

Newsletter di Archeologia

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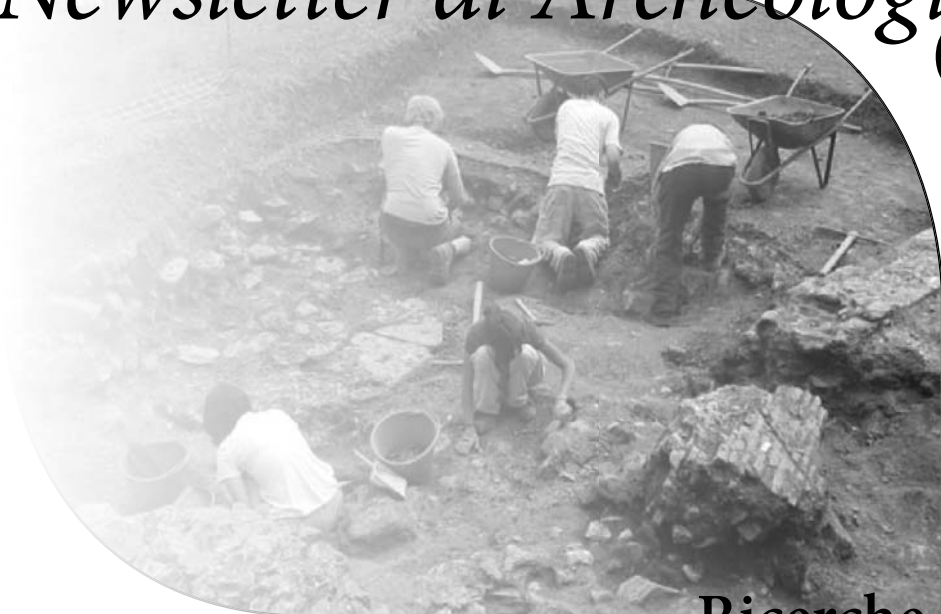
Ricerche e studi

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BUDDHIST SETTLEMENTS AND PROTO-HISTORIC GRAVEYARDS: NEW CHRONOMETRIC AND ARCHAEOLOGICAL DATA FROM SAIDU SHARIF I (SWAT, PAKISTAN)

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with a contribution by *Filippo Terrasi, Fabio Marzaioli, Isabella Passariello and Manuela Capano*¹

Abstract

The article re-examines an interesting case study of the physical and chronological relationship between a pre-Buddhist graveyard and a Buddhist sacred area (Saidu Sharif I, Swat, Pakistan) in the light of new archaeological investigations and radiometric analyses. The specific case is also reappraised against the broader background of Swat cultural history and, in particular, the paradigms of social and economic changes introduced by Buddhism.

Keywords: Swat; Uḍḍiyāna; pre-Buddhist necropolises; Gandharan grave culture; Buddhist settlements.

*The graveyard*²

In the 1980s, during the final stage of the excavation of the Buddhist Saidu Sharif I, several graves were found with an E-W alignment. They were documented either during the excavation of the foundation levels of the Monastery walls or by means of specific sondages carried out below the monastery courtyard level (Noci, Macchiarelli and Faccenna 1997). A total of 18 burials were documented, 17 graves and a secondary inhumation in the foundation pit of one of the Monastery walls (G5) (see below). The tombs consist of simple rectangular graves ranging in size from 1.60 and 2.10 m (long), 0.35 and 0.90 (wide), 0.20 and 0.50 (deep; with a maximum of 0.90 in G4). Male bodies were found lying supine with arms extended along the body, the head facing W (uphill), the face turned towards the N (to the left). The female bodies (with one exception, G9) lay on their right side. The graves were filled with soil; in two cases (G12 and G13, both female tombs) large flat stones were found inside the grave, which had fallen in the vicinity of the corpse’s plexus. They were interpreted as external *sēmata* that had collapsed into the grave. Two smaller flat stones were found also inside G1 (male grave) but near the legs.

A case of superposition was found in graves G11 and G12: grave G11 partially cuts into grave G12, which must not have been visible at the time the former was excavated.

No mound was found over the graves or any floor level corresponding to them.

The interest of this graveyard is also represented by the fact that its characteristics are completely different from all the other graveyards in pre-Buddhist Swat:

1. the graves are simple pits and have no stone or pressed mud walls, no flat level, no stone covering, no antechamber (Silvi Antonini and Stacul 1972; Vidale *et alii* 2015);
2. the male corpses were laid supine while the female bodies were laid on their right flank. In any case the bodies are not placed in a semi-foetal position (generally on the right side) as in the earlier graveyards (*ibidem*);
3. there are no grave goods whereas the earlier graveyards always had rich pottery grave goods and the corpses were buried with ornaments;
4. the anthropological and physical characteristics of the deceased differ from those of the corpses buried in the earlier graveyards studied (according to Macchiarelli) (Noci, Macchiarelli and Faccenna 1997);
5. the graves have been dated to a period that is much later than the other graveyard (c. 1st BCE/1st CE *contra* c. 11th-7th BCE) (Vidale 2016).

Faccenna’s final contribution (Noci, Macchiarelli and Faccenna 1997, 105-111) makes the following points:

¹ CIRCE, Università di Napoli 2 (Italy).

² The first three paragraphs of this paper are a shortened and abridged version of part of an article by L.M. Olivieri et alii currently in press with *Vestnik drevney istorii* 76/3, 2016, *The graveyard and the Buddhist shrine at Saidu Sharif I (Swat, Pakistan). Fresh chronological and stratigraphical evidence*.

