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7 Clues to Kanashi prehistory 2: loanword adaptation in verbs

Abstract: In this chapter, we extend the investigation of common loanword adaptation patterns noted in Kanashi and Kinnauri to the verbal domain, where both languages use dedicated transitivity-signalling morphology exclusively on Indo-Aryan loan verbs. In the same way as with the nominal adaptive markers, we investigate the distribution of this adaptive mechanism in related and neighboring languages in the western Himalayas, and we also discuss possible sources for the verbal adaptive markers.

Keywords: Kanashi, Kinnauri, Sino-Tibetan, Indo-Aryan, language contact, comparative linguistics, verbal morphology

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1 Introduction

Similarly to what we saw for the nominal domain in the previous chapter, Kanashi and Kinnauri also have a pair of adaptive markers used with borrowed Indo-Aryan (IA) verbs: the valency increasing marker *-ja:* and the intransitive marker *-e(d)*.¹ In

¹ Notably and in contrast to the nominal adaptive markers, *-ja:* and *-e(d)* come with clear semantics: they are valency-indicating suffixes. Since they occur only on loanwords, we will still refer to them as “adaptive markers”.

this chapter, we will describe these valency-indicating devices in Kanashi and Kinnauri in Section 2. In the same way as with the nominal adaptive markers, we will also examine (in Section 3) if the neighboring (ST and non-ST) languages show similarities to the Kanashi-Kinnauri patterns, and after an interim summary in Section 4, in Section 5 we turn to the question of the origin of these adaptive markers.

1.1 Background: transitivity and intransitivity strategies in Indo-Aryan and Sino-Tibetan

Many New Indo-Aryan² languages form transitive verbs from intransitive verbs using modern reflexes of OIA or MIA causative morphology. One line of development has led to a configuration where a set of transitive verbs only differ from their intransitive counterparts in having a different root vowel (“ablaut”), a situation similar to umlauting causatives in Germanic languages (e.g. English *fall* : *fell*). This pattern has often been analogically extended to other verb pairs not originally taking part in this formation. In all other cases, the transitivity/causativizing derivational morphemes are suffixes. A number of NIA languages exhibit reflexes of the MIA causative suffix *-āvē*, surfacing in Hindi and many other NIA languages as *-ā* (primary causative), *-vā* (secondary causative < **-āv-āv*), but there are also other transitivity suffixes found in NIA (e.g., *-āḍ*, *-āl*, *-ār*) (Masica 1991: 317ff).

Verbal transitivity devices found across ST (in some cases postulated to go back to Proto-Sino-Tibetan) are at least (LaPolla 2017: 40ff; Matisoff 2003):

1. a causative prefix **s-*;
2. an initial-consonant voicing contrast (suggested to reflect an assimilatory sound change caused by a subsequently lost nasal prefix; Sagart 2006), where intransitive verbs begin with a voiced consonant and the transitive verb has the corresponding unvoiced initial consonant;
3. a middle/reciprocal suffix **(n)si*;
4. a transitivity suffix **-t*.

1–2 are not productive in ST. 3 has counterparts in many ST languages from different subbranches of the family (LaPolla 1996; DeLancey 2010). 4 occurs in Tibetan, Raji and some other ST languages. Many ST languages have also grammatical-

² The three recognized distinct historical stages of IA are referred to in the literature as *Old Indo-Aryan* (OIA), *Middle Indo-Aryan* (MIA) and *New Indo-Aryan* (NIA).

ized light or serial verb constructions involving verbs such as ‘do’, ‘give’, ‘send’ (LaPolla 2017: 52).

Focusing specifically on Kanashi and Kinnauri, the attested valency changing mechanisms are:

1. a transitivity prefix *s-*;
2. initial consonant voicing alternation;
3. a “middle marker” *-fi*;
4. a valency increasing marker *-ja:*;
5. an intransitive marker *-e(d)*.

1 and 2 (same as above) are not productive processes in Kanashi and Kinnauri. 3 (same as above) is productively used in both Kanashi and Kinnauri (see Chapter 3 and Saxena 2017; 2022). 4 and 5 in both Kanashi and Kinnauri occur only on IA loans and verbs of unknown etymologies, but not on ST verb stems.

2 *-e(d)* and *-ja:* in Kanashi and Kinnauri

To a subset of IA loans in Kinnauri, *-e(d)* is suffixed to form an intransitive verb and *-ja:* in the same slot is suffixed to increase valency, either to form the corresponding transitive (or causative) verb from an intransitive verb or to form a causative from a transitive verb. *-e(d)* is realized as *-en* in the examples shown in Table 1 (see more on this below).³

In some situations (for example, in the progressive aspect), the intransitive marker is realized in Kinnauri as *-ed* (instead of as *-en*) and the transitivity marker *-ja:* is realized as *-j* (see Table 2).

The same general pattern can be seen in Kanashi too, as shown in Table 3, although the intransitive suffix appears as invariant *-e* in Kanashi.

2.1 Valency-increasing *-ja:*

No Kinnauri di- or polysyllabic verb stems with *-ja:* in the final syllable are intransitive (Table 4).

³ Note that in the pair *rukennu* : *rokja:mu* ‘to stop (INTR : TR)’ in Table 1 the transitive and intransitive verb forms here have different vowels, much like the “ablaut” in Hindi for transitivity. But even in this case we still see the regular valency increasing adaptive marker *-ja:* in Kinnauri.

