BECAUSE YOU LOVE ANCIENT EGYPT



WOMEN OF POWER

PHOTO © AXEL HYDRE





THE ENIGMATIC MUMMY FROM KV55: PART 1

M. Traugott Huber

When tomb KV 55 was discovered in 1907, a crumbling mummy was found inside that has perplexed Egyptologists ever since. Who was it? The answer promises to identify the father of Tutankhamun.



RAMESSES II'S TEMPLE **PALACE** AT ABYDOS

Jeff Burzacott

This issue's ARCE Update highlights a discovery that forever changes the archaeological landscape of Abydos.



RIVER **SPIRIT**

Betsy Kissam

The incredible photography of **Chester Higgins** highlights some of the shared cultural legacies between the ancient people who made up the empires of Aksum (modern Ethiopia), Kush (Sudan) and Kemet (Egypt).



LIGHT ON THE BENT PYRAMID

Franck Monnier

A new photogrammetric survey of Sneferu's Bent Pyramid at Dahshur was carried out in 2018. The data collected provided significant and valuable new information about the construction of the monument.



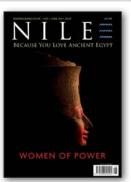
A **ROYAL** AFFAIR

Diana T. Nikolova

The Ptolemies were as ruthless as they were incestuous. In this particular dynasty, the end always justified the means.

Diana T. Nikolova looks at Ptolemies VI and VIII (and Cleopatras II and III), and their cosy-yet-murderous relationships.





THE COVER

WOMEN OF POWER AND INFLUENCE

Brian Alm

The second article in a three-part series on the remarkable royal women of ancient Egypt who, out of duty or ambition, stepped beyond the ancient world's traditional roles and shaped Egypt's history.

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subscription offer.

FROM THE EDITOR

Facebook page may recall seeing a post including this recent image (right) from the fabulous Temple of Isis at Philae. It's a sunshade perforated with hieroglyphs—and we love it! We were also curious about its background, so we did a little research.

The shade was created by Egyptian design house Shosha Kamal, and is dubbed "When the Sun Talks". The company's founder, Shosha Aboulkheir, recently announced that she was "honoured and privileged to collaborate with the Ministry of Antiquities and UNESCO on redesigning the tourist experience in all UNESCO world heritage sites in Egypt.... The tourist experience redesign includes designing sunshades, seating areas, signage, and street lamps.

"When the Sun Talks is a design inspired by the power of the sun for ancient Egyptians. With every sunrise... the shadows on the ground will tell the story of the monuments. Our design philosophy is to let the sun, with all its glory, speak for the site."

In case you are wondering, as far as we can tell, the hieroglyphs created by the sunshade don't really say anything, although that doesn't lessen the impact one little bit.

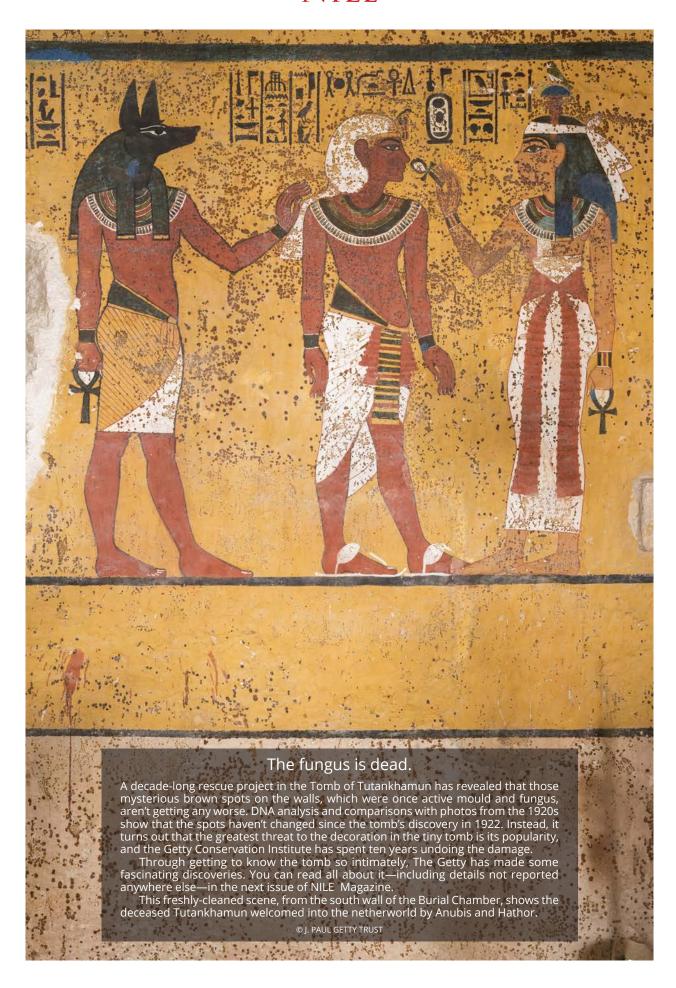
Similar shades will be appearing as part of upgrades to



facilities at sites throughout Egypt, including Abu Simbel, Giza, Dahshur, Karnak and Saqqara, and will, in case you are also wondering, include seating for visitors.

Welcome to issue #20. As always, I hope you enjoy your NILE time!

