functions of these participles in Greek and Indo-Iranian, where they form a coherent system aligned with the corresponding active and middle voices and the (active) perfect tense. In many other Indo-European branches one or two of these participles remain only in relics, or were lost completely. Tocharian preserves all three formations, but their behaviour does not neatly correspond to that found in Greek and Indo-Iranian. Most importantly, the distinction between participles corresponding to the active or middle voice has been abandoned, as will be discussed in more detail below. In this chapter, the main focus will be on the contextual orientation that the Tocharian participles mostly have, and the possible connection of this feature with Uralic/Samoyed.

Other, originally non-participial formations have also gained more prominence in Tocharian and arguably became integrated into the participial system. First, there are two types of gerundives, based on the present and subjunctive stems, which could be regarded as necessitative and potential participles, and second, there is the Tocharian privative, which can be described as a negative participle. These are Tocharian innovations based on Proto-Indo-European verbal adjectives. Their syntactic behaviour is very much like that of the participles, however, so that they should be included in this study.

There is still much ongoing discussion about several aspects of the various Tocharian participles (e.g., Fellner 2014; Fellner & Grestenberger 2018; Friis 2021; Peyrot 2010, 2017; Pinault 2012; Saito 2006). In this chapter, I will approach the participles primarily from the point of view of their orientation, as this is one of the salient discrepancies between Tocharian participles and their cognates elsewhere in Indo-European. In Tocharian, many participles are not only insensitive to the active or middle voice of the verb from which they derive, but they are in general more ambiguous than “classic” active or passive participles, in such a way that a single formation can be both active and passive depending on the context (Krause & Thomas 1960: 184–186; Seržant 2020: 226–230). This feature finds a close parallel in the Samoyed languages, where many participles are contextually oriented as well (Leisiö 2006; Shagal 2018).

In section (7.2) and its subsections, the various participle formations in Tocharian will be discussed in more detail, with special attention to their behaviour with regards to the agent and the patient. This is followed by an overview of Samoyed participles in section (7.3). As in other chapters, our focus will be on this easternmost branch of Uralic. Finally, the characteristics of the Tocharian and Samoyed participial systems will be compared in the final section of this chapter (7.4). In order to evaluate the similarities between Tocharian and Samoyed, and the significance of these similarities, the situation of both the larger Indo-European and Uralic language families, as well as the areal typological context need to be taken into account. First, however, the concept of orientation is briefly introduced in the next subsection, (7.1.1), as this will be an important concept throughout the chapter.

7.1.1 Participles and their orientation

Participles can be difficult to define and delineate from other, related formations. For example, in their role as adjectival verb forms, they are very reminiscent of verbal adjectives, and they have a tendency to function as converbs as well, or to undergo nominalization (Haspelmath 1994: 171–172; Shagal 2019: 14–44). This chapter will focus on those formations whose synchronic behaviour in Tocharian relatively clearly warrants the label of “participle”, and formations that descend from participles in Proto-Indo-European, but may have taken on other functions as well (see especially Shagal 2019: 20–41 for a more detailed delineation of the category of participles).

Participles come in various types with different kinds of behaviour. Of prime importance here is that they do not all interact in the same way with the arguments of the verb from which they are derived. Active participles can modify a subject S or an agent A (1a. and 1b., respectively), while passive participles modify a patient P (1c.; Shagal 2019: 51). An active participle like Ru. *ubityj* cannot modify an intended patient (1d.), and vice versa, a passive participle like *ubívšij* cannot modify the patient (1e.; see Shagal 2019: 61–74 on these types of participles). Despite the fact that both *ubityj* and *ubívšij* are

derived from the same active transitive verb *ubít'* 'kill', their inherent orientation is different (Haspelmath 1994, Shagal 2019: 51–128).

1. Examples of active and passive participles from Russian.

- a. *begúščij* *olén'*
 run:PRS.ACT.PTC deer:NOM.SG
 'The running deer (S)' ~ 'The deer (S) that runs'
- b. *medvéd'* *ubívšij* *olénja*
 bear:NOM.SG kill-PST.ACT.PTC deer:ACC.SG
 'The bear (A) that killed the deer.'
- c. *olén'* *ubítyj* *medvédem*
 deer:NOM.SG kill-PST.PASS.PTC bear:INS.SG
 'The deer (P) that was killed by the bear.'
- d. ** *medvéd'* *ubítyj* *olénja*
 bear:NOM.SG kill-PST.PASS.PTC deer:ACC.SG
 Intended: 'The bear (A) that killed the deer.'
- e. ** *olén'* *ubívšij* *medvédem*
 deer:NOM.SG kill-PST.ACT.PTC bear:INS.SG
 Intended: 'The deer (P) that was killed by the bear.'

There are more types of orientation than just active and passive. An agentive participle is essentially an active participle that can only be formed to transitive verbs (Shagal 2019: 75–77). Absolutive participles, in Shagal's terms, are also found in many Indo-European languages (Shagal 2019: 78–85). These differ from strictly active or passive participles in that they relativize either the subject S of an intransitive verb (with an active meaning) or the patient P of a transitive verb (in which case they are interpreted as passive), but not the agent A of a transitive verb. The English past participle is an example of this type, e.g., *the grown man* = the man (S) that has grown (active, from an intransitive verb) vs. *the thrown rock* = the rock (P) that has been thrown (passive, from a transitive verb). Haspelmath (1994: 159–161) calls this type of participle "resultative" rather than "absolutive", and the correspondence between this type of participle and perfectivity or resultativity is indeed cross-linguistically very common, Shagal also reports (Shagal 2019: 80). I will follow Shagal's terminology and use the term "absolutive" to describe this type of participle throughout the rest of this chapter.

The types of participles discussed so far are all inherently oriented, so that they have a predictable relationship to the participants of the verb action. The final type of orientation that is relevant in the following discussion on Tocharian and Samoyed is contextual orientation (Shagal 2019: 81–105). Participles with contextual orientation are more flexible than inherently oriented participles, as they can relativize both the agent

and patient of a transitive verb, depending on the syntactic context, as well as the subject of an intransitive verb (Haspelmath 1994: 154). Sometimes further oblique participants like locations and possessors can be relativized with contextually oriented participles as well (Shagal 2019: 91–96). Contextually oriented participles are not particularly common in Europe, but they occur widely elsewhere. Pakendorf (2012) discusses contextually oriented participles as the main type of participle in Siberian languages, and considers it to be a shared linguistic feature of the area (also Shagal 2018, and see further below).

To illustrate contextual orientation, Haspelmath (1994: 154) adduces some examples from the Nakh-Daghestanian language Lezgian, reproduced here in (2). The same imperfective participle *k̂xi-zwa-j* can be used to modify various participants of the event described, such as the agent (2a.), the patient (2b.), or a peripheral participant like the place or time (2c.–d.).

2. Lezgian contextually oriented participles used to modify the agent (a.), the patient (b.) and peripheral participants (c.–d.; Haspelmath 1994: 154).

- a. *čar* *k̂xi-zwa-j* *ruš*
 letter(ABS) write-IPFV-PTC girl
 ‘The girl who is writing a letter.’
- b. *ruš-a* *k̂xi-zwa-j* *čar*
 girl-ERG write-IPFV-PTC letter
 ‘The letter which the girl is writing.’
- c. *ruš-a* *čar* *k̂xi-zwa-j* *stol*
 girl-ERG letter(ABS) write-IPFV-PTC table
 ‘The table on which the girl is writing a letter.’
- d. *ruš-a* *čar* *k̂xi-zwa-j* *juġ*
 girl-ERG letter(ABS) write-IPFV-PTC day
 ‘The day on which the girl is writing a letter.’

Shagal describes how sometimes absolutive orientation can be observed as a tendency in otherwise technically contextually oriented participles. For instance, the Ket contextually oriented participle, when formed to a transitive verb, is interpreted by default as passive. However, when a patient (direct object) is expressed, it is active instead. An active interpretation is also possible when the head noun is highly animate (e.g., a human), even without the expression of a direct object (Shagal 2019: 82–83). A similar situation can be observed in the Samoyed languages, such as in Selkup; cf. the following examples from Kuznecova, Helimski & Gruškina (1980: 254).

3. Active (a., c.) and passive (b., d.) use of participles in Selkup (Kuznecova, Helimski & Gruškina 1980: 254; glosses added)
- a. *ṣtä-p qəṭ-pil' qorqi*
 deer-ACC kill-PST.PTC bear
 'The bear that killed the deer.'
- b. *qorqi-t qəṭ-pil' ṣtä*
 bear-GEN kill-PST.PTC deer
 'The deer that was killed by the bear.'
- c. *topir-ip wəṭənti-til' ijat*
 berry-ACC collect-PRS.PTC children
 'The children that collect berries.'
- d. *ijat-in wəṭənti-til' topir*
 children-GEN collect-PRS.PTC berry
 'The berries that are collected by the children.'

In these sentences the past participles in *-pil'* (PS **-pA-jə*) and the present participles in *-til'* (PS **-ntA-jə*) modify the following nouns, but the participles themselves are ambiguous as to whether they express an active or passive relationship. This goes for all other types of participles found in Selkup as well (Kuznecova, Helimski & Gruškina 1980: 254). The argument structure is different between the two sets of sentences, which facilitates the different interpretations: the active reading of *qəṭpil'* 'kill:PST.PTC' and *wəṭəntil'* 'collect:PRS.PTC' in (a) and (c) is necessitated by the presence of an object in the accusative case, namely *ṣtäp* 'deer:ACC' and *topirip* 'berry:ACC'. In sentences (b) and (d), the presence of agents in the genitive case, viz., *qorqit* 'bear:GEN' and *ijatın* 'children:GEN', makes it abundantly clear that a passive interpretation is required instead. An active or passive interpretation of these contextually oriented participles is not inherent in the participles themselves, but, as the name suggests, derives from the context.

Contextually oriented participles are prominently present in both the Tocharian and the Samoyed participial systems, as will be illustrated below. With regards to the preterite participle, the Tocharian situation has been referred to as "the problem of the passive and active usage of the prt.ptc." (Peyrot 2007: 799). This "problem" concerns the contextual orientation of the participles (cf. Seržant 2020: 226–230), which differs in Tocharian from the Indo-European norm. In this chapter we will explore the extent to which contextual participles occur in Tocharian, taking into account various functions of the participle formations, including predicative, substantive and converbial use. However, the attributive function will be given the most weight, as that is a more canonical participial function.

7.2 Tocharian

Since all of the Tocharian participial formations have an Indo-European origin, it is possible to evaluate how the orientation of most of them has changed over time. In the following subsections, the Tocharian use of each individual formation and its relationship to cognate formations in other Indo-European languages will be treated systematically. We will start with the Tocharian reflexes of the Proto-Indo-European active voice participle (7.2.1), then the middle voice participle (7.2.2) followed by the perfect participle (7.2.3), and then the more innovative Tocharian participle formations, namely the gerundives (7.2.4) and the privative (7.2.5).

7.2.1 The *nt*-participle

A participle with the suffix PIE **-nt* forms active participles in almost every branch of Indo-European where it is attested; e.g., Gr. ἄγων, ἄγωντος ‘leading’ from ἄγω ‘lead’, Skt. *bhārant-* ‘carrying’ from *bhāрати* ‘carry’, Lat. *sapiēns, sapientis* ‘wise’ from *sapiō* ‘discern’, Go. *nasjands* ‘saviour’ from *nasjan* ‘save’. This participle is aligned with morphologically active voice of verbs in those languages that show a distinction between active and middle voice, and it is also actively oriented in most Indo-European languages, as it normally modifies the verb’s subject or agent.

There are several phonologically similar Tocharian formations that continue the Proto-Indo-European *nt*-participle (on which in detail see Fellner 2014; 2017; Friis 2021). In Tocharian B, the most productive representative of this group is the participle suffix TB *-ñca*, which corresponds functionally to TA *-nt*. This participle has deviated to a certain extent from its status as a regular participle, as it does not show gender concord, and thus behaves more like a substantive in terms of its inflection. It can be nominalized as an agent noun, but attributive function is still attested (Fellner 2014).

4. a. Tocharian A (A 75 a2; verse; trsl. based on CEToM)

<i>tsrāṇ</i>	<i>pāryo</i>	<i>āriñc</i>	<i>wākṣantām</i>	<i>yāslunt</i>
sharp:M.OBL.SG	arrow:INS	heart:OBL.SG	split:ACT.PTC.OBL.SG	enemy:OBL.SG
<i>koṣāntām</i>	<i>śarwnaṃ</i>	<i>pālkāc-āṃ</i>	<i>kāruṃ</i>	
kill:ACT.PTC.OBL	hunter:LOC.SG	see:IMP.MID.2PL-3SG	compassion:OBL	
‘See his compassion for the murdering hunter, [his] enemy, who splits [his] heart with a sharp arrow.’				

b. Tocharian B (THT 31 a4–5; trsl. based on CEToM)

<i>aiśaumi</i>	<i>ce_u</i>	<i>pällāntār</i>	<i>krento</i>
wise:NOM.PL	DEM.M.OBL.SG	praise:PRS.MID.3PL	good: M.SG.OBL
<i>āstreṃ</i>	<i>śaul</i>	<i>śayeñcai</i>	<i>wnolme</i>
pure: M.SG.OBL	life:OBL.SG	live:ACT.PTC.OBL.SG	being:OBL
‘The sages praise him as being a being who lives a good, pure life, ...’			

c. Tocharian B (PK AS 2B a2; trsl. CEToM)

<i>hiraṇḍaṣṣe</i>	<i>ṣalypempa</i>	<i>tetriwu</i>	<i>nemcekaṃñe</i>
ricinus.ADJ.SG.OBL	oil:COM.SG	mix:PRT.PTC.M.NOM.SG	infallible.NOM.SG
<i>po</i>	<i>tekanma</i>	<i>nākṣeñca</i>	
all	disease:OBL.PL	destroy:ACT.PTC.NOM.SG	
‘Mixed with ricinus oil [it is] an infallible destroyer of all diseases.’			

It is often considered to be an agent noun instead of a participle, as in the translation in (4.c.) of *nākṣeñca* as ‘destroyer’ (see Pinault 2012; Peyrot 2017: 328–329), but as is clear from (4.a–b.), it still shows canonical adjectival functions as well, supporting a continued analysis of this formation as a participle (Fellner 2014). The orientation of the *nt*-participle is definitely active, and most examples are formed from transitive verbs (e.g., Fellner & Grestenberger 2018: 68). The few intransitive verbs that form *nt*-participles have a local exponent, as with intransitive *māskeñca* ‘being, staying’ in example (5). Kuritsyna describes mainly agentive orientation of *nt*-participles, i.e., active participles formed to transitive verbs, with two potential examples of attributive *nt*-participles derived from TB *kāl-*, TA *kāl-* ‘stand’ (Kuritsyna 2022). The Tocharian *nt*-participle thus overall has an active orientation.

