

ARTICLE

## Action nouns in *\*-ja-* and a new verbal stem *\*jsin-* “to kill” in Khotanese<sup>1</sup>

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### Abstract

This article addresses derivational issues related to palatalization in Khotanese, focusing on action nouns of the *kira-* type (< *\*-ja-*). It is argued that diachronic palatalization conforms to the rules of synchronic palatalization and that the origin of the hapax legomenon *jsina-* “killing” (Z 13.124), which apparently violates these rules, needs to be interpreted differently. It is traced back to a reduplicated Indo-Iranian verbal stem *\*ja-g<sup>h</sup>n-* (cf. Young Avestan *jayn-*) < Proto-Indo-European *\*g<sup>wh</sup>é-g<sup>wh</sup>n-* “to strike repeatedly” → “to kill”. This stem is also reflected in the Khotanese gerundive *jsīnaa-* “to be killed” < *\*dzain-ja-* ← *\*dzayn-* < Iranian *\*ja-gn-*. The article contributes additional evidence supporting the development of the preconsonantal voiced velar fricative *\*ɣ* into *\*j* in pre-Khotanese.

**Keywords:** Historical linguistics; Iranian linguistics; Khotanese philology and etymology; Palatalization

### 1. Introduction

This article addresses the alleged difference between diachronic and synchronic palatalization by examining the palatalizing effect of the suffix *\*-ja(ka)-* in Khotanese action nouns, gerundives, and verbal adjectives.<sup>2</sup> It shows that diachronic palatalization conforms to the model proposed by Doug Hitch (1990) for synchronic palatalization (§2). Since the Old Khotanese noun *jsīna-* “killing” appears to be the only word to violate this model, the widely accepted etymology proposed by Ronald E. Emmerick (1969, < *\* Ir. \*jan-ja-*) is rejected in favour of a derivation from the PIE reduplicated stem *\*g<sup>wh</sup>é-g<sup>wh</sup>n-*, so far only attested in YAv. *jayn-*, Gk. *πεφνε/ο-*, and possibly in Ved. *jighnate* (§3). Section 3 also features other nominal and verbal derivatives belonging to the word family of the Khotanese verb *jsan-*: *pps. jsata-* “to kill, slay”.

<sup>1</sup> For Khotanese texts, I use the following conventions: *italics* (or roman in quotations in italics) letters not clearly visible; [ ] restoration of a lacuna; # joining of fragments belonging to one and the same folio. Differing conventions used by others are converted to those listed above for the sake of consistency.

<sup>2</sup> Problematic cases are not considered, such as *māsta-* “great, big” < Ir. *\*mačita-* (cf. Av. *masita-*), with apparent fronting of a [a] > ä [ə] before *i* and subsequent syncope of the internal vowel (Skjærvø 2022: 123).

## 2. Palatalization in the Khotanese action nouns and verbal adjectives in *\*-ia-*

In a recent article, Mauro Maggi and I dealt with the Khotanese masculine substantive *saña-* “artifice, expedient, means, method” (Del Tomba and Maggi 2021), rehabilitating an old etymology proposed by Ernst Leumann (1933–36: 510), who reconstructed an action noun in *\*-ia-* derived from the Indo-Iranian root *\*sćand-* “to appear, seem (good)” (cf. Av. *<sup>1</sup>sañd-*, OP *θand-*, Skt. *chand-*).<sup>3</sup> This type of action noun was no longer productive in Khotanese and is found in a comparatively small number of substantives, typically derived from the full grade of the root (rarely on a lengthened grade).<sup>4</sup> Examples are *kīra-* “action, deed” < Ir. *\*kar-ia-* and allegedly *jsīna-* “killing” < Ir. *\*jan-ia-* (KS 297–9 with references). However, if we compare these two nouns with *saña-* < Ir. *\*sćand-ia-*, the problem of the divergent treatment of palatalization comes to light, because the palatalizing effect of the suffix *\*-ia-* apparently caused the umlaut of the root-vowel in e.g. *kīra-* and *jsīna-*, while it surfaced as palatalization of the consonant group *\*-nd-* > *\*-n-* preceding the suffix in *saña-*. In our article, we mentioned this problem without attempting an explanation: “[n]otice that *\*-ia-* palatalizes the preceding *\*-n-* < Ir. *\*-nd-* in *saña-*, but the previous *\*-a-* in *jsīna-*” (Del Tomba and Maggi 2021: 213, n. 86).