Jeff Burzacott ≡ editor@nilemagazine.com.au





THE ENIGMATIC



ITS IDENTITY

MUMMY FROM



FINALLY

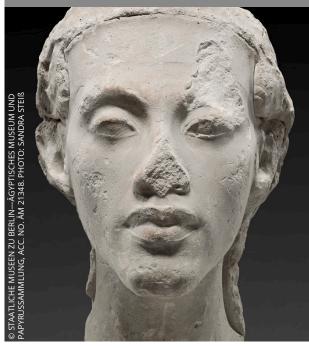
KV 55: PART 1



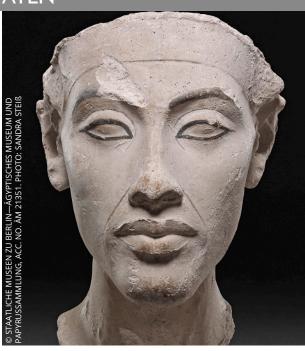
RESOLVED

NILE #20 | JUNE-JULY 2019

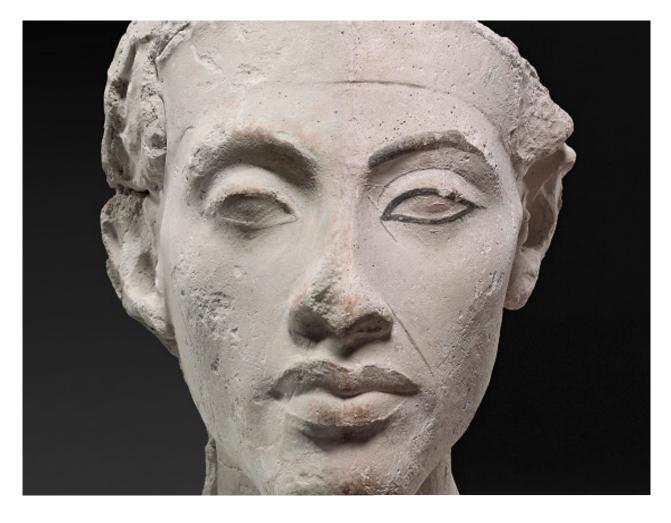
AKHENATEN

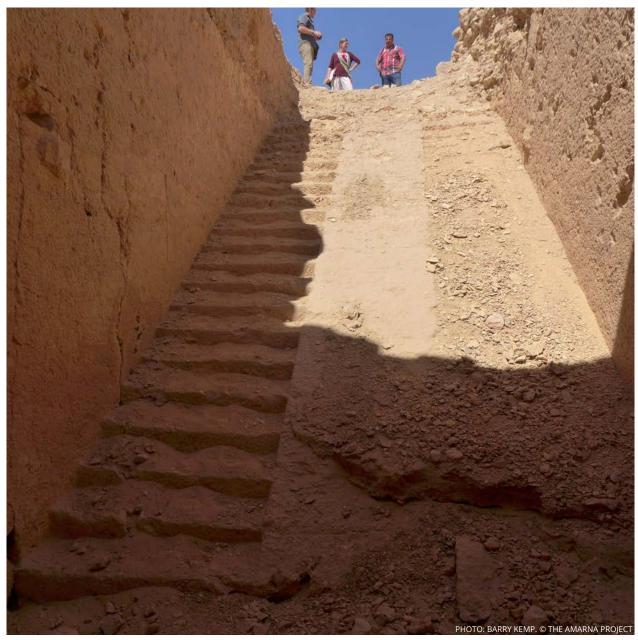


The face of an unorthodox pharaoh. (ABOVE) A plaster model of a younger Akhenaten in his early 20s, and (RIGHT) a second version from the same age. These busts were used as models from which sculptors would create stone effigies.



These two heads from Amarna perfectly display the tell-tale characteristic traits of Akhenaten, and are remarkably consistent; divided down the centre, each face is almost a mirror image of the other (BELOW).





Looking up at the entrance ramp of Amarna tomb TA 27; twenty-one steps flank the central ramp used for sliding the royal sarcophagus into the tomb.

TA 27 was begun in confident, regal style, and was given a

wide entrance very similar to that for Akhenaten's tomb. This tomb, however, reached only 13 m into the Amarna bedrock before work was halted. The most likely candidate for the tomb is Smenkhkare, who ruled for only one year.

26 leave us in no doubt that it is the tomb of Akhenaten.

The other pharaonic tomb is TA 27, believed to be of regal status by its prominent and stand-alone position in the main wadi, the entry with stairs including the central ramp for the royal sarcophagus (above), and the large dimensions of its doorway and corridor. In fact, this is the only other tomb to very closely resemble Akhenaten's TA 26. However, TA 27 is far from ever having been finished, and wasn't usable for a burial. Only the first corridor was near to completion. The true owner of TA 27 was never recorded, and three Amarna pharaohs have been proposed: Smenkhkare, Nefertiti, and Tutankhamun.

The latter can be safely ruled out. Tutankhamun's

accession at the tender age of 9 years was unexpected—the consequence of the untimely death of his predecessor and mother-in-law, Pharaoh Ankhkheperure Neferneferuaten (Nefertiti), who died prematurely around 34 years of age. Nefertiti had every chance to rule Egypt for another 20 years and reach an age similar to her mother-in-law, Queen Tiye, at over 50 years, or her father, the later Pharaoh Ay, at over 60 years. Therefore, it is very unlikely that digging for TA 27 had begun for young Tutankhamun before he became pharaoh.

On Tutankhamun's accession, it seems unlikely that he would commission a new royal tomb at Amarna. Several experts suggest that the royal court's subsequent move from



UPDATE FROM ARCE

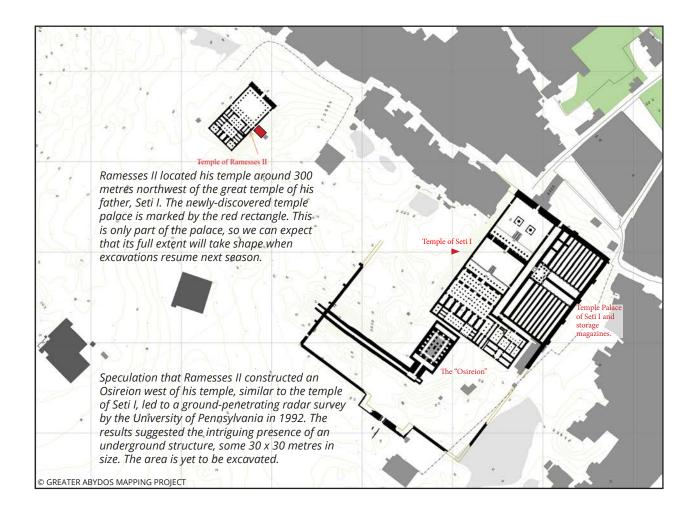
CURRENT RESEARCH, EXCAVATION AND CONSERVATION PROJECTS IN EGYPT

THE TEMPLE PALACE OF RAMESSES II AT ABYDOS

A new discovery by the New York University Expedition to the Temple of Ramesses II in Abydos forever changes the archaeological landscape.



This is the newly-discovered Temple Palace of Ramesses II, adjacent to the king's Abydos temple. It was here that the king would have retired after a long journey to Abydos for ceremonial and ritual duties, and where he would have held private audiences with courtiers and officials.



round 1280 B.C., a young Ramesses II—ordered the construction of a new temple on the noisy Abydene landscape. At this point, work was still underway on the large nearby temple of the recently-deceased king, his father Seti I. Abydos rang to the sound of chisels tapping out delicate reliefs, and the chants (and grunts) of work crews hauling heavy limestone blocks into place. This frenzy of activity marked the large-scale reestablishment of the cult of Osiris at Abydos after almost six decades of neglect, driven by the Aten-centric philosophy of King Akhenaten.