Table 1: *-e(d)* and *-ja:* in Kinnauri

V(INTR)	Gloss	V(TR)	Gloss
<i>polʈ-en-nu</i>	'to turn around, to roll'	<i>polʈ-ja:-mu</i>	'to turn (sth) around, to roll (sth)'
<i>ba:s-en-nu</i>	'to smell'	<i>ba:s-ja:-mu</i>	'to smell (sth)'
<i>pa:l-en-nu</i>	'to grow'	<i>pa:l-ja:-mu</i>	'to grow (sth)'
<i>ruk-en-nu</i>	'to stop'	<i>rok-ja:-mu</i>	'to stop (sth)'
<i>somɖ-en-nu</i>	'to understand'	<i>somɖ-ja:-mu</i>	'to understand (sth)'
<i>dʒonl-en-nu</i>	'to swing'	<i>dʒonl-ja:-mu</i>	'to swing (sth)'

Table 2: *-e(d)* and *-ja:* in the Kinnauri structure [V-(TR/INTR)-PROG BE.PRS]

V(INTR)	Gloss (V-INTR-PROG BE.PRS)	V(TR)	Gloss (V-TR-PROG BE.PRS)
<i>baɖɖ-ed-o du</i>	'is playing'	<i>baɖɖ-j-o du</i>	'is making (sb) play'
<i>hal-ed-o du</i>	'is walking'	<i>hal-j-o du</i>	'is making (sb) walk'
<i>bo:l-ed-o du</i>	'is crazy'	<i>bo:l-j-o du</i>	'makes (sb) crazy'
<i>sik-ed-o du</i>	'is moving' (e.g. leaving on their own)	<i>sik-j-o du</i>	'is moving (sth)'
<i>bifar-ed-o du</i>	'is tense'	<i>bifar-j-o du</i>	'is making (sb/sth) tense'
<i>ba:t-ed-o du</i>	'is talking to self'	<i>ba:t-j-o du</i>	'is making (sb) talk to self'
<i>tʰur-ed-o du</i>	'is running'	<i>tʰur-j-o du</i>	'is making (sb) run'
<i>tokʰ-ed-o du</i>	'is shouting'	<i>tokʰ-j-o du</i>	'is making (sb) shout'
<i>pur-ed-o du</i>	'is coming to an end'	<i>pur-j-o du</i>	'is finishing (sth)'

Once the valency increasing marker *-ja:* is affixed to the verb stem, it becomes part of the lexical item, which then undergoes the same processes as a regular lexical verb. In Kinnauri monosyllabic verb stems are reduplicated in the perfective aspect, if the verb stem does not end in *-tʃ* or *-f*. If the verb stem is disyllabic, there is partial reduplication, where only the second syllable is reduplicated. In the perfective form of the verb stems with *-ja:*, the last consonant of the penultimate syllable together with the final syllable (*-ja:*) are reduplicated (Table 5).

As was the case with Kinnauri above, in Kanashi, the suffix *-ja:* attaches to stems of IA origin and to stems with unknown etymology. Transitive verbs with *-ja:* take the intransitive marker *-e* or the middle marker *-ʃi* in their corresponding decreased valency verb forms. See Table 6.

Notably, nasal stems do not drop their final consonant before *-ja:* (e.g. *gaŋ-ja:-m* 'to count'), which indicates that the *-j-* patterns as a vowel in the phonological system of Kanashi, for which additional support is provided by verbs such as *rangja:m* 'to dye, to color' and *sangja:m* 'to pile up', since *-ŋg-* is the expected intervocalic realization of *-ŋ-*.

Table 3: *-e* and *-ja* in Kanashi

Gloss	V-INTR-INF	V-TR-INF
'to meet (INTR : TR)'	<i>mil-e-m</i>	<i>mil-ja:-m</i>
'to sleep (INTR : TR)'	<i>tul-e-m</i>	<i>tul-ja:-m</i>
'to press (INTR : TR)'	<i>ɖzik-e-m</i>	<i>ɖzik-ja:-m</i>
'to grow (INTR : TR)'	<i>roh-e-m</i>	<i>roj-ja:-m</i>
'to cook (INTR : TR)'	<i>sit-e-m</i>	<i>siti-ja:-m</i>
'to see (INTR : TR)'	<i>ba:l-e-m</i>	<i>ba:l-ja:-m</i>

Table 4: *-ja* in Kinnauri

Etymology	Kinnauri	Gloss
T9822. <i>mánas</i> n. 'mind'	<i>mon-ja:-mu</i>	'to make sb agree'
T9092 <i>phulla</i> 'expanded, blown (of flowers)'	<i>p^hul-ja:-mu</i>	'to blow (sth)'
T1316 <i>ārādhayati</i> 'pleased, invited'	<i>ar-ja:-mu</i>	'to call (sb)'
T12959 <i>sāmbudhyatē</i> 'wakes up, understands'	<i>somɖ-ja:-mu</i>	'to explain (sth)'
T9106 * <i>phēkk</i> 'throw'	<i>p^hik-ja:-mu</i>	'to throw (sth)'
T7968 * <i>pallaṭṭ</i> 'turn, overturn'	<i>polṭ-ja:-mu</i>	'to turn over (e.g. chapati, quilt)'
T4998 <i>chārdati chardāyati</i> 'causes to flow over', 'vomits'	<i>ts^huṭ-ja:-mu</i>	'to release (sth)'
T5979 <i>tōlaka tōlāyati</i> 'lifts, weights, considers'	<i>tol-ja:-mu</i>	'to weigh (sth)'