1. the graveyard covered only a small area and was used by a small community;
2. the graveyard continued to be used until the time of the Monastery's construction;
3. considerable free space remained between one grave and another;
4. the graveyard was partially cut by the terracing work and remained exposed;
5. traces of bones were found in the foundation pits indicating the fact that they were filled with soil taken from the partial cutting of the graves;
6. there was a direct physical overlap between the graveyard and the Monastery;
7. there is deemed to be no chronological interruption between the two phenomena.

However, as the only evidence offered by ^{14}C analysis performed on a bone fragment from grave G11 (1st-11th century CE) (*ibidem*, 109) could not be used, Faccenna called for new tests to be carried out above all on the remains of the physically latest two graves (G11 and G12), and grave G5. In the case of the latter, it should be noted that its characteristics are not clearly defined: an intentional burial (as proposed by Faccenna, *ibidem*, 108), or a secondary inhumation (according to Noci, *ibidem*, 27; Macchiarelli, *ibidem*, § 2.4). In the latter case it was likely a reburial carried out by the Monastery builders, as an act of *pietas* (*ibidem*).

L.M.O.

New ^{14}C data

After work carried out as part of the ACT Project (see above) involving not only conservation and restoration but also the excavation of several sanctuary sectors left unexcavated by Faccenna, it was decided to fill the gap in the graveyard's dating. Following Faccenna's indication it was decided to analyse the samples of human remains taken from graves G11, G12 and G5. The material comes from the Mission's anthropological collection conserved in the Saidu Sharif storehouse. Exportation of the samples was granted by the Department of Archaeology and Museums, Government of Pakistan, with the approval of the Directorate of Archaeology and Museums of Khyber-Pakhtunkhwa Province. Sample analysis was performed at the CIRCE (Center for Isotopic Research on the Cultural and Environmental heritage) facility (Terrasi *et alii* 2007)³.

The three bone samples were chemically treated in order to extract the collagen fraction, using a specific protocol, known as gelatinization (Longin 1971; Brown *et alii* 1988), which is effective in removing contaminants on samples younger than 20,000 years. Initially the sample was crushed and pulverized and then treated with acid and basic attacks. The aim was to remove carbonates and contaminants as humic acids. The obtained collagen was transformed in gel fraction by heating to 70°C in a pH 3 solution for 20 hrs (Passariello *et alii* 2012). Finally the gel was freeze-dried and underwent combustion and graphitization processes (Passariello *et alii* 2007; Marzaioli *et alii* 2008). The ultrasensitive measurement of the $^{14}\text{C}/^{12}\text{C}$ isotopic ratio was performed by Accelerator Mass Spectrometry, using a 3MV tandem accelerator (Terrasi *et alii* 2008). Conventional radiocarbon ages were then extracted and the calibrated ages were obtained by the Oxcal v4.2.4 program (Bronk Ramsey 2013) and INTCAL13 (Reimer *et alii* 2013) calibration curve.

Circe code	Sample name	RCage $\pm 1\sigma$ (BP)	Calibrated age (1 σ , BC)	Calibrated age (2 σ , BC)
DSH6524	SSI_G5_4	2296 \pm 19	398-378	403-360 (94%) 269-264 (1,4%)
DSH6525	SSI_G12_12	2292 \pm 31	401-360 (65,8%) 268-265 (2,4%)	406-353 (71,3%) 292-231 (24,1%)
DSH6526	SSI_G11_8	2346 \pm 21	407-395	474-443 (3,7%) 431-381 (91,7%)

Table 1 - Results obtained in this work shown with their laboratory code, the archaeological name, the ^{14}C age with 1 standard deviation and the calibrated ages for 1 σ and 2 σ ranges.

³ The laboratory analyses were funded by a grant from CISA Center (Centro Interdipartimentale di Servizi per l'Archeologia, Università degli Studi di Napoli "L'Orientale") and additional financial support by CIRCE Center.

Radiocarbon and calibrated ages are reported in Table 1 and displayed in Fig. 2 as individual calibrated dates. The three plots show a large superposition of the probability intervals for the three dates, indicating that, within the experimental uncertainty, the three bones can be considered contemporary. However, as there are archaeological indications that grave 11 can be slightly more recent than grave 12, we used the calibrated dates of the G11 and G12 graves to create a Bayesian model which uses archaeological information such as phasing and stratigraphy, and accounts for statistical scatter in the ^{14}C analyses and calibration methods (Bayliss 2009). The result of this analysis, as it can be seen in Fig. 3, is that with a large confidence level the experimental data are compatible with the hypothesis that grave 11 is later than grave 12 by several years, taking also into account the variability of the apparent age at burial due to collagen turnover time.

F.T., F.M., I.P., M.C.

New stratigraphic evidence

The results of the analyses are particularly interesting and led to further field evidence being sought. A documentation campaign was thus implemented during the month of April with an extension of several days in late May 2015.

This work took place on a part of the outer slope where a mechanically excavated section had revealed the existence of several graves below the level marked by the Buddhist sanctuary. The exposed cut revealed several graves having the same characteristics as those discovered underneath the Monastery. On the strength of the results of the ^{14}C tests on the bone samples from graves G11, G12 and G5, it was decided to clean up and study the exposed section in order to determine the stratigraphic situation in an area outside the complex and not affected by the work involved in its construction.