5. Tocharian B (PK AS 17A b1; prose; trsl. CEToM)

<i>t(ane)</i>	<i>ñak(e)</i>	<i>pūrvavedīd)v(ī)pn(e)</i>	<i>māsk(e)ñca</i>	<i>ñ(a)kt(e)</i>
here	now	PN:LOC	be:ACT.PTC	god
<i>pūrv(o)ttare</i>	<i>ñem</i>			
PN	name			

‘Here now, the god **who** stayed in Pūrvavedīdvīpa, Pūrvottara by name, ...’

In most Indo-European languages, the *nt*-participle is aligned with the morphological category of the active voice, and the orientation of this participle is typically active.⁷⁵ In

⁷⁵ Some examples like Gm. *die melkende Kuh* ‘the cow that is milked, milch cow’ are taken as a trace of ambiguous orientation in the *nt*-participle (Haspelmath 1994: 170), but it is unclear to me if this is not rather formed to an (earlier?) intransitive sense of a labile verb ‘to milk’ as found in the Icelandic cognate *mjólka*, which can mean both ‘milk’ and ‘produce milk’. Fellner and

Tocharian, the connection with the finite active, while common (Fellner & Grestenberger 2018: 68), is not complete, and *nt*-participles can be formed to exclusively middle-voice verbs. There is one other branch of Indo-European where *nt*-participles are famously not actively oriented, namely in Anatolian. For example, when a Hittite *nt*-participle is formed from an intransitive verb, the interpretation is active, as expected, e.g., Hitt. *akkant-* ‘having died’, *pānt-* ‘having gone’.⁷⁶ When formed to a transitive verb, the Hittite *nt*-participle is usually interpreted as passive, e.g., Hitt. *appant-* ‘seized, taken’, *piyant-* ‘given’ (Hoffner & Melchert 2008: 339–340). Active instances of seemingly transitive *nt*-participles are argued by both Brosman and by Lyutikova and Sideltsev to be restricted to transitives that can optionally be construed without an object, such as ‘eat’ (Brosman 2010: 23; Lyutikova & Sideltsev 2021).

The behaviour of the *nt*-participle in Hittite thus contrasts with the active nature of the *nt*-participle in the other Indo-European languages, including Tocharian (Fellner & Grestenberger 2018; Friis 2021). For Tocharian, we can consider the *nt*-participle to have retained its usage as an active participle as inherited from post-Anatolian Indo-European, although it did not maintain its connection with the active voice. This (lack of) development of the orientation of the *nt*-participle from Proto-Indo-European to Tocharian is summarized and visualized in the table below.

Table 7.1: Schematic change in the orientation of the *nt*-participle from Proto-Indo-European to Proto-Tocharian.

Indo-European		Tocharian
active (S/A)	=	active (S/A)

7.2.2 The *m*-participle

The Proto-Indo-European participle in **-mh₁no-* is not as broadly attested as the *nt*-participle. It is associated with the middle voice in most of the languages where it is productive, that is, mainly in Greek and Indo-Iranian. As a middle voice participle it stands in morphological opposition to the active voice *nt*-participle. In terms of its orientation, the middle voice participle does not have “middle orientation”, if participles

Grestenberger also discuss Vedic *járant* ‘old’, which cannot be regarded as the synchronic active participle to *járati* ‘make old’, but rather semantically belongs with the middle *járate* ‘become old’; some *nt*-formations in Greek and Latin also belong with middle verbs rather than active verbs (Fellner & Grestenberger 2018: 64–65). However, synchronically cases like Vedic *járant* are lexicalized adjectives, and they do not directly concern the participial system (Lowe 2015: 286–287).

⁷⁶ Unlike the *nt*-participle in other Indo-European languages, these Hittite *nt*-participles refer to the past.

with such an orientation exist at all (see Haspelmath 1994: 152), but rather an active orientation. Any arising passive semantics encountered in middle participles are normally shared with the finite middle verb. For example, the middle voice of Greek *φέρωμαι* can already have the passive meaning ‘be carried off’ beside the more canonically middle meaning ‘carry (for oneself)’, so that the participle *φερόμενον* in (6.a.) is actually active in its orientation. Example (6.b.) shows that the middle voice participle of the semantically active *τίθεμαι* ‘put (for oneself, around oneself, on oneself)’ is also actively oriented, rather than passively oriented.

6. a. Ancient Greek (Hdt., Histories 2.29.2; Grestenberger 2020: 226)

τὸ	πλοῖον	οἶχεται	φερόμενον	ὑπὸ
DEF.N.NOM	boat:NOM	goes.off	carry:PRS.MID.PTC.N.NOM.SG	by
ἰσχύος	τοῦ	ῥόου		
strength:GEN	DEF.M.GEN	current:GEN		

‘... the boat gets lost, **carried off** by the strength of the current.’

b. Ancient Greek (Hom., Iliad 4.514–16; Grestenberger 2020: 225)

τὸν	δ’	εἶρ’	ἄμφ’	ὤμοισι	τιθέμενον
3SG.M.ACC	PTCL	found	around	shoulders	put:PRS.MID.PTC.M.ACC
ἔντεα	καλὰ				
armour.ACC	beautiful.F.ACC				

‘He found him **putting** his beautiful armour around his shoulders.’

Tocharian has also inherited the Proto-Indo-European formation in **-mh,no-* that is reflected in the Greek middle voice participles. This yielded Proto-Tocharian **-mane* and eventually TB *-mane*, A *-mām* (Klingenschmitt 1975: 159–163), and is called the *m*-participle or the present participle. Just as the Tocharian active *nt*-participle is not directly connected with active voice verbs anymore (see subsection 7.2.1), the Tocharian *m*-participle is not intimately connected with the middle voice inflection either (Malzahn 2010: 480–481; Peyrot 2017: 328 fn. 3). For example, the intransitive active voice verb TB *nes-*, TA *nas-* ‘be’ is only attested with an *m*-participle in TB *nesamane*, TA *nasmām*, while the middle voice verb TB *maska-*, TA *māskā-* ‘be, become’ has an *nt*-participle in TB *māskeñca*, TA *māskant* discussed above. Semantically, the *m*-participle is perhaps more associated with the idea of a middle voice than is the *nt*-participle, since it can be passive as well as active, but this does not always correlate with the diathesis of the finite middle voice verb. A passive *m*-participle can exist next to a semantically active verb, as shown by examples like the passive *m*-participle TA *pāsmām* ‘(being) protected’ based on the active transitive middle voice verb *pās-* ‘protect’ and passive TA *sesmām*

‘being supported’ based on active transitive middle voice *se-* ‘support’; both are illustrated in (7).

7. a. Tocharian A, passive attributive *m*-ptc. (A 2 b3; trsl. based on CEToM)

<i>pāsmām</i>	<i>niṣpal</i>	<i>lo</i>	<i>nākṣāl</i>
guard:PRS.PTC	property	PTCL.PFV	lose:PRS.GER.M.NOM.SG

‘[Even] (well-)**guarded** property will (eventually) be fully lost.’

- b. Tocharian A, passive converbial *m*-ptc. (A 73 a2; trsl. CEToM)

<i>weyeṃ</i>	<i>nāmṣunt</i>	<i>ālam-wcā</i>	<i>sesmām</i>
amazed	be:PRT.PTC.F.NOM.PL	each.other:PER	support:PRS.PTC

‘Surprised and **supported** by each other...’

There is even a certain ambiguity, as can be illustrated with the *m*-participle TB *akemane*, TA *ākmām* derived from TB *ak-*, TA *āk-* ‘lead’. This formation is attested in both active and passive orientation. In Tocharian B, the middle voice finite *āstār* has a passive meaning next to active voice *āsām*, an aspect that is deemed indicative of a continued connection with the middle voice by Fellner and Grestenberger (2018: 76). However, with the parallel existence of an actively oriented *m*-participle from the same verb, there is still a partial mismatch between this participle and the finite verb. Both Tocharian A and B attest this active use of TA *ākmām*, TB *akemane*, as well as the passive meaning associated with the middle voice, so that there is no clear one-to-one connection between the *m*-participle and the meaning of the finite middle voice (cf. the examples with TA *pāsmām* and *sesmām* above).

8. a. Tocharian A, passive converbial *m*-ptc. (A 81 a5)

<i>(ca)ndālāsā</i>	<i>kossi</i>	<i>ākmām</i>
Caṇḍāla:PER.PL	kill:INF	lead:PRS.PTC

‘Led to be killed by the Caṇḍālas.’⁷⁷

- b. Tocharian B, passive attributive *m*-ptc. (THT 3 b5–6)

<i>mākte</i>	<i>kautsy</i>	<i>akemane</i>	<i>wnolme</i>
like	kill:INF	lead:PRS.PTC	being

‘Just like a being **led** to be killed.’

⁷⁷ Theoretically, this could be read as ‘leading [X] to be killed by the Caṇḍālas’ due to the fragmentary nature of the manuscript, but the rest of the context makes it clear that the subject of the sentence is not the one leading.

- c. Tocharian A, active converbial *m*-ptc. (A 402 a1)

<i>wartsi</i>	<i>ākmām</i>
assembly	lead:PRS.PTC

‘Leading the assembly, ...’

- d. Tocharian B, active converbial *m*-ptc. (THT 88 b5–6)

<i>uttareṃ</i>	<i>mñcuṣkeṃ</i>	<i>akemane</i>
PN:OBL	prince:OBL	lead:PRS.PTC

‘Leading prince Uttara, ...’

If there were a strict correspondence between the finite middle voice and the *m*-participle in Tocharian, the *akemane* ‘leading’ in *uttareṃ mñcuṣkeṃ akemane* ‘leading prince Uttara’ (8d.) should have been passive just like the passive finite TB *āštār*. What we see instead, is that *m*-participles based on transitive verbs can be either active or passive, regardless of whether the associated verb is active or middle voice.

All that being said, Friis has identified some traces of an earlier connection between the *m*-participle and the middle voice in a few verbs where the middle voice provides the intransitive counterpart to the active voice. For example, TB *pāksemane oñkorñai* (THT 107 a2) is a ‘cooking porridge’ in the intransitive sense, not a porridge that ‘cooks (something)’ or ‘is being cooked’. This means that the *m*-participle *pāksemane* is in line with the intransitive meaning of the middle voice *pāk*- ‘cook, ripen (itr.)’, rather than with the meaning of the transitive active voice *pāk*- ‘cook (tr.)’ (Friis 2021: 3–4 fn. 6). The *m*-participle thus derives diachronically from a true middle voice participle, and its eventual ambivalence to active or middle voice in Tocharian is a secondary innovation (ibid.; also Fellner & Grestenberger 2018).

There are various ways to interpret the ambiguous orientation of the *m*-participle, and it may be that the different uses of this formation, between attributive and converbial, muddy the water. In the examples discussed so far, it appears that an *m*-participle that is used as a converb is more often active than an attributively used *m*-participle. Kuritsyna has found that passive orientation prevails particularly in attributive use of *m*-participles formed from transitive verbs, pointing to a potentially absolutive orientation (Kuritsyna 2023: 139). Since attributive use is the more canonical function of participles, this situation merits special attention. In CEToM searches for “mane”, “māne” and “mām” I was able to find eight examples of passive *m*-participles for Tocharian A, and two examples in Tocharian B.

Tocharian B examples of passive *m*-participles that I found are *akemane* (THT 3 b5-6) from *ak*- ‘lead’ and *tsāksemane* (IOL Toch 5 a4) from *tsāk*- ‘burn (tr.)’. The use of *akemane* is attributive, and so is that of *aikemane* (THT 559.2 a2) from *aik*- ‘know’, adduced by Kuritsyna (2023: 119). Accompanying the converbial *tsāksemane* there is an instrument in the perlicative case, namely *pwārasa* ‘by fire’.

9. a. Tocharian B, passive attributive *m*-ptc. (THT 3 b5–6)

<i>mäkte</i>	<i>kautsy</i>	<i>akemane</i>	<i>wnolme</i>
like	kill:INF	lead:PRS.PTC	being

‘Just like a being (that is) led to be killed.’

b. Tocharian B, passive converbial *m*-ptc (IOL Toch 5 a4; trsl. CEToM)

<i>onmiṣṣana</i>		<i>pwārasa</i>	<i>tsāksemane</i>	<i>marmanma</i>
remorse:ADJZ.OBL.PL		fire:PER.PL	burn:PRS.PTC	vessel:PL
<i>tronktse</i>	<i>stām</i>	<i>ra</i>	<i>sālpiñ</i> ⁷⁸	<i>cittsa</i>
empty	tree	like	glowing:M.OBL.SG	spirit:PER
<i>wolokmar</i>				
stay:PRS.MID.1SG				

‘[While my] vessels are burnt by the fires of remorse, I dwell like an empty tree with a glowing spirit.’

Tocharian B active *m*-participles used in attributive function are mostly based on intransitive verbs of the type in *pāksemane onkorñai* ‘the cooking porridge’ mentioned above. When formed to transitive verb, the resulting attributive *m*-participle is generally passive, in a pattern that conforms to Kuritsyna’s interpretation of attributive *m*-participles as absolutive in orientation (Kuritsyna 2023: 139). However, I have found one active example of an attributive *m*-participle based on the transitive verb *lans-* ‘build, work on, carry out’. The presence of an accompanying object, *yketseñe cake* ‘a local river’ makes this interpretation quite clear, see example (10).

10. Tocharian B, active attributive *m*-ptc. (Kizil WD-I-a4; trsl.⁷⁹ based on CEToM)

<i>skaśce</i>	<i>ikām-štwerne</i>	<i>yketseñe</i>	<i>cake</i>	<i>laṃsemane</i>
6:ORD.OBL.SG	20-4:LOC	local	river:OBL.SG	build:PRS.PTC
<i>kapyāri</i>	<i>ṣārwai</i>	<i>śawāre</i>		
worker:NOM.PL	meat(?):OBL	eat:PRT.3PL		

‘On the 24th [day] of the 6th [month], the workers who were repairing the local river ate meat.’

Tocharian A *m*-participles found in passive function are at least *pāsmām* (A 2 b3) from *pās-* ‘protect’, *kropmām* (A 3 b1; cf. the parallel formation *kropnmām* attested only as active in A 18 b6, A 19 a1, A 303 a2 and A 405 a1) from *krop-* ‘gather (tr.)’, *ypamām* (A 17 b3) from *yāp-* ‘make, do’, *esmām* (A 257 b1, YQ I.4 a6, YQ III.7 a3 and b3; also found active in A 301 a5, and possibly in A 232 a2) from *e-* ‘give’, *ākmām* (A 81 a5; also found active in

⁷⁸ Final *-ñ* due to the following *c-*; otherwise *sālpiñ*.

