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# New Perspectives on the Interior of the Bent Pyramid 

Charles Rigano

Although the shape of the Bent Pyramid is well known, pictures of it are readily available and the site is easily visited, this pyramid's interior is still something of a mystery. For such a significant Old Kingdom monument, the interior has received only occasional attention.
In 1839 John Perring was the first to scientifically explore the inside of the pyramid and penetrate the upper passage and Chamber. About 1882 Flinders Petrie investigated the north entry but apparently did not go any further. AbdelSalam Hussein spent four seasons working in the pyramid from 1946 until his death in 1949, but his notes were lost. Ahmed Fakhry spent four seasons at the site from 1951 to 1955 but most of his report deals with the exterior pyramid complex. He describes the interior in just $3-1 / 2$ pages although he provides 13 pictures and nine drawings. In 1962 Vito Maragioglio and Celeste Rinaldi published a detailed description and large-scale drawings of the interior and exterior as part of their two-decade study of the Memphite pyramids.

I had visited the Bent Pyramid on four earlier trips. Each time I looked up at the north entrance, only 39 feet above the ground, I knew it was a climb that my age, fear, and guide would not permit. But on this trip in April 2001, there was a heavy scaffold in place and we had permission from Dr. Zahi Hawass to enter. With Andrew Bayuk and
hard climbs, and of course there were bats - how many I did not know. Their previous experience helped us be better prepared this trip with headlamps and respirators, a couple of cameras and a lot of film, and a large clear plastic bag to change film inside. With much anticipation we climbed the scaffolding. From the top I realized how high above the ground the entrance really is and how wise my decisions had been in the previous years not to make the attempt.

A locked, heavy metal door protects the north entrance. The casing around the entrance is generally intact with the architrave virtually whole. The architrave is the largest casing block in the pyramid. Its location at the center of the north face would likely have drawn the attention of anyone who wanted to find the entrance. As with other pyramids, ancient robbers had found their way inside and removed everything of value. Just inside the entrance are holes high on either wall that Petrie proposed had held a bronze pivot which supported a hinged stone door. Since this arrangement would effectively limit the available entrance to half the passage height, I have never thought Petrie's proposal was persuasive, but Petrie did not have benefit of Fakhry's discovery that a single casing stone closed the west entrance.

Petrie; Perring; Fakhry; and Maragioglio and Rinaldi mention two inscriptions on the east and west walls just inside the entrance. We found these inscriptions and many others, some possibly ancient, some relatively modern. On the east Brent Benjamin of Guardian's Egypt (www.guardians.net/egypt) and two inspectors, after years of anticipation, I finally had the opportunity to explore the interior. Andrew and Brent had been inside the previous year and I had seen their pictures and video. There were no lights, the dust was terrible, there were two

Figure 1: North (left) and west (right) sides of the Bent Pyramid. The 40 -foot-high scaffold to the entrance is barely visible at the center of the north face. Photo by author.



Figure 2. The internal layout as it appears today. The dashed line represents ground level. Upper drawing - looking towards the west. Lower Drawing - looking down. (A) Descending Passage, (B) Antichamber, (C) Lower Cahmber, (D) Connecting Passage, (E) Upper Passage, F Upper Chamber
way on both the east and west walls. (Maragioglio and Rinaldi 1964:62) The outline was easily visible and shows short, high steps leading higher than the floor of the lower chamber above. Pink mortar still adheres to the antechamber wall.

The antechamber's far (south) end is a 22-foot-high flat bedrock wall which has been roughly tunneled into at the base. This wall has to be climbed to reach the lower chamber. An old rope ladder still hangs down from above. Fortunately, in the past few years an 18-foot-long wooden ladder has been added which hangs by ropes tied from above. The bottom of the ladder sways slightly a couple feet above the antechamber floor, the
wall we found and photographed a scratched animal shape - reported as a lion by Fakhry and a pug-dog by Petrie. (Fakhry 1959:46; Petrie 1883:144-145) It was not executed well enough to tell what animal was intended and there was no evidence to indicate its purpose there.

Initially the descending passage floor is bare but rough and provides easy footholds. After 20 feet, old railroad tracks and ties which run the length of the passage, used in clearing the pyramid interior, provided suitable substitutes for the slatted floorboards and side railings found in most pyramids visited by tourists. The primary method for making the long, 257 -foot descent was to hold onto the tracks and slide from one tie to the next. On the ascent, the ties provided a convenient surface to push against. The $26^{\circ}$ to $28^{\circ}$ passage inclination is typical of the major pyramids. When the pyramids were new and the inclined passage floors smooth, the passage must have been difficult to climb without assistance. Possibly the holes near the entrance held a bar to which a rope was attached that ran the length of the passage.

At the bottom of the descending passage, the floor is cut away and the railroad tracks, on wooden planks, cross a large, rough hole in the floor and emerge into the antechamber. The transition from the descending passage to the antechamber is rough and all surfaces are badly damaged. While I knew what to expect, the long, narrow, but high (3 feet 6 inches wide, 17 feet 9 inches long, 41 feet 4 inches high) antechamber with its corbeled ceiling was still a surprise. The floor was heavily littered with stones with diameters up to 1 foot. Some may have broken free from the ceiling; most were likely thrown down from the higher chambers. Maragioglio and Rinaldi reported the outline of a stair-
ladder's other end falls a couple of feet short of the top of the wall. This made for an interesting climb.

The entrance to the lower chamber is in the chamber's northeast corner and matches the width of the antechamber, but rises to a surprising height of 16 feet. This narrow, high opening is topped by a damaged, upside down "V" cut into horizontally laid blocks.


Figure 3: The descending passage enters the $(\mathrm{A})$ antechamber from the bottom right. The scaffold (not shown) fills the west side of the (B) lower chamber. (C) windows, (D) chimney.

Opposite the entrance, on the south wall of the lower chamber, is a rectangular opening and short passage leading to the tall chimney. There is a squared hole in the short passage floor which workmen told Fakhry they had excavated to a depth of about 26 feet in 1948 without reaching the bottom. (Fakhry 1959:47) This hole is now completely filled with rubble. A corbeled window 18 feet above the chamber floor penetrates the wall between the chamber and the chimney and relieves the weight bearing down on the short passage ceiling.

The lower chamber measures 20 feet 8 inches by 16 feet 3 inches and rises to a 56 feet 9 inches high corbeled ceiling. The floor here is also littered with stone rubble that completely covers the surface, requiring us to walk carefully. Rubble is piled to a height of 5 feet along the south and west walls of the chamber. The chamber walls are not bedrock but are made of nicely laid limestone blocks. A section of the west wall is missing and the limestone lining can be seen to be about 1 foot thick.

Behind the lining is the bedrock surface. There are significant remains of pink plaster on the east wall of the lower chamber up to the base of the corbeled window.

