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## Die "Grosse Halle" von Karakorum: zur archäologischen Untersuchung des ersten buddhistischen Tempels der alten mongolischen Hauptstadt

der Reihe / of the series

Forschungen zur Archäologie außereuropäischer Kulturen; Bd. 12

DOI: https://doi.org/10.34780/coic-cbqc

**Herausgebende Institution / Publisher:** Deutsches Archäologisches Institut

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## 16 The archaeological record of the "Great Hall" of Karakorum. The excavations in the so-called palace area

Summary

Translated from the German by Karoline Mazurié de Keroualin

This publication presents the results of the excavations carried out between 2000 and 2006 by the Mongolian-German Karakorum Expedition in the area of the "Great Hall" of Karakorum. The first chapters are devoted to the historical background and to the history of research. A detailed description of the different archaeological features follows and, finally, possible parallels and the interpretation as an important Buddhist temple are discussed.

Different historical sources written on different occasions and with different intentions provide insights into the history and the development of the ancient Mongolian capital Karakorum. Alongside travel reports written by European monks who frequently travelled to the East for missionary and also diplomatic reasons, there are also a few primary and secondary sources of Mongolian origin to be cited. Moreover the descriptions of the Franciscan monks John of Plano Carpini and William of Rubruk are of crucial importance. William of Rubruk spent a long period of time at the court of Möngke Khan and he composed a detailed and lively description of daily life in the city. The Persian chronographers, Ata-Malik, Juvaini, Rashid al-Din, and Al-Umari, also mentioned Karakorum in their chronicles. The same applies for the Yuanshi, the official history of the Yuan dynasty. It was, however, written some time later. An inscription dated 1346 provides detailed information about the construction processes in Karakorum. This bilingual document represented by fragments stemming from Karakorum describes the construction of the "temple of the rise of the Yuan". The description of the building given by this source, which in several points has striking counterparts in the archaeological record, is of particular interest.

Excavations in the area of the so-called "Great Hall", i. e. the sector located in the southwestern part of the medieval city of Karakorum, were carried out for the first time in 1933 by the Russian archaeologist Dmitrij Demjanovič Bukinič. Bukinič, who initially considered the building complex as a palace, revised his interpretation on the basis of the excavation results and finally concluded that it was a temple complex. The Russian archaeologist Sergej Vladimirovič Kiselëv, who was the first to carry out large-scale excavations in Karakorum and also to investigate the area of the "Great Hall" in 1948/49, disregarded previous research and assumed that the area corresponded to the palace of the Mongolian emperors in the city of Karakorum. Also, on the Mongolian side, research progressed on Karakorum and more particularly in the area of the south-western corner of the town. At the end of the 1970s excavations were carried out by the Mongolian archaeologist N. Ser-Odcav. The results of these excavations remained unpublished.

The area of the "Great Hall" as well as of its western adjacent building was completely investigated between 2000 and 2006 by the Commission of Archaeology of Non-European Cultures (KAAK) of the German Archaeological Institute. With the opening of parts of the "Great Hall" for tourism, further archaeological investigations became necessary. In 2013 and 2014 significant new information furthering our understanding of the area was collected of which the present publication provides only a brief overview. This information will be analysed and published in more detail in the future. During the archaeological fieldwork, a large hall, erected on an artificial platform was uncovered. Its interior construction and also the vestigial remains indicate that it was a Buddhist temple. In the following we will describe its type of construction and its architectural particularities.

As suggested by the analysis of the features, a square building with side lengths of approximately 38×38 m was constructed on an arti-

ficially built, two-metre-high central platform. For stabilisation, but first and foremost for aesthetic reasons, the platform was surrounded on the outer side by a 1.60–1.80 m high screen wall built using several layers of upright fired bricks. The corners of this screen wall were built using vertical granite pillars. Foundation deposits were found under the four corners of the platform as well as under the stairs leading to the platform on the western and eastern side. These were large pottery containers with a lid including, alongside cereals, the so-called "nine precious objects" wrapped in fabrics, objects made of nine different materials considered as being salutary.

The interior construction of the seven-nave building on the platform consisted of eight-byeight wooden columns standing on granite bases with rhythmically changing bay widths and bay walls. From west to east and also from north to south the second, fourth and sixth bay was larger than the first, third and fifth bay.

