Between Gandhāra and Xinjiang
Notes on the Upper Indus Petroglyphs,
Buddhism and Globalization

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Abstract

The Buddhist petroglyphs of the Upper Indus area are representative of the dynamics of transcultural interaction among figurative systems in antiquity. Starting from this specific category of cultural products, this paper aims at providing new perspectives on global interactions, especially looking at the diffusion of Buddhism along the Silk Roads. The iconography of the Buddhist petroglyphs along the capillary roads of the Upper Indus area suggests that traders and pilgrims across the mountains contributed to opening up the path to the development of a Chinese Buddhist visual culture. Buddhist iconography travelled from Greater Gandhāra to China also through not-official representations such as these. The representation of Jātaka stories in the Upper Indus petroglyphs and in paintings in Kizil provides the case study for the present contribution. A final section of this paper focusses on the role of the Karakorum in the transregional contacts between the Indian Subcontinent and Chinese Central Asia, highlighting the role of Buddhism as transcultural force in this process. The circulation of Buddhist iconography functions as catalyst for change and innovation and provides fresh insights toward an integration of the Upper Indus petroglyphs into the wider phenomenon of transculturation along the ancient Silk Roads.

Keywords: petroglyphs, jātaka, visual culture, globalization, Upper Indus, Gandhāra, Buddhism

1. Introduction

Petroglyphs and inscriptions along mountain routes of the Upper Indus and neighbouring valleys of Northern Pakistan typify an important transit area between South Asia and Eastern Central Asia (nowadays Xinjiang region of China). These roads were a crucial passage for travellers, traders and pilgrims; the identification of Buddhist themes in this large corpus of rock art stimulates a special interest in the scholarly community. Buddhist

visual culture in this remote area worked as agent of transcultural transmission, bridging distant areas across the ancient world.

In 1984 the Heidelberg Academy for the Humanities and Sciences established a special research unit (*Forschungstelle*) to document and study those petroglyphs and inscriptions clustered along the Upper Indus roads, an area made more accessible thanks to the opening of the Karakorum Highway in 1978.[1] The work of the Heidelberg team is particularly precious considering the endangered status of this rock art treasure, threatened by the imminent construction of the Diamer-Basha Dam (Rogers Kolachi Khan 2012, 21).

The Upper Indus region was a crucial node in ancient trade network. Encased among the Western Himalaya, the Hindukush and the Karakorum mountains, the area was cut by interconnected capillary routes linking the North-western corner of the Indian subcontinent to the Tarim Basin in modern day Xinjiang province of China. The study area lies partly in Khyber Pakhtunkhwa and partly in Gilgit-Baltistan regions of Northern Pakistan, extending in a west east direction for approximately 110 km along the course of the Indus River before it turns northwards on the way to Gilgit and the Chinese frontier (Fig. 1).

This relevant portion of the course of the Indus River has a peculiar role in history, since – despite isolation and apparent inaccessibility – it constituted a fundamental crossing on the way between Greater Gandhāra and Eastern Central Asia (Neelis 2014, 52). In particular this route was crucial in the Early Historic Period.

2. Petroglyphs from the Upper Indus Area

Over 30,000 petroglyphs and 5000 inscriptions have been recorded in the Upper Indus area; this huge archive records the history of these mountains, witnesses the movement of people and cultures, and reflects tremendous linguistic and cultural diversity on a millennium long timespan (Hauptmann 2008, 353). Drawings include animals (mostly simplified mountain goats), human figures, architectures and symbols; inscriptions cover several languages such as Indian and Iranian idioms, Tibetan, Chinese. Both inscriptions and petroglyphs are obtained by abrasion of the dark patina of high mountain desert varnish covering the rocks. Inscriptions are mainly dated on a palaeographic basis according to the

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[1] Cfr. MANP 1-11 and ANP 1-3.

scripts and languages used; moreover some of them include dates and datable elements. Most of the inscriptions just record names.[2] Information about the age of the petroglyphs comes from multiple data; when possible their association to datable inscriptions is a precious help. Intricate representations also show superimposition of petroglyphs in subsequent periods, confirming the long use of some peculiar places.
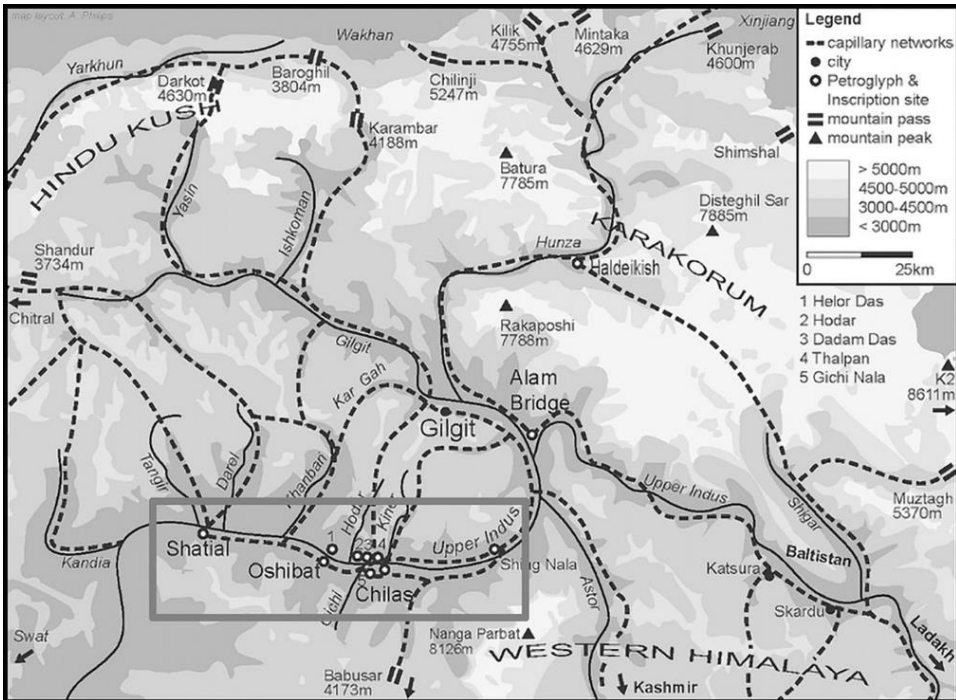

Fig. 1 - Capillary Routes in Northern Pakistan; framed in grey the area of the petroglyphs object of the present study (after Neelis 2014, 52, Map 2).

Petroglyphs are grouped in specific sites, mostly clustered on large rock faces and boulders, marking special places along the way, whose importance is dictated by geographical and symbolic meanings; concentrations of zoomorphic representations have been interpreted as possibly indicating hunting grounds or gaming areas; clusters of

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[2] Most of the epigraphic material has been published either in the ANP or in the MANP volumes. For an overview of the graffiti findings refer to Neelis (2011, 268-71) and attached bibliography.

inscriptions and drawings located near settlements were likely produced by locals more than by visitors; while clusters located at passage points such as important river crossings can be attributed to travellers such as traders, pilgrims or itinerant monks (Neelis 2014, 54).[3]

Graffiti, donative inscriptions, *stūpa* drawings, iconic and narrative Buddhist images witness the passage and diffusion of Buddhism in this region. Devotional practices followed travellers (traders, itinerant monks, local donors) in an area where lack of resources and an inhospitable environment prevented the establishment of permanent *stūpas* and monasteries before royal patronage by the Palola Śāhis of Gilgit in the 6th-8th century CE (Neelis 2017, 13). Petroglyphs sites mostly appear at crucial crossings and stations along the routes. Ancient travellers marked these places with their passage not only leaving several inscriptions with their names, but also giving these areas a symbolic and religious meaning. This phenomenon is particularly clear in the Buddhist period, when the donation of Buddhist imagery was considered as a meritorious action largely performed by monks and laymen alike. Besides Buddhism, petroglyphs illustrate pre-Islamic religious diversity in the area; figures of Brahmanic deities associated to Kharoṣṭhī inscriptions dated to the 1st-3rd century CE have been identified at the site of Chilas II (Fussman 1989, 1-40). Buddhist petroglyphs date from the 1st to the 8th century CE.[4] The donation of imageries at Buddhist sacred places took the special form of petroglyph representation in the Upper Indus area clustering in actual wayside rock art shrines; this phenomenon shows how religious practice in this relevant area of the ancient world underwent a profound process of transculturation. Transcultural processes lead to the intermingling of visual, religious, technological and environmental elements that gave life to a peculiar manifestation of Buddhist culture, namely a neo-culture both 'global' and 'local' in nature. Buddhism indeed plays an important role along the ways of early globalization; the creation of Buddhist petroglyphs derives from this wide phenomenon, but it is deeply rooted in the local artistic language, resulting in a 'glocal' phenomenon. This particular cultural milieu provides interesting elements for the understanding of

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[3] The most relevant sites being Oshibat, Shatial, Hodar, Shing Nala, Gichi Nala, Dadam Das, Chilas Bridge, Thalpan (MANP 1-11).

[4] For a brief overview on Buddhist petroglyphs refer to Jettmar and Thewalt 1987, 15-23.

transculturation in the areas involved in ancient globalization such as the so-called Silk Roads in the Buddhist period.[5]

3. Buddhist petroglyphs

Because of their implications for the understanding of cultural globalization, Buddhist imagery deserves special attention. Moreover Buddhist petroglyphs are particularly impressive and significant for the history they narrate.

Buddhist petroglyphs include symbols, architectural representations, iconic images and narrative scenes. Architectural representations mostly refers to *stupās*, but are also attested other kinds of structures whose identification is not always easy; some of them may be probably identified as *vihāras* or shrines (Bruneau 2007, 68).

Buddhist anthropomorphic representations include interesting petroglyphs of Buddhas and Bodhisattvas, narrative scenes from Śākyamuni's lifetime and Jātaka stories of his previous births. Buddhist petroglyphs also include accompanying secondary characters and portraits of donors and worshippers.

