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Title: The solar altar in the Temple of Hatshepsut at Deir el-Bahari: Architecture and ideology

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Abstract: In a recent article Teresa Dziedzic presented a theoretical reconstruction of the solar altar in the Temple of Hatshepsut at Deir el-Bahari, with two obelisks standing on the top of it. From both a technological/logistic and an ideological point of view this hypothesis seems untenable. An alternative reconstruction may be offered in agreement with the archaeological evidence and the ideological program of the temple. Statues of the king and of Amun-Ra placed on the altar served as focal points of an early version of the ritual of ‘joining the sun-disk’.

Keywords: Deir el-Bahari, Hatshepsut, temple, sun cult, solar altar, obelisks, statues

مذبح الشمس في معبد حتشبسوت في الدير البحري . العمارة والأيدولوجية
Andrzej Ćwiek

الملخص: في مقال نشر حديثاً Teresa Dziedzic قدمت نظرية إعادة بناء مذبح الشمس في معبد حتشبسوت في الدير البحري مع مسلتين قائمتين على الجزء العلوي منه. وعلى حد سواء وجهة نظر تقنية ولوجستية وأيدولوجية فإن هذه النظرية لا يمكن الدفاع عنها. إن عملية إعادة البناء البديل قد تعرض بالإتفاق مع الأدلة الأثرية والبرنامج الإيدولوجي للمعبد. إن تماثيل الملك وآمون-رع التي وضعت على المذبح كانت بمثابة نقطة محورية في النسخة المبكرة في طقوس إنضمام قرص الشمس .

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RESEARCH



ABBREVIATIONS

<i>AA</i>	<i>Archäologischer Anzeiger; Jahrbuch des Deutschen Archäologischen Instituts</i> (Berlin)
<i>ANM</i>	<i>Archéologie du Nil Moyen</i> (Lille)
<i>ASAE</i>	<i>Annales du Service des Antiquités de l'Égypte</i> (Cairo)
<i>AV</i>	<i>Archäologische Veröffentlichungen, Deutsches Archäologisches Institut, Abteilung Kairo</i> (Berlin–Mainz am Rhein)
<i>BAAL</i>	<i>Bulletin d'archéologie et d'architecture libanaises</i> (Beirut)
<i>BAH</i>	<i>Bibliothèque archéologique et historique</i> (Paris)
<i>BAR IS</i>	<i>British Archaeology Reports International Series</i> (Oxford)
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i> (Ann Arbor, MI)
<i>BCH</i>	<i>Bulletin de correspondance hellénique</i> (Paris)
<i>BdE</i>	<i>Bibliothèque d'étude</i> (Cairo)
<i>BIFAO</i>	<i>Bulletin de l'Institut français d'archéologie orientale</i> (Cairo)
<i>BSAA</i>	<i>Bulletin de la Société d'archéologie d'Alexandrie</i> (Cairo)
<i>BSFE</i>	<i>Bulletin de la Société française d'égyptologie</i> (Paris)
<i>CCE</i>	<i>Cahiers de la céramique égyptienne</i> (Cairo)
<i>EtTrav</i>	<i>Études et travaux. Travaux du Centre d'archéologie méditerranéenne de l'Académie des sciences polonaise</i> (Warsaw)
<i>FIFAO</i>	<i>Fouilles de l'Institut français d'archéologie orientale</i> (Cairo)
<i>GAMAR</i>	<i>Gdańsk Archaeological Museum African Reports</i> (Gdańsk)
<i>GM</i>	<i>Göttinger Miszellen</i> (Göttingen)
<i>IAMS</i>	<i>Institute of Archaeo-Metallurgical Studies</i> (London)
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt</i> (Boston–Princeton–New York–Cairo)
<i>JEA</i>	<i>Journal of Egyptian Archaeology</i> (London)
<i>JGS</i>	<i>Journal of Glass Studies</i> (Corning, NY)
<i>JJP</i>	<i>Journal of Juristic Papyrology</i> (Warsaw)
<i>JRS</i>	<i>Journal of Roman Studies</i> (London)
<i>MDAIK</i>	<i>Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo</i> (Wiesbaden)
<i>OIP</i>	<i>Oriental Institute Publications</i> (Chicago)
<i>OLA</i>	<i>Orientalia lovaniensia analecta</i> (Louvain)
<i>PAM</i>	<i>Polish Archaeology in the Mediterranean</i> (Warsaw)
<i>PSAS</i>	<i>Proceedings of the Seminar for Arabian Studies</i> (London)
<i>SAAC</i>	<i>Studies in Ancient Art and Civilisation</i> (Kraków)
<i>SAK</i>	<i>Studien zur altägyptischen Kultur</i> (Hamburg)
<i>SAOC</i>	<i>Studies in Ancient Oriental Civilization</i> (Chicago)
<i>WVDOG</i>	<i>Wissenschaftliche Veröffentlichungen der deutschen Orient-Gesellschaft</i> (Berlin–Leipzig)