High in the lower chamber's corbeled ceiling, 41 feet above the floor, the connecting passage provides access to the upper chamber and passage. To the ancient Egyptians, the entrance to this passage was likely lost in the darkness above, out of reach of the lighting methods of the day. To gain access to this passage, Hussein built a tall, heavy wooden scaffolding in the lower chamber. On this scaffolding three wooden ladders, one above the other, sit on crossbeams and are bolted to each other and to the scaffolding. I was concerned about trusting my life to a 50 -year-old wooden structure. However, I was surprised (and pleased) to find the whole structure remarkably sturdy. The climb was long but there was no sensation of height since both the ceiling and floor were lost in the blackness. Arriving at the top of the ladder after climbing up 22 feet from the antechamber and an additional 41 feet from the lower chamber, I felt I must be high in the pyramid core but the opposite was true. It was hard to imagine that I was still 11 feet below ground level.

The descending passage penetrates to a depth of 74 feet below ground level. For its entire length the passage is lined with blocks - floor, walls, and ceiling. The same is true for the antechamber and the lower chamber. Unlike the Giza pyramids, which have passages cut through the bedrock, the Bent pyramid's lower substructure - descending passage, antechamber, and lower chamber - were all built of limestone blocks constructed inside a trench cut into the bedrock. This method was intended for Djedefre's pyramid
at Abu Rawash, the so-called great pit at Zawyet el-Aryan, and two smaller pyramids at Abu Sir. At these sites the open trenches can still be seen clearly, the internal structures either never having been built or removed at a later time.

I was concerned about getting through the ascending connecting passage. I expected it to be slippery and steep and I worried about slipping and falling back into the lower chamber. However, I felt secure for its full length. The passage turns several times and for most of its length neither end is visible. The passage incline varied significantly and I measured it at several places between $15^{\circ}$ and $30^{\circ}$. It is generally square but not finely finished. This finish makes it appear as neither a rough robbers' tunnel nor a finely finished original passage but as an afterthought of the original builders, excavated through already laid core blocks. Since this passage was cut through core blocks, I wanted to test the proposal that the core blocks were laid inclined toward the pyramid center. Near the top of the connecting passage I measured the incline of the passage blocks and found they were laid horizontally. This point, near the central foundation only 40 feet from the pyramid center and 10 feet above ground level, may not be the best place from which to make a generalization about the construction method. However, it is the only place in the pyramid's interior where core blocks are exposed.

From the connecting passage I stepped into the east-west upper passage and savored a moment of sheer joy. The first picture I had ever seen of the pyramid's interior was taken from this vantage point, looking west toward the portcullis; I never thought I would have the opportunity to stand here. Perring had arrived at this point 162 years earlier and recorded the event on the upper passage wall immediately across from the connecting passage: "Discovered October 20, 1839."

Most of the upper passage is 5 feet 4 inches high, but since the connecting passage accesses the upper passage slightly below the original floor level, part of the upper passage floor has been removed making this passage 23 inches higher at this spot. To the immediate right (west) from the connecting passage, the full width of the upper passage floor opens into a hole 13 feet deep and 14 feet long, effectively blocking us from further exploration in this direction. The hole has finished sides of limestone blocks and apparently is part of the original construction. Fakhry found this hole, covered by flooring blocks and filled with rough, yellowish limestone blocks. At the bottom was only bedrock, with no obvious purpose for the hole. Just a few feet beyond the deep hole, the lowered portcullis is easily visible. A robbers' hole in the upper right corner of the portcullis was enlarged by Hussein to a rectangular space about 3 feet high to pro-


Figure 3: The upper chamber as it appears today. The cedar beams (not shown) are to the north of the massif. The Snefru cartouche is at the bottom east side of the trench immediately inside of the chamber. (A) upper passage, (B) small space, (C) cartouche, (D) short, (E) massif.

vide easy access to the western passage and to the western entrance at its end. The portcullis was sealed with mortar around the edges on both sides indicating that the north and west entrances were both open when the portcullis was lowered. The rising western passage was originally filled with plug blocks for its entire 211foot length. Robbers removed the blocks for the first 60 feet, Hussein continued for the next 45 feet, and Fakhry completed removal to the entrance. Here Fakhry found the only example of an original pyramid closure. The entrance was closed with a casing block placed in the passage and indistinguishable from any other casing block. (Fakhry 1959:49,52. Fakhry 1954:511) Today, from the exterior, the western entrance 109 feet above the desert floor looks inaccessible.

To the left (east) from the connecting passage, after a step up, the upper passage runs straight to the upper chamber. About halfway is the second portcullis, still in the raised position. A modern wooden beam supposedly holds the portcullis in place. What kept the portcullis from falling before the beam was installed is not apparent. Possibly the portcullis was not lowered because side pressures on the stone resulting from the settling of the pyramid would not allow it to slide. However, the beam provided us some assurance that the portcullis would not slip.

Based on reports and diagrams from earlier investigators, I had anticipated that the upper passage would provide direct access to the upper chamber. This was only partially true. Although the passage does lead directly into the chamber's southwest corner, within the overall 26 feet 2 inches by 17 feet 3 inches chamber, the small space that is accessible measures only 9 feet by 4 feet. My first impression was that I had not yet reached the chamber. However, a glance up at the 54-foot-high corbeled ceiling confirmed that this small space was in fact part of the upper chamber. To the left (north), the small space is bounded by a 21 -foot-high vertical wall of well-cut blocks laid in courses. The east end of the wall is missing and roughly cut fill stones are visible. At the top of the wall's rough section, long flat blocks sit on top of the rough stones and appear to indicate a floor.

Maragioglio and Rinaldi described this large masonry mass of small limestone blocks, roughly squared and mortared, as a massif. (Maragioglio and Rinaldi 1964:70) To the front (east) is an 11 -foot high short wall of similar quality to the left wall. This short wall is not flat but is well-cut, and mortared blocks projecting from the wall's bottom half indicate much of the original configuration is now missing. With some difficulty the short wall can be climbed. Over this wall is a space that reaches to the chamber floor and was probably excavated by early robbers. We had hoped to get over the massif to see the famed cedar beams which span the chamber. Climbing up the eastern, rough part of the massif looked possible, but dangerous. A slip here, deep inside the pyramid, could have had disastrous results and we decided not to risk it.

Just inside the upper chamber, robbers had cut a rough hole two courses deep spanning the floor and continuing under the left wall. On stepping down into this space, on the lower course we found an inverted cartouche of Snefru, drawn in red ocher, that confirmed the pyramid's owner.