A thorough account of synchronic palatalization in Old Khotanese has been provided by Hitch (1990). To put it concisely, when a palatalization-triggering suffix is attached to a lexical morpheme, four mutually exclusive effects of potential palatalization moving backwards towards the stressed vowel may occur:

1. if the final sound of the lexical morpheme is a palatalizable consonant (or consonant cluster), it takes palatalization (e.g. 2sg.prs.act. *pulśā* from *puls-* “to ask” + *-iā* [SGS 192]);
2. if the final sound of the lexical morpheme is already palatal, it absorbs palatalization (e.g. 2sg.prs.act. *sājā* from *sāj-* “to learn” + *-iā*);
3. if the final sound of the lexical morpheme is a consonant or a consonant cluster that cannot be palatalized, it transmits palatalization and causes the umlaut of the vowel (e.g. 3sg.opt.act. *kṣīma* from *kṣam-* “to endure” + *-iā* [SGS 207]);
4. if the final sound of the lexical morpheme can transmit palatalization but the vowel is already palatal, the vowel absorbs the umlaut potential (e.g. 2sg.prs.act. *bremā* from *brem-* “to weep” + *-iā*).

Since Hitch’s primary focus was on describing synchronic palatalization, he deliberately excluded sections of Khotanese inflection and derivation that are no longer productive as early as the Old Khotanese period. These include (1) abstract nouns in *\*-ia(ka)-*, and (2) deverbals and (old) gerundives in *\*-ia(ka)-*. It is therefore worthwhile to closely examine these derivational suffixes to determine whether additional diachronic rules can be identified.

I initially verified whether the fate of these suffixes was regulated by a Khotanese version of Sievers’ law, according to which a distinct outcome of the same suffix would be mirrored by a different realization of the palatalization: *\*-ia-* after a light syllable and *\*-iia-* after a heavy syllable, including those syllables ending with a consonant cluster. Accordingly, Khot. *jsīna-* “killing” < *\*dzania-* < Ir. *\*jan-ia-* would show umlaut of the vowel because *\*-ia-* was attached to a light syllable (cf. also Khot. *āysīra-* “armour” < *\*azariā-* < Ir. *\*ā-jar-ia-* or Khot. *kīra-* “action, deed” < Ir. *\*kar-ia-*), while Khot. *saña-* “artifice” < *\*tsann-iia-* < Ir. *\*sćand-(i)ia-* would show palatalization of the consonant because *\*-(i)ia-* was attached

<sup>3</sup> See EWAia 1.555–6, EDIV 332–4 and Schmitt 2014: 257.

<sup>4</sup> Degener (KS 298–9) lists only eight nouns.

to a heavy syllable (cf. also Khot. *auša-*, *oša-* “evil, bad” < \**āuziā-* < Ir. \**ā-uaḡ-(i)ia-*, Khot. *rrāša-* “rule; domain” < \**rāziā* < Ir. \**rāj-(i)ia-*). However, Sievers’ law cannot account for several counterexamples in deverbal adjectives and old gerundives in \*-*ia-*.

Only a few gerundives formed with *-ia-* are found in Khotanese. Most of them are based on verbal roots ending in *-r-* and having *-ā-* as the root vowel (SGS 216–218; KS 299b–300a). Since the *-r-* cannot be palatalized, it allows palatalization to go back to the previous vowel segment (e.g. *tcera-* “to be done” < \**čār-ia-* not \**čār-ia-* from \**kar-* “to do”).<sup>5</sup> This indicates that *-ia-* palatalizes any stressed vowels when the consonant cannot be palatalized but can transmit palatalization. Another relevant form is the old gerundive *hvaña-* “to be spoken” < \**huan-ia-* ← \**huan-* “to call” (cf. YAv. *xʷan-* “to sound”, MMP *xwʷn-* “to call”, MSogd. *xwʷn-*, BSogd. *xwn-*, CSogd. *xwn-* “to call, cry”).<sup>6</sup> Khotanese *hvaña-* “to be spoken” demonstrates that \*-*ia-* regularly palatalizes a preceding consonant and does not cause umlaut of the root vowel (i.e. \*\**hvina-*), contrary to what one would have expected if the different development of *saña-* and *jsīna-* were conditioned by Sievers’ law. Similar cases can be found in the passive forms of verbs, e.g. *kañ-* “to be thrown” < Ir. \**kan-ia-* (SGS 22; EDIV 229–31), *jsañ-* “to be slain” < Ir. \**jan-ia-* (SGS 37; EDIV 224–5), and in the causatives, e.g. *vahiys-* “to descend”: *vahiś-* “to make descend” (SGS 122), *ysah-* “to cease” (SGS 112): *yseh-* “to give up” (SGS 114).