Ramesses built his new temple around 300 metres northwest of his father's, and decorating it with reliefs and hieroglyphic text would continue throughout his life.

It appears that Ramesses intended that his new temple would stand forever. An inscription on the southern wall of the temple's Second Court (the right-most court in the diagram on the opposite page), records a speech made by Ramesses II where he addresses future pharaohs and asks that they bring offerings (live captives) to his temple:

"Oh you kings of Upper and Lower Egypt who shall come hereafter....

you shall capture those who rebel against Egypt.

May you present (some) of them to my august temple!"

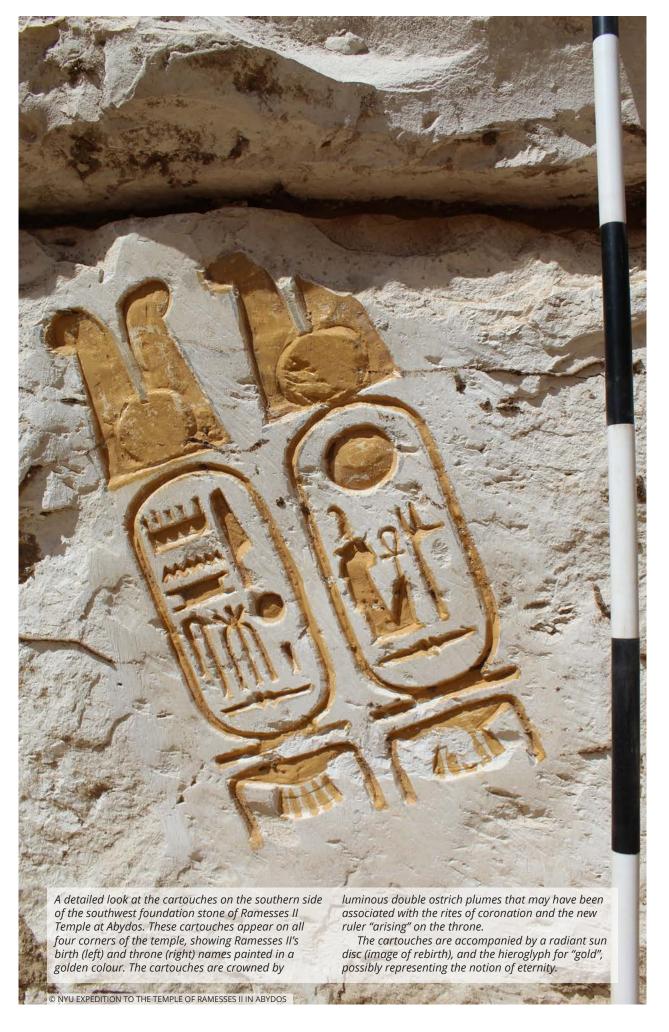
While the temple walls once stood around eight metres high, over the millennia they have been reduced by theft to just over two. Those bottom two metres, however, are renowned for the graceful quality of the reliefs and the vibrant colours of the original paint, captured on porcelain-like, fine-grained limestone.

It may be that reuse of the temple by Coptic Christians in the 4th century A.D. helped preserve the reliefs. Usually, such occupation leads to iconoclastic defacement of the pagan images, but here it seems the Copts took an easier approach, and covered most of them with gypsum instead.

There had been some piecemeal poking-about at the site in the early 1800s, but it wasn't until 1869 that French archaeologist Auguste Mariette fully excavated Ramesses II's temple. Unfortunately, his records of the excavation were rather sparse, and the temple's architecture and delicate reliefs have been exposed to the elements ever since.

It was with this need to document the site, as well as urgently conserve the at-risk stonework, that in 2008, Drs. Sameh Iskander and Ogden Goelet founded the New York University Expedition to the Temple of Ramesses II in Abydos. This field project was to produce the first comprehensive documentation of the Temple of Ramesses II at Abydos. Supported by ARCE, the mission included hiresolution photography, epigraphic line-drawings of the reliefs and hieroglyphs, as well as architectural drawings.

Little did they know that their work would also lead to what Mostafa Waziri, secretary general of the Supreme Council of Antiquities, described as "a very important discovery which will change, for the first time, the plan of the temple more than 160 years since its discovery."





Betsy Kissam Chester Higgins

Photo: Bound for Egypt. A muddy tributary to the Blue Nile on its way to Sudan and Egypt during the Ethiopian rainy season.



"They took a mountain, and fell upon it like Titans, and hollowed and carved it as though it were a cherry-stone, and left it for the feebler men of after-ages to marvel at for ever."—Amelia B. Edwards at Abu Simbel, 1873.

The monumental stone Temple of Ramesses II at Abu Simbel has been dropping jaws since it was first hewn from a Kushite mountain some 3,300 years ago. Stepping into the temple's Great Hall, the visitor is met by eight statue-pillars of Ramesses II portrayed as Osiris, god of resurrection. At the very back, the temple's Sanctuary, which is illuminated by the rejuvenating rays of the rising sun twice a year.

There is something mystical, even supernatural, about the Blue Nile. When Herodotus identified Egypt as "the gift of the Nile" in the 5th century B.C., he had no knowledge of the source of the Blue Nile in the highlands of contemporary Ethiopia—6,000 feet above sea level. But anyone who has witnessed the watery turmoil created by the Ethiopian summer rains can appreciate the otherworldly beauty of the frothing reddish volcanic soil in this water and its menace as it hurtles down mountainsides, tracking through ancient gullies and joining to form swift flowing streams, tributaries and then the impressive Blue Nile River.

The might of this river slices gorges through volcanic rock, creating sheer canyon walls, some more than 4,000 feet deep. Twisting and turning, juxtaposing broad sweeps with tight curves, the water turns north and drops down into the deserts of Sudan and Egypt. By the time the river reaches the desert at Khartoum in Sudan, where it commingles with the White Nile to form the Nile River, its elevation is 1250 feet—having fallen nearly 5,000 feet in 900 miles. By the time the Nile reaches the Giza pyramids, its elevation is barely 64 feet. Before modern dams

interrupted the flow, the Blue Nile carried about 80% of the water and fertile silt that transformed Egypt's parched desert plains: surely the "gift" that Herodotus recognized.