This variety of themes and iconographies shows the profound impact of Buddhist doctrines on this area whose role as transit zone in the diffusion of Buddhism does not imply a passive participation to its passage and transformation. Looking at these rocks it is possible to read and follow a peculiar segment of Buddhist history.[6]

Architectural representations largely outnumber Buddhist anthropomorphic imagery. Often *stūpa* representations surround Buddhist scenes and they are clearly created by different hands at different times. This depends on a well-known Buddhist practice consisting in the donation of devotional object, or their representation, to a sacred site in

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[5] The use of transcultural theories for the understanding of cultural interactions in the frame of ancient globalization proved successful in other contexts such as Indian Ocean trade (Autiero 2015, 2017, 2019); this paper marks the first step toward the study of the Karakorum petroglyphs through the lenses of transcultural studies.

[6] Clearly recognizable iconographies soon captured scholarly attention and have been promptly identified by the Heidelberg team (cf. ANP 1-3). Novel analysis and interpretation based on quantitative methods of Buddhist petroglyphs have been recently attempted (Van Aerde 2019 and Van Aerde et al. 2020), however, these works shows substantial shortcomings both regarding iconographical issues and in acknowledging previous literature.

order to collect spiritual merits. Many of the *stūpas* that have been sketched on the rocks along these mountain routes mark the passage of devotees that showed their respect and devotion to sacred places. Several hypotheses have been formulated on the criteria to determine the sacrality of these places. Buddhist sacred topography indeed is a fluid one, and throughout the history of Buddhism, and following its diffusion, new sacred places have been identified. Buddhist transmission adapted to fluctuating religious, economic and political conditions (Neelis 2014, 51). This phenomenon is particularly attested in the North Western areas of the Subcontinent where Buddhism prospered.

From a stylistic point of view Buddhist images are at first strictly related to Buddhist art in the Greater Gandhāra region and later show connections to the Kashmir and Western Himalaya styles (Fussman 1993, 1-60). Focussing on the early Buddhist period, the Karakorum routes are literally the corridor between Gandhāra and Xinjiang, and throughout these images we can follow the journey of Buddhist visual culture toward China along the ancient Silk Roads.

3.1 Stūpas

A typology of thirteen types of stupa representations in the Upper Indus area has been proposed by Laurianne Bruneau (2007) (Fig. 2), which based her study on 1359 engravings. While some of the types represented might be reproductions of *stūpas* actually seen by their creators in architectural or portable form (Fig. 3), an important source of typological variation is the repetition of the stupa motif starting from earlier petroglyphs, each copy causing a departure from the original model through mechanic reproduction and reinterpretation of architectural elements without an actual understanding (Bruneau 2007, 71).
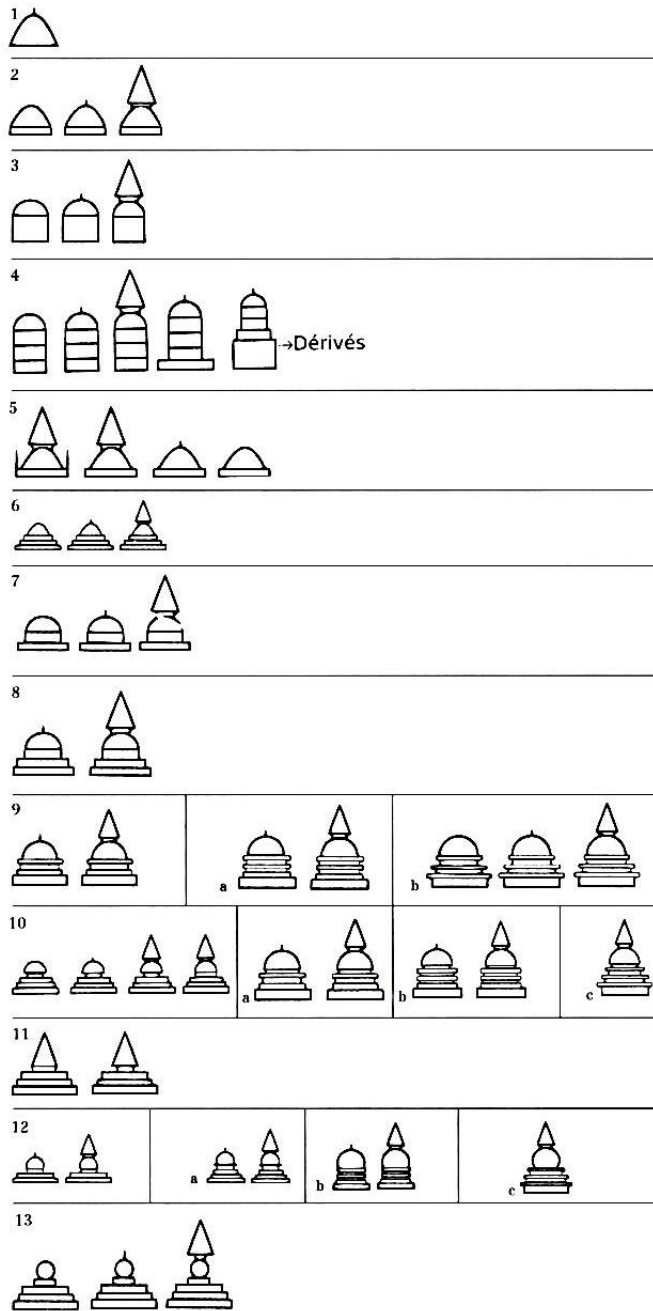
Fig. 2 - Typology of *stūpa* representations in the Upper Indus valley (after Bruneau 2007, 65, Tableau 2).

Fig. 3 - Comparison of *stūpa* architecture (After Van Aerde 2019, 465, Fig. 20.4). Left: petroglyph from Chilas bridge (Bandini-König 2003 (MANP 6), Tafel III). Centre: schist reliquary *stūpa*, Gandhāra, 1st–2nd century CE (Carlton Rochell Asian Art Gallery, private collection, New York). Right: rendering of petroglyph from Chilas bridge (Bandini-König 2003 (MANP 6), Tafel 25).

This phenomenon justifies also those cases of problematic identification of engraved architectures as *stūpas*; sometimes it is, indeed, difficult even to tell *stūpas* apart from other structures such as temples or *vihāras* (Fig. 4). Not all the *stūpa* petroglyphs are the same, besides numerous simple representations left behind by pious travellers, some peculiar *stūpas* are, instead, commissioned art pieces realized by professional artists.

Typological study on the *stūpa* petroglyphs suggests that early images date to the early centuries of our era, showing strong relations to North Western India; nevertheless only 10% of the *stūpa* petroglyphs can be dated to this early date (Bruneau 2007, 71). Buddhism appear particularly lively in the area from the 2nd to the 8th centuries. Especially in the later centuries this is justified by the establishment of royal patronage with the rise to power of the Palola Śāhi dynasty – as corroborated by manuscripts and bronzes from the Gilgit area (Von Hinüber 2004).

Fig. 4 - Buddhist petroglyph from Chilas representing probably a *vihāra* (after Bruneau 2007, 69, Fig. 18).

Among the many types, a very significant one is the so called "*stūpa* tower" whose direct comparison is to Turfan architecture developed during the 7th-8th century under Tang influence (Fig. 5). Several Chinese and Tibetan sources corroborated intensive contact between the Upper Indus region and China (Bruneau 2007, 71). Conflict between Chinese and Tibetan powers over the Palola Śāhi kingdom eventually led to its extinction in the middle of the 8th century.

Rock inscriptions in Chinese in the Upper Indus Area date from the late Han to the Tang dynasties (Höllmann 1993, 72). But it is from the 9th century onward that the role of the Upper Indus Valley in the itinerary between India and Eastern Central Asia declined.
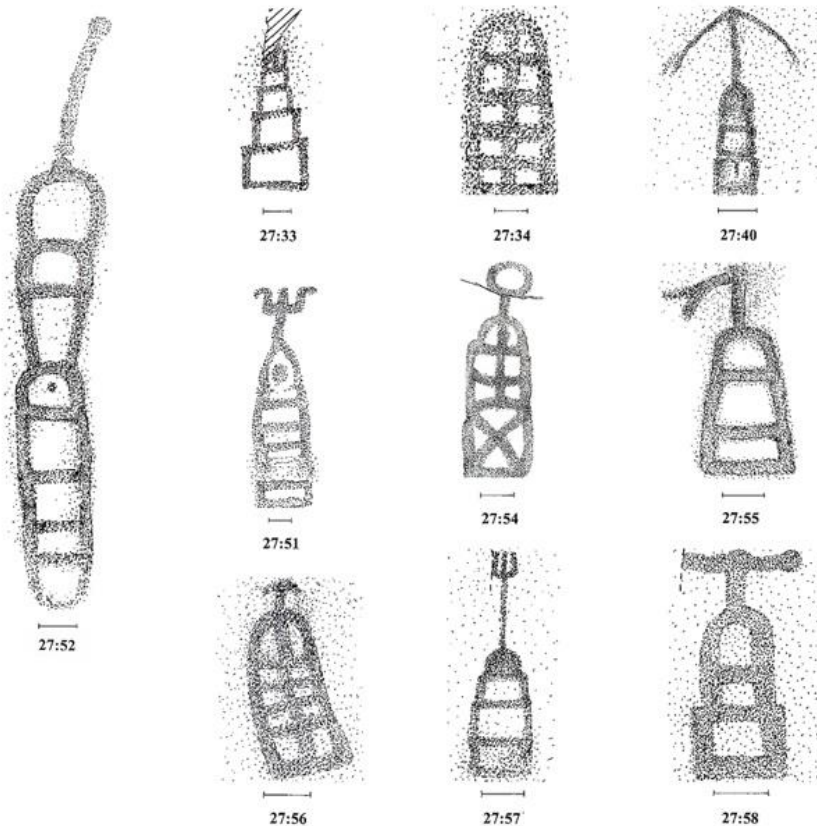

Fig. 5 - Drawings of '*stūpa* tower' petroglyphs (Bruneau type 4) from Chilas; graphic elaboration after Bandini 2003 (MANP 6), Tafel 18.

Clusters of *stūpa* petroglyphs in the sites of Shatial, Hodar, Chilas, Thalpan and Shing Nala ranging in date from the first to the eight centuries CE define these places as actual Buddhist sacred places or shrines.

In Shatial 138 *stūpa* drawings indicate the site's religious significance (Neelis 2014, 55); the most impressive Buddhist image at Shatial combines an intricate *stūpa* with a narrative scene (Śibi Jātaka) on the left, and another architecture of difficult interpretation on the right (Fussman 1994) (Fig. 6). This so called 'Shatial triptic' has been dated to ca. 350 CE on palaeographic ground.

