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THE DENE-KUSUNDA HYPOTHESIS: A CRITICAL ACCOUNT[1]

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The Dene-Yenisseian hypothesis (Vajda 2010a, 2013) linking the Yenisseian languages and the Na-Dene languages has gained some attention as the first substantial proposal of a linguistic connection across the Bering Strait. At the same time, morphological material has been interpreted as indicating a genealogical relationship between Yenisseian, Burushaski and Kusunda (van Driem 2001, 2008, 2014). The two hypotheses have been linked under the name 'Dene-Yenisseian' by van Driem (2014: 80) but I hereby introduce the term 'Dene-Kusunda' to designate the hypothesis of a genealogical relationship between Kusunda, Burushaski, Yenisseian and Na-Dene. This paper aims to review the Dene-Kusunda hypothesis by presenting a critical evaluation of the morphological data amassed as evidence in van Driem (2001, 2008, 2014), Vajda (2010a, 2013) and Gerber (2013). The argumentation in favour of Dene-Kusunda looks promising at first sight, but much of it can be explained by chance or selective analysis. A more definite evaluation of this proposal must await more studious work on the individual languages, but it is in fact likely that the putative time depth inhibits an ultimate verification or falsification.

Introduction

The time depth reachable with the methods of historical linguistics is restricted to some millennia, thus being only a pale reflection of the time depth reached by archaeology and population genetics. Beyond this point of time, no reliable statements can be made with regard to genealogical linguistic affiliation, since the crucial differentiation between chance similarities, borrowings and genealogically inherited material is no longer possible.

Despite this widely accepted fact, many linguists over time have tried to push the linguistic horizon further back, either by relating reconstructed proto-languages to each other or by appending language isolates like Basque (cf. Forni 2013) or Japanese (cf. S. A. Starostin 1991; Robbeets 2005, this volume) to established language families. However, the thriving interest in unravelling more of the linguistic prehistory of mankind is lamentably not matched by an equally elaborated and cogent methodology. Rather, it is often the case that superficial lexical or phonological similarities are viewed as sufficient evidence for a proposed genealogical relationship, and most proposals of so called macrofamilies or superstocks do not stand a critical review with the principles established in the prevailing comparative method (cf. Campbell/Poser 2008: 296).

The time depth assumed by proposals of macrofamilies is an even more serious issue than the methodological shortcomings. Most of these proposals presuppose a time depth which is quite a bit beyond the linguistic horizon reachable by the conventional historical-comparative methods and, thus, accessible to linguistic science. Anything beyond this point cannot be proven or falsified, and consequently belongs to the realm of speculation. In this respect, it

is irrelevant whether the respective proposals try to relate proto-languages or language isolates to each other, both endeavours are equally speculative and prone to errors.

The aim of this paper is to critically evaluate the Dene-Kusunda hypothesis, which, too, involves a great time depth, but can be seen as more convincing due to its more studious and rigorous methodological approach and the use of morphological evidence. This hypothesis claims a genealogical relationship between the two language isolates Burushaski and Kusunda and the two language families Yenisseian and Na-Dene, i.e. the Athabaskan languages plus Eyak and Tlingit.

The paper consists of four parts. An introductory part presents the languages involved in the Dene-Kusunda hypothesis and shortly discusses the hypothesis itself. The second part discusses the aspects of Dene-Kusunda verbal morphology that are treated as evidence for a genealogical relationship by van Driem and Vajda and provides a critical assessment of each aspect. This section also presents additional correspondences not observed by either Vajda or van Driem. The third part adds some notes on similarities in the nominal morphology and the lexicon. The fourth part summarises the evidence for Dene-Kusunda and discusses the shortcomings of the hypothesis.

The Dene-Kusunda hypothesis

Burushaski is the language of the Burusho people living in the high alpine valleys of the Hunza and Yasin rivers in the Karakorum in northern Pakistan. Three main dialects can be distinguished, the Hunza and Nagar dialects in the Hunza valley and the somewhat different Yasin dialect in the Yasin valley (cf. Berger 1998a: 3; Berger 1974: 1). Burushaski is nowadays spoken by at most 100,000 people, even though a gradual loss of fluid command among the speakers of younger generations, especially in the domain of the complex verbal morphology, is observable due to the increasing influence of the national language Urdu and of English (cf. Berger 1998a: 3–4; Berger 1992).

The Kusunda are an ethnic minority living in central and midwestern Nepal, where they lived as semi-nomadic hunter-gatherers until recent times. However, as a result of forced intermarriage with other ethnic groups, their number has dwindled and their language is moribund (cf. Watters 2006: 9). Kusunda is a language isolate with no proven genealogical affiliation to any other language stock (cf. van Driem 2001: 258; Watters 2006: 20).

The Yenisseian[2] language family spoken along the Yenisei (Енисей) river in central Siberia consists of the six languages Ket, Yugh, Kott, Assan, Arin and Pumpokol, four of which went extinct during the eighteenth and nineteenth century (Kott, Assan, Arin and Pumpokol), while Yugh survived until 1991 when the last fluent speaker died, leaving Ket as the only surviving Yenisseian language (cf. Vajda 2004: 1). However, even Ket is only spoken by about 200

older speakers, pointing towards a soon extinction of the language (cf. Vajda 2009: 474–479).[3]

The Na-Dene phylum consist of the Athabaskan languages, Eyak and Tlingit, which form three independent but clearly related linguistic units.[4] The Athabaskan language family is the biggest language family of Northern America, both with regard to the amount of languages and speakers as well as to the territory covered by the speech communities, ranging from Alaska to California and the Southwest of the United States (cf. Mithun 1999: 347). The Athabaskan language family can be subgrouped into three main branches, namely Northern Athabaskan, Pacific Coast Athabaskan and Apachean (cf. Mithun 1999: 346; Campbell 1997: 111; Cook/Rice 1989: 2). The demographic profile of numerous languages in every branch leaves no doubt about the soon extinction of these languages.

Eyak is a recently extinct language which was spoken on the south coast of Alaska around the Copper River (cf. Mithun 1999: 359; Campbell 1997: 110). Tlingit is a language spoken by around 500 people in southeastern Alaska (cf. Mithun 1999: 360). The relatedness between Eyak, Tlingit and Athabaskan is considered evident by experts, whereby Eyak and Tlingit do not show a closer affinity to any of the Athabaskan subgroups. They must thus be classified as sister languages to the linguistic ancestor of all Athabaskan languages (cf. Krauss 1965a: 185).

All the linguistic groups involved in the Dene-Kusunda hypothesis have already been associated with other language families in proposals of distant genealogical relationship, e.g. Burushaski with the Caucasian languages by Bouda (1954, 1964) or Bengtson (1992a, 1992b, 1997), or Kusunda with the Indo-Pacific macro-stock (Whitehouse *et al.* 2004), which cannot stand up to critical review. The Dene-Kusunda hypothesis itself ressembles the Dene-Caucasian hypothesis, which claims a genealogical relationship between Sino-Tibetan[5], Na-Dene, Yenisseian, North Caucasian and Burushaski, *inter alia* (cf. S. A. Starostin 1984; Nikolaev 1991). The differences between the Dene-Kusunda and Dene-Caucasian hypotheses mainly lie in the different methodology and in the treatment of the detected similarities. The proponents of Dene-Caucasian stand in a long tradition of long-range comparisons which are defined by an unsatisfactory methodology of superficial lexical inspection.

The Dene-Kusunda hypothesis, majorly the work of Vajda on Dene-Yenisseian, in contrast, is characterised by a methodology which conforms to the principles of historical-comparative linguistics by carefully assessing the similarities detected and by accepting only similarities which evince systematic sound correspondences as possible cognates.

The Dene-Kusunda hypothesis presented in this paper can be viewed as a combination of the work of Vajda (2010a, 2013) and of van Driem (2001: 1198–1206, 2008, 2014). They both tried to relate one member of the Dene-Kusunda

hypothesis to another, namely Burushaski to Yenisseian in the case of van Driem, and Yenisseian to Na-Dene in the case of Vajda. Van Driem (2001) explicitly bases his work on earlier accounts of Hyde Clark (1870) and Toporov (1969, 1971). Toporov provided an extensive list of typological similarities between Burushaski and Yenisseian, but only little material correspondences. Van Driem (2001: 1200) presents some material similarities in the domain of the agreement systems. He named his proposal 'Karasuk theory' (van Driem 2001: 1186), mainly because of his identification of the linguistic ancestors of Burushaski and Yenisseian with the bearers of the archaeological Karasuk culture. He later rejected this identification (van Driem 2008), but adhered to his linguistic proposal, calling it 'Greater Yenisseian', and in 2014, included Kusunda into his proposal (van Driem 2014: 80).

In the meantime, a paper by Edward Vajda, a sedulous scholar on various topics in Ket and Yenisseian linguistics, had appeared, in which he argues for a genealogical link between Yenisseian and the Na-Dene languages (Vajda 2010a). In analogy to the development of the idea of an Indo-European language family, Vajda (2010b: 104–106) does not regard himself as the discoverer of the Dene-Yenisseian link, but as a linguist who provides evidence and confirms the claims made by previous proponents of a Dene-Yenisseian link, namely Trombetti (1923), Nikolaev (1991) or Ruhlen (1998). His proposal was briefly reviewed by Rice (2011) and Dunn (2012), among others, and has been accepted by some linguists, including Comrie (2010), Nichols (2010) and Hamp (2010).

Vajda's evidence for Dene-Yenisseian is more extensive than the one of van Driem for Burushaski-Yenisseian, and the argumentation of Vajda contradicts the one of van Driem in some points, making the two proposals concurring theories rather than two facets of the same theory. Nevertheless, van Driem (2014: 80) merged the argumentation of Vajda with his hypothesis and named the resulting family 'Dene-Yenisseian', a somewhat misleading designation, given the very similar name with identical pronunciation commonly used for the proposal of Vajda, namely 'Dene-Yeniseian'[6]. Therefore, I hereby introduce the designation 'Dene-Kusunda' to refer to the hypothetical relationship of Na-Dene, Yenisseian, Burushaski and Kusunda, and the proposal of Vajda will be referred to as 'Dene-Yenisseian'. I would like to strongly emphasise right from the beginning that 'Dene-Kusunda' designates the *hypothesis* of a linguistic relationship and *not* a linguistic relationship itself, and that my use of the term in this paper is denominating, not advocating.

Although Vajda's work focuses on Yenisseian and Na-Dene, he has stated in different publications (e.g. Vajda 2010b: 113–115) that the two language groups may form part of a larger subgroup including other languages of Eurasia, thus implicitly remaining open to the idea of an inclusion of languages such as Burushaski or Kusunda.

This paper represents the extended and revised version of Gerber (2013).

Besides presenting the evidence for Dene-Kusunda, the paper is mainly meant to represent a critical review of the Dene-Kusunda hypothesis, concluding that much of the evidence is problematic, and rejecting a rash endorsement of the proposal. Other critical reviews have been brought forth by Campbell (2011) and G. Starostin (2012) on the proposal of Vajda (2010a) and by Bielmeier (2003) on the Karasuk theory of van Driem (2001).

In addition to the unconvincing nature of large parts of the evidence, the great time depth that must be assumed for Dene-Yenisseian or Dene-Kusunda poses a serious theoretical problem, since it makes a precise assessment of the presented evidence impossible. As a consequence, I will argue in the last section for a preliminary rejection of the hypothesis and for more research on the individual languages.

Comparison of the verbal morphology

In this section, the verbal morphologies of Burushaski, Kusunda, Yenisseian and Na-Dene are compared. The verb shows the most elaborated and intriguing morphology in all these languages, thus it might be most promising to look here for vestiges of relatedness, since lexical evidence probably have become scarce at the time depth required for Dene-Kusunda (cf. van Driem 2001: 1198).

Shared morphological features between two languages, especially in the form of shared aberrancy, constitutes strong evidence for genealogical relationship (cf. Meillet 1925: 22–29) and may be sufficient to assume that the languages are related to each other (cf. Campbell/Poser 2008: 184, 222–223).

The following comparative description will be concentrated on five aspects, namely the overall verb structure, the agreement patterning, the tense/aspect-system, the shape prefixes and the valence-changing morphemes of Na-Dene known as classifiers.

Verb template and position classes

All Dene-Kusunda languages exhibit a highly complex verb structure with a number of slots, which are filled individually or dependent on the occurrence of other morphemes in other slots. The verb templates of Yenisseian and Na-Dene are most similar to each other, whereas both Burushaski and Kusunda exhibit likewise complex, but somewhat divergent templates. In this section, I will first give an account of the verb templates of Yenisseian and Na-Dene and the similarities between them, before moving on to show that the verb templates of Burushaski and Kusunda, although nowadays divergent from those of Yenisseian and Na-Dene, probably had a more akin structure in earlier stages.

Ket

The Ket verb displays a high formal complexity, but is not rich in inflectional categories, exhibiting only three obligatory grammatical categories, namely

tense, mood and subject/object coordination (cf. Vajda 2001: 373, 2004: 44). The Ket verb agrees with the subject of an intransitive verb and with both the subject and object of a transitive verb in person, number and, in the third person, in nominal class, namely animated masculine, animated feminine and inanimated (cf. Werner 1997b: 183, 187, 190–193). Examples (1) and (2) (Vajda 2004: 49–50) show class specific agreement marking on the subject of a intransitive verb, whereas examples (3) and (4) (Vajda 2004: 50) show class specific agreement marking on the object of a transitive verb.

(1) *duno*
du=in-qo
3.M.SUBJ=PERF-die
'He died.'

(2) *dəno*
də=in-qo
3.F.SUBJ=PERF-die
'She died.'

(3) *dontet*
di=o-in-tet
1.SUBJ=3.M.OBJ-PERF-hit
'I hit him.'

(4) *dbintet*
di=b-in-tet
1.SUBJ=3.N.OBJ-PERF-hit
'I hit it.'

The complexity of the Ket verb is caused by a high degree of morphophonological alternations and allomorphy in the agreement patterning, evident from the fact that the subject and object markers occupy more than half the positions in the model of Vajda (2001: 372, 375) and are divided by Werner (1997b: 149–153) into nine different series depending on the phonetic properties, the functional characteristics and the position of the agreement affixes in the affix string of the verb.

Table 1: Ket verb template, based on Vajda (2001)

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
AGREE	INCORP	AGREE	DET	THEM, AGREE	AGREE	TAM	AGREE, STAT	R	AGREE

Vajda (2001: 371–372) uses a model of position classes for his description of the Ket verb, in which two or more morphemes that occupy contiguous slots but can only appear in conjunction with each other are assigned to the same position class (cf. table 1), whereas other models such as that of Werner (1997b) assign an own slot to every consequent morpheme in the verb string.

The position class model of Vajda (2001, 2004) exhibits 10 positions, six of which (positions 8, 6, 4, 3, 1 and -1) are used to express subject/object coordination (cf. Vajda 2001: 372). Position 7 contains the incorporated elements, and position 5 is occupied by the determiner (cf. Vajda 2001: 372). These two positions, together with the stem in position 0, are the purely lexical components of the Ket verb. However, the determiners in position 5 often have no identifiable separate meaning (cf. Vajda 2001: 372; Werner 1997b: 64–67), and the elements in position 7 are, while being the morphemes with the most discrete meaning, usually incorporated elements (cf. Vajda 2001: 372). The stem in position 0, on the other hand, is structurally present in all verb forms, but it may also lack discrete meaning and resembles a derivational element due to its polysemantic character (cf. Vajda 2001: 372).

The remaining positions (4, 2 and 1) are occupied by the thematic durative affix <a-> in position 4, the two tense/aspect/mood-markers <in-> and <il-> in position 2, shown in examples (5) and (6) (Vajda 2004: 46), and the stative resultative affix <a-> for first and second person in position 1 (cf. Vajda 2001: 372–374).

(5) *kovini*
ku=o-b-in-i
2.SUBJ=THEM-3.N.OBJ-PERF-sharpen
'You sharpened it.'

(6) *kovildon*
ku=o-b-il-do-n
2.SUBJ=THEM-3.N.OBJ-IMPRF-clip-ANIM.PL
'You (pl) clipped it.'

Kott

The Kott verb looks intriguingly similar to the Ket verb, and there is no doubt about the relatedness and common origin of the two verb templates. The only significant differences in the organisation of the verbal morphology lies in the domain of agreement marking.

The reconstruction of a Proto-Yenisseian verb structure reveals that much of the intricate agreement patterning accounting for many of the Ket and Kott verb slots, especially the slots further away from the verb root, can be analysed as secondary developments (cf. Vajda 2008). The Proto-Yenisseian verb, shown in table 2 (Vajda 2010a: 37), exhibits agreement only with a first or second person subject. The overall number of prefix positions can be boiled down to only four slots.

Athabaskan

The verb in the Athabaskan languages as well as in Eyak and Tlingit is the most fundamental word class and a single verb form may convey all the necessary information of a clause (cf. Young/Morgan 1980: 102).

The Athabaskan-Eyak-Tlingit verb agrees with subject and object in person and number. An elaborated system of aspect and mode accounts for much of the richness and complexity of the verb. Aspect and mode are expressed by prefixes, by different stem forms and by conjugation pattern (cf. Rice 1989: 434; Young/Morgan 1980: 103, 326–327; Krauss 1965a: 171). The different aspectual and modal verb stems actually derive from the verb root and suffixes which have been phonologically merged with the verb root to some extent.

The verb template of Na-Dene languages also exhibits positions for incorporation, adverbial modifiers and unproductive, semantically opaque thematic prefixes, which are bound to the verb stem. A crucial class of prefixes is the set of classifiers, which immediately precede the stem as valence changing morphemes, but often also constitute semantically empty, obligatory stem extensions (cf. Krauss 1965b; Krauss 1969; Cook/Rice 1989: 29–30).[7]

Table 2: Proto-Yenisseian verb template (cf. Vajda 2010a: 37)

	P4	P3	P2	P1	P0
ADV, OBJ	DET	ANIM/INANIM	TAM	SUBJ, PERF/STAT	STEM

The prefixes added to the verb stem are divided into two subgroups, which are conventionally called *conjunct* and *disjunct*. The conjunct prefixes are those which primarily express inflectional information and are morphosyntactically and phonologically bound more closely to the stem, exhibiting only a small number of phonemes. The disjunct prefixes are those morphosyntactically and phonologically less closely bound to the stem (cf. Cook/Rice 1989: 16; Young/Morgan 1980: 100; Rice 1989: 433).

Tables 3 and 4 illustrate the verb templates of Athabaskan languages, namely of Navajo (Apachean) and Slave (Northern Athabaskan), as analysed by Young/Morgan (1980: 107) and Rice (1989: 425), respectively. The Navajo verb in the analysis of Young (2000: 18–26) and Young/Morgan (1980: 107) exhibits eleven positions. The Slave verb is analysed by Rice (1989: 425) as exhibiting 16 prefix slots, but in table 4, the Slave verb is represented with a reduced number of 13 prefix slots.[8] The genealogical relatedness of these two verb templates as well as of the concrete morphological material is obvious, especially in the conjunct zone. The classifiers in both languages are immediately followed by the subject markers and by a tremendous number of thematic, derivational or aspectual-modal prefixes (cf. e.g. Young/Morgan 1980: 107), preceding the separated object marking position.

Comparison within Athabaskan shows that the conjunct prefix slots constitute the inherited material of Athabaskan verbal morphology, whereas much of the complexity and richness of the disjunct zone of nowadays daughter languages like Navajo or Slave is due to secondary innovation. The generalised Athabaskan verb complex, shown in table 5 as worked out by Vajda (2010a: 38) in collaboration with Athabaskan scholars Michael Krauss, Jeffry Leer and James Kari, exhibits only a restricted number of prefix positions.

Eyak

The Eyak verb, following Krauss (1965a: 171), consists of 9 prefix positions and four suffix positions, as depicted in table 6. The structure of the Eyak verb parallels in most parts the Athabaskan template, for example in the position of the classifier and the subject agreement prefixes, both closely bound to the stem.

The morphological complexity of the Eyak verb and especially the variety of mode-aspect affixes in positions 2, 6, 8, -2 and -3 (cf. Krauss 1965a: 175–181) can be illustrated in example (7) in which the number of positions filled

Table 3: Navajo verb positions, based on Young (2000: 18–26) and Young/Morgan (1980: 107)

disjunct					**conjunct**					
P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
PP.OBJ, POSS, REFL, RECP	DER	ITER	DIST.PL	DIR.OBJ	3.SUBJ	THEM, ADV	TAM	SUBJ	CLASS	STEM

Table 4: Slave verb positions, based on Rice (1989: 425)

disjunct								conjunct						
P0	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
ADV, PP.INCORP + PP.OBJ	ASP, ADV, THEM	DIST	CSTM	INCORP	NUM	OBJ	DEIC	THEM, ASP, DER	THEM	TAM	1/2.SUBJ	CLASS	STEM

Table 5: Generalised Athabaskan verb positions (cf. Vajda 2010a: 38)

	P6	P5	P4	P3	P2	P1	P0
DER, THEM	OBJ, DEIC	QUAL	TAM	1/2.SUBJ	PERF/STAT	CLASS	STEM (ROOT + TAM)

approaches the maximum (cf. Krauss 1965a: 183).

(7) *dik' ləχiqəqiˑdəxsɬχaˀχĩš'gɬG*
dik' ləχi-qə-qiˑdə-Ø-xʷ-s-ɬ
NEG 2PL.OBJ-PL-DER-NEG.ACT.PERF-1SG.SUBJ-PERF-CLASS
-χaˀχĩš'-g-ɬ-G
-tickle-REPT-PERF-NEG
'I did not tickle your feet.'

Tlingit

The Tlingit verb shown in table 7 exhibits 8 prefix slots. Unlike the Athabaskan and like the Eyak verb, the Tlingit verb shows an elaborated set of suffixes (cf. Leer 1991: 91). The verb root is immediately preceded by the classifiers, which are cognate to, but formally more complex than the Athabaskan and Eyak classifiers. As in Athabaskan and Eyak, the subject markers are close to the root and adjacent to the classifiers. Interestingly, verb stem formation morphology is more readily segmentable in Tlingit than in Athabaskan or Eyak, where the verb roots have been merged with the aspectual suffixes. The suffix categories building up the verb stem of Tlingit are the derivational suffixes in position -1, the durative suffixes in position -2 and the so-called 'inner' modal suffixes in position -3 (cf. Leer 1991: 150–154).

In their oldest morphological layer, the verb of Athabaskan, Eyak and Tlingit show evident similarities, e.g. verb stem formation based on the amalgamation of a verb root and tense/aspect/mode suffixes, and the closest prefix slots containing the classifiers, subject markers, basic tense/aspect prefixes and the qualifiers. Vajda (2010a: 39–40) views the striking typological parallels between the verb templates of Na-Dene and Yenisseian as constitutive for a genealogical affiliation of the two families, presenting material similarities that he believes to reflect inheritance from a common ancestor rather than the result of chance or borrowing. These proposed cognacies will be presented in the following sections. The rest of this section will be devoted to a presentation of the verb templates of Burushaski and Kusunda and a comparison of these templates with the structures established for Yenisseian and Na-Dene so far.

Table 6: Eyak verb positions (cf. Krauss 1965a: 171)

P1	P2	P3	P4	P5	P6	P7	P8	P9		P-1	P-2	P-3	P-4
AGREE, THEM	TAM	THEM	NUM	DER, THEM	TAM	SUBJ	TAM	CLASS	STEM	DER	DER, TAM	NEG	AGREE

Table 7: Tlingit verb positions (cf. Leer 1991: 91)

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1	P-2	P-3	P-4	P-5
ADJP, THEM	NUM	OBJ, INCORP	INCORP	TAM, POL	DIST	SUBJ	CLASS	ROOT	DER	DUR	MOD	MOD, AUX	MOD

Burushaski

Based on the relevant literature, e.g. Lorimer (1935), Tiffou/Pesot (1989), Berger (1998a), Berger (1974), or Anderson/Eggert (2001), the Burushaski verb is represented in table 8 as exhibiting four prefix slots (P4-P1), three inner suffix slots (P-3–P-5) and two outer suffix slots (P-6–P-7). Three position in the positional centre form the stem of the Burushaski verb (P0–P-2).

The base of any Burushaski verb is its root (P0), being the underlying lexical entry without any affix (cf. Berger 1998a: 126–128). The verb stem consists of the verb root and, optionally, the plural suffix <-ya>, which occurs with a handful of verbs (cf. Berger 1998a: 130).

Another morpheme in the verb stem is the aspect suffix <-ć>, with morphophonologically conditioned allomorphs <-ç> and <-y>, which is called 'Präsensmarker' by Berger (1998a: 130) and 'durative affix' by Anderson/Eggert (2001: 235). The occurrence or absence of this aspect marker divides the Burushaski tense system into two major classes of tenses/aspects, as shown in examples (8) and (9) (Berger 1998a: 150–151).