Wall remains were only rarely identified. Exterior walls were reconstructed in the northern, western and eastern part along the inner edge of the outermost pillar bases and in part of the second and sixth bay in a west-east direction. In the interior of the building no remains of east-west oriented wall features were preserved.

It was possible to identify the ancient floor of the building at a height of 100.00 m throughout the entire inner part. It was formed by a greyish rammed loam construction covered with square green glazed square floor tiles in the central part and grey unglazed floor tiles in the marginal parts. Except for these, grey rectangular floor tiles were placed diagonally starting from the corners of the building to the centre. They form four diagonal paths leading to the centre. In the marginal areas of these diagonal paths remains of two lotus thrones supporting Buddha statues were preserved in masonry niches in the northwestern and north-eastern parts. It is assumed that similar statues flanked all the four diagonal paths.

In the centre of the building a square space of 22 by 22 m was reserved within the floor area. In its very centre a second square masonry structure with side lengths of 2.80 m contained a midmost deposit dug into the layering of the platform. This intentional deposit was probably a foundation or construction sacrifice.

The central masonry structure was surrounded by four deposits containing tens of thousands of unfired *tsa-tsa* tablets made of coarse clay. To the outside, immediately adjacent to the *tsa-tsa* deposits, brickwork up to five rows wide and

at most four layers high was formed by bricks placed upright on their long sides. These constructions were identified on all the four external sides of the *tsa-tsa* deposits and no ancient floor remains were identified in the area enclosed in this manner. It can therefore be assumed that this central construction of the building was a platform-like covered space or a construction the original height of which could not be determined on the basis of the archaeological record. Most probably it was a stupa.

The elevated part of the hall was formed by wooden columns standing on bases supporting a roof construction or one or several upper floors. Remains of collapsed wooden beams and boards are indicative of a prevailing timber structure that supported a pitched roof covered with tiles as evidenced by countless glazed roof tiles.

The entire platform was accessible by stair constructions at the centre in the west and in the east leading from the surrounding floor level at a local height of 98.20 m to the level of the platform. A gangway leading from the north to the building that was reached in the northern part by two lateral staircases enabled access from the northern side. This gangway probably connected the main building with a smaller construction also erected on an artificial platform located north of it. As the southern part of the main platform was heavily disturbed by ancient excavations, the precise aspect of the southern access can only be hypothesized. It is assumed that stairs were erected on the still preserved inclined ramp. As evidenced by the stairs the building had entrances on all four sides. The southern entrance, as shown by the ground plan, was more sophisticated than the western and eastern entrance with columns erected in front that supported a covered entrance area. Floor remains in the southern unroofed area of the platform revealed that the entire surface of the platform was equipped with a floor probably made with square grey fired floor tiles, even at the exterior of the building.

As a whole, the kind of construction materials used makes it possible to suppose that the hall was erected according to a Chinese model with a skeleton structure. The green and red glazed roof tiles found in the debris as well as remains of some painted timber are indicative of a roof construction according to a Chinese model. The distribution map of the eaves tiles suggests the presence of a multi-storey roof. Whereas the main part of the roof tiles was green glazed, occasionally red and yellow glazed remains were also found. It is well established

that the colour design of the timber constructions and the roof played a particular role in both Chinese and Tibetan architecture. Colours were used to emphasise the status and the function of a building.

As only rare elements of elevated constructions of the "Great Hall" are preserved, it is necessary to take into account possible parallels and architectural influences on its reconstruction. Because of the specific development of the architecture of the nomadic society in medieval Mongolia, these influences can only partly be identified in the country itself but have to be searched for in the formative neighbouring regions of China and Tibet.

In contrast to Mongolia, both countries had a centuries-old – in the case of China even a millennia-old – rich architectural tradition at the beginning of the 13<sup>th</sup> century. It must be assumed that the intense relationships of the Mongolian khans with China and also with Tibetan lamas were used to develop types of architectural representation that previously played only a minor role amongst the nomadic Mongolians.

When comparing the "Great Hall" with similar architectural developments in China and Tibet, we are dealing here with a building that was planned and constructed according to Chinese principles. Nonetheless with regard to its spatial configuration, it exhibits elements that are clearly planned according to Tibetan cosmic perceptions.