At Hodar over 130 *stūpa*s have been abraded on the rocks as religious offerings from probably local inhabitants (Neelis 2014, 56). At Hodar is particularly evident that dedication of schematic representations of *stūpas* are not less meritorious than more elaborate drawings (ibid.). In the practice of meritorious donation, what really counts is the intention, and then the value of the gift itself is not fundamental.

Fig. 6 - The Shatial Triptic (after Fussman 1994, fig. 2).

At Chilas (site of Chilas II) the most ancient *stūpa* petroglyphs have been identified thanks to their association to approximately sixty Kharoṣṭi

inscriptions (Fussman 1989, 1-40). These early *stūpa*s make the absence of anthropomorphic images of the Buddhas significant suggesting a pre-iconic phase of Buddhist art in the Upper Indus (Carter 1993, 349-366; Neelis 2014, 57, note 33).

Fig. 7 - Śākyamuni under the *bodhi* tree, petroglyph from Thalpan (picture modified from Jettmar 1987, Photograph 18, plate 1).

Near the modern Thalpan bridge are located some of the most impressive Buddhist petroglyphs including *stūpas* as well as narrative and iconic representations (Fussman 1994; Maillard and Jera-Bezard 1994). At this site such artworks were commissioned by known patrons named Kuberavāhana and Siṅhoṭa.

These sites are all located at passage point along the Karakorum route and cover the role of wayside shrines (Neelis 2014). A further cluster of Buddhist petroglyphs is located away from the route at Shing Nala, approximately thirty kilometres upstream from Thalpan; at this site 156 *stūpas*, representing 41% of the total engravings, are accompanied by Brahmi donative inscription often defining them as "religious offerings". Since Shing Nala is not located along the main transit route, Ditte Bandini-König suggests that this site was not a wayside shrine but an actual pilgrimage place that attracted numerous visitors around 500 CE on the site where a Buddhist forest monk fixed his retreat (Neelis 2014, 57).

Data on Buddhist petroglyphs and sites in the Upper Indus region further add to our understanding of Buddhism in this relevant part of the world and adaptive nature to new and diverse environments.

Abundant representations of *stūpas* in the Upper Indus respond to the predominant role of this monument in Buddhist devotional practices. The *stūpa* is by far the most important element in Buddhist sanctuaries, even in places where iconic representations of the Buddha were widespread; indeed, the main *stūpa* is the principal object of cult also in Gandhāra. Therefore, the predominant role of *stūpa* images among the Buddhist imagery along the Karakorum Highway perfectly corresponds to a well-known tradition. Larger scale devotional icons are indeed a later development in Buddhist practice; these later icons took over later in time the function historically held by the *stūpa* (Behrendt 2007, 42).

3.2 Buddhist scenes

While conspicuously outnumbered by drawings of *stūpas*, the repertoire of Buddhist imagery in the Upper Indus area deserves some attention. Petroglyphs representing Buddhas and Bodhisattvas, stories from the life of Buddha Śākyamuni and his previous births add to our understanding of Buddhism in this area by a great extent. The already mentioned patron Kuberavāhana, besides donating drawings of intricate architectures, also commissioned impressive visual narratives including a representation of Śākyamuni's enlightment (Fig. 7) and first sermon (Fig. 8) at Thalpan (Maillard and Jera-Bezard 1994). At Chilas bridge Kuberavāhana and his teacher Mitragupta are portrayed alongside the representation of the Vyāghrī Jātaka (Fig. 9). Other Jātakas represented in this corpus are the Śibi Jātaka in Shatial (Fig. 10) and Thalpan (Fig. 11), and the Ṛṣipañchaka

Jātaka at Thalpan (Fig. 12). It has been suggested that these narratives may have been re-located to this area in the literary sources as an attempt (eventually successful) to further link Buddhism to an area very far from its Gangetic homeland (Fussman 1994, 14 ff.; Neelis 2014, 58, note 36). Another local donor named Siṅhoṭa left petroglyphs depicting the previous Buddha Vipaśyn and the Bodhisattvas Avalokiteśvara and Maitreya at Chilas Bridge accompanied by *stūpas* representations (Fig. 13) (Neelis 2014, 58). Inscriptions attest the cult of other Buddhas and Bodhisattvas associated to Mahāyāna such as Amitāba, Akṣobhya, Prabhūtaratna, and Ratnaśikhin (Von Hinüber 1989, 41-106; Neelis 2014, 58 note 37). The role of Bodhisattvas as protectors of travellers – and specifically of traders – is well-known in Buddhist literature, adding significance to their presence along the Karakorum routes (Neelis 2011, 31-32; Von Hinüber 1989b, 84–89).

Fig. 8 - First sermon in Sarnath, petroglyph from Thalpan (after Jettmar in ANP 2, pl. 8).

Fig. 9 - Vyāghrī Jātaka, petroglyph from Chilas (after Bandini-König 2003 (MANP 6), Tafel IV).

Fig. 10 - Śibi Jātaka, petroglyph from Shatial (picture modified from Fussman 1994, fig. 3).

Fig. 11 - Śibi Jātaka, petroglyph from Thalpan (after Bandini-König 2003 (MANP 6), Tafel XXII).

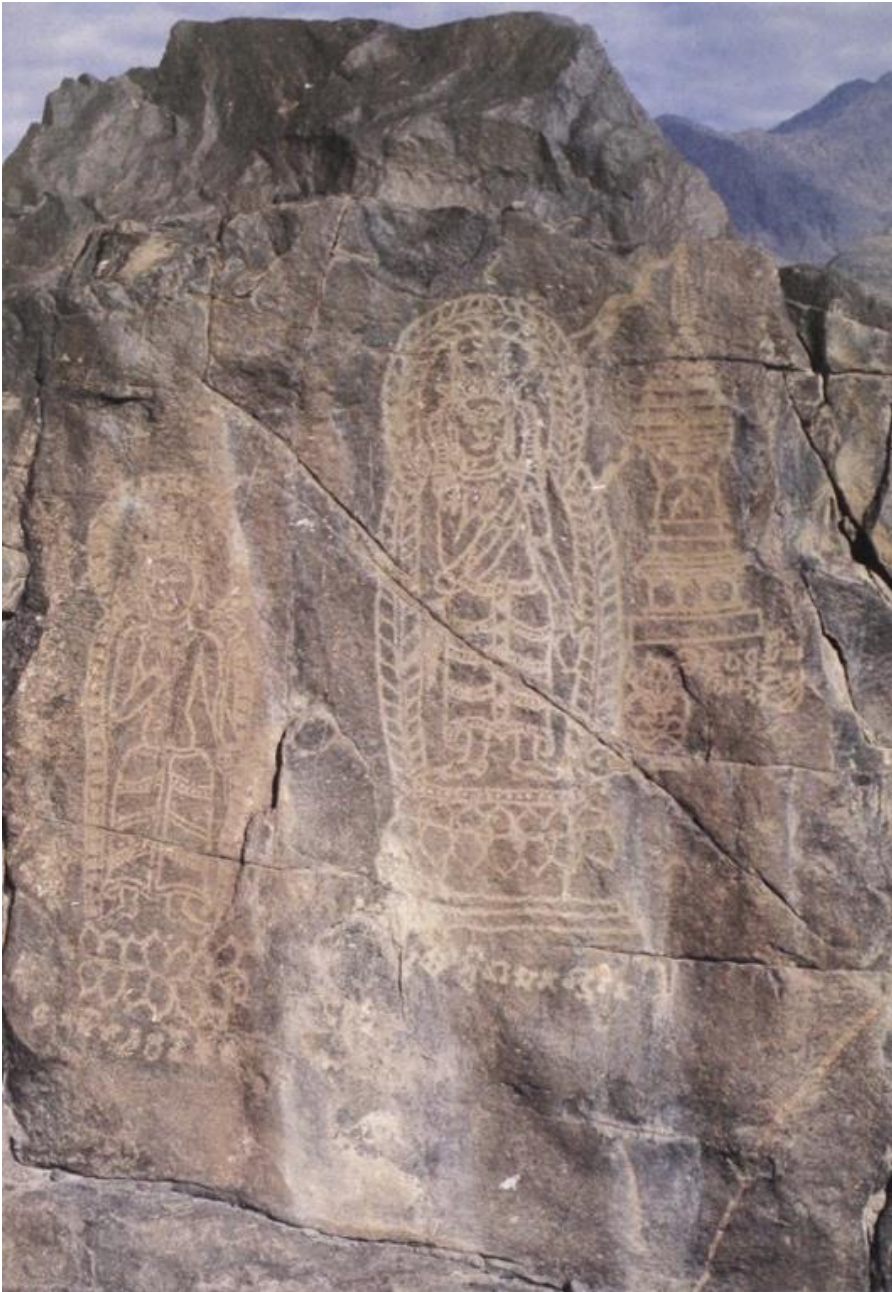Fig. 12 - Ṛṣipañchaka Jātaka, petroglyph from Thalpan (after Jettmar in ANP 2, pl. 10).

Fig. 13 - Bodhisattvas Avalokiteśvara and Maitreya at Chilas Bridge (Jettmar 1989 (ANP 1, part 2), Plate 158).

Iconography suggests that anthropomorphic imagery draws upon major art schools, starting from Gandhāra. Between Gandhāra and the Karakorum Area, a crucial transit point is the Swāt Valley. An interesting study by Anna Filigenzi (2006) puts forward the hypothesis that copies of famous and much admired works – such as the frieze of the *stūpa* of Saidu Sharif in her case study – were reproduced as models to copy that circulated in the Buddhist oecumene (Filigenzi 2006, 78). Filigenzi's hypothesis is very well formulated and supported by strong data pointing out how the frieze of Saidu Sharif was the model for paintings in Miran (located in the easternmost part of the southern route of the Silk Roads in the Tarim Basin, in what is nowadays Xinjiang region of China; Filigenzi 2006, 74). Particularly interesting in the Saidu Sharif-Miran connection is the time discrepancy; as a matter of fact, the frieze is dated to the second quarter of the 1st century CE, while paintings at Miran were executed in the 3rd-4th century (cfr. Filigenzi 2006, 73 with previous literature). This circumstance attests to a long lasting success of masterpieces such as the Saidu Sharif frieze, and the repetition of successful iconographic models over the centuries.