(8) *éta báa*
e-t-a ba-a
3SG.HMXY.OBJ-do-LV AUX-1SG.SUBJ
'I have done it.'

(9) *éća báa*
e-t-ć-a ba-a
3SG.HMXY.OBJ-do-DUR-LV AUX-1SG.SUBJ
'I'm doing it.'

The prefix slots probably reflect the oldest positions of the Burushaski verb, since they mainly include old material, that is either material expressing central notions of Burushaski verbal morphology, or partially non-transparent and frozen material, i.e. the negation marker <a-́> in position 4, the temporal subordinating prefix <n-> in position 3 (cf. Berger 1998a: 143, 165), the valence changing morphemes <d(V)- ~ t(V)-> and <s-> in positions 3 and 1 and the agreement prefixes, called 'Pronominalpräfixe' by Berger (1998a: 44, 90), in position 2, which operate both on nouns and verbs as possessive and agreement markers, respectively, and also function as a valence changing device on some verbs (cf. Berger 1998a: 111–125). Both the negative prefix and the n-prefix trigger a synchronically inexplicable voicing mutation on following voiced obstruents (Berger 1998a: 106, 109; Holst 2014: 28), The d- and s-prefixes as

Table 8: Burushaski verb positions (cf. Berger 1998a: 104)

prefixes				stem			inner suffixes			outer suffixes	
P4	P3	P2	P1	P0	P-1	P-2	P-3	P-4	P-5	P-6	P-7
NEG	VAL↓/INF	SUBJ/OBJ(.VAL↑)	VAL↑	R	NUM	DUR	SUBJ.1	INF/MOD	SUBJ/MOD	AUX	NOM/Q

well as the agreement prefixes appear as lexically conditioned, semantically bleached root extensions on some verbs (Berger 1998a: 110, 117, 126). Both observations imply an old age of the respective morphology.

The suffixes can be divided into two subgroups, the inner suffixes and the outer suffixes. The inner suffixes constitute markers which form a part of the same phonological word as the verb stem and the prefixes and which, as a consequence, must belong to an older layer of morphological material.

The inner suffixes consist of agreement markers in positions -3 and -5 and of modal and non-finite suffixes in positions -4 and -5, e.g. the participle <-m>[9], viz. example (10) (Berger *et al.* 1996: 166), or the optative suffix <-áa>, as illustrated in example (11) (Berger 1998a: 136).

(10) *jakúne halánċ yeéċum juán*
ẓakun-e halanċ yeeċ-u-m juan
donkey-ERG moon see-LV-PART as.if
'Like the donkey who saw (lit. having seen) the moon.'

(11) *úne bel níáa!*
un-e bel ni-aa
2SG-GEN pedigree wane-OPT
'May your house wane!'

The outer suffixes are actually clitics or free particles, and thus less strongly bound to the verb root and more recently grammaticalised than the inner suffixes. The most important of these outer suffixes is the auxiliary <bá- ~ b-> in position -6, which is phonologically reduced and merged with the verb stem in the Hunza dialect, viz. *éċáa* 'you are doing', but is still a separate word in the Nagar dialect, viz. *éċu báa* 'id.' (cf. Berger 1998a: 19). The auxiliary contributes to the richness of the Burushaski tense system by building up some periphrastic tenses (cf. Berger 1998a: 138–140). Position -7 is occupied by nominal particles and frozen case markers used as derivational devices, e.g. <=aṭe>, which expresses temporal subordination, as illustrated in example (12) (Berger 1998a: 140). The same slot is also occupied by the interrogative particle <=a> (cf. Berger 1998a: 141), as in example (13) (Berger 1998a: 180).

(12) *ma maíráṭe je taṅ amáyam*
ma ma-ir=aṭe je taṅ a-man-ć-a-m
2PL 2PL.SUBJ-die=onto/with 1SG scarcity 1SG.SUBJ-become-DUR-1SG.SUBJ-PART
'When you have died, I will be sad.'

(13) *bras ke hói únara?*
bras ke hoi un-ar=a
rice and vegetable 2SG-DAT/ALL=Q
'Are the rice and vegetables for you?'

This description shows that the Burushaski verb exhibits more ancient, that is frozen and lexicalised, morphological material in its prefix slots than in its suffix slots, which are largely occupied by formally and functionally transparent morphemes and, in the case of the outer suffixes, by material only recently and partially amalgamated with the verb. The predominance of a presumably old prefixation pattern parallels the prevailing prefix strategies of Na-Dene and Yenisseian. This general typological parallels are supplemented by actual positional correspondences, mainly by the immediate position of the valence increasing morpheme <s-> and the agreement markers in front of the verb root in Burushaski, which evokes the Na-Dene verb with its parallel order of verb stem, classifier and subject prefixes. Besides these similarities, however, other parts of the Burushaski verbal morphology are organised in unique ways that have no parallels in Na-Dene or Yenisseian. The next section will show that very much the same can be said about Kusunda.

Kusunda

The Kusunda verb shown in tables 9 and 10 is morphologically complex, although the grammatical categories expressed in the verb are not high in number.[10] The Kusunda verb shows agreement with the subject in person and number and is inflected for a binary aspectual differentiation between realis and irrealis in position 2/3, illustrated in examples (14) and (15) (Watters 2006: 63).

(14) *təmən*
t-əm-ən
1.SUBJ-eat-REAL
'I ate.'

Table 9: Verb positions of Kusunda (class I), based on Watters (2006)

P-1	P0	P1	P2	P3	P4
SUBJ	ROOT	PL	REAL/IRR, NEG.REAL/NEG.IRR, IMP, PROH, HORT, OPT	NEG.PERF, INCMPL	IMIN

Table 10: Verb positions of Kusunda (class II), based on Watters (2006)

P0	P1	P2	P3	P4	P5
ROOT	SUBJ	PL	REAL/IRR, NEG.REAL/NEG.IRR, IMP, PROH, PT-HORT, OPT	NEG.PERF, INCMPL	IMIN

(15) *təmdu*
t-əm-du
3.SUBJ-eat-IRR
'I will eat.'

Kusunda exhibits an elaborated mood system including 'imperative', 'prohibitive', 'hortative' and 'optative' in the same position 2/3 (cf. Watters 2006: 75–82).

Additional aspectual markers can be added in position 3/4 with the incompletive <-da>, shown in example (16) (Watters 2006: 71), and in position 4/5 with the imminent <=ben>, shown in example (17) (Watters 2006: 70). Slot 3/4 is further occupied by the negative perfective, that is a suffixed copy of the personal pronoun added to the negated realis marker <-da:ˤu ~ -a:ˤu>, shown in example (18) (Watters 2006: 75).[11]

(16) *tsi tsəgənda*
tsi ts-əg-ən-da
1SG 1.SUBJ-go-REAL-INCMPL
'I was going.'

(17) *tsi tsəgənben*
tsi ts-əg-ən=ben
1SG 1.SUBJ-go-REAL=IMIN
'I'm about to go.'

(18) *tsi təmda:ˤutsi*
tsi t-əm-da:ˤu=tsi
1SG 1.SUBJ-eat-NEG.REAL=1SG
'I haven't eaten yet.'

The complexity of the Kusunda verb is caused by morphophonologically conditioned processes, namely the fusion of morphemes expressing different categories, yielding fusional markers, and the use of phonological mutation as a mean to differentiate the marked from the unmarked form of a grammatical category, namely the irrealis from the realis aspect (cf. Watters 2006: 65, 20–21).

For the description of the Kusunda verb, it is essential to differentiate between two different classes of verbs, named 'Class I' and 'Class II' in Watters (2006: 59, 61). The main formal difference between the two classes is that class I verbs show agreement prefixes, whereas the class II verbs exhibit agreement suffixes (cf. Watters 2006: 59). These differences in the syntagmatic position of the agreement morphemes have a significant influence on the realisation of the grammatical categories. The suffixation of the agreement markers in class II verbs lead to the fusion of these suffixes with the markers of other grammatical categories which are likewise suffixed (cf. Watters 2006: 65). In contrast, the prefixation structure of class I verbs causes no fusion of morphemes (cf. Watters 2006: 66).

The affiliation of a verb to a class is lexically conditioned. The class I patterning is used with a limited set of high frequency verbs and is presumably archaic (cf. Watters 2006: 60–61). The patterning structure is additionally partially conditioned by the syllable shape of the verb root, since the prefixation pattern primarily occurs on verbs with a vocalic onset, whereas the suffixation patterning is mainly applied with verbs beginning in a consonant (cf. Watters 2006: 59–60).

The description of the verb of Burushaski, Kusunda, Ket and Athabaskan-Eyak-Tlingit has shown that all of these languages exhibit a morphologically highly complex verb structure with a considerable amount of adjacent positions reserved for the expression of certain grammatical categories. With the exception of Kusunda, all the languages compared show a biactential agreement pattern, Burushaski and Athabaskan-Eyak-Tlingit additionally reveal an elaborated tense/aspect/mood system.

However, comparison within Yenisseian and Na-Dene and internal reconstruction in Burushaski also reveal much less complex systems for earlier stages of these languages. These reconstructions show a Na-Dene and Yenisseian verb structure that is more similar to the verb structure of Kusunda than the ones of the various daughter languages of Athabaskan and Yenisseian. Similarly to Kusunda, the verb agreement seems to have originally been

restricted to first and second person subject and did not involve object agreement. Additionally, the basic tense/aspect/mode system of Yenisseian and Athabaskan-Eyak-Tlingit parallels the bipartite aspect system of Kusunda.

However, such typological similarities are not of great value, since they are probably the result of coincidence. Typological similarities should be treated most carefully in historical-comparative linguistics, since they are entirely worthless if not supplemented by concrete material cognacy. Complex verb templates are known to develop and erode quickly and superficial similarities in the organisation of two language's verbal morphology do thus not constitute convincing evidence for relatedness.

In the following sections, material parallels to supplement the typological similarities will be presented and critically reviewed, beginning with the agreement marking and followed by sections about the tense/aspect/mode-system, the shape prefixes and the classifers.

Agreement marking

This section about agreement morphology will be organised in the same way as the present section, beginning with a description of the Yenisseian agreement morphology, before moving on to the respective structures in Na-Dene, Burushaski and Kusunda.

Yenisseian

The Yenisseian daugther languages show extensive similarities in their agreement patterning. Expectably, some differences exist between the agreement patterning of the Ket-Yugh subgroup and the Kott-Assan subgroup, reflecting the bifurcation of Yenisseian into a Ket-Yugh and a Kott-Assan subgroup of Yenisseian.[12] All Yenisseian languages show several slots in the verbal morphology occupied by agreement markers, including subject markers, object markers and two markers of animacy as well as plural suffixes. In the following, a short overview of the agreement morphology of Ket is given, with some subsequent notes on the Kott and Proto-Yenisseian agreement system.

Agreement in Ket is expressed by two sets of affixes in multiple slots within the verb affix chain and a set of plural suffixes in position -1 (cf. Vajda 2001: 376). The two sets of affixes were named D-affixes and B-affixes by Bouda (1957) according to the initial sound of the first person markers, i.e. <ba-> and <di->, and are ordered by Werner (1997b: 150) into nine different rows depending on the phonological and functional properties of the affixes and their position in the verb. The classification of the agreement markers into the two sets D and B is mainly based on their formal properties, that is exhibiting an initial /d/ or /b/ in the marker of the first person, and has no strict functional base. In the following, I will describe the Ket agreement morphology on functional grounds rather than on formal ones, since a functional analysis facilitates the

understanding of the synchronic and diachronic dimensions of the agreement system of Yenisseian.

The biactantial agreement pattern of Ket is different from other languages with complex verbal morphology in that Ket inflection does not occupy positions that are reserved for expressing the same syntactic function in all verbs. Rather, the inflectional affixes appear 'in slots idiosyncratically pre-selected during stem derivation' (Vajda 2001: 371). This, together with a complex network of morphophonological patterns based on position class configuration, provides an explanation for the complexity and variety in the verbal morphology of Ket (cf. Vajda 2001: 371). While the agreement morphs are selected syntactically, dependant on the grammatical relations of the actants, the configuration of the actant agreement slots of any given Ket verb are determined derivationally (cf. Vajda 2001: 375).

Table 11 shows the arrangement of the agreement markers of Vajda (2001: 376, 2008: 152). The variation of the forms in slot 6 (P6) in table 11 is due to the following differentiations: <bu-> is a grammatically empty, redundant third person subject marker in one derivational subtype. The unrounded and rounded variations in the first and third person express an 'introverted' action and an 'extroverted' action, respectively (cf. Werner 1997b: 193), the first one expressing an action not resulting in spatial displacement of the argument so marked and the second one occuring in verbs conveying displacement (cf. Vajda 2001: 375). Every affix in position 6 is obligatory followed by a consonant reflecting the verb's lexical situation aspect, namely <t-> for stative, <k-> for dynamic, and <n-> for residue, so that there are, together with the introverted-extroverted distinction, four variants of each agreement affix in position 6 (P6), viz. <bok-> (dynamic extroverted) ~ <bak-> (dynamic introverted) ~ <bat-> (stative introverted) ~ <ban-> (residue) for first person singular (cf. Vajda 2001: 375–376). Furthermore, positions 4 and 3 exhibit the animate and inanimate marker. These markers have become object markers in Kett, but have retained their original function as animacy markers in Kott (cf. Vajda 2008: 142–144, 159).

On the basis of this arrangement, Vajda (2001: 377–379) identifies five different lexico-derivational subtypes of conjugation, which he calls 'active', 'absolutive', 'coreferential absolutive', 'coreferential inactive' and 'possessive'. Georg (2007: 184–196) builds his description of the conjugation types on Vajda, but chooses the more neutral designation 'conjugations I-V'.

For the rest of this description, I am going to adapt the glossing conventions of Vajda (2001) in using square brackets for morphemes that are part of the underlying verb form, but do not appear overtly, parentheses for epenthetic elements that only appear in the surfacing verb form and LE for lexical elements with no discrete meaning in a synchronic perspective (cf. Vajda 2001: 374–375). Superscript ciphers indicate the position class of the respective morphemes in

Table 11: Ket Agreement morphemes (cf. Vajda 2001: 376, 2008: 152)

slot	P8	P6	P4	P3	P1	P-1
conjugation	I-IV	II-IV	I, III	I, (II), III-IV	I, III, IV	I-III
function	SUBJ (A, SA, SO)	OBJ, SUBJ (SA, SO)	3.ANIM.OBJ/SUBJ (SO)	3.INANIM.OBJ/.SUBJ (SO)	1/2.OBJ/SUBJ (SO)	ANIM.SUBJ (A)
1SG	di	ba ~ bo	-	-	di	-
2SG	ku	ku	-	-	ku	-
3SG.M	du	a ~ o ~ bu	a ~ o	-	a	-
3SG.F	da	i ~ u ~ bu	i	-	a	-
3SG.N	da	Ø ~ u ~ bu	-	b	a	-
1PL	di	dəŋ	-	-	daŋ	n
2PL	ku	kəŋ	-	-	kaŋ	n
3PL.ANIM	du	aŋ ~ oŋ ~ bu	aŋ ~ oŋ	-	aŋ	n

accordance with table 11.

Conjugation I: *active*: The choice of subject marker position in this subtype follows a split-S agentive or active pattern, the position 8 used for the active term, positions 4, 3 or 1 used for the inactive term and position -1 for the plural marking, cf. examples (19)–(21) (Vajda 2001: 377).

(19) *sitdi*
sit^{7} -di^{1} -[a]^{0}
awake-1.SUBJ-LE
'I awaken.'

(20) *dilkit*
di^{8} -[i]l^{2} -kit^{0}
1.SUBJ-IMPRF-swim
'I was swimming.'

(21) *duldis*
du^{8} -[i]l^{2} -di^{1} -s^{0}
3.M.SUBJ-IMPRF-1.OBJ-dress
'He dressed me.'

Conjugation II: *absolutive:* In this subtype, the selection of the actant positions is in accordance with an ergative-absolutive alignment, the position 8 being used for the transitive subject, position 6 for the intransitive subject and direct object and position -1 for the plural marking, cf. examples (22)–(24) (Vajda 2001: 377–378).

(22) *ebondaq*
e^{7} -bo[k]^{6} -[i]n^{2} -daq^{0}
LE-1.SUBJ-PERF-LE
'I sobered up.'

(23) *bokatn*
bok^{6} -a^{4} -tn^{0}
1.SUBJ-THEM-go
'I am going.'

(24) *daetbolqo*
da^{8} -et^{7} -bo[k]^{6} -[i]l^{2} -qo^{0}
3.F.SUBJ-alive-1.OBJ-IMPRF-LE
'She healed me.'

Conjugation III: *coreferential absolutive:* This subtype places a redundant second subject marker in position 6, whereas the real subject marker is placed in position 8 and the direct object in position 4, 3 or 1 and the plural marker in position -1, cf. examples (25) and (26) (Vajda 2001: 378).

(25) *batolok*
[di]^{8} -bat^{6} -o^{4} -[i]l^{2} -ok^{0}
1.SUBJ-1.SUBJ-THEM-IMPRF-up
'I shuddered.'

(26) *dabukdit*
da^{8} -buk^{6} -di^{1} -t^{0}
3.F.SUBJ-3.SUBJ-1.OBJ-LE
'She carries me.'

Conjugation IV: *coreferential inactive:* This subtype shows a mixture of accusative and split-S alignment (Vajda 2004: 54). It places a redundant second subject marker in position 1, whereas the real subject marker is placed in position 8 (a neuter inactive subject is placed in position 3) and the object is placed in position 6, cf. examples (27)–(29) (Vajda 2001: 378, 2004: 55).

(27) *datajadaq*
da^{8} -t^{5} -a^{4} -(j) -a^{1} -daq^{0}
3.F.SUBJ-LE-THEM-3.SUBJ-fall
'She falls.'

(28) *tabadaq*
t^{5} -a^{4} -b^{3} -a^{1} -daq^{0}
LE-THEM-3.N.SUBJ-3.SUBJ-fall
'It falls.'

(29) *dukdiqa*
d[i]^{8} -uk^{6} -di^{1} -qa^{0}
1.SUBJ-3.N.OBJ-1.SUBJ-sell
'I sell it.'

Conjugation V: *possessive*: This kind of subtype expresses agreement by incorporating nominal possessive prefixes on the (likewise incorporated) morpheme in position 7, cf. example (30) (Vajda 2001: 378).

(30) *absibedejbata*
ab-sibedej^{7} -b^{3} -a^{1} -ta^{0}
my-whisper-LE-LE-extend
'I whisper.'

The agreement system of Kott (cf. table 12) differs from the one of Ket in some aspects. Kott exhibits an additional subject marking slot in P-1, e.g. *hamaˀkutholok-**ŋ*** 'I loved you', *hamaˀantholok-**u*** 'you loved me' (Vajda 2008: 145), unlike Ket, where the subject has an additional slot in the leftmost position of the verb string, e.g. ***d**=bágdɛŋkuɣavɛt* 'I find you', ***k**=bágdɛŋbɔɣavɛt* 'you find me' (Vajda 2008: 152, cf. also examples (19)–(30) above).

Furthermore, the animacy markers in position 4 are still productively used as such, whereas they became associated with object marking in Ket (cf. Vajda 2008: 142–144, 159). An interesting difference concerns the lack of gender marking in Kott. Third person markers show no differentiation between masculine, feminine and neuter, as it is the case in Ket, and the conclusion of Vajda (2008: 142) that gender marking may also have been absent in Proto-Yenisseian classifies the gender marking of Ket as secondary innovation. This interpretation considerably influences the comparison of the Yenisseian agreement morphology with those of the other members of the Dene-Kusunda hypothesis. The typological similarities to Na-Dene and Kusunda, both likewise lacking gender marking, would be increased, while the affinity to Burushaski, which, like Ket, shows an elaborated nominal class differentiation throughout its grammar, would be reduced.

The comparison of the agreement structure of the Yenisseian languages makes clear that much of the overwhelming complexity in it is due to secondary innovation in the form of subsequent waves of grammaticalisation and lexicalisation of erstwhile transparent agreement patterns. The agreement system of Proto-Yenisseian must have been considerably simpler (cf. table 13). Vajda (2008: 159) assumes that only an undergoer subject of first and second person was marked, namely in P1 next to the verb root, whereas subject and object

Table 12: Kott agreement morphemes, based on Vajda (2008: 144)

slot	P6	P4	P1	P-1
function	OBJ, SA/SO	ANIM/INANIM	SA/SO	ANIM.SUBJ
1SG	aŋ ~ eŋ	d^j ~ Ø	i	ŋ ~ aŋ
2SG	u	d^j ~ Ø	i	u
3SG.M	a	d^j ~ Ø	a	Ø
3SG.F	?	d^j ~ Ø	a	Ø
3SG.N	?	b	a	Ø
1PL	oŋ	d^j ~ Ø	oŋ	antoŋ
2PL	oŋ	d^j ~ Ø	oŋ	anoŋ
3PL.ANIM	oŋ	d^j ~ Ø	aŋ	an

nominal phrases were unmarked. All the other agreement slots were subsequent innovations, the leftmost clitics of Ket and the suffixes of Kott being prominent individual examples. Probably anterior to those, position 6, which previously functioned as location for objects in the verb phrase, became an object prefix position by fusion with the verb complex (cf. Vajda 2008: 160). These prefixes, the B-affixes (cf. Werner 1997b: 150), later expanded their function to become markers of subject, too (cf. Vajda 2008: 160). Consequently, the set of agreement affixes most relevant for comparison with possible sister languages of Yenisseian are the old prefixes in position 1 in both Ket and Kott and, to a lesser degree, the object markers in position 6 (cf. table 13). The third person markers were probably not agreement markers in the first place, but reanalysed instances of a perfective/stative prefix.

Na-Dene

The Athabaskan verb shows an old slot for subject marking of first and second person, and additional slots for the expression of objects and deictics. Tables 14 and 15 show the agreement prefixes of Navajo and Slave based on Young/Morgan (1980: 107, 136, 169, 189) and Rice (1989: 429–433, 775–776). In the following, the Navajo agreement system will be explained in some detail as an illustration of Athabaskan agreement morphology.

Table 13: Oldest prefix slots of Yenisseian

	P6 OBJ		P1 SUBJ	
	Kott	**Ket**	**Kott**	**Ket**
1SG	aŋ ~ eŋ	ba ~ bo	i	di
2SG	u	ku	i	ku
3SG.M	a	a ~ o ~ bu	(a)	(a)
3SG.F	?	i ~ u ~ bu	(a)	(a)
3SG.N	?	Ø ~ u ~ bu	(a)	(a)
1PL	oŋ	dəŋ	oŋ	daŋ
2PL	oŋ	kəŋ	oŋ	kaŋ
3PL.ANIM	oŋ	aŋ ~ oŋ ~ bu	aŋ	aŋ

A Navajo first or second person subject singular and duoplural is expressed by the prefixes in position 8, as illustrated in examples (31)–(33) (Young 2000: 31–32), whereas a third person subject is always zero-marked in that position (cf. Young/Morgan 1980: 346–348).

(31) *yishcha*
yi-sh-cha
THEM-1SG.SUBJ-cry.IMPRF
'I am crying.'

(32) *yiicha*
y-ii(d) -cha
THEM-1DUPL.SUBJ-cry.IMPRF
'We are crying.'

(33) *nicha*
ni-cha
2SG.SG-cry.IMPRF
'You are crying.'

Table 14: Navajo agreement markers, based on Young/Morgan (1980)

	OBJ/REFL (P0)	DIR.OBJ (P4)	DEIC.SUBJ (P5)	SUBJ (P8)
1SG	shi	shi	-	sh ~ s ~ Ø
1DUPL	nihi	nihi	-	ii(d)
2SG	ni	ni	-	ni ~' ~ Ø
2DUPL	nihi	nihi	-	o(h)
3	bi	bi, Ø	-	Ø
3o	yi	yi	-	-
3a	ha, ho-	ha, ho, hw	ji	-
3i	'i	'a	'a	-
3s	ha, ho	ha, ho, hw	ha	-
reflexive	'ádi, 'ád	di ('ádi)	-	-
reciprocal	'ahi, 'aɬhi, 'aɬh	'ahi	-	-
agentive	-	-	'adi, 'di	-

Table 15: Slave agreement markers, based on Rice (1989)

	PP.OBJ (P0)	OBJ (P6)	DEIC (P7)	SUBJ (P11)
1SG	se	se	-	h
1DUPL	naxe	naxe	-	íd
2SG	ne	ne	-	ne
2PL	naxe	naxe	-	ah
3	be	be	-	Ø
3PL human	ku	ku	-	-
4	ye	ye	-	-
4PL human	go	go	-	-
unspecified	ʔe	ʔe	ts'e	-
PL human	-	-	ke/ge	-
areal	go	go	-	-
reflexive	ʔede	ʔede	-	-
reciprocal	ʔeɬe	ʔeɬe	-	-

The four prefixes in position 5 are called ‘deictics’ and either express an indefinite subject (= ‘3i’), cf. example (34) (Young/Morgan 1980: 185), an area, space or impersonal thing (= ‘3s’), cf. example (35) (Young/Morgan 1980: 186), an animated subject (= ‘3a’), cf. example (36) (Young/Morgan 1980: 187), or an unspecified agent (= ‘agentive’) (Young/Morgan 1980: 189).

