

THE OSTRACON

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Senet, the Game of Passing

Rhonda K. Hageman

The average person, or even the average Egyptophile, when asked to name major features of ancient Egyptian culture, will certainly mention pyramids, mummies, hieroglyphs, and the Egyptian pantheon of gods and goddesses. However, one of the most ever-present and enduring elements of life in dynastic Egypt is little known outside Egyptology. This is the delightful board game known to the Egyptians as *snt*, here transcribed as *senet*.¹ The word *senet* is a form of the verb “to pass” (Kendall 1978, 4, note 2). This probably refers to the way in which the pieces move, passing through the 30 squares of the board and also passing the opponent’s pieces in order to be the first ones played off. However, in later periods, it may also have signified the ideal of passing safely through the anticipated dangers of the netherworld into a blissful afterlife.

HISTORY

It is known for a certainty that the pastime of senet is not only older than the pyramids, but older than the pharaohs themselves. Timothy Kendall, in his exhaustive work *Passing Through the Netherworld*, includes a photograph of a Predynastic game board with pieces, molded from dried mud, which was found in a grave at el-Mahasna in Middle Egypt (Kendall 1978, 7). As Egyptologist Jacques Kinnaer explains, “That this board game is of great antiquity is shown by its stylised representation as the hieroglyph *mn*,  the earliest occurrences of which are dated to the reign of the Horus Narmer, at the beginning of the Early Dynastic Period” (Kinnaer 2004: 1). This glyph appears in the *nebti* name of the 1st Dynasty king, Hor-Aha, the same king whom Manetho identifies as “Menes” (*mn-n-ʿ*) (and who is also often identified as Narmer) in the first cartouche in the Kings’ List at Abydos (Fig. 2). The meaning of the bilateral hieroglyph *mn* is variously translated as “enduring”, “lasting”, or “permanent”, as in the names of the kings *Menkaure* and *Menkheperre Tuthmosis (III)*, as well as the city *Mennufer* (the Greek “Memphis”).

The meaning of the glyph *mn* becomes more significant in the later history of the game as a metaphysical concept representing the soul “enduring” and achieving a successful entrance into the afterlife. Moreover, the game is of such antiquity that it figures in one of the most well-known Egyptian creation myths, “Days Upon the Year.” In this story, Re refuses to allow the pregnant sky goddess, Nut, to give birth on any day of the 360-day year, in order to prevent the birth of any rivals to his exalted position. To remedy this, the god Thoth challenges the moon god, Khonsu, to play senet for the stake of some of the moon’s light. After many games, Thoth eventually wins from Khonsu (in some versions, the moon itself) enough light to create five additional “days upon the year”, making the full year 365 days. He gives these extra days to Nut, on which to bear her offspring: Osiris, Isis, Nephthys, Set, and Horus the Elder (Oakes and Gahlin 2003, 330–331). Clearly, the existence of this myth indicates the already universal appeal of

senet in the daily lives of the ancient Egyptians.

Although there are numerous pictorial representations of senet and people playing it, as well as a large number of complete or partial game boards and sets that have been discovered, “there exists no description of the rules, neither on papyrus nor on the walls of any tomb”². Apparently the game was so widely known among all levels of society that no one ever felt any need to write down the rules or method of play. Senet boards made of clay, stone, faience, ivory or wood were common grave goods from the earliest times (Kendall 1978, 1), even in the poorest graves, and the 30-square board layouts have been found scratched by workmen into the roofs of buildings and scrawled on the margins of schoolboys’ writing tablets (Kendall 1978, 22) in much the same way as modern schoolchildren draw up 3 X 3 squares for a quick game of tic-tac-toe.

The earliest known pictorial representation of senet is from the tomb of the 3rd Dynasty official, Hesyre, at Saqqara. In this image, painted on a wall, the board looks much the same as it would thousands of years later, with three rows of ten squares, four throwsticks, and seven rounded conical pieces for each player, one set shorter than the other. The flat or half-rounded throwsticks, which the players used to determine the number of squares to move, were patterned or colored on one side and blank on the other side. These same features would remain fairly consistent throughout the history of the game although the game acquired certain metaphysical aspects in the Ramesside period and the dynasties that followed (see below).

PLAY AND DEVELOPMENT

Despite the lack of explicitly written game instructions, researchers have gleaned enough information from inscriptions accompanying illustrations of senet players to arrive at a fairly good idea of how this most ancient of board games was played. The number of blank or uncolored sides facing up after the sticks were thrown indicated the number of squares to move, from one to four. If the sticks fell with all four blank sides face-down, the players may have moved either five or six spaces. Interpretations of this rule vary; some researchers argue for five spaces and others for six. In either case, throwing four-faces-down seems to have allowed the player another throw, which was also true for throws of 1 and 4. Throws of 2 or 3 ended the player’s turn. Besides throwsticks, knucklebones were occasionally used to determine the number of squares to move; a number of known sets contain carved, imitation knucklebones in ivory. The number of spaces to move were determined by which surfaces of the bones faced upward when thrown or rolled, of which there were five possible combinations (Kendall 1978, 66–67). In general, most of the earliest senet boards, from the Old and Middle Kingdom periods, looked much like the diagram below (Fig. 3.).

The 30 squares were not played as a squared field as in chess or checkers, but rather as a path, shaped like a reversed letter ‘S’, from ‘1’ in the upper left to ‘30’ in the lower right. (The

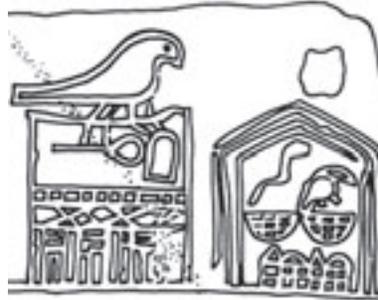


Fig. 1. The *mn* hieroglyph (at lower right) in the *nebti* name of Hor-Aha on an ivory label from the tomb of Queen Nithhotep (after Clayton 1994, 20).



Fig. 2. “Menes” from the Abydos King List

original boards were not numbered; numbers are used only in modern diagrams for the convenience of the reader). The players moved their pieces from left to right across the top row, from right to left across the middle row, and ended the game by moving from left to right across the bottom. Senet was a race game; like its distant descendant backgammon, its object was for the players to play all of their pieces along the designated path and off the board. The player who first played off all of his or her pieces first won the game.

