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THE BUDDHIST SITE OF TOKAR-DARA I (SWÂT, PAKISTAN).

BUILDING TECHNIQUES IN THE ANCIENT GANDHÂRA

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ABSTRACT

In recent years the international community has begun to focus on the dangerous state of conservation of Buddhist heritage in the Swât Valley (Pakistan). Not only are these religious complexes abandoned and decaying, they are also subject to attacks and destruction. However, local populations and the international community both appear disinterested in this issue. The scope of this research is to contribute to the archaeological history of Swât and the architecture of Gandhâra. The study, involving a survey and photographic campaign, focused on the Tokar-Dara I site in the Swat Valley. It enabled the author to not only identify the different building phases, but also to get a better understanding of the masonry, construction techniques, architectural and typological features of the buildings. The latter includes a main stûpa, a vihara, a monastery, an assembly hall, a badly damaged aqueduct and cistern. The architectural remains spread 228 metres to the north and south, and 206 metres to the east and west. The stûpa, with a hemispherical dome and upper and lower drums resting on a square podium, was once surrounded by votive stupas completely destroyed by unauthorized diggers. The rectangular monastery has two entrances: one to the north leading to the main stûpa, and one to the south leading to the assembly hall. Square-shaped domed cells surround the free side of the cloister. The high walls of a hall used as an assembly room by the Buddhist community are located near the corner of the monastery court. To the east, the remains of a vihara are surrounded by walls on three sides. The relic shrine resting on a square plinth with base moulding is accessed by a flight of steps.

Keywords: History of Architecture; Architectural heritage, Historic constructions; Restoration and Conservation; Safeguard and Valorization.

INTRODUCTION

In recent years the international scientific community has begun to focus on the dangerous state of conservation of the Tokar-Dara I complex and other Buddhist sites in the Swât Valley (Pakistan). The scope of this research, part of a collaboration project between Sapienza University of Rome and the Italian Institute for Africa and the Orient (ISAO), is to provide further, albeit partial data regarding the architecture and religious buildings in Gandhâra in the Swât Valley. The study was prompted by the fact that local and international communities appear disinterested and unappreciative of these abandoned and decaying areas. Instead, said communities should work jointly on common objectives and encourage legislative initiatives such as safeguard policies, enhancement and management processes, and total protection of the cultural heritage and 'value' of the sites.

Their current state of decay and isolation is due to wars and religious abuse prompting radical Islamic movements to concentrate on artistic heritage, not only by desecrating
and destroying any tangible object not referable to their own culture, but also by setting up terrorist training camps or carrying out military drills in these areas (fig. 1). Although these sites are now abandoned, in the past generations of Italian scholars, archaeologists and architects have explored and restored some of the most important religious settlements in the Swat Valley. This work lasted for many years from the 1950s to 2007 when political events forced the Italian Institute for Africa and the Orient to abandon its offices in Saidu Sharif.

The neglected and abandoned archaeological site of Tokar-Dara I, part of the Mission's study and enhancement programme, had so far never been included in any research, survey, safeguard and protection project. The buildings in the complex are now in ruins and require conservation and maintenance interventions so that this priceless heritage can be handed down to future generations [1].

In this complex scenario, rife with social, political and cultural conflicts of interest, we were able to perform – albeit with great difficulty – an initial exploratory study including a photographic campaign and metric survey.

THE SWAT VALLEY. KNOWLEDGE GENERATES UNDERSTANDING

Over the centuries, several civilisations and cultures – Indian, Iranian, Hellenistic – have lived in the Swat region, formerly known as Uddiyana. Ever since the third century B.C., the entire region was under the influence of Buddhism, a doctrine supported and therefore disseminated by several rulers: the monk king Ashoka (304 B.C. - 232 B.C.) who helped spread Buddhism in the valley, and the Kushan king, Kanishka (128 - 151 A.D.). Evidence of this has been found in numerous sculptural, architectural and pictorial objects still in situ, fragments documenting the extensive assortment of references, influences and styles in this area. The artistry is an eclectic mix of interrelated styles which scholars believe were produced between the first century B.C. and the sixth century A.D., a period marked by the dissemination of Buddhism in these regions thanks to trade routes, for example the Silk Route.