A preliminary analysis of the data emerging from a study of the section and their comparison with the stratigraphic evidence of the excavations lead to the following conclusions:

1. the graveyard was average in size (comparable to the earliest graveyards of Katelai and Loebanr) (Silvi Antonini and Stacul 1972) and served a medium-small size community although for not more than two generations;
2. graves consisted of simple pits covered by a mound of rubble and in some cases marked by a stone *sēma* in the centre;
3. during the phase of abandonment erosion exposed and carried downhill occasional scattered bone material from the graves further uphill;
4. the graveyard had been abandoned for at least three centuries at the time the sanctuary was constructed and would probably not have been visible at the time of the Monastery's construction. There is a gap in the chronological continuity between the two phenomena; their physical superimposition is indirect;
5. the graveyard was partially cut by terracing work and exposed during the preliminary work carried out for the building of the Buddhist complex. The layers sealing the upper surface of the graveyard, and a slice of the alluvial layer where the graves were dug, well documented in the Section, were removed artificially during the leveling of the two terraces to make room for the complex;
6. many of the graves must have been obliterated completely by the levelling: it was consequently initially believed that considerable space existed between one grave and another, which was then contradicted by the evidence emerging from Section I. The bone fragments found in the foundation pits confirm this;
7. the characteristics of the graveyard, as acknowledged in the past (Noci, Macchiarelli and Faccenna 1997), are very similar to those of the graveyard (in two phases) of Sarai Khola (Taxila) (Halim 1968; Bernhardt 1969; Halim 1970-71; *idem* 1972; Bernhardt 1981; Lukacs 1983): burial in simple graves, bodies laid supine, absence of grave goods, anthropological-physical data (Bernhardt 1981; Lukacs 1983; Macchiarelli, Noci, Macchiarelli and Faccenna 1997). Today the fresh evidence allows these similarities to be completed also by a chronological proximity between the two graveyards (Sarai Khola, 260 +/- 50 BCE; Bernhardt 1981; Saidu Sharif I, 406-361 BCE).

L.M.O.

The context and aims of the research: A cultural and historical framing

Among the many research lines that Central- and South-Asian archaeology is uniquely equipped to pursue is the study of pre-Buddhist funeral customs and the dynamics of interaction between pre- or non-Buddhist beliefs (of which funeral customs are the most palpable evidence) and the vigorous spreading of Buddhism throughout these regions. As a matter of fact, such a crucial part of pan-Asian cultural history mainly unfolds within the sphere of non-written traditions, the material traces of which are moreover sporadic and very often difficult to detect and interpret.

Judging from the macroscopic archaeological evidence, we must conclude that within a few centuries Buddhism succeeded in establishing itself as a dominant religious system, constituting efficient networks of both imperial and native place-based patronage, receiving grants of lands, impressing upon the landscapes the tangible, monumental signs of its presence, and playing a crucial role in developmental economies. However, it is difficult to weigh the real impact of Buddhism on local cultural mentalities. For sure, the massive presence of Buddhism - as it is witnessed by the large number, size and wealth of Buddhist foundations scattered across Asian countries - might have somehow reshaped the social and cultural assets of the local communities. Nevertheless, material evidence of different traditions living side by side with Buddhism, which has been variously documented throughout the areas concerned, call for more attentive scrutiny of the dynamics of interaction between dominant and non-dominant cultures and social groups.

New food for thought is being provided by the most recent archaeological research in Swat, in modern day Khyber Pakhtunkhwa (formerly called North-West Frontier Province), Pakistan, carried out by the Italian Archaeological Mission in Pakistan under the direction of Luca M. Olivieri.

The region, known as Uḍḍiyāna in ancient sources, was one of the most celebrated holy lands of Buddhism and the credited birth-place of Padmasambhava, the great master who introduced Buddhism in Tibet. Copious archaeological evidence and still huge, visible remains, witness to the presence of Buddhism in the region from the 3rd century BCE and to a subsequent, stunning expansion of the network of Buddhist settlements. This impetuous growth seems to have started at around the beginning of the Common Era under local dynasties affiliated with the Saka-Parthian power, namely the Oḍi and the Apraca, and to have continued throughout the following centuries, especially during the Kushan period (1st to 3rd cent. CE).

After the decline of the Kushan power, the archaeological record becomes more blurred also due to a series of natural catastrophes, which heavily affected the settlements, and a marked decrease of the use of stone in favour of less durable building and sculptural materials such as stucco and wood. However, Buddhism remained vital until at least the 8th century CE (Filigenzi 2015) and, although in a much decreased scale, it survived in the region until the beginning of the 11th century, when the Ghaznavid conquest set in motion an irreversible process of Islamisation.

The relevance of the case study illustrated in this article derives not only from the early establishment of Buddhism in the region and its long-lasting dominance but also, and more importantly, from the territorial archaeology that was practised there since the mid-1950s by the Italian Archaeological Mission in Pakistan⁴. The rich archaeological record collected in Swat over the course of the last sixty years encompasses a vast time span, from prehistory to the Islamic period, and different cultural contexts (urban, religious and funerary), as well as rock shelters serving ritual and/or functional purposes, which relate to pastoralist communities living in the highlands (Olivieri 2013). Spanning long periods of time, from the 2nd half of the 1st millennium BCE to the 2nd half of the 1st millennium CE, the rock shelters witness to a local ideological universe (conventionally labelled, for the sake of simplicity, as 'Kafir-Dardic'), which seems to have maintained its independency from the 'urbanised' culture of the valleys.

Moreover, the careful methodologies that since the very beginning have been applied to all aspects of field research (excavation, survey, documentation, archival filing and publication) makes it possible to continuously update and critically revise the data progressively collected and recorded.