The preceding is a description of the pyramid interior as it appears today. During the past 4,500 years, robbers and excavators searched for treasure, hidden spaces and burials. In doing so, they changed the pyramid's interior, sometimes completely destroying both the original configuration and our ability to determine the builder's original intent. The Bent pyramid's interior has probably suffered more at man's hand than any other pyramid. Maragioglio and Rinaldi attempted to identify individual parts of the original configuration based on the remaining physical evidence but did not provide a cohesive description of the original pyramid interior. (Maragioglio and Rinaldi 1964:62-64,70,102,106-108)

As noted earlier, marks on the side walls of the antechamber provide evidence that a staircase originally angled steeply upward from near the antechamber's lower entrance toward a point significantly higher than the present floor of the lower chamber. According to Maragioglio and Rinaldi, the mortar I saw on the antechamber walls exists only in the space which would have been covered by the staircase. (Maragioglio and Rinaldi 1964:62) Perring's drawing (Perring 1839:Plate XVI, Figure 2) shows that masonry, probably rubble from the destruction of the stairs, filled the antechamber to almost the first corbeled course, 29 feet high, and lay on an angle that
roughly followed the steps.
Perring's drawings also show that the lower chamber contained a masonry fill. Fakhry reported that small squared blocks filled the chamber to the first corbelling, about 20 feet high. (Fakhry 1959:47) Maragioglio and Rinaldi suggest that the level was 3 feet lower at the base of the window. (Maragioglio and Rinaldi 1964:102) While we saw significant amounts of pink mortar on the east wall, Maragioglio and Rinaldi reported mortar on other walls as well, at times thick, up to the first corbel overhang. (Op. cit.)

This evidence indicates that originally a stairway ran steeply upward from near the antechamber's north entrance and provided access to the lower chamber, which had a floor about 17 feet above the current level. The presence of this staircase explains the apparently unnecessary height of the opening from the antechamber to the lower chamber - the lower half of the opening was filled by the staircase. It is likely that the small blocks forming the staircase were first shifted by robbers in their search for hidden spaces. Robbers also took apart the lower chamber floor and threw the debris down over the remnants of the staircase. With the intent of cleaning the pyramid interior, archaeologists removed most of the blocks and debris over a long period. The stones still littering the floors of both chambers and the debris piled against the south and west walls of the

lower chamber are what remain of the staircase and floor.
Changes are also obvious in the upper chamber. Much has been made of the cedar beams spanning the chamber without a satisfactory explanation of their purpose. Perring found the upper chamber largely filled with the stone massif. (Fakhry $1954: 510,512$ ) Robbers had removed some the blocks in the northeast part and in the southeast corner, forming the shaft-like space we saw behind the short wall. In 1946 Hussein dismantled the northern part of the massif in search of Snefru's burial. As he removed stones in the middle of the chamber, the cedar beams became visible among the stones. He cleared the chamber's northern end to the floor level and exposed 10 beams composed of tree trunk halves. The massif at the chamber's south side remains and likely contains additional beams. The significant point is that the beams were contained and hidden within the massif. Therefore they could not play any symbolic or practical role in the burial and their purpose had to relate either to the construction or to the purpose of the massif.

Perring's drawings, one of Hussein's photographs, and possibly one of Fakhry's drawing all indicate that the south side of the upper chamber was filled with a sloping mass starting at the entrance and inclined up to the top of the massif. This might indicate a stairway was present at one time to access the top of the massif which was the real chamber floor. While there are no markings on the side walls to indicate a stairway, it would not be inconsistent with the structures in the chamber today or with the stairway in the lower chambers. In addition, the angled ceiling at the entrance to the upper chamber could have provided headroom for people using a staircase. While the presence of the staircase is not based on strong evidence, the existence of the large massif filling the room and raising the floor is a near certainty.

That small blocks were used to fill the spaces in the lower and upper chambers is indicative that these were afterthoughts and not part of the original plan. If they were part of the original construction, blocks consistent with and integral to the pyramid construction would have been used. It is possible that the small blocks were used to fill the spaces and thereby strengthen the pyramid but that purpose is far from certain. As is so often the case in archaeology, as we find answers to some questions, the answers themselves raise other questions.

Note: Pictures of the Bent pyramid's interior can be found at www.guardians.net/egypt. REFERENCES

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# Behind the Scenes of an Egyptian Expedition - Part II <br> Richard Harwood 

Part I of this article, which appeared in the Fall 2001 issue of The Ostracon, discussed the formal preparations and approval processes for American archaeological expeditions in Egypt.

The expedition of which I am a member is the University of Arizona Egyptian Expedition (UAEE) under the direction of Dr. Richard H. Wilkinson. As part of the Expedition's Motif Alignment Project, we have photographed, recorded, and studied the wall scenes in the tomb of Merenptah (KV 8) in the main Valley of the Kings. We also have spent parts of the past two field seasons excavating the area surrounding tomb WV 25 as part of our Western Valley of the Kings Project. This article will use our experiences to illustrate the procedures that American expeditions generally follow after Egypt's Supreme Council of Antiquities (SCA) and the Egyptian Security Police have given their initial assurances that the proposed project and the individual team members will be approved.

## In Cairo

For the past few years, all members of an expedition team have been required to appear together at the headquarters of the SCA to obtain their final paperwork. Our team members gather in Cairo no later than the day before what we call "SCA Day".

We arrive at the headquarters of the American Research Center in Egypt (ARCE) early that morning for a meeting with Madam Amira Khatab in her private office. Madam Amira, a delightful, indomitable and highly efficient lady, has been with the ARCE office in Cairo for 35 years and is the Assistant to Dr. Robert Springborg, the Director of ARCE. It would be difficult to find any American Egyptologist working in Egypt who would not credit her with superhuman powers when it comes to weaving through the maze of bureaucratic procedures or handling miscellaneous problems from booking local travel arrangements to assisting with lost passports.

Following the formalities of strong Turkish coffee, pleasant conversation and a short social visit with Dr. Springborg, the business begins. A set fee is paid in US dollars to cover the cost of ARCE's crucial services. The fee, based on the number of members on our team, is discounted considerably because the University of Arizona is an institutional member of ARCE.

Madam Amira collects all of our passports and has one of her assistants make photocopies of them. She fills out a form for the Security Police listing our travel plans to Luxor: date, flight numbers and times, the names of the hotels where each of us will be staying, and when and how we will be returning to Cairo. Three of our team members plan to travel to Luxor by train but do not yet have their tickets. Madam Amira collects the price of the tickets from them and sends one of her assistants to the train station to buy the tickets and bring them back to the ARCE office. She makes sure we have the phone and fax numbers of the ARCE office as well as her personal mobile (cellular) phone number, just in case we have any problems and need to contact her at any time of the day or night.


Dr. Robert Springborg and Madam Amira Khatab hold her certificate of Appreciation from The University of Arizona Egyptian Expedition.