Several squares on the board have special significance. The first marked square, Square 15, sometimes contains the hieroglyph *nfr* (life) or other markings, but is frequently unmarked in any

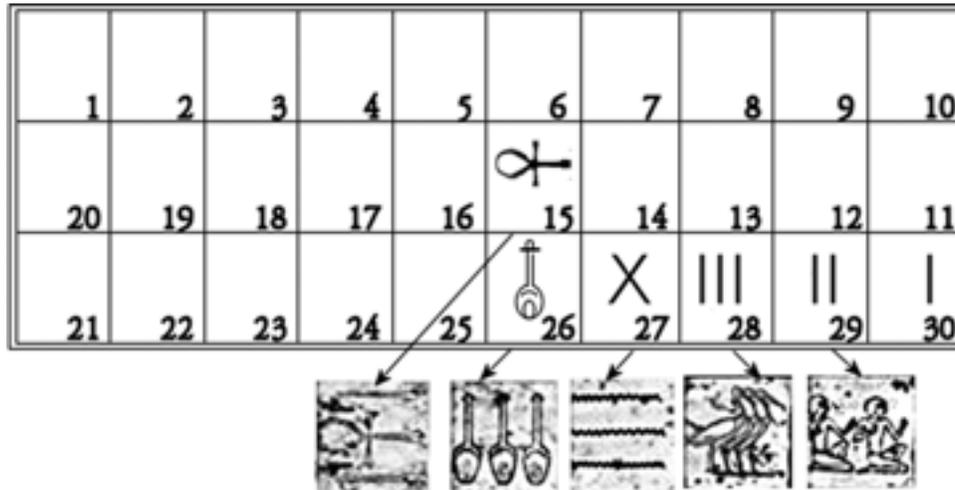


Fig. 3. Above: A senet board with numbered squares to indicate sequence of play. Squares 15 and 26-30 have special significance; see text. Below: Five designs for squares 15 and 26 through 29 similar to those on a senet board from Tutankhamun's tomb.

way. The last five squares are marked with characteristic symbols. Square 26 is traditionally marked with the hieroglyph *nfr* (good). Square 27 bears a large X, apparently a warning that this is a bad place to land. The final three squares are marked simply with three strokes, two strokes, and one stroke, indicating the throws necessary to play off one's pieces from those squares. Occasionally, the last square is designated by the sun-disk symbol instead of a single stroke; frequently it is simply left blank. This "simple" version of the board is found both in early representations and in later times.

The appearance of the six marked squares changed somewhat over time. By the beginning of the New Kingdom, the designs used to signify the important squares, or "houses", had become more elaborate, as seen in one of the senet sets found in the tomb of Tutankhamun³ (Fig. 3). In this set, Square 15 contains an *ankh*, but now it is framed by a pair of *was* scepters. Square 26, known by this time as the "Beautiful House", now contains not one but three *nfr* hieroglyphs, forming the plural *nfr.w* and changing the meaning from "good" to "beautiful" (Kendall 1978, 24). The name of this square is actually a play on words: the phrase *pr nfr.w* can read either "beautiful house" (as on a senet board) or "house of beautification", the latter being the mortuary where priests performed the rituals of mummification. As discussed below, that meaning became highly significant to the game in the later New Kingdom. Square 27, formerly marked with an ominous-looking X, now contains the hieroglyph for water, indicating what sort of danger awaits those who are unlucky enough to land there. The 'three' and 'two' squares are marked here with three birds and two human, male figures. The last square, Square 30, is unmarked in this set, but sometimes contained an image of Horus.

Not only did the markings on the squares vary from one set to another, but the design and style of the boards did as well. Ephemeral or incidental boards, intended to be used at the moment, were drawn on papyrus or scratched into the earth or handy stone surfaces. One step up from those were simple "slab-style" boards, made from a flat piece of wood or slab of clay. The most frequently found senet boards were in the form of boxes with a sliding drawer that held the pieces and the throwsticks. Both the slab-style and box-style senet boards often had boards for other games, such as the popular game of "twenty-squares", on the reverse side, so turning the board over presented the other playing surface (Kendall 1978, 20; fig. 14).

These double-surfaced game boxes, two of which were among the items found in Tutankhamun's tomb, were so common in the Second Intermediate Period and the New Kingdom that modern historians have occasionally confused the two games.⁴ The most elaborate senet boards were in the form of free-standing tables with legs ending in ornately carved lion's paws. A magnificent example of this type (Fig. 4) was found in the tomb of Tutankhamun, who must have been an avid devotee of the game since he was buried with no fewer than four sets.

The game pieces used to play senet were as varied as the boards on which it was played. Frequently, the playing pieces are shown as simple, rounded cones, with one set taller than the other. Other sets are depicted with one opponent's pieces in the

shape of tall, rounded cones and the other having short, squat pieces shaped like spools or barrels. An elegant set once belonging to the 18th Dynasty pharaoh Hatshepsut has carved wooden pieces in the form of lion's-heads, each bearing her cartouche, "Maatkare," on top of its head (Kendall 1978, 18 and 25; figs. 13 and 19).

To play the game, the players apparently arranged their pieces alternately across the first row of the board, although some versions of the rules hypothesized by scholars have the players "rolling" themselves onto the board one piece at a time, as permitted by throws of the sticks. As described earlier, throwing the sticks or knucklebones determined how many spaces a player could move. Whereas in chess or checkers enemy pieces are captured and removed from play altogether, in senet opposing pieces exchange positions but remain in play on the board. In other words, if a player's piece lands on a space occupied by the opponent's piece, the opponent's piece is moved to the space from which the other player's piece originated.⁵ If a player has two pieces on adjoining squares, those pieces are protected, and may not be displaced by an opponent, although an opposing piece may pass around them by a high enough throw, and continue along the path toward the end. Three pieces belonging to the same player on adjoining squares form a block; they can be neither displaced nor passed. The opponent's pieces are held up behind this block until the player chooses to break it up.

The players roll or throw the sticks until they get a throw of 2 or 3, at which point their turn ends and they move their pieces in accordance with the throws they have accumulated during that turn. A few lucky throws can change the situation of the game very quickly. The use of throwsticks rather than dice weights the odds; it gives a higher probability of throwing 2 or 3, and a much smaller chance

of getting the high-value throws of 1, 4, or 5/6. Playing *senet* with a modern six-sided die, with which the odds of rolling any particular number from 1 to 6 are equal to the odds of rolling any other number, drastically alters the character of the game.