Considering first the typical Chinese architectural elements, i. e. a foundation platform, a wooden skeleton structure and a decorative roof, clear resemblances with the construction type of the "Great Hall" can be highlighted. The typical construction of a platform layer surrounded by a brick wall can be clearly identified, as can the use of wooden columns standing on stone bases - common during the Han period - and no longer dug into the soil. Alongside the repeatedly found collapsed remains of roof timber, these columns are basic elements of a wooden framework construction, probably a tailiang system. This term denotes a construction the main structure of which consists of wooden columns, beams and sets of brackets.

The decorative design of the roof of the "Great Hall" was clearly evidenced by the large numbers of glazed ornamental roof tiles preserved. The collapse made it possible to exclude any possibility that we are dealing here with a flat roof. The archaeological record in the marginal zones of the building made it possible to reconstruct a clear eaves edge indicating that

the external roof tiles sloped down along the inclination of the roof. In addition a flat roof of Tibetan type would not have been covered with tiles.

Although the use of Chinese architectural principles could be recognised, only hypothetical answers may be provided to the numerous questions referring to the detailed design. These concern notably the precise height of the building, the roof design, the possibility of a multistoreyed structure and the precise interior arrangement of the building. Indications of the height may be deduced from the circumference and the preserved height of the wooden columns. According to a personal communication of N. Gutschow and A. Brandt their diameter of 0.5-0.6 m indicates a maximum height of 35 m for statical reasons. The remnant of a collapsed column at least nine metre long was preserved in the debris layers, which makes it possible to reconstruct, based on the archaeological record, a minimum height of nine metres up to the eaves edge and the beginning of the roof construction.

As to the roof design the question can at least partly be answered on the basis of the type and the distribution of the eaves tiles. In the collapse different concentrations of eaves tiles can be identified, which makes it possible, if we follow this interpretation, to assume two or three roof levels and thus two or three storeys or at least a multi-storeyed roof. Independent of a multi-storeyed roof, the important number of green glazed roof tiles and the scattered instances of red glazed tiles make it possible to suppose a dominantly colourful roof design. Fragments stemming from figural decorative designs suggest a design typical of Chinese architecture for the roof ridge.

Considering that a minimum height of nine metres was attested for the columns and consequently for the supposed multi-storeyed roof, a significant total height of the building may be imagined. High pavilion constructions are well known in a Chinese context: the 48 m high Zhenguo tile pagoda associated with the Kaiyuan Temple in Quanzhou in the Fujian Province or the wooden pagoda of the Fogong Temple in the Ying County of the Shanxi Province.

However, comparatively little debris was present above the floor. If a fairly high building had collapsed, a greater amount of debris should be expected, even if the main part was constructed from timber. On the other hand the consequences stemming from its destruction by fire and the proven re-use of construction materials for other purposes cannot be quan-

tified. The quantities of materials encountered during excavation at the beginning of the 21st century should not therefore be considered as highly significant.

While the design of the building presents numerous characteristics typical of Chinese architecture with regard to its elevation and construction, Tibetan influence can also be recognised, more particularly with regard to the design of the layout and the function of the building that will be discussed in the following.

An important aspect borrowed from the Indian cultural sphere in Tibetan-Buddhist architecture is the fact that it is often strongly orientated towards cosmic connections. This becomes apparent from two-dimensional aspects, the layout, but also from three-dimensional aspects, the superstructure of sacral buildings. More particularly, from the 11th century on, the century of late conversion, it can be stated that the buildings are increasingly laid out in the shape of a symbolic mandala. The Samye Monastery in Tibet is considered to be one of the most typical examples. The square palace with the sitting main deity, surrounded by the secondary deities and the all-embracing circles, can be considered as basic elements of a mandala. They represent the purifying spheres of the body, the word and the spirit. In the cosmic implementation the central representation of the deity has an analogy in the Mount Merou, the centre of the world according to the Tibetan view. The subdivision of the mandala into five segments, each with a centre and four cardinal directions, mirrors the subdivision of the world, but also of the human mind, represented by five Tathāgata Buddhas. The closest architectural implementation to this cosmology is the stupa.