⁷⁹ Original translation in Chinese: ‘六月二十四日，正在修理当地河道的净人们吃了肉.’

A 402 a1) from *āk-* ‘lead’, *sesmām* (A 73 a2) from *se-* ‘support’. Some examples from this group are given here in (11).

11. (a) Tocharian A, passive attributive *m*-ptc. (A 3 b1; trsl. CEToM)

<i>tañne</i>	<i>kropmām</i>	<i>nišpalntu</i>	<i>ykoṃ</i>	<i>ošeñi</i>
thus	gather:PRS.PTC	property:PL	by.day	by.night
<i>śamañtär</i>		<i>mäñtne</i>		
increase:PRS.MID.3PL		as		

‘Possessions **that are gathered** in that way by day and night increase like ...’

- (b) Tocharian A, passive attributive *m*-ptc. (A 17 b3; trsl. CEToM)

<i>pñintu(yo)</i>	<i>ptāñkät</i>	<i>yärkā ypamām</i>	<i>yatatär</i>
virtue:INS.PL	Buddha	venerate:PRS.PTC	be(come):PRS.MID.3SG

‘Through virtues one becomes the **venerated** Buddha.’

- (c) Tocharian A, passive attributive *m*-ptc. (YQ III.3 a3; trsl. CEToM)

<i>pissankac</i>	<i>esmām</i>	<i>tñi</i>	<i>kanak</i>
community:ALL.SG	give:PRS.PTC	2SG.GEN	cotton.cloth

‘A cotton cloth **given** by you to the community.’

A number of Tocharian A passive *m*-participles are used attributively, e.g., in A 3 b1 *kropmām nišpalntu* ‘gathered possessions’ (11a.) and in A 2 b3 *pāsmām nišpal* ‘guarded possessions’ (see 7a. above). Some are furthermore accompanied by an agent in the perlocative or genitive, e.g., in YQ III.7 a3 *esmām tñi kanak* ‘the cotton cloth given by you’ (here in 11c.), and in A 73 a2 *ālam-wcā se(s)m(ām)* ‘(being) supported by each other’ (7b. above).

In Tocharian A, as in Tocharian B, active *m*-participles used in attributive function are mostly based on intransitive verbs; e.g., A 3b4 *sälpmām por* ‘glowing fire’, A 16b2 *smimām akmaḷyo* ‘with a smiling face’. One possible exception treated by Kuritsyna (2023: 117) is the *m*-participle *wlesmām*, given here in example (12). As Kuritsyna discusses, interpretation of this *m*-participle as an attributive rather than an adverbial is not certain, however, as either the start of the sentence, *āsre päšre trse (kroś)še* ‘dry, hard, rough, cold’, or the ending, *aṃšre nāmṭsuṣ* ‘being unsteady’, could in principle be interpreted as an apposition. If *aṃšre nāmṭsuṣ* ‘being unsteady’ is taken as the predicate, *tukri wlesmām* ‘working (the) clay’ is converbial rather than attributive.

12. Tocharian A (A 23 b5; trsl. based on CEToM)

<i>āsre</i>	<i>pāsre</i>	<i>tsre</i>	(<i>kroš</i>) <i>še</i>	<i>tukri</i>	<i>wlesmām</i>	<i>ñi</i>	<i>tsarām</i>
dry	raw	rough	cold	clay	build:PRS.PTC	1SG.GEN	hand.DU
<i>aṃśre</i>	<i>nāmtsus</i>						
unsteady	be:PRT.PTC.M.NOM.PL						

‘Dry, hard, raw/rough [and] (col)d [are] my clay-**working** hands, they are unsteady.’
 or: ‘Dry, hard, raw/rough, (col)d, **working** the clay, my hands are unsteady’

Since there is also a clear example of an active transitive *m*-participle in Tocharian B (cf. example sentence 10 above), TA *tukri wlesmām ñi tsarām* may be a genuine example of the same phenomenon in Tocharian A as well, if it is to be interpreted as attributive. The number of examples remains low in any case, and the majority of attributive *m*-participles follow an absolutive pattern of orientation (Kuritsyna 2023: 139). However, considering the fact that the meaning of the Tocharian finite verb cannot supply the right interpretation for the orientation of any given *m*-participle, at least not synchronically, in combination with the more contextually oriented converbial behaviour of the *m*-participle (Kuritsyna 2023: 139) and the marginal active transitive attributive use in example (10), the general orientation of the *m*-participle formation can be characterized as contextual. The development from Proto-Indo-European is illustrated in the table below.

Table 7.2: Schematic change in the orientation of the *m*-participle from Proto-Indo-European to Proto-Tocharian.

Indo-European	Tocharian
active (S/A)	→ contextual (S/A/P)

7.2.3 The preterite participle

The third Proto-Indo-European participle formation inherited in Tocharian is the perfect participle in PIE **-uos*, which became the Tocharian preterite participle (Krause & Thomas 1960: 261; Þórhallsdóttir 1988: 185; Saito 2006: 4–11). Unlike the *nt*-participle and the *m*-participle, the preterite participle retained its canonical participial function more faithfully. It is fully inflected for gender, case and number, like any adjective, and it can take objects in the oblique and agents in the genitive or perlativ case.

There are four different classes of preterite participle formation in Tocharian, which differ on formal parameters such as presence or absence of reduplication and the quality of the stem-final vowel (Þórhallsdóttir 1988: 184–185), but these classes do not show any functional difference. When based on a transitive verb, a preterite participle can either be interpreted as active or passive (e.g., Krause & Thomas 1960: 185, 190–191, Saito 2006:

18, Malzahn 2010: 232). Naturally, when a participle is formed to an intransitive verb, only an active interpretation is available.

Although the question of whether any individual Tocharian preterite participle is active or passive cannot be answered based on the form alone, the surrounding context typically holds the answer: the standard interpretation seems to be passive, and typically only when an object—an oblique noun or pronoun—is expressed, an active interpretation is warranted instead. The preterite participle thus shows contextual orientation, as per Seržant (2020: 226–230). Seržant (ibid.) connects the use of either actively or passively oriented preterite participles with the topicality of the respective arguments: if the subject or agent of the clause is more topical, the participle is actively oriented, but if the object is more topical, the participle is constructed in such a way as to be passively oriented.

If we look at the construction of the individual clauses, actively used preterite participles are generally accompanied by an overt direct object, while passively used preterite participles are not. This pattern emerges from a survey of preterite participle of *yam-* ‘do, make’ in both Tocharian languages in the CEToM database. This particular verb was chosen because it is amply attested, and obligatorily transitive; a list is given below in (13–16). Seržant also lists *yāmu* as one of the most clearly unoriented verbs (Seržant 2020: 230). It appears that an active interpretation occurs when an object is explicitly stated within the same sentence. Among the Tocharian A examples there is one minor exception in (14a.), where a preterite participle takes the same object as a preceding absolutive without the use of a resumptive pronoun, so that the object of the participle and thus its active meaning needs to be derived from the immediately preceding context. Other sentences with active forms of TA *yāmu* do contain an oblique. The examples illustrating the use of active *yāmu* are given here for Tocharian B in (13) and for Tocharian A in (14).

13. Tocharian B active use of the prt.ptc. *yāmu*.⁸⁰

- a. THT 24 a3 (Udānālaṅkāra; verse; trsl. CEToM)
šateñ wnołmī cai mā šaiṣṣe kca(OBL) ynāñm yā(m)oṣ
 ‘These rich beings **valued** nobody, ...’

⁸⁰ In some cases, the precise use and translation of *yāmu* is too uncertain, mostly due to limited context resulting from the fragmentary nature of the manuscripts. Excluded from the list for this reason are forms of *yāmu* found in THT 41 (*no yneś yāmoṣ*), 123 a3–4 (*māntrākka ñākta kerekauna yāmo*/// passive acc. to Saito 2006: 496, trsl. ‘O god! Just so a flood is made’, but the agreement between *kerekauna* and *yāmo-*, probably *yāmoṣ*, is unclear, as *yāmoṣ* should be in the oblique singular to agree with singular *kerekauna*, while Saito’s translation suggests a nominative function), 223.a a4 (///–*dhat yāmoṣ karuntsa*///), 251 b1–2, 304b3 (passive acc. to Saito 2006: 494), 321 b3 (///*āssa yāmu osne yānma*///), 321 b4 (///*āssa yāmu osne ṣmalle*///), 340b5 (///–*tsemi yāmoṣ*

- b. THT 41 a1–a2 (Udānālaṅkāra; verse; trsl. CEToM; cf. Saito 2006: 495)
(štarccce dhyām(OBL)) no yneś yāmoṣ
 ‘For they **have realized** (the fourth Dhyāna).’
- c. THT 41 a6 (Udānālaṅkāra; verse; trsl. CEToM)
piś bhūmintā(OBL) saim yāmu
 ‘... the one that **takes refuge** in the five Bhūmis [“earths”] ...’
- d. THT 45 a2 (Udānālaṅkāra; verse; trsl. CEToM)
tañ paine(OBL) saim yāmu
 ‘**having** made your feet [my] **refuge**.’
- e. THT 89 a2 (Araṇemijātaka; verse; trsl. CEToM)
waipātār wloṣām letseṃne po kālymintsa hwāsa ñi lestaī(OBL) yāmwa
 ‘in my dishevelled hair curls animals **have made** nest[s] everywhere’
- f. THT 89 b3 (Araṇemijātaka; verse; trsl. CEToM)
ñi sak lakle t(a)ñ w(i)ś(ai) tu pāke(OBL) yā(m)u
 ‘(it is) [both] happiness [and] suffering to me to **have partaken** in your domain’
- g. THT 102 a4 (Subhāṣitagaveṣin-Jātaka; prose; trsl. after Saito 2006: 493)
(((ka)rtse(OBL) yāmu westrā
 ‘He is called a **benefactor** (lit. “good-doer”).’

luwa///; passive acc. to Saito 2006: 494), 348 a3 (///-k- yāmu ste mā///), 352 b4 (///(pra)tiṃ ṇiśāmpa yāmoṣ epyac –), 405 b5 (– l yāmu yarṣtar), 529a2 (waipalau yāmu), 541a3 (aimameṃ yāmu; active acc. to Saito 2006: 495), 542 b2 (āklyi yāmoṣ), 562 a4 (///lmeṃts läktsauña yāmusa mäsketārne), 1119 a1 (...ñ yāmu), 1374.p b2 (///– saim yāmu –///), 1378.a a7 (///ruṃ yneś yāmu///), 1481.a a3 (///ce nauṣ yāmu ṣai –///), 1530 a1 (///-sk- kau no yāmoṣ), 1536.c b5 (///yāmu kowcā weña–), 1575.b a3 (///warttone nesaiñe yāmu), 2476 a2 (///—yāmu–///), 2599 b2 (///–yāmu–///), 4092 a2 (yneś yāmoṣepi), IOL Toch 27 a4 (...nenne yāmoṣām), IOL Toch 43 a5 (omp omp yāmuwa yāmuwa; passive acc. to trsl. CEToM) IOL Toch 79 b2 (///–reṃ yāmusa), IOL Toch 102 a3 (///yāmu kleś ka///), IOL Toch 114 b3 ((yo)lo yamorcci yāmo(ś)///), IOL Toch 141 a3 (///(a)pākārtse yāmu : cewsa śaiṣsentse///), IOL Toch 174 b5 (///t- yāmoṣ ekañi///), IOL Toch 201 b5 (– wī – yāmu āryavaṃśānt-///; probably wīna yāmu ‘having taken pleasure’), IOL Toch 226 b2 (///yāmu po cwī –///), IOL Toch 235 a4 (///lyñ- tane yāmu ste · m- –///), IOL Toch 157 b3 (///(y)āmoṣā), IOL Toch 240 b4 (cīne yāmu larauñe kalppanmasa mā///), IOL Toch 255 b3 (...na yāmu mäsketrā), IOL Toch 280 b6 (lo yāmu ste; active trsl. by CEToM), IOL Toch 367 b2 (///yāmoṣām), IOL Toch 754 a2 (///-e yāmu śaul:///), IOL Toch 827 a2 (///-n- saim yāmu –///), IOL Toch 828 b2 (///(sadga)t(i)m yāmoṣ-:///), PK AS 12K b1, PK AS 15H a3 (///yāmu wrāntsaimēñ ā///), PK NS 11 b4 (yāmu), PK NS 112 (///māka pñi nauṣ yāmuwa saṃsārne kleśanma; this TB fragment is somewhat puzzling due to the use of TA pñi rather than TB sg. yarpo or pl. yārponṭa; cf. THT 242 a4 lkāntār-c yāmwa nauṣ yārponṭa. The translation in CEToM is active, ‘having previously done much merit, ... the passions in the saṃsāra ...’, but it is unclear what yāmuwa, f.pl., agrees with; kleśanma?) PK NS 305 & 306 b2, SI 5873 a17, W 9 b4 (sā (yā)musa ka).

- h. THT 107 b2 (Buddha legend; prose; trsl. based on CEToM)
*snai epin̄kte śuddhawāsāṣṣi ñakti rṣākāññe weṣ(OBL) yāmoṣ mā lauке stāna ñor
 lymāre*
 ‘Without delay, Śuddhavāsa gods, having **donned** [lit. **made**] the guise of a sage,
 sat down not far away under [some] trees’
- i. THT 133 a4 (Kāvya; verse; trsl. Adams 2013: 168; cf. Saito 2006: 493)
krent yāmor(OBL) mā yāmoṣām ce(n n)o śāccātsi pkate
 ‘He intended, however, to let [**those who had**] not **done** a good deed proceed’
- j. THT 203 b5 & 204 a3–4 (Buddhastotra; verse; trsl. CEToM)
tañ pernerñe(OBL) saim yamoṣ perneñc ka po klautkāre
 ‘All **who made** your glory their **refuge** have already turned glorious.’
- k. THT 273 a5 (Buddhastotra; verse; trsl. CEToM):
snai keś wā wes cī(OBL) saim yāmoṣ tallāñciśkañ⁸¹
 ‘For in countless numbers we miserable ones **have made** you our **refuge**’
- l. THT 288 a1 (Kāvya; verse; trsl. CEToM)
(ka)ruṃ(OBL) nauṣ yāmu
 ‘**Having put** (lit. “done”) compassion at the forefront ...’
- m. THT 542 a3 (Doctrine; prose; trsl. based on Saito 2006: 493)
avibhaktasya · mā putkoṣepi · pāke(OBL) yāmoṣepi wat
 ‘[Skt.] Of something that is not detailed · Of something that is not divided · or of
 something that is not **shared** (lit. “do part”) in’⁸²
- n. THT 1102 a1 (Karmavācanā; prose; trsl. CEToM; cf. IOL Toch 827 a4)
upādhy(ā)y(e)ṃ(OBL) saim yā(mu) ///
 ‘**Having made** the Upādhyāya (teacher) a **refuge** ...’
- o. THT 1520 a2 (trsl. CEToM)
/// (kā)ly(m) ĩntsa irge(OBL) yāmu
 ‘**having made/done** *irge* (?) in all directions, ...’
- p. THT 92 a5
añcalī ṣarne yāmu
 ‘**Having put** (lit. “done”) [his] hands in *añjali* position.’
- Same expression with slight variations: 99 b1 *añcali ṣarne yāmu*, 100 b6 *añcalī
 ṣarne yāmu*, 109 a7 *añjal ṣarne yāmusa*, 261 a4–5 *añcāl ṣārne yāmusa*, IOL Toch 97
 a3 *añcali (ṣa)rne yāmu*, 178 a4 *añcali ṣarne yāmu*, 261 a3 */// (a)ñcal ṣarne yāmu –*,
 PK AS 13J b1 *añcalyi ṣarne yāmu*, PK NS 144 b3 */// (a)ñcalyi ṣarne yā(mu) ///*

⁸¹ For *tallāñciśkañ*.