As the players move along the board path, various obstacles arise in addition to those posed by the opponent's pieces. It seems to have been a rule that all pieces must land on Square 26, the "Beautiful House", by exact count before being allowed to continue on to the last squares and be played off the board. At this point, the game becomes more difficult and dramatic. Rolling a 1 from Square 26 would land the player in the "hazard" Square 27, indicated by an X on the simpler boards or by the symbol for water on later examples. Therefore, we can surmise that this is why the roll of 1 allowed the player to roll again, and to continue accumulating throws of the sticks or bones until getting a 2 or a 3, and only then to move the pieces. This made it fairly infrequent that a player would be forced into landing a piece on Square 27. From this square, the player, who has "drowned" in the water, has a choice of moving that piece to Square 15, the square associated with rebirth and decorated with an ankh or other symbols of regeneration, or of waiting to roll a 4 to get out of the water. As long as that piece remains "in the water", no other pieces can be moved and are not considered protected (Kendall 1978, 65). If the player successfully avoids landing in the Nile in Square 27, he or she then moves onto one of the squares designated with the numbers 3, 2, or 1. From here the player can only move pieces off the board by an exact throw of the needed number; if that number is not thrown and there are no other pieces on the board (or none that can be moved legally), then the player is forced to move the piece backwards the indicated number of spaces. Therefore, one may be forced by the throw of the sticks to land in Square 27 if there is no other legal move available.

SENET AS A FUNERARY METAPHOR

As the play of *senet* continued into the 18th Dynasty, it began to acquire a deeper and more mystical, or metaphysical, significance that it had not possessed earlier. While remaining a popular pastime, it also became (at least among the higher classes) a metaphor for the deceased person's successful journey and entry into the afterlife. A number of features of the ordinary gameplay naturally led to this supernatural interpretation of the game and its meaning: 1) the designation of Square 26 as *pr nfr.w*, the "Beautiful House"— or the house of mummification; 2) the fact that players are required to land on Square 26 before finishing their path around the board (which mirrors the Egyptian belief that the dead must be mummified in order to achieve immortality); and 3) the depiction of the *senet* board as a hieroglyph meaning "to endure" or "to persevere". The object of the game, which is to endure all the obstacles and be able to leave the playing surface, reflects the goal of each person in Egyptian society: to endure or persevere in the danger-fraught passage through the netherworld and finally achieve immortality in an eternal paradise.

In accord with this broader and deeper concept of what the game symbolized, the game board itself also developed in a new direction. Until the middle of the 18th Dynasty, the standard board design was similar to Fig. 3, with the *nfr.w* glyphs in Square 26, the "water" in Square 27, and 3 – 2 – 1 on the last three squares. As the game acquired this secondary, funerary significance in the late 18th and 19th Dynasties, each of the 30 squares of the board was inscribed or painted with motifs and images that reflected this metaphor of



Fig. 4. A *senet* board from Tutankhamun's tomb

death-and-rebirth (Kendall 1978, 28–33). For example, on a few 19th Dynasty boards, Square 15 contained the drawing of a frog, representing rebirth and the goddess Heket (Kendall 1978, 32).

Moreover, as the Egyptians' concept of the meaning and purpose of the game shifted towards a funerary paradigm, the character of *senet* as portrayed in tomb paintings and papyri (such as the Book of the Dead) also changed. Prior to the mid-18th Dynasty, the tomb owners, if they were particularly avid players, had themselves depicted in their tombs playing *senet* with various friends or relations, often accompanied by captions explaining how well the game was going. However, as the concept of winning at *senet* evolved into a metaphor (or even a magical formula) for successfully attaining the afterlife, the tomb paintings began to depict the tomb owner playing alone against some invisible, unseen adversary. There are two well-known examples of this style of painting: the portrayal of Ani with his wife as he is playing *senet* in the Papyrus of Ani, and the wall painting from the tomb of Nefertari (Fig. 5). Like Ani, Nefertari is seated alone at the gaming table, playing for her soul's destiny against her unseen opponent. The identity of this adversary is not known; whether it is one of the 42 gods or goddesses addressed in the Negative Confession, or Osiris himself, or some other unnamed entity, is never indicated.

Given the association of the funerary form of *senet* with the gods and the attainment of the afterlife, it would be interesting to determine whether *senet* was played in this way, or only in its original form as an amusing pastime, or if it were banned altogether during the reign of Akhenaten. The fact that Tutankhamun was an enthusiastic player is not necessarily significant; he could have been introduced to the game in his boyhood once he had left Akhetaten and returned to Thebes. It would be a logical assumption that *senet*, in its religious aspect, would be directly at odds with Akhenaten's belief in the Aten as the single god, which is indirectly supported by the lack of representation of this game in the Amarna tombs.⁶

LATE DEVELOPMENTS

The funerary form of *senet* seems to have been a fairly short-lived phenomenon. During the reign of Taharqa, the older, simpler form of the board motifs seems to have been revived (Kendall 1978, 39). However, as time passed and the Egyptians were increasingly governed by outsiders, knowledge and understanding of its play and meaning seemed to fade. There are some very odd and garbled descriptions in Greco-Roman writings of a game which must have been *senet* but which was only dimly understood by the writers attempting to describe it. Finally the game disappeared entirely;



Fig. 5. Queen Nefertari plays senet in a scene from her tomb (after Clayton 1994, 148).

the last known reference to it is in the tomb of an official named Petosiris, in the fourth century A.D. (Kendall 1978, 38–43).

SENET IN THE MODERN AGE

Modern game addicts owe a considerable debt to the Egyptologists and historians who have done a great deal of work to revive interest in, and awareness of, this very ancient game. Among these are Timothy Kendall, Gustave Jéquier, John Tait, Edgar Pusch, and R.C. Bell, all of whom have formulated various versions of the rules by which senet was played.

However, the greatest momentum currently driving interest in senet must certainly be the Internet and electronic media in general. Although Timothy Kendall's excellent work, *Passing Through the Netherworld*, introduced many fans of senet to the game (the present author included), it has long been out of print and the only way to locate it is to find a used copy of the funerary-style senet set (also called *Passing Through the Netherworld*) with which it was distributed and sold. In contrast, there are now a myriad of websites and Internet documents explaining the history and rules of senet, and often containing images of playing boards which can be printed and used in actual play. A cursory search on the Internet for senet sites leaves one with the impression that a renaissance is underway for this long-lost pastime.