(34) *na’ané*
na-’a-né
THEM-3i-play
‘someone is playing.’

(35) *halgai*
ha-łi-gai
3s-THEM-be.white
‘it (=an area) is white.’

(36) *jiní*
ji-ní
3a-say
‘It is said/people say.’

The direct object is expressed in position 4 with some interesting variation in the third person. The three deictics 3a, 3i and 3s may also be used as object markers (cf. Young/Morgan 1980: 169), in addition to two other object markers called ‘3’ and ‘3o’ (Young/Morgan 1980: 169). The prefix <yi-> (= ‘3o’) is used when the noun first mentioned in a sentence is the subject, i.e. with unfocused object, cf. example (37) (Young/Morgan 1980: 171), and is replaced by <bi-> (= ‘3’) when the noun first mentioned in a sentence is the object, i.e. with focused object, cf. example (38) (Young/Morgan 1980: 171).

(37) *’ashkii ɬį́į́ yiyiiłtsą́*
’ashkii ɬį́į́ yi-yi-ł-tsą́
boy horse 3o.OBJ-PERF-CLASS.ł-see
‘The boy saw the horse.’

(38) *ɬɭ́ɭ́ ’ashkii biiłtsą́*
ɬɭ́ɭ́ ’ashkii bi-yi-ł-tsą́
horse boy 3.OBJ-PERF-CLASS.Ł-see
‘the horse was seen by the boy (lit. it was the horse the boy saw).’

An indirect object is expressed in position 0, a slot likewise occupied in some instances by a reflexive pronoun (cf. Young/Morgan 1980: 136–139).

The Eyak agreement markers are listed in table 16 (cf. Krauss 1965a: 171). Like the Athabaskan languages, Eyak expresses only a first or second person subject in position 7, whereas a third person subject and the object are marked elsewhere (P-4 and P1) (cf. Krauss 1965a: 175). Eyak does not express a first person plural participant in the subject or object positions, but in a position preceding the verb by the prefix <da·-> (cf. Krauss 1965a: 172).

The Tlingit agreement markers are listed in table 17, following Leer (1991: 58–59, 103, 123).[13] The subject markers in position 2 indicate the agent of an intransitive or transitive verb, the third person being unmarked (cf. Leer 1991: 103). The object markers occupy position 6 (cf. Leer 1991: 122–129).

The comparison of the agreement patterns of Athabaskan, Eyak and Tlingit reveals that the Na-Dene languages originally only marked the subject, reflected in its near position to the verb stem. Object marking must have arisen by later grammaticalisation, given its relative syntagmatic distance from the verb root. Third person subject marking is younger than first and second person marking in Na-Dene, since it, too, occupies a different slot in the verb template. At least some of the material, e.g. the deictics, is readily identifiable as grammaticalised deictic particles which were integrated into the verb complex.

Table 16: Eyak agreement markers, based on Kraus (1965a: 171)

	OBJ (P1)	**SUBJ** (P7)	**SUBJ/OBJ** (P-4)
1SG	xu	x^w	-
1PL	-	-	-
2SG	i	Ø ~ (y)i	-
2PL	ləχi	ləχ	-
3SG	u ~ Ø	-	ĩh
3PL	u ~ Ø	-	inu·
reflexive	əd(ə) ~ əd(u)	-	-
indeterminate	i ~ (i)da	-	-
indefinite	k’u	-	-

Table 17: Tlingit agreement markers, based on Leer (1991: 58–59, 103, 123)

	OBJ (P6)	**SUBJ** (P2)
1SG	χad, ʔaχ	χa
1PL	haˑ	tuˑ
2SG	ʔi	iˑ ~ Ø
2PL	ɯiˑ	ɯi
3 recessive	ʔa ~ Ø	-
3 neutral	ʔa ~ Ø	Ø
2 salient	ʔaš	-
indefinite human	qu, qaˑ	du
indefinite non-human	ʔad	-
reflexive	š, Ø	-
reciprocal	wuʼš	-
partitive	ʔaʼ, -	-

Burushaski

The Burushaski verb shows agreement with person, number and nominal class in third person, namely with human masculine (hm), human feminine (hf) and two inanimate classes (x and y) (cf. Berger 1998a: 33–38, 103). Agreement with person, number and nominal class is expressed by two sets of affixes, namely the pronominal prefixes in P2 and the personal endings in P-5 and P-3 (cf. Berger 1998a: 117–125, 132–133, 136–137). An astounding characteristic of the Burushaski verb agreement system are the different alignment types expressed by the pronominal prefixes and the personal endings. The prefixes agree with the subject of an intransitive verb and with the object of a transitive verb, while the suffixes agree with the subject of both intransitive and transitive verbs (cf. Berger 1992: 20–21). The following examples (39)–(42) from Berger (1992: 21) illustrate this pattern.

(39) *amánam*
a-man-a-m
1SG.SUBJ-become-1SG.SUBJ-PART
‘I came into being.’

(40) *gumánuma*
gu-man-u-m-a
2SG.SUBJ-become-LV-PART-2SG.SUBJ
'You came into being.'

(41) *ayeéċuma*
a-yeeċ-u-m-a
1SG.OBJ-see-LV-PART-2SG.SUBJ
'You saw me.'

(42) *guyeéċam*
gu-yeeċ-a-m
2SG.OBJ-see-1SG.SUBJ-PART
'I saw you.'

The agreement suffixes in P-5 (P-3 for the first person) occur in a short version and a long version, depending on whether the stress is put on the verb stem or the ending. The agreement suffixes of all three dialects are given in table 18 (cf. Berger 1998a: 136–137).

The pronominal prefixes come in three sets, given in table 19 prefixes (Hunza dialect). The function of these agreement prefixes is not restricted to the expression of agreement. They also cause changes in the valence of the verb (cf. Berger 1998a: 117). There is a fundamental distinction between primary verbs and secondary verbs. Primary verbs are verbs with no pronominal prefix or with pronominal prefixes of type I, whereas secondary verbs are derived from primary verbs with the pronominal prefixes of type II or III or with the d-prefix (cf. Berger 1998a: 117).

Table 18: Burushaski agreement suffixes, based on Berger (1998a: 136–137)

	Hunza		**Nagar**		**Yasin**	
	singular	*plural*	*singular*	*plural*	*singular*	*plural*
1	a ~ áa	an ~ áan	a ~ aa	an ~ een	a	en
2	a a ~ áa	an ~ áan	a ~ aa	an ~ een	a	en
3.HM	i ~ íi	an ~ áan	i ~ ii	an ~ een	i	en
3.HF	o ~ óo	an~ áan	o ~ oo	an ~ een	u	en
3.X	i ~ íi	ie ~ íe, íin, ían	i ~ ii	ie ~ io	i	en
3.Y	i ~ íi	i ~ íi	i ~ ii	i ~ ii	i	i

Table 19: Burushaski (Hunza dialect) pronominal prefixes (cf. Berger 1998a: 90)

	I	II	III
1SG	a-́, á	á	áa
2SG	gu-́, gú ~ kú	gó ~ kó	góo ~ kóo
3SG.HM	i-́, í	é	ée
3SG.HF	mu-́, mú	mó	móo
3SG.X	i-́, í	é	ée
3SG.Y	i-́, í	é	ée
1PL	mi-́, mí	mé	mée
2PL	ma-́, má	má	máa
3PL.HX	u-́, ú	ó	óo
3PL.Y	i-́, í	é	ée
grapheme	-, -́	◌̣	◌̣◌̣

Most of the primary verbs have either no pronominal prefixes or only in certain circumstances. The assignment of the pronominal prefixes of type I to these primary verbs depends on the nominal class affiliation of the subject or the degree of control over the action (cf. Berger 1998a: 118). Examples (43)–(44) from Berger (1998a: 118) show that no agreement prefixes occur with a subject belonging to the y-class, whereas the prefixes are present if the subject belongs to the h- or x-class.

(43) *hun iġúlimi*
hun i-ġul-i-m-i
wood 3SG.X.SUBJ-burn-LV-PART-3SG.X.SUBJ
'The wood burnt up.'

(44) *ha ġulúmi*
ha ġul-u-m-i
house burn-LV-PART-3SG.Y.SUBJ
'The house burnt up.'

The pronominal prefixes of type II are used to form secondary transitive verbs from primary intransitives and agree with the object (cf. Berger 1998a: 121). Example (45) illustrates the type II pronominal prefixes.

(45) *mósqurċimi*
mo-s-qurċ-i-m-i
3SG.HF.OBJ-VAL↑-sink-LV-PART-3SG.HM.SUBJ
'He sank her.'

The pronominal prefixes of type III derive a causative-applicative or a transitive from primary or secondary transitive or intransitive verbs, e.g. *pus-́* 'to bind' → *-̇pus-* 'to let bind'. The pronominal prefix of type III agrees with the person or object who is made or forced to do something or in whose favour the action is done, i.e. with the actant that is most directly affected by the action expressed in the verb, as shown in the examples (46) and (47) (Berger 1998a: 123).

(46) *óoġarimi*
oo-ġar-i-m-i
3PL.HX.OBJ-play-LV-PART-3SG.HM.SUBJ
'He made them play.'

(47) *jáa áu áasqanuman*
ja-e a-u aa-s-qan-u-m-an
1SG-GEN 1SG-father 1SG.OBJ-VAL↑-kill-LV-PART-3PL.H.SUBJ
'They have killed my father.'

Kusunda

Agreement in Kusunda is expressed by a set of affixes which bear formal resemblance to the personal pronouns[14] (cf. Watters 2006: 60–62, 44). Class I verbs show prefixed agreement morphology, namely <ts-> or <t-> for first person, <n-> for second person and <g->, <d->, or <Ø-> for third person (cf. Watters 2006: 60), as shown in examples (48)–(50) (Watters 2006: 60).

(48) *təmən*
t-əm-ən
1.SUBJ-eat-REAL
'I ate.'

(49) *nəmən*
n-əm-ən
2.SUBJ-eat-REAL
'You ate.'

(50) *gəmən*
g-əm-ən
3.SUBJ-eat-REAL
'He ate.'

The use of either <ts-> or <t-> in the first person and either <g-> or <Ø-> in the third person is lexically conditioned and not predictable, whereas the third person allomorph <d-> might in fact be derived from the onset of the verb *əg* (← **dəg*) 'to go' with which it primarily occurs. The onset is still visible in the imperative form *da* 'go!' (cf. Watters 2006: 60).

Kusunda class II verbs, which exhibit suffixed agreement morphology, must be divided into intransitive and transitive verbs. The intransitive class II verbs add the agreement suffixes to the verb stem. The transitive class II verbs, however, express the agreement on the auxiliary 'to do', which follows the inconjugated verb stem (cf. Watters 2006: 61–62).

The suffixes of the class II verbs vary slightly between transitive and intransitive verbs. Transitive verbs have <-t> for first person, <-n> for second person and <-g> for third person, cf. examples (51)–(53) (Watters 2006: 61).

(51) *dzaatn̩*
dza-a-t-n̩
buy-make-1.SUBJ-REAL
'I bought.'

(52) *dzaann̩*
dza-a-n-n̩
buy-make-2.SUBJ-REAL
'You bought.'

(53) *dzaəgən*
dza-ə-g-ən
buy-make-3.SUBJ-REAL
'He bought.'

The intransitive class II verbs exhibit agreement suffixes that resemble the personal pronouns more closely, e.g. example (54). Commonly, the agreement suffix is deleted and the agreement is exclusively expressed by the personal pronoun, e.g. example (55), which can then again be attached in a new position at the end of the verb, i.e. example (56) (Watters 2006: 62).

(54) *tsi siptsin*
tsi sip-tsi-n
I enter-1.SUBJ-REAL
'I entered.'

(55) *tsi sipn̩*
tsi sip-n̩
I enter-REAL
'I entered.'

(56) *tsi sipn̩tsi*
tsi sip-n̩-tsi
I enter-REAL-1.SUBJ
'I entered.'

Plurality is expressed by the suffix <-da> (cf. Watters 2006: 63). For class I verbs in the realis aspect, the suffix <-da> is added unaltered to the verb root, as illustrated in examples (57)–(59). (Watters 2006: 63).

(57) *təmdan*
t-əm-da-n
1.SUBJ-eat-PL-REAL
'We ate.'

(58) *nəmdan*
n-əm-da-n
2.SUBJ-eat-PL-REAL
'You ate. '

(59) *gəmdan*
g-əm-da-n
3.SUBJ-eat-PL-REAL
'They ate.'

In class II verbs in the realis aspect, the plural suffix <-da> coalesces with the preceding person agreement suffixes, causing the onset of the plural suffix to be lost and the vowel to be reanalysed as a part of the realis suffix <-n>, so that the sequences <-d-da-n> [-1.SUBJ-PL-REAL], <-n-da-n> [-2.SUBJ-PL-REAL] and <-g-da-n> [-3.SUBJ-PL-REAL] fuse and yield <-d-ən> [-1.SUBJ-PL.REAL], <-n-ən> [-2.SUBJ-PL.REAL] and <-g-ən> [-3.SUBJ-PL.REAL], illustrated in examples (60) and (61) (Watters 2006: 65).

(60) *pumbadən*
pumba-d-ən
beat-1.SUBJ-PL.REAL
'We beat (someone).'

(61) *pumbanən*
pumba-n-ən
beat-2.SUBJ-PL.REAL
'You beat (someone).'

Burushaski-Yenisseian

Both van Driem and Vajda analyse similarities in the agreement morphology of Dene-Kusunda languages to argue for a genealogical relationship between some of these languages. Van Driem (2001: 1199) regards the similarities in the verbal morphology of Burushaski and Yenisseian as more than only typological similarities in the overall structure, pointing out that the systems show cognates in the morphology, especially in the domain of agreement patterning.

Burushaski as well as Ket show class-dependent agreement in the third person with remarkable parallels in exhibiting a differentiation between a masculine and feminine class within the animate class in opposition to the inanimate class (cf. van Driem 2001: 1199). The formal dichotomy in the Yenisseian languages between the verbs which take agreement affixes of the B-group and the verbs using agreement affixes of the D-group corresponds to the distinction of verbs in Burushaski with the d-prefix and those that lack the prefix (cf. van Driem 2001: 1199). The multifunctional use of the Yenisseian B-affixes and D-affixes as subject and object marker parallels the use of the Burushaski prefixes and suffixes to denote agreement in number and person with intransitive

subject and patient and with intransitive subject and agent, respectively (cf. van Driem 2001: 1199).

The parallels between the formal dichotomy of Burushaski between verbs with and verbs without the d-prefix and the formal dichotomy of Ket between verbs with D-affixes and verbs with B-affixes seem promising, but this is likely to be a coincidence. The differentiation between verbs with and verbs without d-prefix in Burushaski is characterised by the valence decreasing function of the d-prefix which itself is no agreement prefix, whereas both the D-affixes and the B-affixes of Ket are agreement markers. Furthermore, the typological property of a verb set dichotomy is no convincing evidence for relationship without material correspondences.

The concrete cognates that van Driem (2001: 1200) has detected are listed in table 20. The Burushaski pronominal prefix for the second person singular <gu-> shows formal and functional similarities to the Ket second person agreement prefix <ku->. A cognate relationship might also be obtained between some forms of the B-affixes of Ket and Burushaski agreement affixes, namely between the Burushaski pronominal prefix for first person singular <a-> and the Ket first person singular agreement affix <ba->, between the Burushaski pronominal prefix for non-feminine third person singular <i-> and Ket third person singular agreement affix <i->, between the Burushaski pronominal prefix for third person plural <u-> and the Ket third person plural agreement affix <bu-> (cf. van Driem 2001: 1200). Furthermore, both in Burushaski and Ket, the plural of the subject can be expressed by a nasal suffix <-n, -ŋ> in Ket and <-en ~ -an> in Burushaski (cf. van Driem 2001: 1200).

The comparisons of Burushaski <gu-> and Ket <ku->, Burushaski <a-> and Ket <ba->, Burushaski <u-> and Ket <bu->, as well as Burushaski <-an> and Ket <-n/-ŋ> are convincing from the semantic point of view, whereas the comparison of Burushaski <i-> and Ket <i-> is inappropriate, because the Burushaski prefix denotes any third person actant with the exception of a feminine one, expressed by <mu->, whereas in Ket the only nominal class taking the <i-> prefix is precisely the feminine class (see tables 19 and 11).

Although the comparison looks appealing, further morphemes have to be taken out of the body of evidence because of methodological shortcomings. First, Burushaski data is compared to Ket data without consideration of the other Yenisseian languages. As was shown above, Kott does not exhibit a second person marker similar to Ket <ku->, but a vocalic morpheme <i->. The status of this divergence is not clarified, and Ket <ku-> could thus be a secondary innovation, which would make the similarity to the Burushaski second person prefix <gu-> a mere chance resemblance. Additionally, Kott does not exhibit any

Table 20: Proposed cognates of Ket and Burushaski (van Driem 2001: 1200)

Yenisseian (Ket)	Burushaski	Meaning
ba-	a-	1SG
ku-	gu-	2SG
i-	i-	3SG
bu-	u-	3PL
-n, -ŋ	-an ~ en	PL

gender or nominal class distinction in third person, again pointing towards the possibility of secondary innovation in Ket (cf. Vajda 2008: 142). The exclusion of Kott and the other Yenisseian languages thus is a serious methodological flaw of the comparison of van Driem.

Second, the bilabial plosive in the Ket forms of the two pairs <ba-> and <a->, and <bu-> and <u-> should not be ignored and its coming-about in Ket or loss in Burushaski must be explained before the two correspondences can be regarded as possible cognates. Before that, the two pairs cannot be viewed as convincing parallels and must be taken out of the body of evidence for a relationship of the agreement morphology of Yenisseian and Ket.

This leaves us with only two correspondences which are not to be dismissed *a priori*, namely Ket <ku-> to Burushaski <gu-> and Ket <-n, -ŋ> to Burushaski <-an ~ -en>. However, their quality as indicators of genealogical relationship is at least questionable. Bielmeier (2003: 96) states that if one is to compare Ket <ku-> and Burushaski <gu-> or Ket <-n, ŋ> and Burushaski <-an ~ -en>, one could also add the Kartvelian second person singular object prefix *<g->, and the Old Georgian aorist plural infix <-(e)n->. If one is to accept these similarities, this would again lead towards the postulation of a Dene-Caucasian macro-family (as in Shevoroshkin 1991). Even if one rejects such a proposal, the existence of similar material in other languages decreases the value of the proposed correspondences for a close relationship between Burushaski and Yenisseian. They are not specific for these two languages and probably constitute chance similarities come about through independent developments in both Burushaski and Ket, just as phonologically and functionally similar morphemes have also independently arisen in other languages such as Georgian.

In general, thus, the proposed correspondences of van Driem (2001: 1200) fail to convincingly demonstrate relatedness between Burushaski and Ket. However, the second person singular correspondence of <ku-> and <gu-> as well as the plural suffix correspondence should not be ignored and be examined in more detail in future research. For the time being, however, the argumentation

for a common origin of the agreement morphology of Yenisseian and Burushaski largely fails. In the following, the evidence from agreement morphology for a relationship between Yenisseian and Na-Dene is examined.

Dene-Yenisseian

Curiously, the comparison of the pronominal system, viz. the subject agreement markers and the personal pronouns, of Na-Dene and Yenisseian is not as fruitful as on would expect given the considerable similarities in other domains of the morphology (see sections below). Vajda (2010a: 53) admits that a comparison of the pronominal elements of Yenisseian and Athabaskan-Eyak-Tlingit does not yield convincing evidence for a genealogical relationship, quite the contrary, the considerable divergence and scarceness of convincing cognates in this domain would be an issue to be explained if the hypothesis would have been verified with enough evidence from other domains.

Table 21, based on Vajda (2010a: 50), shows the pronominal systems of Yenisseian and Athabaskan-Eyak-Tlingit. The most convincing parallel is the plural portion in the second person and partially in the first person personal pronouns, viz. Proto-Yenisseian **ʔawoŋ* ~ Proto-Athabaskan **nəχ(ʷ)ən* ~ Tlingit *uɻiˑh(ʷ)áˑn* 'you', and Proto-Yenisseian **aʒəŋ* ~ Tlingit *ʔuháˑn* 'we' (cf. Vajda 2010a: 50). However, since plural noun suffixes are absent in Proto-Na-Dene, it remains unclear how to assess these correspondences (cf. Vajda 2010a: 50).

Vajda (2010a: 50) additionally regards the correspondences in the third person pronoun as similar enough to postulate a shared origin, i.e. Proto-Yenisseian **wV* ~ Proto-Athabaskan *wiˑ* ~ **wə-n* ~ Eyak *ʔaˑ* ~ Tlingit *hú*, to which one may add the Burushaski third person hx-class plural prefix <u-> already compared to Ket <bu-> above. The reconstruction of Proto-Yenisseian **wV* and the corresponding Na-Dene forms actually strengthen the comparison of Ket <bu-> with Burushaski <u->. The two major problems of this previous correspondence postulated by van Driem (2001: 1200) were the open question of how to assess the bilabial onset of Ket <bu-> and the absence of this onset in Burushaski <u->, both of which are resolved by the validation of the bilabial onset of Ket <bu-> in Proto-Yenisseian **wV* and the cognate Tlingit form *hú* without labial onsonant onset, similar to Burushaski <u->.

The problem with the correspondence Proto-Yenisseian **wV* ~ Proto-Athabaskan *wiˑ* ~ **wə-n* ~ Eyak *ʔaˑ* ~ Tlingit *hú* is that here we encounter a case where one form in a language is compared to numerous forms in another language. In a table on page 50, Vajda (2010a) relates Proto-Yenisseian **wV* to Athabaskan **wə*, Eyak *ʔaˑ* and Tlingit *hú*. On the same page he compares the Tlingit pronoun *hú* with the morpheme <ha-> in Kott and Arin *hatu*. The problematic part is that he then also mentions the earlier Ket **buha* (yielding nowadays *bu*) as etymologically related to Kott and Arin *hatu*, indicating that

Table 21: Pronominal elements of Yenisseian and Athabaskan-Eyak-Tlingit (Vajda 2010a: 50)

	PY	Ket	Kott	Arin	Pumpokol	Athabaskan	Eyak	Tlingit
1SG pronoun	*ʔaʒ	ad	aj	aj, ja	ad	*ši ~ xʲi	xuˑ	χád
1SG.SUBJ-prefix	?	i, di, ba	i, ŋ	?	?	*š ~ xʲ	x(ʷ)	χa
1PL pronoun	*aʒəŋ	ətn	ajoŋ	aiŋ	adiŋ	?*dəneˑ	ɢəyəɢ	uháˑn
1PL.SUBJ-prefix	*ʒəŋ	dəŋ	an	?	?	*îˑ-D	-	tuˑ
2SG pronoun	*ʔaw	ūˑ	au	au	ue	*ñən	ʔiˑ	waʔé
2SG.SUBJ-prefix	?	ku	i	?	?	*ñi	yi	īˑ
2PL pronoun	*ʔawoŋ	əkŋ	aoŋ	aŋ	aiáŋ	*nəχ(ʷ)ən	łəχi	ɯiˑh(ʷ)áˑn
2PL.SUBJ-prefix	*[k]oŋ	kəŋ	on	?	?	?*χ(ʷ)	łəχ	ɯi(ˑ)
3SG pronoun	?*wV	būˑ	uju, hatu	au, hatu	?	*wiˑ ~ *wə-n	ʔaˑ	hú
3SG.SUBJ-prefix	-	-	-	?	?	-	-	-

both <bu->, from Proto-Yenisseian *wV, as well as <-ha>, related with Tlingit *hú*, itself cognate to Athabaskan *$wə$ and Proto-Yenisseian *wV, derive from the same morpheme. However, the presumed Dene-Yenisseian third person morpheme, say *wV, can hardly have yielded both <bu-> and <-ha> in the earlier Ket form **buha*. Consequently, one of the two correspondences should be abandoned if a convincing comparison is to be established, even if it signifies a less embracing explanation of third person pronominal morphology.

The first and second person are much more problematic, and this may partly be due to unstable sounds involved in these pronominal elements (cf. Vajda 2010a: 47). Vajda (2010a: 48, 49) assumes that the Proto-Yenisseian first person morpheme *<ʒ-> may ultimately be derived from a labialised velar fricative */x^w-/, which would explain the Ket outcome /b/ in <ba-> as well as Ket /d/ in <di-> and Kott <i-> and /j/ in *aj* 'I'. However, the development from *<x^w> to Ket /d/ is irregular, since the assumed labialised velar fricative */x^w/ of Proto-Dene-Yenisseian should yield Proto-Yenisseian */x/ and further be reflected as /s/ in Ket/Yugh and /ʃ/ in Kott, according to the respective sound correspondences set up by Vajda (2010a: 86–87).

