



# ESSEX EGYPTOLOGY GROUP - REVIEW

## **January 2021 Meeting**

by Margaret Patterson

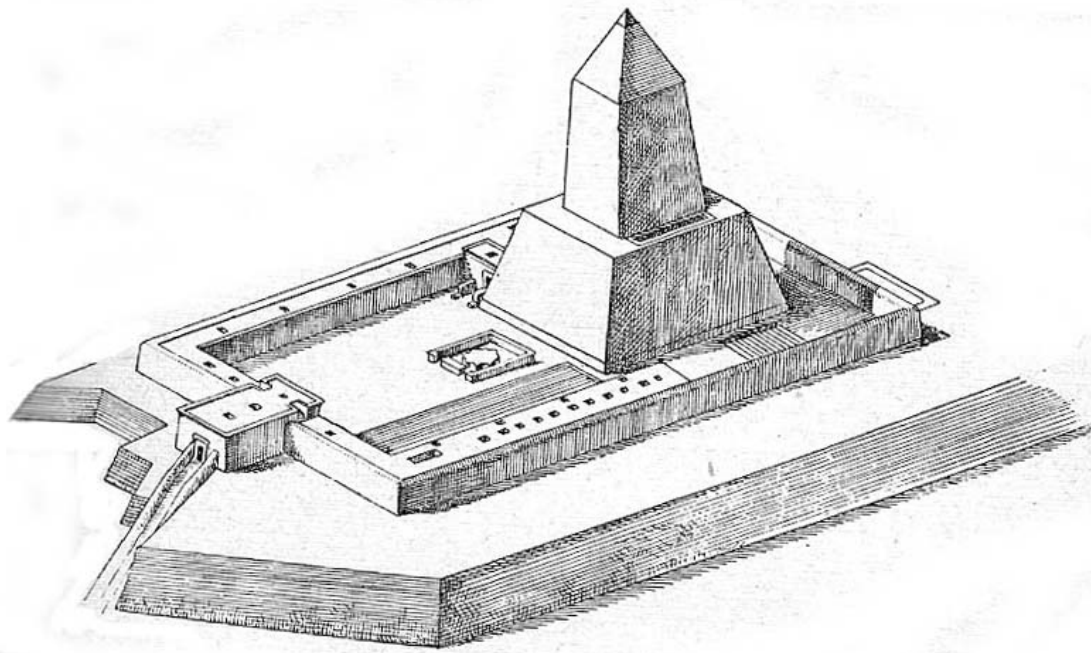
### **“The Kings of the Sun. The Fifth Dynasty Sun Temples and the Solar Cult at the Old Kingdom”**

**Dr Massimiliano Nuzzolo**

At the beginning of January Dr Massimiliano Nuzzolo started our 2021 programme of talks and talked to us via Zoom about his work on the Sun Temples of the 5th Dynasty of Ancient Egypt. He told us he has a book on the subject published last year, *Fifth Dynasty Sun Temples* (<https://www.oxbowbooks.com/oxbow/fifth-dynasty-sun-temples.html>), and another one coming up.

Nuzzolo began his talk by setting the scene – telling us where these temples are and what previous work had been done on them before his project began. They are situated in the Memphite Necropolis, just south of Cairo. The site is called Abu Ghurab and it is near Abusir, and the sun temples are just north of the 5th Dynasty pyramids which are also at this site. It is halfway between Dahshur (where Sneferu has his pyramids) and Giza (where Khufu, Khafre and Menkaure have their pyramids). This location is not a coincidence, and he stressed that the 5th Dynasty kings saw themselves as the legitimate heirs of the 4th Dynasty. All the sun temples were built during the 5th Dynasty, and the two which have been found are those of Userkaf (the first king of the dynasty) and Niuserra (the fifth). He said that he would mostly be discussing that of Niuserra as it's by far the best preserved.

Ludwig Borchardt led the initial excavations at the site in 1898-1905. He is most famous as the man who discovered the famous bust of Nefertiti, now in Berlin. His career started with the excavation at Abu Ghurab of the sun temple of Niuserra. The excavation was funded by Baron von Bissing who was a prominent Egyptologist and political figure of the time, he was from Munich so many of the finds went there rather than to Berlin. Two other prominent figures in Egyptology also worked there: H. Schäfer, who was the first editor of the Palermo Stone, and G. Möller who was the author of an important text on hieratic. So the excavation at this site is an important piece of the history of Egyptology, as well as providing us with knowledge of the 5th Dynasty. Their work was published in three volumes between 1922 and 1928. There wasn't any more work there until the 1950s, when one of the last pupils of Borchardt (Herbert Ricke) excavated at the site. That excavation discovered the remains of Userkaf's sun temple. After this there was no further excavation at the site and no-one has looked for the other sun temples.