The Nile's water rises at a time when other rivers are lessening. Unsuccessful at working out an explanation for this phenomenon, Herodotus wrote "I was particularly anxious to learn from [the Egyptian priests] why the Nile, at the commencement of the summer solstice, begins to rise, and continues to increase for a hundred days—and why, as soon as that number is past, it forthwith retires and contracts its stream..."

In the 1st century B.C., 400 years after Herodotus, Diodorus recorded "the Ethiopians... say, that the Egyptians are a colony drawn out from them by Osiris; and that Egypt was... made land by the river Nile, which brought down slime and mud out of Ethiopia."

The boundaries of Ethiopia today on the Horn of Africa are not the designation accepted by the ancients that referred vaguely to the home of black people living south of the Mediterranean Sea. The Blue Nile remained an ongoing siren song for the Greeks, Romans and other Europeans



Stone obelisks are found along the Nile in Ethiopia and Egypt. In Aksum, Ethiopia, this 20-metre-high monolith stands tall in a field of such obelisks, which served as royal tomb markers. Obelisks in Egypt, erected in pairs in front of temples and topped with pyramidions, appear

to function like billboards advertising a pharaoh's accomplishments, and are dated by the pharaoh's reign. Less well understood, Aksumite obelisks have been dated anywhere from around the 5th century B.C. to early A.D.; without inscriptions from rulers, the dates are open to conjecture.











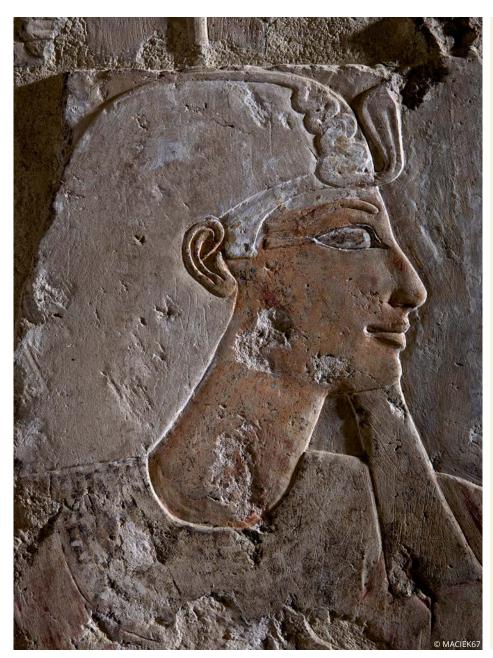


Part 2 The Brave New World

This vandalised-but-restored head of a colossal, 5-metre high Osiride statue of Hatshepsut sports a crown that only a king could wear: the double crown of Upper and Lower Egypt. The statue originally stood on the lower terrace of her memorial temple at Deir el-Bahari.

But why the violent backlash against her rule?

© AXEL HYDRE



Here we see Hatshepsut in a rather androgynous guise, in the sanctuary of her temple at Deir el-Bahari.

During Hatshepsut's reign her representations transitioned from a female sovereign to a male pharaoh. Originally painted yellow, Hatshepsut's skin here has been repainted to appear more reddish, and thus more masculine.

Each year, a festival known as the Beautiful Feast of the Valley featured a trip across the Nile by the sacred barque of Amun—from Karnak Temple to the ancient and sacred precinct of Hathor in Deir el-Bahari. This is right where Hatshepsut happened to have built her cult temple, and it was in the temple sanctuary that Amun spent the night.

The barque of Amun was carried in a procession that included stopping at various spots, the Stations of the Gods, so the common people could ask the oracle questions.

Moreover these processions, festivals and oracular counsellings gave the people an opportunity to witness Amun's support of the monarch via Amun himself.

Hatshepsut sited her monument conspicuously beside the temple of Mentuhotep II, who, 600 years earlier, had rescued Egypt from the dismal First Intermediate Period. Hatshepsut, it seems, had a flair for appearances.

In Part One of this series (NILE #19, April–May 2019), we met the 17th-Dynasty queens Tetisheri and Ahhotep, and the 18th Dynasty's Queen Ahmose-Nefertari—three successive generations of very powerful and influential women.

Earlier, in the First Intermediate Period and Middle Kingdom, women were virtually absent from the scene, except for Sobekneferu (12th Dynasty), whose reign was short and essentially sounded the death knell for the Middle Kingdom. But now, for a period of some 70 years, spanning the late Second Intermediate Period into the New Kingdom, Egypt was governed, essentially, by women.

With the defeat of the Hyksos foreigners, in which Queen Ahhotep played a significant role, we have the restoration of Egypt's dominion and order through military might. We have the growing, nationwide cult of Amun and the ascendency of Thebes as a result. We have a new dynasty under a new king, Ahmose I, along with a new and powerful Great Royal Wife, Ahmose-Nefertari, who holds a new position of power: God's Wife of Amun. This position came with unprecedented wealth, influence and independence

to wield as she wished. And with Ahmose I, we now have the ascension of a military man to the throne—noble, but non-royal. Incidentally, we also have a standing army, with new weaponry including the chariot, the composite bow and the *khepesh* scimitar. We have all the makings of Empire. This Brave New World is the New Kingdom.

What kind of power would women wield next? Who would follow this trio of Tetisheri, Ahhotep, Ahmose-Nefertari? Who could? Answer: Hatshepsut.

HATSHEPSUT

She was not the first female king, but the greatest ever to rule Egypt (even including Cleopatra VII), and one of the most fascinating women in Egyptian history—world history, for that matter.

Enough has been written about Hatshepsut to make her familiar to anyone who has read about Egypt, so, very briefly then: the 18th Dynasty's King Thutmose I (ca. 1504– 1492 B.C.) was the father of both Hatshepsut and her husband Thutmose II. Hatshepsut and Thutmose II had a This relief, from the upper terrace of Hatshepsut's Temple at Deir el-Bahari, was originally a portrait of her daughter, Neferure; it was subsequently altered by Hatshepsut to represent her mother, Queen Ahmose.