This strong case witnessing to the circulation of models between the Swāt Valley and Xinjiang, supports the hypothesis that the same possibility existed in the transmission of visual culture between Gandhāra and the Karakorum range. Along these mountain routes established iconographies arrived and were reproduced on the available support, namely rock faces and boulders, before royal patronage made actual architectural sanctuaries possible. The likely circulation of 'cartoons' clearly not only does not deny a strong link between sculpted material in the main Buddhist sanctuaries and rock carvings in the Upper Indus, but provides a common origin and common pattern of diffusion that embraces the wider phenomenon of expansion of Buddhist visual culture.

Another relevant example of the iconographic link between Gandhāra and Xinjiang comes from the representation of Buddha's life in the so-called "Stairs Cave" at Kizil (cave 110) that employs a Gandhāran narrative system (Santoro 2003, 117). Santoro concludes that although the pictures of the Kizil grotto are clearly linked to Gandhāran models, they are never a mere copy of the models themselves (Santoro 2003, 122). Also in this case, Central Asian paintings, while clearly connected to Gandhāran models, are dated to later periods (the painting in the Stairs Cave have been dated at the earliest to the 4th-5th century by Chinese scholars; Santoro 2003, 125). It is not surprising that hagiographic

material in visual form remains a valid source and model for a long time, as it happens with written sources.

Permanence of models and valorisation of earlier artistic accomplishments is also seen in the reuse of stone relief in the decoration of the main *stūpa* of Butkara I at least three centuries after their creation (Faccenna 1980/1981, 82).

In conclusion chronological discrepancies supported by palaeography between the early Gandhāran production and the Karakorum petroglyphs, don't rule out a direct connection between the two artistic productions, since portable models circulated between Gandhāra and Chinese Central Asia as demonstrated by the cited examples. These models were possibly used over long time spans, since their sacral subjects prolonged their life and appeal to devotees and possible patrons.

The whole artistic production from Gandhāra – as it happens in cognate artistic traditions – shares a great amount of stylistic and iconographic conventions that belong to widespread canons shared both on a regional and interregional scale. Repetition of motifs and patterns tells a story of wide circulation of models, possibly actual reproductions of famous masterpieces whose transposition in other contexts followed local conventions and adapted to new environments. While in later Xinjiang the Gandhāran lesson was put in practice through painting, along the mountain routes of the Upper Indus these models were reinterpreted in the local rock art idiom.

4. Case Study: Jātaka Stories Between the Karakorum and Kizil

In order to trace a direct connection between Upper Indus visual culture and Chinese Xinjiang it is interesting to look for iconographic correspondences. As previously stated the huge pictorial treasure of the Silk Roads offers indeed several examples corroborating the fact that visual culture from Greater Gandhāra travelled along the Silk Roads toward China.

In this paper I present some preliminary considerations from the comparative study of jātaka representations in the petroglyphs in the Upper Indus and in mural paintings in Kizil grottoes in Chinese Xinjiang.[7]

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[7] The examples reported in this paper only represent a first part of a wider ongoing research.

Previous studies demonstrate that Kizil became a major iconographic bridge between India and China (Bell 2000, 56).

Buddhist imagery found among the petroglyphs include representation of three jātaka stories: Vyāghrī Jātaka (at Chilas Bridge) (Fig. 14), Śibi Jātaka (at Shatial (Fig. 15) and Thalpan (Fig. 16)), and the Ṛṣipaṅchaka Jātaka (at Thalpan) (Fig. 17).[8] Albeit a very limited sample, it is a significant one, first of all because – as already stated – the relocation of some of these jātakas in and around Gandhāra was part of the eventually successful attempt to establish Buddhism in these areas.[9] Among those represented in the Karakorum petroglyphs, only the Ṛṣipaṅchaka Jātaka does not appear in Gandhāra reliefs, while it is represented in Kizil.[10]

Looking at the jātakas, the evidence is too scant for obtaining conclusive results, nevertheless this preliminary works opens the way to further analysis. Among the stories included in this research only the Ṛṣipaṅchaka Jātaka gives more precise comparisons between the two areas, and this must be considered as a first step toward a precise reconstruction of the various mountain routes that took Buddhist iconography along the Chinese Silk Routes.

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[8] Where not otherwise specified, main source for jātaka representations in the Upper Indus is Thewalt 1983, 622-634.

[9] According to Chinese pilgrims four jātaka stories took place in Gandhāra: Vyāghrī Jātaka, Śibi Jātaka, Dīpankara Jātaka, and Chandraprabha Jātaka; among those represented in the Karakorum only the Ṛṣipaṅchaka Jātaka did not undergo such relocation, but in this case its mountainous setting might have played a role in its local success.

[10] For a synthesis on jātaka representations in Gandhāra please refer to Bell 2000, 32 ff. (ill. of Vyāghrī Jātaka in Kurita 1990, 310; ill. of Śibi Jātaka in Kurita 1990, 277).

Fig. 14 - Drawing of the Vyāghrī Jātaka at Chilas Bridge (after Thewalt 1983, fig. 5).

Fig. 15 - Drawing of the Śibi Jātaka at Shatial (graphic elaboration of the author after Thewalt 1983, fig. 3 and 4).

Fig. 16 - Drawing of the Śibi Jātaka at Thalpan (after Thewalt 1983, fig. 2).

Fig. 17 - Drawing of the Ṛṣipañchaka Jātaka (after Thewalt 1983, fig. 1).

4.1 Vyāghrī Jātaka

The Vyāghrī Jātaka – also known as Mahasattva Jātaka – tells the story of prince Mahasattva, actually the Bodhisattva, who sacrificed his life to feed a dying tigress and her two cubs.[11] The prince threw himself off a rocky escarpment, and let the tigers eat his flesh. Only the bones remained behind for the prince's family to collect. A *stūpa* was erected at the place of his self-sacrifice.

The Vyāghrī-Jātaka petroglyph in Chilas shows the legend with many details; besides the protagonists of the story, the artist also represented three further persons and a tree deity watching the scene. The Bodhisattva is represented as a Buddha lying on his back on the ground; his left arm lays next to his body, while his right rests on his chest, in a posture suggesting acceptance and willingness to feed the beast. Both legs are stretched out, overall the body position is rather stiff.

There are five animals of different size ready to dismember the body, according to Thewalt´s analysis two of the felines – namely the last two on the left – are later addition (1983, 629).

The tigress – only slightly bigger than the two original cubs – stands on the upper body of Mahasattva; behind her the cubs approach the legs. The scene is set at the foot of a rocky outcrop, rendered in stylized form by means of meandering right-angled lines. On an upper level of the escarpment on the left rises a tree. From its trunk projects the upper body of a mourning female tree deity. On top of the rocky outcrop there are three persons, probably Mahasattva's brothers and father; all of them gesticulating in despair and trepidation.

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[11] This is a very short summary of a known story with more than one version; the most important variant is the identity of the Bodhisattva as either a prince or a Brahmanic ascetic (for a summary of the extant version please refer to Matsumura 2012, 49-50.
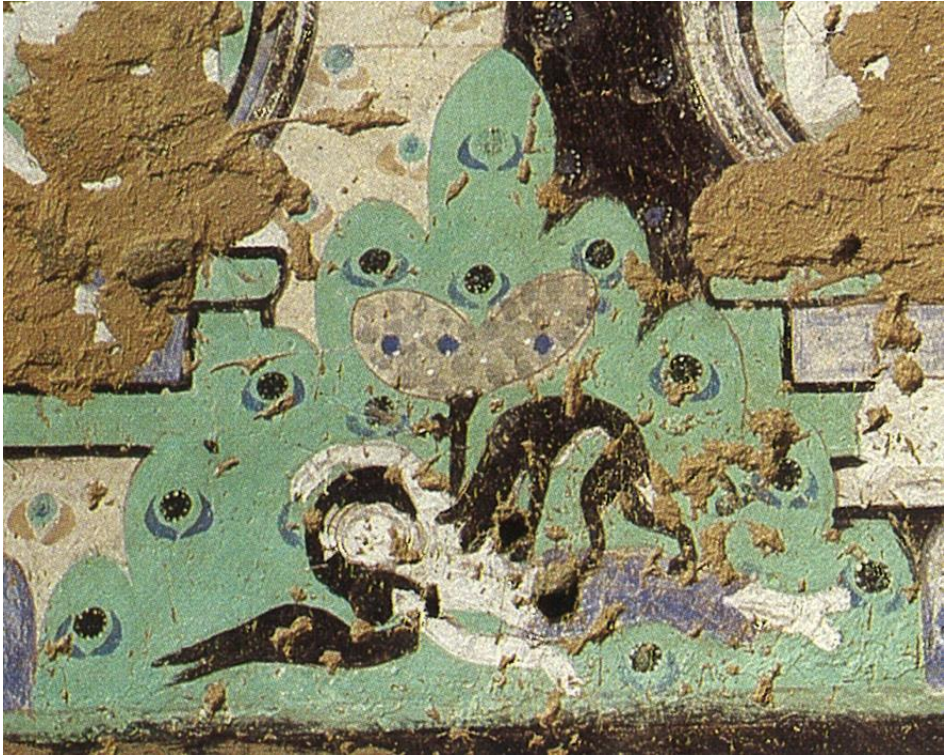
Fig. 18 - The Vyāghrī Jātaka at Kizil, cave 8 (author's elaboration after Kizil Grottoes 1983-1985, vol. I, fig. 32).

The Vyāghrī Jātaka is represented eight times in Kizil (in cave 8, 17, 34, 38x2, 47, 114, 184). These eight representations show some iconographic variations, for the scope of the present research the most interesting is the position of the prince's arms: indeed, in four of the Kizil paintings Mahasattva is shown with the right arm raised over his head (Fig. 18), while in the others he is not (Bell 2000, 53) (Fig. 19). The position with the right arm raised is used in Gandhāra (Kurita 1990, 310); while in Chilas the arm lays on the chest. In cave 38 in Kizil the Vyāghrī Jātaka appears twice showing two specular images. It is evident that different versions circulated at the same time, reflecting iconographic liberty in the rendering of the story.