Table 5: Perfective with verbs in *-j(a)* in Kinnauri

Gloss	V-TR-INF	V(TR)~PFV
'to throw (sth)'	<i>p^hik-ja:-mu</i>	<i>p^hikja:~kja:</i>
'to cut (e.g. vegetables)'	<i>ts^hin-ja:-mu</i>	<i>ts^hinja:~nja:</i>
'to turn over (e.g. bread, quilt)'	<i>polṭ-ja:-mu</i>	<i>polṭja:~tja:</i>
'to increase (sth countable)'	<i>bod-ja:-mu</i>	<i>bodja:~dja:</i>
'to stop (sb)'	<i>rok-ja:-mu</i>	<i>rokja:~kja:</i>
'to gather (sth)'	<i>meṭ-ja:-mu</i>	<i>meṭja:~tja:</i>
'to wipe, to sweep (sth)'	<i>kuf-ja:-mu</i>	<i>kufja:~fja:</i>
'to swing (sth)'	<i>ɖzonl-ja:-mu</i>	<i>ɖzonlja:~lja:</i>
'to rub (e.g. clothes)'	<i>ɖzek^h-ja:-mu</i>	<i>ɖzek^hja:~k^hja:</i>
'to leave (sth)'	<i>foṭ^h-ja:-mu</i>	<i>foṭ^hja:~t^hja:</i>

Unlike Kinnauri, in Kanashi, there are some verbs which seem to contain both the transitive and the intransitive marker: *-ja* and *-e* (Table 7). More data is needed to analyze this further.

Table 6: Transitive and intransitive IA loan verbs in Kanashi

Etymology	Kanashi	Gloss (V-TR-INF)	Kanashi	Gloss (V-INTR-INF)
T7968 *pallaṭṭ 'turn, overturn'	<i>palt̪-ja:-m</i>	'to turn (sth) over'	<i>palt̪-e-m</i>	'to turn over'
T2339 *ubbal 'rise, swell, boil'	<i>ubɭ-ja:-m</i>	'to boil (sth)'	<i>ubɭ-e-m</i>	'to boil'
T8037 pāṭhayati 'causes to read'	<i>paɭ^h-ja:-m</i>	'to teach (sth)'	<i>paɭ-e-m</i>	'to teach'
T13943 *haṭṭ 'move'	<i>haṇɖ-ja:-m</i>	'to make (sb) walk'	<i>haṇɖ-e-m</i>	'to walk'
T6173 *dabb 'press'	<i>ɖub-ja:-m</i>	'to sink, drown (sb/sth)'	<i>ɖubb-e-m</i>	'to sink, drown'
T11048 likhāti 'scratches', 'writes'	<i>lik^h-ja:-m</i>	'to write (sth)'	<i>lik^h-e-m</i>	'to write'

As in Kinnauri, once the valency increasing marker *-ja:* is affixed to the verb stem, it becomes part of the lexical item, which then undergoes the same processes as a regular lexical verb. For example, the regular imperative marker is affixed to the verb stem, as shown in (1).

- (1) *ba:l-ja:-u*
 see-TR-IMP.M
 'Look!'

Table 7: Kanashi loan verbs with *-ja:* and *-e*

Etymology	Kanashi	Gloss	Kanashi	Gloss
T1696 uḍḍayana n. 'flying up'; T1697 uḍḍiyatē 'flies up'	<i>uɭ-ja:-m</i>	[fly-TR-INF]	<i>uɭ-j-e-m</i>	[fly-TR-INTR-INF]
T12429 śikṣaṇa n. 'act of learning'	<i>sik^h-ja:-m</i>	[learn-TR-INF]	<i>sik^h-j-e-m</i>	[learn-TR-INTR-INF]
T10560 raṅga ¹ m. 'dye, colour'	<i>raŋg-ja:-m</i>	[color-TR-INF]	<i>raŋg-j-e-m</i>	[color-TR-INTR-INF]

2.2 Intransitive *-e(d)*

Di- and polysyllabic verb stems with *-e(d)* as the final syllable are intransitive verbs in Kinnauri. As was the case with the valency increasing marker *-ja:* above, *-e(d)* occurs only with IA loans or verbs of unknown etymologies, but never on ST verbs. *-e(d)* appears as *-e*, *-ed* or *-en* depending on its morphophonological context. The variant *-en* appears before infinitive *-mu*, which is then realized as *-nu*. See Table 8. The variant *-ed* is found e.g. before the progressive aspect marker *-o* (see Table 2), and *-e* appears before the past tense suffix *-kjo* and in the reduplicated perfective.

Table 8: Intransitive loan verbs in Kinnauri

Etymology	Kinnauri	Gloss
T7968 *pallaṭṭ ‘turn, overturn’	<i>polṭ-en-nu</i>	[turn.OVER-INTR-INF] ‘to turn over (INTR)’
T11592 vāsa ³ m. ‘perfume’. T11601 vāsayati ³ ‘perfumes’	<i>ba:s-en-nu</i>	[smell-INTR-INF] ‘to smell (INTR)’
T8125 pālā m. ‘protector’, T8106 pāyāyati ¹ ‘brings over, rescues, brings to an end’	<i>pa:l-en-nu</i>	[grow-INTR-INF] ‘to grow (INTR)’
T11453 vaha : vāhati ‘carries, bears along (of rivers), is carried along’	<i>boj-en-nu</i>	[flow-INTR-INF] ‘to float, to blow (INTR)’
T10827 *rōkk ‘stop’	<i>ruk-en-nu</i>	[stop-INTR-INF] ‘to stop (INTR)’
T12959 sambudhyatē ‘wakes up, understands’	<i>somḍ-en-nu</i>	[understand-INTR-INF] ‘to understand (INTR)’
T5417 *jhōlayati ‘causes to swing’	<i>ḍzonl-en-nu</i>	[swing-INTR-INF] ‘to swing (INTR)’

As the examples in Table 9 illustrate, the corresponding intransitive verb forms of the transitive verbs with *-ja:* can take either the intransitive marker *-e(d)*, or the middle marker *-fi*. In many cases both are possible, often with slightly different senses.