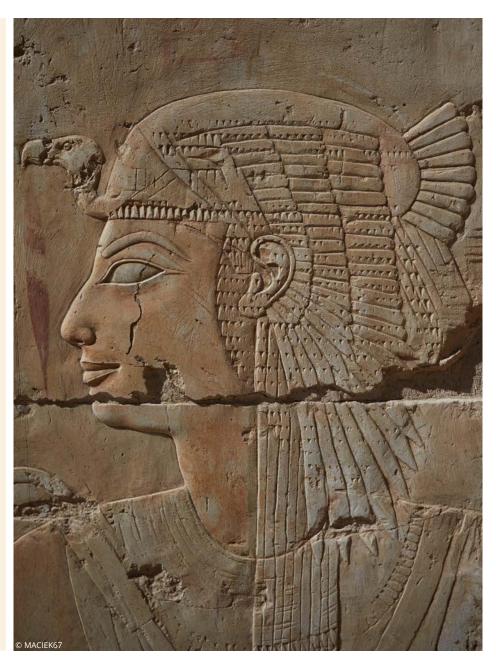
Ahmose wears a queen's vulture headdress, but beneath this can been seen Neferure's wig; she was depicted as both a priestess of Hathor and as God's Wife of Amun. A scrubbed-out modius, a style worn by the God's Wife, can be seen above her head.

Before her kingship, when Hatshepsut was the Great Royal Wife of Thutmose II, she was also a God's Wife of Amun. Now, as king, the position of God's Wife was handed to Neferure.

Little is known about Neferure after Hatshepsut's death, but her pedigree would have made her a prime candidate to become a bride for Thutmose III.

A stela discovered at Serabit el-Khadim in the southwest Sinai, and dated to Hatshepsut's regnal year 11, shows Thutmose III with his queen, the God's Wife Satiah. However, there is no other evidence that Satiah was ever a God's Wife, and so the figure on the stela may have originally represented Neferure.

This is the last we ever see of Neferure, and it may be that she died not long afterwards.



daughter, Neferure, while Thutmose and a spare wife from the harem, Iset, had a son who would eventually become King Thutmose III. Thutmose II died unexpectedly early in his reign, around year 13 (ca. 1479 B.C.), when the boy was too young to rule, so his newly-widowed stepmotheraunt Hatshepsut took over as regent. However, after about six years, for reasons still unknown, she took an unprecedented step, and had herself crowned as co-ruler: King Hatshepsut. At least one queen had ruled as king before (Sobekneferu, 300 years earlier), but solely out of necessity when the king had died, leaving no male heir. This time, Egypt already had a pharaoh—albeit a fledgling one—Thutmose III.

Now we come to another fascinating part of the story. On the walls of her memorial temple at Deir el-Bahari, Hatshepsut claimed that the god Amun foresaw her kingship via a prophecy. Amun proclaimed her as his daughter and rightful ruler of Egypt.

Hatshepsut explained that the god crept up on her mother while she was sleeping, arousing her with his divine fragrance. Oh, Amun had taken the form of her father, Thutmose I, so it was all okay. Amun told the queen that she would bear him a daughter, whose name would mean "United with Amun, Foremost of Noble Ladies":

"Khenemet-Amun Hatshepsut will be the name of this my daughter I have placed in your womb....

"She shall exercise excellent kingship in this entire land."

Incidentally, the usefulness of this justification was not lost on King Amenhotep III, three generations later, when he too wished to explain his divine origin. The walls

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monuments bore the brunt of a serious campaign against her kingship. This head from a statue was reassembled from fragments collected from her temple at Deir el-Bahari in 1928.

PHOTO: BRUCE SCHWARZ, METROPOLITAN MUSEUM OF ART.

PERSECUTING HATSHEPSUT

There's no doubting that Thutmose III wanted to create a new history—one in which King Hatshepsut didn't exist. But why? There has been endless speculation since Jean-François Champollion first puzzled over reliefs of a male-looking pharaoh, but with feminine markings in her name. Here are the three prevailing theories:

1 THE EVIL STEPMOTHER

You certainly couldn't blame Thutmose for being bitter about being forced wait in the wings for so long. However, the bulk of the destruction had been targeted at represen-tations of Hatshepsut as pharaoh. Images of her as "Great Wife" and "God's Wife" were left intact. If Thutmose III was so full of spite, wouldn't he have attacked all her images? Besides, it seems unlikely that he would have brooded for two decades after his stepmother's death before avenging himself. The Hatshepsut backlash was probably more a cover-up than a settling of old scores. Which leads us to...

2 FUTURE PROOFING

Why wait 20 years? Because it was not until then that Thutmose had to deal with succession planning. The campaign against Hatshepsut's kingly presence was relatively brief: from shortly before the end of Thutmose III's reign through to the beginning of the coregency with his son, Amenhotep II.

Hatshepsut had breeding; her great-grandfather, Ahmose, had driven out the Hyksos occupiers from Egypt and founded Egypt's 18th Dynasty. Her impressive ancestry, however, may have actually been a problem for Thutmose. She was a descendent of Ahmose I through her mother's bloodline. Her father, Thutmose I, was from a different family, and Thutmose III's ancestry was through Thutmose I and harem queens.

Although Hatshepsut's daughter Neferure had likely died decades earlier, Thutmose may have been concerned that other descendents of Ahmose believed their royal blood gave them a greater entitlement to the throne than Amenhotep II.

3 NO FEMALE PHARAOHS PLEASE

Nothing personal; not a full-fledged damnatio memoriae, but simply a rejection of the idea of a female king, and a precaution against letting any more of that sort of thing happen in Egypt. This certainly fits with only kingly images having been attacked. But again, why wait 20 years? There was probably more to it than male chauvinism.

4 FAKE PHARAOH

Other royal wives that had ruled before were celebrated; crisis demanded that a woman lead when all the male candidates were gone. Hatshepsut's reign, however, according to the customs of the day, wasn't legitimate. Her reign sat entirely within that of her stepson's, the appointed ruler. In effect, it didn't count.

By erasing all records of her as pharaoh, Thutmose III relegated Hatshepsut's rightful place to that of a dutiful queen, and removed from the king lists someone who technically had no right to be there. The fact that the attacks continued in Ramesses II's time, 200 years later, indicates that this was no personal agenda; it was just a matter of setting things right.

This tiny wooden head of Queen Tiye, with a total height (including the crown) of just 22 cm, was discovered in 1905 at the site of Amenhotep III's harem palace at Gurob, near the entrance to the Faiyum Oasis.

In her Egyptology blog, egyptianaemporium.wordpress. com, Gemma Ellen Smith tells us that this portrait of Tiye "reveals much about the religious movement of the Amarna period, and emphasises that changes were already occurring during the reign of Akhenaten's father, Amenhotep III.