Fig. 19 - The Vyāghrī Jātaka at Kizil, cave 114 (author's elaboration after Kizil Grottoes 1983-1985, vol. II, fig. 146).

In Kizil jātakas are represented inside lozenges whose juxtaposition mimics a mountainous landscape;[12] in the limited space of each lozenge the story is reduced to its central scene, and often different moments are shown simultaneously. In the case of the Vyāghrī Jātaka the prince is often shown twice at the same time: laying on the ground with the tigers, and during the fall from the rocky outcrop (Fig. 20). Either the limited space and the already redundant mountainous landscape might have favored this narrative choice.

Fig. 20 - The Vyāghrī Jātaka at Kizil, cave 38 (author's elaboration after Kizil Grottoes 1983-1985, vol. I, fig. 116).

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[12] From the Chinese point of view, indeed, Buddhism came from the mountains, and this might have influenced the iconographic choice of the pattern encasing Buddhist stories in cave murals.

Not only a stylistic preference, but also the wider freedom guaranteed by painting if compared to rock engraving, makes Kizil murals of the Vyāghrī Jātaka much more lively and sinuous than their Chilas counterpart.

No precise iconographic comparison can be made between the Chilas Vyāghrī Jātaka and the murals in Kizil suggesting a direct contact; nevertheless, the variety seen in the Xinjiang caves suggests that more than one iconographic model circulated along the Silk Roads. Only one known Gandhāra relief depicts this story, but it is not possible to exclude that there were more lost sculptural or painted example with iconographic variety in Gandhāra itself.

4.2 Śibi Jātaka

King Śibi – one of the many previous births of the Buddha – saves a dove pursued by a hawk, but, in order to save also the hawk from starving, he decides to donate his own flesh to the hawk in an amount equal to the weight of the dove. The jātaka story continues with a miraculous twist: God Indra had indeed turned himself into the hawk, and the dove was one of his vassals; the transformation was a way to test king Śibi's virtue. When the king decides to give the hawk the same amount of his flesh as the weight of the dove, Indra causes the dove to be heavier and heavier, ultimately leading the king to step with his whole body on the scale. After having assessed the willingness of the King to perform the ultimate sacrifice, Indra reveals himself and heals the king, who is then praised by gods and humans.

The story of king Śibi appears in two of the Karakorum petroglyphs. In Thalpan the artist depicted the most important event of the story: the cutting and weighting of the flesh; the focus is entirely on the king's self-sacrifice. Śibi sits on a low stool or cushion on the left. His royal status is shown by the headgear. The king is shown cutting flesh from his left arm. On the right of the drawing a servant holds a beam balance: on the right plate stands the dove, while on the left probably is represented the cut flesh.

The same jātaka is also represented in Shatial in a very different way. Here the style is completely different, the drawing is not a pure outline as in Thalpan. In Shatial there is a clear attempt at creating a *chiaroscuro* using the natural patina and different filling patterns. The story is identified from the presence of the dove in Śibi's lap and of the

servant holding a balance; the iconography here is very peculiar since Śibi is not represented as a king but as Buddha. The moment of the self-sacrifice is suggested but not explicit, and the focus in this case is on the role of Śibi as future Buddha, as implied by the overlap of the different time sequences: the life as Śibi and the future life as Śākyamuni.[13]

In Kizil there are four representations of the Śibi Jātaka (Bell 2000, 54-55) (Fig. 21). No precise comparisons to the iconographic peculiarities seen in Shatial and Thalpan are to be seen; indeed, the cutting of the arm instead of the leg is to my knowledge unique. One important point to stress is that also in this case the story shows some iconographic variants either in the Karakorum and in Kizil. The dove ransom version of this story seems to have originated in Gandhāra, while in the Pali canon is reported a story of Śibi giving away his eyes. No trace of the eyes story has been found either in the Karakorum and in Kizil, further showing how Gandhāra is a crucial point for the transmission of Buddhist stories in the eastern Silk Roads.

Fig. 21 - The Śibi Jātaka at Kizil, cave 114 (author's elaboration after Kizil Grottoes 1983-1985, vol. II, fig. 128).

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[13] As previously said also in the Vyāghrī Jātaka from Chilas this same phenomenon happens, and the bodhisattva – Mahasattva in this case – is represented with the typical iconography of the Buddha. Despites this circumstance, style rules out the possibility that the two illustration might be the work of the same artist.

4.3 Ṛṣipaṅchaka Jātaka

The Ṛṣipaṅchaka Jātaka – which does not appear in the Pali canon – tells the story of an ascetic revealing to a group of animals (a dove, a crow, a snake, and a gazelle) that the greatest evil is bodily existence. In Thalpan the scene is very clear: on the left sits the emaciated ascetic, his legs are crossed, he only wears a loincloth, in his left hand he holds a *mala* (prayer bead rosary), while the right hand is raised in a posture that indicates teaching. The ascetics is rendered in three quarters and faces five superimposed animals: from the top a boar, a bigger bird (likely a crow), a smaller bird (likely a dove), and a gazelle (whose horns recall also the ibex or mountain goat, the most represented animal in the Karakorum).
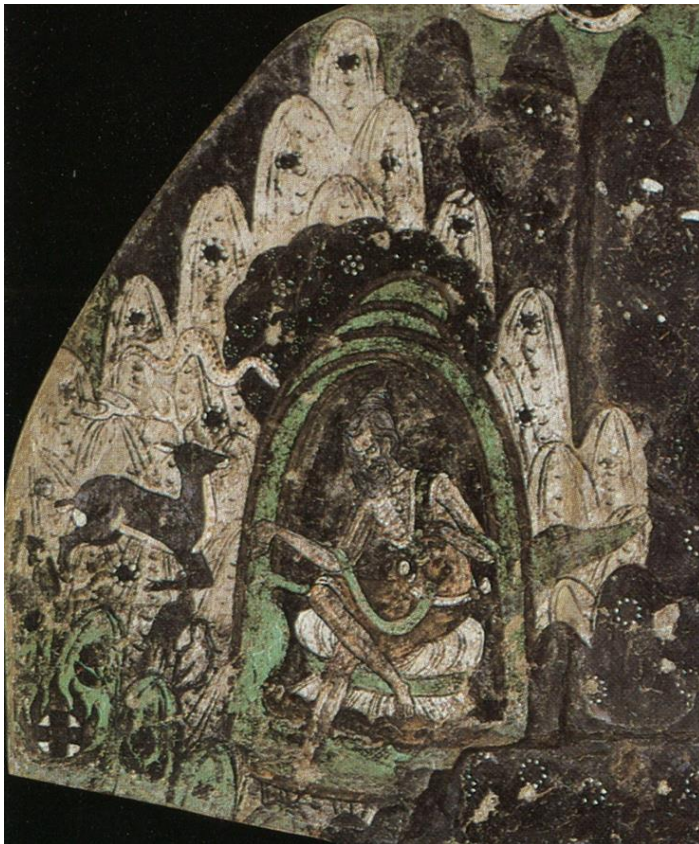

Fig. 22 - The Ṛṣipaṅchaka Jātaka at Kizil, cave 114 (author's elaboration after Kizil Grottoes 1983-1985, vol. III, fig. 197).

This scene from the Ṛṣipañchaka Jātaka is painted in five caves in Kizil; while in cave 17 and 114 there are all four animals (Fig. 22), in cave 171 there are five (Fig. 23), while in cave 38 and 14 only the deer is represented in what has been interpreted as a condensed version of the story (Yaldiz 1987, 78, note 116). The sequence of the animals – always superimposed, except for cave 171 where they clearly surround the ascetic in a semi-circle – varies in every painting, and never corresponds to the sequence in Thalpan. This variety simply attests to the little importance this information has for the narrative, maybe no single version circulated also in written form. This fact also justifies the addition of the boar in Thalpan and of the parrot in Kizil 117, as well as the presence of only one animal twice in Kizil; these representations, no matter their variability, maintain their role as memory aid for an already knowledgeable audience, or alternatively for an audience accompanied by a teacher/monk explaining the stories.
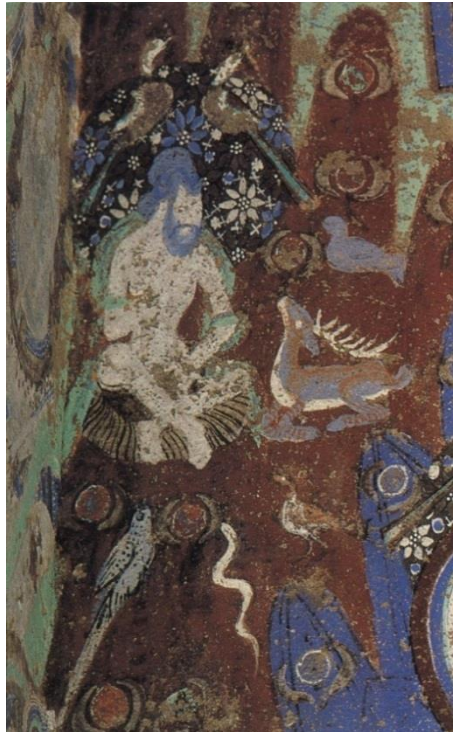

Fig. 23 - The Ṛṣipañchaka Jātaka at Kizil, cave 171 (author's elaboration after Kizil Grottoes 1983-1985, vol. III, fig. 10).

The comparisons between representation of the Ṛṣipaṅchaka Jātaka in Thalpan and Kizil is the most fruitful among the three stories analyzed. In particular the ascetic, besides the usual emaciated appearance, holds the exact same position and attribute in Thalpan and in Kizil 171 (despites the image is mirrored). In both representations the ascetic has a tree on the back to suggest him being in a forest environment. His hair from the forehead falls on the back in large curls, a difference being the visible chignon in Kizil that is absent in Thalpan. In general, in the Kizil mural there is a better rendering of tridimensionality, but this is also due to the better possibilities offered by painting if compared to engraving. Both versions bear five animals instead of four, there is no conclusive evidence about the significance of this datum, but we can imagine that maybe a version with a fifth unspecified animal might have circulated. In both cases it is unclear the reason for the fifth animal to be added. Also representations of the ascetic in caves 17 and 114 are comparable to the iconography seen in Thalpan.