**Borchardt's Reconstruction of the Sun Temple**

Nuzzolo told us that despite a lot of papers and articles about the sun temples there is still not a clear view of their form and function. There are two main schools of thought, and Nuzzolo listed some of the scholars who have published these ideas. The majority of scholars interpret the temples as a mortuary temple and stress the funerary meaning – in part this is because the temples are on the West Bank as is traditional in Egypt for funerary structures. And they are near the pyramids of this dynasty which also implies a connection. But more recently another interpretation has been suggested (particularly by Voss and Verner) – they think the temples weren't intended for the king's funerary cult but instead were for the daily cult of the sun god. More recently yet Verner has suggested the temples are involved in the political legitimisation of the king but Nuzzolo said he doesn't think this can be the whole answer. It makes some sense for Userkaf as he's the first king of the new dynasty, but Niuserra is the fifth and presumably doesn't need such large-scale efforts to legitimise himself.

So there are still several open questions about these structures. These include questions about the architectural features of the temples, about the nature of the cult that is performed there. And also – where are the missing temples? From textual sources it's known that there are 6 of them associated with each of the first six kings of the 5th Dynasty, but there are only these two that have been excavated so far. These open questions are why Nuzzolo is working on these temples, there is still lots to discover. He started his PhD on the subject in 2005, and the team he leads began excavating at Niuserra's temple in 2010.

Having introduced us to the site and the previous work there Nuzzolo moved on to tell us about his own work and the conclusions he's been able to draw. He first stressed that he would be talking about Niuserra's temple – it's where he's excavated and it's the one most of our knowledge is based on, and so all generalisations must be provisional. For instance we have no idea how sun temples have developed over time, as our data is primarily based on this single snapshot.

When they started their fieldwork they had several issues to address. The temple had been partially covered after the excavation in 1905, and when they arrived in 2010 it was covered with a lot of debris and sand. So they needed to begin by re-excavating it, and re-documenting it. Borchardt didn't collect any pottery when he

excavated – he was not interested in that side of the archaeological remains, only in the monuments and more “impressive” artefacts like stone vessels (of which he did find one). So there was no previously documented evidence of the material culture of the daily life of the temple, which is a huge resource of knowledge that hasn't yet been tapped.

Another area where Nuzzolo wanted to re-investigate something that Borchardt had only cursorily excavated was what was underneath the temple as it stands now. Borchardt had very quickly excavated some mud brick structures under one of the pavements, but his conclusions weren't convincing. Nuzzolo's work now suggests that this wasn't phase 1 of the existing temple as Borchardt had assumed, but is instead a different structure that previously occupied the site. Something that came up multiple times during Nuzzolo's talk was that several of Borchardt's interpretations were unconvincing and their re-excavations at the temple provided new evidence to draw better conclusions.

They are using several different approaches to re-investigate the temple. One is to do traditional archaeology at the site – drawing, photographing, measuring the blocks that remain, for instance. They are also looking at the archives from Borchardt's investigation – there are hundreds of photos which weren't part of the official publication, for instance. And these sometimes contradict the publication – Nuzzolo showed us an example of where the publication said a particular wall was undecorated, but the archive photograph showed that it was.

They have also performed laser scanning and photogrammetry of the site. They first did this as part of the preliminary phase of the excavation in 2010. And it's a good thing that they did – as with all excavations in Egypt they were unable to excavate during the Revolution in 2011. When they returned in 2013 looters had damaged the structures, so some of the temple is now only known from their scans. He showed us an example of a staircase that had been destroyed. They then did another round of scanning in 2014, partly because technology had move on since the original scans and partly for fear that more information would be lost if there was more looting. From these scans, photographs and aerial photographs they have been able to make 3D models of the site and new (much more accurate) plans. He showed us their 2018 plan as compared to the old Borchardt one so that we could see the differences. They have also been able from this data to propose a new construction of the temple, with a much firmer basis in reality than Borchardt's.

Nuzzolo next took us through the five main areas of the temple in turn, discussing what they have found and how they're re-interpreting the site. These areas were the north area of the temple (which had storage magazines and a large courtyard), the central area where the altar for offerings was, a southern area with cultic rooms, a large obelisk on the west side of the temple, and outside the enclosure walls to the south a structure called the mud brick solar boat.