Hence, it appears that diachronic palatalization aligns with the model proposed by Hitch (1990) for synchronic palatalization, as shown in Tables 1 and 2.<sup>7</sup>

In light of the above, it is clear that the word requiring explanation is not *saña-* “expedient” but rather *jsīna-* “killing”, as it is the sole action noun that deviates from the palatalization rules.

**Table 1.** Palatalizable morpheme-final consonant segment → palatalization of the consonant segment

Action nouns
Ir. * <i>xaj-ia-</i> > * <i>xazja-</i> (KS 298b; Skjærvø 2004: 2.258) > Khot. <i>khaša-</i> “drink” <sup>8</sup>
Ir. * <i>ui-pāč-ia-</i> (KS 298b) > * <i>gubātsia-</i> > Khot. <i>gvācha-</i> “digestion”
Ir. * <i>rāj-ia-</i> > * <i>rāziā-</i> (KS 299a) > Khot. <i>rrāša-</i> “rule; domain”
Ir. * <i>ścand-ia-</i> (Del Tomba and Maggi 2021) > * <i>sannja-</i> > * <i>sanja-</i> > Khot. <i>saña-</i> “artifice”
Ir. * <i>huan-ia-</i> (KS 299a) > Khot. * <i>hvāña-</i> “speech”
Old gerundives and verbal adjectives
Ir. * <i>a-nāt-ia-</i> > * <i>anāsja-</i> (KS 300b) > Khot. <i>anāśša-</i> “unacceptable” <sup>9</sup>
Ir. * <i>ā-uaḡ-ia-</i> > * <i>āuzia-</i> (cf. KS 301a; Dragoni 2023: 67) > Khot. <i>auša-/oša-</i> “evil, bad”
Ir. * <i>ni-kač-ia-</i> > * <i>nikasja-</i> > Khot. <i>niyaśša-</i> “deficient, bad” <sup>10</sup>
Ir. * <i>pati-jān-ia-</i> > * <i>pazāñia-</i> (KS 301a) > Khot. <i>paysāña-</i> “recognizable, insightful”
Ir. * <i>huan-ia(ka)-</i> (KS 301b) > Khot. <i>hvaña(a)-</i> “to be spoken”

<sup>5</sup> See KS 301.

<sup>6</sup> EDIV 144–145. In Khotanese, the old gerundive *hvaña-* stands beside recent *hvāñāña-*, which displays the most common way of forming the gerundive by adding \**āña-* to the present stem of the verb (cf. also older *hveraa-* “to be consumed” vs. later *hvarāña-* “id.”, both from *hvar-* “to consume”).

<sup>7</sup> The data below are primarily taken, with adjustments, from Degener (1989, KS).

<sup>8</sup> Emmerick (1968b, SGS 26) assumes that *khāś-* “to eat, drink” is a denominative. However, the ppp. *khašta-* “seems to imply a base \**xaz-*, [...] found also in the noun *khaša-*”.

<sup>9</sup> See further Emmerick 1995: 64 and Maggi 1995: 112–3.

<sup>10</sup> See Skjærvø 2004, vol. 2: 204, s.v. *aniyaśša-*. Cf. LKhot. *ñāša-* “low, humble, despised” (Dict. 117 s.v. *ñāša*).

**Table 2.** Non-palatalizable morpheme-final consonant segment → palatalization of the stressed root vowel

Action nouns
Ir. * <i>ā-jar-ia-</i> > * <i>āzariā-</i> (KS 298b) > Khot. <i>āysīra-</i> “armour” Ir. * <i>kar-ia-</i> (KS 298b; Emmerick 1969: 60) > Khot. <i>kīra-</i> “action, deed”
Old gerundives and verbal adjectives
Ir. * <i>čār-ia-</i> > * <i>tčārīa-</i> (KS 301a) > Khot. <i>tčera(a)-</i> “to be done” Ir. * <i>pārñ-ia-</i> (KS 299b; KT 4.58) > * <i>pārriā-</i> > Khot. <i>perra-</i> “to be induced” Ir. * <i>bār-ia-</i> (KS 301a) > Khot. <i>bera-</i> “to be carried, borne” Ir. * <i>jār-ia-</i> > * <i>zārīa-</i> (KS 299b) > Khot. <i>ysera-</i> “to be pitied, pitiable” Ir. * <i>hūāra(ka)-</i> (KS 301b) > Khot. <i>hvera(a)-</i> “to be eaten”

**3. Khotanese *jsīna-* “killing” and related words**

The etymology of the hapax legomenon *jsīna-* “killing” < \**jan-ia-* has been proposed by Emmerick (1969: 60; *Studies* 1.47–8) in order to elucidate a difficult passage from the *Book of Zambasta*:<sup>11</sup>

Z 13.124  
*hori pracaino cu ro jsīnā—na hamaraṣṭo pathīyā*  
*rre mahādevā mahāsama—tā tteri dāru jutāndā*  
“It is because of liberality and also because he has always refrained from taking life  
that King Mahādeva (and King) Mahāsaṃmata lived so long.”