4.4 Final observations

From the comparison between the almost coeval jātaka representations in the Karakorum and in Kizil it can be noted that the only story not attested in Gandhāra – the Ṛṣipaṅchaka Jātaka – finds more precise correspondence to the Kizil iconography. Despites the sample is limited to only three stories, this datum is an important starting point: in the future comparisons will be expanded to other Xinjiang sites, and will include – besides jātakas – also the other Buddhist themes encountered along the mountain routes of the Karakorum, such as scenes from the life of Buddha, Bodhisattvas and architectures. Our preliminary observation is that both the Karakorum petroglyphs and the Kizil murals, reflect the same phase of Buddhist transmission, and in both places it is likely that the same texts and 'cartoons' circulated at almost the same time.

Three (out of four) jātaka representations in the Karakorum were the work of one and the same artist: the Vyāghrī-Jātaka in Chilas, the Ṛṣipaṅcaka-Jātaka and the Śibi Jātaka in Thalpan. He was likely an itinerant artist, travelling with his set of 'cartoons'. He was probably from the Greater Gandhāra region and he was travelling along known trade and pilgrimage routes making a long stop in the Thalpan area that according to Jettmar was an important religious center at that time (Jettmar and

Thewalt 1987, 18). His drawings are executed in simple outlines, but the composition, three-quarter views, and the rendering of curves, all reveal the artist's high drawing skills. This leads to a series of questions: was painting his primary medium of choice? How would his work appear if painted? It is indeed not very likely that drawing on rocks was the technique the artist was originally trained on; it makes more sense that a painter, familiar with Buddhist texts and iconography, took on the task of drawing on rocks under his patron's request.[14] The artist might have been a painter from a famous monastery in Greater Gandhāra and might have been travelling with other monks toward the Tarim basin in that lively period of Buddhist transmission that is the 4th to the 6th century

5. Buddhist Transit Zone on the Karakorum: A Passage to China

5.1 Data from Chinese Pilgrims' Accounts

Epigraphic and petroglyphic evidence qualifies the Upper Indus routes as trans-cultural and trans-regional passages; this evidence is corroborated by the literary accounts of Chinese pilgrims of their travels to and from South Asia (Neelis 2011, 272 and ff.; Tansen 2006 and 2015, 60 ff.). Pilgrims' accounts date from the fourth to the eight centuries.

　　　Chinese sources and higher frequency of petroglyphs also suggest the presence of a holy Buddhist site near the Thalpan station, as speculated at first by Karl Jettmar (Jettmar and Thewalt 1987, 18). Nevertheless this suggestion remains speculative, since unsupported by archaeological evidence. Faxian described his passage across the mountains between Khotan and Swāt around 403 CE, but exact identification of its itinerary remains uncertain. In particular is interesting his visit to Tuo-li where he reports a large wooden image of Maitreya venerated by local rulers (Neelis 2011, 273); as already said there is no archaeological record of a sanctuary in this area, but it could have been located between Shatial and Chilas next to a crossing on the Indus (ibid.).

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[14] In January 2021 archaeologists of the KP Directorate of Archaeology (Pakistan) released, via social media, news of the remarkable discovery of mural paintings at the site of Abba Sahib Chena, in the Swat Valley, probably dated to the 1st century CE; this preliminary information is very promising also for the understanding of painting traditions and their relations to other artistic media in Gandhāra and neighbouring areas.

Another Chinese pilgrim named Zhimeng left Chang'an (modern Xi'an) in 404 CE and roughly followed Faxian's itinerary throughout the Upper Indus reaching probably Gandhāra (the name 'Jibin' he uses has been intended also as Kashmir). More Chinese monks named Dharmavikrama and Hui-lan travelled the same route from China to Jibin in the fifth century. In the sixth century Song Yun and Huisheng travelled from the southern Tarim Basin to Swāt and Gandhāra. Song Yun described the direct route from Swāt in terms similar to Faxian's description (Neelis 2011, 274).

A common element in these descriptions is the 'hanging passage' (probably a temporary rope bridge on the Indus), whose simple view may have caused travelers to change their itineraries (Kuwayama 1987, 718, 721; Neelis 2011, 275). The difficulties of mountain itineraries have been described also by Xuanzang who traveled from 627-645 CE referring to the route from Swāt to the Indus River.
Difficult and scary crossing and passageways may correspond to the main clusters of Buddhist petroglyphs, as pointed out by several scholars including Fussman and Jettmar (Neelis 2011, 272). These clusters grew to the role of sacred shrines.

The Chinese accounts are important in confirming the long lasting use of the Karakorum routes as one of the many branches of the ancient Silk Roads.

5.2 Xinjiang

The capillary network of transit routes in the Upper Indus links the North Western corner of the Indian Subcontinent to the overland routes of Chinese Central Asia in the Tarim Basin of modern-day Xinjiang. The history of the transmission of Buddhism along the Southern and Northern branches of the silk routes in the Tarim Basin is enigmatic since Buddhist *stūpas* and monasteries are conspicuous by their absence during the early Han phase (Neelis 2011, 289). The paucity of early archaeological records raises many questions on how Buddhist religious and visual culture flourished and evolved in this transit zone eventually developing a distinctive religious culture and playing a central role in trans-regional connectivities at a later date (Neelis 2011, 289).

As highlighted by Jason Neelis, the Xinjiang routes in the early centuries played the role of transit zone, where Buddhism did not expand

by contact and foundation of monastic establishments, but long-distance transmission allowed the penetration of Buddhist religious and visual culture elements (Neelis 2011, 291-302).

Transit zones such as the Karakorum and the Tarim Basin constituted the backbone of transculturation between South and Eastern Asia – linking areas where Buddhism had an early institutional establishment such as Gandhāra, Swāt and, on the eastern end, Chang'an and Luoyang. Petroglyphs from Northern Pakistan make this pattern of connection visible; "however many scholars still consider indirect routes from Taxila through the Hindu Kush in present-day Afghanistan to the Oxus valley the most likely path for the propagation of Buddhism to western Central Asia, eastern Central Asia and China" (Neelis 2011, 303). Data actually support the idea that different routes coexisted and alternate in a fluctuating pattern, confirming that the importance of the mountain routes of the Karakorum in Buddhist transmission is undeniable.

The Tarim Basin during the first centuries CE worked as a transit zone for Buddhism because no established power was strong enough to foster and support an institutional establishment of Buddhist sanctuaries. As a matter of fact, during the Han Dynasty, Chinese control on Eastern central Asia fluctuated, but this lack of established political control, and alternating power between imperial China and local dynasties, never halted connectedness along the Silk Routes as shown by archaeological and artistic findings (Neelis 2011, 294). As an example *stūpa* remains in Kashgar clearly show cultural links with the northwestern Indian subcontinent. These five large *stūpas* derive from models developed in Gandhāra and Swāt (Rhie 1999, 249). Petroglyphs of *stūpas* at Chilas and Thalpan also show the same features, further strongly suggesting that the Upper Indus routes were an effective node in the pattern of diffusion of Buddhist visual culture.

Also deserve mention the numismatic evidence from Khotan where bilingual Saka and Kuśāna coins and Khotanese coins in Chinese and Kharoṣṭi suggest ties as early as in the first century (Neelis 2011, 295; Cribb 1984–5, 153–157). Again these coins provide evidence for direct contacts between Gandhāra and the Tarim Basin through the Karakorum, and not across the northernmost passages between Western and Eastern Central Asia.

Several settlements along the Xinjiang Silk Routes show contacts with Gandhāra and Swāt through inscriptions, numismatics and archaeological evidence; such direct connectedness invites for further

research on the Karakorum transit zone, and calls for new research and surveys further east along the mountain traits before entering the Tarim basin.

Evidence so far suggests that the principal Buddhist cultural hubs were in direct contact at an early historical phase by way of a series of transit zone, where – at least at the beginning – political and environmental situations did not allow the establishment of large Buddhist centers. Exploring the transit zones in the first two centuries CE largely adds to our understanding of cultural transmission during the heyday of Early Historic Globalization.

6. Buddhism as Mercantile Religion

In the study of Buddhism many efforts have been devoted to the understanding of its relations to trade networks; mobility is inherently linked to Buddhist tradition and message (Neelis 2011, 3). Religion is an institution that affects also economic activity, such as long distance trade, and, thanks to religion, cultural exchange finds new paths of diffusion (Lewer and Van den Berg 2007, 765).

Buddhism is a universalistic religion with a strong soteriological message; this message is the promise of an eternal spiritual bliss or liberation from life sufferings that goes far beyond the earthly existence. It is typical to find this characteristic in religions traditionally associated to trade and traders (Autiero 2016, 160).

Many religions, aimed to the fulfillment of spiritual accomplishments, deter the quest of immanent wealth. From a mercantile point of view, therefore, the quest for wealth and material riches can be an obstacle to a fulfilled religious life. However this line of reasoning does not apply to pious laity; in order to guarantee the well-being of the whole society (including not-productive monks and nuns), people must undertake activities like specialized production and trade (Lewer and Van den Berg 2007, 765). These general observations help to understand the success of Buddhism in Early Historic India. Since approximately the middle of the first millennium BCE, new heterodox religions appeared in India, causing a real revolution in the religious as well as in the social domain (Kulke and Rothermund 2004, 54).

The diffusion of religions along the commercial routes is a history of movement, meeting, reciprocal reaction and confrontation, adaptation and change. Although long distance trade is not the only reason for the spreading of religious ideas, it is definitely an important factor, so trade deserves attention even in the study of cultural context characterized by specific religious backgrounds (Foltz 1999, 7). Jason Neelis (2011, 3 ff.) concludes that models – such as long distance transmission and contact expansion – mostly overlap and coexist involving trans-cultural transformations according to separate chronologies, socioeconomic conditions, geographical and environmental settings.