There is no detectable Dene-Yenisseian correspondence between first person plural or second person singular and plural pronouns and prefixes, except the plural portions mentioned above and the similarity between Kott second person singular prefix <i-> and Na-Dene *<ŋʲi->, <yi-> and <ī·-> if one is ready to assume that the morpheme in Yenisseian ultimately was *<ŋʲi-> (cf. Vajda 2010a: 49). However, the general difficulties in assigning exact sounds to the Kott agreement prefixes, including the second person marker (cf. Vajda 2010a: 49), as well as the quite distinct Ket marker for second person, <ku->, question this assumption.

In sum, there is not much convincing evidence for material cognacy in the

pronominal systems of Na-Dene and Yenisseian, and the two reconstructed morphemes for first and second person, *<x^w-> and *<$ŋ^j i$>, provided by Vajda (2010a: 48, 49) are probably informed by the similar looking morphemes in Na-Dene. The only rather convincing, but faint similarity concerns the expression of plurality by a nasal. This may also relate to similar plural devices found in Burushaski and Kusunda.

In addition to the agreement prefixes and personal pronouns, Vajda (2010a: 51–52) speculates that the two animacy markers <d^j>[15] and <b> of Yenisseian may be related to the Athabaskan deictic markers, e.g. <y-> and <b-> in Navajo, reconstructed as *<yə-> and *<wə->. This comparison seems promising, but surely much more work is needed on these markers, especially in Yenisseian, where the exact phonetic shape and the actual occurence of <d^j-> is still not entirely understood (cf. Vajda 2010a: 51–52). Additionally, the link is based on semantic latitude, as the proposed correspondences in Athabaskan mark topicality of the third person actant, whereas the Yenisseian morphemes indicate animacy (cf. Vajda 2010a: 52).

Another methodological shortcoming is that Vajda compares the Yenisseian morphemes with some material in only one branch of Na-Dene, namely Athabaskan, while such morphemes seem to be absent in the other two branches Eyak and Tlingit. As the methods of historical-comparative linguistics dictate, material of a specific subgroup of a language family should not be compared with material in languages outside this language family before having clarified the status of the material in the respective language family. This is a principle dictated by simple logic, because if a specific morpheme is only present in one subgroup of a language family, but not in others, and the material in question is a secondary innovation of this explicit subgroup, then it makes hardly sense to compare this secondary innovation with structures in languages outside of the specific language family. Even if the deictic markers of Athabaskan should turn out to be archaic and to have been lost in Eyak and Tlingit, it is still important to keep in tune with the right order of comparison, otherwise the results are without much value for a proposed relationship. Thus, the comparison of Yenisseian <d^j-> and <b-> with Athabaskan *<yə-> and *<wə-> is not only problematic with regard to the semantics and the unclarified status of <d^j->, but also crucially with regard to the established methodology of historical-comparative linguistics.

In general, the observations of Vajda (2010a: 47–53) remain putative due to the lack of reliable reconstructions of the pronominal systems and the unstable sounds in the pronouns and agreement markers.

Dene-Kusunda

The agreement system of Kusunda resembles the systems of Yenisseian and Athabaskan-Eyak-Tlingit in that the agreement markers were originally prefixes, reflected by the older prefixation structure of the class I verbs. As mentioned

above, the class I agreement prefixes show differentiation in the first (<ts-> ~ <t-> ~ <s->) and the third person (<g-> ~ <Ø->). The variation in the third person might be caused by semantic properties of the verbs, by which certain verbs are not marked for third person, while others are. Alternatively, the unmarked form might be the original form, whereas the prefix <g-> might have later been created from the third person personal pronoun *gina*[16]. This second interpretation might be more realistic, since the class II verbs always mark a third person subject with <-g>, regardless of the semantic properties of the involved verb. Thus, the third person in Kusunda might originally have been unmarked, just as in Yenisseian and Na-Dene.

The second person subject marker of Kusunda <n-> resembles the second person singular agreement marker found in the Athabaskan languages (see tables 14, 15 and 21).

The first person subject markers of Kusunda can also be brought into relationship to Yenisseian and Na-Dene. The allomorph <s-> is similar to the Athabaskan prefix <*ši-> ~ <xʲi->, shown in table 21, and could be thought of as being cognate to the forms explained by Vajda (2010a: 50). However, it is not clear whether the allomorph <s-> constitutes the original, underlying version of the Kusunda first person subject prefix. It is also possible to think of the form <ts-> as being the underlying form.

Consequently, one could argue that *<ts-> is the original morpheme of which all Dene-Kusunda languages show reflexes. In this scenario, Kusunda would be the only language to have preserved the first person subject marker in its original phonological form, i.e. as dental affricate <ts->. In Burushaski, Yenisenan, Athabaskan, Eyak and Tlingit, the onset of the marker would have changed to a postalveolar affricate */ʧ-/. This stage would be reflected by the Burushaski personal pronoun *je* /ʤe/ 'I' (cf. Berger 1998a: 80). Yenisseian and Athabaskan-Eyak-Tlingit would have spirantised the initial to /ʃ ~ ʒ ~ x/, from which the Proto-Yenisseian pronoun *ʔaʒ and the Athabaskan, Eyak and Tlingit forms would be derived. This highly speculative string of sound changes would indicate that Kusunda is the most conservative language in preserving the original sound shape of the subject marker, corresponding to the conservative overall structure exhibited by Kusunda in comparison with the other languages. However, various sound changes have to be assumed to justify this relationship, and economy therefore favours the assumption of a simple chance similarity. Additionally, it may well be the case that the allomorph <t-> is the original marker for first person in Kusunda, and the allomorph <ts-> may represent a palatalised form conditioned by the high front vowel in the personal pronoun *tsi* 'I'. This is supported by the plural form *tok* 'we' and the oblique root for first person singular, <tən-> (cf. Watters 2006: 46), where the presumably original stop /t/ did not undergo palatalization before the non-front vowels.

Tense/aspect-system

The comparison of the tense/aspect-system of Yenisseian and Na-Dene represents the largest and most detailed part of the morphological argument of Vajda (2010a) for Dene-Yenisseian. The comparison includes both the structural similarities of the verb template and various morphemes building up the fundamental temporal and aspectual oppositions, namely the two tense/mood markers *<xʲi-> and *<ɢa->, the basic aspectual markers *<-ɬ> and *<-ŋʲ>[17] and a distributive/plural morpheme.

As indicated above, the verb templates of Na-Dene and Yenisseian in their most archaic form look intriguingly similar to each other. Vajda (2010a) identifies parallels in all the oldest prefix positions. Similarities in the tense/aspect-systems constitute the strongest argument of his comparison, and this essentially includes the identification of a shared bipartite verb structure. In both language groups, a conjugated verb requests at least a lexical verb root plus a tense/mood marker prefixed to the verb root (cf. Vajda 2010a: 40–41). This tense/mood marker may originally have been derived from an auxiliary and constitutes the second morphology-attracting slot of the verb complex of both Na-Dene and Yenisseian. The bipartite verb structure proposed by Vajda (2010a: 41) is shown in table 22.

However, it must be kept in mind that typological similarities are no evidence for relatedness. Indo-European and Niger-Congo languages are not related to each other just because they happen to share the feature of nominal classes. Campbell/Poser (2008: 192–193) point out the variability of positional similarities in the morphology. Such complex morphology may rapidly build up and rapidly disintegrate, and closely related languages may exhibit quite distinct degrees of morphological complexity, just as non-related languages may share similarly organised complex morphology. As a consequence, it is implausible that both Yenisseian and Na-Dene have retained the original template so thoroughly after many thousands of years (cf. also Campbell 2011: 448). The similarities may also plausibly be due to chance, at least partially, and cannot be viewed as constituting evidence for a relationship between Yenisseian and Na-Dene.

Table 22: Dene-Yenisseian bipartite verb structure (cf. Vajda 2010a: 41)

	auxiliary complex	**stem complex**
Na-Dene	shape/pron.prefix + *AUX*	PERF.STAT + CLASS + *ROOT* + PERF.STAT/TAM
Yenisseian	shape/pron.prefix + *AUX* + TAM	PERF.STAT + DER + *ROOT* + PERF.STAT

Additionally, both G. Starostin (2012: 122) and Campbell (2011: 448–449) point out the problematic consequences of assuming a more analytic structure, consisting of a lexical root and an auxiliary, for the Dene-Yenisseian verb. The verb template of Dene-Yenisseian as proposed by Vajda (2010a) implies quite implausibly that Yenisseian and Na-Dene have undergone similar grammaticalisation processes after the division (cf. G. Starostin 2012: 122). Kibrik (2010: 318) states that '[...] given Vajda's suggestion that these morphemes are originally auxiliary stems, their cognacy does not tell anything about the relatedness of the verb templates per se.'

Besides the typological similarities of the verb template, Vajda (2010a) argues that the morphological material building up the verb forms in Na-Dene and Yenisseian are cognate, namely the tense/mood prefixes and the basic aspectual markers.

The two basic tense/mood affixes (represented as AUX in table 22) which form the second morphology-attracting position in the verb template are reconstructed by Vajda (2010a) as *<ɢa-> and *<xʲi-> and reflected as <si-> and <yi-> in Navajo, <s-> and <ɢə-> in Eyak and <ɯu-> and <ɢa-> in Tlingit. The presumed correspondences in Pre-Proto-Yenisseian as reconstructed by Vajda (2010a: 42), are *<si-> and *<ɢa->, with modern Ket reflexes <s- ~ i- ~ a- ~ ʌ-> and <qo- ~ o->, respectively (cf. Vajda 2010a: 42). In Na-Dene, the use of *<ɢa-> and *<xʲi-> is characterised by a complementary distribution, reflected in Proto-Athabaskan atelic *<ɣa-> vs. telic *<s-> (Kari 1979), Navajo yi- imperfectives vs. si-perfectives (Young 2000) as well as in Tlingit imperfective <ɢa-> vs. perfective <ɯu-> (Leer 1991).

A similarly strict complementary distribution is observable for the proposed Yenisseian cognates to the two Na-Dene morphemes, viz. Ket <qo- ~ o-> and <s- ~ i- ~ a- ~ ʌ->. While the assignment of a firm function to these two morphemes is a difficult task, as Vajda (2010a: 45) has to admit, they presumably originally expressed a contrast in telicity, that is 'the presence or absence of a built-in end point in the verbal event' (Vajda 2010a: 45). In this system, *<ɢa-> originally covered atelic verbal events, whereas *<xʲi-> marked telic verbal events.

According to Vajda's (2010a) analysis, atelic *<ɢa-> was mostly reduced to <o-> in Ket due to the labialisation of /a/ to /o/ when adjacent to an uvular sound, and the subsequent elision of this uvular sound when preceded by another consonant, as in *d-ɯs-**o**-l-bet* 'I rowed' (cf. Vajda 2010a: 43). It was retained as <q(o)-> in Ket 'kill' verbs when no other consonant which forms part of the phonological verb preceded, e.g. *t=**qo**-d-ej* 'he killed me' or *t=**qo**-k-ej* 'he killed you' (cf. Vajda 2010a: 43).

The telic marker *<xʲi-> either yielded the consonantal allomorph <s-> in Ket/Yugh and <š- ~ č-> in Kott, a vocalic allomorph <j- ~ i- ~ a- ~ ʌ->, or zero, depending on the phonological environment (cf. Vajda 2010a: 44). The sibilant

consonant of the morpheme is retained for instance in Ket *d=at-**s**-a-daq* ‘he goes downriver on the ice’ or in *a-k-**s**-saal* ‘he spends the night’ (cf. Vajda 2010a: 44). When preceded by a non-aspirated stop and followed by a prefix beginning in a voiced consonant, <xʲi-> became <ji->. The approximant was later dropped due to Ket/Yugh phonotactic rules not allowing the sequence /ji/ in syllable onset, and the remaining vowel was realised as /ʌ/ or /i/, cf. *d=at-**ʌ**-d-daq* ‘I go downriver on the ice’ or *a-k-**i**-n-saal* ‘he spent the night’. Phonological environments which usually cause syncope in Ket led to the elision of the vowel (cf. Vajda 2010a: 44). After a fricative, affricate or aspirated stop, <xʲi-> became <a- ~ ʌ->, e.g. *du=h-**a**-ta* ‘he (masculine-class tree) stands’, where thematic <h-> is presumably derived from Proto-Yenisseian *<pʰ> (cf. Vajda 2010a: 44).

The analysis provided by Vajda (2010a) that derives all the Ket tense/mood markers <s->, <i-> and <a-> from *<xʲi-> contradicts previous analyses of the Ket verb, including analyses of Vajda himself (2003, 2004), which analysed these markers as being derived from more than one morpheme. This is a major point of criticism of G. Starostin (2012: 124), who suspects that this revolutionary new analysis derives from a need to make the Yenisseian system look more like the Na-Dene system rather than from lingustically informed new insights into Yenisseian verbal morphology. In addition to this point of criticism, the sound changes involved in the formation of the allomorphs <s->, <i-> and <a-> are phonetically implausible, as G. Starostin (2012: 123), too, points out. Especially the sound change /xʲi/ → [a]/[-son]_ is untenable.

Advocates of the Dene-Yenisseian hypothesis may point out likewise unexpectable sound changes in well established language families to justify the validity of the Yenisseian development, for example Proto-Indo-European */dw/ to Armenian /erk/, as in *erku* ‘two’, cognate with Latin *duo*, in *erkar* ‘long’, cognate with Greek *δηρό-* ‘long’ (← **dwāro-*), or in the verb root *erki-* ‘to frighten’, cognate with Greek *δείδω* ‘to fear’ and Sanskrit *dvéṣṭi* ‘hates’ (← **dwei-*) (Meillet 1925: 6; Mallory/Adams 2006: 299, 339). However, unlike the proposed Dene-Yenisseian sound change, the sound change from Proto-Indo-European */dw/ to Armenian /erk/ has been proven to be regular and systematic, being attested in a sufficient number of reflexes with stable Indo-European etymologies. Unless much more instances of the Yenisseian sound change are detected to prove the change to likewise be regular and systematic, it should be rejected on the grounds of phonological implausibility, and with it the correspondence of Ket <a-> to Na-Dene *<xʲi->. Consequently, Yenisseian does not exhibit a proper two-member telicity paradigm corresponding to that of Na-Dene, and the similarities between the Yenisseian and Na-Dene systems become much less cogent.

Similar problems are obvious in the identification of Yenisseian <o-> with Na-Dene *<ɢa->. The scarceness of an original uvular sound in the Yenisseian morpheme decreases the plausibility of the comparison. Additionally, the change

proposed by Vajda (2010a), by which former <qo-> in Yenisseian is reduced to <o-> if the morpheme is preceded by another morpheme belonging to the phonological verb, is not as convincing as a first gaze implies. G. Starostin (2012: 123) shows that the uvular sound does not show up in verb forms where it would be expected according to Vajda's description of its distribution. Consider the verb form *d=a-v-a* 'I am braiding it' and its past tense form *d=o-m-n-a* (← **d=o-v-n-a*) (G. Starostin 2012: 123). Just as in *t=qo-d-ej* 'he killed me', the initial <d=> is a clitic and does not belong to the phonological word, so that the prefix <o-> is word-initially and should, according to the distribution claims of Vajda, appear as <qo->, viz. **d=qo-m-n-a.* However, it appears as <o->, indicating that either Vajda's distribution is not correct and the two Ket morphemes <qo-> and <o-> are not identical, or that <qo-> was reduced to <o-> in *d=o-m-n-a* due to some process of analogical levelling. G. Starostin (2012: 124), quite rightly, comments on the possibility of analogy: 'But if we bring analogy in the discussion, why have all the paradigms suffered the same analogical fate except for the verb "to kill"?' G. Starostin (2012: 124) also shows that <qo-> in the verb 'to kill' obviously occupies the same floating slot as the past tense markers <l-> and <n->, being placed before the object markers of first and second person, but after the object markers of third person, whereas <o-> never shows this kind of shift in slot position. This, again, may indicate that they actually constitute two separate morphemes.

The unsolved questions and doubts raised in the preceding paragraphs must be taken seriously and have to be resolved by proponents of Dene-Yenisseian if the hypothesis is ought to subsist as a serious proposal. For the time being, the comparison of the so-called tense/mood markers does not stand up to critical review (cf. also G. Starostin 2012: 124) and needs to be reworked.

Besides the parallels in the tense/mood markers, two aspectual markers are similar, too, and are interpreted by Vajda (2010a: 42, 46) as being genealogically related to each other. These two markers in Na-Dene, namely the progressive marker *<-ɬ> and the perfective marker *<-ŋʲ>, are suffixes to the verb root and, following their fusion with the adjacent verb root, have created the characteristic aspectual verb stems. An example of the tremendous variety of verb stems in the Athabaskan language Slave is given in table 23 (cf. Rice 1989: 828).

The example of Slave aspectual verb stem alternations shows in an insightful way how the two markers *<-ɬ> and *<-ŋʲ> are the fundamental device to derive verb stems differentiated for aspect, while the marker themselves are no longer overtly present. Closer inspection of the phonological alternation of the aspectual verb stems gives a clear indication of the original phonological shape of the aspectual morphemes. Thus, in Slave, the aspectual verb stems with final /h/, e.g. momentaneous imperfective <-káh>, are derived from the combination of a verb root and former /ɬ/, which became /h/ in Slave (cf. Rice 1989: 439). The

Table 23: Slave aspectual verb stems (extract) of <-ká> 'to handle a contained object' (cf. Rice 1989: 828)

	Imperfective	Perfective	Optative	Future
Momentaneous	káh	kǫ	káh	kah
Continuative	ka	kǫ	ká	-
Repetitive	kah	kah	kah	-
Neuter	kǫ	ká	ká	-

aspectual verb stems with nasalised vowel, e.g. momentaneous perfective <-kǫ>, must be derived from the fusion of the verb root with a nasal suffix, viz. *<-ka-N>. These two ancient, underlying suffixes reflect the progressive marker *<-ɬ> and the perfective marker *<-ŋʲ> (cf. also Leer 1979).

According to Vajda (2010a: 46), the two lexically conditioned past tense and imperative markers <l-> and <n-> of modern Ket are cognate to the two Na-Dene aspect markers. A few verbs in modern Ket where the distribution of <l-> and <n-> is not lexically conditioned, e.g. *hantet* 'Subject broke it (once)' vs. *haltet* 'Subject broke it (several actions)', show that the two markers originally may have expressed aspectual differences similar to the Na-Dene markers.

While the phonetic and functional similarities are quite convincing, the different position of these markers in Na-Dene and Yenisseian constitutes an obstacle in tracing these morphemes back to a shared origin. The Yenisseian markers <n-> and <l-> occupy a prefix slot and are separated from the verb root by the agreement markers (cf. Werner 1997a: 85; Werner 1997b: 155). The aspect markers *<-ɬ> and *<-ŋʲ> of Na-Dene, in contrast, are suffixes directly attached to the verb root. Vajda (2010a: 41, 46) tries to explain this difference with alternating marking strategies in Yenisseian and Na-Dene and analyses the position of the aspect prefixes of Yenisseian as having arisen from the suffixation of these markers to the ancient auxiliary instead of to the verb root as in Na-Dene. Although this seems like a comprehensible explanation, it does not answer the motivation behind such a different marking strategy. Additionally, such an explanation substantially hinges on an identification of the tense prefixes <s- ~ i- ~ a- ~ ʌ-> and the labialised vowel <o-> of modern Ket with the two telicity markers *<xʲi-> and *<ɢa-> of Na-Dene, that is as morphology-attracting auxiliaries. Since the present evidence cannot conclusively relate these morphemes (see above), the possibility of mere chance similarity as source for the parallels between Yenisseian <l-> and <n-> and Na-Dene *<-ɬ> and *<-ŋʲ> is greatly increased. G. Starostin (2012: 125) accepts the comparison as possible evidence for Dene-Yenisseian, but it is advisable to remain skeptical unless more

evidence is brought forward.

Another similarity in the tense/aspect-system of Na-Dene and Yenisseian discussed in Vajda (2010a: 41–42) involves the use of the Na-Dene perfective morpheme *<ŋʲ> as a 'perfective/stative' marker (Leer 2000), that is as a marker of verb forms expressing a state that was created by former action, e.g. Proto-Athabaskan ***ŋʲəžuˑŋʲ*** 'it is good' or Tlingit *ʔuwatáˑ* (← <ɯu-ɯa-ta-**ɯ**>) 'it has gotten fat' (Leer 2000: 126–127). A similar morpheme, reconstructed as *<jə->, is also found in Yenisseian, e.g. Ket *t-a-b-**ʌ**-kit* 'it is (in the state of having been) rubbed' and *a-**jʌ**-dop* 'it is plugged', Kott *b-a-l-**aː**-kit* 'it was (in a state of having been) rubbed' (Vajda 2010a: 42). As in Na-Dene, this marker in Yenisseian often appears twice, as a prefix and as a suffix, the latter having the shapes <-ej ~ -e ~ -i ~ -j ~ -ŋ>, the nasal allomorph mainly appearing after uvulars (cf. Vajda 2010a: 42).

The correspondence of Na-Dene stative/perfective *<ŋʲ> and Yenisseian *<jə-> would imply the identity of the Yenisseian stative/perfective *<jə-> and the perfective prefix <n-> discussed above, since the two alleged cognates in Na-Dene both arose from the same morpheme, namely *<ŋʲ>. The problem of these assumptions lies in the different phonological realisation of the marker in its different uses in Yenisseian. Vajda (2010a: 42) addresses this issue and speculates that the nasal /ŋ/ in the marker *<ŋʲ> may have assimilated to its palatal secondary articulation, becoming /ɲ/, and ultimately ended up as /n/ by a process of dissimilation when following the likewise palatal tense/mood marker <xʲi> [çi], thus yielding the modern Ket perfective marker <n->. After the verb root, however, unaffected by the tense/mood marker <xʲi>, the morphem *<ŋʲ> would have yielded the allomorphs <-ej ~ -e ~ -i ~ -j ~ -ŋ> (cf. Vajda 2010a: 42).

However, this phonological development is speculative rather than built on solid evidence. Additionally, it only treats one half of the problem, that is the different realisation of the marker as stative/perfective suffix <-ej ~ -e ~ -i ~ -j ~ -ŋ> on the verb root and as perfective aspect prefix <n-> following the tense/mood marker. The other part of the problem concerns the different realisations of the marker in its uses as perfective/stative prefix *<jə-> and as perfective aspect prefix <n->.

The perfective aspect prefix <n-> is defined as following the tense/mood markers, that is the ancient auxiliaries, and the perfective/stative prefix may likewise be immediately preceded by these tense/mood markers, in which case the perfective/stative prefix is realised as <ajʌ-> in modern Ket, with an additional vowel /a/ which is analysed as epenthetic by Vajda (2010a: 42), e.g. *il-u-k-s-**ajʌ**-bet* 'it is broken'. This would indicate that the Yenisseian morpheme cognate to the Na-Dene marker *<ŋʲ> would be realised as either <jʌ-> or <n-> in an identical phonological and morphological environment. Such a non-transparent and unexplained split violates the principles of historical-comparative linguistics and the basic principles of sound change as being regular

and can only be resolved by assuming that either the two morphs in question are not instances of the same morpheme, or that a formerly present conditioning environment leading to two different realisations was repealed by some intermediate change.

The overall structure of the Proto-Yenisseian verb established in the paper of Vajda (2010a: 40) shows the slot of the tense/mood markers to be separated from the perfective/stative prefix by the agreement prefixes for first and second person, whereas the perfective aspect marker <n-> is always immediately attached to the tense/mood markers. Thus, we may assume a different morphological environment for the perfective/stative marker and the perfective aspect marker, at least in the majority of verb forms, which led to a different phonological development and resulted in the present split <jʌ-> vs. <n->.

Despite this passably convincing assumption, it is possible to assume that the two morphemes <jʌ-> and <n-> of modern Ket represent two different morphemes instead of being derived from the same source. In this case, a comparison of both Yenisseian morphemes <jʌ-> and <n-> with the same morpheme of Na-Dene, namely *<ŋʲ>, would constitute a violation of the principle of comparative linguistics not to compare one form in one language with multiple forms in another language (cf. Campbell/Poser 2008: 210) and decrease the quality of the evidence for Dene-Yenisseian.

Another shortcoming of the comparison of the Yenisseian morphemes assumed to be cognates of the Na-Dene perfective/stative circumfix lies in the contradictory analysis of Vajda (2010a). At one point, Vajda defines the aspectual affixes as being attached to the tense/mood markers in Yenisseian, presumably in order to present the two aspectual markers <n-> and <l-> as a coherent set comparable to the aspectual suffixes of Na-Dene. At another point, namely in the search for a correspondence to the Na-Dene perfective/stative circumfix, Vajda instead analyses the perfective marker of Yenisseian to be attached to the verb root, both as prefix and suffix, obviously contradicting his previous analysis of an auxiliary-attachment of the Yenisseian morpheme.