"The type of crown worn by Tiye in the portrait—the cow horns and sun disk—is associated with the goddess Hathor, and their presence on the crown indicate Tiye's divine status.

"The head was modified in antiquity to include the plumed crown, and CT scans have revealed that beneath the crown and brown covering, the statue is adorned with a baglike khat-headdress. This type of headdress is traditionally worn by the four protective funerary goddesses, Isis, Nephthys, Selket and Neith, as seen on the canopic chest of Tutankhamun.

"Although the statue of Tiye was not part of the funerary equipment of Amenhotep III, it is likely that it was created for his funerary cult at Gurob. Here, at the very beginning of the reign of Akhenaten, we see a queen functioning as a funerary goddess—an unorthodox motif that was repeated in the Amarna period proper—the granite sarcophagus of Akhenaten has images of Nefertiti at each of its four corners in place of the four protective goddesses.

"It seems that the Amarna royal women were called upon to fill a void created by Akhenaten's Atenist obsession. With the attempted eradication of the majority of deities, Tiye and Nefertiti were used as funerary goddesses to protect the bodily remains of Amenhotep III and Akhenaten.

"It is believed that the portrait of Queen Tiye was modified during the restoration of the traditional religious order in the post-Amarna period, when the motif of the queen as funerary goddess was no longer acceptable."

This wonderful portrait of Queen Tiye is now in the Neues Museum in Berlin (ÄM 21834).



country—no doubt driven and informed by her politically astute Akhmim roots. Later on, during the very early reign of her son Akhenaten, the Mitanni king Tushratta, apparently in a fit of frustration over Akhenaten's disinterested manner in matters of state, wrote to Egypt's most powerful woman. Tushratta asked Tiye to politely intervene in a situation regarding some diplomatic gift-giving, saying:

YOU, TIYE, ARE THE ONE WHO KNOWS THAT I ALWAYS SHOWED LOVE TO [AMENHOTEP], YOUR HUSBAND.... AND THE THINGS THAT I WOULD WRITE AND SAY TO YOUR HUSBAND, YOU KNOW THESE BETTER THAN ANYONE....

I HAD ASKED YOUR HUSBAND FOR STATUES OF SOLID GOLD.... BUT NOW [AKHENATEN], YOUR SON, HAS SENT STATUES OF WOOD, PLATED IN GOLD. HE HAS NOT GIVEN ME EVEN THOSE THINGS THAT HIS FATHER WAS ACCUSTOMED TO GIVE."

Tiye was the first King's Great Wife to include the cow horns and sun disk in her crown (above), and she carried a sistrum, thus associating herself with Hathor. However, there's much more to Tiye than the optics. Amenhotep III had become convinced of his own divinity, and also had developed a fascination with the old pre-Amun, solar religion, which emphasised Ra.

Whatever divinity he imagined for himself went also for Tiye, who, in filling the role of Hathor, linked herself to Ra. In fact, Tiye did not even take the title God's Wife of Amun, suggesting to Egyptologist Joyce Tyldesley that already by this time the royal family may have been downplaying Amun. The Aten cult was starting up even in Thutmose IV's reign, and perhaps in some rudimentary way as far back as Hatshepsut, and was now gaining traction.

It is often written that Amenhotep may have also been motivated by reasons more strategic than sacred: a "church" vs "state" scenario whereby the Amun priesthood was becoming too powerful. However, despite the appeal of such intrigue, Egyptologist Aidan Dodson revealed to NILE Magazine that there is no evidence to support the idea.

In any case, Amenhotep III passed on to his second son and successor, Amenhotep IV (soon to become Akhenaten), his passion for self-deification and the roots of a new sunoriented theology.

There's some serious stuff going on here, not least the advancing deification of living royalty.

NEFERNEFERUATEN-NEFERTITI

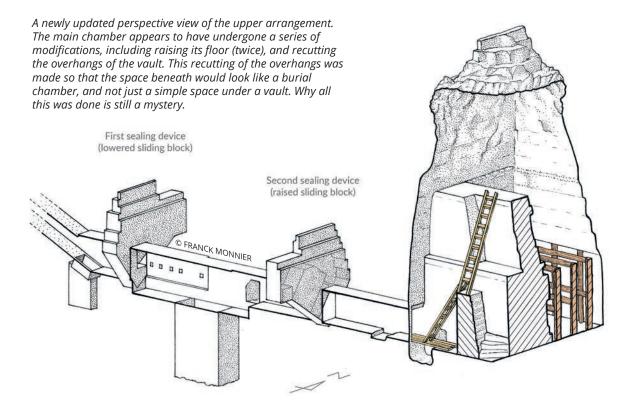
Amenhotep IV renamed himself Akhenaten upon decreeing a new religion centered on himself and his wife Nefertiti as the only direct connections to the deified sun disk, Aten. In doing so, he bent thousands of years of time-hallowed religious tradition towards a new creation myth—one in which Akhenaten and Nefertiti were the first offspring

ARCHITECTURE OF THE BENT PYRAMID

A new photogrammetric survey of Sneferu's Bent Pyramid at Dahshur was carried out in 2018, in conjunction with the production of a TV documentary. Unexpectedly, the data collected during the study provided significant and valuable new information about the construction of the monument.

Franck Monnier

© FRANCK MONNIER



Additional details that had previously gone unnoticed were also recorded. These details support and validate the construction chronology and sequence that I proposed in conjunction with my colleague Alexander Puchkov, in 2016.

The chamber was first built with a cedar-wood framework and a timber shoring for the purpose of stabilising and holding the construction blocks of the side walls in place, while the stone courses of the pyramid were raised around it. A high corbelled vault eventually covered the entire space in order to protect the burial chamber from the huge load above.

Before the removal of this temporary woodwork structure, the builders chose to elevate the floor of the chamber with a filling mass of masonry. The workers paved the top of the mass with a floor of slabs so that the room would still look like a chamber, and began to take away the cedar beams propping up the first overhangs above. They then re-cut the lowermost projecting overhangs to create nearly flat faces.

This first phase of operations was not finished when they decided to elevate the floor of the chamber once again. The height of the masonry mass was increased up to the fifth overhang of the corbelled vault, and it was again topped off with paving slabs. The projections were re-cut up to the tenth overhang (higher than we previously thought). The second raising of the floor led them to smooth the overhangs so that the space would still serve its purpose effectively.