THE SOLAR ALTAR IN THE TEMPLE OF HATSHEPSUT AT DEIR EL-BAHARI: ARCHITECTURE AND IDEOLOGY

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Abstract: In a recent article Teresa Dziedzic presented a theoretical reconstruction of the solar altar in the Temple of Hatshepsut at Deir el-Bahari, with two obelisks standing on the top of it. From both a technological/logistic and an ideological point of view this hypothesis seems untenable. An alternative reconstruction may be offered in agreement with the archaeological evidence and the ideological program of the temple. Statues of the king and of Amun-Ra placed on the altar served as focal points of an early version of the ritual of 'joining the sun-disk'.

Keywords: Deir el-Bahari, Hatshepsut, temple, sun cult, solar altar, obelisks, statues

In a recently published article, Teresa Dziedzic presented a hypothetical reconstruction of the original appearance of the solar altar in the Temple of Hatshepsut at Deir el-Bahari (Dziedzic 2013). After an introduction aimed at giving a theoretical background for her concepts (see Addendum below), the author proposed that the altar was once furnished with a pair of huge obelisks. This hypothesis seems untenable for a number of reasons, both technological/logistic and ideological.

According to Dziedzic, the traces of objects once standing on the altar might suggest that there were two obelisks flanking an offering table. She reconstructed these obelisks as being over 5 m high, with bases 1.05 m long to the side. The stone was not specified. One is

tempted to suggest limestone or granite as the most probable material, since quartzite has not been recorded anywhere in the Temple of Hatshepsut, while sandstone was used in relatively small quantity and mostly in the foundations. Assuming the specific gravity of compact limestone as 2.65–2.85 g/cm³ and that of Aswan granite as 2.60–3.20 g/cm³ (Arnold 2003: 40), one may estimate the weight of monoliths of such dimensions as almost 15 tons each. Sandstone obelisks would be only slightly lighter, given the specific gravity of this rock as 2.00–2.65 g/cm³. This estimate may be compared to obelisks in the Ra-Horakhty chapel of the great temple of Ramesses II at Abu Simbel. The weight of those two obelisks is in the range of 2.5 t each (calculated after the dimensions in Kuentz 1932: 45–50, Pl. XIII). Despite

being so much smaller, however, the obelisks at Abu Simbel did not stand on the altar, but outside, at its corners (Badawy et al. 1989; see also Habachi 1984: 98 and Pl. 25; Quirke 2001: 96, Fig. 42).

Further analysis reveals a number of ramifications of the 'obelisk hypothesis'. Since the second, larger altar (on which the obelisks would be placed) was presumably built over the smaller one only after some time had elapsed, it is probable that the walls of the solar complex were already in existence. This would certainly make the introduction of big monoliths into the courtyard very troublesome. What is even more important, no special enforcement was made, which seems improbable in the case of the postulated heavy obelisks to be placed on the altar. Instead, the new altar was constructed of relatively small limestone blocks over the earlier one. As noted already by Edouard Naville: 'The floor of the altar is in bad condition, and formed of irregular pieces fitted together', moreover, 'It will be noticed that neither the stone floor on which the altar stands nor the altar itself is quite level (1895: 8). The resistance of this construction against some thirty tons of weight pressing in two points at the sides would be very limited, and certainly the Egyptian architects would undertake every possible action to enable placing the obelisks safely on the platform and to protect it from being crushed. However, no traces of any special foundation (the altar is built directly on the courtyard floor) were discovered, nor

were there bases of any kind, nor grooves in the upper surface of the altar, which could have helped in putting up such obelisks (see Isler 1976 for techniques of erecting obelisks). What is easy to dismiss for a modern architect, working in a digital reality, would certainly have been a concern for ancient architects.