A taxi is arranged to take our team to the SCA headquarters in the crowded, rundown Cairo district of Abbasiya. Twenty percent of Egypt's Gross National Product is generated by tourism directly related to the work of the Supreme Council of Antiquities The public, "showcase" headquarters of the SCA, in the fashionable Zamalek district of Cairo, are clean and modern. This is where foreign dignitaries are greeted and entertained. But the actual, working offices of the SCA in Abbasiya are shockingly drab and shabby.

The interior walls of the high-rise building are stained and the paint is peeling off. The tile floors and marble stairs are scuffed and worn. Small, faded prints of various antiquity sites and tinted photographs of President Hosni Mubaruk are taped on the walls. The plastic chairs and couches are badly torn and the stuffing is falling out. The building has no air-conditioning. The windows are open to the stifling heat and an occasional table fan pushes the stale air around slowly.

Since none of us speaks fluent Arabic, Salah Metwali has accompanied us from ARCE. Fresh from having purchased the train tickets, Salah is a tremendous help in guiding us through the various offices.

After entering the building and climbing the stairs, we are ushered into a stark room on the second floor. Within ten minutes, a casually dressed official enters the room. We know from Madam Amira that the SCA has already approved our project. But the official reviews our file at length before finally presenting a contract to Dr. Wilkinson for his signature. It specifies where we can work, the duration of the work season, and what we can do. The contract is written in Arabic so it is reviewed carefully to make sure the dates, site locations, names of the team members and other essential elements are correct. If any of this information should later be found to be missing or wrong, we all might have to return to Cairo to get the contract corrected.

We express our thanks and are referred to another room on the sixth floor. The building has an elevator which may not have worked for many years, so we climb the stairs. The room is small and cramped, with ten women seated behind seven desks. Most are munching on hard rolls, sipping hot tea from thin, plain glasses, and gossiping about what they and their families had done the previous night. We crowd into the room and plaster ourselves against the bare walls.

The number of employees in these offices has mushroomed during recent years, perhaps owing to the fact that all university graduates in Egypt are guaranteed a


An official of the SCA and Dr. Richard Wilkinson, Director of the UAEE, examine the Expedition's work contract.
government job. But government salaries are minimal and most employees have to work at least two jobs to make ends meet. To accommodate all qualified employees, the work shifts of non-essential employees are short. For example, if you spend a full day at the government-run Egyptian Museum in Cairo, you may notice that, while the Museum is open for only eight hours each day, there are two complete changes of non-administrative staff during that time.

Among the women in the small, sixth-floor office, one is obviously in charge. She checks our paperwork while another fills in additional forms on the solitary, manual typewriter. No one has said a word to us, but we realize the importance of what is happening. We are in the clerical office of the Security Police and the two ladies who are actually working are preparing our security clearances. Our smiles are intended to radiate goodwill and friendship. An official enters the room. He examines, questions and finally signs the papers. We are directed back down to yet another room on the second floor.

The staff examine our passports closely and compare them with photocopies that were made at the ARCE office and with others from the SCA office. They record the information manually on still another set of forms. Something seems to be wrong. The man recording the information about my passport questions the fact that it was issued only three weeks earlier and is valid for only one year. It is not the passport I used during our previous field season, which was valid for another five years. I explain that my old passport was lost by the United States

Postal System in the process of getting a visa from the Egyptian Consulate in Houston and a new, temporary passport had to be issued at the last moment. The officials confer quietly in Arabic while we all hold our breath.

Suddenly the man behind the desk stands up, gives us a big smile, and hands us back our passports. We have run the bureaucratic gauntlet in record-shattering time. What usually takes several hours at the SCA headquarters has been completed in less than one. In the taxi on the way back to the ARCE office, we are struck by a novel question for "SCA Day": What do we do with the rest of the afternoon?

Running the gauntlet has never gone so smoothly. In every previous year, at least one unexpected stumbling block had been thrown in our path at the last minute. One year, after an entire day at the SCA headquarters, we were finally issued security clearances only to discover that all the UAEE members had been assigned to the team of Dr. Kent Weeks, and all of Dr. Weeks's team members had been assigned to work with Dr. Wilkinson. It took most of the following day to straighten out the filing error. Another year, the Secretary General of the SCA who preceded the very able Dr. Gaballa Ali Gaballa decided (for some still unknown reason) to withdraw all approvals for American projects and the entire season had to be cancelled at the last minute. Last year, our security clearances remained unsigned for nearly a week, and half of our team members never did receive theirs. The reason: the head of the Security Police, who had already agreed in writing to issue the clearances, was on vacation and no one else was willing to take responsibility for signing the papers during his absence.

This year, everything had gone smoothly in Cairo. That left only one more official set of procedures before we could begin our actual work. The SCA and the Security Police had given us the green light to proceed. But we would be working in Luxor and our final approval would have to be obtained from the Antiquities Office in Upper Egypt.

## In Luxor

We arrive in Luxor on Friday, the equivalent of Sunday in Christian countries, when most Egyptians do not work unless they are directly involved in the tourist industry. In recent years, Thursdays have also become non-work days for government officials. So the day of our arrival is set aside for


The Expedition's reis, Nubie el-Baset Hassan, on the roof of his home where he and his family sleep during the summer.
unpacking, settling into the hotel for the next few weeks, renewing acquaintances with the hotel staff and visiting friends in the Luxor area.

The following day, the team splits up to take care of preparations and to make necessary contacts. Dr. Wilkinson makes arrangements for all of us to meet the next day with Dr. Sabry el-Azziz, the General Director of Antiquities for Upper Egypt, to receive our additional paperwork and permits. Two of us take the ferry across the Nile to the West Bank to find Nubie el-Baset Hassan. Nubie is the reis - or foreman - of our Egyptian workmen and has worked with us for many years. We are unable to call ahead because, like most people who live on the West Bank, Nubie and his family do not have a telephone. Luckily, we find him in his home near Medinet Habu, the mortuary temple of Ramesses III. We are also relieved to find that he is not currently working with another project.

Sitting on mat-covered stone benches along the wall of the mud-floor room where he entertains guests, drinking scalding hot tea from small, thin glasses, we explain to Nubie what we will be doing this season. Together, we determine the number of workmen we will need for the physical labor of the excavation. In Egypt, archaeologists are required to hire local workmen to do most of the strenuous work which, considering the high summer temperatures and scorching sun, we are more than happy to do.

Before leaving, we take an inventory of all the equipment we have stored with Nubie over the years: flood
lights, electrical cords, a camera tripod, flashlights, a military compass, T-squares, meter sticks, measuring tapes, duct tape, trowels, paint brushes, and tooth brushes for particularly fine work. After a visit and more scalding tea with Nubie's elderly mother, we head back across the river, satisfied that the preparations are going well.