This holds true for the most part. However, a restricted set of verbs with the valency increasing marker *-ja:* do not permit the intransitive marker *-e(d)* (Table 10). It is unclear why this is the case. They only permit the middle marker.

In Kanashi, too, the intransitive marker *-e* occurs only with (IA) loan verbs (Table 11).

Apart from the intransitive marker *-e*, there are also some underived disyllabic transitive IA verb stems in Kanashi ending in *-e* (e.g., *ba:le-* ‘look, see’; *kaṭe-* ‘cut’). These are recognized by their occurrence in clear transitive clauses. In some cases there are also intransitive usages of these verbs in our Kanashi material, so that the

Table 9: Transitive-intransitive loan verb pairs in Kinnauri

Gloss (TR)	V-TR-INF	V-TR-MDL-INF	V-INTR-INF
'to smell'	<i>ba:s-ja:-mu</i>	<i>ba:s-ja:-fi-mu</i>	<i>ba:s-en-nu</i>
'to grow'	<i>pa:l-ja:-mu</i>	<i>pa:l-ja:-fi-mu</i>	<i>pa:l-en-nu</i>
'to drown'	<i>qub-ja:-mu</i>	<i>qub-ja:-fi-mu</i>	<i>qub-en-nu</i>
'to understand (X)'	<i>somɕ-ja:-mu</i>	<i>somɕ-ja:-fi-mu</i>	<i>somdz-en-nu</i>
'to move (X)'	<i>sik-ja:-mu</i>	<i>sik-ja:-fi-mu</i>	<i>sik-en-nu</i>
'to increase (X)'	<i>bod-ja:-mu</i>	<i>bod-ja:-fi-mu</i>	<i>bod-en-nu</i>
'to stop (X)'	<i>rok-ja:-mu</i>	<i>rok-ja:-fi-mu</i> [to be stopped, PL/collectively]	<i>ruk-en-nu</i> [on its own, SG]
'to swing (X)'	<i>dʒonl-ja:-mu</i>	<i>dʒonl-ja:-fi-mu</i> [to get swung, PL/collectively]'	<i>dʒonl-en-nu</i> [on its own, SG]
'to turn over'	<i>polɕ-ja:-mu</i>	<i>polɕ-ja:-fi-mu</i>	<i>polɕ-en-nu</i> [on its own, SG]

Table 10: Kinnauri loan verbs without *-e(d)*

Gloss (TR)	V-TR-INF	V-TR-MDL-INF	*V(INTR)
'to squeeze'	<i>tru:t^h-ja:-mu</i>	<i>tru:t^h-ja:-fi-mu</i>	* <i>t(r)u:t^hennu</i>
'to leave (sb/sth)'	<i>foɕ^h-ja:-mu</i>	<i>foɕ^h-ja:-fi-mu</i>	* <i>foɕ^hennu</i>
'to make sb agree'	<i>mon-ja:-mu</i>	<i>mon-ja:-fi-mu</i>	* <i>monennu</i>
'to blow off (sth)'	<i>p^hul-ja:-mu</i>	<i>p^hul-ja:-fi-mu</i>	* <i>p^hulxkennu</i>
'to call (sb)'	<i>ar-ja:-mu</i>	<i>ar-ja:-fi-mu</i>	* <i>arennu</i>

Table 11: The intransitive marker *-e* in Kanashi

Etymology	Kanashi	Gloss	Kanashi	Gloss
T3945 *khöll 'to open'. 2. *khull 'to be open'	<i>k^hul-am</i>	[open-INF]	<i>k^hul-e-m</i>	[open-INTR-INF]
T11260 *vanvati 'to prepare, to make'	<i>baŋ-am</i>	[make-INF]	<i>baŋ-e-m</i>	[make-INTR-INF]

same verb stem may in principle receive two different analyses: *ba:le-m* [see-INF] 'to look, see' : *ba:l-e-m* [see-INTR-INF] 'to be visible'. This seems to lead to situations such as the ones shown in Table 12, where the same form has two different structural analyses.

Kanashi *-e* has a close correspondence in Kinnauri *-ed* (see above). As described above in Section 2.2, the Kinnauri suffix appears in the variants *-e*, *-ed* or *-en* depending on the (morphophonological) context. Unlike Kinnauri, the intransitive marker *-e* in Kanashi is invariant (2–3).