As for the case in point, the intensive field research method has allowed observations based on cross comparison of sensitive data, such as the recurrent association of Buddhist sacred areas or

⁴ Other institutions were also active in the region, in particular the teams depending on the Department of Archaeology and Museums, Government of Pakistan, and on the Department of Archaeology of the Peshawar University. At present, a major role is being played by the Provincial Department of Archaeology and Museums, Government of Kyber-Pkhtunkhwa.

individual *stūpas* with earlier cemeteries. This fact was already noticed by G. Tucci (1977, 10), who mentioned the cases of Butkara II, Katelai, Chaharbagh, Dangram, Loebanr, Jambil, Aligrama, Gumbatuna and Gogdara. Tucci also pointed out some common features of the pre-Buddhist necropolises, particularly the location on the sloping side of a hill (provided the availability of the ‘same cretaceous soil’) and the presence of ‘some water or streamlet nearby’ (*ibidem*). From these preliminary observations Tucci inferred that the superimposition of Buddhist spaces and monuments on graveyards, or their close proximity to the latter, was a deliberated act, aimed at certifying the accomplished replacement of the old faith by the new one.

This conclusion has serious implications, since the surmised expropriation of hallowed soils would significantly entail the construction of a Buddhist model of organisational culture⁵. However, it is also to be born in mind that three extensive protohistoric graveyards excavated by the Italian Archaeological Mission in Pakistan in the early 1960s (Katelai I, Loebanr I and Butkara II) have been dated between the end of the 2nd millennium BCE and the mid-1st millennium BCE (Silvi Antonini and Stacul 1972; Vidale, Micheli and Olivieri 2016). This indicates that a certain time interval had elapsed from the final period of use of the necropolises and the implantation of Buddhist sacred areas nearby.

Of special interest is therefore the case of Saidu Sharif I, where the physical and chronological relationship between the pre-Buddhist cemetery and the Buddhist sacred area appeared to be indicative, as detailed above, of a seamless transition.

The Buddhist sacred area of Saidu Sharif I (possibly the Rahorbhyara recorded by the Tibetan pilgrims (Tucci 1971, 416, fn. 2) lies at the foot of the mountains separating the Saidu River valley from the Jambil River valley. In the modern topographic context it is situated near the homonymous modern town, but in ancient time it certainly gravitated towards the then capital of Swat (the Mengjieli of Chinese sources)⁶, of which it faced the southern tip. The sacred area stands on two large terraces, cut into the rock to the north and delimited to the south by a steep slope leading down to a seasonal stream. Though contiguous, the terraces are at different levels (a difference of 3 m c.). The upper terrace is occupied by the Monastery, while the lower one is a cultic space, characterised by the presence of a Main Stūpa and minor monuments (small *stūpas*, *vihāras*, columns).

The importance of the site for the history of Buddhist art and architecture can hardly be overestimated⁷. However, for the specific aim of the present study it will be sufficient to recall that the foundation of the Buddhist sacred complex has been dated within the second quarter of the 1st century CE on the basis of a number of cross-compared data (stratigraphic, numismatic, epigraphic and, for both architectures and sculptures, typological), which relate not only to the individual site but to other excavated sites within and outside the artistic province of Swat. This safe chronological reference thus offers the most reliable grounds for a cross scrutiny of the two different physical contexts, the pre-Buddhist necropolis and the Buddhist settlement.

The results of the analyses presented here call now for a re-examination of the matter. All three samples (bone fragments from the three latest tombs of the underlying pre-Buddhist graveyard, namely G11, G12 and G5) point to a date ranging approximately from the late 5th century BCE to the

⁵ Similar phenomena have been observed elsewhere in the Indian Subcontinent, particularly in Andhra Pradesh; see for instance the evidence collected by Schopen (1996).

⁶ In all likelihood, the ancient Mengjieli lies underneath the extensive built-up area of modern-day Mingora. The identification was first proposed by G. Tucci on the basis of both topographic considerations and phonetic correspondence with the Chinese version of the toponym. Further confirmation of this hypothesis came from the excavation of the Buddhist sacred area of Butkara I, the major Buddhist establishment in the region, which in turn was identified (again on the basis of supporting phonetic, topographic and archaeological evidence) with the opulent Tolo described by the Chinese pilgrim Songyun. For more details and relevant bibliography (Tucci 1958, 285 ff.; *idem* 1978, 60-61; Faccenna 1980-81, 756, fn.1; Filigenzi 2010, 390.).

⁷ As for the architectural typology, the Main Stūpa of Saidu Sharif represents the earliest specimen so far known of the ‘*stūpa* with columns’; also, the original decoration of the *stūpa* consists of a Gandharan narrative frieze, once again the earliest of this type ever documented and, moreover, the only one in the history of Gandharan art that can be dated according to a safe cluster of archaeological data (Faccenna 1995; *idem* 2001; Faccenna, Callieri and Filigenzi 2003, 307 ff.).

mid-4th century BCE⁸. This means that, as in the aforementioned cases of Katelai I, Loebanr I and Butkara II, the pre-existent necropolis had long been in disuse when the Buddhist sacred area was established and physically superimposed on it. Whether or not any physical trace of the necropolis was still visible at the time of the Buddhist appropriation of the soil, or whether the cemetery was still held - notwithstanding its being in disuse for centuries - in reverence or even superstitious awe by the local communities, it is difficult to determine. However, it is hard to believe that the Buddhist monks were totally unaware of the nature of the soil they were occupying. The recurrent juxtaposition of pre-Buddhist burial grounds and Buddhist foundations in the archaeological topography of Swat cannot be merely coincidental and, even if unknowingly started, it would soon have led to an empirical cognisance of the terrain. The association is more likely to reflect a significant pattern, the inducement factors of which remain nonetheless, given the incompleteness of our present knowledge, a matter of speculation.