The following day, we meet with Dr. Sabry el-Azziz at the tafteesh (the official Antiquities office) on the East Bank, located in an alley just behind the Luxor Museum. Gracious, charming and efficient as always, Dr. Sabry offers us more scalding tea. We discuss our respective families, and he catches us up on the latest news and possible position changes within the Supreme Council of Antiquities.

Almost as a casual afterthought, Dr. Sabry signs our official work papers and arranges for us to meet later that day with his associate, the Chief Inspector of Antiquities on the West Bank. Before we leave, he kindly gives us special, handwritten passes that allow us free entry into all archaeological sites in the Luxor area for the entire time we will be there.

Papers in hand, we cross to the West Bank. We select a motorboat and arrange with the driver to transport us each day that we will be working on the West Bank. For five or more people, a motorboat is cheaper than the local ferry. It is also much faster and the boat driver will be waiting for us on the West Bank to bring us back when we have finished working for the day.

Arriving at the tafteesh on the West Bank, we discover that Mr. Mohammed el-Bialy, the Chief Inspector on the West Bank, is in South America giving a series of lectures. Filling in for him is our good friend, Mr. Ibrahim Soliman, Chief Inspector of the Valley of the Kings. Mr. Ibrahim is extremely friendly and outgoing and, like Dr. Sabry, has been especially helpful to us over many years. He also understands Americans better than most Chief Inspectors. Rather than offering us still more scaldingly hot tea in the 110-degree temperature, he asks if we would like a very cold soda. If he had worn a large enough ring, we would all have kissed it at the same time.

Although expeditions can request a particular reis, the Chief Inspector of the area must approve the choice. While we were taking care of other matters, Nubie had alerted Mr. Ibrahim that we were in Luxor and Mr. Ibrahim had approved Nubie as our reis. Nubie had then hired


Mr. Ibrahim Soliman, Chief Inspector of the Valley of the Kings
our six workmen and a driver, Tiyeb, who had driven us the previous year. We were delighted with Nubie's choice. Unlike many other drivers, Tiyeb is very agreeable about staying with us the entire time we are working. This is particularly important in more remote areas, like the West Valley of the Kings, in case there is an emergency or if we have to send someone back to one of the villages to find a needed piece of equipment.

Prior to our arrival at the tafteesh on the West Bank, Mr. Ibrahim had also asked Mr. Aez ed-Din to be our project Inspector. By SCA regulation, each expedition is assigned a government Inspector who stays with the project team whenever it is actually working on-site. This is for two reasons: first, to assist in any special matters that might come up; and second, to ensure that anything that is found of particular value or importance is reported immediately to the proper Egyptian authorities. In order to maintain an official distance - and to avoid any possible collusion - between the Inspector and the project team, it is unusual for a project Inspector to be assigned to the same expedition for more than one field season. Mr. Aez ed-Din had been our Inspector the previous season and was well liked by the team members so we were both surprised and pleased that he had been reassigned to us again this year.

With Murphy's Law in mind, we have learned to pad the time we expect to work with a couple of extra days, just in case anything unexpected happens. It usually does, and this year was no exception. America West Airlines had lost Dr. Wilkinson's checked luggage on his short flight between Tucson and Phoenix. They eventually located the suitcase and sent it to London where, by international regulations, it was held in quarantine for several days. It was finally sent on to Egypt, only to be diverted to another country due to a sandstorm around the Cairo airport. While the contents were not absolutely crucial to this year's project - those things had been packed in carry-on luggage the suitcase did contain several items that would be very helpful to the project. We decided to delay the start of our work for one extra day with the hope that the suitcase would arrive. This is explained to Mr. Ibrahim in answer to his polite inquiry about how the traveling had gone so far.

In the course of our conversation at the tafteesh, we ask Mr. Ibrahim if the third level of the mortuary temple
of Hatshepsut at Deir el-Bahari is open to the public.
"No," he says. "I'm sorry. We hope to open it later this year, insha'allah." Then his eyes brighten and he asks, "You have all seen the third level, of course?"

We tell him that none of us has, other than looking down on it from the path that leads from Deir el-Medina over to the Valley of the Kings.
"Then you must see it! This afternoon is probably too hot, but Mr. Aez ed-Din can take you there tomorrow and Mr. Yassar, the Chief Inspector at Deir el-Bahari, will show it to you. You will love it! Besides", he says with a twinkle in his eye, "it will be a lot better than sitting around waiting for a suitcase that, in Egypt, may never arrive".

Plans to visit Karnak are forgotten immediately and his kind offer is accepted with great enthusiasm.

Final schedules are arranged. Mr. Ibrahim has a meeting with other Antiquities Department officials mid-morning the next day to discuss the flash-flood drainage problems in the Valley of the Kings. We arrange to come to the tafteesh prior to that meeting to present our passports and six photocopies of the visa stamps showing our entry dates into Egypt.

The next day, after a brief meeting with Mr. Ibrahim, a two-hour guided tour of the third level of the mortuary temple of Hatshepsut, and just minutes before the "drop dead" time for having to replace work clothes and miscellaneous equipment, Dr. Wilkinson's suitcase is delivered to his hotel in Luxor. It is over a week late but in time for us to start the project with only one day's actual delay.

On the first day of on-site work, Tiyeb picks us up at the motorboat landing at 7 am . His open-bed truck holds all 12 of us - Tiyeb, the project team, the workmen, Nubie and Mr. Aez ed-Din. Tiyeb has already picked up the workmen and we drive to the West Valley in time to start work by 7:30. The Chief Inspector of the West Bank determines how early we can begin work each day, usually with the recommendation of the Inspector assigned to our project. Even the Egyptians like to begin as early in the morning as possible, before the heat of the day makes heavy work unbearable. After about noon, when summer temperatures in the West Valley can reach upwards of 120 degrees, strenuous physical labor simply is not safe for the workmen.

## Back in Cairo

Following the end of the season and before leaving Luxor, Dr. Wilkinson writes a Preliminary Report of the field season which is typed, printed and photocopied at one of the Internet cafès in Luxor. Before we leave Luxor, one photocopy is given to the General Director of Antiquities for Upper Egypt, one to the Chief Inspector on the West Bank, and one, as a courtesy, to the project Inspector. After we get back to Cairo, we deliver six additional photocopies to Madam Amira at ARCE: one copy for their files and five that they will deliver to the SCA. Within the next two months, Dr. Wilkinson will write a Final Report of the season which he will send to ARCE to be forwarded to the SCA.

The field season has been a great success. The regulatory procedures, overseen by Madam Amira, have gone flawlessly this year; the local Egyptian workmen, hired and supervised by Nubie, have done a wonderful job; and Egyptological knowledge about tomb WV 25 has been increased as much as it can be by the work that has been done.