No such obelisks or anything that might be assigned to them have been found at Deir el-Bahari (or anywhere on the West Bank as a matter of fact).¹ The only fragments of hard stone found in the Complex of the Sun Cult were pieces of red granite that may be assigned to statues and an offering table.² And though the decoration of the Southern Lower Portico is *in extenso* devoted to the transport and erection of the female pharaoh's Karnak obelisks, no depiction nor mention is made in the temple of Deir el-Bahari concerning the alleged obelisks on the solar altar.

The technical improbability of obelisks sited upon the altar is but one of the arguments against the discussed hypothesis. More importantly, there was no reason for having the obelisks there. Obelisks placed in the royal sphere belonged to the Heliopolitan tradition and before the New Kingdom were set only in Heliopolis (setting aside the issue of the obeliskoids in the Fifth Dynasty sun temples, for which see recently Nuzzolo and Pirelli 2011). Their introduction into Karnak (aimed to be the 'southern Heliopolis') in the Eighteenth Dynasty is attributed to

¹ The identification by Wilkinson (1835: 90) of the remains at the beginning of the causeway, in front of the temple gate, as bases of once existing obelisks, was subsequently disproved by later scholars. The structures appeared to be square tree-pots.

² The author's own research based on the excavation notes of the Polish-Egyptian Archaeological and Conservation Mission, and on Herbert E. Winlock's notebooks in the Metropolitan Museum of Art archive. The author is deeply grateful to Dorothea Arnold for granting access to this archive.

Thutmose I (Gundlach 2009), whose plans were followed and developed by Thutmose II and Hatshepsut. She was probably responsible for erecting the obelisks in the name of her father and husband (for a recent discussion of this issue, see Larché 2010: 301–303; Gabolde 2012: 467–468; 2014).

Anyway, these monoliths were related in the ideology to the central seat of the sun god (Ra/Atum at Heliopolis, Amun-Ra at Karnak) on the east bank. Obelisks were usually placed in pairs in liminal places, flanking the entrance to the internal parts of the temple. Their cosmological symbolism referred somehow to the idea of the *benben*, the first material object to have emerged from the primeval abyss (see, e.g., Wallet-Lebrun 2009: 70), and to the daily journey of the sun, shining on the obelisk tops sheeted in gold or electrum. The obelisks represented the connection between the earth and the sun, acting as an embodiment of the pharaoh, the only intermediary between humanity and the divine sphere. This identification was reinforced by the texts, including references to the king's 'jubilee', the Heb-Sed. They were therefore connected with the earthly life of the ruler and his role as the representative of the sun god (Bell 2002; Quirke 2001: 134–142). The obelisks did not appear in the West-Bank temples of "millions of years", which joined into one the cults of the deceased pharaoh and the gods, first of all the sun god Amun-Ra and the sky goddess Hathor, with a strong emphasis on rebirth and regeneration. Abu Simbel is much later and not a royal mortuary temple; moreover, as stated above, the obelisks were much smaller and not standing on the altar. It is thus no parallel.

A different reconstruction of the original appearance of the solar altar in the temple of Deir el-Bahari, in accordance with the archaeological evidence, and the history and ideology of *Djeser-djeseru* may be proposed, following ideas put forward by Janusz Karkowski. He suggested that the ritual of *hnm jtn*, 'joining the sun disk', known from Graeco-Roman temples (but possibly present already in Akh-menu, according to Barguet 1962: 291 with No. 2), was already enacted in the Temple of Hatshepsut. The solar altar would stand at the termination of a ritual path beginning in the Complex of the Royal Mortuary Cult, which served the regeneration and rebirth of the king, at the same time being a reference to the yearly sun journey (Karkowski 2003: 84, 107). The ideology of the Complex of the Sun Cult was concentrated on the hidden part of the sun's journey and transformations of the sun god leading to his rejuvenation, and on the reconfirmation of Hatshepsut's kingship (Karkowski 2003: 109; see Stadelmann 1969). It seems that the two main subjects of the Egyptian ideology of kingship were present at the beginning and end of the ritual cycle: birth/rebirth in the Complex of the Royal Mortuary Cult at the southern end of the Upper Terrace, and coronation/re-confirmation of rule in the Complex of the Sun Cult at the northern end.