This passage exemplifies two of the five reasons for a long life in *saṃsāra*. The five reasons, listed in the preceding two verses (Z 13.122–3), are: (1) abundant food donation; (2) avoidance of killing; (3) meditation on the *ārūpyasamāpatti* (formless states of meditation); (4) practice of the four *ṛddhipādas* (bases of psychic power); (5) obtainment of the *dharmakāya* (body of the dharma). They are explained and exemplified in the following verses (Z 13.124–7), starting with (1) abundant food donation and (2) avoidance of killing, which are condensed in v. 124.

Emmerick’s exegesis of the passage is undoubtedly correct and represents a significant advance compared to Leumann’s and Bailey’s interpretations of *jsīnāna* as an instr.abl.sg. masculine of the otherwise feminine noun *jsīnā-* “life” (< Ir. *jaīanā-*, cf. Tum. *tsenā-*),<sup>12</sup> whose instr.abl.sg. is expected to be *jsīñe jsa-*: cf. Leumann’s interpretive translation of *cu ro jsīnāna hamaraṣṭo pathīyā* as “und auch (der andere) was [weil] von dem (ihm beschiedenen) Lebensquantum rechtschaffen [edelmütig] (zu Gunsten eines Andern einst) er abgestanden ist [auf die Fortdauer des eigenen Lebens verzichtet hat]”<sup>13</sup> and Bailey’s translation of *jsīnāna ... pathīyā* as “withdrawn from life”.<sup>14</sup>

Although the context demands the interpretation of the masculine noun *jsīna-* as “killing”, the morphophonological problems highlighted in the preceding paragraph rule out a derivation from \**jan-ia-*.<sup>15</sup> Other possibilities must be explored.

<sup>11</sup> Edition and translation by Emmerick (1968a: 204–5). Maggi’s (2004: 1237) translation of this passage basically follows Emmerick: “Grazie alla loro generosità e perché si astennero sempre dall’uccidere, il re Mahādeva e il re Mahāsaṃmata vissero tanto a lungo”.

<sup>12</sup> See Skjærvø 2004, 2: 269.

<sup>13</sup> Leumann 1933–36: 187.

<sup>14</sup> *Dict.* 155b s.v. *jsīnā-*.

<sup>15</sup> So Emmerick 1969: 60, *Studies* 1.47–8 and Degener KS 299a.

There is no doubt that we are dealing with a nominal form belonging to the word family of the verb *jsan-*: ppp. *jsata-* “to kill, slay” (SGS 37). The following are attested:

1. Adjectival compound member with *-aa-* < *-aka-*, *\*jsanaa-* “killer” (KS 20b):  
IOL Khot 160/1 v3 (KT 5.106, p. 41; *Cat.* 358) *çaṇḍāla hvq'nda-jsanā ttā'te* “murderers, man-killers, thieves”.
2. Agent noun with *-āka-*, *jsanāka-* “killer” (KS 46b):  
Sudh 94 ms. P *mahaidrrasaina rre vā jsanāka paśāvai* (= ms. A *mahaidrasai rre vū-vā jsināka paśāve*; ms. C *mahadrrasaina rai vā-vā jsanāka paśāvai*) “King Mahendrasena has sent hither a killer against me”.<sup>16</sup>  
JS 93 (21 v3) *āta ttā tvī va asidūna jsanāka* “Evil killers came then against you”.<sup>17</sup>
3. Action noun with *-kyā-*, *jsamgyā-* “killing” (KS 203b):<sup>18</sup>  
Suv 2.9 *jsamgye jsa pathamka* “Refraining from killing”.<sup>19</sup>  
Suv 2.10 *jsamgye jsa . pathiyyā* “refrained from killing”.  
Suv 2.59 [*pa*]thiyyā *jsamgye jsa* “id.”.
4. Derived adjective in *-iā-*, *jsiñāa-* “condemned to death” (KS 303a), on which see the main text below.
5. Gerundive in *\*āñā-*, *jsanāñā-* “to be slayed” (KS 59b):  
Sudh 314 ms. C *kāḍara jse vara ṣṭau raysga vira jsanauñā* (= ms. B *kāḍara birre raysaga vira jsanauñā*) “Then she must be slayed swiftly with his knife”.<sup>20</sup>  
Sudh 319 ms. A *kāḍarīnai vara ṣṭām raysgi vī jsanāñā* “There he must swiftly slay her with his sword”.<sup>21</sup>  
IOL Khot 147/1 r3 (KT 5.180, p. 87; *Cat.* 330) *jsanāñā ṣi ājaviṣi* “that snake must be killed”.
6. Infinitive formed from the present stem with *-ā*, *jsanā* “killing, to kill” (KS 292a):  
Rāma 177a *varai āṣṭamḍāmdā jsqñā* “They were about to slay him there”.  
IOL Khot S. 13 70 (KT 2.9, p. 45; *Cat.* 511) *cv-am hvaihura biśā āṣṭamḍāmdā jsqñā* “because the Uigurs began killing them all”.<sup>22</sup>
7. Infinitive formed from the stem of the past participle with *-iē*, *\*jsīte* > *jsīye* “killing, to kill” (SGS 37, 219; KS 287a):  
Z 24.442 *cīyā rre hvadu . hamatā jsīye pariīyī* “when the king himself orders to kill a man”.  
Z 24.450 *cvī ye jsīye paritā* “when one orders to kill one”.