If the chronological gap between pre-Buddhist necropolises and Buddhist settlements is a real fact and not the misleading picture created by accidental voids in our archaeological records, then we must conclude that the local funeral customs had undergone a drastic change after the 4th century BCE and that inhumation had been abandoned in favour of incineration.

As a matter of fact, the proto-historic necropolises of Swat yielded evidence for multiple internments and, moreover, a coexistence of diverse disposal methods, among them cremation. However, rather than a primary practice cremation was more likely a form of secondary deposition that, for some unknown reason, might have occasionally been preferred to the simple post-depositional displacement of bones, the latter being largely attested by fractional burials. Incineration and fractional burials would thus represent two alternative solutions to the same purpose and both could be explained as part of cyclic funerary rituals revolving around inhumation customs (Vidale, Micheli and Olivieri 2016)⁹.

Be that as it may, only a massive transition from inhumation to cremation can explain the absence of necropolises after the 4th century BCE. In this process, the spreading of Buddhism might have played an influential role. To date, the earliest monumental evidence of a Buddhist presence in Swat is provided by the great centre of Butkara I, which was established already in the 3rd century BCE¹⁰. From this we can infer that the activity in the region of Buddhist 'immigrant monks' - to paraphrase the words used by Schopen (1996) - long pre-dates that significant increase in the number and wealth of Buddhism foundations which took place around the beginning of the Common Era. Indeed, such a growth and ramification of Buddhist permanent settlements, characterised by impressive and expensive architectures and decorative devices, can be considered as the successful outcome of a well-planned and long-term strategy of implantation, which persuaded powerful donors to funnel huge resources into the construction of a tangible Buddhist hegemony.

Land acquisitions are a constitutional part of this process. Buddhist monks needed for their residence and cultic monuments spaces that could meet certain requirements, such as relative isolation - but not remoteness - from inhabited centres, visibility and water supply, all requirements that the pre-Buddhist necropolises could satisfy. Additionally, though we know practically nothing about ancient indigenous ownership of land or grant of land use rights, ancient communal burial grounds might well have been ideologically and economically easy to expropriate. Functionally dismissed by a new cultural asset, the sleepy terrain of the ancient necropolises must have also been rated - in comparison with the plenty of fertile valley soil - as barely suitable for cropping because of erosion hazard.

The economic aspects of the Buddhist hegemony can hardly be overemphasised. As mentioned before, we have by now evidence enough of the involvement of the Buddhist monastic communities in strategies for territorial economic developments. The prevalent idea of Buddhist

⁸ As mentioned above, the previous radiometric estimation of a sample from G11 yielded inconclusive result (81-1015 CE; Noci, Macchiarelli and Faccenna 1997, 109, fn. 1). The only value attached to it was the fact that the earliest term did not exclude a possible chronological overlapping between the Buddhist sacred area and the pre-Buddhist graveyard.

⁹ Among the possible explanations, one may regard cremation as an expedient for a rapid reduction of corpses that were found not completely defleshed at the moment of exhumation, in a way not dissimilar from our modern practices.

¹⁰ This dating has been questioned by some scholars, but see the answer by Faccenna (Faccenna, Callieri and Filigenzi 2003, 279).

monks being especially connected with trade economy fails to do justice to the many economic activities in which monasteries were engaged¹¹. The barrage systems documented in Swat in close proximity to Buddhist monasteries suggest that the latter also promoted agricultural intensification (and as an indirect consequence urban development as well) through a better management and exploitation of water resources¹².

The economic development of the early historic period (in which Buddhist monks seem to have played such an active role) might have facilitated the transition from the ancient, space-consuming inhumation rituals to the cremation advocated by Buddhism, which was also (successfully, we may say) engaged in shaping new patterns of land commodification. In this complex framework of economic, social and cultural changes, the overlapping of Buddhist sacred areas and pre-Buddhist burial grounds appears to carry multifarious meanings, which all together promote an image of strategic, advantageous transition from old to new.

Lastly, some reflection is deserved by grave G5 (Fig. 4), from which comes one of the samples analysed (Table 1). The grave was dug out of the layer filling the foundation trench of the perimeter wall of the Monastery (S side of the eastern stretch). Due to the incompleteness of the skeletal remains (only the skull and long bones were recovered), no conclusive statements were made about the nature of the deposition, whether primary or secondary. On account of the anatomical position of the bones and the apparent lack of concern demonstrated by the builders of the Buddhist sanctuary about all other graves, Faccenna considered unlikely a reburial and was rather inclined to think of a primary deposition (Noci, Macchiarelli and Faccenna 1997, 108-109). In this case, grave G5 would have been the very last burial 'before the graveyard was finally sealed off'. The ¹⁴C analyses, which date the bone sample to a period around 398-378 BCE (Table 1), now demonstrate beyond any doubt that this was a secondary deposition and thus a deliberate act performed by the Monastery's builders. One cannot but agree with Faccenna on the fact that, when considered against the background of general inattention for the other burials, this stands out as an 'extremely unusual behaviour'. One wonders whether this act of *pietas*, somehow anomalous in the context, hints at an incorporative ritual (either respectful or superstitious, or even a mixture of both) aiming at placating and propitiating the ancestors of a superseded social and religious ideological sphere.

As for the incompleteness of the remains, it is difficult to say whether or not the tomb was disturbed, but in any case one could not expect to find in a reburial the complete skeleton. In general, among various cultures, skull and long bones appear very often to be charged with special meaning (McAnany 1995, 46, 61; Kuijt 1997). Also in the case of G5, these skeletal remains may have wittingly been selected for reburial. Rather, it is the overall appearance of the burial - that is, both the anatomical position of the skeletal remains and the shape of the grave pit - that adds to the list of 'anomalies' to be elucidated. All things considered, G5 appears deliberately and emphatically designed after the original models. Should we consider this as a further witness to a symbolic behaviour?