These two analyses leave us with three instances of the perfective affix in Yenisseian, one as suffix to the tense/mood markers, one as prefix to the verb root and one as suffix to the verb root, whereas Na-Dene only exhibits two of them, one as the perfective/stative prefix and one as perfective aspect suffix. Thus, while the distribution and function of the perfective affix is transparent in Na-Dene, the same cannot be said of its proposed Yenisseian correspondence. The two separate analyses of Vajda (2010a) on the aspectual markers and the perfective/stative affix both make sense on their own, but in combination, they create an implausible synopsis of the respective Yenisseian morphology which does actually not match the pattern observable in Na-Dene. Why is the perfective/stative morpheme attached to the verb root in Yenisseian, when in another instance, i.e. as the aspectual marker <n->, the perfective/stative

morpheme cannot and is not attached to the verb root, but to the auxiliary? Thus, in Yenisseian, the morphemes *<jə-> and <-ej ~ -e ~ -i ~ -j ~ -ŋ> are probably not etymologically related to the perfective affix <n->.

These open questions cannot be resolved conclusively at the present stage, but that the mere existence of such questions demands more detailed and studious work by those in favour of Dene-Yenisseian. In the next sections, the tense/aspect-systems of Burushaski and Kusunda will be compared to those of Na-Dene and Yenisseian.

Parallels in Burushaski

Burushaski exhibits an elaborated tense-system, but, as was pointed out above, much of this diversity is due to periphrastic constructions built up with the participle <-m> and the auxiliary. Table 24 shows the different tenses/aspects of Burushaski, using the German (and somewhat Eurocentric) terminology of Berger (1998a: 142).

The slot immediately after the verb root is followed by a presumably old aspect marker <-ć> (cf. table 8). This marker derives the so-called present stem from the verb root and serves as a basic form for the following tenses: future, present and imperfect (cf. Berger 1998: 142 and table 24). All of these tenses in Burushaski express an action that is ongoing or possible/hypothetical (cf. Berger 1998a: 159–162, 164), e.g. future in the verb form *ayáćuman* in example (62) (cf. Berger 1998a: 159).

Table 24: Burushaski tense/aspect-system (cf. Berger 1998a: 142)

	Formation	**Example**	**Translation**
Konativ	R-AGREE	her-i	‘He is about to cry.’
Präteritum	R(-LV)-PART-AGREE	hér-i-m-i	‘he cried.’
Futur	R-**DUR**(-LV)-PART-AGREE	hér-ć-i-m-i	‘he will cry.’
Perfekt	R(-LV) = *AUX.PRES*	her-u = bai	‘he has cried.’
Präsens	R-**DUR**(-LV) = *AUX.PRES*	hér-ć-u = bai	‘he’s crying.’
Plusquamperfekt	R(-LV) = *AUX.PRET*	hér-u = bam	‘he had cried.’
Imperfekt	R-**DUR**(-LV) = *AUX.PRET*	hér-ć-u = bam	‘he was crying.’

(62) *je hínuma ágar khóle men leél umánan ke je phat ayáćuman biláśue*
je hinuma agar khole men leel u-man-an
1SG alone if here nobody known 3PL.HX.SUBJ-become-3PL.HX.SUBJ
ke je phat a-ya-t-ć-u-m-an
then 1SG allow NEG-1SG.OBJ-do-DUR-LV-PART-3PL.HX.SUBJ
bilas-o-e
witch-PL.HX-ERG
'If the witches realise that I'm alone here, they won't let me [escape].'

One could argue that this binary system of tenses with and tenses without the present marker resembles the dichotomy of progressive and perfective in Yenisseian and Athabaskan-Eyak-Tlingit. However, the durative marker of Burushaski does not show any phonetic similarities to the affixes <n->/*<-ŋʲ> and <l->/*<-ɬ> of Yenisseian and Na-Dene, so that the functional similarities are most probably just typological parallels without any significance for genealogical relationship.

Parallels in Kusunda

The Kusunda tense/aspect-system exhibits a binary distinction between realis and irrealis, the realis aspect denoting actions or states that already took place or are taking place and the irrealis aspect designating events that will or might happen (cf. Watters 2006: 66). However, for the class II verbs, the tense/aspect-system is extended to include past tense. This past tense seems to be a recently evolved category, since it only occupies part of the semantic domain of the realis aspect and is not distinguished from the realis aspect in negated forms (cf. Watters 2006: 66, 71).

The realis aspect is expressed by the suffix <-(ə)n> after the plural suffix and, in the case of class II verbs, after the agreement suffixes (cf. Watters 2006: 66). As pointed out above, the suffixation strategy of the agreement markers employed in class II verbs causes the plural suffix <-da> to coalesce with the agreement marker and the realis suffix (cf. Watters 2006: 65). Examples of the realis aspect in class I and class II verbs were shown above in the section concerning the agreement morphology.

The irrealis aspect is expressed by the suffixes <-du> and <-k> (Watters 2006: 66), <-du> being the suffix in singular verb forms and <-k> the irrealis marker in plural verb forms. Watters (2006: 64) speculates that the irrealis in plural verb forms was originally expressed by the suffix <-da> and that the morpheme <-k> originally expressed plurality, like in the domain of personal pronouns, which form the plural by adding the suffix <-k> (cf. Watters 2006:

44). The morphophonological realisation of these morphemes is more accurate in class I verbs, as examples (63) and (64) show (Watters 2006: 63–64).

(63) *təmdu*
t-əm-du
1.SUBJ-eat-IRR
'I will eat.'

(64) *təmdak*
t-əm-da-k
1.SUBJ-eat-PL-IRR
'We will eat.'

In class II verbs, the agreement suffixes coalesce with the irrealis marker as well as with the plural marker, so that the morpheme sequences <-d-du> [-1.SUBJ-IRR], <d-da-k> [-1.SUBJ-PL-IRR], <-n-du> [-2.SUBJ-IRR], <-n-da-k> [-2.SUBJ-PL-IRR], <-g-du> [-3.SUBJ-IRR] and <-g-da-k> [-3.SUBJ-PL-IRR] are fused to <d-u> [-1.SUBJ-IRR], <-d-ək> [-1.SUBJ-IRR.PL], <-n-u> [-2.SUBJ-IRR], <-n-ək> [-2.SUBJ-IRR.PL], <-g-u> [-3.SUBJ-IRR] and <-g-ək> [-3.SUBJ-IRR.PL], respectively (cf. Watters 2006: 64–66), as shown in examples (65) and (66) (Watters 2006: 64).

(65) *pumbadu*
pumba-d-u
beat-1.SUBJ-IRR
'I will beat (someone).'

(66) *pumbadək*
pumba-d-ək
beat-1.SUBJ-IRR.PL
'We will beat (someone).'

A small set of class I verbs does not express the irrealis aspect by suffixes, but by a process of mutation by which all sounds of the verb form including the realis suffix are shifted back one position of articulation, e.g. /g/ to /ɢˢ/ or /ə/ to /a/, as illustrated in examples (67) and (68) (Watters 2006: 68).

(67) *tsi tsəgən*
tsi ts-əg-ən
I 1.SUBJ-go-REAL [-mutation]
'I went.'

(68) *tsi ʧaɢˤan*
tsi ʧ-aɢˤ-an
I 1.SUBJ-go-REAL [+mutation]
'I will go.'

The basic aspect system of Kusunda is similar to Yenisseian and Athabaskan-Eyak-Tlingit in that the system builds on two complementary markers, namely the realis suffix <-(ə)n> and the irrealis suffixes <-du> and <-k>. In addition, the realis suffix <-(ə)n> shows a certain similaritiy to the perfective-stative affixes *<-ŋʲi> and <n-> of Na-Dene and Yenisseian, but this is very likely a chance similarity, since there are no further and deeper parallels between the aspect-systems of Kusunda and Dene-Yenisseian. Van Driem (2014: 80) relates the realis marker <-(ə)n> of Kusunda to the plural markers of Burushaski, <-an ~ -en>, and Ket, <-n, -ŋ>. The quality of this comparison is increased by the fact that the plural marker of Ket may in fact be derived from the nasal allomorph of the perfective/stative suffix <-ej ~ -e ~ -i ~ -j ~ -ŋ>, as in *-doq* 'one subject flies' vs. *-doq-**ŋ*** 'various subjects fly' (Vajda 2010a: 42). However, this is almost surely a chance similarity, since it is not possible to relate the morphemes of all three languages in an embracing and elegant way. Additionally, nasals are predominantly used in grammatical morphemes in many languages (Maddieson 1984: 70).

Another more convincing similarity is detectable between the Kusunda plural suffix <-da>, added directly to the verb stem in front of the aspect suffixes, and a prefix <d-> in Ket expressing distributive meaning as well as the Proto-Athabaskan distributive plural proclictic *<dâ˙=> placed before the tense/mood markers (cf. Vajda 2010a: 47). The similarity between the Ket and Athabaskan morphemes and the Kusunda suffix was already mentioned in Gerber (2013) and was adopted by van Driem (2014: 80). However, this parallel, too, may likewise belong to the realm of chance similarities to be expected between any two languages. The present work of the proponents of Dene-Yenisseian and Dene-Kusunda cannot explain away chance similarity for this correspondence, and unless this changes, it should be treated as such.

An explicit problem posed by Kusunda concerns the process of mutation to derive the irrealis from some class I realis verb forms. Since this process is presumably archaic, we may hope to find correspondences of this process in languages related to Kusunda. The fact that no traces of such a process are

visible in neither Na-Dene nor Yenisseian or Burushaski indicates that the most archaic devices to differentiate tense and aspect in Kusunda and the other Dene-Kusunda languages were more aberrant from each other than the modern day systems imply, i.e. that they are not derived from a common source.

As a conclusion to the prominent topic of tense/aspect-systems in Dene-Kusunda comparison, it can be stated that many parts of the Dene-Yenisseian comparison of Vajda (2010a), though looking appealing on first sight, must be revised and improved on the basis of more detailed work, while some parts of it should be preliminarily excluded from the body of positive evidence for Dene-Yenisseian until new and more convincing evidence for their inclusion can be presented, e.g. the perfective/stative comparison or the tense/mood marker parallels. With regard to Burushaski and Kusunda, we can say that some minor similarities are detectable and that those two languages, too, build their tense/aspect-system on the basis of a binary differentiation. However, apart from typological similarities, little specific material is feasible, and the detected parallels are likely to be mere chance similarities without significance.

Shape prefixes

Both Na-Dene and Yenisseian exhibit a class of verbal morphemes located between the object markers and the tense/mood prefixes (cf. Vajda 2010a: 53). In Yenisseian, these 'determiners' (Krejnovič 1968: 29–40) have the shape of single consonants, some of which may ultimately be derived from incorporated body part nouns (cf. Vajda 2003). In general, these morphemes are largely fossilised stem elements in Yenisseian without transparent semantics, mostly so in Ket and Yugh (cf. Werner 1997b: 157–158), whereas they still productively differentiate verbs in Kott, e.g. *oːfuːjaŋ* 'I'm spinning' vs. ***f-****ofuːjaŋ* 'I'm twining' (Werner 1997a: 85–86). The assumed cognate morphemes in Na-Dene are conventionally called 'qualifiers' (Kari 1989). Here, too, some of these morphemes may be derived from anatomical nouns, while others are neither semantically nor etymologically transparent (cf. Vajda 2010a: 53). The prefixes are more productively used in Eyak, whereas most Athabaskan languages no longer make use of them (cf. Vajda 2010a: 53). Neither Burushaski nor Kusunda exhibit any morphology which could be brought into relationship with the Yenisseian determiners or the Na-Dene qualifiers, as Burushaski and Kusunda generally seem to lack stem extension morphemes and noun incorporation.

Vajda (2010a: 53–54) claims that three morphemes found both in Na-Dene and Yenisseian are cognate, reflected in Ket <n-> 'round', <d-> 'long shape, along' and <h-> 'area, surface' and the semantically similar Athabaskan reconstructions *<nə->, *<də-> and *<qʊ->. The comparison of these prefixes, however, cannot be judged as being convincing. Firstly, these morphemes are very short, mainly single consonants, and this highly increases the possibility of chance similarities. Secondly, the possibility of superficial look-alikes is even

enhanced by the frozen semantics of the morphemes of both Na-Dene and Yenisseian, which allows speculative assumptions about the original meaning, leading to a more akin look of the claimed correspondences. Thirdly, the shape prefix expressing long shape shows an irregular sound correspondence between Ket and Kott, namely Ket /d/ ~ Kott /dʲ/, where we would expect Kott /č/ (cf. Vajda 2010a: 54). This is explained by Vajda (2010a: 55) as being triggered by the following tense/aspect markers. The conjecture nature of this reasoning is acknowledged by Vajda (2010a: 55) himself. Finally, the fact that these shape prefixes are only a minor component of the prefix zone in question and that the respective zone contains many other morphemes demands that correspondences for these other morphemes must be found in order to convincingly argue for a shared origin of the morphological material in this prefix zone of both Yenisseian and Na-Dene.

Vajda (2010a: 55) confesses that the shape prefixes do not constitute the best evidence for genealogical relationship and that much more work needs to be done on these morphemes in Na-Dene and Yenisseian. Understandably, this part of his morphological comparison has faced a harsh evaluation by its critics, namely by G. Starostin (2012: 125–126), who convincingly points out that the attribution of clear semantics to the shape prefixes of Yenisseian is difficult and that the concrete analysis of the semantics of these morphemes of Vajda (2010a) is questionable, considering the existence of other verb forms where the assumed meaning, e.g. 'round' for <n->, is clearly absent. Evidently, much more work on the individual morphemes in both Yenisseian and Na-Dene is needed before the shape prefixes can be used as convincing evidence for a genealogical relationship between Na-Dene and Yenisseian.

Classifiers

One of the most fundamental and intriguing parts – the 'hallmark' (Leer 1991: 94) – of the verbal morphology of Na-Dene languages are the so called classifiers. The classifiers are morphemes which, generally spoken, mark valence changes on the verb root. The classifiers are the morphemes nearest to the verb root, a fact that shows that they belong to the oldest layer of the morphology of nowadays Na-Dene languages (cf. Kibrik 1993: 48–49). In the following, the classifier systems of Athabaskan, Eyak and Tlingit are explained and the proposed reconstruction of the Proto-Na-Dene classifier complex is outlined before moving on to presenting possible cognates in Yenisseian and Burushaski.

The Na-Dene system

Athabaskan languages and Eyak show a system of four classifiers, with the concrete phonological forms <Ø->, <ɬ->, <d-> and <l-> in Navajo (cf. Young/Morgan 1980: 353), <Ø->, <h-> (← *<ɬ->), <d-> and <l-> in Slave (cf. Rice 1989: 439), <Ø->, <s-> (← *<ɬ->), <d-> and <l-> in Sarcee (cf. Cook 1984:

162–163), and <Ø->, <ɬ->, <də-> ~ <di-> and <ɬə-> ~ <ɬi-> in Eyak (cf. Krauss 1965a: 175). The classifier reconstructed for Proto-Athabaskan are *<Ø->, *<də->, *<ɬ-> and *<ɬə-> (Krauss 1965b: 20).

The classifiers in Athabaskan and in Eyak often function as thematic prefixes without a grammatical function and are thus lexically conditioned, but in cases where they still bear a grammatical function, the classifier <ɬ-> generally causes an increase in valence, whereas the classifiers <d-> and <l-> corresponds to a decrease of valence or lack of transitivity in various specific materialisations. The examples below, taken from Young/Morgan (1980: 184, 354) for Navajo (examples (69)–(72)), and from Cook (1984: 164) for Sarcee (examples (73)–(76)), illustrate the usage of the classifiers <d-> and <ɬ-> (→ <s-> in Sarcee) with regard to valence decrease and increase, respectively.[18]

(69) *yich'id*
yi-Ø-ch'id
3.OBJ-CLASS.Ø-scratch
'He's scratching it.'

(70) *ádích'id*
ádí-d-ch'id
3.REFL-CLASS.D-scratch
'He's scratching himself.'

(71) *dohɬid*
di-oh-Ø-lid
THEM.fire-2DUPL.SUBJ-CLASS.Ø-burn
'You are burning.'

(72) *dohɬid*
di-oh-ɬ-lid
THEM.fire-2DUPL.SUBJ-CLASS.Ł-burn
'You are burning it.'

(73) *yìsʔí*
Ø-ɣi-s-Ø-ʔín
OBJ-PERF-1.SUBJ-CLASS.Ø-see
'I saw it.'

(74) *yìst'í*
ɣi-s-d-ʔín
PERF-1.SUBJ-CLASS.D-see
'I was seen.'

(75) *nágòn*
ná-Ø-gòn
ITER-CLASS.Ø-dry
'It is drying.'

(76) *náyìsgòn*
ná-ɣi-s-gòn
ITER-PERF-CLASS.ɬ-dry
'He will dry it.'

The Tlingit classifiers (cf. table 25) are morphologically more complex than the classifiers of Athabaskan and Eyak. The classifier complex of Tlingit accurately reflects the inherited tripartite structure, which, to a lesser extent, is also visible to some extent in Eyak and internally reconstructible for Athabaskan (cf. Hoijer 1948: 255; Krauss 1965b; Krauss 1969: 53; Leer 1991: 94–95). The three components of Pre-Athabaskan described by Krauss (1969: 54) as 'd-component', 'y-component' and 'ɬ-component' are reflected in Tlingit as 'D-component', 'I-component' and 'series-component' (Leer 1991: 94).

The crucial point behind this terminology is the assumption that the classifier system of Pre-Athabaskan, that is Athabaskan-Eyak-Tlingit, can be analysed as having consisted of three morphologically and phonologically separated and functionally divergent units, namely the basic dichotomy of <Ø-> and <ɬ->, to which the d-component and the y-component could be added (Krauss 1969: 54).

Tlingit, in contrast to Athabaskan and Eyak, exhibits four basic forms, namely <Ø->, <ɬ->, <s-> and <š->, to which the D-component and the I-component are added (cf. Krauss 1969: 54; Leer 1991: 94–95). The classifiers are used as thematic prefixes and as derivational elements (cf. Leer 1991: 46, 96–103). Like in Athabaskan and Eyak, the Tlingit classifiers supplemented with the D-component occur in intransitive themes and in verbs with decreased valency, e.g. reflexive or reciprocal, as in *Ø-uɣa-w-**di**-ʔú's'* 'he/she washed his/her own face' vs. *ʔa-uɣa-'-wa-ʔú's'* 'he/she washed another's face' (cf. Leer 1991: 98). Likewise corresponding to the Athabaskan and Eyak material, the series-component <ɬ-> and <s-> occur in complementary distribution in causative and transitive derivational strings (cf. Leer 1991: 99–101).

Table 25: Tlingit classifiers (cf. Leer 1991: 95)

	-D			+D		
	label	-I	+I	**label**	-I	+I
Ø-series	Ø	Ø	ɯa	Ø+*D*	da	di
ɬ-series	ɬ	ɬa	ɬi	ɬ+*D*	ɬ	tɬi
s-series	*s*	sa	si	*s*+*D*	s	tsi
š-series	*š*	ša	ši	*š*+*D*	š	tši

As mentioned above, the comparison of the classifier systems of Athabaskan, Eyak and Tlingit shows that these systems derive from a tripartite complex of three individual morphemes, which fused in different ways in the individual language groups. The reconstruction of Leer (2008: 22) of the original morphemes involves *<yi->, *<S-> and *<də->. The second component *<S-> constitutes an abstract notion reflecting the assumption that this component consisted of more than one concrete morpheme, at least two, which have the phonetic shapes *<s-> and *<ɬ-> (cf. Leer 2008: 22). According to Leer (2008: 23), the syntagmatic order of the classifier morphemes was <yi-S-də>, quite in contrast to Krauss (1969: 67), who suggests the order <d=L=y> (= <də-S-yi> in Leer's notation).

The morpheme *<yi-> (the 'y-component' of Krauss (1969)) derives from the perfective/stative prefix *<ŋʲ-> which was discussed above. In early Proto-Athabaskan-Eyak-Tlingit, the classifier sequences *<yi-də> and *<yi-S-də>, underwent sound changes in which the prefix *<yi-> assimilated the vowel of the classifer *<də-> to *<di-> and was lost consequently, resulting in the sequences *<di-> and *<S-di-> (cf. Leer 2008: 25). In Athabaskan, the alternation between *<di-> (← *<yi-də>) and *<də-> and between *<ɬi> (← *<ɬ-di> ← *<yi-ɬ-də>) and *<ɬə> (← *<ɬ-də>) was levelled out and yielded *<də-> and *<ɬə- ~ lə-> (cf. Leer 2008: 26), whereas the differentiation in the vocalic quality was maintained in Tlingit and Eyak.

The series component *<S-> operates as thematic or valence-increasing prefix. The fact that instances of *<S-> in Na-Dene are also found with intransitive themes suggests that this component originated from something else than a simple valence-increasing morpheme (cf. Leer 2008: 24). The prefix is widely used as noun-classificatory prefix in Tlingit, and traces of such a function are also found in Athabaskan and Eyak, in which it refers to '[...] a limp body or corpse' (Leer 2008: 25). However, the primary use of *<S-> is clearly that of a

valence-increasing device (cf. Leer 2008: 24). In Proto-Athabaskan-Eyak, the two morphemes *<s-> and *<ɬ-> merged into *<ɬ->, whereas they were kept separate in Tlingit, which later innovated a third morpheme <š-> (cf. Leer 2008: 25, 28).

The last element of the classifier string, *<də->, is a thematic and valence decreasing morpheme which is maintained in all branches of Na-Dene (cf. Leer 2008: 25). The reshuffling of the classifier system in the individual branches, both phonologically and functionally, will not be further elaborated here and can be found in detail in Leer (2008). It has become clear that the simple classifiers of Athabaskan actually derive from a much more complex structure of three interacting components, and any language claimed to be related to Na-Dene should show traces of at least a part of this classifier system. This necessity is even more urging when we consider the antiquity of the morphological material that constitutes the classifiers of Na-Dene.

Whereas Kusunda has no similar morphemes whatsoever,[19] there are morphemes in Yenisseian and Burushaski that could be brought in relationship to the Na-Dene classifiers. I will first present the claimed cognates of Vajda (2010a) in Yenisseian and later turn to the parallels in Burushaski.

The Yenisseian link to the classifiers

Vajda (2010a: 56) presents potential cognates to all the Na-Dene classifier elements except for the valence-increasing morpheme *<s->. His argumentation hinges on his interpretation of the valence-changing function of the classifiers as secondary innovation in Na-Dene, whereas Yenisseian would have retained the original valence-unrelated function which is also seen in some instances of the Na-Dene classifiers (cf. Vajda 2010a: 59).

The y-component of Na-Dene was shown to have arisen from assimilation by the perfective/stative prefix (cf. Leer 2000). In Yenisseian, the perfective/stative prefix *<jə->, the correspondence to the y-component of Na-Dene, did not develop any grammatical interaction with elements cognate with the d- and ɬ-elements of Na-Dene, but merged with the subject prefix (cf. Vajda 2004).

Vajda (2010a: 56–57) assumes that the classifier element *<də-> in Na-Dene was ultimately derived from a homonymic and auto-instrumental third person possessive prefix, that is a prefix which denotes actions performed by one's own body, e.g. drinking or the natural production of sound. The element in Yenisseian which he identifies as cognate to this possessive prefix is the prefix *<ǯ> of Proto-Yenisseian (<d-> in Ket, <dʲ-> in Yugh, <č-> in Kott) which conforms to the regular sound correspondence Na-Dene */d/ ~ Proto-Yenisseian */ǯ/ set up by Vajda (2010a: 80). This Yenisseian prefix regularly occurs as imperative prefix (imperative formation historically involved valence reduction, still visible in the deletion of any subject agreement prefixes from the verb form

in the imperative mode (Vajda 2004: 46)), but is also used in contexts more akin the proposed auto-instrumental origin of the Na-Dene classifier *<də->, namely '[...] vestigially in the anlaut of a number of verb bases denoting body position or the production of sound [and possibly in] certain verbs of sound, such as "laugh" [...]' (Vajda 2010a: 57).