Table 12: Structurally ambiguous loan verbs in Kanashi

Etymology	Kanashi	Gloss	Kanashi	Gloss
T2854 <i>kártati</i> 'cuts'	<i>kaɬ-e-m</i> <i>kaɬe-ʃi-m</i>	'to get cut' [cut-INTR-INF] 'to get cut' [cut-MDL-INF]	<i>kaɬ-ja-m</i>	'to cut (X)'
T9473 * <i>bhāla</i> 2 'observation'	<i>ba:l-e-m</i> <i>ba:le-ʃi-m</i>	'to look' [see-INTR-INF] 'to look' [see-MDL-INF]	<i>ba:l-ja-m</i>	'to look (at X)'
T10138 * <i>miśrala</i> 'mixed'	<i>mil-e-m</i> <i>mile-ʃi-m</i>	'to meet' [meet-INTR-INF] 'to meet' [meet-MDL-INF]	<i>mil-ja-m</i>	'to meet, mix, stir (X)'

- (2) *kaɬ-e-u-ta-ŋ*
cut-INTR-PROG-NPST-1/2PL
'(We) are cutting'

- (3) *biɖli-ga: tsamk-e-u to-f*
lightning-PL shine-INTR-PROG be-3PL
'There is lightning'

We suggest that the Kanashi intransitive marker *-e* and the Kinnauri intransitive marker *-e(d)* are related. The most economical description is one where *-ed* is assumed to be the basic form of the suffix and the other two variants seen in Kinnauri are the results of assimilatory processes. Kanashi *-e* is invariable (except for normal phonetic variation involving the vowel /e/; see Chapter 2). It is reasonable to assume that Kinnauri presents the older situation, and that Kanashi has lost the final *-d* (or *-n*).⁴ A supporting argument is that the cognates of original ST verb stems showing *-n* ~ *-d* variation in Kinnauri end in *-n* in Kanashi, e.g. *lonam* 'to tell'; *sanam* 'to kill').

3 The adaptive markers in neighboring languages

Next, we will examine if the valency increasing marker *-ja:* and/or the intransitive marker *-e(d)* are also attested in other ST and/or in IA languages of this region.

⁴ The original final segment could also be *-t*, since in Kinnauri voicing of stops is largely positionally determined. See below in Section 3.1.1 on Shumcho.

3.1 Sino-Tibetan languages

3.1.1 Sino-Tibetan languages of Himachal Pradesh

All ST languages of Himachal Pradesh have IA loans, but none of them show productive use of the suffixes discussed above or similar markers in borrowed verbs. There is no mention of either of these two markers in Tinani (D. D. Sharma 1989: 111–186), Navakat (Saxena 2022), Bunan (Widmer 2017); in Tibetan *-e* has a transitive function, not a detransitivizing function.

Chhitkuli does not seem to use these markers at all (D. D. Sharma 1992: 197–304; Martinez 2021), except for one possible example,⁵ *gältiŋ* ‘to melt’ : *gäl-ya-sə-ŋ* ‘to cause to melt (TR)’, where we find a *-ja* (“-ya” in D. D. Sharma 1992: 197–304), which seems to correspond to Kinnauri/Kanashi *-ja*. This *-ja* as a valency increasing marker is not a productive mechanism in Chhitkuli (Philippe Martinez p.c.). However, Chhitkuli regularly substitutes *-ea* for original (transitive/causative) *-a*: in Hindi loan verbs (Martinez 2021: 553).

On the other hand, the intransitive marker *-(e)t* in Shumcho (Huber 2014; 2019) may plausibly be related to the Kanashi and Kinnauri intransitive marker *-e(d)*: “Transitive-intransitive pairs based on Indo-Aryan loans mostly have verb-final *-t* (or *-et?*) as the intransitive marker, e.g. *hela-ma* [typo for *-me?*] ‘move (trans.)’ vs. *helet-me* ‘move (intrans.)’, *hula-me* ‘shake (trans.)’ vs. *hulet-me* ‘shake (intrans.)’, [...] It remains to be investigated whether *-(e)t* is also taken from an Indo-Aryan donor language in some way or other.” (Huber 2014: 252f/fn. 33)

3.1.2 Sino-Tibetan languages of Uttarakhand and western Nepal

For the present investigation we have considered the following ST languages spoken in Uttarakhand and western Nepal:⁶ Darma (Willis Oko 2019), Chaudangsi (Konow 1909), Byangsi (Konow 1909), Rongpo (S. R. Sharma 2001; Zoller 1983), Jad (D. D. Sharma 1990: 1–78), Raji (Nepal varieties: Khatri 2008) and Newar (Kathmandu Newar: Hargreaves 2017; Dolakha Newar: Genetti 2007). Darma, Chaudangsi, Byangsi and Rongpo are usually classified as WH languages (as are Kanashi and Kinnauri). Raji belongs to the Raji-Raute subgroup (Hammarström

⁵ Original transcription as in D. D. Sharma (1992: 197–304). Morpheme boundaries are our additions.

⁶ The selection of languages is constrained by the availability of the data.

et al. 2021),⁷ Jad belongs to the Bodish sub-group (Hammarström et al. 2021), and the classification of Newar is unclear.

Jad, Darma and Kathmandu Newar show no traces of these markers in the sources that we have consulted.

According to S. R. Sharma (2001), IA transitivizing morphology is retained in IA loan verbs in Rongpo. Example, *ha:rpəŋ* ‘to be defeated’ : *həra:pəŋ* ‘to defeat’; *lekhpəŋ* ‘to write’ : *lekha:pəŋ* ‘to make someone write’. There are, however, some verb stems in Rongpo where *-ja* (“-ya” in S. R. Sharma 2001 and Zoller 1983) occurs in the second syllable of transitive verbs, many of which are IA loans.⁸ For example, *bhəbər-* ‘to roast (IA.INTR)’ : *bhəbərja-* ‘to roast (IA.TR)’; *bhətya-* ‘to call, to shout, to invite (TR)’; *khərja-* ‘to hunt, to rush’, *rəñya-* ‘to color (TR)’ (*rəñ* ‘color (N)’), *khorya* ‘to bury’. But unlike Kanashi and Kinnauri, there also seem to be some intransitive verbs in Rongpo which have *-ja* in the second syllable (e.g. *dhəndya-* ‘to walk (INTR)’; *kunhya-* ‘to bark (IA.INTR)’). More work is needed.