The latest form (7) is a good candidate to account for *jsināna* in Z 13.124. Indeed, the expected infinitive from the stem of the past participle of *jsan-* must have been *jsīte*; the spelling *-y-* (cf. *jsīye*) for *-t-* is ubiquitous since the Old Khotanese period (cf. *parīyī* in Z 24.442 and *paritā* in Z 24.450 above). Therefore, a possible explanation involves a slight emendation of the manuscript reading from *jsināna* to *\*jsitāna* “from killing”, an infinitive formed from the past participle inflected as instr.abl.sg. The proposed emendation does not present significant obstacles, as *-n-* and *-t-* are very similar in Khotanese Brāhmī and, in the aforementioned passage from chapter 13 of Z, inflected forms of

<sup>16</sup> Translation by De Chiara 2013: 75.

<sup>17</sup> Translation adapted from Dresden 1955: 434.

<sup>18</sup> As pointed out by Degener, “[d]a das Wort nur im I[nstrumental]-A[blativ]S[ingular] belegt ist, könnte es statt *jsamgyā-* auch *jsamggā-* [...] sein, -cā- ist aber das häufigere und daher wahrscheinlichere Suffix”.

<sup>19</sup> Translation by Skjærvø 2004: 1.19. Note that the passage in Suv is thematically comparable to that of Z 13 cited above. See also Skjærvø 2004: 2.103.

<sup>20</sup> Translation adapted from De Chiara 2013: 135.

<sup>21</sup> Translation adapted from De Chiara 2013: 135.

<sup>22</sup> Translation by Skjærvø (*Cat.* 511).

the noun *jsīnā*- “life” (and derivatives) occur nine times in the space of eight verses (nom.sg. *jsīna* 122, 125 [2×], 126 [2×], 127; nom.acc.pl. *jsīne* 128, *jsīnā* 128; adjectival compound nom.acc.pl. *dāra-jsīniya* “long lived”, 129). Although a copying error remains a possibility, it is possible and certainly safer to keep to the manuscript reading *jsīnāna*.

The origin of *jsīna*- cannot be clarified without taking into consideration the adjective *jsīñaa*- (4), which Degener (KS 303) translates as “zum Tode verurteilt” and derives from the noun *jsīna*- “killing”. As I have demonstrated, however, *jsīna*- cannot be from \**janīa*- and we therefore need to explain its apparent derived adjective accordingly. Khotanese *jsīñaa*- is attested four times:

1. acc.sg.m. Z 15.43 (OKhot.) *maharamṅgu jsīñau hvamʾdu ṣṣai hiśsanā khastu ne yīndā* “The condemned athletic man even iron cannot wound”.<sup>23</sup>
2. gen.pl.m. KV 2.5 (OKhot.) IOL Khot 175/3 v3+FK 210.21 Do.33 v3 u *pūhā śā ku jsīñānu hvamʾdānu bājā hvāñāte* “And the fifth is when he pronounces deliverance of men condemned to death” (= Skt. *vadhya-prāptānām manuṣya-paśu-sūkara-kukkuṭādīnām parimocanam*).<sup>24</sup>
3. nom.pl.m. Suv 3.78 (LKhot.) *cu jsīñā rrumdā parauya* “Those who are to be slain at the king’s command” (= Skt. *ye rāja-caura-śaṭha-vadhya-prāptā*).<sup>25</sup>
4. nom.pl.m. Suv 3.78 (LKhot.) *cu jsīñā tti haṃphūside jīyina* “May those who (were) to be slain have a share in life” (= Skt. *vadhyāś ca saṃyujyīyu jīvītena*).<sup>26</sup>