The storerooms of the northern storage area are laid out in a block of elongated rooms oriented north to south, all of them with a door at the southern end into an east-west corridor. The door frames of these rooms are decorated with the titles of the king. Nuzzolo said that these two axes are key to the ideas behind the structure of the temple. The east to west axis is the path of the sun, and the south to north axis is the course of the Nile.

He compared this storage area with the contemporary pyramids – his example was Sahura's pyramid which is the best preserved. At the pyramid site there are two sets of storage magazines. On the southern side of the pyramid the rooms are made of rough material with no monumental door frames, and these rooms contained foodstuffs. On the northern side of the pyramid were rooms that look very like these ones in the sun temple, elongated on the north/south axis with monumental door frames. They contained cultic items, not foodstuffs. Given the similarity in form he

thinks that the sun temple storage rooms would also be for cultic items and not food. It's also known from textual evidence that food was offered in the king's sun temple every day, but the texts say that it was then sent on to the pyramid for long term storage. So this is a case where the archaeology is confirming what we see in the texts.

To the south of the east-west corridor is a large area that Borchardt thought was a slaughterhouse. Temples could have slaughterhouses, we've had a previous talk at the EEG from Mohammed Abu el-Yezid about the slaughterhouse in Seti I's temple at Abydos. But Nuzzolo said that this is one of the cases where Borchardt's interpretation of the site is unconvincing. One big obstacle is that the entrance to this area is smaller than the cows or bulls that he was proposing were slaughtered here! So it's much more plausible that the meat offerings were brought in after they had been butchered. What this area does have is a row of 10 alabaster basins – but they don't look like the sort of basin that is used to catch the blood from slaughtering animals (which would be connected with drains to some sort of sewer system). Instead they are lined up on the eastern side of the courtyard with holes near the top of the western side of each basin. To their west was a grooved pavement with tracks to let liquid flow from the basins in an east to west direction following the course of the sun.

Part of Borchardt's evidence for his interpretation was an inscription on the basins, which he interpreted as the name of the slaughterhouse. But Nuzzolo said that we now know that slaughterhouses are named differently, and gave us the example of the one at Neferefre's pyramid which was excavated by Verner. So altogether it seems implausible that it's a slaughterhouse and instead Nuzzolo interprets it as a purification area for the offerings that were going to be made to the sun god. The offerings were put on the grooved pavement and the basins were filled and then the water allowed to run over them from east to west. Nuzzolo told us that a similar basin has also been found in the court of Djoser's pyramid complex.

To the west of the storerooms and this large purification area is another small area of purification. Again it has basins, but in this case the water will flow from south to north following the course of the Nile. So both of the key axes of the temple have a purification area associated with them.

The main part of the temple, in the centre, contains the altar. This consists of four alabaster slabs laid out in a square and aligned with the four cardinal directions. In the centre of this square is a circular slab which can be seen as a stylised form of the sun god on which the offerings were put.

Borchardt thought this was surrounded by a low wall with no doors, and not high enough to keep anyone in the courtyard from reaching it. However Nuzzolo's re-excavation found doors, and large door frames with inscriptions around them so there must have been a more substantial wall and more controlled access. One of these was actually found by Petrie in the courtyard of the temple of Ptah at Memphis – this was rebuilt by Ramesses II using material from the earlier temples of Abusir, including this frame which is now in the Cairo Museum. This one is particularly interesting as it doesn't fit with most of the door sites at the temple – except for the area between the altar and the obelisk to the west. Borchardt's reconstruction had left this area empty, as he had not found any evidence of structures here. But he did note that this meant that there were no shrines specifically to celebrate the cult of the sun. Nuzzolo's new evidence supports a reconstruction that has shrines between the altar area and the obelisk.

The southern part of the temple is an area which contains two rooms that Nuzzolo referred to as "cultic areas". One of these, the Chapel, is decorated on the interior walls with scenes from the sed festival of the king. It's the most complete set of scenes related to this festival that we have. So as well as the ritual run, which is

often seen, there are also scenes of a procession of the gods of Egypt collecting in the temple and venerating the sun god. There are also scenes of the washing of the feet of the king, which is a ceremony that isn't seen depicted anywhere else until the reign of Osorkon II (in the 22nd Dynasty in the Third Intermediate Period more than 1500 years later). The book that has already been published has a lot of information on the decoration in this chapel but he didn't have time to go into it in detail in the talk.