One may say that the set of analyses presented here opens as many questions as it answers. However, to researchers discerning questions it is in itself a leap forward. In this specific case, it encourages us to continue and broaden our research along archaeological, anthropological and environmental lines.

A.F.

¹¹ See for instance the seminal contributions by Schopen (2004) and the more recent studies by Brancaccio (2011) and Neelis (2014).

¹² Dams also reduce the risk of flooding, which is quite high in North Pakistan. The Buddhist narrative reliefs representing the 'Conversion of the Nāgas' (i.e., the chthonic divine beings ruling waters and the underworld, who are responsible for floods and earthquakes), which usually show the Nāgas within a walled fountain, are probably the mythisation of the Buddhist technological interaction with the natural environment (Olivieri, Vidale et alii 2006).

References

- Bayliss, A. (2009) Rolling Out Revolution: using radiocarbon dating in archaeology, *Radiocarbon*, 51, 123-147.
- Bernhardt, W. (1969) Preliminary Report on the Human Skeletal Remains from the Prehistoric Cemetery of Sarai Khola, *Pakistan Archaeology*, 6, 100-116.
- Bernhardt, W. (1981) Ethnic and Morphological Affinities of the People of the Iron Age Cemetery of Sarai Khola near Taxila (Pakistan), *Journal of Mediterranean Anthropology and Archaeology*, 1, 180-210.
- Brancaccio, P. (2011) *The Buddhist Caves at Aurangabad: Transformations in Art and Religion*. Leiden.
- Bronk Ramsey, C. and S. Lee (2013) Recent and Planned Developments of the Program OxCal, *Radiocarbon*, 55, 2-3, 720-730.
- Brown, T.A., D.E. Nelson, J.S. Vogel and J.R. Southon (1988) Improved Collagen Extraction Method by Modified Longin Method, *Radiocarbon*, 30, 2, 171-7.
- Callieri, P. (1989) *Saidu Sharif I (Swat, Pakistan)*, 1. *The Buddhist Sacred Area, The Monastery* (IsMEO Reports and Memoirs XXIII, 1). Rome.
- Callieri, P. (1993) Ranneistoričeskij Svat: primer akkul'turacii?, *Vestnik Drevnej Istorii*, 205, 2, 131-136.
- Di Florio, M.R., S. Lorenzoni, E. Zanettin Lorenzoni and L.M. Olivieri (1993) Evidence of Ancient Stone Quarrying in Lower Swat, NWFP, Pakistan. A Geo-archaeological Study, *Science and Technology for Cultural Heritage*, 2, 63-74.
- Faccenna, D. (1980-1981) *Butkara I (Swat, Pakistan) 1956-1962* (5 vols.) (IsMEO Reports and Memoirs, III, 1-5.2). Rome.
- Faccenna, D. (1995) *Saidu Sharif I (Swat, Pakistan)*, 2. *The Buddhist Sacred Area. The Stūpa Terrace* (IsMEO Reports and Memoirs, XXIII, 2). Rome.
- Faccenna, D. (2001) *Il fregio figurato dello Stūpa Principale nell'area sacra buddhista di Saidu Sharif I (Swat, Pakistan)* (IsIAO Reports and Memoirs, XXVIII). Roma.
- Faccenna, D., P. Callieri and A. Filigenzi (2003) At the Origin of Gandharan Art. The Contribution of the IsIAO Italian Archaeological Mission in the Swat Valley, Pakistan, *Ancient Civilizations from Scythia to Siberia*, 9, 3-4, 277-380.
- Filigenzi, A. (2010) Post-Gandharan/non-Gandharan: Archaeological Inquiry into a still Nameless Period. M. Alram et alii (eds) *Coins, Art and Chronology II. The First Millennium C.E. in the Indo-Iranian Borderlands*, 389-406. Wien.
- Filigenzi, A. (2015) *Art and Landscape. Buddhist Rock Art of Late Antique Swat/Uḍḍiyāna*. With contributions by L.M. Olivieri and P. Rockwell (Österreichische Akademie der Wissenschaften, Philosophisch-Historische Klasse Denkschriften, 462. Band). Wien.
- Halim, M. (1968) Preliminary Report on the Excavations at Sarai Khola, *Pakistan Archaeology*, 5, 100-116.
- Halim, M. (1970-71) Excavations at Sarai Khola - Part I, *Pakistan Archaeology*, 7, 28-40.
- Halim, M. (1972) Excavations at Sarai Khola - Part II, *Pakistan Archaeology*, 8, 3-112.
- Kuijt, I. (1997) Negotiating Equality through Ritual: A Consideration of Late Natufian and Pre-Pottery Neolithic A Period Mortuary Practices, *Journal of Anthropological Archaeology*, 15, 313-336.
- Longin, R. (1971) New Method of Collagen Extraction for Radiocarbon Dating, *Nature*, 230 (5291), 241-242.
- Lukacs, J.R. (1983) Dental Anthropology and the Origins of two Iron Age Populations from Northern Pakistan, *Homo*, 34, 1-15
- Marzaioli F., G. Borriello, I. Passariello, C. Lubritto, N. De Cesare, A. D'Onofrio and F. Terrasi (2008) Zinc Reduction as an Alternative Method for AMS Radiocarbon Dating: Process Optimization at CIRCE, *Radiocarbon*, 50, 1, 139-49.
- McAnany, P.A. (1995) *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. Austin.
- Neelis, J. (2014) Localizing the Buddha's Presence at Wayside Shrines in Northern Pakistan, P. Wick and V. Rabens (eds) *Religions and Trade: Religious Formation, Transformation and Cross-Cultural Exchange between East and West*, 45-64. Leiden-Boston.