⁸² See SWTF I: 174a.

- q. IOL Toch 5 b4 (Confession; verse; trsl. CEToM):
cine yāmu śrīgupti(OBL)
 'Who **has taken** excellent protection in you, ...'
- r. IOL Toch 31 a3 (Daśakarmapathāvadānamālā; verse; trsl. CEToM)
 ///...sa cimpā āklyi(OBL) *yāmoṣ wes*
 '... we have **studied** (lit. "do learning") with you.'
- s. IOL Toch 92 b2 (Karmavācanā; prose; cf. also IOL Toch 776)
(sāñ)k(OBL) *saim yāmu*
 'Having made the community (into) a refuge.'
- t. IOL Toch 152 b4 (Udānavarga; prose)
(wī)na(OBL) *yāmu māsketrā*
 'He **has found** pleasure.'
- u. IOL Toch 152 a7 (Udānavarga; prose)
wīna(OBL) *y(āmo)ṣ*
 'They, **having found** pleasure, ...'
- v. IOL Toch 167 (Medicine/magic text; trsl. Peyrot 2013: 714)
kāwalñesa rano trañko(OBL) *(y)āmu tākaṃ*
 'Even if he has **committed** (lit. "done") an offence by craving, ...'
- w. PK AS 1A a2 (Udānavarga; prose; trsl. based on CEToM)
tusāksa šek ompalskoññene wīna(OBL) *yāmoṣ kakraupaṣāṃ*
 'Therefore, indeed always **finding** pleasure in meditation [and] being concentrated, ...'
- x. PK AS 7C a4 (Karmavibhaṅga; verse; trsl. CEToM):
tane šemi ksa onolmi yāmor(OBL) *yāmoṣ nrayne cmelyesa kakraupau špā tākan-me*
 '[There are] some beings **who have done** a deed, and by being reborn in hell it will be further accumulated by them.'
- y. PK AS 7F b3–b4 (Karmavibhaṅga; verse; trsl. CEToM)
yāmu yārpona(OBL) *še /// (keksentsa) ra skw(a)ssu mā no palskosa*
 'Who **has done** meritorious deeds ...⁸³ he [is] happy with the (body) indeed, but not with the mind.'
- z. PK AS 7G b5 (Karmavibhaṅga; verse; trsl. CEToM)
tane šemi ksa wñolmi māskentrā śconai-yparwe duśśilñesa yolain yāmor(OBL)
yāmoṣā
 'There are some beings here **having done** bad deeds because of their ill conduct that originates in hatred.'

⁸³ Apart from restored *keksentsa*, eight more syllables are missing.

- aa. PK AS 16.2 b1 (Aggañña-Sutta; verse; trsl. CETOm)
warto wṣeṃññai(OBL) saim yāmoṣ
 'Having made a forest shelter their refuge, ...'
- bb. PK AS 17A a6–b1 (Supriyanāṭaka; prose; trsl. CETOm)
kau(c)yāmu śukt naumīyenta(OBL) kauṃ-pi(r)k(o)ṣṣai k(al)ym(ine) ma(sa)
c(akravārt)t(i) w(a)lo ra
 'Having lifted up the seven jewels he (went) in eastern direction, like a *cakravartin* king.'
- cc. PK DA M 507.37 and .36 a83–84 (Account; prose; trsl. Ching 2010: 215)
saswa ce(OBL) wes(s)i – (pu)ttewante snai-paille yāmu ste
 'Lord, **what** Puttewante **has** lawlessly **done** to us, ...'
- dd. PK NS 56 a5 (Doctrine; prose; trsl. CETOm)
/// -ntane āklyi(OBL)yāmoṣ
 'Having studied in ...'
- ee. SI B 119(2) b5 (Udānavarga; prose; trsl. CETOm)
(pelai)kne(OBL)yāmu nauṣāññe
 'Having accomplished the ancient Law'
14. Tocharian A active use of the preterite participle *yāmu*.⁸⁴
- a. A 9 a2 (Puṇyavantajātaka; prose; trsl. based on Sieg 1944: 12 and CETOm)
wrasañ penu cam peke pālkoräṣ yneś pālśkaṃ yāmuṣ trāñkiñc
 'And the people who saw the painting **took** [it] **for** real, they say ...'
- b. A 13 b6 (Puṇyavantajātaka; verse; trsl. CETOm)
pñintu(OBL)yāmu wrasom mā yāṣ tālorñeyam mā yāṣ ñātseyam
 'A person **that has practised** virtues does not come into misery, does not come into hardship'

⁸⁴ Not included here are instances of *yāmu* that are either unclear as to their diathesis, or that occur in a (fragmentary) context where I am unsure of a translation: A 45 a5 (*modin yāmunt*); 69 a4 (*///yāmu ·*); 90 a3 (*jñ- -ntu yāmu ṣṭy akālyme*; active acc. to Saito 2006: 491); 121 a1 (*was sem yāmuṣ*); 123 a3 (*///ārwar yāmu ṣe*); 148 a6 (*mānt wāknā ne yāmu tā*; active acc. to Saito 2006: 490); 167 b5 (*///yāmuṣ : ysāl:///*); 179.c a5 & a6 (*///yāmuṣ tmāk śweñc///*); 220 a3 (*kuc yāmu ā///*); 236 b7 (*wr·t- -m·yāmu : knānmām sā ///*); 281 b2 (*///yāmuṣ :*); 310 a6 (*///yāmunt ālyeksac- -*; passive acc. to Saito 2006: 490); 318/319 a7 (*///vidyādharñāñ prusaṃ yāmunt///*); 418 b2 (*///muntam lok yām· ///*; active acc. to Saito 2006: 491); 460 a5 (*///rūpā wañi yāmu -*) & b2 (*///āṣtār yāmu -*; active acc. to Saito 2006: 491). THT 1412h a2 *///tim yāmu* is probably active *pratim yāmu* 'having made the decision', and similarly THT 2449 *///lypuntu yāmu : ///* for *lyalypuntu yāmu* 'having done deeds'.

- c. A 16 b4–b5 (Puṇyavantajātaka; verse; trsl. CEToM)
puk ceṣ pñintu(OBL) yāmuntāp puṇyavāni parnontāp yokmaṇ klyam̐tār
 ‘But they are all standing at the gate of splendid Puṇyavān, **who has practised** virtues.’
- d. A 22 a5 (Puṇyavantajātaka, Brhaddiyutijātaka; trsl. CEToM; cf. also fragmentary A 280 b3)
pariweṣ(OBL) yāmu koṇ-ñikātt oki
 ‘Like the sun, **having produced** a halo, ...’
- e. A 78 a3 (Ṣaḍdanta-Jātaka; verse; trsl. CEToM)
caṇ wraman(OBL) ne(ṣa)ṣi praṣṭaṇ āklye yāmu
 ‘(He **who**) **has educated** himself in this matter in an earlier time.’
- f. A 148 a1 (prose; see CEToM)
ṣom caṇ lyalypu(OBL) yāmu
 ‘**Having done** this one deed.’
- g. A 240 a4 (prose; see CEToM)
(a) surāsāṣṣ aci wrasañ añu(OBL) yāmūṣ
 ‘From the Asuras to the beings, they **were** silent ...’
- h. A 244 a3 (verse; trsl. based on Thomas 1957: 280)
mañkal(OBL) yāmu tñi pālskaṣi ñemi
 ‘... Your bliss-**providing** pearl of a mind ...’
- i. A 279 b7 = A 302 a1 (Maitreyasamiti-Nāṭaka; verse; trsl. = 302 a1)
p(r)em wyār(OBL) yām(u) tāṣ ///
///prem wyār(OBL) yām(u) tāṣ –
 ‘If he has **erected** (lit. “made”) a temple (?) and a cloister.’
- j. A 291 b8 (Maitreyasamiti-Nāṭaka; verse; trsl. CEToM)
yok(OBL) yāmu jambunāt wäss oki āṣṭār lukṣanu wsā-yok ya(ts) ///
 ‘[His] skin **has produced** a colour pure like Jambunāda gold, shining and gold-coloured.’
- k. A 336 a6 (Dialogue; verse; trsl. CEToM)
(śāk tampe) yntu(OBL) yneṣ yāmu kucn= ākṣ(i)ññā mārkaṃpal sām sutār tāk
 ‘**Having manifested** (lit. “made manifest”) (the ten powers), what he proclaimed as the law, this became the Sūtra.’
- l. A 336 b2 (Dialogue; prose; trsl. CEToM)
(ā)klye(OBL) yāmuñcās ñāktas napenāśśi ākṣiññā sām abhidharm-piṭak tāk
 ‘(What) he **proclaimed** to learned gods and men, this became the *Abhidharma-Piṭaka*.’

- m. A 347 a4–b1 (verse; trsl. based on CEToM):
śil pat nu pāpṣu yāmu pat spaktām(OBL) : knānmuneyaṃ spaltāk yāmu
 ‘... or **has observed** good behaviour, or has done service, or **has made** an effort for knowledge ...’
- n. A 386 a2–3 (Abhidharmakośa; prose; trsl. CEToM)
oktasāṃ ytār(OBL) yneś yāmntāp kus ne sām śūrmaṣ tām praṣtaṃ tsārwo kākke
kātānkāṣ sām prāmodya plānto trānktrā
 ‘Which comfort and joy arise for that reason at that time **to the one who has manifested** the eightfold path, this is called *prāmodya* joy.’
- o. A 394 a4 (verse; trsl. CEToM)
waṣtaṣ lāntāssi pratim(OBL) yāmu
 ‘**Having made** the decision to leave home, ...’
- p. THT 1152 b2 (verse? trsl. CEToM)
koc kanweṃ(OBL) yāmu
 ‘**Having lifted up** (lit. “done upward”) [his] knees.’
- q. YQ I.6 a8 (Maitreyasamiti-Nāṭaka; prose; trsl. CEToM)
p_ukis puk essi pratim(OBL) yāmu
 ‘**I made** the resolve to give all of them away to all.’
- r. YQ II.2 b7 (Maitreyasamiti-Nāṭaka; prose; trsl. CEToM)
/// (pari)weṣ(OBL) yāmu puk yārśār
 ‘**Having made** a halo all around.’
- s. YQ II.13 b4 (Maitreyasamiti-Nāṭaka; prose; trsl. CEToM)
/// nu ptāṅkāt kāṣṣinaṃ wsokone(OBL) tsopatsāṃ yneś yāmu
 ‘**Having made manifest** the great joy towards the Buddha-god the teacher.’

From the passive examples below, it can be seen that in the absence of an oblique, the participle is typically passive. In such instances an agent or instrument is often expressed using a genitive, a perlativ (in TB) or an instrumental (in TA only), but this is not necessary.⁸⁵ Examples illustrating the passive use of *yāmu* are given here for Tocharian B in (15), and for Tocharian A in (16).

15. Tocharian B passive use of the prt.ptc. *yāmu*:⁸⁶

- a. THT 30 a3–4 (Udānālāṅkāra; verse; trsl. based on CEToM)

⁸⁵ According to Meunier (2017: 229–230) the use of the genitive is original to Tocharian, while the perlativ and instrumental are rather due to Sanskrit influence.

⁸⁶ According to Saito 2006: 584, 36% of passive preterite participles are construed with an expressed agent in Tocharian B.

snai keś cmela karsatsiśco špä tne ytārye sâ špālmeṃ : śaiṣṣe kārśaucaisa(PER.A)
apākārtse yāmusa klyomña

‘And to recognize the countless births, this path **was revealed** (lit. “made manifest”) as the best one by the knower of the world, the noble (path)’

- b. THT 46 a1 (Udānālaṅkāra; verse; trsl. CEToM)
(rā)skre yāmu erkatte r·w⁸⁷=attsaik päst snai-(mai)yya
‘**Having been** extremely mistreated the powerless one completely despaired(?)’
- c. THT 119 a4–5 (Rājavṛtti; verse; see CEToM)
(k_ise wa)t no cmelane yāmwā yāmornta yolaina krenta wat p(o)///
‘Or which deeds **were done** in the births, bad or good, all ...’
- d. THT 119 b1 (Rājavṛtti; verse; trsl. after Peyrot 2013: 713)
(krenta yā)mornta mākaikne no śaumontse k_ise yāmwā tāk(am)
‘Which (good) deeds **are done** for a person in many ways, ...’
- e. THT 175a2 (Abhidharmakośa; prose; trsl. after Thomas 1957: 289)
ce kārīkne vyākhyāṃ yāmu päst tāka totā kca ||
‘... **has been explained** approximately so much in this Kārīkā.’
- f. THT 202 b1 (Abhidharmakośa; prose; see CEToM)
na ca tatkarāṇaṃ mana · mā špä ātmaṇṭtse(GEN.A) *yāmu palsko*
‘(Skt.) · and [the thing] **not done** by the self is the mind.’ (?)
- g. THT 212 a2–3 (Buddhastotra; verse; trsl. based on CEToM)
karuṇāṣṣe bhrīkār enku śārśa ymeṣṣe maiyttārṣṣe no warsa ite po yāmoṣṣā
‘Having seized the vessel of compassion with the hand of your mind, **filled** [lit. ‘made full’] with the water of friendship, ...’
- h. THT 242 a4 (Buddhastotra; verse; see CEToM)
lkāntār-c(PRON.SUFF.A) *yāmwā nauṣ yārṇonta*
‘They see the good deeds **done** by you earlier.’
- i. THT 257 b5 (Kāvya; verse; see CEToM)
/// (y)āmu ṇāktents(GEN.A) *māsketrā ///*
‘It is **made** by the gods.’
- j. THT 299 a1 (Udānavarga; verse; see CEToM)
(ke)te yolo yāmu yāmor kreṃtsa(PER.A)
‘By whom a deed **has been** wrongly done, [if he covers it up] with a good [one] ...’
- k. THT 330 b2 (Doctrine; trsl. based on CEToM)
su wasaṇpāt yāmu mā māsketār

⁸⁷ The proper translation and restoration of this (presumable) verb, *r·w* is uncertain.