The other room is called the Room of the Seasons because its decoration depicts the seasons. Each group of scenes has a large depiction of the personification of the season, followed by registers showing the activities and natural scenes associated with that season. And these in turn are followed by registers depicting the personifications of the Nomes. And in each case the procession is moving to the north, towards the obelisk.

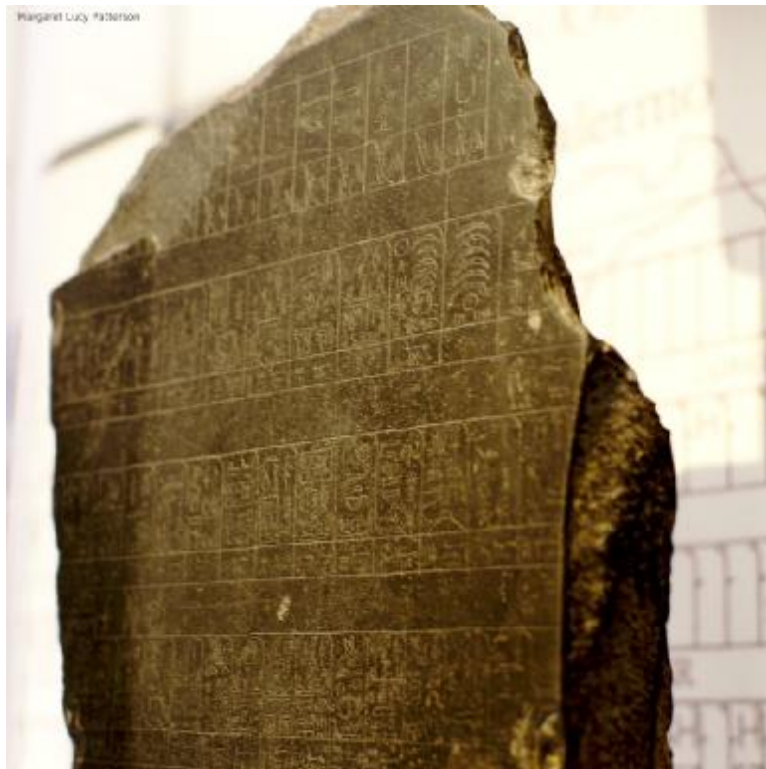
The relief on the wall at the focus of the processions shown on the other walls was removed by Borchardt and taken to Berlin. Thankfully he also made a drawing of it, because it was destroyed during World War II. It wasn't complete even when it was found, and Borchardt's reconstruction in the original publication said that there was no image of the king in front of the sun god on this relief. The idea was therefore that this room focused completely on the sun god and not the king. However Nuzzolo and his team found some more pieces of the relief when they were re-excavating. Two of these are important for re-evaluating the decoration scheme: a piece with part of Niuserra's name and a piece with part of his face. By comparing these with other reliefs it was possible to work out that this was the king wearing the atef crown, which would make him a deified king. Nuzzolo said that their new reconstruction has the king kneeling in front of the god, being deified in return for his offerings. This type of scene appears with other kings in other temples – for instance, there are images of Seti I at Abydos where the same thing is happening: with Seti I presenting himself as a deified being in front of the other gods, seeking re-deification. So this changes the focus of this room from being the sun god to the deified king.

Borchardt's reconstruction of the obelisk at the west of the temple was monumental in scale. He thought that it had a very large pedestal and a broad obelisk on top of it. Inside the pedestal area there is a corridor, which Borchardt's reconstruction showed spiralling round twice rising up inside the pedestal. But Nuzzolo told us that he found no evidence that it did this, instead it appears to make three sides of a square after starting with a north running passageway from the entrance from the Room of the Seasons. After that it turns left (heading west), then right (north) and right again to go east and ending at the north eastern corner.