For those who lack a handy opponent, a number of websites exist that contain Java-enabled or other programs that allow online play against a server, or play against one's own computer once the software has been installed. The earliest of these (and among the more difficult to play) was created by programmer and archaic-games collector, P.S. Neeley. His site includes not only senet (using Professor Tait's version of the rules), but its cousin "twenty-squares", the Norse game Halatafl, and many other ancient games that have been nearly lost to history. In addition, the German children's search engine and game site, Blinde Kuh (www.blinde-kuh.de), created by Birgit Bachmann and Stefan R. Muller, contains an online senet game, albeit slightly simplified to be played by children. The British Museum also has an online Shockwave version, intended to be played by two human players, or by one player who plays both sides.⁷ At one time, Discovery Channel had an excellent online senet game

on its website, but it was subsequently removed. However, the game was included in an educational CD produced by Discovery Channel entitled *Nile: Passage to Egypt*. If one can find a copy of the CD, the game is embedded within the "Journey up the Nile" motif of the CD, in the section related to Abu Simbel. It is, in this author's opinion, among the best electronic versions of senet that has been produced, barring the accompanying soundtrack which consists of an unseen "Re" taunts and belittles the player in stentorian tones at every turn.⁸ Finally, there even exists a version written for the Palm Pilot, which is quite well-done and enjoyable to play.⁹ In addition to these actual games, there are a multitude of online references and links about senet, many of which duplicate information from sites listed in the References below. A large number of these are found on education-oriented sites and targeted at schoolchildren learning about ancient Egypt. If senet has a future, it may very well lie with the young people learning about it now in their social studies curricula.

Exploring the game of senet provides a glimpse into the life, attitudes and culture of dynastic Egypt, and offers an opportunity to understand and enjoy a pastime that surely delighted the ancient Egyptians at all levels of society. As Timothy Kendall states (1978, 6), "As we throw the sticks, move our pieces through the thirty "houses" of the board, and hope for victory, we may keep in mind—and be touched with awe—that through some forty centuries all of the greatest figures in Egyptian antiquity are almost certain to have played this game in much the same way and to have hoped for the selfsame victory."

ENDNOTES

- ¹ Also referred to in various sources as *senat* or *senit*.
- ² Kantz, Markus. "Senet, das 30-Felder-Spiel". *Senet, ein altägyptisches Brettspiel*, page 1 (translation mine). Herr Kantz's Senet page shows images of several modern senet sets available from various manufacturers in Europe, and he includes the makers' addresses.
- ³ It is interesting to note that the commercial set that is currently available under the name "Senat" uses this identical board design.
- ⁴ This confusion is not uncommon, as the two games were played with the same pieces on similar boards. For example, the small and elegant 17th Dynasty game box on display as part the *Quest for Immortality: Treasures of Ancient Egypt* exhibit (catalog page 156) is identified both in the catalog and in exhibit signage as a senet board when in fact the playing surface visible in the photo and while on display is a board for twenty-squares. (Whether there is, in fact, a thirty-square playing surface on the other side of the box is unknown). In addition, *Egypt: Land of the Pharaohs* in the *Lost Civilizations* series by Time-Life shows a "senet" board of the box type on page 139; close inspection reveals that it, too, is a board for twenty-squares and not for senet.
- ⁵ This may be the origin of the "hit" move in backgammon (considered by many to be a descendant of senet), in which a player's lone piece is landed on by an opposing piece and displaced to the raised bar across the center of the board. The player must then roll dice until throwing a number that allows that piece back into play.
- ⁶ There are no Amarna-period depictions of senet of which this author is aware.
- ⁷ http://www.ancientegypt.co.uk/life/activity/act_main.html
- ⁸ This is amusing once, possibly twice, after which it becomes obnoxious. Fortunately, the "mute" control solves this problem.
- ⁹ <http://www.rogame.com/pages/SenetDeluxe.html>. This version is well worth playing, and has caused the present author to miss a bus stop on more than one occasion.

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The Domestic Cat in Egyptian Tomb Paintings

Brenda L. Lowe

There are two species of indigenous small cats in Egypt: the swamp cat and the African wild cat. The swamp or jungle cat, *Felis chaus*, is the heavier of the two species with a short tail and long, tufted ears. They are usually plain-colored without distinctive body markings, ranging from light reddish brown or sandy fawn to gray, with black-tipped ears, faint stripes on the head, a darker dorsal line, and stripes on the upper legs and the tail (Malek 1997, 24). The African wild cat is more lightly built, with a longer body, legs and tail. It has the markings of a striped tabby on its sandy fawn-colored coat, with stripes sometimes appearing on the head and legs, and with a black-tipped, ringed tail. Small cats comprised part of the original Egyptian fauna and those occurring in art were descendants of the African wild cat, *Felis libyca*, although some interbreeding with the swamp cat was not impossible (Janssen 1989, 15).

Throughout its long history, Egypt has been a primarily agrarian society with grain and other agricultural products stored in villages, towns and temples. The Egyptians could not have failed to notice the cat's ability and mastery in catching and killing pests and vermin. Realizing what economically valuable assets the cats were, the Egyptians would certainly have wanted to encourage and maintain a relationship with these wild animals. Over time, the cats became more than simply pest controllers; they became part of the home and field environment, and eventually were domesticated.

Although the majority of tomb scenes depicting domestic cats date to the 18th, 19th and 20th Dynasties of the New Kingdom, there are several examples from the Middle Kingdom. Most of these are fowling scenes with a cat in a boat or in a thicket, as seen in several tombs at Beni Hasan. At this site in Middle Egypt, on the east bank of the Nile about 23 km south of el-Minya, there are 39 large, rock-cut tombs that were dug into the cliffs for princes of the Oryx nome (the 16th nome of Upper Egypt) in the late 11th and early 12th Dynasties. Many of these tombs can be seen from the Nile, at various points stretching along a high ridge. From the tombs, there is a spectacular view of the green fields below, flanking both sides of the river, which may have been a primary reason the tomb owners chose this area.

The earliest known depiction of a domestic cat is found at Beni Hasan, in the tomb of Bakhet III (tomb number 15). The female cat, its sex indicated by a sign above the animal, is shown confronting a field rat of its same size. The cat, facing right, is shown in its "hieroglyphic" form (Sir Alan Gardiner's glyph D13). The cat's tail, partially obscured by the right haunch on the inside of which it curls, points straight up (Malek 1997, 40). A similar hunting scene is found in the tomb of Khnumhotep (no. 3). Sometimes included in the same hunting scene are an ichneumon or Egyptian mongoose, and a genet, a catlike carnivore that is now extinct in Egypt (Malek 1997, 55). In fact, concealed among the tall rushes painted in the tomb of Khnumhotep are not only a cat but also two genets and an ichneumon.