‘He **has not been** ordained.’

- l. THT 528 a4 (Doctrine; prose; see CEToM)
 /// *ep(e) aly(e)ksa*(PER.A) *yāmu*
 ‘Or **done** by another’
- m. PK AS 2C a6–b1 (Medicine/magic; prose; trsl. CEToM)
toy šotrūna špā tuntse(GEN.A) *yāmuwa po tekanmats rano še-ñemmts*⁸⁸
 ‘And these symptoms **induced** by that [belong] also to all diseases which have the same name.’
- n. THT 521 a3 (Karmavibhaṅga; trsl. CEToM)
(mäksu no yā)mor yāmu šlek špā kakraupau
 ‘But a deed **that is done** and accumulated’
- o. THT 521 a4 (Karmavibhaṅga; trsl. CEToM)
k_use no su yāmor mā yāmu mā kākraupau
 ‘But which is the deed **which has not been done** and not accumulated?’
- p. THT 1574 b1 (Letter; trsl. CEToM)
iśśapakentse(GEN.A) *yāmoš saṅkrāmne ñake päkwalñesa kartse* – –
 ‘In the monastery **made** by Iśśapake, now with trust ... good ...’
- q. PK AS 3B a2 (Medicine/Magic; prose; trsl. based on CEToM)
istak yāmoš pili lakoy
 ‘As soon as boils **emerge** (lit. “are made”), one should examine [them].’
- r. PK AS 3B b6 (Medicine/Magic; prose; trsl. CEToM)
k_use salturna yāmu tākoy
 ‘If somebody **has been made** *salturna* [= bewitched??].’
- s. PK AS 6C a5 (Udānālāṅkāra; verse; trsl. CEToM)
šim mā prākre aipu no išcemtsa oṃšmeṃ mā yāmu
 ‘But the roof [is] not firmly covered and not **done** with clay on top.’
- t. PK AS 7C a6–b1 (Karmavibhaṅga; verse; trsl. CEToM)
empele rano yāmu šey-ne(PRON.SUFF.A) *yāmor su : onmin no postām yamašate mrau*(skāte)
 ‘Although such a horrible deed **had been done** by him, nevertheless he felt remorse afterwards [and] felt revulsion.’
- u. PK AS 7C b2 (Karmavibhaṅga; verse; trsl. CEToM)
empelona ra yāmwa tākaṃ yāmornā
 ‘Even [if] horrible deeds **have been done**, ...’

⁸⁸ sic. Perhaps for a genitive plural *še-ñemnaṃts*.

- v. PK AS 7C b3 (Karmavibhaṅga; verse; trsl. CEToM)
se(m) t(u-)yāknesa yāmor yāmu ket(GEN.A) tākaṃ
 ‘By whom a deed of this kind may **have been done**, ...’
- w. PK AS 7C b4 (Karmavibhaṅga; verse; trsl. CEToM)
intsu no yāmor yāmu mā no kakraupau
 ‘But which [is] the deed **done** but not accumulated?’
- x. PK AS 7C b5 (Karmavibhaṅga; verse; trsl. CEToM)
se yāmor yāmu mā no kakkraupau mäsketrä
 ‘This deed is **done** but not accumulated.’
- y. PK AS 7C b5–6 (Karmavibhaṅga; verse; trsl. CEToM)
k(,s)e no sū yāmor kakraupau mā no yāmu
 ‘But what [is] the deed accumulated but not **done**?’
- z. PK AS 7E b6 (Karmavibhaṅga; verse; trsl. CEToM)
 – – *tāntär-me lau(ka)ññana yāmuwa*
 ‘... for them (the deeds) **having been done** in the past’
- aa. PK AS 7E b6 (Karmavibhaṅga; verse; trsl. CEToM)
palsko no yairu ailñene āyor nano-nano āklyi yāmu māka cmela-cmelane
 ‘But the mind has been trained in gift giving [and] again and again **instructed** many times birth after birth’
- bb. PK AS 7F a3 (Karmavibhaṅga; verse; trsl. based on CEToM)
mā āyoršše kreṃt wāšmoṃmpa āklyi yāmu cmelane
 ‘He **has not been educated** during the [previous] births with a good friend of a gift.’
- cc. PK AS 7K a3 (Karmavibhaṅga; verse; trsl. CEToM; cf. THT 46 a1)
srukallāññentse(GEN.A) räs(k)r(e yā)moš erkatte
 ‘By death they have **been severely maltreated**.’
- dd. PK AS 17E a3 (Supriyanāṭaka; prose; trsl. CEToM)
viśvakarmi ñäkteṃtse(GEN.A) ra nermit (y)ām(u)
 ‘It **has been fashioned** by the god Viśvakarman, as it were.’
- ee. PK AS 17F a5 (Supriyanāṭaka; verse; trsl. CEToM)
yaitkor āk(s)o(r) seṃ (k,se ste maiy)y(a) kete(GEN.A) po yāmu
 ‘(Which is) this order [and] instruction by which all the power has been **shown** (lit. “made”)?’
- ff. PK AS 18B a3–4 (Vinayavibhaṅga; prose; trsl. Adams 2013: 739)
sa(ñ)k(a)meṃ šamāni samanit yāmoš šeyeṃ
 ‘Monks from the community **were assembled** ...’

- gg. PK NS 53 b4–b5 (trsl. CEToM)
kaklāyaṣepi pīle yāmu ra ñem er(sn)a
 ‘Name and form [are] like the wound **inflicted** on the one who has fallen.’
- hh. PK NS 399 a4 (Candraprabha-Avadāna; prose; trsl. CEToM)
ṣ(u)ktañce kauṃ māñcuṣkeṃtse lantuññe abhiṣek yāmu
 ‘On the seventh day the royal consecration of the prince **is performed**.’
- ii. IOL Toch 62 b3 (Bhikṣu-Prātimokṣasūtra; prose; trsl. after CEToM)
k_use ṣamāne mā kappi yāmoṣ wassi ya(masträ)
 ‘If a monk makes a garment **that has not been properly made**.’
16. Tocharian A passive use of the prt.ptc. *yāmu* (in sentences a.–f. with a genitive agent, in g.–i. with an instrumental, j.–l. with neither):⁸⁹
- a. A 7 b3–4 (Puṇyavantajātaka; prose; trsl. after Sieg 1944: 10 and CEToM)
mā naṣ āñmaṃ wrasaśī(GEN.A) āñmaṣi īme yāmu wāṣpā (pe)nu āñcām mā naṣ
 ‘There is nothing in the self. The image of the self **has been made** by the beings. And truly, there is no self.’
- b. A 14 b4 (Puṇyavantajātaka; prose; trsl. CEToM)
puk krañcās wrasaśī(GEN.A) kāpñe yāmunt kra – –
 ‘(They.F) **are loved** (lit. “made beloved”) by all good beings.’
- c. A 49 a5 (Avadāna; prose; trsl. after CEToM)
/// puṣyamitres lānt(GEN.A) kat yāmunt wyārās saṅgrāmās ///
 ‘... **having been** destroyed by king Puṣyamitra, (Kaniṣka had built) cloisters and monasteries’
- d. A 49 b4 (Avadāna; prose; trsl. CEToM)
mārkampalṣināp śpeṣuy lānt(GEN.A) yāmunt wyār
 ‘The cloister **founded** by the Law-abiding king Śpeṣu.’
- e. A 49 b5 (Avadāna; prose; trsl. CEToM)
mārkampalṣināp kanaṣkes lānt(GEN.A) yāmunt wyār
 ‘The cloister **founded** by the Law-abiding king Kaniṣka.’
- f. A 59 a5 (Unmādayanti-Jātaka; prose; trsl. CEToM)
(k_uleñci ñe)mi ynāñm yāmus śomiṃ ṣeṣ
 ‘She was a girl **honoured** as a pearl (of women).’
- g. A 79 a5 (Śaddantajātaka; prose; trsl. CEToM)
tām kaklyuṣurūṣ ṣaru bodhisatveṃ swārām rakeyo(INSTR) wsok yāmu

⁸⁹ According to Saito 2006: 584, 39% of passive preterite participles are construed with an expressed agent in Tocharian A.

‘When he had heard this, the hunter, **having been made** glad by the sweet speech of the Bodhisattva, ...’

- h. A 79 b5 (Ṣaḍdantajāṭaka; verse; trsl. CEToM)
kāswoneyo(INSTR) yā(mu) nu pāl ākntsāśśi sātkatār tri āpāytwam
 ‘But a wound **which has** out of virtue **been made** to the ignorant ones extends over the three evil forms of existence.’
- i. A 93 a5 (Nanda-Carita I; verse; trsl. based on Saito 2006: 490)
sākkres parnoñcāśśi(GEN.A) kāpñe yāmu saṃkrām nyaghrodha
 ‘The monastery Nyagrodha, **loved** by the happy, glorious people.’
- j. A 172 a6 (trsl. CEToM)
-āp(GEN.A) yāmund jetavam sa(nkrāma)
 ‘The Jetavana monastery **founded** by ...’
- k. A 231 a4 (verse; untrsl. in CEToM)
neṣā yāmund lyalypūntu
 ‘The deeds **that were done** earlier.’
- l. A 270 b8 (Maitreyasamiti-Nāṭaka; prose; trsl. CEToM)
(klyo)m tu neṣinām ṣṇi yāmund pratim opyā(c pāklār)
 ‘O noble one, remember the resolution **made** by yourself in the past!’
- m. A 340 b1 (Koṭikarṇa-Avadāna; verse; trsl. CEToM)
ṣṇy entsyo(INSTR)y(ā)mund lyalypāntwā (was pretañ)
 ‘Because of our deeds **committed** due to our miserliness, (we [are] pretas).’
- n. YQ III.6 b7 (Maitreyasamiti-Nāṭaka; prose; trsl. CEToM)
/// (pi)ssaṇk penu yārka yāmu tāśśi
 ‘The community, too, will **be honoured** by you.’

The example sentences show forms of *yāmu* as both active and passive in various functions in the sentence, illustrating the contextual orientation of the preterite participle. It is contextually oriented regardless of whether it is used as an attributive, absolutive, or part of the predicate (cf. also Saito 2006: 489–497, who gives a few examples of each type).

Besides Tocharian, reflexes of the perfect participle in other Indo-European branches are found in Indo-Iranian, Greek and Balto-Slavic, with a few relic formations in Germanic and Celtic. It is not found in Anatolian, or in Armenian, Albanian and Italic (e.g., Rau 2017). This participle is reconstructed as actively oriented for Proto-Indo-European, although some labile verbs are also attested with a passive meaning in Ancient Greek (Kümmel 2020: 17, 24). The fully contextual orientation of this participle in Tocharian is not paralleled elsewhere in Indo-European, indicating that it is a

Tocharian innovation. The development in orientation from Proto-Indo-European is represented in the table below.

Table 7.3: Schematic change in the orientation of the perfect participle from Proto-Indo-European to the preterite participle in Proto-Tocharian.

Indo-European	Tocharian
active (S/A)	→ contextual (S/A/P)

7.2.4 The gerundives: necessitative and potential participles

The two gerundives in Tocharian are fully inflected adjectives derived from the present and subjunctive stems with a suffix TB *-lle*, TA *-l* (*-*ljo*). The present-based gerundive expresses necessity, while the subjunctive-based gerundive expresses possibility. The gerundives can be used attributively, and they also often occur as part of the predicate, with or without a form of the verb ‘to be’ in auxiliary function (Krause & Thomas 1960: 186–187). In a syntactical study of these formations, Thomas (1952: 22ff.) points out that their use is mostly passive, but that some occurrences are rather to be interpreted as active (Thomas 1952: esp. 22–26).

The gerundives behave very much like participles (Thomas 1952; Fellner 2013: 74), motivating their inclusion in this chapter. Meunier describes them as “indifferent to diathesis” (Meunier 2017: 222), by which she might refer to the fact that they are formed from both active and middle voice verbs, but Kuritsyna (2022) listed them together with the preterite participles as examples of contextually oriented formations in Tocharian. The sentences in (17) below give a brief overview of the uses of the gerundives.

The present gerundive is most often found with a passive interpretation when formed to a transitive verb, as in (17a); see Thomas (1952: 16–28). The subjunctive gerundive is found with good representations of both passive and active use, as illustrated in (17b) and (17c) respectively; see Thomas (1952: 28–47). The gerundives can be formed to intransitive verbs as well; in such cases they are by necessity active. This is shown in example (17c) with a present gerundive and in (17d) with a subjunctive gerundive (Thomas 1952).

17. a. Tocharian B (THT 600 b5; trsl. after Thomas 1952: 19)

<i>kamarttaññe</i>	<i>wai</i>	<i>amām</i>	<i>karuñäntse</i>	<i>sañi</i>
rulership	and	pride	compassion:GEN.SG	enemy:NOM.PL
<i>bodhisatveṃts</i>		<i>wikṣalle</i>		
Bodhisattva:GEN.PL		avoid:PRS.GER.M.NOM.SG		

‘Rulership and pride, the enemies of compassion, [are] to be avoided by the Bodhisattvas.’

b. Tocharian B (THT 14 b1; trsl. after Thomas 1952: 32)

<i>(lā)k(le)nta</i>	<i>parskallona</i>	<i>nraiṣṣana</i>	<i>lyakār=</i>
suffering:PL.OBL	fear:SBJ.GER.F.PL.OBL	hellish:F.PL.OBL	see:PRT.3PL
<i>ākālṣlyi</i>			
disciple:NOM.PL			

‘The disciples saw the **fearful** sufferings of hell.’

c. Tocharian A (A 66 a5; trsl. CEToM)

<i>ṣākk atsek</i>	<i>nāñi</i>	<i>brahmadatte</i>	<i>wāl</i>	<i>pats</i>	<i>māskal</i>
certainly	1SG.GEN	PN	king	husband	be:PRS.GER

‘Certainly, king Brahmadatta **shall be** my husband.’

d. Tocharian B (THT 88 a4–5; trsl. after CEToM)

<i>(pā)lka</i>	<i>nai</i>	<i>mā-ṣekaṃñe</i>	<i>wāntarwats</i>	<i>sparkālye ā(ke)</i>
see:IMP.ACT.2SG	PTCL	inconstancy	thing:GEN.PL	with.perishable.end

‘Behold the inconstancy of things [**that**] **have a perishable end**.’

e. Tocharian B (THT 1574 a3; trsl. CEToM)

<i>totka</i>	<i>śātresa</i>	<i>pruccamñe</i>	<i>yamalle</i>	<i>ṣait</i>
little	grain:PER	excellence	do:SBJ.GER.M.NOM.SG	be:IPF.ACT.2SG

‘With a little grain you **would be doing** something excellent.’