Vajda (2010a: 57) cannot detect any cognate for the classifier *<s->, and the possible correspondences to the classifier *<ɬ-> are scarce and not sufficient to assume that there ever existed a cognate in Yenisseian. This poverty of comparable material is claimed to derive from morphophonological rules of Yenisseian by which these consonantal classifiers were elided before the consonant onset of verb roots (cf. Vajda 2010a: 57). Despite the poverty of comparable material, Vajda (2010a: 57) argues that the classifier *<ɬ-> in Na-Dene originated from a prefix used to derive verbs from adjective or stative verbs, being the functional precursor of the valence-increasing semantics of the classifier yielded in a subsequent semantic shift. This change is related by Vajda (2010a: 58) to the homonymic instrumental postposition <-ɬ> found in Na-Dene nominal morphology, which may have caused a reanalysis of the derivation prefix *<ɬ-> to become a general marker of valence increase. Yenisseian, while not having virtually any correspondence to the classifier *<ɬ-> itself, shows a phonetically similar device to derive nouns denoting tools (cf. Vajda 2010a: 59). However, the correspondence of this nominal marker of instrumentality, even if it is valid, does not prove the influence of this marker on the development of the semantics of the classifier *<ɬ-> in Na-Dene, nor does it signify the *quondam* existence of a Yenisseian verb marker cognate to the Na-Dene classifier.

In general, the Yenisseian correspondences to the Na-Dene classifiers proposed by Vajda (2010a) are weak, mainly due to the speculative assumption of major changes in the function of the classifiers from Proto-Dene-Yenisseian to Pre-Na-Dene, the one and only purpose of which is to open up the Na-Dene classifiers for a comparison with morphological material in Yenisseian. The comparisons involve a great deal of hypotheses where direct and convincing parallels are not available, and thus fails to convince.

The unconvincing nature of the Yenisseian parallels was also pointed out by Kibrik (2010: 318): '[...] as long as the status of the immediately pre-root TIs [= Transitivity Indicators, i.e. classifiers] is not clarified, morphological argument for the relationship largely fails', and was identified as a crucial shortcoming of the morphological comparison by Campbell (2011: 450). It seems to me that Burushaski rather than Yenisseian shows promising parallels to the Na-Dene classifiers, and I will outline in the following that reasonable correspondences can be found for the entire classifier system of Na-Dene as set up by Leer (2008).

The Burushaski link to the classifiers

The material of Burushaski that bears formal and function similarities to the classifier system of Athabaskan-Eyak-Tlingit includes the d-prefix (~ Na-Dene *<də->), the s-prefix (~ Na-Dene *<s->) and the pronominal prefixes (~ Na-Dene *<ɬ-> and *<yi->).

The pronominal prefixes of Burushaski often signal a change in valence, and I assume that this function emerged from morphological material cognate with the Na-Dene y-component and ɬ-component. Likewise, the grammatical functions of the d-prefix and s-prefix of Burushaski strikingly parallel the semantics of the classifier elements *<də-> and *<s-> of Na-Dene. Let's first summarise the observations concerning the d- and s-prefixes of Burushaski, before turning to the more intricate issue of the pronominal prefixes. Finally, the findings will be summed up and it will be shown what an identification of these morphemes with the Na-Dene classifiers may tell us about the structure of the verb template of an archaic stage of Burushaski.

The d-prefix is one of the most curious and intransparent morphemes in Burushaski and has attracted a lot of interest, leading to different interpretations, e.g. by Berger (1974: 32; 1998: 110), Lorimer (1935: 226) or Bashir (2004). The prefix has the basic form <d-> and is devoiced when it is preceded by the negation prefix <a-́>. It receives a supporting vowel (<-u-> ~ <-i-> ~ <-a->) when it is followed by a pronominal prefix with consonant onset or by the verb stem (cf. Berger 1998a: 108–109).

The only fully transparent function of the d-prefix is to form secondary intransitives from primary transitives, as in *di-qhis-* 'to break (intrans.)', derived from *qis-́* 'to break something' (Berger 1998a: 110). Additionally, there are about twenty verbs which occur in pairs with and without the d-prefix, whereby the forms with the d-prefix do neither exhibit shared semantics, nor a consistent semantic differentiation from the verb forms without the prefix (Berger 1998a: 110). Finally, there are verbs which always exhibit the d-prefix, e.g. *do-óq-* 'to swell'. In these cases, the occurrence of the d-prefix is lexically conditioned (cf. Berger 1998a: 110). These usages show that the d-prefix of Burushaski is an old, partly frozen morpheme, the original function of which was, as is still visible in some instances, to decrease the valency of a verb.

This use of the d-prefix of Burushaski parallels the function of the classifier morpheme *<də-> of Na-Dene in indicating a lack of transitivity, viz. Slave *rasereyi̯ʔa* 'He fooled me' vs. *rareyeht'a* 'I was fooled' (Rice 1989: 457). Another parallel between the d-prefix of Burushaski and the classifier *<də-> of Na-Dene is the shared proximity to the verb root, indicating the relative antiquity of both markers. However, unlike the classifier of Na-Dene, the d-prefix of Burushaski is separated from the verb root by the agreement marker and the prefix <s->, both of which I claim to be possible cognates to the S- and y-component of the Na-Dene classifier complex, whereas in Na-Dene, *<də-> is

placed immediately before the verb root. This difference will be addressed below at the end of this section.

The transitive prefix <s-> of Burushaski always appears with pronominal prefixes of type II and derives secondary transitive verbs from primary intransitive verbs, viz. *-**ṡ**-par-* 'to make tired' vs. *-wár-* 'be tired', *-**ṡ**-pal-* 'to lose' vs. *balúu-* 'to get lost' (Berger 1998a: 125–126). This use of the prefix <s-> parallels the valence-increasing function of the s-component of Tlingit, viz. *SUBJ-Ø-nug* 'SUBJ sits down' ~ *OBJ-SUBJ-s-nug* 'SUBJ seats OBJ' (Leer 1991: 53). As mentioned above, the s-classifier of Tlingit belongs to the oldest morphological material of Na-Dene. The s-prefix of Burushaski thus constitutes a remarkable formal and functional parallel. My analysis of the pronominal prefixes elaborated below in the next paragraphs indicates that the higher valence of pronominal prefixes of type II with regard to pronominal prefixes of type I originally correlated with the addition of the s-prefix. From this it follows that the prefix <s-> in Burushaski once was a transparent valence increasing device, even though it seems that nowadays this valence increase is mainly ascribed to the pronominal prefixes of type II due to a process of reanalysis.

Leer (2008: 25) shows that the S-component in Na-Dene (*<s-> and *<ɬ->) was also used as a noun-classificatory device. Such a function is unknown of the s-prefix of Burushaski, in accordance with the general absence of such classificatory morphology in Burushaski. Thus, this second function of the S-component may have been lost in Burushaski due to contact influences with other languages lacking such devices, or it may be a secondary innovation of Na-Dene.

It is unclear whether the combination of the d-prefix and the s-prefix often encountered in Burushaski verbs, viz. *d-ṡ-ċal* 'to waken', *d-ṡ-karaẏ* 'to heat up' (Berger 1998a: 125–126), constitutes a sophisticated functional fusion like the combination of different classifier elements in Na-Dene. More likely, such verbs show a lexicalised instance of the d-prefix supplemented by a more transparent valence increasing s-prefix.

Like the d-prefix and like the classifiers of Athabaskan-Eyak-Tlingit, the s-prefix occupies a slot almost immediately in front of the verb root, thus again hinting at the relative antiquity of these morphemes of Burushaski. In what follows, the pronominal prefixes of Burushaski are discussed as possible cognates to the 'y-component' and 'ɬ-component' (Krauss 1969: 54) of the Na-Dene classifier complex.

The pronominal prefixes of Burushaski come in three sets (cf. table 19). The only differentiation between the pronominal prefixes of type I and of type II and III is the height difference between the vowels /i/ and /u/ of type I and /e/ and /o/ of type II and III. Types II and III are distinguished solely by the length difference of the vowels, with short vowels in type II and long vowels in type III. A diachronic investigation of the pronominal prefixes of Burushaski and their

functional differences must necessarily relate the phonological differences with functional differences. The phonological differences of the Burushaski pronominal prefixes expressing their functional graduation must have come about either by some additional morphological material or by internal modification, e.g. stress patterns or ablaut. In this section, I argue that the phonological and functional differences among the pronominal prefixes of Burushaski are derived from additional morphological material cognate to the Na-Dene classifier components *<(y)i-> and *<ɬ->.

In the following, I will adopt a different terminology for the pronominal prefixes than Berger (1998a) and will call the individual series *high-vowel series* (the 'type I' of Berger), *mid-vowel series* (the 'type II' of Berger), and *lengthened series* (the 'type III' of Berger). This terminology ought to constitute a more neutral naming convention and avoid the connotative association between 'type I' and *basic form* and between 'type II' and 'type III' and *derived form*.

The high-vowel series probably reflects the combination of the mid-vowel series prefixes with a high vowel affix <i-> or <y->, represented here by the abstract notion *<I->, cognate to the y-component and thus the perfective/stative prefix *<ŋʲi> of Na-Dene. The lengthened series may likewise have resulted from the morphological fusion of two individual morphemes, namely the mid-vowel pronominal prefixes and a morpheme with unknown phonetic shape (represented here by <L->) corresponding to the Na-Dene classifier element *<ɬ->. As a consequence, I analyse the mid-vowel series as the only series without morphological supplement and thus as basic form of the agreement prefixes, that is as pure agreement markers without valence related connotation.

The function of the mid vowel prefixes is to add an additional argument to a verb. However, I disagree with Berger in that I do not consider the mid-vowel series to have any specific derivational potential. Rather, the addition of an argument is simply achieved by the semantically, i.e. with regard to valence, neutral agreement prefixes of the mid-vowel series. It is rather in the high-vowel and lengthened series where we ought to look for valence-affecting derivational potential, marked by archaic morphological material now overtly lost and only present in the phonological differences of the agreement prefixes. The seeming valence-increasing function of the mid-vowel series may be a result of reanalysis of their functional relation to the high-vowel series, shifting the basic notion from the mid-vowel to the high-vowel series, probably reinforced by the common combination of the mid-vowel series prefixes with the valence-increasing s-prefix.

The rules governing the addition or omission of the high-vowel series pronominal prefixes are complex and partially incomprehensible. Most intransitive verbs exhibit no agreement marking by the high-vowel prefixes, whereas a small set of verbs always take the prefixes, e.g. *-ír-* 'to die' (cf. Berger 1998a: 118). Berger (1998a: 119) assumes that the marking of an intransitive or

transitive verb with high-vowel pronominal prefixes is governed by semantic and pragmatic rules, and that the verbs which always or never take pronominal prefixes should be viewed as generalisations based on the inherent semantics of the specific verb in question. The two relevant parameters are the nominal class affiliation of the subject of intransitive verbs and the object of transitive verbs, respectively, and the degree of control and active execution of an action (cf. Berger 1998a: 118).

Verbs are marked with pronominal prefixes of the high-vowel series if the subject of intransitive verbs or the object of transitive verbs is a member of the hx-class, that is masculine, feminine or inanimate x-class, whereas affiliation to the other inanimate class, the y-class, will lead to no marking with high-vowel agreement markers, e.g. *baldá pusími* 'he bound the load (y)' vs. *hir* ***i-****phúsimi* 'he bound the man (hm)' (Berger 1998a: 118). The second parameter of certain intransitive verbs involves marking with high-vowel agreement prefixes if the action encoded in the verb is not controlled by the subject and initiated from outside. An unmarked intransitive verb implies an action controlled and consciously carried out by the subject of the verb, e.g. *ġurċími* 'he dove (consciously)' vs. ***i-****ġúrċimi* 'he sank (e.g. because somebody pushed him)' (Berger 1998a: 118). Verbs with permanent marking or permanent lack thereof can be viewed as generalisations of these parameters, either because they always involve a subject or object of the hx or y nominal class, or because they express an action which can only be carried out consciously (= permanent omission of marking) or unconsciously and uncontrolled (= permanent marking). Examples of permanent omission of marking include verbs like *hurúṭ-* 'to sit', *girát-* 'to dance', and examples of permanent marking include verbs like *-ír-* 'to die' or *-wár-* 'to become tired', since such actions cannot be controlled by the subject of the respective verb (cf. Berger 1998a: 119–120). Transitive verbs with permanent marking can be explained as generalisations of verbs which prototypically had a hx-object, e.g. *-ílikin-* 'to praise', whereas transitive verbs with a prototypical y-object would have led to a general omission of pronominal prefixes with such verbs, e.g. *min-́* 'to drink' (cf. Berger 1998a: 120). Furthermore, there are some pairs of intransitive and transitive verbs which are only differentiated by the occurence of the high-vowel pronominal prefixes in the transitive version, e.g. *qis-́* 'to be torn' vs. *-qhís* 'to tear' (cf. Berger 1998a: 119).

The high-vowel pronominal prefixes are, thus, generally omitted if the subject of an intransitive verb or the object of a transitive verb has control over the action, and appear if the subject of an intransitive verb or the object of a transitive verb has no control over the action because of some other person or the respective circumstances which control the action. Since members of the inanimate y class can never have control over an action due to their semantic characteristics, the marking with pronominal prefixes, that is the indication of a

lack of control over the action, would be redundant. Intransitive subject or transitive objects of the y class are by definition passive and stative. With intransitive and transitive verbs with animate subjects or objects, however, the expression of the differentiation between controlled and uncontrolled action by means of marking with high-vowel prefixes is a valuable device. Thus, it can be said that with verbs where the differentiation between controlled and uncontrollable action actually makes sense, that is in verbs with hx-subject or object, the use of the high-vowel pronominal prefixes expresses uncontrollable actions and their omission signifies controlled actions, or, as Berger (1992: 16) puts it, '[Die Pronominalpräfixe] unterscheiden die freiwillige von der unfreiwilligen Handlung bzw. das Aktiv vom Passiv'.

This expression of a passive, stative, unconscious or uncontrollable action guided from outside may be related to the differences in vowel height between the high-vowel and mid-vowel pronominal prefixes. If we assume the mid-vowel series to be the basic form, then an explanation for the high vowels in the eponymous series is needed. A possible origin of these high vowels could lie in an archaic combination of the mid-vowel pronominal prefixes with a high vowel morpheme, abstractly represented by *<I->, which would have raised the mid vowels and consequently disappeared, and this presumed morpheme could be cognate to the morpheme *<(y)i-> in Na-Dene, which, too, assimilated the vowel of the following classifier element *<də->. Thus, both the semantics and the phonology imply that the Burushaski high vowel pronominal prefixes contain a correspondence to the stative/perfective prefix, viz. the y-component of the Na-Dene classifier complex. This prefix, either preceding or following the agreement markers of Burushaski, may have assimilated the mid-vowels of the pronominal prefixes (just as its potential cognate in Na-Dene assimilated the vowel of the morpheme *<də->) and may have been lost consequently. This process is illustrated in table 26. The semantics of the high-vowel pronominal prefixes bear similarities to a stative/passive marker which marks an action as not involving the active participation of the subject. As Leer (2000: 134) points out, the stative/perfective prefix of Na-Dene may originally rather have been stative than perfective and developed its perfective semantics only later.

However, there are some important objections to an identification of the high-vowel pronominal prefixes of Burushaski with the stative/perfective affix of Na-Dene. Firstly, it must be said that there is no direct evidence that such a prefix *<I-> ever existed in Burushaski, and my argumentation fully comes from indirect evidence. The high-vowel pronominal prefixes are mostly unstressed, while stressed allomorphs appear only through the addition of other prefixes, e.g. the negation marker <á-> (cf. Berger 1998a: 111). Unstressed /o/ and /u/ in Burushaski fall together in /u/, as well as /e/ and /i/ did in /i/ in an earlier stage of the language (cf. Berger 1998a: 17, 24). Since the only difference between the

Table 26: A possible origin of the Burushaski high-vowel series

	Burushaski	**Pre-Burushaski** (stage 2)	**Pre-Burushaski** (stage 1)
1SG	a-́ ~ á	*a-I	*a-I
2SG	gu-́, gú ~ kú	*gu-I	*go-I
3SG.HM	i-́ ~ í	*i-I	*e-I
3SG.HF	mu-́ ~ mú	*mu-I	*mo-I
3SG.X	i-́ ~ í	*i-I	*e-I
3SG.Y	i-́ ~ í	*i-I	*e-I
1PL	mi-́ ~ mí	*mi-I	*me-I
2PL	ma-́ ~ má	*ma-I	*ma-I
3PL.HX	u-́ ~ ú	*u-I	*o-I
3PL.Y	i-́ ~ í	*i-I	*e-I

high-vowel and mid-vowel series is the quality of the vowels /i/ ~ /e/ and /u/ ~ /o/, and since the high-vowel series basically represents the unstressed series, the vowel differences may simply be explained by means of vowel mergers in unstressed syllables. This elegant and economic explanation does not involve the postulation of morphemes for which there is no direct evidence, but it would also obfuscate the search for the morphological material responsible for the functional differences between the different prefix series. Probably, the stress and length differentiations are all that there is to it, and the phenomenon of ablaut famously known from Indo-European may remind us how sophisticatedly stress and vowel alternations fulfill grammatical functions.

Secondly, it could be argued that the expression of a passive or uncontrolled action by means of agreement markers is only a secondary connotation of the agreement system of Burushaski, namely its ergative alignment. In this regard, the use of these object markers with intransitive verbs would be a secondary extension of the primary use with transitive verbs, and the whole topic of controlled and uncontrolled actions would be resolvable with reference to the ergative pattern of Burushaski agreement prefixation.

In general, while the postulation of some morpheme corresponding to the stative/perfective morpheme of Na-Dene may be a promising explanation for the high-vowel prefix series, there are some major objections to this explanation, and the argumentation is by no means convincing. The lengthened series of pronominal prefixes, however, exhibit a more convincing parallel to the Na-Dene classifier system.

The lengthened series of the pronominal prefixes increases the valence of the verb and builds causative verb forms from primary and secondary transitives, e.g. *-i-ġar* ‘to make play music’ from *-ġar-* ‘to play music’, or *-i-pus-* ‘to make bind, to bind for’ from *pus-́* ‘to bind’ (cf. Berger 1998a: 122–123). Interestingly,

the lengthened series is also sometimes involved in forming transitives from primary intransitives, as in *-̣birbin-* 'to pour in' from *birbín-* 'to rise (said of water)', or in *-̣gi̯ẏ* 'to put into' from *gi̯ẏ-* 'to penetrate into', and occasionally forms a second transitive with diverging meaning from a transitive verb with mid-vowel prefixes, e.g. *-̣maldin-* 'to pile up (wood)' vs. *-maldin-* 'to twine two threads together' (cf. Berger 1998a: 124). The lengthened series prefixes appear in some intransitive verbs, combined with the d-prefix, e.g. *d-̣matal-* 'to yawn', *d-̣pirkan* 'to stumble'. The causative derivation of the lengthened series might thus only be a secondary generalisation, whereas originally the lengthened series had a much broader functional range, commonly associated with some kind of valence increase, except for the use with intransitive verbs, where the d-prefix probably neutralised the valence increase. It is interesting at this point to note again that the s-prefix occurs only with the mid vowel series, thus being in complementary distribution with the lengthened series. This implies a shared functional base of the two marking devices.

Since the lengthened pronominal prefixes show higher valence than the mid-vowel series prefixes and differ from them only by means of vowel length, the functional difference must be derived from this length differentiation. If we define the short mid-vowel series as basic form of the agreement markers, then the lengthened prefixes must be the derived morphemes, that is must derive from the (short) agreement prefixes plus another, no longer overtly present morpheme. This morpheme might be cognate with the Na-Dene classifier *<ɬ->, which also functions as a valence-increasing device. Since such a sound does not appear as a phoneme in modern Burushaski, we may assume that the morpheme *<ɬ-> (like all other instances of /ɬ/) merged with another sound, presumably /l/, in the prehistory of Burushaski. For the present analysis, I will use the abstract notion *<L-> to refer to the morpheme presumably responsible for the lengthening of the agreement prefixes and etymologically derived from the same source as the Na-Dene classifier *<ɬ->. The morpheme *<L-> combined with the agreement markers in Pre-Burushaski to trigger an increase in valence. At a later stage, the morpheme ceased to appear overtly, but lived on as compensatory lengthening of the preceding vowel of the agreement prefixes. The whole process is illustrated in table 27.

The phonological loss of *<L-> in Burushaski parallels the development of *<ɬ-> in many Athabaskan languages, where <ɬ-> or its intervocalic allomorph <l->, too, are often only detectable indirectly through effects they exert on surrounding sounds, e.g. Navajo *woohsi̯ih* 'you are in the act of standing him up', from *wo-yi-oh-ɬ-zi̯ih*, with contraction of <ɬ-> with stem-initial consonant (Young/Morgan 1980: 354), or Slave *náízéh* 'we hunt', from *ná-íd-l-séh*, with voicing of stem initial consonant and loss of the final /d/ of the first person dual/plural subject morpheme <íd-> triggered by the likewise lost classifier <l-> (cf. Rice 1989: 446).

Table 27: A possible origin of the Burushaski lengthened series

	Burushaski	**Pre-Burushaski** (stage 2)	**Pre-Burushaski** (stage 1)
1SG	áa	*a-L	*a-ɬ
2SG	góo ~ kóo	*go-L	*go-ɬ
3SG.HM	ée	*e-L	*e-ɬ
3SG.HF	móo	mo-L	*mo-ɬ
3SG.X	ée	*e-L	*e-ɬ
3SG.Y	ée	*e-L	*e-ɬ
1PL	mée	*me-L	*me-ɬ
2PL	máa	*ma-L	*ma-ɬ
3PL.HX	óo	*o-L	*o-ɬ
3PL.Y	ée	*e-L	*e-ɬ

In Sarcee, the proposed Burushaski development of loss and compensatory lengthening finds a perfect match. The Sarcee classifier <l-> is never realised overtly, but appears merely as vowel completely assimilated to the preceding vowel /a/ or /i/, that is as lengthening of the preceding vowel, e.g. *áyìì**d**ìn* 'it (the horse) is broken', from *á-ɣi-**ɬ**-dìn* (cf. Cook 1984: 126).

Such parallels do not necessarily prove a shared origin of the Na-Dene classifier *<ɬ-> and the morpheme responsible for the lengthened pronominal prefixes in Burushaski, but they show intriguing similarities in the development of these morphemes, which may let us speculate whether the lengthened agreement prefixes in Burushaski may not be just another instance of a phenomenon so often observed in Na-Dene language, namely the loss of *<ɬ-> echoed in subtle phonological effects on its environment.

The assumption of cognates to the Na-Dene classifier elements *<də->, *<s->, *<(y)i-> and *<ɬ-> in Burushaski in the morphemes <d(V)- ~ t(V)-> and <s-> and in the phonology of the high-vowel and lengthened pronominal prefixes series allows a first and preliminary reconstruction of the inner prefix positions of Pre-Burushaski, illustrated in table 28. The classifier elements *<s-> and *<L-> immediately precede the verb root, followed by the stative element *<I-> and the agreement markers. The outmost element in this structure is the d-prefix. This complex resembles the verb templates set up for Athabaskan, Eyak and Tlingit, with the classifiers preceding the agreement marking, and it is even more similar if we would assign the stative prefix the position in front of the agreement markers, which would also be a possible position from where to exert its assimilatory influence. However, the position of the d-prefix does not fit with the order <yi-S-də> of the classifier complex of Na-Dene as proposed by Leer (2008). The d-prefix of Burushaski may have moved to the outer position at a stage where the classifier markers where still free particles and before the order

Table 28: Possible structure of the inner prefix positions of Pre-Burushaski

Category	VAL↓	AGREE	STAT	VAL↑	STEM
Morpheme	d(V)- ~ t(V)-	a-, go-, e- ...	I-	s-, L-	R + ...

became permanent due to grammaticalisation in both Burushaski and Na-Dene. Whether this is a convincing hypothesis or whether this syntagmatic mismatch depreciates the similarities between the Na-Dene classifier system and the proposed Burushaski correspondences, is an open question, as is the validity of the whole comparative proposal.

The correspondences between the Na-Dene morpheme *<ɬ-> and the Burushaski lengthened pronominal prefixes and between the Na-Dene stative/perfective prefix *<(y)i-> and the Burushaski high-vowel pronominal prefixes may be responded to as forced or unconvincing, and the non-existence of direct evidence and the use of indirect evidence as base of argumentation, too, may be identified as crucial flaws of this comparison.

However, in the case of the two Na-Dene morphemes *<də-> and *<s->, there is morphological material in Burushaski allowing a direct comparison, and the only substantial criticism to this may involve the possibility of chance similarities due to the short form of the compared morphemes.[20]

Notes on nominal morphology and lexicon

The focus of the work of the proponents of Dene-Yenisseian or Dene-Kusunda lies in the domain of verbal morphology. However, the second part of Vajda's (2010a) paper is devoted to the comparison of lexical data and to the postulation of regular sound correspondences between Yenisseian and Na-Dene. Additionally, the work of Toporov (1971) postulates correspondences in the nominal morphology of Burushaski and Yenisseian, and Vajda (2013) outlines some similarities in the nominal morphology of Yenisseian and Na-Dene. Thus, there are also putative cognates in the nominal morphology and the lexicon. Since the main focus of this paper lies on verbal morphology, these similarities will only be presented briefly in the following for the sake of completeness. The first section presents the findings of Toporov (1971) for Burushaski-Yenisseian, of Vajda (2013) for Dene-Yenisseian, and my own observations concerning possible similarities in Kusunda, whereas the second section shortly discusses the lexical comparisons crafted by Vajda (2010a) for Dene-Yenisseian and shows that no evidence can be amassed for Dene-Kusunda.