From the reign of Tuthmosis III (1479–1425 BCE), the domestic cat began to be shown quite frequently in tomb decorations, indicating that cats were considered part of the family by at least the 18th Dynasty. Since royal tombs never depicted domestic scenes, only the tombs of nobles contained paintings of cats. During the Amarna Period under the reign of Akhenaten (1353-1335 BCE), nobles' tombs constructed at Tel el-Amarna contain only religious and official scenes, often including members of the royal family; domestic scenes are not shown. As a result, the Amarna Period is the

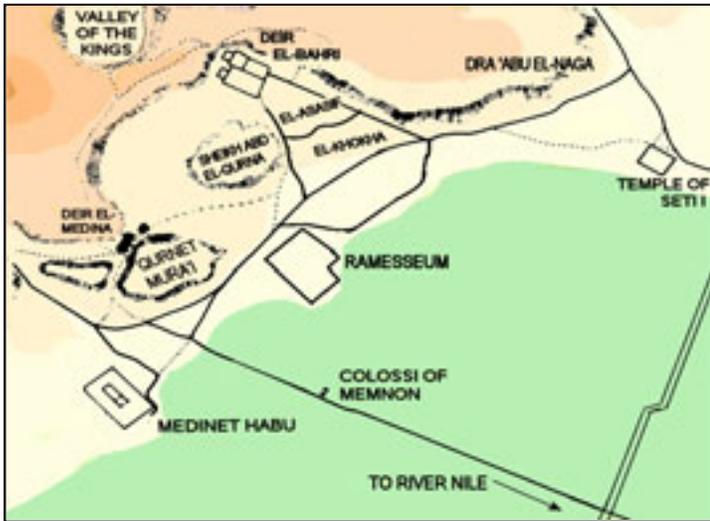


Fig. 1. Western Thebes.

only time during the last half of the New Kingdom in which no domestic cats are depicted in any tombs. Most of the New Kingdom cat-scenes are found in the Theban tombs of nobles on the West Bank of the Nile, across from Luxor. This area is a vast region honeycombed with over 400 documented tombs dug into the hillsides and cliffs beyond the line of cultivation. Most of the tombs are concentrated between Deir el-Medina, the village of the tomb-builders (Bierbrier 1982, 9), to the south and Dra 'Abu el-Naga to the north. Between these points lie semi-separate tomb areas known today as Qurnet Mura'i, Sheikh 'Abd el-Qurna, el-Khokha, and the Asasif which lies on both sides of the causeway leading to the mortuary temple of Hatshepsut at Deir el-Bahri (Fig.1).

The ancient Egyptian artist worked under what would today seem like almost inhumane conditions, with inadequate lighting, hot humid air, and unreasonably long hours in a ten-day work week. Their coarse brushes were made from bundles of palm fibers or pieces of chewed or beaten wood. In spite of their limited tools, these artists were innovative and invented square grid patterns to help position and draw their figures on the large tomb walls and in temples. The lines were made by dipping a length of string into red paint, stretching it taut across the surface at the appropriate level, and then snapping it against the wall. In many unfinished scenes, the splashes made by the paint as the string hit the wall can still be seen (Robins 1986, 20). This grid method is still used today by some artists.

The domestic cat is depicted in Theban tomb paintings in two main areas: the cat under a chair, and the cat in fishing and fowling scenes. Many of these familiar scenes can be seen in tombs open to the general public. [See table 1, page 10 for a list of Theban tomb paintings with cats — Ed.] Others are on view in museum collections throughout the world. And some, now lost or destroyed, can be found only in photographs or drawings in publications and unpublished manuscripts.

The most common of these scenes show a man and his wife seated in separate chairs, either side-by-side or facing each other, with a cat under the wife's chair and, in many cases, a monkey under the husband's chair (Malek 1997, 59). Since women seem to be the most prominent cat-owners in these compositions, and because of its association with the mother goddess, Mut, it has been postulated that the cat had some subtle erotic significance, or perhaps was a symbol of female sexuality (Houlihan 1996, 83).

In most cases, the cat is displayed with love and humorous touches. In the Theban tomb of Anen, the second prophet of Amun (TT 120), Queen Tiy (the wife of Amenhotep III [1391-1353 BCE] and sister of Anen) is included in one scene. Under her chair there is an unlikely scene of a cat embracing a goose with a green monkey jumping over the pair (Fig.2). The cat has a clearly painted black-tipped ringtail and the tabby pattern is painted with individual black strokes along the arched back, with stripes extending part way down the animal's side. The front right paw curls in a natural and realistic pose around the goose. Unfortunately, the cat's face is severely damaged. However, the tip of the ears and nose are distinguishable, as is the slight projection of its eye. The whiskers at the nose and eyes are still visible. The monkey springing over the pair is delightful with the rendering of its individual black hairs over the brown, gray and white fur.

Another example of a cat and goose under a chair—in a less friendly relationship—features a cat spitting at a goose in the tomb of Penbuy and Kasa (TT 10). Other notable examples of cats under the wife's chair and monkeys under the husband's chair are the Ramesside tombs of Raya (TT 159) and Penna (called Sunero; TT 331).

The majority of cats depicted in Theban tombs show them eating, devouring fish, and gnawing on bones. In the tomb of Nakht (TT 52), a cat is eating a fish under the chair of Nakht's wife, Tawi (Fig.3). The tabby markings are indicated with quick, short strokes on the dramatically arched back, then zigzag strokes for the pattern on the side and legs. The scene is a very realistic rendering of a long-bodied and long-legged cat with its long ringed tail. The cat is holding the fish down firmly between its front paws. Its mouth is opened, ready to bite into the fish, with its solid pink tongue visible. Even though the cat is shown in profile, both ears are painted.

In the tomb of May (TT 130), constructed during the reign of Tuthmosis III, there is a frustrated and wild-eyed cat tied with a red ribbon to a black lacquered chair leg, hungrily eyeing a bowl of meat that is just out of its reach (Fig.4). The front left paw is struggling with the ribbon and the right paw is partially extended. The cat's head is turned back over its shoulder, eyeing the food, with its mouth open and its pink tongue hanging out. The ancient artist obviously had some difficulty with the position of the cat's tail. Upon close examination next to the painted tail, there is another, pale red outline of a tail drawn but not painted. Evidently, the artist decided that the original tail was not drawn in the best position and it was not to be used in the final scene.