One specific way in which religion can influence international trade is through its network effect (Eakin 2003). The sharing of religious ideas by people living in distant countries creates networks of trust that aid economic transactions (Lewer and Van den Berg 2007, 765). Trade contacts based on a common religion that works as guarantee of trustworthiness, may have even resulted in mass conversion at commercial posts (Autiero 2016, 161). Long distance trade is a concurring factor to the spread of religious ideas. In particular the diffusion of proselytizing religions – like Buddhism, Christianity and Islam – followed trade routes: traders themselves where pioneers in adopting new religious doctrines, then labeled as "mercantile religion". Soteriology and universalism in a "mercantile religion" help the traders to maintain a moral behavior even during long travels far away from the rules of their homeland. Buddhism was born as anti-nomistic and non-traditional movement, against orthodox beliefs focused on rituals and sacrifice and deeply rooted on local social organization, from which merchants temporarily living abroad were actually cut out.[15] Religions in order to deal with the spiritual world of traders have to be human-centric so that the entrepreneurship and the self-realization can be pursued and justified also from a moral point of view.

These observations concur to a better understanding of the great value of Buddhist petroglyphs along the Karakorum routes; in this remote

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[15] Long distance can be on the other hand an obstacle to the radiation of not-universalistic religious doctrines, and of the related moral teachings. Indeed, traders, when away from their societies and their religious moral rules, have the chance to behave irrespectively of the rules of their homeland. Ancient traders, when abroad, lived in a limbo where the social control, conveyed by a religious ethic, needed to find new ways to be effective. Personal beliefs, after the encounter with different gods, rites and myths, can be strongly questioned, especially when the respect of the rules relies upon the fear derived from a divine investiture of the political elite (Autiero 2015, 161).

area local beliefs and multiple doctrines coexisted, but Buddhism, due to its major connection to trade, eventually became dominant in the centuries of major development of the so-called Silk Roads.

7. Conclusions

Data derived from the petroglyphs of the Upper Indus border region of Northern Pakistan show how significant this transit zone was for the initial phase of Buddhist transmission beyond the Indian Subcontinent. From a commercial point of view the strengths of this area were precious gems and metals, probably the real incentive to cross these difficult routes (Neelis 2011, 286).

   While Chinese accounts refer to actual Buddhist shrines in the area, archaeology so far does not corroborate this piece of information. Apparently socioeconomic conditions in the Upper Indus did not allow the establishment of Buddhist institutions before the royal patronage of the Palola Śāhi dynasty of Gilgit in the 7th and 8th century (Neelis 2011, 287). Buddhist petroglyphs and inscriptions nevertheless demonstrate that – using a different and glocal language – travelers, pilgrims, traders, and local patrons established new narratives and religious topologies in this arduous transit zone.

   The corpus of petroglyphs from the Upper Indus area provides several clues for further studies on pattern of cultural diffusion, on phenomena of transculturation in non-urban contexts, and on the role of transit zones in the transmission of major doctrines such as Buddhism. The development and success of universalistic religions as Buddhism in the context of ancient globalization shows the functioning of a network effect in religious transmission and its role in the diffusion of religious imagery and material culture. In particular the Upper Indus petroglyphs suggest that traders and pilgrims crossing the mountains carried with them not only portable objects and icons, but also actual models and 'cartoons' of Buddhist narratives and icons, opening up the path to the development of a Chinese Buddhist visual culture. The present study suggests that the circulation of portable objects functions as catalyst for change and innovation. On the crucial topic of the transmission of the anthropomorphic image of Buddha, rock art from Upper Indus shows that it was not a univocal phenomenon; indeed, the image of Buddha travelled from Greater Gandhāra to China and Central Asia also through not-

institutional contact transmission (meaning that was not a passage of information between monastic institutions); acts of devotion paid to petroglyphs along trade routes facilitated the image of the Buddha to travel outside of South Asia.

These clusters of images are Buddhist sacred places and constitute actual shrines even if not in architectural form; rock art was likely the focal point for devotion and worship, not accessory to other physical monuments. This is corroborated by several records of donations at major Buddhist sites, all in the form of rock art (*stūpa*, symbols or inscriptions). This phenomenon shows an adaptive strategy of Buddhist practice to the mountain environment. Adaptability is one of the keys to the success and diffusion of Buddhism.

Further research is needed to identify connections of Upper Indus rock art to neighbouring areas. This work would also help in tracing shifting routes and itineraries, especially following the establishment of the Śāhi dynasties in Northern Pakistan. This paper suggests a network approach to the study of this area, whose isolation was clearly only apparent.

The Buddhist petroglyphs of the Upper Indus-Karakorum range must be studied in a wider context. Further research on neighbouring areas may provide further data on the expansion of Buddhist visual culture. In particular the easternmost outreaches of these mountain routes in Western China, before entering the Tarim Basin, deserve attention.[16] This effort would be an important step in order to reconstruct the still missing links among the many routes of the ancient Silk Roads. In recent years a growing support for a network approach has made clear that we cannot understand ancient connectivities with a compartmentalised view. Very promising results are expected on the adaptability of Buddhist visuals and narratives to different context in this interconnected wide network.

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[16] Unfortunately recent research in Chinese Xinjinag might be hidden in publications in Chinese; inaccessibility of recent scientific literature to the international community because of the linguistic barrier is a great obstacle for research on this geographical area.

References

Series *Materialien zur Archäologie der Nordgebiete Pakistans* (MANP)
(Consulted online at https://digi.hadw-bw.de/view/manp)

Bemman, M and D. König, (1994) *Die Felsbildstation Oshibat, Mit Beiträgen von Gerard Fussman, Oskar von Hinüber un Nicholas Sims-Williams (Herausgegeben von H. Hauptmann), Band 1* (MANP 1). Mainz.

Fussmann, G. and D. König (1997) *Die Felsbildstation Shatial, Mit Beiträgen von Oskar von Hinüber, Thomas O. Höllmann, Karl Jettmar und Nicholas Sims-Williams (Herausgegeben von H. Hauptmann), Band 2* (MANP 2). Mainz.

Bandini-König, D. (1999) *Die Felsbildstation Hodar, Mit Beiträgen von Gerard Fussman, Harald Hauptmann, Oskar von Hinüber, Thomas O. Höllmann, Ruth Schmelzer und Hellmut Völk (Herausgegeben von H. Hauptmann), Band 3* (MANP 3). Mainz.

Bandini-König, D. and O. von Hinüber (2001) *Die Felsbildstationen Shing Nala und Gichi Nala, Mit Beiträgen von W. Bernhard Dickorè und Günther A. Wagner (Herausgegeben von H. Hauptmann), Band 4* (MANP 4). Mainz.

Bemman M. (2005) *Die Felsbildstation Dadam Das, Mit Beiträgen von Oskar von Hinüber und Jason Neelis, Bearbeitung der Inschriften durch Oskar von Hinüber, Jason Neelis und Nicholas Sims-Williams (Herausgegeben von H. Hauptmann), Band 5* (MANP 5). Mainz.

Bandini-König, D. (2003) *Die Felsbildstation Thalpan I: Kataloge Chilas-Brücke und Thalpan (Steine 1–30), Bearbeituing der Inschriften durch Gerard Fussman et al. (Herausgegeben von H. Hauptmann), Band 6* (MANP 6). Mainz.

Bandini-König, D. (2005) *Die Felsbildstation Thalpan II: Katalog Thalpan (Steine 31–195), Bearbeituing der Inschriften durch Oskar von Hinüber und Thomas O. Höllmann (Herausgegeben von H. Hauptmann), Band 7* (MANP 7). Mainz.

Bandini‑König, D. (2007) *Die Felsbildstation Thalpan III: Katalog Thalpan (Steine 196–450),Bearbeituing der Inschriften von Gérard Fussman, Oskar von Hinüber, Nicholas Sims-Williams (Herausgegeben von H. Hauptmann), Band 8* (MANP 8). Mainz.

Bandini‑König, D. (2009) *Die Felsbildstation Thalpan IV: Katalog Thalpan (Steine 451–811), Bearbeituing der Inschriften durch Philip T. Denwood et al. (Herausgegeben von H. Hauptmann),Band 9* (MANP 9). Mainz.

Bandini‑König, D. (2011) *Die Felsbildstation Thalpan V: Kataloge Ziyarat, Thakot, Khomar Das,Gichoi Das, Dardarbati Das, Bearbeituing der Inschriften von Gérard Fussman, Oskar von Hinüber, Nicholas Sims-Williams (Herausgegeben von H. Hauptmann), Band 10* (MANP 10). Mainz.

Bandini‑König, D. (2013) *Die Felsbildstation Thalpan VI: Kataloge Ba Das, Ba Das Ost, Gali,Gukona, Mostar Nala, Ke Ges, Ame Ges und Drang Da, Bearbeituing der Inschriften durch Gérard Fussman, Oskar von Hinüber und Nicholas Sims-Williams (Herausgegeben von H. Hauptmann),Band 11* (MANP 11). Mainz.

Series *Antiquities of Northern Pakistan: Reports and Studies* **(ANP)**

Jettmar, K., in collaboration with D. König and V. Thewalt (eds.) (1989) *Antiquities of Northern Pakistan: Reports and Studies - Rock inscriptions in the Indus Valley.* Volume 1, [pt. 1.] Text. [pt. 2.] Plates (ANP 1). Mainz.

Jettmar, K., in collaboration with D. König and M. Bemmann (eds.) (1993) *Antiquities of Northern Pakistan: Reports and Studies.* Volume 2 (ANP 2). Mainz.

Fussman, G. and K. Jettmar, in collaboration with D. König (eds.) (1994) *Antiquities of Northern Pakistan: Reports and Studies.* Volume 3 (ANP 3). Mainz.

von Hinüber, O. (2005) *Antiquities of Northern Pakistan. Reports and Studies / Die Palola Sahis: Ihre Steininschriften, Inschriften auf Bronzen,*

Handschriftenkolophone und Schutzzauber. Materialien zur Geschichte von Gilgit und Chilas. Volume 5 (ANP 5). Mainz.

Bibliographical References

Autiero, S. (2015) Terracotta Figurines from Egypt as Agents of Cultural Globalization. In *Current Research in Egyptology 2014 – Ancient Egypt in a Global World* (eds. M. Pinarello, J. Yoo, J. Lundock and C. Walsh). London, pp. 90-99.

Autiero, S. (2016) Multidisciplinarity and Indian Ocean History: a New Methodological Approach. In *Interdisciplinarity in World History: Continuity and Change* (eds. A.I. Abushouk and M. Zweiri). Cambridge, pp. 150-163.