Nuzzolo said that Borchardt was clear that he was putting forward his reconstruction as a suggestion only – he was aware he had little evidence to support it (or anything else!). His only evidence was one small block that he measured to get a slope and then extrapolated from there based on a depiction on a relief of the obelisk at a Sun Temple. But as Nuzzolo pointed out that would mean that an awful lot of the building material had vanished from the site (based on overlaying the proposed reconstruction over the parts that do remain). There are also other indications that it's not an accurate reconstruction. For instance looking at texts from the period the determinative for the names of these sun temples has a very thin looking obelisk. And the structure is built on a man-made hillock, which wouldn't support the weight of a structure as large as the one Borchardt proposed. There's also the fact that this is the secondary monument, and this reconstruction would make it larger than the pyramid (which is the primary monument)! So that all seemed rather implausible to Nuzzolo and he and his team started to investigate every block that's left from the structure. They took this data and plugged it into a piece of software to generate an architectural model (ABIM software:

Archaeological Building Information Model). The textual evidence was also helpful – there’s a part of the temple that’s written down as being 20 cubits by 20 cubits (though sadly the height dimension isn’t preserved). The only part of the temple that this could plausibly match is the obelisk pedestal, and so that gave them another constraint for the model. The model suggests the pedestal was originally 15m tall. In addition in 1976 Verner had found a pyramidion, that he believed came from the sun temple (there’s no hard evidence to connect it to the site, so it can’t be said for sure). Taking all this together Nuzzolo proposes that there was a monolithic obelisk on top of the pedestal (like what one thinks of when thinking about Ancient Egyptian obelisks) that was ~10m tall. Nuzzolo says that they still need to investigate this further, but this is their reconstruction at the moment.

Outside the temple proper on the southern side was a structure that Borchardt described as a “mud brick solar boat”. This is enormous – the photograph had a man for scale whose head came to less than halfway up the outer wall. Nuzzolo said that they plan to re-excavate this in the future. So far all they have done is confirm where it is and that the structure is still there – they’re not yet ready to undertake the excavation and preservation of it. On the Palermo Stone there is mention of the building of one of these structures at the sun temple of Neferirkara. It’s referred to as the “Maat(y)” boat built for Re.



The Palermo Stone

Nuzzolo now moved on to summing up the conclusions he’s been able to draw from the last decade of excavation at the site. He now sees the sun temple as serving more than one function – it’s the place of the daily celebration of the sun cult, and it’s also the place where the king’s power is renewed through the sed festival. This regeneration of the king is part of a cosmic cycle of regeneration, the cycle of nature. The layout of the temple, the symbolism of its sacred spaces and the decorative scheme all come together to make these two cycles of regeneration be recapitulated for eternity. And even though this temple is built to last forever it has a place in the world of the living, celebrating the sun cult and the king’s regeneration.

He explained that he sees the pyramid and the sun temple as two faces of the same coin. There are similar areas in each complex, and the axes they’re based around are similar. But there are also important differences related to the differences in

their function. For instance the alabaster purification area is only found in the sun temple. Instead at the pyramid there's a limestone area connected to Osiris. The sed festival and cycle of nature decoration is only found in the sun temple. The equivalent part of the pyramid is connected with the earthly rulership of the king. Nuzzolo also noted that it's interesting that the sed festival is in the sun temple, rather than the pyramid – this connects the regeneration of kingship with the sun. The stones are also different in the two temples: in the sun temple the stones are things like alabaster, and in the pyramid they're basalt and limestone.

Nuzzolo's view of the two complexes is that they had two different but complementary roles. The king is a real mortal man who needs regeneration in the pyramid and he is also divine and needs regeneration as the son of the sun in the sun temple. The pyramid is thus associated with the ba and the body of the king is there after his death. The sun temple is about the royal ka and the idea of eternal kingship. Every day the offerings were moved from the royal residence to the sun temple and then to the pyramid. This is a complete cycle that guarantees the eternal regeneration of the king in both the earthly and afterlife realms. And as these complexes are built in stone this cycle will continue for eternity. This is why each king needed his own temple. If this was "just" a temple for the sun god's cult then you'd expect it to be like Karnak where the kings each add to the temple of Amun rather than build a new one of their own. But the sun temple is also for the eternal regeneration of a specific king, so each ruler needs his own.

In the Q&A session Nuzzolo returned to this idea and pointed out that this association with the sun god is not a novelty in the 5th Dynasty, it's more that they take it further. In the 4th Dynasty the association was in the afterlife, and so the pyramid was the essential monument. But in the 5th Dynasty the king is identifying himself with the sun god and asserting his divinity during his own lifetime.

Nuzzolo wrapped up by telling us a bit about what the future of their investigation is. One question he particularly wants to answer is where the missing temples are. Using radar and geophysical techniques they have identified a potential site for one of them, and so they aim to excavate there in the future.

This was a fascinating talk – I hadn't previously known much about the sun temples so I learnt a lot. It's also another example of how much can be discovered by going back to previously excavated sites and re-investigating them with modern methods.