Reports and tales by travellers, merchants and religious provide interesting data; these wayfarers include the Chinese monks Faxian (337? A.D. - 422 A.D.), who wrote about the religious fervour in these areas, and Hsian Tsang (Xuanzang) (600? A.D. - 664 A.D.) who documented the presence of numerous albeit abandoned monasteries [2]. The decline of the monasteries began in the first half of the third century A.D. when political and religious control by the Buddhist Kushans was threatened by invasions first by the Hephthalites (530 A.D.), the so-called “White Huns” of Central Asia, and then by the Sassanids from Persia. The area entered a long period of decline which ended in the eleventh century when the Muslims conquered the area and founded the great Ghaznavid empire, paving the way for Islam to take root in the region.

THE TOKAR-DARA I COMPLEX

The Swat region spreads across a valley at the foot of the mountains between the Hindu Kush and the Karakorum. The archaeological area of Tokar-Dara I is located south of the Swat River near the towns of Saidu Sharif and Mingora, approximately five kilometres from the city of Barikot, formerly Bazna, conquered by Alexander the Great (fig. 2). The earliest reports about the region were written in the nineteenth century when several explorers began to be interested in ancient artefacts in the Swat region. Sir Aurel Stein (Budapest 1862 - Kabul, 1943), an archaeologist and geographer, visited Pakistan and
the Swat Valley between 1898 and 1928, emphasising its state of neglect and desolation: "Much regrettable damage and loss have been caused ... in tribal territory and elsewhere along the Peshawar border, by "irresponsible" digging for remains of that Hellenistic sculptural art which once adorned all Buddhist sanctuaries of this region. How destructive such digging usually was and how often much of the spoil, when sold to amateur collectors, was ultimately scattered or destroyed, is a story too sad" [3].

Then came the studies by Evert Barger and Philip Wright in 1938 [4] and, in the nineties, the Gandhara Archaeological Project carried out by the Federal Department, the University of Peshawar and the Italian Archaeological Mission. Together they drafted an emergency plan for these uncontrolled areas left at the mercy of man's neglect and abandonment.

Although in ruins, the complex (first and third-fourth century A.D.) still has some of the architectural structures of Gandhara: a main burial "mound" (stupa), a relic shrine/vihara, a large monastery with an assembly hall and an aqueduct/cistern system (fig. 3). In the Tokar-Dara 2 site there are smaller dwellings situated in isolated, mono and multi-cellular shelters in the nearby mountains.

According to several scholars, the fact these monasteries are located quite far away from rather isolated urban centres would seem to suggest they were founded much later, around the first century A.D., when Buddhism was at its peak in this area. At this point the monks probably no longer depended on aid from the faithful but were economically self-sufficient and able to build permanent buildings with lodgings, storerooms, kitchens, and refectories to accommodate large religious communities. In fact, permanent residential structures are not always present in the more ancient sacred areas. Furthermore, the monasteries are less organised logistically and do not have multiple supply systems.

This study, launched in 2006-2007, was the first campaign to survey the Tokar-Dara 1 complex as the primary step in a knowledge gathering process; in fact, no basic plan of the complex existed up to this point (fig. 4). The direct data acquisition survey provided information regarding materials, techniques and design choices implemented by its ancient builders. The Tokar-Dara 1 complex extends for an area of approximately 230 metres, from north to south, and roughly 100 metres from east to west along the north-south axis. The main, 18 metres high stupa has an almost square layout positioned on a massive masonry base. The podium on which it rests (20 x 22 metres) is solid except for a small domed room near the entrance steps; this room held the relics of Buddha. In the centre of the façade, facing the route leading to the site, the remains of a flight of steps lead up to the top of the base where, in the corners, it is possible to see the marks left by the four bases, for free-standing columns.