Thomas furthermore provides a few examples of active present gerundives, which are constructed with an oblique (Thomas 1952: 22–26). The clearest examples are all impersonal constructions, as in (18).

18. Tocharian B (IOL Toch 15 b4; trsl. based on Thomas 1952: 24)

<i>tumem</i>	<i>po</i>	<i>wāntarwa</i>	<i>paramānuntasa</i>	<i>lākāṣāle</i>
thereupon	all	thing:PL	atom:PL.PER	look:PRS.GER.M.NOM.SG

‘Thereupon, **one must look at** all things precisely.’

or: ‘Thereupon, all things **must be looked at** precisely.’

The expected construction for a passive would have the gerundive agree with *wāntarwa* ‘things’ in the feminine plural form *lkāṣlona* or a spelling variant thereof.

Instances of potentially active present gerundives with an overt acting person are also generally difficult to interpret, and example (19) below is not without problems. For instance, *aiṣlyi* is to be read as *aiṣlye* (Thomas 1952: 25). There is another potentially active example of the present gerundive of this same verb ‘to give’ in (20), but its interpretation is not entirely certain either. A passive reading is perhaps also possible if the scope of the genitive *ket* is extended, or if an omitted genitive agent is assumed. The

translation could then be ‘Therefore, the one whose wish [is] to be always happy, [and] by whom a gift should be given [while] always being joyful.’ The present gerund *aiṣṣälle*, in the masculine singular, can agree with either *āyor*, an alternant singular noun, or with an unexpressed grammatically masculine entity implicated by *ket*.

19. Tocharian B (THT 492 a1–2; prose; trsl. after Peyrot 2013: 346)

<i>sessatatte</i>	<i>rine</i>	<i>meskeṣṣem</i>	<i>cānem</i>
PN	town:LOC	connection:ADJZ.M.OBL.SG	coin:OBL.SG
<i>aiṣlyi</i>	<i>tākaṃ</i>		
give:PRS.GER.M.OBL.SG	be:SBJ.ACT.3SG		

‘Šeṣadatta **will have to give** the stringed coins in town.’

20. Tocharian B (PK AS 7E a5; trsl. CEToM)

<i>tūsa</i>	<i>ket</i>	<i>āñme</i>	<i>skwassu</i>	<i>šek</i>	<i>nessi</i>
therefore	who:GEN	wish	happy	always	be:INF
<i>aiṣṣäll=</i>	<i>āyor</i>	<i>katkemane</i>	<i>šek</i>		
give:PRS.GER.M.NOM.SG	gift	be.happy:PRS.PTC	always		

‘Therefore, the one whose wish [it is] to be always happy **should give** gifts [while] always being joyful.’

Instances of active use of the subjunctive gerundive are more numerous. These mostly occur in constructions with a copula, and they are characterized by Thomas as a periphrastic future or periphrastic subjunctive (Thomas 1952: 38–43). Several illustrative examples are of this type of construction in Tocharian B are to be found in the manuscript THT 107, where the two sisters Nandā and Nandabalā are looking for a worthy recipient of their special porridge.

21. a. Tocharian B (THT 107 b1–2; trsl. Peyrot 2013: 344)

<i>cisa</i>	<i>kreṃnt</i>	<i>kālālyana</i>	<i>tākam</i>	<i>cwi</i>
2sg.PER	good	bring:SBJ.GER.F.PL.NOM	be:SBJ.ACT.1PL	3SG.GEN
<i>aiskem</i>	<i>ci</i>	<i>eṃške</i>	<i>tārkanam</i>	
give:PRS.ACT.1PL	2SG.OBL	while	leave:PRS.ACT.1PL	

‘If we **can find** (lit. “bring up”) somebody better than you, we will give [it] to him while we leave you [alone].’

b. Tocharian B (THT 107 b5–6; trsl. Peyrot 2013: 342)

comtsa *špālmeṃ* *dakšinākeṃ* *mā* *kālālyana*
 3SG.DIST.PER excellent worthy of gifts NEG bring:SBJ.GER.F.PL.NOM
nescer
 be:PRS.ACT.2PL

‘You **can/will** not **find** (lit. “bring up”) anyone better and worthier of gifts than him there.’

c. Tocharian B (THT 107 b10)

mā *tot* *ñiś* *pintwāt* *warpalle* *nesau*
 NEG so 1SG.NOM alms(OBL) accept:SBJ.GER.M.NOM.SG be:PRS.ACT.1SG
 ‘I **cannot accept** any alms.’

This type of active use of the subjunctive gerund could be partially a result of the periphrastic constructions, but the following examples in (22) and (23) show that a predicatively used subjunctive gerundive can be both active and passive.

22. Tocharian B (THT 33 a5; trsl. based on CEToM)

makte *ksa* *rintār* *waipecc=* *ekñenta* *takarškñesa*
 self INDEF give.up:SBJ.MID.3SG possession property faith:PER
mrauskalñesa *mā* *špä* *sū* *wteṃtse* *kraupalle*
 world.weariness:PER NEG CONJ he again gather:SBJ.GER.M.NOM.SG
 ‘If someone gives up possession and property himself, out of faith and weariness of the world, he **will not gather** [it] a second time.’

23. Tocharian B (THT 205 a2; trsl. CEToM)

papalarsa *ci* *ñakta* *nervvaṃn* *oko* *kālale*
 praising:PER 2SG.OBL god:VOC Nirvāṇa fruit obtain:SBJ.GER.M.NOM.SG
 ‘By praising you, o god, the Nirvāṇa-fruit **can be obtained**.’

In general, attributive use of the gerundives is less common than predicative use, and it is to my knowledge not attested in active transitive function. Passive attributive use can be illustrated with example (24), where the agent is expressed in the genitive, as in the case of the other participles (Thomas 1952: 19).

24. Tocharian B (PK AS 17D b5–6; trsl. CEToM)

ñi yāmṣālye wāntare pācer walo tu yāmām
 1SG.GEN do:PRS.GER.M.OBL.SG thing(OBL) father king it do:SBJ.ACT.3SG
 ‘[My] father, the king, will do the thing **that would have to be done** [lit. has to be done] by me.’

In attributive function, the gerundives thus attest to at least an absolutive pattern of orientation. However, it turns out that these formations can additionally be used to relativize non-core participants in both Tocharian A and B. The first two example sentences below, (25a–b), show both a subjunctive gerundive, *kroplyām* and *swāsallye* respectively, and a present gerundive, *eṣlyām* and *yalye* respectively, with similar functions (cf. Thomas 1952: 26–27, 32–34).

25. a. Tocharian A (A11 a3–4; trsl. CEToM)

wartsi kroplyām praṣṭā (wa)rtsi kot ravaṇe
 assembly gather:SBJ.GER.F.OBL.SG time:PER company split:PRT.3SG PN
sne knānmuneyā nati eṣlyām praṣṭā nati
 without knowledge:PER power give:PRS.GER.F.OBL.SG time:PER power
kot rākṣasāsī
 split:PRT.3SG Rākṣasa:GEN.PL

‘At the time **that** the assembly **had to be gathered**, Rāvaṇa split the company out of ignorance. At the time **that** power **had to be given**, he split the power of the Rākṣasas.’

b. Tocharian B (IOL Toch 7 a1; trsl. CEToM)

(yente ma) yalye ikene ma swāsallye ikene
 wind NEG go:PRS.GER.M.OBL.SG place:LOC NEG rain:SBJ.GER.M.OBL.SG place:LOC
 ‘(Not) in a place **where** (the wind) goes; not in a place **where it rains**.’

c. Tocharian B (IOL Toch 7 a2; trsl. CEToM)

ma wār tärkalye ikene
 NEG water release:SBJ.GER.M.OBL.SG place:LOC
 ‘Not in a place **where** water is released.’

These constructions whereby non-core participants are relativized with a participle are found in other languages with contextually oriented participles as well, such as those cited by Haspelmath (1994: 154) for Lezgian and by Shagal (2019: 2) for Kalmyk. Both of these examples display contextually oriented participles used to modify not only subject,

agent or patient, but also a time or location at which an event is taking place.⁹⁰ These are repeated here in (26):

26. Lezgian (Haspelmath 1994: 154 (a.)) and Kalmyk (Shagal 2019: 2 (b.))

- a. *ruš-a* *čar* *kx̣i-zwa-j* *juǰ*
 girl-ERG letter:ABS write-IPFV-PTC day
 ‘The day on which the girl is writing a letter.’
- b. *küük-n-ä* *bičag* *bič-žä-sən* *širä*
 girl-EXT-GEN letter write-PROG-PST.PTC desk
 ‘The desk at which the girl is writing a letter.’

In terms of the participants that can certainly be relativized using gerundives, there are thus examples of the subject being relativized, the direct object being relativized, and a non-core participant (location or time) being relativized. In predicative use, subjunctive gerundives are found as both active and passive, depending on the context. The orientation of the gerundives can be generally described as contextual, although present gerundives are practically always passive when formed to a transitive verb.

The orientation of the Proto-Indo-European precursor of the gerundives is controversial. The gerundive suffix for both the present and the subjunctive gerundive can be reconstructed as PT **-lle*, from PIE **-ljo*. This is derived from a Proto-Indo-European adjective suffix **-lo* (Hackstein 2003: 54–55). It is uncertain whether such a verbal adjective would already have had a dedicated orientation, making any reconstruction difficult. The closest relative of the Tocharian gerundive suffix is the Armenian gerundive in *-li*, also derived from **-ljo*, although the formation and/or specialization of this suffix may have been parallel in the two branches rather than inherited from Proto-Indo-European.

Similar to the Tocharian gerundives, the Armenian gerundive in *-li* can be either active or passive as well. Olsen gives some examples of the ambiguity of this type, as in *andowneli* both ‘acceptable’ and ‘accepting, receiving; receiver’, and in *sireli* both ‘lovable, beloved’ and ‘loving’ (Olsen 1999: 336). Olsen also points out the similarities with the Tocharian formation (Olsen 1999: 398), but regards the development as secondary, writing that “if the type of inherited **lo*-stems, [...], at some point indicated the simple notion of a verbal action, the conception of the original diathesis, which is apparently active (nomina agentis) in the proto-language, is easily neutralized [...]

⁹⁰ IOL Toch 141 a5 /// – *pentse yainmoš prekene · orto* /// is suggestive of the same possibility with preterite participles, translating to something like ‘at the time when X was/were reached/obtained by ...-pe (perhaps *kraupe* ‘congregation?’), ...’ I am not aware of other examples of this type.

The same ambiguity towards passive or active orientation is found in the related Armenian infinitive, e.g., *gorcel* ‘to work, working’ or ‘to be worked’ as the context requires (Olsen 1999: 397). A third related formation is the past participle in Classical Armenian *-eal*. This was absolutive in its orientation (“passive-intransitive”) when used adjectivally (Meyer 2017: 75–76).

In the other Indo-European languages, the **lo*-adjectives often have an active interpretation, such as in Latin *crēdulus* ‘easy of belief, gullible’ (Hackstein 2003: 55–57). Active use is also found in the Slavic *l*-participles, which became the basis for the active past tense; e.g., Russian active transitive *on ubíl* ‘he killed’ vs. active intransitive *on pyl* ‘he swam’. Kuryłowicz has argued that the active orientation arose secondarily in these branches, with the original orientation being absolutive (Kuryłowicz 1970–72: 324). The active use found in Latin and Germanic **lo*-adjectives would have developed because verbal adjectives in **-to-* had taken over the passive function. Similarly, the exclusively active use of the Slavic perfect based on the same adjective suffix would be due to the introduction of a new mediopassive construction with the reflexive pronoun **se*, which could have displaced the passive function of the **lo*-adjective (Kuryłowicz 1970–72: 326–327).

Evidence in favour of earlier contextual or absolutive orientation is restricted to Tocharian, where it may be secondary, and Armenian. In Armenian, the reverse argument can be made as for Germanic, Latin and Slavic, since the adjectives in **lo*-took over from the adjectives in **-to-* (Meyer 2017: 76), so that the absolutive orientation there is just as suspect as the active orientation in the other branches.

If the gerundives formed to transitive verbs had in origin specifically active orientation, the contextual orientation of the Tocharian gerundives is a later innovation. This development would be in line with the new contextual orientation of preterite participles from earlier active perfect participles. A parallel development then has to be assumed for Armenian gerundives. It is noteworthy that the two languages where derivatives of the **lo*-adjectives show contextual orientation are spoken in areas where various neighbouring languages have contextually oriented participles (on which cf. below). The potential development from active or absolutive orientation to Tocharian contextual orientation is represented in a schematic way in Table 7.4 below.

Table 7.4: Schematic change in orientation from Proto-Indo-European to the Proto-Tocharian gerundives.

Indo-European	Tocharian
? active (S/A) or absolutive (S/P) →	contextual (S/A/P)

7.2.5 The privative: a negative participle

The privative in Tocharian B functions as a negative participle, and it is formed by a combination of the negative prefix *en-* (with various allomorphs) and the suffix *-tte*. It is principally derived from the subjunctive stem of the verb. The origin of the negative prefix is PIE negative **n-*, and the suffix *-tte* may reflect PIE **-to-* (Hilmarsson 1991: 14–16 with further references). The gemination could be the result of analogy to that found in other common Tocharian adjectival suffixes like *-sse*, *-tstse*, *-lle*, *-ññe* (Hilmarsson 1991: 14–16). The derivation by Krause and Thomas (1960: 188) from **-tuo-* would account for the Tocharian B geminate by sound law, but is excluded due to the lack of a labial reflex in Tocharian A, where relic privatives end in simple *-t*, rather than ***tu* (Hilmarsson 1991: 15–16).⁹¹

The privative is inflected as an adjective, agreeing with a head noun in gender, case and number. Unlike the preterite participle or the gerundives, the privative does not have a specific time reference, as it indicates that an action “is not to be, cannot or should not take place, or has not taken place” (Hilmarsson 1991: 16). This indifference to features like tense, aspect or mood is found in participial systems with a negative participle in several Uralic languages (Finnish, Komi-Zyrian, North Saami, Northern Khanty) and in the Dravidian language Telugu (Shagal 2019: 159). Similar to the participles discussed above, however, it also shows both active and passive meaning when formed to transitive verbs (cf. Hilmarsson 1991: 20–117 *passim* with 15 examples of passive privatives formed to transitive verbs and 5 active privatives from transitive verbs).