But the next field season is only ten months away, and the planning, application process, and fund raising has already begun anew.

Editor's Note: Dr. Richard H. Wilkinson's report on the 20002001 field seasons of the UAEE begins on Page 13. For additional information on the University of Arizona Egyptian Expedition, please visit its Web site at: w3.arizona.edu/~egypt/

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Figure 1: Part of the University of Arizona team excavating the western side of Tomb WV 25.

# The Identity of the Amarna-Age Tomb WV 25 in the Western Valley of the Kings 

Richard H. Wilkinson

The University of Arizona Egyptian Expedition has worked in the Valley of the Kings since 1989 and has excavated and studied a number of royal tombs there over the course of the past 13 years. During that time the Expedition has spent several seasons working in the Western branch of the royal necropolis - the socalled West Valley - studying the tombs of the Amarna age kings found there. Although both the earliest and latest of these tombs, those of Amenhotep III (WV 22, referring to tomb number 22 in the West Valley) and Ay (WV 23), were decorated and inscribed for their occupants, the uninscribed tomb known only as WV 25 which lies between them has long been an enigma.

## The First Tomb of Akhenaten?

It is usually thought that WV 25 may be the first tomb begun by Amenhotep IV/Akhenaten before that king moved to his new city of Akhetaten and built his famous royal
tomb there. This presumed identity of the uninscribed tomb is based on its general position in the West Valley and on the size and design of its architectural features, all of which would seem to place the monument chronologically between those of Amenhotep III and Ay. The tomb was discovered by Giovanni Belzoni in his explorations of 1816-17 along with the tomb of Ay and the shaft tomb known as WV 24 which lies between Ay's tomb and WV 25 (and which may have been cut originally as a storage annex for WV 25 in the same way that Amenhotep III's tomb had a similar storage annex "tomb" known as WV A).

Although Egyptology is indebted to Belzoni's persistent and profitable work of search and discovery, it is also hampered by the fact that, in the mode of his day, the Italian strongman sought artifacts rather than archaeological features, and the latter were sometimes jeopardized or destroyed in the frenzied effort to find the former. This is particularly clear in Belzoni's famous use of a battering ram to open


Figure 2: Steps leading into WV25. Note unusual lip at the bottom of the stairs.

WV 25, a procedure that accomplished its goals but with little regard for the tomb itself. Belzoni's damage to the architectural record of WV 25 did not begin with the ram, however, and the intrepid explorer may well have unintentionally destroyed some key evidence for this tomb.

## A Way to Solve the Enigma

Evidence from within the tomb that could be used to ascertain the owner or builder of WV 25 is entirely lacking. The tomb is unfinished and undecorated. It appears that, for some reason, the construction of the tomb was halted abruptly and the workmen never returned.

One way in which the enigma of WV 25's origin might be solved would be the discovery of a foundation deposit pit or pits - containing inscribed objects providing clear identification of the tomb's owner. Such pits were constructed for a number of New Kingdom royal tombs, including the tomb of Amenhotep III in the same valley. If the supposition that WV 25 represents the very next royal tomb cut in the West Valley is correct, which it would be if it is indeed the first tomb begun for Akhenaten, then it seems likely that foundation deposit pits could exist for that tomb also. While earlier excavations conducted in front of the tomb and cursory examinations of the surface levels at the sides of the tomb did not uncover any such pits, the University
of Arizona Egyptian Expedition decided that the area should be searched thoroughly in order to make an archaeological determination of this situation.

In the spring of 2000, the Expedition requested and was granted permission by the Supreme Council of Antiquities to conduct a thorough search of the areas around this tomb in the hope of finding foundation deposit pits. This work was funded by a number of gifts of support including a generous grant from The Amarna Research Foundation (TARF). Unfortunately, however, work conducted in the summer of 2000 provided only a testament to Belzoni's probing of the slopes to the west of WV 25 .

The stratigraphic sequence of this area, or what is left of it, begins with a layer of surface debris consisting mainly of dirt and rocks of various sizes (Level 1) deposited by numerous floods over the centuries. Beneath this surface layer was a layer of clean white limestone chips of various sizes (Level 2 ), which represented the stone that was removed and dumped in the course of the construction of tomb 25 . Below the layer of tomb chips was a layer of undisturbed dirt, which would have been the level of the surface at the time the tomb, was constructed (Level 3). This third level ended at the hard packed level of rock and tafl that represents the upper surface of the bedrock limestone gebel (Level 4).

But in most of the area excavated to the west of the tomb, these stratigraphic levels had been churned in the past, almost certainly by Belzoni in the course of his discovery of tomb 25 . Our excavations turned up only small fragments of artifacts in this disturbed area and no sign of a foundation pit was discovered, although given the degree of the area's disturbance, this was hardly surprising.

## Major Stratigraphic Levels Common to Excavated Areas Around Tomb WV 25

Level 1: Post-New Kingdom level - Loose packed surface debris

Level 2: Tomb construction level - Limestone chips cut from tomb
Level 3: Pre-tomb ground level - Mostly similar to Level 1 above
Level 4: Underlying gebel - Hard-packed rock and limestone beds

## Foundation Pit

Our summer 2001 season's work on this project, again supported in part by TARF, therefore involved searching the remaining unexplored area to the eastern side of the entrance to tomb WV 25. This area exhibited the same stratigraphic sequence, but in contrast to our excavation of
the heavily disturbed areas to the west of the tomb, only a small amount of disturbance was evident.

In the course of excavating this area, Nubie Abd el-Basset, our Expedition's reis, discovered a feature that we soon realized represented the remains of a foundation deposit pit. This feature was located 2.7 meters from the axis line at the center of the tomb entrance in exactly the area one would expect a pit to have been dug.

The pit, which was cut into the New Kingdom surface layer and underlying hard pack at the base of the limestone chip level, was just over 30 cm deep on its northern edge, although it had been dug through on its southern half at some point. The edges of that half of the pit were, therefore, less distinct, but it was clear that the feature had been nearly circular in plan - about 45 cm across on its east-west axis.

The surface level around the lip of the pit had been carefully smoothed and exhibited numerous cut marks where harder areas had been leveled. Small stones and hard pack on the sides and base of the pit also exhibited cut surfaces. Most of the pit was lined with fine, clean, yellowish-grey river sand - totally unlike the surrounding soil type - and not mixed with any other substance although the pit itself was filled with intrusive limestone chips from the layer above.

The horizontal and vertical loci, size, shape, and river sand lining of this feature clearly indicated that it represented the remains of a foundation deposit pit dug through (and doubtless emptied of its artifactual contents) at some time, and almost certainly by Belzoni's workmen in the course of their probing of the area at the time of WV 25 's discovery.