Noci, F., R. Macchiarelli and D. Faccenna (1997) *Saidu Sharif I (Swat, Pakistan)*, 3. *The Graveyard* (IsIAO Reports and Memoirs XXIII, 3). Rome.

Olivieri, L.M. (2013) *Painted Rock Shelters of the Swat-Malakand Area: From Bronze Age to Buddhism. Materials for a Tentative Reconstruction of the Religious and Cultural Stratigraphy of Ancient Swat* (PhD Diss., Freie Universität Berlin [2011]) www.dart-europe.eu/full.php?id=732907

Olivieri, L.M. and M. Vidale, with contributions by A. Nasir, T. Saeed, L. Colliva, R. Garbini, L. Langella, R. Micheli and E. Morigi (2006). Archaeology and Settlement History in a Test-Area of the Swat Valley. Preliminary Report on the AMSV Project (1st Phase), *East and West*, 56, 1-3, 73-150.

Passariello I., F. Marzaioli, C. Lubritto, M. Rubino, A. D'Onofrio, N. De Cesare, G. Borriello, G. Casa, A. Palmieri, D. Rogalla, C. Sabbarese and F. Terrasi (2007) Radiocarbon Sample Preparation at the CIRCE AMS Laboratory in Caserta, Italy, *Radiocarbon*, 49, 2, 225-32.

Passariello, I., P. Simone, J. Tandoh, F. Marzaioli, M. Capano, N. De Cesare and F. Terrasi (2012) Characterization of Different Chemical Procedures for ^{14}C Dating of Buried, Cremated, and Modern Bone Samples at CIRCE, *Radiocarbon*, 54, 3-4, 867-877.

Reimer, P.J., E. Bard, A. Bayliss, J.W. Beck, P.G. Blackwell, C. Bronk Ramsey, P.M. Grootes, T.P. Guilderson, H. Haflidason, I. Hajdas, C. Hattz, T.J. Heaton, D.L. Hoffmann, A.G. Hogg, K.A. Hughen, K.F. Kaiser, B. Kromer, S.W. Manning, M. Niu, R.W. Reimer, D.A. Richards, E.M. Scott, J.R. Southon, R.A. Staff, C.S.M. Turney and J. van der Plicht (2013) IntCal13 and Marine13 Radiocarbon Age Calibration Curves 0-50,000 Years cal BP, *Radiocarbon*, 55, 4.

Schopen, G. (1996) Immigrant Monks and the Proto-Historical Dead: The Buddhist Occupation of Early Burial Sites in India, F. Wilhelm (ed) *Festschrift Dieter Schlingloff*, 215-238. Reinbek.

Schopen, G. (2004) *Buddhist Monks and Business Matters: Still More Papers on Monastic Buddhism in India*. Honolulu.

Silvi Antonini, C. and G. Stacul (1972) *The Protohistoric Graveyards of Swāt (Pakistan)* (IsMEO Reports and Memoirs VII, 1-2). Rome.

Terrasi, F., N. De Cesare, A. D'Onofrio, C. Lubritto, F. Marzaioli, I. Passariello, D. Rogalla, C. Sabbarese, G. Borriello, C. Casa and A. Palmieri (2008) High precision ^{14}C AMS at CIRCE, *Nuclear Instruments and Methods in Physics Research*, B266, 10, 2221-2224.

Terrasi, F., D. Rogalla, N. De Cesare, A. D'Onofrio, C. Lubritto, F. Marzaioli, I. Passariello, M. Rubino, C. Sabbarese, G. Casa, A. Palmieri, L. Gialanella, G. Imbriani, V. Roca, M. Romano, M. Sundquist and R. Loger (2007) A new AMS facility in Caserta/Italy, *Nuclear Instruments and Methods in Physics Research*, B259, 14-17.

Tucci, G. (1958) Preliminary Report on an Archaeological Survey in Swat, *East and West*, 9, 4, 279-328 (repr. in Tucci 1997, 59-113).

Tucci, G. (1971) Travels of Tibetan Pilgrims in the Swat Valley, *Opera Minora*, II, 369-418. Roma (first ed. Calcutta 1940; repr. in Tucci 1997, 1-57).

Tucci, G. (1977) On Swāt. The Dards and Connected Problems, *East and West*, 27, 1-4, 9-85, 94-103 (repr. in Tucci 1997, 165-259).

Tucci, G. (1978) *La via dello Swat*. Roma.

G. Tucci (1997) *On Swāt. Historical and Archaeological Notes*, P. Callieri and A. Filigenzi (eds). Rome.

Vidale, M., L.M. Olivieri, S. Ferrari and E. Loliva (2015) Tracce di strumenti e organizzazione del lavoro su elementi scolpiti gandharici di Saidu Sharif e Panr (Swat, Pakistan) conservati nel MNAO, S. Pannuzi (ed) *Gandhara. Tecnologia, produzione e conservazione. Indagini preliminari su sculture in pietra e stucco del Museo Nazionale di Arte Orientale 'Giuseppe Tucci'*. Roma.

Vidale, M., R. Micheli and L.M. Olivieri, (eds) (2016) *Excavation at the Protohistoric Graveyards of Gogdara and Udegram* (ACT-Field School Project Reports and Memoirs, III). Lahore.