As can be seen, the inflected forms of *jsīñaa*- can consistently be translated as “to be slain” in all four occurrences, suggesting their use as the gerundive of *jsan*- “to slay, kill”. Indeed, Bailey (*Prolexis* 92) considered this *jsīñaa*- to be the gerundive form of *jsan*-, a theory also supported by Skjærvø (2004, 2: 269). As for the apparent palatalization of both the consonant and the vowel, an obvious hypothesis is that the gerundive suffix \*-īa- could have palatalized not only the stem-final consonant °n- > °ñ- but also the stressed vowel via umlaut.<sup>27</sup> So-called “double umlaut” might have occurred to prevent homophony with other conjugated forms of the passive verb *jsañ*- “to be slain”.<sup>28</sup> Nevertheless, instances of double umlaut are exceedingly rare.<sup>29</sup>

In order to explain the ī-vowel in *jsīñaa*-, a different, more plausible solution can be proposed based on comparative grounds. Vedic has a reduplicated present *jīghnate*, whose precise origin is debated: it may either derive from Ilr. \**jī-gʰn-* < PIE \**gʷh₁i-gʷh₁n-*, or have acquired the ī-vowel analogically after other present formations of the type *Ci-CCa-*.<sup>30</sup> If

<sup>23</sup> Translation by Emmerick 1968a: 235.

<sup>24</sup> Edition and translation by Maggi 1995: 65. Only the middle (IOL Khot 175/3) and right parts (FK 210.21 Do.33) of the folio are extant. Unfortunately, the London fragment has been laminated so that several portions of akṣaras that Bailey could read in his *editio princeps* (KT 5.649, p. 297) can no longer be read today. We therefore need to rely on Bailey’s edition. Skjærvø (2002, Cat. 391) reads *jsīñānu* in place of Bailey’s *jsīñānu*. Although the leaf is in fact faded, an inspection of the facsimile (FK 210.21 Do.33 v3, cf. Maggi 1995, pl. 7) confirms Bailey’s reading.

<sup>25</sup> Edition and translation by Skjærvø 2004, 1: 56–7.

<sup>26</sup> Skjærvø 2004, 1: 56–7.

<sup>27</sup> Cf. Bailey (*Prolexis* 92): “This is the fut ptc in -ya- from *jsan*- to strike, formed as *hvañā*-, but with i-umlaut”.

<sup>28</sup> One might also wonder whether analogical levelling would have taken place within the paradigm. Indeed, a number of forms of both the verb *jsan*- “to slay” and its passive *jsañ*- “to be slain” regularly show umlaut of the vowel induced by the verbal endings, cf. 3sg.prs.act. *jsīndi* ~ *jsīndā* ~ *jsīdā*, 3sg.prs.pass. *jsīnde* ~ *jsīdā* ~ *jsīndai*, inf. *jsīye*. However, the analogical extension of the root vocalism of a conjugated verbal form to a nominal derivative is an unparalleled development in Khotanese.

<sup>29</sup> Only two examples of double umlaut are mentioned in the literature (Hitch 1990: 191): (1) the loc.sg. *diśta* from *dasta*- “hand” (for expected \**daśta*) and (2) the loc.sg. *kiśśa* from *kūsa*- (for expected \**kūśśa*).

<sup>30</sup> See Lazzeroni 2012; Lazzeroni and Magni 2020: 21–3; García Ramón 1998: 147–9; 2014: 63–65; and Hintze 1999: 109.



the same form had also been inherited by Khotanese, then the following diachronic path could be established: Ilr. \**jig<sup>h</sup>n-* > Ir. \**jign-* > \**jīyn-* > \**dzin-* (loss of \**y* and compensatory lengthening) → ger. \**dzin-ia-* > Khot. *jsiña(a)-*. However, a serious problem with this derivation is that the sequence \**ji/-* was expected to yield Khot. *ji-* (cf. intransitive *pasūjs-* “to burn” < vs. causative *pasūj-* “to light”, *kaljs-* “to be struck” vs. causative *kalj-* “to strike” or the denominal verb *hamgūj-* “to meet” from *hamgūjsa-* “meeting”).<sup>31</sup>