This may be confirmed by the abovementioned evidence of red granite fragments found during excavations in the Complex of the Sun Cult. No other hard stone fragments were found there, and the pieces seem to come from statues and possibly also from an altar/offering table. On the other hand, the Complex of the Royal Cult was the only area where pieces

of black (grano)diorite were recorded. They came from the statues of Hatshepsut and, probably, Thutmose I (see below). These discoveries enable a theoretical restoration of the statuary program of the seated royal figures, related to the ritual path as described by Karkowski. In symbolism, black diorite was royal and Osirian, red granite was solar; the position of the black and red statues reflected the beginning and end of the imaginary and ritual royal path [Fig. 1]. After coming from KV 20, their common tomb in the Valley of the Kings, and emergence from the Netherworld through the false doors in the west walls of the Chapel of Hatshepsut and Chapel of Thutmose I, the kings were imagined to move around

the Upper Terrace, which was done in ritual form by way of a procession with portable statues. Having visited the Main Sanctuary of Amun, they passed final regeneration rituals in the Complex of the Sun Cult, and eventually came back to the tomb through the west wall of the niche in the Upper Anubis Shrine. The need for help from Anubis in this transfer was the reason for the addition of this room to the solar complex. The cycle of rebirth would have thus been completed (Ćwiek 2014).

It may be suggested that black (grano)diorite statues of Hatshepsut (MMA 30.3.3; Keller 2005: 159) and Thutmose I³ (MMA 31.3.168; Keller 2005: 161, attributed to Hatshepsut) were once in the Complex of the Royal Cult (in the

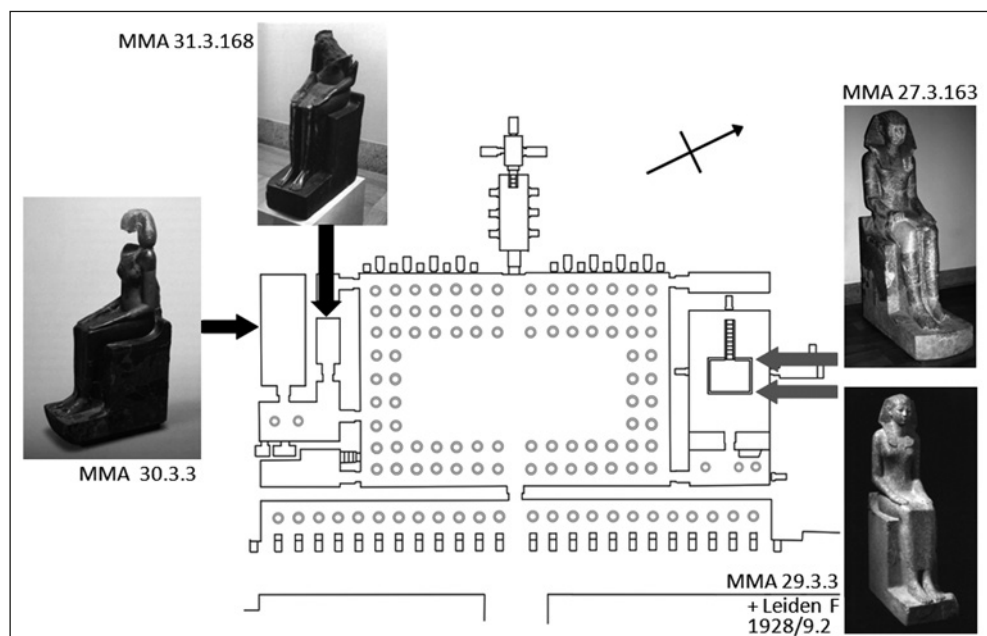


Fig. 1. Hypothetical attribution of the royal seated statues to the rooms of the Upper Terrace of the Temple of Hatshepsut (Plan A. Ćwiek; photos after Keller 2005)

³ I am indebted to Dorothea Arnold for this attribution.

Chapel of Hatshepsut and the Chapel of Thutmose I, respectively), and the red granite statues of Hatshepsut (MMA 29.3.3 + Leiden F 1928/9.2; Keller 2005: 170–171; and MMA 27.3.163; Keller 2005: 160) in the Complex of the Sun Cult (*contra* Budzanowski 2003).⁴ One may even propose a precise location for the statues attributed to the solar complex: red granite figure MMA 29.3.3 + Leiden F1928/9.2 (a smaller one, with female dress and texts, see Tefnin 1979: 6–11) was intended to be placed on the earlier, smaller altar and the bigger statue MMA 27.3.163 ('male' in attitude and texts, which may point to its later date, see Tefnin 1979: 16–18) on the enlarged altar. The king's statue may have been juxtaposed with that of Amun, the offering table standing between them.