Because of the lack of specification of Chinese construction techniques with regard to the function of the building linked with the universal use of a wooden framework construction, it is not possible to determine its function based on the exclusive analysis of the ground plan of the "Great Hall" primarily reconstructed from the arrangement of the column bases. Based on only the architecture it cannot be decided whether we are dealing with a sacral or secular building. Only the analysis of specific elements of Tibetan architecture such as the representation of mandalas or the erection of stupas indicates the use of the building as a temple.

Its inconclusive layout may have been one of the reasons for the changing interpretations of the function of the building in the course of the research carried out at Karakorum. The

detailed analysis of the excavation record and the consideration of elements linked to the interior arrangement as well as of the vestigial remains made it possible to confirm the function. The archaeological record registered after the complete uncovering of the "Great Hall" made a conclusive interpretation possible, with the result that an intentional construction of the building as a temple can be assumed.

The most striking criterion for this interpretation, as early on as during the excavation, was first and foremost the important number of finds with a Buddhist background. Two thirds of more than 17,000 inventoried objects can be assigned to a clear Buddhist context. Fragments of wall decoration and Buddhist statues as well as the great amount of tsa-tsa votive tablets form the largest category of vestigial remains alongside iron fragments such as nails. Apart from objects, numerous features also exhibit clear Buddhist characteristics. Thus, the two preserved lotus thrones, the floor tiles in the area of the diagonally set floor with Buddhist symbols as for example the swastika and the trident, and the tsa-tsa deposits are various characteristic architectural elements indicating a Buddhist context. But first and foremost the general layout of the building reveals characteristics with regard to the construction of the building which fully match the Tibetan conception of the world and its architectural implementation in the shape of a mandala. It can therefore be assumed that the "Great Hall" of Karakorum was also a representation of this cosmology. The numerous elements in favour of the hypothesis of the architectural implementation in the shape of a mandala are the square plan of the building, the square space identified in the floor area, the deposits including tens of thousands of tsa-tsa votive tablets, and the encircling wall of a further deposit in the centre of this area. In addition, the central space in the floor was also encircled by a wall and probably formed the basis of a huge stupa. Four diagonal pathways led to this stupa that are recognisable in the floor pavement and that subdivide the space into four equal areas. They were probably flanked by four statues sitting on lotus thrones. The different colours of the floor pavement mark an interior and an exterior area in the surroundings of the centre.

The complete absence of floor tiles in the centre and the deposits of tens of thousands of *tsa-tsa* tablets may be indicative of a pedestal construction supporting a stupa and therefore rendering this area inaccessible and invisible.

Large numbers of collapsed bricks in the immediate surroundings of the centre of the building led us to assume that a massive masonry structure existed in this place. The brickwork in the centre of this space may be interpreted as a symbolic position of the *yasti* post marking the parasol-axis. No. remains of this probably wooden column were preserved and it is uncertain to what depth it was dug into the soil. Also, stupas or their Tibetan version, the *chortens*, were filled up with *tsa-tsas* at all periods. In the occidental literature, the best known examples are the stupas of the Tangut city of Khara-Khoto, which Peter Koslow also mentions as being filled with a large number of *tsa-tsas*.

Based on the interpretation of this archaeological record the stupa construction formed the centre of the building, the ground plan of which was subdivided by four diagonal pathways according to the four cardinal directions. Lotus thrones, perhaps in niches, were most obviously placed along these pathways. Two of these thrones were clearly preserved. The number of statue fragments recovered from the debris shows that a greater number of larger-than-life-size statues were originally present in the "Great Hall".

In addition, the great number of bas-reliefs found in the area of the tsa-tsa deposits exclusively represent the Five Wisdom Tathagatas, which can be recognised on the basis of their hand gestures. Originating from the Adi-Buddha they represent basic principles and at the same time each is assigned to a cardinal direction and to distinct colours. Amitābha is associated with the western direction and the meditation gesture, Amoghasiddhi with the northern direction and the protection gesture, Aksobhya with the eastern direction and the earth witness gesture, and Ratnasambhava with the southern direction and the gesture of offering. According to the scholar Hans-Georg Hüttel, their frequency indicates the implementation of a Vairocana mandala, with in its centre or nearby a statue of the Vairocana-Buddha usually characterised by a discussion gesture.