Another popular motif in Theban tombs was of a cat sitting under a chair in a banquet scene. A well-known example is found in the tomb of Nebamun (TT 181) which depicts a [tabby?] cat sitting under a lady's chair with another lady painted directly behind her. A serving girl stands before them, offering scented cones on a tray. The tabby cat, shown in profile, is painted with both ears, an open mouth, its pink tongue extended, and an unusually long ringtail.

Animals, like people, were usually rendered in profile. However, there are some notable exceptions where the full view of the cat's

face is shown. In the tomb of Neferhotep (TT 50), constructed at Sheikh 'Abd el-Qurna during the reign of Horemheb, is a very interesting and whimsical scene of a cat and a monkey (Fig.5). The cat, its face shown in full-front view, seems to have taken the monkey by surprise and is



Fig. 2. Cat, Goose, and Monkey. Artwork by Brenda Lowe.



Fig. 3. Cat with a Fish. Artwork by Brenda Lowe.

carried by it in piggyback fashion. The cat has one of its front paws on the monkey's head and the hind paws firmly on its back (Malek 1997, 62).

In the tomb of Penbuy and Kasa (TT 10), constructed at Deir el-Medina during the reign of Ramesses II, there is a painting



Fig. 4. Cat Beneath a Chair. Artwork by Brenda Lowe.

of a plump, unhappy, and full-faced feline. Its grumpiness may be due to the fact that it is adorned with a necklace of three strands of beads and wearing earrings with large dangling pendants. Another fancy-dressed cat is found in the Deir el-Medina tomb of Ipuy (TT 217). The tomb owner and his wife, Duammeres, dressed in festive clothes, are seated on high-backed chairs while their son and daughter offer them decorative bouquets (Malek 1997, 59). A mother cat, positioned under the wife's chair, is shown with her face in front view. She has a light brown coat with tabby stripes indicated by stippling strokes and appears to be wearing one earring and a striped collar around her neck. In Ipuy's lap sits a playful kitten, shown in profile, with similar fur markings and with a raised front paw batting at its owner's fancy sleeve.

The other major motif found in Theban tombs is with a cat in fishing and fowling scenes. These are highly imaginative, showing the tomb owner and his family with the family cat on a hunting trip in the Nile swamplands. The tomb owner is usually depicted standing tall in a rather flimsy looking papyrus skiff, his throw stick in his hand, while his wife and children are seated or standing behind him.

One of the most popular tombs with tourists is the tomb of Menna (TT 69) at Sheikh 'Abd el-Qurna, a Scribe of the Fields during the reign of Tuthmosis IV and/or Amenhotep III (1401–1353 BCE). Here a cat jumps nimbly from one papyrus stalk to another toward several birds' nests with tempting eggs. The cat in this scene has yellowish brown fur, with a heavily painted black stripe pattern that is not as easily identified or as detailed as in many other tombs. The cat in the 18th Dynasty tomb of Simut (TT A24) at Dra 'Abu el-Naga has a much more pronounced, striped coat with a ringed tail, and stands on its hind legs with its front paws clinging to its owner's long kilt. In another hunting scene, in the tomb of Ipuy (TT 217), the hunting cat has a thick dark line along its back and the tabby pattern is painted with dots in horizontal rows. In fact, the tomb of Ipuy depicts three different cats, including the mother and kitten mentioned above, leading one to believe that either Ipuy or the artist especially liked cats.

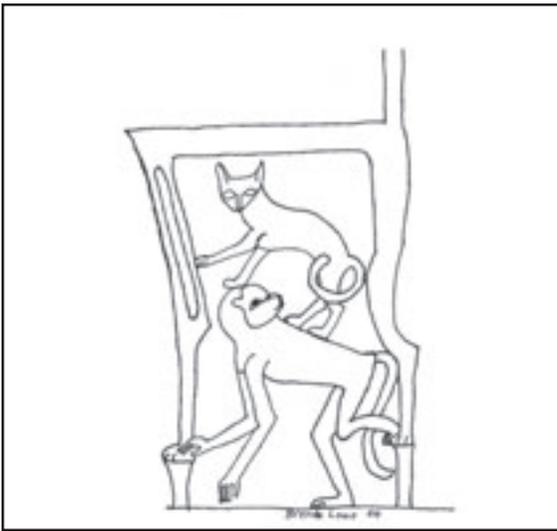


Fig. 5. Cat and Monkey. Sketch by Brenda Lowe.

Perhaps the most beautiful hunting scene, known as “Fowling in the Marshes”, was acquired by the British Museum in the 1820s along with nine other fragments. The provenance of these fragments, however, is not certain. They are commonly believed to be from the tomb of Nebamun (TT 181 mentioned above) at el-Khokha since part of his name appears on one of the fragments; Lisa Manniche believes that all of the fragments came from a damaged and now lost tomb located at Dra ‘Abu el-Naga and decorated at about the same time as the tombs of Nakht and Menna during the reign of Tuthmosis IV (Manniche 1987, 59).

In this scene, the tomb owner stands with a throw stick in one hand and clutches three ducks in the other. His wife stands behind him, dressed in an elaborate costume, and their daughter with a princess lock sits between her father’s legs with one hand holding papyrus flowers and the other holding her father’s front leg. The family cat is balanced on two papyrus stalks with one bird in its front claws, another under his hind paws, and its teeth holding a duck by its wing (Fig.6). The painting is filled with energy and excitement, with birds flapping their wings, butterflies, papyrus reeds, and an Egyptian goose that may be a decoy in the front of the boat. This scene has led some scholars to believe that cats were used to flush out the fowl for their owners to fell with their throw sticks (Malek 1997, 66). There is no concrete evidence, however, that ancient Egyptian hunters actually used cats to flush or retrieve prey, and such activities would be contrary to a cat’s basic nature.

As we watch our cats and kittens play and entertain us with their agility and cleverness, it is interesting to remember that the ancient Egyptians shared our same emotions and even wanted to carry their pets with them into the afterlife in the form of beautiful tomb paintings. Indeed, the Egyptians revered cats throughout most of their history and worshipped them as manifestations of various gods and goddesses. As many owners would attest today, their cats would simply accept this adoration as totally natural, and as their due.



Fig. 6. Cat with 3 Birds. Artwork by Brenda Lowe.