## Empty - But Not Without Value

This discovery leads us to believe that, just like the tomb of Amenhotep III which lies a little distance away, foundation pits may well have been placed around WV 25, probably directly in front of the tomb on the axis of the tomb entrance and on each side of the entrance itself. The first of these could have been destroyed by Belzoni's digging or even placed in the area in which New Kingdom workmen's huts were later built, if those structures were built after WV 25 was constructed. Any pit directly on the west side of the tomb entrance was doubtless destroyed in the course of Belzoni's thorough probing, as revealed by our excavation of that area. The damaged pit that we discovered on the east side of the entrance was most likely the only surviving example of such pits for this particular tomb.

Although the remains of the one surviving pit were clear enough, the tomb which was probably Akhenaten's first funerary monument remains, like Akhenaten himself, as


Figure 3: Tomb WV 25. The remains of a foundation deposit pit were cut into the New kingdom surface level to the east of the tomb, at the left in this view.
mysterious and enigmatic as ever. On the other hand, despite the fact that the pit had been emptied, depriving us of conclusive evidence of the ownership of WV 25, our excavation nevertheless established the existence of a deposit pit or pits for this intriguing monument and provided another link in the history of foundation deposits associated with New Kingdom royal tombs.

Certainly the knowledge that WV 25 did originally have one or more foundation deposit pits was worth the time spent carefully excavating the area around the tomb. The Amarna Research Foundation's support of this project was therefore both worthwhile and of great help in achieving this understanding.

> Dr. Richard H. Wilkinson is a professor at the University of Arizona and is the Director of the University of Arizona Egyptian Expedition.

## Motif Alignment Project

In addition to its excavation work, the University of Arizona Egyptian Expedition also conducts another ongoing project in the Valley of the Kings: the Motif Alignment Project, which aims to understand the underlying symbolism of the way in which the decoration of the royal tombs was organized. This orientational symbolism of New Kingdom royal tombs has been little studied until recent years and the project is finding many aspects of royal tomb decoration that have not been noted or understood before. While it is known that as early as the 18 th dynasty the ancient Egyptians considered the entrance to the royal tomb to be symbolically located in the south (despite actual cardinal directions), a good deal of evidence indicates that during the 19th dynasty another symbolic orientation was utilized in which the royal tomb was considered to lie on an east-west axis.

The Motif Alignment Project is collecting and studying the evidence for this symbolic re-alignment and its influence on the decoration of the Ramesside tombs and also applying what is learned to the tombs of the Amarna Period. For the past few years, the Expedition has conducted seasons of photography and recording in various New Kingdom royal tombs and is producing a CD-ROM, which will allow full study of motif alignment in the Valley of the Kings.

# Discovered: The Pyramid-Tomb of King Nub-kheper-re Intef 

Daniel Polz

During the spring season of 2001, an archaeological expedition of the German Institute of Archaeology Cairo discovered the ruins of a royal tomb of the $17^{\text {th }}$ Dynasty (c. 1645-1550 BCE) in the large necropolis of Dra' Abu el-Naga in Western Thebes. (fig. 1) The tomb is in the northern portion of the Theban necropolis, not far from the entrance to the Valley of the Kings. This area, called Dra’ Abu el-Naga after a nearby modern village, has long been assumed to be the cemetery of both kings and private individuals of the $17^{\text {th }}$ and early $18^{\text {th }}$ dynasties. Since the early 1800 s, several royal coffins and other parts of royal burial equipment have been discovered in Dra ${ }^{\text {A Abu el-Naga, most of them in illicit exca- }}$ vations. Other discoveries in this area were made in the 1860s by the workmen of Auguste Mariette, the first director of the Egyptian Antiquities Organization.

Among the royal objects from Dra' Abu el-Naga are the wooden, gilded coffins of three kings with the name Intef (or Antef), now in the Louvre in Paris and in the British Museum in London, as well as the coffins of the famous
queen Ahhotep and the "private" coffin of king Kamose that are now in the Cairo Museum.
These and several other objects found at Dra' Abu elNaga formed the basis of a meticulous investigation and, subsequently, of an ingenious article by the American archaeologist and Egyptologist Herbert E. Winlock in the early 1920's. In this article (Winlock 1924: 217-277), Winlock attempted to locate the tombs of the kings of the $17^{\text {th }}$ dynasty at Thebes. Winlock's other major source was an ancient Egyptian document. The famous Abbott Papyrus, now kept and partially displayed in the Egyptian Galleries of the British Museum in London, is one of a series of "tomb-robber papyri" dating to the reign of Ramesses IX (c. 1121-1103 BCE). The Abbott Papyrus is an official report, written in hieratic, of a "governmental" inspection of certain royal and non-royal tombs in the vast Theban necropolis. Reacting to a rumor that ten royal tombs had recently been violated and robbed, a committee of nobles and officials of the Theban bureaucracy was formed to investigate the matter.

Among the allegedly plundered royal tombs was the pyra-

Fig. 1: The necropolis of Dra’ Abu el-Naga in Western Thebes

Figures 1, 3, 4, 5 are © German Institute of Archaeology Cairo 2001.



Fig. 2: Abbott Papyrus: Report on the tomb of Nub-kheper-re Intef (after: Möller, Hieratische Lesestücke, Berlin 1909-1910)
mid-tomb of king Nub-kheper-re Intef of the $17^{\text {th }}$ dynasty. The relevant passage of the text of the Abbott Papyrus reads as follows (fig. 2) (author's translation):
"The pyramid-tomb of king Nub-kheper-re, Son of Ra, Intef - Life, Prosperity, Health! It was found in the course of being broken into by the thieves who dug a tunnel of two and one half cubits in its outer wall and (a tunnel of) one cubit in the (transverse) hall of the tomb of the deceased overseer of the offering-bearers of the temple of Amun [Karnak], (called) Yuroy. It [the pyramid tomb] was uninjured because the thieves did not know how to reach it."

It was the tomb of Yuroy, overseer of offering bearers, which led Winlock to the idea that if one were able to locate this private tomb in the Theban necropolis, the pyramid tomb of Nub-kheper-re would be not too far away from it. Winlock succeeded in locating the tomb of Yuroy (TT 13) in Dra’ Abu el-Naga, now open to the public as the "Tomb of Shuroy", and concluded that the royal tomb must have been somewhere close. Strangely enough, neither Winlock nor any subsequent archaeologist ever tried to verify his shrewd hypothesis regarding the location of Nub-kheperre's tomb by an archaeological investigation of the area.
This is where the archaeological expedition of the German Institute of Archaeology started in the spring of 2001. The idea was, simply speaking: Why don't we give it a try? From the viewpoint of scholarship, nothing is less satisfying than an unverified hypothesis if one has the opportunity to attempt to verify or refute it. From an archaeological point of view, the underlying conception of our attempt was to identify an area in the vicinity of the tomb of Yuroy which in antiquity might have been suitable for the construction of a (presumably small) pyramid.
The results of our excavation were immediate and more than promising. The first test trench revealed the remains of a small mud brick building, obviously a private funerary chapel, with some scant remains of mural paintings, including hieroglyphic inscriptions, still preserved. These inscriptions give us the name and titles of the chapel's owner, Teti

- a certain "hereditary prince, count, sealer of the Lower Egyptian King, sole companion (of the king), overseer of the seal-bearers", named Teti. On the chapel's west panel, in front of a small niche, are the remains of a large cartouche. Although badly damaged, the almost-faded traces of the inscription allow for only one reconstruction: Nub-kheper-re (fig. 3).