An additional important indication for its use as a temple is the orientation of the building complex, clearly deviating by almost 45 degrees from the main axes of the city with the corners of the complex indicating the respective cardinal direction necessary for the construction of a mandala. This evident deviation from the main axis of the city was already noticed by Nancy S. Steinhardt (1990) in her analysis of Chinese city planning and quoted as an "unusual orienta-

tion". The orientation of the building according to cosmic connections for religious reasons provides a conclusive explanation of this deviation.

While secular buildings, including palaces, are generally oriented according to the main axes of a city, the orientation of sacral buildings according to cosmic connections is linked with more important regularities. The reasons why a palace in this obvious form would deviate from the principal layout of the city, the administrative centre of which it represents concomitantly, may only be explained by temporal differences with regard to the construction. There is no evidence of such a temporal difference.

Another criterion indicating a Buddhist use from the beginning is the strong emphasis on the number eight mirrored by eight by eight columns in the ground plan and thus forming the basis of the building. The number eight is the most significant number in Buddhism but it also plays an important role in Chinese philosophy. We are referring here to the eight trigrams that can be combined to form 64 possible pairs.

The architectural style and the construction technique highlight clear Chinese influence, whereas the architectural idea and the outline of the building have parallels in Tibet. Additional analogies can be recognised in the interior arrangement of the rooms based on the fragments of reliefs and remains of wall paintings. They were analysed within an as yet unpublished master's thesis by Eva Hoffmann at the University of Bonn. In her study in a general manner she established significant differences between the fragments of the wall paintings discovered by S. V. Kiselëv and those discovered by the Mongolian-German Karakorum Expedition. The accurate position of the paintings stemming from the excavations carried out by S. V. Kiselëv as well as their type of production cannot be precisely recognised. From the stylistic point of view Chinese, Uyghur and Nepalese-Tibetan elements may be hypothesized, but the international style of Buddhist art during the 11th to 14th century makes it impossible to identify clear origins of the artists. According to H.-G. Hüttel, the remains of wall paintings found by the Mongolian-German Karakorum Expedition may be assigned to Sino-Tibetan as well as Indo-Nepalese styles of the 12th to 14th century A.D. Similar archaeological remains recovered from the Tangut city of Khara-Khoto discovered at the beginning of the 20th century by the Russian scholar Peter Koslow provide the closest analogies. Similarities could be noted with regard to the paintings as well as to the

representation of the reliefs given that in Kara Khoto numerous vestigial remains of Buddhist art and architecture were preserved. Apart from the fragments of wall paintings, two fragments of clay figurines, found in the kiln area excavated in 2009 near to the Orchon show clear Tangut influence. A direct craft relationship seems to be very likely. As it is quite probable that Tangut people were brought to the court of the khan after the conquest of the city of Khara Khoto in 1226/27 by the Mongols, such relationships are easy to imagine.

More generally, the merging of Tibetan, Mongolian, Chinese and occasionally also Indian elements in architecture can be frequently encountered in Mongolia. The examples preserved to date are mainly dated to the period from the 16<sup>th</sup> century on. Andre Alexander (2006), in his listing of typical monastic architecture of Mongolia, distinguishes the *ger* type, the wooden *ger* type as well as square variants of these, along with a type of Tibetan influence made from stones, bricks and rammed clay, and more-

over the traditional Chinese style as well as the Qing dynasty style. His classification first and foremost focuses on the construction materials and techniques implemented and it disregards further aspects such as ideologically significant ideas. If these criteria were applied, the "Great Hall" of Karakorum would be a building erected according to the Chinese style.

The analysis of the different organic remains thanks to the radiocarbon method as well as the analysis of several thermoluminescence samples provided a scientific dating mainly to the 13th/14th century A.D., a period that is also consistent with the data stemming from historical sources. As a whole the function and the use of the "Great Hall" of Karakorum as a Buddhist temple can be clearly proven. The deposits discovered during the latest excavations at the four corners of the platform substantiate the assumption that the building corresponds to the 'temple of the rise of the Yuan' mentioned in the inscription of 1346.