A coronation group would also be possible, analogous to the triad of Amenhotep III, Seth and Horus, reused by Ramesses III at Medinet Habu, but here the gods would be Amun-Ra and Ra-Horakhty. Such a theoretical reconstruction might explain a curious feature of the decoration of the solar complex: both the relief on the western reveal of the gate leading to the vestibule and the one in the western

niche of the open court, showed these gods crowning Hatshepsut. These two places, at the entrance and the stairs to the altar, were the beginning and the end of a part of the ritual path, like brackets delimiting and defining what was in between; either a statue group placed on a common base, or a series of three independent, juxtaposed statues. Though there is some evidence for one-piece statue groups of Hatshepsut and deities (Seidel 1996: 127–134), it is the latter possibility which seems more probable. Amun-Ra and Ra-Horakhty figures might have flanked Hatshepsut, who occupied the place in between, while the offering table would stand in the middle of the altar. The female king's figure would be one of the red granite statues mentioned above. The gods' statues may only be guessed, given that they were certainly removed and possibly destroyed during the Amarna Period.

A possibility, which may be considered as the most probable one, joining the aforementioned hypotheses, is that Hatshepsut and Amun-Ra were represented in form of statues, while Ra-Horakhty only appeared symbolically with the sun rays shining at the altar.

ADDENDUM

The present paper is not intended to be a review of the article of Teresa Dziedzic. However, one has to stress that the introductory part of that article, anticipated as an overview of Egyptian solar architecture (and aimed at supporting the presented thesis), is regrettably superficial, not up-to-date and full of mistakes. Some of them at least should be corrected:

"Monumental solar temples, eight in all ... were raised by every pharaoh of the Fifth Dynasty, starting with Userkaf" (Dziedzic 2013: 636). "The last king of the Fifth Dynasty to raise such a sanctuary was Djedkare-Isesi" (Dziedzic 2013: 637). In fact, only six sun temples of the Fifth Dynasty are known from written sources, two of which were explored

⁴ The existence of a statue of Thutmose I in the Complex of the Sun Cult, which would seem logical, must remain an open question.

archaeologically. The number eight indeed occurred by error in Arnold's *Die Tempel ägyptens*, but this has been corrected in his later works (e.g., Arnold 2003: 234–235), and all recent literature on the subject, which Dziedzic had not consulted, gives correct data (see, e.g., Verner 2003; 2005; Voss 2004; Krejčí and Dušan 2006; Nuzzolo 2006; Janák, Vymazalová, and Coppens 2011). The last king of the Fifth Dynasty who built the sun temple was Menkauhor. Neither Djedkare nor Unis built such a monument.

“Of the eight solar sanctuaries that are known, only two – Abu Gurob and Abu Simbel – have been excavated” (Dziedzic 2013: 637). One should understand ‘Userkaf’s sun temple’ instead of ‘Abu Simbel’ which is the site of the temples of Ramesses II in Nubia.

“A few meters to the south of this sanctuary there was another temple oriented towards the valley and containing the tomb of Echnaton” (Dziedzic 2013: 637). Obviously, Arnold’s description of the layout of Amarna has been misunderstood. The tomb of Akhenaten

is located in a desert valley (Wadi Abu Hassah el-Bahari, the ‘Royal Wadi’) 10 km east of the city, and the axis of his mortuary temple, the so-called Small Aten Temple, south of the Great Aten Temple in the center of Amarna, is aligned with the tomb (see Reeves 2001: 116, 125–130).

“A sanctuary furnished with typical solar imagery, that is, a pair of pylons, pair of obelisks with high altar and baboons worshipping the sun, existed also to the north of the temples in Abu Simbel” (Dziedzic 2013: 637). The solar complex at Abu Simbel is located in the northern quarter of the great temple of Ramesses II, outside its rock-cut parts, and certainly south of the temple of Nefertari, thus not ‘north of the temples’. Moreover, its plan includes not ‘a pair of pylons’, but only one pylon of a peculiar shape, with two towers but without the usual gate between them (Badawy et al. 1989). Though the ancient Egyptians used sometimes a dual form of the term for such a structure (*bḥntj*), in modern Egyptology a monumental gate with two towers flanking it is called a pylon in the singular.

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