Nominal morphology

Toporov (1971) gives a comprehensive overview of typological and structural similarities between Burushaski and Yenisseian. However, his comparison of the verbal morphology is restricted by the scarce reliable material about the verbal morphology of Burushaski and Yenisseian available at the time of writing, and does thus not constitute an up-to-date account on the similarities of Burushaski and Yenisseian. While his comparison of the similarities in the verbal morphology are outdated by recent publications on both Yenisseian and Burushaski and by the comparison of van Driem (2001), the comparison of the nominal morphology reveals some interesting parallels which ought to be assessed.

Firstly, Toporov (1971: 113) points out the existence of nominal classes in both Burushaski and Ket (cf. also Berger 1998a; Werner 1994: 13–44; Werner 1995: 91–94). The semantic differentiation of the nominal classes is virtually the same. Ket exhibits a main dichotomy between inanimated and animated, which is further divided into masculine and feminine (cf. Werner 1997b: 88–96), and Burushaski assigns every noun to either the masculine, feminine, or one of two inanimate classes (cf. Berger 1998a: 33). Furthermore, the nominal classes are expressed in both languages by similar strategies, i.e. class-specific demonstrative pronouns, number and case suffixes and encoding of the nominal class in the third person of the agreement markers of the verb (Toporov 1971: 113).

Secondly, the case systems of Burushaski and Ket share a principle by which the suffixation of the genitive marker creates an oblique stem to which other case suffixes are added, although in Burushaski this only occurs with nouns belonging to the animated feminine class (cf. Toporov 1971: 117; Berger 1998a: 58; Werner 1995: 80). Examples are Burushaski *gus* 'wife (ABS)' → *gus-mo* 'wife (GEN)' → *gus-mu-r* 'wife (DAT)' (Berger 1998a: 58), or Ket *oˑp* 'father (ABS)' → *ob-da* 'father (GEN)' → *ob-da-ŋa* 'father (DAT)' (Werner 1994: 57–58).

Thirdly, in both Burushaski and Ket, nominal plurality is expressed by suffixation and both languages exhibit a rich inventory of possible plural suffixes, of which in both languages only a few endings are used regularly. Furthermore, both languages exhibit a differentiation of plural suffixes among nominal classes, and both languages use a velar nasal <-ŋ> as the basic element to form the plural of nouns of the inanimate class (cf. Toporov 1971: 115–116; Berger 1998a: 53–57; Werner 1997b: 100), e.g. Burushaski *gaçhé-ŋ* 'dwarves' (Berger 1998a: 53) or Ket *qɔŋlɔq-ŋ* 'little bells' (Werner 1997b: 96).

Finally, possession can be expressed in both Ket and Burushaski by prefixes added to the noun (cf. Toporov 1971: 114–115), e.g. Burushaski *á-lćin* 'my eye' (Berger 1998a: 44), or Ket *da-hɨˀp* 'his son' (Werner 1997b: 118).

While these typological similarities are quite impressive, the actual material is really distinct and shows no signs of genealogical relatedness, with the sole

exception of the nasal plural suffix. Additionally, as Vajda (2008: 142) argues, the nominal classes of Ket may be a secondary innovation. Thus, this typological similarity is nothing else than a coincidence, and it is probable that the same must be said of the rest of the parallels in the nominal morphology of Burushaski and Yenisseian.

Some parallels in the nominal morphology of Yenisseian and Na-Dene, mainly in the domain of possession morphology, have recently been presented by Vajda (2013). The comparison of Yenisseian and Na-Dene nominal morphology shows that some instances of the Eyak l-qualifier, which is phonologically derived from a nasal stop, as well as the Athabaskan nasal-class prefix, that is possessive prefixes with unexplainable nasalised vowel used on inalienably possessed nouns, e.g. Slave *sį̨lá* 'my hand', *nį̨lá* 'your hand' (Rice 1989: 211), may derive from an archaic nasal affix functioning as possessive morpheme, probably cognate to the nasal element in Ket dative, ablative and adessive case formatives, i.e. <-ŋa>, <-ŋal> and <-ŋten>, probably from *<-ŋ-a> [-POSS-DAT], *<-ŋ-al> [-POSS-ABL] and *<-ŋ-ten> [-POSS-ADS] (cf. Vajda 2013: 82, 89).

The Eyak d-qualifier and the Ket third person possessive marker <d-> may be cognate to the Tlingit third person possessive <du-> (cf. Vajda 2013: 89), and the unexpected Tlingit onset /tɬ'/ in *-tɬ'ìɢ* 'finger', cognate to Proto-Athabaskan **-ts'əɢ,* could have come about by the merger of the original and expected onset /ts'/ and an archaic possessive morpheme *<ŋʷ> (Vajda 2013: 89).

Additionally, Vajda (2013) also points out similarities in postpositional constructions, i.e. the use of a third person possessive marker <d-> in both Ket and (presumably) Athabaskan as well as the presumable use of a nasal possessive marker in Athabaskan related to the nasal-class prefix and the Ket nasal possessive marker in the dative, ablative and adessive case markers (cf. Vajda 2013: 86), putative cognates in directionals, that is morphemes specifying a direction with regard to a fixed location, e.g. a body of water (cf. Vajda 2013: 86–87), and typological and structural similarities in the domain of demonstratives (cf. Vajda 2013: 88–89).

Vajda (2010a: 60–63) also shows some typological and material correspondences between Eyak and Yenisseian in the formation of gerunds, and I suspect that the formation of deverbal adjectives with the two morphemes <n-> and < -n> in Burushaski (cf. Berger 1998a: 165–166) may bear some relationship to the Eyak gerund formation with the morphemes <'is-> and <-l (← *n)> and their presumed Yenisseian cognates, Kott <ši-> and Proto-Yenisseian *<-əŋ> (cf. Vajda 2010a: 61). However, the Burushaski link to the gerund morphology of Yenisseian and Eyak is far from being an elaborated hypothesis.

The comparisons are certainly interesting and should be studied in more detail, but this does not yet constitute evidence for genealogical relatedness,

rather it is a promising field for further research which may tell us more about a possible link between Yenisseian and Na-Dene. Vajda (2013: 89) still detects plenty of open questions which have to be answered in order to make the comparison of the nominal morphology of Yenisseian and Na-Dene convincing.

Three aspects of Kusunda nomimal morphology find correspondences in other members of Dene-Kusunda. These parallels concern the inherent marking of inalienably possessed nouns, the genitive marker <-(y)e ~ -(y)i> and vestiges of nominal plural marking with a velar suffix <-(o)k>.

A typological peculiarity shared between Burushaski and Kusunda and also found in Na-Dene languages is that certain nouns inherently take a possessive prefix. In Burushaski, some words designating body parts or kinship terms, i.e. inalienably possessed nouns, can only occur with possessive prefixes, e.g. *-mé* '(my, your, ...) tooth', *-š* '(my, your, ...) heart', *-uẏ* '(my, your, ...) father', *-mi* '(my, your, ...) mother' (Berger 1992: 17–18; Berger 1998a: 44–46; Berger 1998b: 286, 460). Kusunda exhibits a set of words, typically body parts, with a velar onset that might go back to an old third person possessive prefix, e.g. *gimət*, from **g-imət* 'his/her stomach' (cf. Watters 2006: 46). It becomes obvious that <g-> does not belong to the stem, but constitutes the third person possessive prefix, when the first person possessive prefix is added, viz. *ts-imət* 'my stomach', without the initial /g/ (cf. Watters 2006: 46). The obligatory marking of inalienable possession is also known from Athabaskan languages like Slave (cf. Rice 1989: 232).

Another parallel between Burushaski and Kusunda concerns the genitive/ergative marker <-e> of Burushaski and, formally and partially functionally correlating, the genitive marker <-(y)e ~ -(y)i> of Kusunda. The Burushaski marker can mark the active participant of a transitive verb, but is also used as a marker of possession or affiliation, e.g. *Húnzu-e tham* 'the king of Hunza' (Berger 1998a: 66), just as the Kusunda marker, e.g. *Ram-e agəi* 'the dog of Ram' (Watters 2006: 50).

However, the Kusunda marker looks like a Tibeto-Burman loan, as a similar marker is found throughout this family (cf. DeLancey 1985), e.g. the genitive/ergative/instrumental marker <-e ~ -ye> in Kham (cf. Watters 2002: 64–67; Watters 2006: 51), a language spoken in close geographical proximity to Kusunda and donor languages of a considerable amount of loan words in Kusunda (cf. Watters 2006: 15), or the ergative marker <-i> in Raji (cf. Rastogi 2012: 69–70), the speakers of which led a life as nomadic hunter-gatherers in western Nepal until very recently (cf. Rastogi 2012: 21–22; Shrestha/Singh 1992: 96–97), just as the Kusunda did (cf. Watters 2006: 9). Even if it should turn out not to constitute a loan word, the monosyllabic shape of the compared morphemes makes them likely candidates for chance similarity.

There is no plural marking on nouns in Kusunda (cf. Watters 2006). However, the first and second person singular pronouns *tsi* and *nu* show plural

forms *tok* and *nok*, and as was shown above, Kusunda irrealis aspect is marked in the plural by the suffix amalgamation <-da-k>, the first element <-da> signalising plural, the second one <-k> irrealis aspect (cf. Watters 2006: 66). However, Watters (2006: 64) assumes that plurality might have originally been expressed by the velar stop <-k>, etymologically related to the pronominal plural marker. This lets one assume that this plural marking may once have been more productive than it is nowadays.

Interestingly, both Ket and Burushaski exhibit a very productive and common plural marker which also consist of a velar (nasal) stop, namely <-ŋ>. As was speculated above, Yenisseian and Na-Dene may probably share some nasal plural morpheme visible in the pronouns for first and second person, i.e. Tlingit *ʔuhá·**n*** ~ Proto-Yenisseian **aʒ**əŋ*** 'we' and Proto-Athabaskan **nəχ(ʷ)**ən*** ~ Tlingit *uɣi·h(ʷ)**án*** ~ Proto-Yenisseian **ʔaw**oŋ*** 'you (pl.)' (cf. Vajda 2010a: 50). We may relate this nasal plural morpheme in Yenisseian, Burushaski and Na-Dene to the pronominal plural marker <-k> of Kusunda. The plural pronouns of Kusunda, *tok* and *nok*, additionally exhibit an unexplainable back vowel /o/ compared with the singular forms *tsi* and *nu*. This is reminiscent of the back vowel quality in the plural portion of the Dene-Yenisseian comparison, especially in the second person, i.e. Proto-Athabaskan *<-ən> ~ Tlingit <-an> ~ Proto-Yenisseian *<-oŋ>. From this we may conclude that the plural marker in Kusunda was originally *<-ok>, and the attachment to the singular pronouns *tsi* and *nu* may have yielded the plural forms *tok* and *nok* via an intermediate stage **tsi-ok* and **nu-ok.* This comparison would indicate that the original velar plosiv */k/ became a homorganic nasal in all Dene-Kusunda languages except Kusunda, where it remained /k/ and was fossilised as a marker of pronominal plural. While this assumption is somewhat speculative, it constitutes the most promising and convincing parallel between Kusunda, Burushaski, Yenisseian and Na-Dene and should be looked at in detail in further research, in contrast to the similar possessive patterns and the similar ergative/genitive markers of Burushaski and Kusunda, which are chance similarities without significance for genealogical relationship.

Lexicon

Lexical evidence in the form of systematic sound correspondences is often viewed as a necessary condition to prove the genealogical affiliation of a language (cf. Campbell/Poser 2008: 172). It is in the domain of lexical comparison where most comparative work on the languages involved in the Dene-Kusunda hypothesis has been done. Most of this contributions, however, do not differentiate between superficial similarities and systematic sound correspondences and focus on the listing of look-alikes, ignoring various important principles of convincing lexical comparison, such as strictness towards semantic latitude, elimination of borrowings, nursery and onomatopoetic terms

from the lists, search for multisyllabic cognates instead of short, monosyllabic forms, avoidance to compare one word in one language with various words in another language, among others (cf. Campbell/Poser 2008: 194–205, 210).

Examples of this inadequate approach can be seen in Bengtson (1997) for Burushaski and Caucasian languages, in Ruhlen (1998) for Na-Dene and Yenisseian, or in Gurov (1989) for Kusunda and Yenisseian. In fact, a superficial inspection of the lexicon of Na-Dene, Yenisseian, Burushaski and Kusunda could lead one to believe that these languages must share a common ancestor indeed, looking at seemingly astonishing and convincing correspondences such as Na-Dene **ɢeit* ~ Yenisseian **kʌˀt* ~ Kusunda *getse* for 'child, offspring, man', Na-Dene **qˀi(-s)* ~ Yenisseian **kit'* ~ Kusunda *gidzaŋ* for 'body', Tlingit *ˀix* ~ Yenisseian **igə* ~ Kusunda *gidzi* ~ Burushaski *-ík* for 'name/to call out'.[21] However, hardly any systematic sound correspondences are observable in these sets. Additionally and even more significantly, some inalienably possessed nouns in Kusunda cannot occur without a genuine possessive prefix of third person, i.e. <g-> (cf. Watters 2006: 46–47). Thus, the lexical roots for 'body' and 'name' in Kusunda actually are *dzaŋ* and *dzi*, with no similarities whatsoever to the Na-Dene or Yenisseian words.

Superficial lexical comparisons are unconvincing and prone to errors. In the second part of his paper, Vajda (2010a) compares the lexicon of Na-Dene and Yenisseian with a methodology that conforms more to the principles of comparative linguistics, establishes some putative sound correspondences and also provides an external explanation of the origin of Yenisseian tones by comparing respective lexemes with possible cognates in Na-Dene. His careful approach is a valuable contribution to a more rigorous methodology in proposals of distant genetic relationships, and even though his correspondences have faced critique from Campbell (2011) and G. Starostin (2012), it must be emphasised that his approach is in accordance with the basic principles of serious lexical comparison and constitutes a more fruitful contribution to the assessment of a putative Dene-Yenisseian hypothesis than former word lists based on superficial inspection. The critique of Campbell (2011: 446–448) and G. Starostin (2012: 128–138) reveals that a part of the proposed correspondences of Vajda (2010a) is incorrect or inconclusive, and that the remaining correspondences may not be sufficient to conclusively show a genealogical affiliation of Yenisseian to Na-Dene (cf. Campbell 2011: 448). Vajda (2010a: 94) points out the need for more lexical comparison to establish the putative sound correspondences. Thus, while lexical comparison for Dene-Yenisseian looks promising, it must be classified as work in progress rather than conclusive evidence for a genealogical relationship.

A first inspection of some of the correspondences of Dene-Yenisseian of Vajda (2010a: 64–94) and their semantic counterparts in Burushaski und Kusunda does not reveal any lexical evidence for Dene-Kusunda, as the corresponding words in Burushaski and Kusunda do not show any similarities to

the Dene-Yenisseian lexemes, e.g. Proto-Yenisseian **seŋ* ~ Proto-Athabaskan-Eyak **-sənt'* ~ Burushaski *-ḳin* ~ Kusunda *id(ə)u* 'liver', Proto-Yenisseian **tə'q* ~ Proto-Athabaskan-Eyak **ts'inɢ* ~ Burushaski *-ṁiṣ* ~ Kusunda *aõla* (Nepali loan) 'finger, toe', Ket *del* ~ Proto-Athabaskan-Eyak **dəɬ* ~ Burushaski *multán* ~ Kusunda *ləpa* 'blood'.[22] The only detectable similarity to Yenisseian and Burushaski in Kusunda is the demonstrative pronoun *gina*, which could be related to the Ket demonstrative *kīˑ* 'this (near to the speaker') **(**Werner 1997b: 137) and the Burushaski demonstrative *khiné* 'this one' (Berger 1998a: 81). The few parallels between Burushaski and Yenisseian include Proto-Yenisseian **čiˀ-s* 'stone' ~ Burushaski *ćhiṣ* 'mountain' or Proto-Yenisseian **igə* ~ Burushaski *-ík* 'name' (G. Starostin 2012: 131, 132–133).[23] However, this is fairly thin evidence for genealogical relatedness, and some parallels obviously involve unclear etymologies, e.g. the comparison of the demonstrative pronouns, or semantic latitude, e.g. Proto-Yenisseian **čiˀ-s* 'stone' ~ Burushaski *ćhiṣ* 'mountain'. Thus, it can firmly be stated that no lexical evidence for Dene-Kusunda is detectable, whereas there are some promising correspondences for Dene-Yenisseian.

Critical assessment of the evidence

In this paper, similarities in the verbal morphology of Burushaski, Kusunda, Yenisseian and Athabaskan-Eyak-Tlingit have been presented and critically evaluated. I presented and assessed the evidence compiled by van Driem (2001, 2014) and Vajda (2010a) and added my own observations in order to give a comprehensive overview of the similarities of the verbal morphology of the involved languages. The following sections will summarise the evidence and point out some general issues that decrease the quality of the evidence for Dene-Kusunda and Dene-Yenisseian. Finally, an outlook is given.

Summary of the evidence for Dene-Kusunda

The evidence for Dene-Kusunda includes some similarities that should not be rejected *a priori* just because a great time depth has to be assumed for such a language family. However, much of the evidence is unconvincing, either because the proposed correspondences may also have come about by mere chance, or because the evidence is based on selective analysis which does marginalise or exclude some inconvenient part of the respective morphology in order to focus on the parts that make the comparison look more appealing. Table 29 summarises and assesses all the possible material cognates from the verbal morphology detected by Vajda (2010a), van Driem (2001, 2014) and Gerber (2013, this paper).[24] In the following, a short summary of the detected evidence in the five individual domains compared in the above sections will be given, including an assessment on the strength of each of these domains for the proposal of a Dene-Kusunda phylum. Because lexical comparison forms a

Table 29: Possible Dene-Kusunda cognates

Na-Dene		Yenisseian		Burushaski		Kusunda		Arguments and Source	Evaluation
Morpheme	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*		
PA **ši ~ *xʌ́i*, E *xuˈ*, T *χád* / PA **š- ~ *xʌ́-*, E *x(ʷ)-*, T *χa-*	'I'/ 1SG.SUBJ-prefix	PY **ʾaʒ*, PPY ?**xʷ*/ Ket *ba-*, *di-*, Kott *i-*, *-ŋ*	'I'/ 1SG.AGREE-affix	*je* [ʤe]	'I'	*tsi* / *ts-* ~ *t-* ~ *s-*	'I'/ 1SG.SUBJ-prefix	Possible regular correspondence for AET and YNS, speculative reconstruction for all languages possible. Vajda (2010a), Gerber (2013).	Highly speculative, unstable sounds involved.
PA **ñən* / **ñi-*, E *yí-*, T *ʔ-*	'you (sg)'/ 2SG.SUBJ-prefix	Kott *i-* (←PY ?**ŋ/i-*)	2SG.SUBJ-prefix	*un*	'you (SG)'	*nu, n-*	'you (SG)', 2SG.SUBJ-prefix	Close similarities between PA and K, possibly Kott. Vajda (2010a), Gerber (2013).	Not convincing, likely to be typological similarity, unmarked nasal element.
T *ʾuháˈn*	'we'	PY **aʒəŋ* / Ket *-n, -ŋ*	'we' / PL-suffix	*-an ~ -en*	PL-suffix	*tok*	'we'	Plural portion of T, PY, B and K possibly cognate (*-áˈn ~-əŋ ~ -a/en ~ -(o)k*). Vajda (2010a), van Driem (2001), Gerber (this paper).	No cognates in PA and E, unmarked nasal elements, affiliation of K speculative.
PA **nəχ(ʷ)ən*, T *tɥiˈh(ʷ)án*	'you (PL)'	PY **ʾawoŋ* / Ket *-n, -ŋ*	'you (PL)' / PL-suffix	*-an ~ -en*	PL-suffix	*nok*	'you (PL)'	Plural portion of PA, T, PY, B and K possibly cognate (*-ən ~ -án~ -oŋ ~ -a/en ~ -(o)k*). Vajda (2010a), van Driem (2001), Gerber (this paper).	No cognates in E, unmarked nasal elements, affiliation of K speculative.
-	-	Ket *ba-*	1SG.AGREE-prefix	*a-*	1SG.AGREE -prefix	-	-	Formal and functional parallels. van Driem (2001).	Problematic due to monosyllabic shape, unexplained bilabial onset in Ket.

Na-Dene		Yenisseian		Burushaski		Kusunda		Arguments and Source	Evaluation
Morpheme	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*		
PA **wi˙ ~ *wə-n*, T *hú*	'he/she/it'	Ket *bū˙* (← PY **wV̄*) / *bu-*	'he/she/it'/ 3SG/PL.N. AGREE-prefix	*u-*	3PL.HX.AGREE-prefix	-	-	Formal and functional parallels. van Driem (2001), Vajda (2010a), Gerber (this paper).	Fairly convincing for PA and YNS as well as T and B, problematic due to monosyllabic shape.
-	-	Ket *ku-*	2SG.AGREE-prefix	*gu-*	2SG.AGREE-prefix	-	-	Formal and functional parallels. van Driem (2001).	Convincing, but no cognate in other languages, similar forms in Caucasian languages.
-	-	Ket *i-*	3SG.F.AGREE-prefix	*i-*	3SG.HMX. AGREE-prefix	-	-	Formal parallels. van Driem (2001).	Incorrect comparison due to complementary functions.
PA **dâ˙=*	DIST-clitic	Ket *d-*	DIST-prefix	-	-	*-da*	PL-suffix	Formal and functional parallels. Vajda (2010a), Gerber (2013), van Driem (2014).	Vague semantics of involved morphemes, prefix in PA and Ket, suffix in K, probably chance similarity.
PA **yə-*, **wə-*	deictics (topic marker)	Ket *di-*, *b-*	animacy markers	-	-	-	-	Formal parallels. Vajda (2010a).	Unconvincing, functionally divergent, no cognates in E and T, unclear form in YNS.

Na-Dene		Yenisseian		Burushaski		Kusunda		Arguments and Source	Evaluation
Morpheme	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*		
AET **-ŋ/i, *-l*	ASP-suffixes (PERF, PROG)	PY **n-, *l-*	ASP-prefixes (PERF, IMPRF)	-	-	*-(ə)n*	ASP-suffix (REAL)	Cognate forms and system for AET and YNS, formal and functional parallels to Kusunda. Vajda (2010a), Gerber (2013), van Driem (2014).	Not fully convincing, different positions in verb template, unmarked nasal elements.
AET **x'i, *ɢa*	tense/mood-prefixes (←?AUX)	Ket *s- ~ i- ~ a- ~ ʌ-, qo- ~ o*	conjugation-prefixes (←? tense/ mood-prefixes/ AUX)	-	-	-	-	Functional and formal parallels. Vajda (2010a).	Unconvincing, scarcely attested in Ket, speculative analysis.
PA **nə-, *də-, *qʊ-*	classificatory shape prefixes	Ket *n-, d-, h-* (← PY **n-, *ǯ-, *p-*)	classificatory shape prefixes	-	-	-	-	Functional similarities, possibly regular sound correspondences. Vajda (2010a).	Unconvincing due to simple shape, semantically opaque prefixes, no correspondence in other prefixes in same slot, unelaborated analysis.
AET **də-*	VAL↓-classifier (←?auto-instrumental prefix)	PY **ǯ-*	IMP-prefix (and of body position or production with some verbs)	-	-	-	-	Valence-related function secondary. Vajda (2010a).	Unconvincing, highly speculative.
AET **də-*	VAL↓-classifier	-	-	*d-*	VAL↓-prefix	-	-	Formally and functionally identical. Gerber (2013).	Convincing, but suspiciously stable meaning and form implied.

Na-Dene		Yenisseian		Burushaski		Kusunda		Arguments and Source	Evaluation
Morpheme	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*	*Morpheme*	*Meaning*		
AET **(y)i-*	effect of STAT/PERF prefix	PY **jə-*	STAT/PERF-prefix	-	-	-	-	Formal and function parallels. Vajda (2010a).	Convincing, but exact relation unclear, identity of the two morphemes questionable.
AET **(y)i-*	effect of STAT/PERF prefix	-	-	*a-, gu-, i-* ...	AGREE-prefixes ?+ STAT **I-*	-	-	Formal and functional parallels, same assimilatory effect. Gerber (this paper).	Unconvincing, functional relation unclear, highly speculative, no direct evidence.
AET **l-*	VAL↑-classifier (~ ? INSTR-affix)	*l-*	INSTR-affix	-	-	-	-	Formally and functionally related. Vajda (2010a).	Unconvincing, highly speculative, no direct correspondence in YNS.
AET **l-*	VAL↑-classifier	-	-	*áa-, góo-, ée-*	AGREE-prefixes ?+ VAL↑ **L-*	-	-	Formal and functional parallels, similar development. Gerber (this paper).	Convincing, but no direct evidence, speculative.
AET **s-*	VAL↑-classifier	-	-	*s-*	VAL↑-prefix	-	-	Functionally and formally identical. Gerber (2013).	Convincing, but suspiciously stable meaning and form implied.

second important part of the paper of Vajda (2010a) and is generally important for proposals of genealogical relationship, the lexical evidence and its strength will be considered, too.