Autiero, S. (2017) Bes figurines from Roman Egypt as agents of transculturation in the Indian Ocean. *Thiasos - Journal of archaeology and ancient architecture*, vol. 6: 79-89.

Autiero, S. (2019) Iconography as Agent of Cultural Globalization – Bronze figurines from South Arabia. In *Stories of Globalization: The Red Sea and the Persian Gulf from Late Prehistory to Early Modernity. Selected Papers of Red Sea Project VII* (eds. A. Manzo, C. Zazzaro and D.J. De Falco). Leiden, pp. 408-42.

Behrendt, K. (2007) *The art of Gandhara in the metropolitan museum of art*. New York.

Bell, A. (2000) *Didactic narration: Jataka iconography in Dunhuang with a catalogue of jataka representations in China*. Münster in Westfalen.

Bennmann, M., and D. König (1994) *Die Felsbildstation Oshibat, mit Beiträgen von Gerard Fussman,Oskar von Hinüber und Nicolas Sims-Williams (Herausgegeben von H. Hauptmann), Band 1*. Mainz.

Bruneau, L. (2007) L'architecture bouddhique dans la vallée du Haut Indus (Pakistan): un essai de typologie des représentations rupestres de stūupa. *Arts Asiatiques,* 62, 63–75.

Carter, M. (1993) Petroglyphs at Chilas II: Evidence for a pre-iconic phase of Buddhist art in Gandhara. *South Asian Archaeology, 1991,* 349–366.

Cribb, J. (1984) The Sino-Kharosthi Coins of Khotan: Their Attribution and Relevance to Kushan Chronology: PART 1. *The Numismatic Chronicle (1966-)*, 144, 128-152.

Cribb, J. (1985) The Sino-Kharosthi Coins of Khotan: Their Attribution and Relevance to Kushan Chronology: PART 2. *The Numismatic Chronicle (1966-)*, 145, 136-149.

Dani, A. H. (1983) *Chilas, the city of Nanga Parvat (Dyamar)*. Islamabad.

Eakin, E. (2003) Connect, They Say, Only Connect. In *New York Times*, 25 January 2003.

Faccenna, D. (1980/1981) *Butkara I (Swat, Pakistan) 1956–1962* (IsMEO reports and Memoirs iii 1-5.2). Rome.

Filigenzi, A. (2006) From Saidu Sharif to Miran. In *Indologicca Taurinensia*, Vol. XXXII, 67-89.

Foltz, R.C. (1999) *Religions of the Silk Road. Overland Trade and Cultural Exchange from Antiquity to the Fifteenth Century*. New York.

Fussman, G. (1989) Les inscriptions Kharosṭḥī de la plaine de Chilas. In *Antiquities of Northern Pakistan: reports and studies, vol. 1* (ed. K. Jettmar). Mainz, pp. 1-40.

Fussman, G. (1993) Chilas, Hatun et les bronzes Bouddhiques du Cachemire. In *Antiquities of Northern Pakistan, Reports and Studies, vol. 2* (ed. K. Jettmar). Mainz, pp. 1–60.

Fussman, G. (1994) Une peinture sur pierre: Le triptyque au stūpa de Shatial. In *Antiquities of Northern Pakistan*, *Reports and Studies, vol. 3* (ed. G. Fussman and K. Jettmar). Mainz, pp. 1–55.

Fussman, G. and D. Bandini-König (1997) *Die Felsbildstation Shatial, mit Beiträgen von Oskar von Hinüber, Thomas O. Höllmann, Karl Jettmar*

und Nicolas Sims-Williams (Herausgegeben von H. Hauptmann), Band 2. Mainz: MANP.

Fussman, G., and Jettmar, K. (1994) *Antiquities of Northern Pakistan, reports and studies 3*. Mainz.

Ghulam, M. (1905) *Festivals and Folklore of Gilgit. Memoirs of the Asiatic Society of Bengal*, Vol. 1, Nr. 7. Calcutta [reprint: 1980. *Festivals and Folklore of Gilgit. Islamabad: National Institute of Folk Heritage*].

Hauptmann, H. (2008) Rock art in the upper Indus region. In *Gandhāra, the Buddhist heritage of Pakistan: Legends, monasteries, and paradise* (ed. C. Luczanits) Mainz, pp. 352–357.

Hauptmann, H. (2009) *Felsbilder und Ischriften am Karakorum Highway*. Heidelberg.

Höllmann, T.O. (1993) Chinesische Felsinschriften aus dem Hunza und industal. In *Antiquities of Northern Pakistan*, vol. 2 (eds. Karl Jettmar). Mainz: 61–76.

Jettmar, K. (1989) *Antiquities of Northern Pakistan, reports and studies 1*. Mainz.

Jettmar, K. (1993) *Antiquities of Northern Pakistan, Reports and Studies 2*. Mainz.

Jettmar, K. and V. Thewalt (1987) *Between Gandhāra and the Silk Roads. Rock-Carvings along the Karakorum Highway. Discoveries by German-Pakistani Expeditions 1979-1983*. Mainz.

Kulke, H. and D. Rothermund (2004) *A History of India*. New York.

Kurita, I. (1988) *Gandāra bijutsu = Gandhāran art* (Ancient Buddhist art series). Tōkyō.

Kuwayama, S. (1987) Literary Evidence for Dating the Colossi in Bāmiyān. In *Orientalia Iosephi Tucci memoriae dicata*, vol. 2. Serie Orientale Roma 56 (eds. G. Gnoli and L. Lanciotti). Rome, pp. 703–727.

Lewer J.J. and H. Van den Berg (2007) Religion and international trade: does the sharing of a religious culture facilitate the formation of trade networks? In *The American Journal of Economics and Sociology*. Volume 66, Issue 4: 765–794.

Maillard, M. and R. Jera-Bezard (1994) Les stupas de Kuberavahana à Chilas et Thalpan. In *Antiquities of Northern Pakistan, reports and studies, vol. 3* (eds. G. Fussman and K. Jettmar). Mainz, pp. 173–200.

Matsumura, J. (2012) A Unique Vyāghrī-jātaka from Gandhara: The *Foushuo pusa toushen (yi) ehu qita yinyuan jing* - 佛説菩薩投身(飴)餓虎起塔因縁經. *Journal of the International College for Postgraduate Buddhist Studies*, Vol. XVI: 49-68.

Neelis, J. (2011) *Early Buddhist transmission and trade networks: Mobility and exchange within and beyond the northwestern borderlands of South Asia (Dynamics in the history of religion)*. Leiden.

Neelis, J. (2014) Localizing the Buddha's presence at wayside shrines in Northern Pakistan. In *Religions and trade: Religious formation, transformation and cross-cultural exchange between east and west*)eds. P. Wick and V. Rabens). Leiden, pp. 45–64.

Neelis, J. (2017) Endangered Signposts: Upper Indus Petroglyphs and Inscriptions in Northern Pakistan. *TASAA Review, The Journal of the Asian Art Society of Australia*, Vol. 26 No 3: 12-13.

Rhie, M.M. (1999) *Early Buddhist Art of China and Central Asia*. 2 vols. Handbook of Oriental studies, Section 4, China, 12. Leiden - Boston.

Rogers Kolachi Khan and Associates (2012) *The Chilas Cultural Landscape Project: An Introductory Manual on Cultural Landscapes*. World Monument Fund.

Santoro, A. (2003) Gandhāra and Kizil: the Buddha's Life in the Stairs Cave. In *Rivista degli Studi Orientali*, Vol. 77, Fasc. 1/4: 115-133.

Tansen, S. (2006) The Travel Records of Chinese Pilgrims Faxian, Xuanzang, and Yijing – Sources for Cross-Cultural Encounters between

Ancient China and Ancient India. In *Education About Asia*, Volume 11, Number 3: 24-33.

Tansen, S. (2015) Chinese Sources on South Asia. In *Beyond National Frames: India, South Asia and th World* (ed. R. Mukherjee). Delhi, pp. 52-73.

Grotto Art of China. The Kizil Grottoes (克孜尔石窟/ *Kezi'er shi ku*) (1983-1985), 3 vols., Tokyo.

Thewalt, V. (1983) Jataka-Darstellungen bei Chilas und Shatial am Indus. In *Ethnologie und Geschichte - Festschrift für Karl Jettmar* (ed. P. Snoy), http://www.thewalt.de/reprints/jatakas/jataka.htm (rep. 1997).

Thewalt, V. (2008) *Stūpas und verwandte Bauwerke in Felsbildern der Stationen Chilās I, Chilās II und Oshibat am Indus (Nordpakistan)*. Heidelberg.

Van Aerde, M.E.J.J. (2019) Routes Beyond Gandhara: Buddhist Rock Carvings in the Context od the Early Silk Roads. In *Socio-Environmental Dynamics along the Historical Silk Road* (eds. L.E.Yang, H.-R. Bork, X. Fang and S. Mischke). New York, pp. 455-80.

Van Aerde M.E.J.J. van, A.D.L. Mohns and A.G. Khan (2020) Buddha on the Rocks, Gandharan Connections through the Karakorum Mountains. In *The Global Connections of Gandharan Art, Proceedings of the Third International Workshop of the Gandhara Connections Project, University of Oxford, 18th-19th March 2019* (eds. W. Rienjang and P. Stewart). Oxford, pp. 105-134.

Von Hinüber, O. (1989) Brahmi inscriptions on the history and culture of the Upper Indus Valley. In *Antiquities of Northern Pakistan, Reports and Studies, vol. 1* (ed. K. Jettmar). Mainz, pp. 41–72.

Von Hinüber, O. (1989) Buddhistische Inschriften aus dem Tal des Oberen Indus. In *Antiquities of Northern Pakistan, Reports and Studies, vol. 1* (ed. K. Jettmar). Mainz, pp. 73–106.

Von Hinüber, O. (2004) *Die Palola Ṣāhis: Ihre Steinenschriften, Inschriften auf Bronzen, Handschriftenkolophone und Schutzzauber: materialen zur Geschichte von Gilgit und Chilas*. Antiquities of Northern Pakistan 5. Mainz.

Yaldiz, M. (1987) *Archäologie und Kunstgeschichte Chinesisch-Zentralasiens (Xinjiang)*. Handbuch der Orientalistik. 7. Leiden.