Several different hypotheses have been elaborated regarding the presence of these elements: Kurt A. Behrendt places them in the so-called "post-Asokan" period, between the second and mid-fifth century A.D. [5]. Instead Domenico Nacciciana identifies an earlier date, in other words the "Saka-Panhian" period between the first century B.C. and the first century A.D., when the stupas has "quadrangular plans, walls showing pilaster decoration and in some cases flights of steps or railing or columns on the four corners of the first storey" [6].

A first drum, roughly 2 metres high, rises above this terrace; it has a diameter of almost 16 metres, i.e., 50 feet in the Gandhara measuring system (Gf) [7]. Then come two cylindrical objects, each two metres high, recessed roughly by 1.20 m. At the top there is a big solid dome (anda) with a 10.67 m diameter. The stūpa has a moulded base, in
other words 'silhouettes' of an architectural order made of thin, more or less protruding stone slabs (fig. 4).

The masonry was covered in plaster or stucco, in fact there are still visible traces in situ; it is therefore likely that the entire stone structure was covered in bas-reliefs illustrating events in the life of Buddha: from his birth to the revolution, from his first sermon to his death. Even the dome-shaped structure was probably embellished with decorative motifs of lotus petals and geometric ornamentation. At the top there was a sort of square loggia with a balustrade (hrmākā) and a column (yasti), the so-called "cosmic pillar" leading to the uneven series of interconnected stone discs (chattrāvalī), the vertical element tasked with boosting visibility and marking the presence of the sacred relics inside. In actual fact, this type of burial mound, with a square base and circular element at the top, is a 'revolutionary' system in primitive Buddhist architecture [8]. In fact, the ritual of the stupa as "pradaksina or circumambulation", linked to the ancient cosmic axis concept, was in contradiction with the circular celebration always held in the stūpa which, since time immemorial, was a socellium with a roundish plan in order to facilitate the sacred liturgy which took place using an annular pathway.

According to several scholars this kind of burial may be linked to Roman tombs characterised by two very different architectural elements: a square podium topped by a perfectly round drum. For example: the Tomb of Cecilia Metella (30 - 20 B.C.), the Mausoleums in Pozzuoli in the S. Vito district (first century A.D.) and Marano (the so-called "il Ciautro", second century A.D.) or the funerary monument in Nola (first century A.D.). In fact, although contact with Rome was mitigated by other cultures, it often influenced the artistic and architectural production in these areas which were also extensively influenced by Hellenistic tradition.

In places on the stūpa left uncovered by the stone slabs it is possible to see the masonry core, a conglomerate laid in regular almost horizontal layers with large roughly-hewn stone ashlars, mixed with river pebbles easily found in the nearby waterways, and slabs of schist. All these elements are held together by a white earth mortar, rich in kaolin and mixed with vegetal fragments. The outer envelope has a masonry 'facing' covered with rather regular, squarish, smooth ashlar blocks separated by small layers of schist and one or two alternate rows of small slabs of the same maccrion (semi-ashlar masonry), thin, easily manufactured layers laid without mortar or with thin layers of earthy mortar (fig. 5).

The monastery in front of the stūpa has cells and collective spaces arranged around a large, squarish courtyard where the monk performed their activities. The building has several very interesting architectural and construction features: a double access system – one towards the stream, another communicating with the socellium – and 'false vaults' made of stone ashlars covering the ceiling of the cells. It is a sangharama (sangharīma), in other words a permanent coenobitic building. In fact, in the early days of Buddhism the monks were essentially 'itinerant'; they slept in temporary shelters, i.e., grottoes or huts in the mountains [9]. Only later, between the second and third century A.D., did they begin to build permanent religious centres with buildings financed by contributions from benefactors such as kings, merchants and pilgrims.