27. Examples of passive (a.–b), active (c.–d.) and intransitive (e.) use of various privatives:

- a. Tocharian B (THT 331 b1; trsl. Hilmarsson 1991: 21–22)

tusa olyapotse akākatte yaka ce prekšām

‘[If he] **uninvited** asks him still more than this ...’

- b. Tocharian B (PK NS 32 a2; trsl. CEToM)

pelaikneṣṣe laukaññ= eṣpirtacce ṣparttaṣṣim cākkä(r)

‘May I turn the wheel of the law [that] **has not been turned** for a long time.’

- c. Tocharian B (PK AS 12C b1–2; trsl. Pinault & Peyrot fthc.)

(samu)d(tā)rintse totteññe(OBL) ekātkatte se mā srukālñe yānmälle

‘[Even] **without traversing** the limit of the ocean (of the [beings] of the five births) he can attain the [state] of not dying.’

⁹¹ Fellner (2013: 85–89) proposes an alternative reconstruction for the suffix in **-teio-*, a modal derivative from a neutral abstract suffix **-ti-* found in Greek and Sanskrit.

- d. Tocharian B (IOL Toch 9 b4; trsl. Broomhead 1962: 196)
te aikaccepi kleśanma(OBL)
 'That [is the characteristic] of **one who is unable to destroy** kleśas.'
- e. Tocharian B (THT 18 a3; trsl CEToM)
še atākatte waike tne weṣṣän
 'One says an **unfounded** lie here.'

These examples show use of the privative as either passive (27a-b.) or active (27c-d.), depending on the context, so that it may be regarded as yet another contextually oriented participle formation in Tocharian. Example (27e.) contains the privative of an intransitive verb.

The Indo-European verbal adjective in **to-*, from which the privative most likely derives, takes on absolutive orientation in most Indo-European languages, often as a resultative similar to the perfect. It was primarily patient-oriented, contrasting with the actively oriented perfect participle (e.g., Kümmel 2020: 18). It is possible that the original time reference of the Tocharian privative was likewise past, and its orientation absolutive, but this is in any case not the attested situation. Brosman (2010: 26) has argued for residual contextual orientation of *to*-derivatives in Ancient Greek ἄγνωτος, which can mean both active 'ignorant' and passive 'unknown'. Brosman connects the (re)orientation of the **to*-participle as absolutive with the newly active orientation of the *nt*-participle in the non-Anatolian Indo-European languages. Since the *nt*-participle in Tocharian had clearly become an active participle, it is possible that the original pre-Proto-Tocharian **to*-adjective was correspondingly already absolutive, as was its common function in the other non-Anatolian Indo-European languages.

If Tocharian did not share in the development of the *to*-adjective as an absolutely oriented resultative participle-like formation, the contextual orientation of the Tocharian reflex of the **to*-participle could be seen as an archaism. The basis for reconstructing absolutive orientation for this participle in Indo-European is much greater, however, and contextual orientation in Tocharian is in line with the development of other contextually oriented participles, where it is more clearly innovative. As long as Tocharian is not conclusively shown to have split off early based on other arguments, the orientation of the Tocharian formation itself is not a reliable basis for reconstructing the orientation in Proto-Indo-European. The development from absolutive to contextual orientation in Tocharian is schematically illustrated in Table 7.5 below.

Table 7.5: Schematic change in orientation from the Proto-Indo-European *to*-participle to the Proto-Tocharian privative.

Indo-European	Tocharian
absolutive (S/P)	→ contextual (S/A/P)

7.2.6 Summary

Among the *nt*-participle, *m*-participle, preterite participle, the gerundives, and the privative, it turns out that only the *nt*-participle is consistently active in Tocharian. The others all more or less clearly show contextual orientation. The participial system of Tocharian can thus overall be characterized as mixed as regards participle orientation, with a preference for contextual orientation. Only the *nt*-participle has remained true to its Proto-Indo-European orientation, as illustrated in the table below.

Table 7.6: Overview of the development in orientation of the Tocharian participle suffixes.

	PIE		Toch.
*- <i>nt</i>	active (S/A)	=	active (S/A)
*- <i>mh, no</i>	active (S/A)	→	contextual (S/A/P)
*- <i>uōs</i>	active (S/A)	→	contextual (S/A/P)
*- <i>to</i>	absolutive (S/P)	→	contextual (S/A/P)
*- <i>lo</i>	? act. (S/A) or abs. (S/P)	→	contextual (S/A/P)

While many Indo-European languages do not have any such contextually oriented participles, Tocharian is not entirely unique. Some participles in Indic languages like Marathi are also contextually oriented (Shagal 2019: 99), and similar situations are found in Armenian as well with the participles in *-li*, derived from the same Proto-Indo-European source as the Tocharian gerundives (cf. Olsen 1999: 336, 337–338, and 7.2.4). What could be relevant in all these situations is the place where these languages are spoken. Armenian is spoken in the Caucasus, which is known to have many languages with contextually oriented participles in the Nakh-Daghestanian family (Shagal 2019: 1, 100; cf. also Authier 2012: 232 on contextual orientation in the Iranian language Apsheeron Tat, spoken in the Caucasus); and similarly, the Dravidian languages, with which Indic languages have long been in contact, show a preference for contextually oriented participles as well (see Shagal 2019: 1, 98, 100).

Considering that changes in participle orientation are also thought to have occurred due to contact situations in the more western Uralic languages in contact with European Indo-European (Shagal 2018, see also below), these Indo-European languages with

contextually oriented participles that are spoken in areas where the surrounding languages have contextual orientation might be examples of the same kind of development. The prevalence of contextual orientation in Tocharian participles may thus likewise be due to foreign influence.

7.3 Samoyed

We have seen that the Tocharian participial system has innovated in two ways: most participles became contextually oriented, and new necessitative/potential and negative participles were created. To determine whether these changes can be understood from a Tocharian-Samoyed contact hypothesis, we must discuss the Samoyed participial system and its Uralic context. When looking at the Uralic language family in its entirety, the orientation of the participles is varied, with active participles, passive participles, absolutive participles and contextual participles attested in different Uralic languages (Shagal 2018). Within Samoyed, however, the orientation is generally contextual, and as in the other chapters, we will focus on this branch first and foremost. A number of different participles can be reconstructed for Proto-Samoyed, although correspondences in the morphological material between the separate branches show that distinction with other categories like verbal nouns seems to have been fluid (see Shagal 2018).

Discussions of the prehistory of the various participle formations in Samoyed languages can be found scattered in the literature (e.g., Janhunen 1998: 473–474, Mikola 2004: 131, Aikio 2022a: 19), and while a complete and up-to-date overview is lacking, this is not the place to dwell too much on the details. Some general points about the Samoyed participles and their mutual correspondences should be borne in mind, however.

1. Samoyed languages generally share a set of participle types consisting of a present/imperfective, a past/perfective, a necessitative and a negative (also called abessive or caritive) participle that can be reconstructed for Proto-Samoyed. The two extinct Samoyed languages, Mator and Kamas, do not have this full system and Enets lacks the necessitative participle. Nenets and Enets have an additional future participle, which may be an innovation.
2. The suffixes used to form the participles in the various Samoyed languages are not always the same; e.g., the Nganasan imperfective participle suffix *-ntUə* derives from a complex suffix PS **-ntA + -jə*, while the Tundra Nenets counterpart is underived *-n(y)a/-t(y)a* from PS **-ntA*. In some cases, the suffixes do not match at all, such as in the case of the negative participle NeT *-wədawey°* vs. Sk. *-kuíčijl̥*. The former descends from Proto-Uralic **-mAktAmA* (cf. Fi. *-mAtOn*), while the origin of the latter is unknown, as far as I am aware.

3. Various participles have given rise to new finite verb tenses and moods in various Samoyed languages; for example, the Nganasan imperfective aorist suffix *-ntU* derives from the Proto-Samoyed participle **-ntA*, which was replaced in its original function by the aforementioned participle formation with the ending *-ntUə* from PS **-ntA-jə* (on this point, see Janhunen 1998: 471–472).

The wide variety of participle suffixes used in the Samoyed languages hinder the reconstruction of a single, coherent system. Table 7.7 shows participle suffixes found in the Samoyed languages, accompanied by reconstructions to make it clear which suffixes are actually related. The suffixes **-ntA*, **-sA*, **-mə*, **-pA* and **mətAmA* derive from Proto-Uralic participles suffixes **-ntA*, **-ćA*, **-mA*, **-pA* and **-mAktAmA* respectively (see Aikio 2022a: 19).

Table 7.7: Samoyed participle suffixes with (partly mechanical) reconstructions to Proto-Samoyed. Kamas only preserves reflexes of the imperfective participle *-na/ne* from **-ntA* and the perfective participle *-bi* from **-pA-jə*, and is omitted from the table to conserve space. Forest Nenets is in line with Tundra Nenets.

	Ng	EnT	EnF	NeT	Sk.	Mt.
ipfv.	<i>-ntUə</i> <i>*-ntA-jə</i>	<i>-da/-de</i> <i>*-ntA</i>	<i>-da</i> <i>*-ntA</i>	<i>-n(y)a/-t(y)a</i> <i>*-ntA</i>	<i>-(n)tił'</i> <i>*-ntA-jə</i>	<i>-ndA</i> <i>*-ntA</i>
pfv.	<i>-sUəd'əə</i> <i>*-sA-jə-jəjə</i>	<i>-sij</i> <i>*-sA-jə-?</i>	<i>-i</i> <i>*mə-jə</i>	<i>-wi^o, -bey^o</i> <i>*-mə-jə, *-pA-jə</i>	<i>-(m)pił'</i> <i>*-pA-jə</i>	<i>-m(e)</i> <i>*-mə</i>
necess.	<i>-bsUtə</i> <i>*-pso-tə</i>	—	—	<i>-bco</i> <i>*-pso</i>	<i>-(p)sōtił'</i> <i>*-pso-tə-jə</i>	<i>-pso</i> <i>*-pso</i>
neg.	<i>-mətUmAʔA</i> <i>*-mətAmA-j-?</i>	<i>-ɔdaj</i> <i>*-mətAmA-jə</i>	<i>-odaj</i>	<i>-wədawey^o</i> <i>*-mətAmA-jə</i>	<i>-kuńčıl'</i> <i>*???</i>	—

The synchronic behaviour of participles in the individual Samoyed languages is otherwise quite consistent. Participles formed from intransitive verbs are active, while those formed from transitive verbs can usually be either active or passive based on the context. Practically all Samoyed languages agree on this point, as contextually oriented participles are found in all living Samoyed languages, in Nganasan, Nenets, Enets and Selkup (Leisiö 2006: 214), and they existed in Kamas as well (e.g., Klumpp 2022: 832).

The following example sentences from Tundra Nenets have the same type of structure as the Selkup example sentences about the deer and the bear cited as example (3) in subsection (7.1.1). In the first example here, the accusative object of the participle, *ɣənom* ‘boat’, necessitates an active reading. A genitive agent of a passive participle is

expressed in the proper noun *Wera* in the second sentence, and with the plural genitive *pyilyuq* ‘gadflies’ in the third sentence.

28. Tundra Nenets (Nikolaeva 2014: 317 (a–b), 287 (c); glosses adapted)

- a. *ɲəno-m syerta-wi^o xíbya to-^o-Ø*
 boat-ACC do-PFV.PTC who come-AOR-SBC.3SG
 ‘The one who made the boat came.’
- b. *Wera-h temta-wi^o ɲəmke xana-d^o*
 PN-GEN buy-PFV.PTC what take-IMP.SG.OBC.2SG
 ‘Take the thing that Wera has bought.’
- c. *pyilyuq pæ^or-tya ti tæryi pæ^odor-ɲa-Ø*
 gadfly:GEN.PL bother-IPFV.PTC reindeer just shake-AOR-SBC.3SG
 ‘The reindeer bothered by the gadflies is shaking.’

Forest Enets participles are described by Siegl to be “unoriented” as well (Siegl 2013: 330), although the great majority of the example sentences with participles in his description display absolutive orientation; I could not actually identify straightforward examples of active transitive participles.

29. Forest Enets (Siegl 2013: 330, 224; glosses adapted)

- a. *to-i? enči?*
 come-PFV.PTC person
 ‘A person who has arrived.’
- b. *pađu-mi? paður*
 write-PFV.PTC letter
 ‘A written letter.’

The agent can also be marked with a possessive suffix, especially in the northern Samoyed languages. This possessive suffix is attached to the participle in Nganasan and Enets, and to either the noun or the participle in Tundra Nenets.⁹²

⁹² In Selkup this strategy seems to be almost entirely absent. A search for the combination of participle and possessive in the INEL Selkup Corpus turned up only *tantı-sa-nı*, a necessitative participle of *tantı* ‘go out’ with an oblique first-person singular suffix. Apart from that, an example might be seen in *aps̄tıl’ qēljimj tal’ca* ‘the fish that should have been eaten [+by me?], went bad’. That is, if the suffix *-mij* on *qēljı* ‘fish’ is indeed the first-person singular possessive suffix, and indicative of an otherwise invisible first-person agent with the necessitative participle *aps̄tıl’* of *a-* ‘eat’; such an analysis is not apparent from the translation provided by Čeremisina (1991: 46), ‘рыба, которая должна была быть съедена, протухла’, which leaves the suffix *-mij* on *qēljı-mij*

30. Nganasan (Leisiö 2006: 220; glosses adapted)

tenj-ntja-mtä *ɲuʃi* *tande* *śüd'a-mi-nda*
 know-PRS.PTC-POSS.ACC.SG.2SG job:ACC kin:GEN end-VN-LAT
kamiatə-bahu-rə
 keep-RPRT-SG.OBC.2SG

'They say that you will keep up the job that you know until the end of mankind.'

31. Tundra Nenets (Nikolaeva 2014: 290; glosses adapted)

səwa-w^ona *syerta-wi^o* *ɲəno-r^o*
 good-PRO do-PFV.PTC boat-SG.POSS.2SG

'The boat that you made well.'

32. Forest Enets (Khanina & Shluinsky 2023: 844; glosses adapted)

teda? *təj-j-ni?* *sexeri* *me-ən* *kan'e-ni-e?*
 now come-PFV.PTC-POSS.OBL.SG.1DU road in-PRO leave-SBJ-1PL

'Now let's go along the road we came by.'

In Tundra Nenets and in Enets, both the participle and the head noun may also be marked in the same way.

33. Tundra Nenets from Nikolaeva 2014: 315, glosses adapted)

narey^o-h *syerta-we-naq* *ɲəw^orə-naq*
 spring-GEN do-PFV.PTC-PL.POSS.1PL food-PL.POSS.1PL

'The food (pl.) which we prepared in spring.'