Theban tombs showing cats under a chair. (after Porter and Moss 1960)
 TT 10, *Penbuy and Kasa*; Deir el-Medina; reign of Ramesses II; cat (full face) and goose.
 TT 50, *Neferhotep*; Sheikh ‘Abd el-Qurna; reign of Horemheb; cat (full face) and monkey.
 TT 52, *Nakht*; Sheikh ‘Abd el-Qurna; reign of Tuthmosis IV; cat eating a fish.
 TT 55, *Ramose*; Sheikh ‘Abd el-Qurna; reigns of Amenhotep III and Akhenaten; cat and goose.
 TT 96, *Sennufer*; Sheikh ‘Abd el-Qurna; reign of Amenhotep II; cat and haunch.
 TT 120, *Anen*; Sheikh ‘Abd el-Qurna; reign of Amenhotep III; cat, monkey and goose.
 TT 130, *Maya*; Sheikh ‘Abd el-Qurna; reign of Tuthmosis III; cat tied to chair.
 TT 159, *Raya*; Dra ‘Abu el-Naga; 19th Dynasty; cat and monkey.
 TT 178, *Neferonpet*; el-Khokha; reign of Ramesses II; cat gnawing on a bone.
 TT 181, *Nebamun*; el-Khokha; reigns of Amenhotep III and Akhenaten; long-tailed cat.
 TT 217, *Ipyu*; Deir el-Medina; reign of Ramesses II; mother cat (full face), kitten, bird and cat.
 TT 219, *Nebenamet*; Deir el-Medina; Ramesside; kitten.
 TT 331, *Penna* (called *Sunero*); Sheikh ‘Abd el-Qurna; Ramesside; cat and monkey.
 TT 357, *Dhutihirmaktuf*; Deir el-Medina; 19th Dynasty; cat and monkey.

Theban tombs showing cats in fishing and fowling scenes. (after Malek 1997)
 TT 53, *Amenemhat*; Sheikh ‘Abd el-Qurna; reign of Tuthmosis III.
 TT 69, *Menna*; Sheikh ‘Abd el-Qurna; Reign of Tuthmosis IV or Amenhotep III.
 TT 93, *Kenamun*; Dra ‘Abu el-Naga; reign of Amenhotep III.
 TT A24, *Simut*; Dra ‘Abu el-Naga; reign of Amenhotep III.
 TT 217, *Ipyu*; Deir el-Medina; reign of Ramesses II.

Table 1: Cats in Tomb Paintings. Names of tomb owners are italicized.

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House of Scrolls

The Egyptologist by Arthur Phillips

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In 1922 Howard Carter made arguably the most exciting archaeological discovery of all time: the tomb of the pharaoh Tutankhamun, with its fabulous grave goods relatively undisturbed. The objects from the tomb have traveled from continent to continent and been endlessly photographed, discussed and reproduced.

The *Egyptologist* who is the title character in Arthur Phillips's second novel isn't Howard Carter, though Carter does appear in the book. Ralph Trilipush is an anti-Carter, a caricature, a Carter from another planet. Like Carter, he is in search of the tomb of an ephemeral pharaoh. Trilipush's missing pharaoh is named Atum-hadu, which translates as "Atum is aroused." ("Hadu" is derived from a perfectly good Egyptian word; the reference is to one of the many creation myths the Egyptians came up with. In this particular myth, the sole, original god Atum, rising from the primeval waters, created the first pair of male and female gods by masturbating. The fact that no Egyptian pharaoh would have such a name is just the first of many little jokes.)

We meet Trilipush in the very first pages of the book, in a letter he writes from Cairo to his fiancée back in Boston, and it doesn't take more than three pages to alert the reader to Trilipush's character—egotistical, hypocritical, more than a little paranoid (like many other *Egyptologists*?). His letters and diary form part of the narrative. His scholarly reputation, such as it is, rests primarily on his translation of Atum-hadu's erotic poetry. (These translations, quoted *in extenso*, constitute another of the author's little jokes; Trilipush's ribald versions contrast entertainingly with the prim Victorian euphemisms employed by earlier translations of the material.) Using his academic background as leverage, Trilipush has gotten engaged to a Boston beauty named Margaret Finneran, whose daddy is a millionaire snob. With Daddy's help, Trilipush forms a company (The Hand of Atum, Inc.—get it?) to finance his search for the lost tomb. It's left to the reader to decide to what extent Trilipush is motivated by chicanery rather than self-delusion.

A soured, retired Australian P.I., Harold Ferrell, writes a second, parallel narrative, reporting on a case he investigated 30 years earlier. Ferrell doesn't suffer from false modesty either; in fact, it would be difficult to find a single character in the book who isn't self-serving or cynical or miserable. The case Ferrell investigated was on behalf

of a millionaire brewer, Barnabas Davies, who, having learned he had only a few months to live, decided to leave part of his estate to offspring he might have produced in temporary liaisons during his busy youth (38 and still counting, according to Ferrell). Ferrell's assignment is to trace one of the potential mothers, who is living in Sydney. He finds her, broken-down and repulsive, and learns that she did indeed produce a Davies son, Paul Caldwell. Ferrell's search for the boy leads him from circus to library to prison, and finally to the Australian Expeditionary Force in Egypt, in which Caldwell served during World War I. Unfortunately for Ferrell, who is making a killing on expense accounts, Caldwell disappeared in 1918 and is presumed dead.

Well, mystery readers can spot clues like that a mile away. I won't spoil the fun by further exposition, since the mystery is not so much about what happened as how and especially why it happened. *The Egyptologist* can be viewed as a penetrating study of human frustration and obsession, and, since we're talking about ancient Egypt here, man's quest for immortality. However, Trilipush's quest takes him so far beyond the bounds of normal lunacy that it becomes black comedy rather than tragedy. The reader who is uninformed about Egyptology may miss some of the humor, but there is plenty of it; the most entertaining arises from the unwitting self-exposure of Ferrell and Trilipush—one of the challenges of a first-person narrative, which Phillips pulls off triumphantly.

The book is a tour de force of plotting and narrative technique; the intertwining storylines lead with mounting inevitability to one of the most horrendously, hideously humorous endings in modern fiction. It isn't an ending for the faint of heart, but if you appreciate Evelyn Waugh's *Black Mischief*, this one will knock you out.

Reviewed by Barbara Mertz

Barbara Mertz, who received her doctorate degree in Egyptology from the University of Chicago, writes mysteries under the name of Elizabeth Peters. Her latest book is The Serpent on the Crown, an Amelia Peabody mystery, due out 29 March, 2005.

This book review first appeared in the New York Times and is republished here with the gracious permission of Barbara Mertz.