Distinct from this, Chaudangsi, Byangsi, Raji and possibly also Dolakha Newar seem to show some more solid traces of the markers under consideration. In Chaudangsi and Byangsi *-ai* seems to be a valency increasing marker, although appearing in ST items, as opposed to *-ja*. Example, Chaudangsi *si* ‘die’ : *sai* ‘kill’, Chaudangsi *raa* ‘come’ : *rai* ‘bring’; Byangsi *raa* ‘come’ : *raai* ‘bring’.

Raji has a periphrastic causative construction. Its schema is: V-*fija* *sla*- [V-INF CAUS-] (Khatri 2008: 25f). One possible hypothesis could be that the infinitive suffix *-fija* in Raji is related to the Kinnauri/Kanashi valency increasing marker *-ja*, through a putative diachronic scenario where the infinitive marker is reanalyzed as a valency increasing marker *-ja*, and subsequently, *sla* [CAUS] becomes redundant and subsequently disappears.⁹

Further, the passive marker in Raji is *-i*, e.g.: *ram-*fiat*iŋ b^hwa sat-i-k-a* [ram-ABL bird kill-PASS-SAME.DAY-PST] ‘The bird was killed by Ram’ (Khatri 2008: 27). One possible hypothesis could be that the Raji passive marker *-i* is related to the Kanashi and Kinnauri intransitive marker *-e(d)*. Note that [e] ~ [i] variation is a regular feature of Kanashi pronunciation; hence the intransitive marker *-e* is also realized as *-i* (see Chapter 2).

⁷ Sometimes Raji-Raute is classified under WH in the literature.

⁸ We do not yet know if this transitivizing suffix is also found in ST items.

⁹ However, this begs the question of what happened to the infinitive marker in other verbs. There are known cases from other ST languages where nominalizers have developed into verbal morphology, e.g. in Tibetan where the perfective/evidential marker *-pa* has such an origin. It is easier to see how reanalysis of a nominalizer can result in a category which applies across the board, as it were, than in this case where the infinitive would become a valency increasing marker only in some verbs but not in others.

Dolakha Newar has a loan verb adaptation pattern which is reminiscent of the Kanashi and Kinnauri data provided above. Borrowed Nepali verbs are accommodated differently according to their transitivity as shown in Table 13 (Genetti 2007: 156f):

Table 13: IA loan verb accommodation in Dolakha Newar

INTR	Nepali	<i>phulnu</i> ‘swell’	<i>khasnu</i> ‘fall’	<i>janmanu</i> ‘be born’
	Dolakha N.	<i>phul-ai jur-</i>	<i>khas-ai jur-</i>	<i>janm-ai jur-</i>
TR	Nepali	<i>mānu</i> ‘obey’	<i>jitnu</i> ‘win’	<i>ṭikranu</i> ‘stand’
	Dolakha N.	<i>mānyet-</i>	<i>jityet-</i>	<i>ṭikret-</i>
TR/CAUS	Nepali	<i>patyāunu</i> ‘believe’	<i>jalāunu</i> ‘burn’	<i>tarkāunu</i> ‘kindle’
	Dolakha N.	<i>patyāt-</i>	<i>jalyāt-</i>	<i>tarkyāt-</i>

jur- is the verb ‘be, become, happen’ and the *yet-/yāt-* element is the verb ‘do’. Genetti (2007) glosses *-ai* as “BV” (borrowed verb), i.e. she analyzes it as a pure accommodating element added to borrowed intransitive verb stems, much like the adaptive markers in Kanashi and Kinnauri under discussion here. In Dolakha Newar the functional distribution of *-ai* and *yāt-* is reminiscent of the Kinnauri-Kanashi *-e(d)* and *-ja:*. But note that in Chaudangsi and Byangsi *-ai* seems to have a valency increasing function, and not the valency decreasing function.

To summarize thus far, among the ST languages considered here some possible correlates of the valency increasing marker *-ja:* and the intransitive marker *-e(d)* are found in Kinnauri, Kanashi and Shumcho in Himachal Pradesh and in some ST languages of Uttarakhand and Nepal (Chaudangsi, Byangsi, Raji and Dolakha Newar). Note that these languages cut across separate ST sub-groups.

3.2 Dravidian languages

Two Dravidian languages are spoken in this region: Brahui (Andronov 1980) and Kurukh (also Kurux, Dhangar; Hahn 1911; Mishra 1991). Both these Dravidian languages have many IA loans, but, they do not seem to show any trace of the transitive *-ja:* and/or the intransitive marker *-e(d)*.

3.3 Isolate: Kusunda

Many of the transitive verbs in Kusunda (including some identifiable IA loans) have the verb schema: V-*a-d-*, and their corresponding intransitive verbs have the verb schema: V-*e-*. If this observation is correct, there are some possible similarities between Kusunda transitive and intransitive markers and the Kinnauri/Kanashi valency increasing marker *-ja:* and/or intransitive marker *-e(d)*. However, Watters (2006: 61ff, 97) attributes the transitive/causative *-a* in Kusunda to language-internal development, originating in a support verb construction involving the verb *a-* ‘do, make’.