(a) Overall structure: Convincing and intriguing similarities between the verb templates of reconstructed Yenisseian and Na-Dene, and, in a somewhat lesser degree, also between those languages and Kusunda and Burushaski. Such similarities are, however, only typological parallels without further value for a proposal of linguistic relatedness.

(b) Agreement systems: The comparison of Yenisseian and Na-Dene first and second person pronominal morphology is problematic, since these forms may have involved unstable and variable sounds. All the proposed cognates of van Driem (2001) and Vajda (2010a) are questionable and unconvincing, with the possible exceptions of the second person singular agreement prefixes, <ku-> in Ket and <gu-> in Burushaski, the plural portions in the first and second person plural pronouns (cf. table 29) and the third person personal pronoun of Proto-Yenisseian *wV and Proto-Athabaskan *$wi^{\cdot}$ ~ *$wə$-n. The comparison of the agreement morphology does not yield convincing evidence for Dene-Kusunda.

(c) Tense/aspect-system: The material presented by Vajda (2010a) for a shared origin of Yenisseian and Na-Dene tense/aspect morphology is not as conclusive as a first gaze assumes, and all the comparisons discussed above need to be reworked and adjusted. The parallels to Kusunda and Burushaski are very weak and probably chance similarities. The comparison of the tense/aspect morphology does not yield convincing evidence for Dene-Kusunda. However, the similarities between Na-Dene and Yenisseian should not be rejected altogether at the present stage, as a reworked comparison may reveal some convincing parallels.

(d) Shape prefixes: The comparison of the shape prefixes does not stand up to critical examination and must, at least, be reworked, if not abandoned completely (cf. G. Starostin 2012). Since such prefixes are lacking in Burushaski and Kusunda, the comparison cannot provide any evidence for Dene-Kusunda.

(e) Classifiers: The proposed Yenisseian parallels to the Na-Dene classifiers are not convincing due to the speculative nature of the comparison. The proposed correspondences are probably mere chance similarities. The proposed Burushaski parallels are somewhat convincing, but are partially based on questionable indirect evidence. Other parts may constitute chance similarities. The comparison of the classifiers of Na-Dene with elements in Yenisseian does not yield evidence for Dene-Yenisseian, but the parallels in Burushaski may constitute preliminary arguments for a relationship between Burushaski and Na-Dene, while further research is needed to clarify these similarities.

(f) Lexicon: The lexical comparison of Vajda (2010a) for Dene-Yenisseian is somewhat convincing, even though the data set exhibits some very short terms, some possible borrowings from other languages, some onomatopoetic terms, and some one-to-multiple comparisons (cf. Campbell 2011). It is questionable whether the remaining correspondences are sufficient to establish sound correspondences and show relatedness

between Yenisseian and Na-Dene. Certainly, further work is needed on the topic of lexical comparison. Burushaski and Kusunda show no obvious lexical correspondences to Yenisseian or Na-Dene. Thus, lexical evidence may show a relationship between Yenisseian and Na-Dene, but no such relationship between those languages and Burushaski and Kusunda, or between Kusunda or Burushaski.

General problems and methodological shortcomings

The similarities that were described in this paper are not convincing enough to postulate a genealogical relationship between the compared languages. Generally, it is questionable whether any linguistic relationship between the languages involved can convincingly be postulated if the necessary time depth and the lack of documentation of earlier stages is considered. The similarities are unlikely to represent the vestiges of a shared linguistic ancestor. Particularly the following general considerations decrease the value of the evidence described in this paper.

Firstly, the compared elements are very short, almost exclusively monosyllabic. This reduces the value of the presented parallels, because '[...][m]onosyllabic CV or VC (or V) forms may be true cognates, but they are so short that their similarity to forms in other languages could also easily arise due to chance.' (Campbell/Poser 2008: 200).

Secondly, similarities between bound morphemes like those presented in this paper do not *per se* constitute evidence for genealogical relationship and must be treated with care. This is partly due to the fact that languages tend to employ only certain of the sounds for grammatical morphemes, commonly involving unmarked sounds. The same sounds occur cross-linguistically frequently in affixes. Consequently, it is likely that one encounters a lot of similarities between grammatical morphemes of many languages that are accidental (cf. Campbell/Poser 2008: 189). The languages compared in this paper, for example, all exhibit at least two grammatical categories encoded by an affix consisting of a nasal sound, namely the participle prefix <n->, the plural agreement suffix <-an ~ -en>, the nominal plural marker <-ŋ> and the participle suffix <-m> in Burushaski, the suffix <-(ə)n> of the realis aspect and the second person singular agreement marker <n-> of Kusunda, the plural suffix <-n, -ŋ> and the perfective prefix <n-> of Ket and the iterative marker <ná-> and the mode prefix and second person singular agreement marker, both <ni->, of Navajo. But then such markers containing nasals also occur in many other languages of different language families, for example in Turkish, e.g. the negative suffix <-ma ~ -me>, the participle <-an ~ -en>, the first person subject suffix <-im ~ -üm ~ -ım ~ -um>, or the Genitive <-(n)in ~ -(n)ün ~ -(n)ın ~ -(n)un>, or in German, e.g. the infinitive ending <-en>, the nominal negation prefix <un->, or the accusative case suffix <-n>. Nasals 'are rarely subject to confusion with other types of consonants' and 'there is value in incorporating such sounds into any language.' (Maddieson 1984: 70).

Thus, bound grammatical morphemes containing nasals are no good indication for genealogical relatedness. In order to be convincing cognates, bound morphemes of compared languages should, like free morphemes, show regular sound correspondences to each other, not mere look-alikes (cf. Campbell/Poser 2008: 172–174). Such regular sound correspondences are only provided for the Dene-Yenisseian connection of Vajda (2010a), and those, too, are problematic to a certain extent.

Thirdly, affixes may have more than one function or there might be a number of affixes expressing the same function, so that there is a chance to compare affixes of two languages that are actually not fully comparable, or to compare the specific aspects of multifunctional affixes that fit into the analysis and to ignore the other aspects (cf. Campbell/Poser 2008: 189–190).

Finally, as was already pointed out in this paper, the fact that all languages involved in this paper are typologically similar to each other and exhibit similarly complex verbal morphology does not provide evidence for genealogical relationship. Meillet (1925: 25) decisively rejects overall structural similarities without material correspondences as evidence for genealogical relationship:

> 'Ce n'est donc pas avec de pareils trait généraux de structure, sujets à changer du tout au tout en l'espace de quelque siècles, et du reste comportant seulement des variations peu nombreuses, qu'on peut établir des parentés de langue. [...] Ce qui est probant pour établir la continuité entre une 'lange commune' et une langue ultérieure, ce sont les procédés particuliers d'expression de la morphologie.'

Campbell/Poser (2008: 192–193) give an insightful discussion on the value of positional similarities as those observed for Dene-Kusunda and conclude:

> '[n]ot only can non-related languages come independently to share positional categories through morphological changes, related languages not infrequently come to have morphological categories whose positions do not match.'

Especially in the case of the comparison of Burushaski, Kusunda, Yenisseian and Athabaskan-Eyak-Tlingit, the assumed time depth makes it unlikely that these languages, even if they were in fact related to each other, would still preserve enough of the original positions and categories to resemble each other in the way that they actually do nowadays.

All these considerations lead to the conclusion that a genealogical relationship between Burushaski, Kusunda, Yenisseian and Athabaskan-Eyak-Tlingit cannot be demonstrated at the present stage. This finding corroborates my personal conjecture that the time depth of a putative Dene-Kusunda family is just too great to enable us to detect convincing vestiges of a common origin. Convincing statements concerning language relatedness beyond a certain time

depth are not possible, and the Dene-Kusunda hypothesis lies well beyond this horizon.

Outlook

Despite this fairly negative conclusion, a somewhat more optimistic outlook can be formulated. The critical assessment in this paper reveals that the Dene-Kusunda and Dene-Yenisseian proposals should not yet be included as verified facts into linguistic literature if they are to be regarded as serious theories. Evidently, the only way to learn more about a possible relatedness between Burushaski, Yenisseian, Kusunda and Athabaskan-Eyak-Tlingit is to rigorously adopt a bottom-up approach and to elaborate in-depth and careful examinations of the individual language groups and responses to the questions and criticism raised in this paper and other critical reviews. It is a significant fact that work on putative external relationships of language isolates like Burushaski outflanks by far the more fruitful work concerned with internal reconstruction of this language (e.g. Berger 2008; Holst 2014). However, historical-comparative linguistics can only work convincingly on the basis of studious bottom-up contributions.

The work of Vajda is an admirable effort to do this bottom-up work for Yenisseian and Na-Dene. The Dene-Yenisseian link is a stimulating theory, and the methodology as well as parts of the correspondences are convincing and meet the standards set during the postulation of nowadays widely accepted language families. However, what we must be careful about is to not take a theory as a proven fact as long as the evidence does not suffice. Rather, it is advisable to take an agnostic position, instead of adopting a position of effusive consent, which does not contribute much to the development of a scientific theory.

Firmly established language families are not based on a single convincing contribution, but on the work of decades and centuries, and it is utterly wrong to assume that this work could be overleapt once a confident first step has been taken. Instead, such pioneering work on a certain proposed linguistic relationship must be taken as a starting point from where to proceed further on and from where to test, adjust and potentially reject the ideas presented in the initial contribution. By this procedure, a theory gradually becomes more and more sophisticated and firm, regardless of whether it is finally to be rejected or to be accepted. In this respect, it does not benefit a theory like the Dene-Yenisseian link to be ‘proven’ by statistics (cf. Nichols 2010), which seems to me to be exactly one of these attempts to skip the time-consuming, but indispensable intermediate work between a first postulation of a language relationship and its definite acceptance or rejection. The words of von der Gabelentz (1891: 166) on methodological strictness and the consequences of a lack of commitment to it are as true and relevant today as they were a hundred years ago:

> 'Wer entdecken will, muss den Muth haben zu irren. In der Wissenschaft irrt aber nicht allein der, der für eine Thatsache hält, was nicht thatsächlich ist, sondern auch Jener, der vorschnell für bewiesen ansieht, was noch des Beweises ermangelt, oder für wahrscheinlich ausgiebt, wofür noch keine hinlänglichen Anzeichen vorliegen.'

As a logical consequence of the present paper and its critical evaluation of the Dene-Kusunda and Dene-Yenisseian hypotheses, the burden of proof still lies on the shoulders of those who favour these hypotheses. This means that much more qualitative, bottom-up work is needed in order to facilitate a more definite evaluation of the Dene-Yenisseian and Dene-Kusunda hypotheses. Vajda (2010b: 115) states that he wishes his '[...] article to be received as a constructive contribution to long-range as well as mainstream historical linguistics'. This paper suggests that the Dene-Yenisseian proposal and, to some minor degree, the Dene-Kusunda hypothesis achieve this ambitious aim by providing a nutritious ground for further research, but the achievement is only to be lasting if the pioneering work is continued in future research. Otherwise, these hypotheses will be remembered as just two more examples of countless unconvincing attempts at distant genetic relationship. Critical reviews are crucial for the further development of any theory of language relationship. Therefore I understand this paper to be a contribution to the further development of the Dene-Yenisseian and Dene-Kusunda hypotheses.

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Notes

1. The following symbols and abbreviations for grammatical categories are used in this paper: / 'Phoneme', < > 'Grapheme/Morpheme', ? 'Unclear relationship/Form not attested or reconstructable', [ ] 'Phone/Local morphological analysis', ← '... is derived from ...', ↑ 'Increase (of valence)', → '... becomes ...', ↓ 'Decrease (of valence)', 1 'First person', 2 'Second person', 3 'Third person', 4 'Fourth person', A 'Transitive subject', ABL 'Ablative', ABS 'Absolutive', AC 'Anticausative', ACT 'Active', ADJP 'Adjunct phrase', ADS 'Adessive', ADV 'Adverbial marker', AET 'Athabaskan-Eyak-Tlingit', AGREE 'Agreement', ALL 'Allative', ANIM 'Animated', ASP 'Aspect', AUX 'Auxiliary', B 'Burushaski', CAUS 'Causative', CLASS 'Classifier (Na-Dene)', CSTM 'Customary marker', D 'd-classifier', DAT 'Dative', DEIC 'Deictic marker', DER 'Derivational affix', DET 'Determiner', DIR 'Direct (object)', DIST 'Distributive', DU 'Dual', DUR 'Durative', E

'Eyak', ERG 'Ergative', F 'Feminine gender', GEN 'Genitive', H 'h-class', HF 'hf-class', HM 'hm-class', HMXY 'hm/x/y-class', HORT 'Hortative', HX 'hx-class', IMIN 'Imminent marker', IMP 'Imperative', IMPRF 'Imperfective', INANIM 'Inanimated', INCMPL 'Incompletive', INCORP 'Incorporated element', INF 'Non-finite morpheme', INSTR 'Instrumental', IRR 'Irrealis', ITER 'Iterative', K 'Kusunda', LE 'Lexical element', LV 'Linking vowel', M 'Masculine gender', MOD 'Modal morpheme', N 'Neuter gender', NEG 'Negation', NOM 'Nominal marker', NUM 'Number', OBJ 'Object', OPT 'Optative', PA 'Proto-Athabaskan', PART 'Participle', PERF 'Perfective', PL 'Plural', POL 'Polarity', POSS 'Possessive marker', PP 'Postpositional', PPY 'Pre-Proto-Yenisseian', PRES 'Present', PRET 'Preterite', PROG 'Progressive', PROH 'Prohibitive', PT 'Past', PY 'Proto-Yenisseian', Q 'Interrogative particle', QUAL 'Qualifier (shape prefixes in Na-Dene)', R 'Root', REAL 'Realis', RECP 'Reciprocal', REFL 'Reflexive', REPT 'Repetitive', SA 'Active intransitive subject', SG 'Singular', SO 'Inactive intransitive subject', STAT 'Stative', SUBJ 'Subject', T 'Tlingit', TAM 'Tense-aspect-mode', THEM 'Thematic affix', TNS 'Tense', VAL 'Valence', X 'x-class', Y 'y-class', YNS 'Yenisseian', Ø 'Ø-classifier', Ł 'Ł-classifier'.

2. In this paper, I follow the spelling convention also used by van Driem (e.g. 2014: 86), based on the earlier German and Dutch sources, in spelling the name *Yenisseian* with a double <s> in order to ensure a voiceless pronunciation according to German and Dutch orthography.
3. The Yenisseian language family originally included more than these six languages. The erstwhile existence of other, undocumented and extinct Yenisseian languages can be inferred from toponymic evidence and from tsarist fur-tax revenue reports (Vajda 2004: 1).
4. The traditional notion of Na-Dene also includes Haida. However, the affiliation of Haida to Na-Dene has recently been doubted, and a number of scholars exclude Haida from Na-Dene and explain the previous classification with Athabaskan, Eyak and Tlingit as resulting from incorrect analysis and considerable borrowing (cf. Campbell 1997: 114; Mithun 1999: 347). In this paper, I use the designations 'Na-Dene' and 'Athabaskan-Eyak-Tlingit' interchangeably.
5. For a critique of the traditional denomination 'Sino-Tibetan', its misleading linguistic implications and a replacement of this term with 'Tibeto-Burman' or 'Trans-Himalayan', cf. van Driem (1997, 2002, 2005), Blench/Post (2014), or DeLancey (2014: 41), *inter alia*.
6. Until January 2009, the designation 'Dene-Yeniseic' was commonly used to name the hypothesis, and the Yenisseian languages were called 'Yeniseic' by the participants of the Dene-Yeniseian (or rather Dene-Yeniseic) Symposium held on 26-27 February 2008 in Fairbanks (cf. Kari/Potter 2010: 1). The earlier naming conventions can still be seen in the 2008 draft version of Vajda (2010a).
7. The term *classifier* is a constantly used but awkwardly chosen designation, since the classifiers of Athabaskan-Eyak-Tlingit have no functional similarity to systems of numeral noun classification as found e.g. in East Asia which often go under the same designation (cf. Lyons 1977; Craig 1986; Downing 1996; Aikhenvald 2000). The predominant use of the label *classifier* in this context has created a strong relation of association between the label and the phenomenon of numeral noun classification. Consequently, the use of the term classifier to refer to the thematic prefixes of Na-Dene may cause confusion at first sight, even though, in a literal sense, the term *classifier* is also suitable for these puzzling Na-Dene morphemes.

8. In table 6, I have merged the positions 0, ‘incorporated postposition’, 00, ‘object of incorporated postposition’ and 000, ‘adverb’ of Rice (1989: 433) under position 0, ‘PP.INCORP + PP.OBJ’, as well as the positions 8, ‘theme/derivation’ and 9, ‘aspect/derivation’ of Rice (1989: 430) under position 8, ‘THEM, ASP, DER’.
9. The suffix <-m> does not only function as a participle and as an optative marker, but also builds up a considerable part of the tense/aspect-system of Burushaski (cf. Berger 1998a: 133, 142; Tiffou/Pesot 1989: 38–42).
10. Donohue/Gautam (2013: 38) rightly point out that the various morphophonological processes of Kusunda complicate the depiction of the Kusunda verb in only one template, and that because of different agreement and aspect inflections, various different verb templates must be assumed. In accordance with this statement, I present an individual depiction for both class I and class II verbs, which constitute the two main inflectional types of Kusunda.
11. The involvement of a copy of the personal pronoun in this construction may imply that the construction originally put a focus on the subject in question, i.e. ‘It is me who has not eaten (yet)’. This may still be the actual function, since it seems to me that the entire negative perfect meaning is sufficiently encoded in the negative realis marker <-da:ˤu ~ -a:ˤu>. The use of the same construction to also express habitual events (cf. Watters 2006: 75) is additional support for this analysis, according to which the ‘negative perfective’ (Watters 2006: 75) would actually be a pragmatic focus marker.
12. A third distinct subgroup, Arin-Pumpokol, cannot be considered here because of the scarcity of available morphological data. However, on the basis of lexical comparisons, these two languages clearly constitute a third subgroup (cf. Werner 2005: 14).
13. I have modified the spelling of Leer (1991) for a better understanding of the phonetic shape of the agreement markers by people not familiar with Na-Dene spelling conventions. This adjustments concern the spelling of <x̣> [χ] as <χ> and the spelling of <ÿ> [ɯ] as <ɯ>.
14. The personal pronouns of Kusunda are *tsi* ‘I’, *nu* ‘thou’, *gina* ‘he, she, that’, *tok* ‘we’ and *nok* ‘you’ (cf. Watters 2006: 44).
15. This representation is an abstract notion rather than the real pronunciation of the morpheme, which is only attested indirectly and thus poses some difficulties in being assigned a specific phonetic form (cf. Vajda 2010a: 51).
16. There is internal evidence in Kusunda that *gina* ‘he/she’ originated as a demonstrative pronoun, i.e. that third person was originally unmarked: *gina* is still used as a demonstrative pronoun (cf. Watters 2006: 49). Additionally, unlike the first and second person pronouns, *gina* cannot be combined with the pronominal plural marker <-k> to obtain a plural form, but always conveys a number-unspecific meaning (cf. Watters 2006: 44–45). Furthermore, in an attempt to supplement this with external evidence, one could argue that the demonstrative pronoun *gina*, or rather <gi->, which might have been combined with the animate demonstrative pronoun *na* still productively used in Kusunda (cf. Watters 2006: 49), is cognate with the Ket demonstrative pronoun *kɪ̄·* ‘this (near the speaker)’ (cf. Werner 1997b: 137) and reflects the set of demonstrative pronouns in Burushaski starting on a velar plosive, i.e. *khiné* ‘this one’, contrasting with *iné* ‘this one there’ (cf. Berger 1998a: 81).

17. Vajda (2010a), based on Leer (e.g. 2010), provides the spellings <x^{y}i> and <ŋ^{y}>, but in this paper, I prefer the spellings <x^{j}i> and <ŋ^{j}>, which are in accordance with the conventions of the International Phonetic Alphabet.

18. In example (70), the classifier <d-> disappears before the verb root initial consonant (cf. Young/Morgan 1980: 356). Examples (71) and (72) are phonetically realised identically. However, their underlying structure differs, and the phonetic identity is caused by a process of devoicing of /l/ to /ɬ/ which applies in both examples, due to the adjacency of /h/ to /l/ in example (71), and due to the adjacency of the classifier /ɬ/ to /l/ in example (72) (cf. Young/Morgan 1980: 354).

19. The analysis of Watters (2006: 99–102) reveals the existence of an 'anti-causative' morpheme <-t> in Kusunda, alongside a functionally identical morpheme <-q>. The function of both suffixes is to reduce the valence of a genuinely transitive verb, deriving an intransitive or middle meaning, e.g. *kəre: kəla-**q**-ṇ* 'the jug broke' or *dimi nõdze gwi-**t**-ṇ* 'smoke (soot) gathered above' (Watters 2006: 100, 101). The morpheme <-t> is thus functionally and formally similar to the classifier *<də-> of Na-Dene. However, unlike the classifier of Na-Dene, the Kusunda morpheme <-t> is not closely bound to the verb root and occupies a slot after the agreement suffix, e.g. *nok gwi-ni-**t**-n-an* [2.PL gather-2.SUBJ-**AC**-2.SUBJ-PL.REAL] 'you all gathered' (Watters 2006: 102). This mobility of the anticausative suffix <-t> decreases the possibility of the archaic status of the morpheme that we would have to assume if we wanted to relate it to the Na-Dene classifier *<də->. The Na-Dene classifier evidently belongs to the oldest layer of the morphology, visible in its close affiliation to the verb root, going as far as partial or complete fusion with the root or preceding prefixes, and its partially fossilised occurrence. Additionally, the Kusunda morpheme is a suffix, whereas the morpheme in Na-Dene (as well as its presumed correspondences in Yenisseian and Burushaski) is a prefix. Thus, the Kusunda anticausative <-t> exhibits only a superficial chance similarity with the Na-Dene classifier *<də-> and may be a rather recent innovation of the language, together with the second anticausative marker <-q> and the other valence changing morphemes of Kusunda (cf. Watters 2006: 97–105).

20. Or alternative analysis: Berger (2008: 108, 115) argues that the d- and s-prefixes have a 'pronominaler Ursprung', i.e. are derived from demonstrative roots. The agreement prefix of type II and III are analysed as being derived from the combination of type I with a deictic morpheme *<a-> (type II) and of type II with the dative forms of the personal pronouns (type III), respectively (Berger 2008: 113). However, his analysis, which implies that this morphology is not considerably old, does not explain the morphology more convincingly, and cannot be viewed as strong counter-evidence against the analysis of the morphology presented in this paper. Rather, I regard both analyses as equally plausible explanations. Further research needs to be carried out in order to clarify this controversy.

21. Data of these correspondences taken from the following sources: 'child': Na-Dene: Pinnow (1966: 61–62), cited in Werner (2004: 118), Yenisseian: Werner (2004: 118), Kusunda: Watters (2006: 142); 'body': Na-Dene: Pinnow (1966: 100), cited in Werner (2004: 123), Yenisseian: Werner (2004: 123), Kusunda: Watters (2006: 142); 'name': Tlingit: Ruhlen (1998: 13995), Yenisseian: Werner (2004: 133), Kusunda: Watters (2006: 142), Burushaski: Berger (1998b: 211).

22. Data of these correspondences taken from the following sources: 'liver': Yenisseian and Athabaskan-Eyak: Vajda (2010a: 66), Burushaski: Berger (1998b: 245), Kusunda: Watters (2006: 144); 'finger': Yenisseian: S. A. Starostin (1995: 283), Athabaskan-Eyak:

Vajda (2010a: 82), Burushaski: Berger (1998b: 289), Kusunda: Watters (2006: 31); 'blood': Ket and Athabaskan-Eyak: Vajda (2010a: 80), Burushaski: Berger (1998b: 293), Kusunda: Watters (2006: 146).

23. Data of these correspondences taken from the following sources: 'stone/mountain': Yenisseian: G. Starostin (2012: 131), Burushaski: Berger (1998b: 529); 'name': Yenisseian: Werner (2004: 133), Burushaski: Berger (1998b: 211).

24. Some individual morphemes in table 29 are compared to different morphemes in several languages. This is ought to designate conflicting hypothesis as how to connect a specific morpheme in question to material in other branches of a putative Dene-Kusunda family. I also merged some comparison together which were treated as separate comparisons in the above sections. Such cases signify that, in my opinion, the different comparisons are compatible and may show correspondences between more than just two branches of the putative Dene-Kusunda phylum.

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