Fig. 1 - The Buddhist sanctuary of Saidu Sharif I at the end of the excavations in the 1980s. To the left side of the Stūpa Terrace is still visible the area which was mechanically excavated in the late 1990s (photo Italian Archaeological Mission)

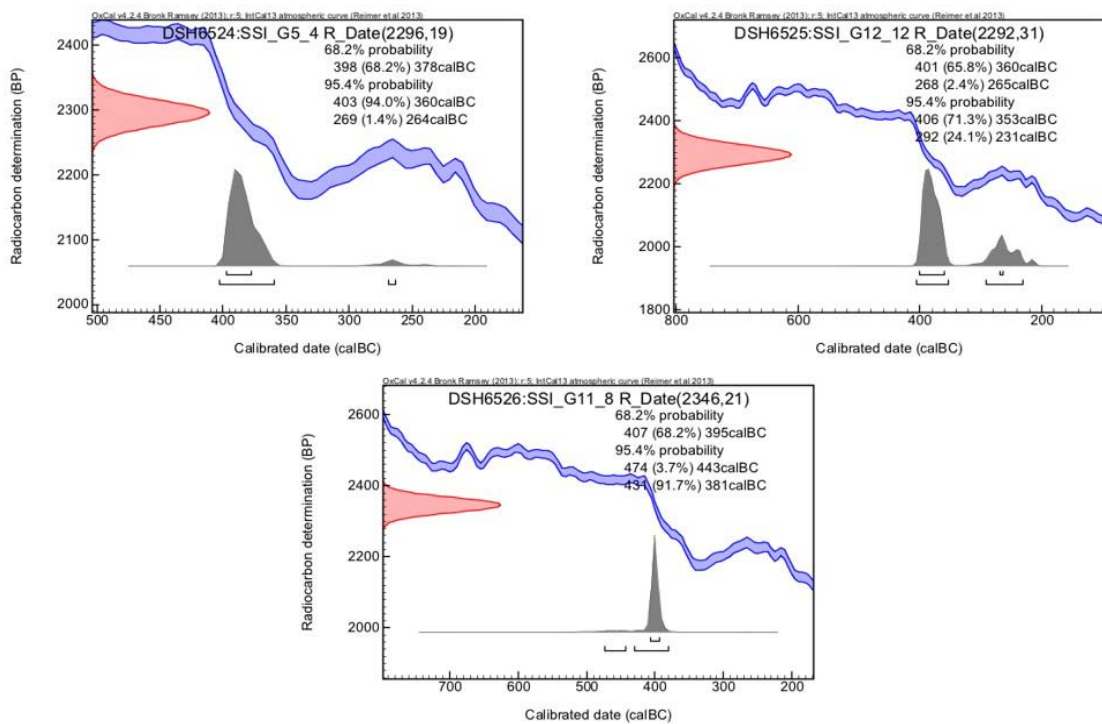


Fig. 2 - Calibrated ages of the three bone samples from graves G5, G12 and G11, obtained by the OxCal v4.2.4 (Bronk Ramsey 2013) and INTCAL13 (Reimer *et alii* 2013).

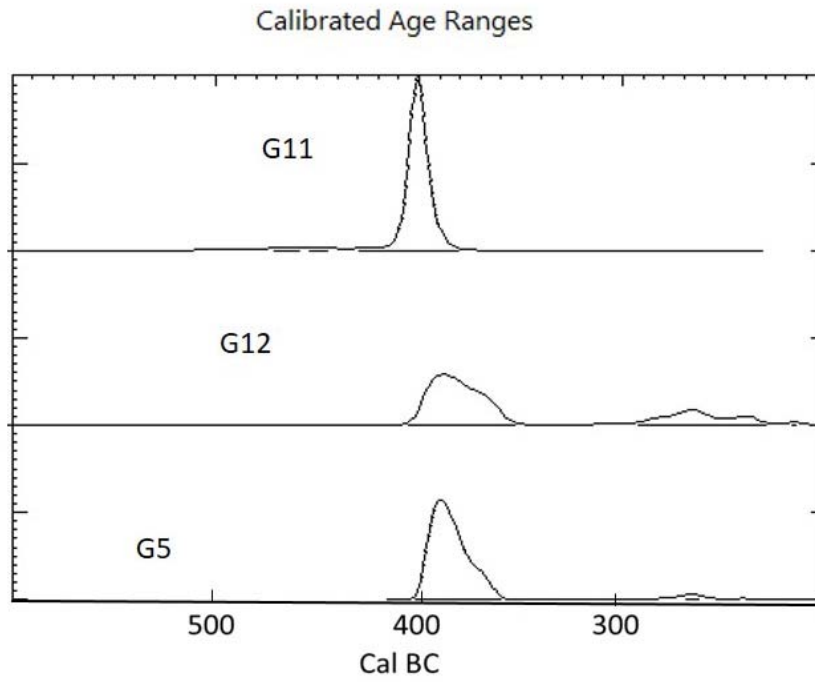


Fig. 3 - A comparison among the calibrated-date probability distributions for samples G5, G12 and G11

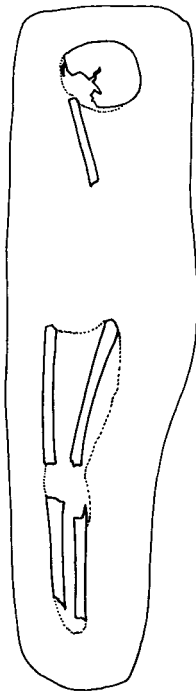


Fig. 4 - Grave 5 (G5). After Noci, Macchiarelli and Faccenna 1997, 22, fig. 6