3.4 Indo-Aryan: Western and Central Pahari languages

In this section we will examine if we find similar valency changing mechanisms in IA languages of this region (which are classified under the Western Pahari or Central Pahari sub-branches of IA). As with ST languages above, the selection of languages here is constrained by the data available. We have included the following IA languages for the present purposes: Kinnauri Pahari (Saxena 2022), Garhwali (Chandola 1966), Bajjika (Roy 2010), Saadri (Uranw & Yadaw 2009), Kotgarhi (Hendriksen 1986), Kumaoni (Apte & Pattanayak 1967), Chinali (D. D. Sharma 1991).

In Kinnauri Pahari (KP) some transitive verbs have corresponding intransitive verbs with *-i/-i:* suffixed to the transitive stem (which itself may contain the transitivizing *-a:* suffix).¹⁰ For example, *qɔ:nɔ* ‘to burn (TR)’ : *qɔ:inɔ* ‘to burn (INTR)’; *kʰɔltsnɔ* ‘to peel (TR)’ : *kʰɔlfi:nɔ* ‘to peel (INTR)’ *hira:nɔ* ‘to lose (TR)’ : *hira:inɔ* ‘to disappear (INTR)’. Further, as in Kinnauri (see above), in Kinnauri Pahari too, *-ja:* functions as a transitivizer (for example, KP: *pʰikja:nɔ* ‘to throw (X)’, Hindi (H): *pʰika:na:* ‘to throw (X)’; KP: *bɔdlja:nɔ* ‘to change (X)’, H: *badla:na:* ‘to change (X)’). It is very likely that its appearance in Kinnauri Pahari is the result of language contact, i.e., that the verbs containing it are loanwords from Kinnauri, despite their IA etymology. The same verb in other IA languages (e.g. Kotgarhi and Hindi) does not contain this *-ja:*. It is our suggestion that *-ja:* in Kinnauri Pahari is possibly due to its contact with ST Kinnauri.

In Chinali as in Chaudangsi and Byangsi *-ai* seems to have a valency increasing function. For example, *suŋ-ba* ‘to listen’, *suŋ-ai-ba* ‘to tell, to narrate’, *nəc-ba* ‘to dance’, *nəc-ai-ba* ‘to make someone dance’. Apart from these two IA languages, none of the IA languages spoken in the the region and for which we have relevant

¹⁰ The Kinnauri Pahari verbs are cited in their infinitive form (suffix *-nɔ*, corresponding to Hindi *-na:*).

data (Kumaoni, Kotgarhi, Garhwali, Bajjika, Saadri) show any similarity with the Kinnauri-Kanashi valency changing markers *-ja:* and *-e(d)*.

4 Summary thus far: distribution of the verbal adaptive markers

To summarize, of the languages included in the present study at least the ones listed in Table 14 seem to show some traces of *-ja:* and *-e(d)* as transitive and intransitive markers. The ST languages in Table 14 cut across the prevailing ST genealogical classification, with the caveat that the really clear instances of these markers are found in Kanashi, Kinnauri and Shumcho (all Kinnauric Western WH).

Table 14: Transitive and intransitive markers

Family	Language	Markers	
		INTR	TR
ST	Kanashi	<i>-e</i>	<i>-ja:</i>
	Kinnauri	<i>-e(d)</i>	<i>-ja:</i>
	Shumcho	<i>-i, -(e)t</i>	<i>-a</i>
	Chhitkuli		<i>-ea</i>
	Chaudangsi		<i>-ai</i>
	Byangsi		<i>-ai</i>
	Rongpo		<i>-ja</i>
	Raji	<i>-i/-e</i>	<i>-a/-wa, -fija ... sla</i>
	Dolakha Newar	<i>-ai</i>	<i>-yet/-yāt</i>
IA	Chinali		<i>-ai</i>
	Kinnauri Pahari	<i>-i</i>	<i>-ja:</i>
Isolate	Kusunda	<i>-e-</i>	<i>-a-d-</i>

5 Possible origins of the adaptive markers *-ja:* and *-e(d)*

Loan verbs are integrated into Kanashi and Kinnauri by at least two mechanisms. The first is the mechanism described in this chapter, which Wichmann & Wohlge-

muth (2008) refer to as “indirect insertion” (see also Wohlgemuth 2009): “In many languages an affix is required to accommodate loan verbs. Once the affix is added the normal inflectional pattern may be applied.” (Wichmann & Wohlgemuth 2008: 97). Both languages also additionally use the “light verb strategy” – i.e. turning the borrowed item into a kind of nominal object of a semantically light verb, such as ‘do’, ‘be’, or ‘make’ (e.g. Kinnauri *kəmaj lan-nu* [earn(N) do/make-INF] ‘to earn’; also: *kəmaja:mu*, with *-ja:*) – a strategy which is extremely common among languages, both in the world and across South Asia, in all language families.

The loanword adaptation strategy described for nouns and adjectives in Chapter 6 is also an instance of indirect insertion, although in this case, we also find borrowings without the adaptive marker (which would constitute “direct insertion” in the terminology of Wichmann & Wohlgemuth 2008) or borrowings where the adaptive marker can optionally be replaced by inflectional suffixes. Neither happens in the verbal domain, making verb borrowing formally different from noun and adjective borrowing, something which has been noted in the literature also in other contexts (Wichmann & Wohlgemuth 2008: 110f).