In Indo-European languages, an intensive form of PIE \**g<sup>wh</sup>en-* “to strike” (LIV<sup>2</sup> 218–9, Gk. *Θείνω*, Lat. *de-fendō*, Skt. *hānti*, YAv. *haiṇti*, etc.) is attested in the reduplicated form PIE \**g<sup>wh</sup>é-g<sup>wh</sup>n-* “to strike repeatedly” → “to kill” (cf. YAv. *jayn-*, attested twice in Yt. 13.45 *ni-jaynānte* [3pl.prs] and Yt. 13.105 *auua-jaynaṭ* [3sg.aor.], Gk. *πεφνε/ο-*).<sup>32</sup> Therefore, it is worth considering whether an inferable stem \**jsin-* could also be the outcome of Ilr. \**ja-g<sup>h</sup>n-* (cf. YAv. *jayn-*) < PIE \**g<sup>wh</sup>é-g<sup>wh</sup>n-*. In fact, there is evidence suggesting that in the sequence Ir. \**-agC-* > \**-ayC-* the voiced fricative yielded \**ṣ* in pre-Khotanese, eventually forming a diphthong with the preceding vowel, which later monophthongized, cf. Ir. \**sagra-* > \**saṣra-* (MMP *sgl*, NP *sēr*) > \**saṣra-* > Khot. *sīra-* “content, happy, satisfied”.<sup>33</sup> Moreover, Iranian unvoiced fricatives were voiced before \**r* even at the beginning of a word (e.g. *grūs-* “to call” < \**xraus-*, cf. Av. *xraosa-*).<sup>34</sup> In word-internal position, Iranian \**-axC-* > \**-ayC-* merged with the outcome of Iranian \**-agC-* > \**-ayC-*.<sup>35</sup> Examples include: Khot. *ttīra-* “bitter” < \**taira-* < \**tayra-* < \**taxra-* (MP *t<sup>h</sup>xl*, MMP *thr*, NP *talx*; Skjærvø 2004: 2.272); Khot. *sāj-*: ppp. \**sīta-* ~ *siya-* “to learn” (SGS 132) < \**saṣda-* < \**sayda-* < \**saxta-* (EDIV 323); Khot. *this-*, *thīs-*: ppp. \**thīta-* ~ *thīya-* “to pull (at, on)” (SGS 42) < \**θaṣda-* < \**θaxta-* (EDIV 391–392) (cf. also [+ \**apa-*] *pathamj-*: *pathīya-* “to restrain”, [+ \**us-*] *usthamj-*: *usthīya-* “to take up, pull out”); *dajs-*: \**dīta-* ~ \**dīya-* “to burn” (SGS 43) (cf. *padajs-*: *padīya-*; SGS 68) < \**daṣda-* < \**dayda-* < \**daxta-* (EDIV 53–4), etc.

If the development \**ay* > \**ai* took place also before nasals, as is likely, then the following diachronic path can be established for *jsiña(a)-* “to be killed”: Ilr. \**jag<sup>h</sup>n-* > Ir. \**jagn-* > \**jayn-* > \**dzain-* (\**-y-* > \**-i-* [j]) > \**dzin-* (monophthongization) → gerundive \**dzin-ia-* > Khot. *jsiña(a)-*.<sup>36</sup> This derivation has the advantage of solving the problem of the missing palatalization because monophthongized \**i* is not expected to palatalize a preceding consonant (cf. all the aforementioned examples).

If a new Khotanese verbal stem \**jsin-* “to kill” is to be proposed, then the instr.abl.sg. *jsināna* “by killing, from killing” in Z 13.124 may be a derivative of this verb: either we are dealing with a derivative in \**-a-* (KS 1–13) of the type *ārūha-* “deportment” (cf. *anārūha-* “motionless”) ← *ārūh-* “to move, shake”, or with an inflected infinitive formed from the present stem with *-ā* (KS 284–94, particularly 285 §§ 46.7.1–2).

The above analysis has an additional advantage, allowing a better understanding of the rare compound *jsaṇaulysa-* “killer, murder”, only attested in Z 24.452 *pharu narya dāruṇa dukha bīdā jsaṇaulysā* “many severe woes will the causer of death bear in hell” (Emmerick 1968a: 409) and in Suv 12.14 (ms. Or) *hamdā[r]ā jsaṇ[au]lysā dīrāṇu hārāṇu*

<sup>31</sup> See Emmerick 1989: 213 and Hitch 1990: 186–7.

<sup>32</sup> See García Ramón 1998; Grenstenberger 2013: 281; Covini 2017: 22–3 and 41 fn. 58; Willi 2018: 65, 86; Jasanoff 2022.