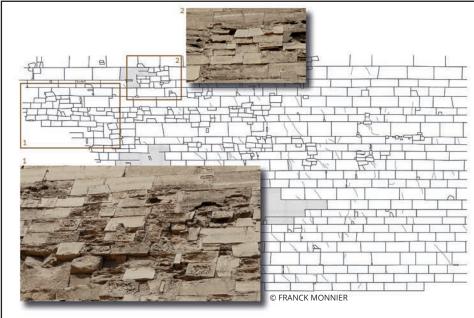
Nearly one quarter of the interior filling mass still remains in position, while the rest was dismantled by archaeologists in the mid 20th century. Parts of the cedar logs are still set into the stones just above the second overhang. Another log remains in place under the peak, propped between the western and eastern faces. The filling mass, just like the wooden framework, was designed with a space at the side allowing access from the entrance below. The horizontal corridor of the upper system of passages leads into the base of the chamber and opens into a space at the



Chamber of the Bent Pyramid. Because of stone collapses, the top of the corbelled vault looks like a natural rocky dome.

side of the mass filling the lower parts of the room. Inside this space, a rubble stone ramp or staircase made it possible to access the upper surface of the masonry mass. This access structure is now partially dismantled, and visitors now reach the platform by climbing two wooden ladders.

In light of the above considerations, the long-held theory that the Bent Pyramid's Upper Chamber had to be reinforced, and was then abandoned due to cracks and



Details of the casing stones, cracks and repairs (small blocks and cut stone patches) of the lower part of the Bent Pyramid, on the east face near the north-east corner.

When the Bent Pyramid was around 40–50 metres high, the architects decided to enlarge the pyramid with the addition of a 16-metrethick mantle at the base.

Today, a great number of stone patches can be seen on the outer casing.

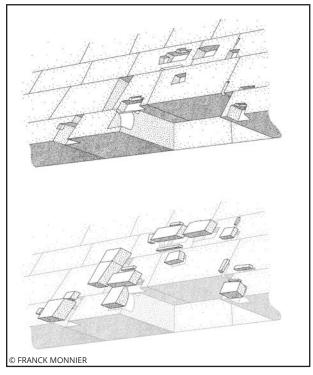


(ABOVE) A detailed look at some of the cut stone repairs, situated a few metres above the ground, on the north face of the Bent Pyramid. A smooth finish was clearly important.

(RIGHT) These drawings detail the sizes and shapes of the sockets in the damaged stones, as well as the stone patches that were individually tailor-made to suit each occasion.

In fact, I did not expect to find such disorder in the appearance of the upper surfaces. Not only are the upper courses not horizontal, but they are clearly irregular and have a wavy appearance. This was not planned and was not due to subsidence. The wavy courses are very irregular, using construction blocks of many different sizes and forms. They give the impression that different crews worked on an ad-hoc basis, side by side but without worrying about what the others were doing. Stone courses seem to be connected by improvised arrangements. Some stones are small, often with a height of only 30 cm. Despite the inconsistent construction techniques used, there are few cracks to be seen in these areas.

Although it has been subject to many repairs, it is







important to stress that the lower parts of the Bent Pyramid were made up of carefully built courses with relatively large blocks—most of them weighing around two tonnes. There is, therefore, a clear difference in quality between the lower and the upper parts of the monument. All this confirms the hypothesis that the pyramid required repairs, and it also indicates that it was finished in a hurry and with a relative lack of care.

Thanks to this new photogrammetric survey, our know-ledge of the site and the monument has been advanced, and we can more clearly understand the sequence of events that occurred during its construction. There are still some unresolved issues, however: particularly in identifying the factors that forced the builders to make so many changes to their plans, and with understanding why the space in the final burial chamber was so restricted, despite being within such a huge monument.

The potential of further scientific survey of this type at the Bent Pyramid is clear, particularly if the surveys are carried out with a wider scope and on a more systematic basis. This work would surely result in the production of more accurate plans and cutaway views like the ones included with this article. The end result would be a more permanent, comprehensive, and accurate record of the Bent Pyramid; one of the most enigmatic monuments of the great pyramid building era.

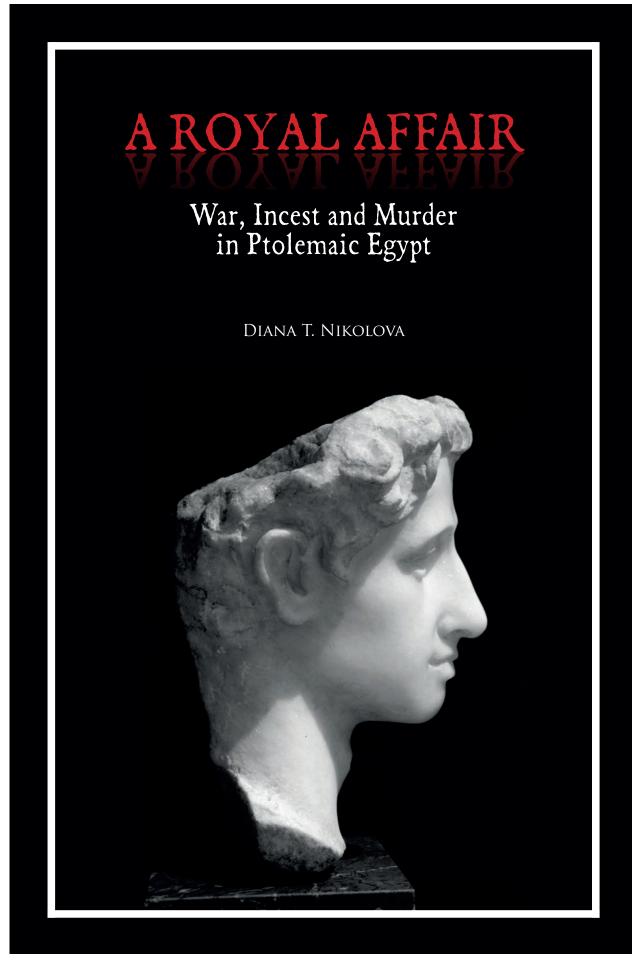
Further Reading:

Franck Monnier and Alexander Puchkov: *The building progress of the Bent Pyramid at Dahshur. A reassessment*, Égypte nilotique et méditerranéenne (ENiM) 9, 2016, pp. 15–36.