From the data presented above, we are confronted with two questions:

1. What is the source of the intransitive marker *-e(d)* and the valency increasing marker *-j(a:)*?
2. How did it happen that Kanashi and Kinnauri show similar developments (including the choice of the form)? And that their plausible traces are also found in some ST languages of Uttarakhand and Nepal (see Table 14)? What does it say about the genealogical classification of these languages and of their prehistory?

Here we will present our preliminary thoughts about the first point, while the second point will be discussed in Chapter 8, although we note here that the set of languages showing the nominal adaptive markers discussed in Chapter 6 and the set of languages possessing the verbal adaptive morphology discussed in this chapter do not coincide fully.

5.1 Possible sources of the adaptive marker *-e(d)*

A relevant observation in relation to the question of the origin of the adaptive marker *-e(d)* is that there are a number of monosyllabic ST primary verbs in Kinnauri which behave morphophonologically in the same way as the intransitive marker *-e(d)*, i.e., they exhibit the variation $CV \sim CVd \sim V \sim CVn-nu$. This could point to an ST-internal origin of *-e(d)* in the form of an original (light) verb, i.e. that we are dealing with “grammaticalization of root-morphemes” (Matisoff 2003:

439), much like the transitivity mechanism reported by Widmer (2017: 709–710) for Bunan.

Notable in this connection is that Shumcho has a number of ST verbs which in some morphological contexts show a final *-t*, which Huber (2014: 232f/fn. 17) refers to as a “root augmentation marker”.¹¹ As mentioned above, in Shumcho we also find an intransitive marker *-(e)t*, exclusive to IA loanwords. Given that a characteristic feature of Kinnauri is contextually determined voiced–unvoiced variation in stops, this means that the intransitivity adaptive marker in Kinnauri probably should be reconstructed as *-(V)t*.

If its origin is in a light or support verb, the most likely candidate would be a verb meaning ‘do’, although there are also other possibilities, such as ‘be’ or ‘have’. Huber (2014: 239) notes the defective paradigm of the Shumcho verb stem *ε*- ‘have’ which occurs only in imperative forms, and Martinez (2021) lists a number of copulas in Chhitkuli, among which we find *a-/a-* ‘be, become’ (Martinez 2021: 138f). Further, in Table 13 we have seen how the verb ‘do’ (*yet-/yāt-*) is used as a light verb accommodating IA loan verbs in Dolakha Newar. Under this assumption, it would still remain to be explained why a particular light verb is used only with (IA) loan verbs, and not used together with, e.g., ST-origin nominal stems.

5.2 Possible sources of the adaptive marker *-j(a)*

Despite the apparent resemblance of the valency increasing marker *-ja* to the *-ā* transitive/causative suffix found in several NIA languages, it is not immediately obvious how to posit this as the source of the Kanashi/Kinnauri *-j(a)* (but see below). For one, the *-j* of *-ja* remains unexplained, not appearing in any IA language as far as we are aware,¹² and in addition, the *-a* of *-ja* is dropped before some endings (for example, in the perfective verb form), at least in Kinnauri, leaving only the *-j* as the marker of transitivity. For this reason, an ST-internal explanation would be more attractive.

On the other hand, it is a known fact that many ST languages have borrowed the IA transitive/causative suffix *-ā* directly. Consequently, we should not dismiss this as a possible source of *-j(a)* in Kinnauri and Kanashi. The initial *-j* could then possibly be connected to *-e(d)*, via a morphophonological alternation independently established for Kinnauri, where in some *e*-final nouns, the *-e* appears as *-j*

¹¹ These sets – *-(d/n)*-final ST-origin verbs in Kinnauri and Shumcho verbs with the root augmentation marker *-t* – show some (modest) overlap between the two languages, e.g. Shumcho *lɔ.t* ‘say’; *lɛ.t* ‘do’ : Kinnauri *lonnu* ‘tell’; *lannu* ‘do, make’.

¹² Except in Kinnauri Pahari, but there it is almost certainly borrowed from Kinnauri.

before some vowel-initial suffixes (e.g. *ate* ‘brother’ + *-u* [-POSS] > *atjo*; *banes* ‘pot’ + *-a*: [-PL] > *banja*:). Thus, the *-j* of *-j(a*:) could reflect the *-e-* of *-e(d)*, so that we are dealing with a sequence of morphs: a light verb **ed-* (or **et-*) and a borrowed IA valency-increasing suffix.

Also, as Wichmann & Wohlgemuth (2008: 97) note, in those cases when the origin is known of affixes used in a language exclusively to accommodate loan verbs, they are typically borrowed together with the verbs from a donor language, which however need not be the language of origin of the affix, in cases of “borrowing of borrowing patterns” (Wichmann & Wohlgemuth 2008: 105f). This would speak in favor of finding an external source of the adaptive marker *-j(a*:), and the best candidate so far seems to be IA transitive/causative *-ā*.

6 Conclusion

Comparing the outcome of the investigations in this chapter (of verbal adaptive markers) and in Chapter 6 (of nominal and adjectival adaptive markers), we find that there are definitely more clear cases of corresponding morphs in other languages of this region for the latter than the former. Many of the correspondences listed in Table 14 are uncertain, while the data warranting that a language in Figure 4 of Chapter 6 is marked with a circle (“many clear instances”) are quite unambiguous.

On the other hand, unlike the two nominal/adjectival adaptive markers *-(V)η* and *-(V)s* described in the previous chapter, the two verbal adaptive markers *-e(d)* and *-j(a*:) seem to be closely connected, generally appearing as a pair, which may indicate that they have a common history, at least in Kanashi and Kinnauri.

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