The stone ceilings rest on large, triangular, corner stone slabs (to all intents and purposes protruding shelves); the slabs supported stone conicis roughly 0.45 m high, and a dome (1.80 m) made of inward-protruding stone fragments laid one on top of the another. The overall height of the rooms, from the current ground level, is approximately 4.50 metres. The walls were built rather carefully, especially the right
angles between the walls and the openings such as doors and windows where bigger and
more regular superimposed slabs alternated as headers and stretchers.
Instead the remaining part of the monastery is less elegant and uniform than the stupa;
large, rough, undressed stones, so-called "rubble masonry", was used for the walls.
The walls near the south-west corner of the monastery are part of a room reserved for
assemblies by the Buddhist community. Imposing walls (some of which rise to a height
of 6 metres above ground level) still remain on three sides of the rectangular hall
measuring approximately 16 x 15 metres (fig. 6).
The highest part of the complex is closed on three sides by a boundary around the upper
sacred sector; the internal elevation has five pilaster strips resting on moulded bases
reinforced at the corners using the same architectural system, but this time arranged in
an L-shape. The tiny pointed arch niches in the corners probably contained lamps,
images or small altars. Another building stands inside the walls: a relic shrine/vihara
used to host or display relics and generally present in sites with quadrangular
monasteries. The base is almost square (13.30 x 13.73 m), has a high podium, and a few
traces of an upper drum; the remains of a flight of steps leading to the square base are
visible along the north-south axis (fig. 7).
The sacred construction may have been reserved just as a place to display the relics
placed directly on the high base, rather than as a place in which to hold the traditional
ceremony. It stands in its own courtyard surrounded by an outer wall creating an
independent sacred space connected only to the monastic housing system through an
entrance along the north-south axis [10].
The fairly regular masonry of the relic shrine is covered by long, elongated, square
stone ashlars quite close to each other and duly staggered.
In fact, only a few thin slabs of schist are inserted between each stone element, unlike
the other constructions in the archaeological area where these fragments are used to fill
the big vertical and horizontal gaps between the stone masses.
Despite the fact that all the constructions in the site are built in a similar manner, the
survey identified substantial differences between the various wall types, especially as
regards the construction of the elements of the two outer walls. This testifies to the long
period of time during which the architectural elements were erected, i.e., from the
first/second century to the fifth/sixth century A.D.
CONCLUSION
The site in question displays an enchanting merger between nature and architecture,
where the few ruins which have withstood the test of time still create a link with the
landscape; they are the remains of a heritage which must not only be acknowledged but
also enhanced. The undisputed historical 'value' of this area, and the site itself, deserve
greater attention by the international scientific community whose task it is to draft
protection and enhancement plans capable of stimulating the involvement of local
populations and craftsmen. These territories are ravaged by traumatic events, attacks,
wars and religious conflicts; this complex situation forces communities to live in
devastated scenarios where control over architectural heritage is not always their
primary concern while trying to get back on their feet. Therefore it is important to sensitise and involve local authorities in trying to encourage 'active protection' and participation even when the cultural and political premises are in contrast with their own history. In short, our objective is the implementation of international cooperation project to enhance the architectural heritage of Gandhāra as part of what is undoubtedly a multifaceted and complex cultural scenario. This cooperation has a common goal: the protection and safeguarding of these historical remains as part of our world heritage.

REFERENCES


Fig. 1 - The Buddha of Johunabad (1st Century A.D.), North West Frontier Province, Pakistan. The sculpture before and after the vandalism by Islamic militants (The Telegraph, 13.09.2007).
Fig. 2 - The Swat region (www.longwarpjournal.org; www.mudahguesthouse.com.jpg).

Fig. 3 - The Tokar-Dara 1 complex. From left to right: stupa, monastery and upper sacred area.

Fig. 4 - Planimetry of Tokar-Dara 1 (survey of the author).
Fig. 4 - The main stūpa and the monastery (photos of the author).

Fig. 5 - Masonry of the stūpa (photos of the author).

Fig. 6 - Assembly hall of the Buddhist community (photos of the author).

Fig. 7 - The relic shrine/vihara in the upper sacred area (photos of the author).