Franck Monnier, *Contribution of photogrammetry in the study of pyramids*, The Journal of Ancient Egyptian Architecture 4, 2020 (several articles in preparation).



Franck Monnier is a former engineer in radiocommunications. His specialist fields are architecture and construction in ancient Egypt. His research focuses on the pyramids, the fortifications and the structural issues. He is the co-founder and the co-editor of the *Journal of Ancient Egyptian Architecture*.



WHITE MARBLE HEAD OF PTOLEMY VI,
ALEXANDRIA, CA. 160 B.C.
COURTESY OF THE RISD MUSEUM, PROVIDENCE, RI. INV. NO. 54.002

In this relief from the Temple of Kom Ombo, Ptolemy VIII stands before a manifestation of Horus, known as Harwer ("Horus the Elder"). Behind Ptolemy is his sister/wife, Cleopatra II, and his niece/step-daughter/wife, Cleopatra III (daughter of his older brother Ptolemy VI and Cleopatra II). Yes, it's complicated.

Situated between Aswan and Edfu, Kom Ombo was begun by Ptolemy VIII's older brother, Ptolemy VI, and is jointly dedicated to Harwer and the crocodile creator god, Sobek.



sister/wife Cleopatra II and their brother Ptolemy VIII—were declared co-rulers in the same year.

Military operations began
in 169 B.C., but some courtiers
quickly realised that this war was
not in the country's best interest.

Therefore, Ptolemy VI's advisors who had
provoked the war were swiftly replaced and peace
negotiations began immediately.

a battle

Antiochus IV, who was the uncle of the Ptolemaic rulers, agreed to the peace on one condition: that Ptolemy VI should rule as sole king of Egypt. Knowing that this would make Ptolemy VI a pawn for Antiochus, and see the Seleucid king ruling Egypt by proxy, the Alexandrian elite were unhappy with proclaiming Ptolemy VI as a sole king. Instead, they declared his brother Ptolemy VIII as Egypt's ruler. Antiochus IV retaliated by besieging Alexandria, but, as he was unable to cut the supply lines into the city, withdrew his army at the end of 169 B.C.

In the meantime, the two Ptolemaic rulers reached

an agreement and were reconciled. Antiochus IV, after being deprived of the opportunity to have Ptolemy VI do his bidding from Egypt's throne, attacked again. Aware that they did not have the resources to win, the Ptolemies turned to the Roman

Senate for assistance.

Cleopatra II

After capturing Cyprus and Memphis without a battle, Antiochus bore down on the Egyptian capital once more. However, on the outskirts of Alexandria, the Seleucid ruler was met by the Roman legate Gaius Popillius Laenas, who had been sent to resolve the conflict. The verdict of the Roman Senate was that Antiochus must leave Egypt and return the territory of Cyprus to the Ptolemies. Possibly keen to avoid provoking the Romans any more than necessary, Antiochus IV agreed, and returned home in the summer of 168 B.C.

Egypt was once again governed by all three siblings: Ptolemy VI, Cleopatra II and Ptolemy VIII. However, while the country was—at least temporarily—safe from invasion, the domestic situation was deteriorating and



The Ptolemaic rulers were clever to utilise temples and their priesthoods to help provide them with badly-needed legitimacy. The kings continued to build, restore and fund temples (as well as provide them with lucrative tax concessions), and, in return, the priests maintained loyalty to the ruling regime.

The Temple of Horus at Edfu (above) was begun in 237 B.C. by Ptolemy III, and dedicated 95 years later by Ptolemy VIII, who is shown at the very left of this photo.

The queen, left with no allies in Egypt, fled to Syria, taking the Ptolemaic state treasury with her.

Ptolemy VIII and Cleopatra III took control of Alexandria in 127–126 B.C. The two fractures from the Egyptian civil war and the three ruling Ptolemies were reconciled in 124 B.C., although the reason for this reconciliation is unclear. Ptolemy VIII and his niece/daughter-in-law/wife had five children together: two sons—Ptolemy IX and Ptolemy X and three daughters—Tryphaina (often referred to as Cleopatra Tryphaina), Cleopatra IV and Selene. Ptolemy VIII died in the summer of 116 B.C., aged around 65.

The late king's will with regards to his succession was unusual for the ancient world. He did not leave his throne to his eldest son, but rather to his second wife Cleopatra III and whomever of their two sons she chooses. For unknown reasons Cleopatra III was not fond of her eldest son Ptolemy IX, and thus wanted to make Ptolemy X king. But her own mother, Cleopatra II, who was still alive and still a rival to her daughter, supported the older of the two brothers. Cleopatra II and Ptolemy IX were backed by the people of Alexandria (and, more importantly, the army) and so Cleopatra III had no choice but to offer the coregency to her eldest son.

LONG LIVE THE KING: PTOLEMY IX

Cleopatra II, however, was not satisfied by this and made herself co-ruler; Egypt was once again ruled by three This procession is part of the Festival of the New Year, which renewed the divine kingship of Horus (and therefore the king). During the festival, a statue of Horus would be removed from its sanctuary and, led by the pharaoh, carried in great procession up a flight of stairs to the temple's roof terrace. There it would be rejuvenated by the sun before being returned to the sanctuary.

This scene shows the procession descending from the roof, depicted on the walls of the temple's western staircase.

monarchs. This arrangement didn't last for long, however, as Cleopatra II passed away by the end of the year. What followed were periods of peace and of infighting between the two brothers, often provoked by Cleopatra III herself.

In 101 B.C. Cleopatra III was murdered by her son Ptolemy X, but by 88 B.C. Ptolemy IX had gained firm control over Egypt. This period of the Ptolemaic Dynasty clearly shows that the marriage of siblings, thought to be beneficial for maintaining the royal line, was often more of a hindrance than a help. It also demonstrates the hunger for power and the burgeoning decline of the Ptolemaic Dynasty.

But most notably, the start of the struggles between Ptolemy VI and Ptolemy VIII shone a light on a new and very important player in the region: Rome. Around 80 years after the events of this article, the fight for the throne between another set of Ptolemaic siblings—in addition to Roman involvement and interference—would lead to the end of the Ptolemaic Dynasty.



DIANA T. NIKOLOVA is a Graduate Teaching Fellow and an Archaeology PhD Candidate at the University of Liverpool. Her current research focuses on Ptolemaic economy and more specifically on the compositional analysis of silver and bronze Ptolemaic coinage.



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