Immediately north of Teti's chapel, we came across a mud-brick wall, covered on both sides with a white lime plaster. Further north, just another meter or so away from the wall, there were the remains of a mud-brick pyramid - the "pyramid-tomb" of Nub-kheper-re Intef!

After another excavation season in the fall of 2001, the ground plan of the pyramid and its surrounding buildings and shafts is becoming clearer (fig. 4, next page). The pyramid of Nub-kheper-re Intef was surrounded by an enclosure wall, once covered with white plaster on both sides. In front of the pyramid lies what we now believe was the royal burial shaft. In the debris filling this extremely large shaft, the rather damaged head of a lifesized royal sandstone statue was found (fig. 5). Certainly this head once belonged to a seated statue of a king. Whether this statue was initially carved for Nub-kheper-re Intef is still


Fig. 5: Head of a royal statue (sandstone)

Fig. 4: Plan of the pyramid of Nub-kheper-re Intef and the surrounding area (Pieter Collet/Daniel Polz)

debatable since the iconographic and stylistic features of the statue's head seem to support an earlier date. The statue may have been usurped by Nub-kheper-re and taken from another site, perhaps from the famous temple of Neb-hepetre Mentuhotep at Deir el-Bahri.

The pyramid-complex of Nub-kheper-re Intef is the first royal tomb of the 17 th dynasty ever discovered in controlled excavations. Its location, architecture, and contents throw new light on the hitherto unknown burials of those Egyptian kings who laid the foundations of Egypt's "Golden Age", the New Kingdom. Furthermore, for the the "dark ages" of the Second Intermediate Period in ancient Egypt.

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Dr. Daniel Polz is a former professor of archaeology and history at UCLA and serves as the Associate Director of the German Institute of Archaeology, Cairo.

## House of Scrolls

Death and the Afterlife in Ancient Egypt
by John H. Taylor
2001, The University of Chicago Press; 272 pp;
\$19.95 softcover; ISBN 0226791645

## Reviewed by Susan Cottman

No people have so vividly or memorably striven to make sense of the afterlife as did the ancient Egyptians. Their beliefs and methods - influenced by and reflecting their unique natural environment and social order - captivate each successive generation that studies them.

It is a formidable task to make sense of Egyptian belief in the afterlife. One of the best, most comprehensive popular books to date is John H. Taylor's Death and the Afterlife in Ancient Egypt. Taylor is an Assistant Keeper in the Department of Egyptian Antiquities at the British Museum.

Taylor examines the vast array of resurrection techniques that ancient Egyptians used during the course of 4,000 years to guarantee their place in the afterlife.

He draws on the British Museum's extensive and celebrated collection of funerary objects and mummies to introduce the reader to the development of burial customs from the predynastic to the Roman eras. Taylor emphasizes the functionality (magical properties) of burial equipment.

Imagine, if you will, a kit for the afterlife. What would it contain? Crucial to resurrection was preservation of the body. From the first known (circa 3500 BCE) attempts at mummifcation recently uncovered at Hierakonpolis (see page 47) to the elaborately wrapped Ptolemaic mummies, mummification was every Egyptian's greatest desire.

Mummification, however, was more than removing the organs, treating the body with resins and spice, and wrapping it up for eternity. The embalmers were also magicians. They uttered spells and inserted amulets and other jewellry as they prepared the body. What are breathtaking masterpieces of the jeweler's art to modern eyes functioned as afterlife insurance for the people who commissioned them.

As the living occupied a house, so did the dead. What today we call a tomb was the Egyptians' house of eternity, the portal to the afterlife. Its walls provided the spells that the deceased needed to survive the journey to the Beyond. We would not dream of going to a country that lacked medical facilities without getting shots first. Similarly, no Egyptian, if he or she could help it, would go to the grave without being mummified, in the protective womb of a coffin, in anticipation of rebirth. The deceased took to their graves a variety of funerary objects: reserve heads, models, shabtis, canopic jars, inscribed passages from the so-called
"Books of the Dead," furniture, toiletries, magic bricks, clothing, a scribe's palette, sandals . . . whatever the funerary customs and practical considerations required.

The majority of ancient Egyptians could not afford decoration or even a tomb. Yet even the poorest Egyptian could take a crude amulet and a plate of food to a pit grave for his or her journey. There was always a way to protect oneself. The more one paid, the more elaborate the travel kit.

At some periods in Egyptian history, the coffin replaced or enhanced some of the functions of burial equipment. Taylor has previously published works on Egyptian coffins and shares his expertise in an especially helpful review of coffins. Changes in coffin inconography came quickly and often, driven as much by social and economic conditions as by theology.

The anthropoid, or mummy-shaped coffin, first attested in the Middle Kingdom, is the most familiar to modern eyes, due in no small part to a wealth of New Kingdom examples. In Taylor's words, "Coffins created special environments or cosmoi in which the transfiguration of the dead was promoted: The extended cosmos (incorporating sky, earth and underworld) and the more restricted cosmos of the deceased's immediate surroundings represented by the burial place and cult-chapel."

The coffin functioned as a "tomb in miniature". In less prosperous or uncertain times, it substituted for the tomb. Excellent examples of this are Theban Third Intermediate Period coffins. In the 21st Dynasty, group burials and the reuse of tombs proliferated. Fewer grave goods accompanied the dead, perhaps as a reaction to the epidemic of tomb robbery or because of a shortage of artists resulting from the collapse of central authority. For whatever reason, the coffins are crammed with vignettes and spells previously found only on tomb walls. Practically speaking, it was a case of the occupant getting the most magic possible for his or her money.

Readers fortunate enough to view the renovated British Museum's Egyptian funerary collections should take this book along.

Implicit throughout Death and the Afterlife in Ancient Egypt is the Egyptians' underlying faith in the afterlife, which never wavered until Christianity arrived - and even then stubbornly persisted, as evidenced by crudely mummified Coptic monks. Taylor immerses the reader in a world whose people wove an elaborate tapestry of faith and magic from a common human thread: the overwhelming desire to explain what happens after death.