<sup>33</sup> Cf. Bailey 1937: 78; Dict. 426a. The development \**-agC-* > \**-aiC-* has a parallel in \**-aβC-* > \**-aṣC-*, cf. \**uafra-* (cf. Av. *vafra-*) > \**βaβra-* > Khot. *baura-* “snow” and \**ḥafta* (cf. Av. *hapta*) > \**ḥaβda* > Khot. *hauda* “seven” (Skjærvø 2022: 123).

<sup>34</sup> See Emmerick 1989: 213 and Skjærvø 2022: 123.

<sup>35</sup> The voicing of the fricatives in the groups \**ft* and \**xt* is a common feature shared by all the principal Eastern Middle Iranian languages (Sims-Williams 1989: 167–8).

<sup>36</sup> A possible counterexample is *būnaa-* “naked”, which is usually traced back to \**bagnaka-* (Dict. 297, cf. BSogd. *βyn<sup>h</sup>k*, CSogd *byny*, Chrz. *βynn<sup>h</sup>k*, etc.). Here the back vowel arose by assimilation to the preceding labial consonant (cf. *būṣṣ-* “to give, distribute” < \**baxṣ-* [SGS 103, Dict. 300], *būṣṣātā-* “staircase” < \**abi-sriṣā-* [Dict. 300]).

*pathamjākā* “whether he is a hired killer (= Skt. *caṇḍālo*), he is a suppressor of evil things” (Skjærvø 2004, 1: 239). The first compound member of *jsaṇaulysa-* can now be interpreted as Khot. *jsaṇa-* “killing, murder”, the actual action noun in *\*-ia-* from *jsan-*, which regularly shows palatalization of the nasal (just like *saṇa-* < Ir. *\*ścānd-ia-*). According to Bailey (Dict. 114), the second member continues an Iranian root *uaz-* “to do, work”.<sup>37</sup>

In conclusion, this article has argued that Khotanese inherited a reduplicated verbal stem Ir. *\*ja-g<sup>h</sup>n-* > Ir. *\*jagn-*, which yielded *\*jāyn-* > *\*jsīn-* “to kill, slay” through regular sound change in an earlier stage of the language. Synchronically, this verb survives only in two nominal derivatives: the gerundive *jsīṇa(a)-* “to be slain, condemned to death” and the abstract noun *jsīna-* “killing, slaying”.

### Technical abbreviations

1/2/3	first, second, third person	MMP	Manichaean Middle Persian
acc.	accusative	MP	Middle Persian
act.	active	MSogd.	Manichaean Sogdian
Av.	Avestan	nom.	nominative
BSogd.	Buddhist Sogdian	NP	New Persian
CSogd.	Christian Sogdian	OAv.	Old Avestan
f.	feminine	OP	Old Persian
ger.	gerundive	pass.	passive
Gk.	Greek	PIE	Proto-Indo-European
Iir.	(Proto-)Indo-Iranian	pl.	plural
inf.	infinitive	ppp.	passive past participle
instr.-abl.	instrumental-ablative	prs.	present
Ir.	(Proto-)Iranian	sg.	singular
Khot.	Khotanese	Skt.	Sanskrit
LKhot.	Late Khotanese	Ved.	Vedic Sanskrit
loc.	locative	YAv.	Young Avestan
m.	masculine		

### Khotanese texts

JS	<i>Jātakastava</i> , edition and translation by Dresden 1955.
KV	<i>Karmavibhaṅga</i> , edition and translation by Maggi 1995.
Rāma	<i>Rāma Story</i> , edition by Bailey (KT 3.65–76) and translation by Bailey 1940.
Sudh	<i>Sudhanāvādāna</i> , edition and translation by De Chiara 2013; commentary by De Chiara 2014.
Suv	<i>Suvarṇabhāṣottamasūtra</i> , edition and translation by Skjærvø 2004.
Z	<i>Book of Zambasta</i> , edition and translation by Emmerick 1968a.

<sup>37</sup> EDIV 425–6. Cf. Av. *\*varəza-* “work, activity” (Skjærvø 2004, 2: 269).



## Bibliographic abbreviations

<i>Cat.</i>	= Skjærvø 2002
<i>Dict.</i>	= Bailey 1979
EDIV	= Cheung 2007
EWAia	= Mayrhofer 1992–2001
KS	= Degener 1989
KT 1–5	= Bailey 1945–1980
LIV <sup>2</sup>	= Rix <i>et al.</i> 2001
<i>Prolexis</i>	= Bailey 1967
SGS	= Emmerick 1968b
<i>Studies</i> 1	= Emmerick and Skjærvø 1982

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