34. Forest Enets (Khanina & Shluinsky 2023: 845, glosses adapted)

kada-oda-j? *əburu-j?* *oka* *n'i* *ɲa-?*
 take.away-FUT.PTC-SG.POSS.1SG thing-SG.POSS.1SG many NEG.3SG exist-CNEG

'The things I will take with me are not numerous.'

Kamas participles like the aorist participle in *-na/-ne* originally showed the same contextual orientation as those in the other Samoyed languages, with intransitive

'fish-*m*' unexplained, as far as I can tell. An independent pronominal genitive agent is found in for instance *man qēt-pi'l' qēl'i-m* 'рыбу, которую я ловил : the fish that I caught' (Čeremisina 1991: 46).

examples like *tunona ine* ‘galloping horse’, *küne kuza* ‘man who has died’, passive examples like *tapsəna uja* ‘roasted meat’ and active examples like *seləne pim* ‘my sharpening stone’ (Klumpp 2002: 103; 2016: 196; 2022: 832). The Kamas aorist participle in these examples is the cognate of the imperfective participle in Tundra Nenets (*-n(y)a/-t(y)a*), the present participle in Selkup (*-(n)tɨl*) and the imperfective participle in Nganasan (*-ntUə*).

Klumpp describes how the passive function of this participle was lost in the Kamas of the 20th century. The standard interpretation had become an active one, and the passive meaning could be derived with the addition of the valency decreasing suffix *-Ō* instead: *amor-ōna ine* ‘eaten horse’. Similarly, the past participle in *-bi* was found in the combinations *-Ōbi* (pass.ptc.) and *-Təbi* (act.ptc.), rather than on its own (Klumpp 2002: 82, 85). It is also the basis of the past tense in *-bi*, an example of the finitization process that participles have undergone in many different Samoyed languages (Klumpp 2022: 832).

For Mator, there are not enough participles attested to draw a firm conclusion about their orientation. The five⁹³ certain examples of Mator present participles are intransitive (Helimski 1997: 169–171). Of the past participle, four examples⁹⁴ are based on intransitive verbs, and four⁹⁵ are based on transitive verbs. All four past participles based on transitive verbs have a passive meaning, so that Helimski (1997: 170) also uses the term passive participle. However, since the number of examples is so low, the Mator use of the past participle may in actuality have been more in line with that of the other Samoyed languages. Its orientation is at least absolutive.

The situation in Nganasan is not easily generalized either, partly due to the existence of a dedicated passive participle *-məə*. This is the only participle in the language that is specifically passive. It is mainly used as a resultative, denoting a more permanent characteristic of the object (Leisiö 2006: 222). Usually, this construction lacks an expressed agent, although it can be supplied in the lative case, instead of in the genitive that is usually used to mark the agent of a participle (Leisiö 2006: 222–223).

⁹³ These are *iləndä* ‘lebendig : living’, *gaterında* ‘lucidus : bright’, *kémende* ‘тяжелый : heavy’, *neéngende/néengende* ‘слабый : weak’ and *närməndä, narməndä* ‘rot : red’.

⁹⁴ These are *heelim-soiü* ‘foenum : hay’ lit. ‘dried grass’, *geálma* ‘dried (itr.)’, *kājma* ‘tot : dead’, *соимъ* <soim> ‘родной : native’.

⁹⁵ These are *идымме* <idjimme> ‘бритый : shaven’, *triptima* ‘dried (tr.)’, *gàdaima* ‘убит : killed’, *картымманса* <kartjmapsa> ‘жареное мясо : roasted meat’ (*-apsa* ‘meat’).

35. Nganasan (Wagner-Nagy 2019: 267; glosses adapted).

<i>manakü?</i>	<i>ɲanuə</i>	<i>d'ekə-məə</i>	<i>kuhu</i>
just.now	real	cut-PASS.PTC	skin
'A freshly skinned pelt.'			

The Nganasan passive participle in *-məə* (PS **-mājə*) is the direct cognate of the Tundra Nenets perfective participle in *-wi*^o and the Forest Enets perfective participle in *-i*, which were illustrated exhibiting contextual orientation in example sentences (28a–b.) and (29a–b) respectively. The distinctly passive, resultative function in Nganasan may be a secondary specialization of the perfective participle, stemming from the relationship between perfective aspect and resultativity.⁹⁶

An additional participle or participle-like formation in Nganasan is called the iterative participle by Wagner-Nagy, and it is formed with the suffix *-KUTə*. Helimski (1998: 510) uses the term *nomen amatoris* instead, indicating a more nominal analysis. Cognates of this formation is also found in Tundra Nenets *-xad*^o, Enets *-kad* inclinative adjectives like NeT *pyisy^oɲkad^o* 'prone to laugh; merry person', EnF *pišigad* 'funny; merry person', NeT *yar^oxad^o* 'crybaby', EnF *d'aruxad* 'crybaby; whining, piteous', *yabyexad^o* 'drunkard; constantly drunk', EnF *d'ebixad* 'drunkard'. Mator *-kAt/-gAt* is characterized by Helimski as an agent noun formation that can also form adjectives, e.g., *täl(ə)gät* 'thief', *bisingät* 'mocker', *bälimgät* 'annoyed, angry'. This Samoyed suffix has recently been connected by Aikio with a Saami adjective suffix PSaa. **-kkēs*, which also creates inclinative adjectives, such as SaaN *boagustahkes* 'prone to laugh', *suoládahkes* 'thievish' (Aikio 2022b). The Nganasan example in (36) shows that at least in that language, this formation can take an accusative object, displaying a verbal argument structure in the same way as a participle.

36. Nganasan (Wagner-Nagy 2019: 516–517; glosses adapted)

<i>tə</i>	<i>ɲuʔəj-küə-j</i>	<i>śelu-j</i>	<i>təbtə</i>	<i>təʔ</i>
well	one-EMPH-ACC.PL	naked.horn.reindeer-ACC.PL	also	you.know
<i>kota-gutə</i>	<i>i-kə-bambu-ɲ</i>			
hunt-ITER.PTC	be-ITER-RPRT-SBC.2SG			

'They say that you like to hunt reindeer with naked horns.'

The remaining participles in Nganasan, when formed to transitive verbs, can be either active or passive, like in the other Samoyed languages. An agent in the genitive often signals passive use and an object in the accusative necessitates an active interpretation,

⁹⁶ This is further implied by Ng. *kondü?məə* 'murderer, assassin; band leader; rascal', cited by Aikio (2006a: 15), derived with *-məə* from the verb *kondüs-* 'murder, assassinate'.

again similar to what we have seen in the Selkup, Nenets and Enets examples above. However, as Leisiö explains, many Nganasan nouns do not have separate nominative, genitive and accusative case forms, so that ambiguities may still arise (Leisiö 2006: 220).

The general picture of the Samoyed participles is that the participial forms of transitive verbs tend to have a passive meaning unless the object is expressed in the accusative. It is easier to find examples of the past participle being used passively, and of the active participle used actively, but this merely reflects a tendency (see, e.g., Helimski 1983: 45 on this phenomenon in Selkup). This is furthermore in line with observations made by Haspelmath on the nature asymmetric participial systems, where commonly active present participles are opposed to past passive participles, without corresponding active past and passive present participles (Haspelmath 1994: 155–157).

When a participle is used passively, the agent may be expressed in the genitive, and in a few cases also in the lative, which is the case used to express an instrumental in many Samoyed languages. In the northern Samoyed languages, if the agent can be represented by a pronoun, it may be expressed in the form of a possessive suffix on either the participle itself or on the head noun, or both, depending on the language and some internal variation (see Pakendorf 2012).

7.3.1 Uralic and areal context

Contextually oriented participles are quite widely attested in other Uralic languages as well, as they are known from Mansi, Khanty, Hungarian, Permic and Kildin Saami (Leisiö 2006: 214, with further references). Shagal (2018) has done a typological study of Uralic participles, and she shows that in the easternmost Uralic languages contextually oriented participles characterize the entire participial system, while some of the westernmost Uralic languages have predominantly inherently oriented participles (Shagal 2018: 75–76).

The contextually oriented participles of eastern Uralic languages align with the general trend in northern Asia, and may be regarded as one of the areal features of Siberia (Shagal 2018: 60; 71–72, 2023: 962–971; Pakendorf 2012). The Finnish type of participial system, with active and passive participles, aligns closely with Russian and Lithuanian (Shagal 2018: 69–71). The areal distribution of the types of participle orientation found in the Uralic languages suggests that this feature can be transmitted by contact, even if the etymological sources of the participles are inherited (Shagal 2018: 80).

Aside from Uralic, contextually oriented participles are common in other language families of Siberia as well. Pakendorf (2012) and Shagal (2018) list Samoyed, Ob-Ugric, Turkic, Mongolic, Tungusic and Yeniseian languages as making wide-spread use of this type of participle (cf. also Lehmann 1984: 52–55 on this type of participle in general and in Turkic). The feature clearly transcends the boundaries of language families in this part of the world.

The encoding of participial agents as possessors is found not only in the Samoyed languages, but more widely in other Uralic languages like Finnic, Mordvin, Saami and Mari as well. The position of the possessive suffix differs, however, as within Samoyed: in Finnish, for instance, the participle itself is marked, not the head noun that it modifies (Shagal 2018: 61).

General trends of the participial systems of Uralic languages are thus a predominance of contextual orientation in the east and more inherent orientation in the west, and a use of the genitive to mark the agent. The details of the implementation of these features correlate with the surrounding languages and language families. The Samoyed participial system furthermore has a four-way distinction between an imperfective or present participle, a perfective or past participle, a necessitative participle, and a negative participle.

7.4 Conclusions on the participial systems

In pre-Proto-Tocharian, a change occurred in the participial system. In the Proto-Indo-European ancestral to Tocharian (i.e., without Anatolian) there was a participial system that consisted of mostly actively oriented participles (*-nt-, *-mh_{no}-, *-uos). The differentiation of the active participle in *-nt- and the middle voice participle in *-mh_{no}- came down to the morphological specifications of the verb. There were also deverbal participle-like formations in *-to-, which were likely absolutive in their orientation. The deverbal adjectives in *-lo- may have been active, but it is difficult to be certain, and they could potentially have been more flexible as well.

In Tocharian, this system was transformed. The only participle that retained its original active orientation is the active participle in PIE *-nt-. This formation may have started to shift its function to that of an agent noun in Proto-Tocharian, and it does not agree in gender with the head noun in those cases where it still functions attributively. The actively oriented middle voice participle *-mh_{no}- lost its connection to the middle voice, and became a present participle with contextual orientation. It furthermore became widely used as a converb as well.

The preterite participle is arguably the most versatile participle formation in Tocharian, and it is very clearly contextually oriented. This is an innovation compared to its origin as an active perfect participle in PIE *-uōs. The verbal adjective in *-lo-, or rather its derivation *-l̥o-, has expanded its function in Tocharian as well in the form of the gerundive suffix. The present and subjunctive gerundive are both more or less clearly contextually oriented. The final participle-like formation in Tocharian is the privative, which may be described as a negative participle. It has a contextual orientation, and derives from the Proto-Indo-European *-to-adjective with probable absolutive orientation.

The bulk of the participles of Tocharian have thus undergone a development in terms of their orientation, with a majority becoming contextually oriented. This constitutes a marked change, an almost complete shift in the character of the participial system. In Samoyed, as in early Uralic in general, the participial system has probably always been characterized by a preference for contextual oriented participles, so that pre-Proto-Samoyed is a prime candidate to have influenced the orientation of participles in pre-Proto-Tocharian.

Table 7.8: Overview of the development of the orientation of participles in Tocharian in comparison to Proto-Samoyed.

	PIE		Toch.	PS
*-nt-	active	=	active	? cf. act.iter.ptc. *-kAtə / agn. *-jA
*-mh,no-	active	→	contextual	cf. contextual prs.ptc. *-ntA
*-uōs	active	→	contextual	cf. contextual pst.ptc. *-pAjə / *-mājə
*-to-	absolutive	→	contextual	cf. contextual neg.ptc. *-mätAmA
*-lo-	? act./abs.	→	contextual	cf. contextual necess.ptc. *-psO

Having described the situation, we must ask if the Tocharian innovations can be understood through the lens of substrate influence from Samoyed. In the original pre-Tocharian situation, it can be assumed that the active and middle voice participle carried out their respective functions as expected from the Indo-European point of view. At some point, they became separate from the active and middle voice of the finite verbs, and could be formed to both as an actively oriented and a general present participle respectively. Aside from the active participle in *-nt, all participles became contextually oriented, like in Samoyed.

The types of participles that exist in the Tocharian system also correspond quite well to the Samoyed system. In Samoyed, there is a general contrast between a present or imperfective participle, a past or perfective participle, a necessitative or future participle, and a negative participle. If the two Tocharian gerundives expressing necessity and possibility, both formed with the same suffix, are considered together, a similar set of participles is obtained in Tocharian. Only the Tocharian active participle has no obvious participial counterpart in Samoyed, although the inclinative adjective or iterative participle in PS *-kAtə may have fulfilled a similar role. Perhaps the agent noun in PS *-jə (e.g., Ng. *toljə* ‘thief’ < PS **tālā-jə* lit. ‘stealer’, PU **sala-ja*) could also be considered here, as the same suffix is found in participles elsewhere in Uralic. Both Tocharian and Samoyed also agree in marking agents of passively used participles in the genitive case.

In conclusion, the Tocharian participial system shows a good deal of isomorphism with the Samoyed system, while deviating from the Proto-Indo-European situation.

Other languages of the wider central and north Asian area show a broadly similar participial profile, however, so that specific convergence to Samoyed cannot be conclusively established. Especially the known later contact with Turkic languages could also have led Tocharian on the path toward contextually oriented participles. That contact may have been too late to affect Tocharian A and B in the same way, however, so that an earlier point of contact with another language group than Turkic may be preferable. Yeniseian and Yukaghir also possess contextually oriented participles, but no other clear traces of substrate influence from these languages in pre-Proto-Tocharian have yet been identified. Further comparison the early participial systems of the other Siberian language families may more accurately determine the specificity of the comparison between the Tocharian and Samoyed participial systems discussed in this chapter.

Even if the specifically Samoyed or Uralic connection remains uncertain, the high degree of contextual orientation found in the participles connects Tocharian to the Siberian linguistic area, lending further credence to the hypothesis that the Tocharians took a route through southern Siberia to end up in the Tarim Basin. While it cannot be conclusively established whether it was contact with a Uralic speaking group like the early Samoyeds that caused the changes observed in the Tocharian participial system, this aspect of the grammar may be added to the list of possible traces of influence from such a source.