The Mamluks and the Pharaohs

Karen R. Mathews

Medieval Islamic Egypt has generally been thought to have been hostile to the ancient Egyptian past, disdainful of a time when people were ruled by tyrants and worshipped idols. In both architectural monuments and written works of the period, however, we receive a more nuanced and complex picture of medieval attitudes towards pharaonic culture.

In the realm of popular culture, people emphasized continuity with the ancient past, essentially “pharaonizing” the Islamic present. At more elite levels of society, numerous scholars sought to reconcile the two cultures by “Islamizing” the ancient past, attempting to make ancient Egyptian culture seem more like medieval Islamic Egypt. The artistic patronage of the Mamluk dynasty (1250-1517 CE) appears to have incorporated both such approaches to understanding the past.

Mamluk rulers employed ancient objects in their architectural constructions and sponsored scientific investigation of and scholarly writings on ancient Egyptian culture to associate themselves with

what they deemed the positive aspects of the culture, while showing themselves to have superseded or gone beyond other elements that could not be reconciled with a medieval Muslim world view.

VISUAL EVIDENCE

In the Mamluk period, pharaonic spolia, or reused objects from ancient buildings, were prominently displayed on the exterior and interior of buildings. Columns from ancient temples were the most ubiquitous spolia, as their size and beautiful granite material made them excellent supports for hypostyle mosques—that is, structures that use columns as supports for the roof. Several beautiful red granite columns, for example, adorn the prayer hall of the Mosque of the Sultan al-Nasir Muhammad at the Citadel in Cairo (Fig. 1). The columns in this building are arranged so that they flank the most important part of the prayer space, the aisle that leads to the prayer niche or mihrab (Fig. 2).

Reused columns were not the only kind of ancient Egyptian spolia employed in Mamluk architecture. There was a great interest in employing ancient blocks of stone as thresholds and lintels of doorways. They generally graced the most visible part of the building, one that people would look at and experience (walking through or over) regularly.

A majority of these reused stones feature hieroglyphs that are displayed in full view, either facing up or out as a person enters the building. One excellent example of this is the Khanqah, or Sufi lodge, of the Sultan Baybars al-Jashankir (Fig. 3). The threshold at the entrance consists of a carved stone depicting Ramesses IX kneeling and offering wine jars to the gods (Fig. 4). And, in one of the most extravagant displays of ancient Egyptian materials, the Sultan al-Mu’ayyad Sheikh reused an entire portal from an ancient Egyptian structure on the façade of his mosque located in the heart of medieval Cairo (Fig. 5). This type of doorway, featuring a broken lintel, first appeared in ancient Egyptian architecture in the 18th Dynasty and became increasingly common in the Late Period (Fig. 6).



Fig. 1. Courtyard of the Mosque of Sultan al-Nasir Muhammad.
Photo by Karen Mathews.



Figure 2. Detail of red granite pharaonic columns in the prayer hall of the Mosque of Sultan al-Nasir Muhammad.
Photo by Karen Mathews.

MEDIEVAL ATTITUDES TOWARDS ANCIENT EGYPT

Along with this reuse of pharaonic material in Mamluk buildings, medieval writers displayed a great scholarly interest in the ancient past. Mamluk literary and historical texts display two distinct attitudes toward ancient Egypt. On one hand, there was a strict, religiously motivated rejection of ancient Egyptian religious practices and the role of the pharaoh; on the other hand, a folkloric attachment to the ancient past continued in a number of popular practices, rituals, and celebrations. Tempering these two entrenched positions was a third, mediating one, embodied by moderate scholarly attitudes towards the ancient past as a topic worthy of scientific investigation.



Fig. 3. Doorway of the Khanqah of Baybars al-Jashankir. Photo by Karen Mathews.



Fig. 4. Threshold in the Khanqah of Baybars consists of carved stone depicting Ramesses IX kneeling and offering wine jars to the gods. Photo by Karen Mathews.

It has been argued that the medieval rejection of ancient Egyptian culture was the result of a deep historical and conceptual chasm separating ancient and medieval Egypt. By the time the Muslims arrived in Egypt in 640, the ancient Egyptian cult had



Fig. 5. Main portal of the Mosque of al-Mu'ayyad Sheikh. Photo by Karen Mathews.



Fig. 6. Detail of reused ancient Egyptian doorway in the Mosque of al-Mu'ayyad Sheikh. Photo by Karen Mathews.

not been practiced in more than a century. In addition, the rejection of ancient Egypt on religious grounds was prevalent in the medieval period, and the history of the prophets and the Qur'an by and large determined the medieval image of ancient Egypt. The Qur'an portrayed the pharaoh of ancient Egypt as the personification of hubris and tyranny, and the polytheistic religion was condemned as idolatrous.

Much historical evidence, then, points to a deep alienation on the part of medieval Muslims from the pharaonic past. The ancient past was not their past, and they saw little need to recover it to serve their own needs. In the realm of popular culture, however, it appears that ancient culture never quite died out, and remnants of ancient beliefs and practices wove themselves into the fabric of medieval Egyptian society. This continuation or re-integration of pharaonic culture manifested itself in various ways. In times of political and economic instability and natural disasters, the people increasingly sought recourse in the ancient practices and beliefs, making the 14th century CE in Egypt a time when these pre-Islamic practices were overwhelmingly popular.

In medieval popular culture, Egypt of the pharaohs was a repository of great knowledge in science, medicine and magic. It was a realm of wonders where spectacular, magical events occurred and wondrous treasures were buried, protected by fierce guardians and elaborate magical spells. Wise and learned priests inscribed all the knowledge of the civilization on the walls of their religious buildings, and they protected this knowledge with talismans and spells. Ancient Egypt was the land of magic *par excellence*, and the Sphinx was the ancient object credited by medieval Egyptians with the greatest magical and apotropaic power. It was to this monumental sculpture that people turned for help and guidance in times of great calamity.

On rare occasions, pharaonic beliefs and practices were interwoven into the fabric of mainstream Islam. This can best be seen in the Islamic cult of saints, where cult sites such as the Temple of Luxor were transformed into Islamic religious sites and Muslim saints, in this case Abu el-Haggag, replaced the god or gods worshipped there in antiquity. The pragmatism of the common people dictated that one continued to use whatever proved efficacious, and this kept many ancient beliefs and practices alive through the Middle Ages and into the present day.

SCHOLARLY APPROACHES TO ANCIENT EGYPT

If the popular approach to the ancient past was characterized by continuity and syncretism, the educated elite saw pharaonic Egypt as a distinct culture, separated historically from medieval Egypt but worthy of scientific study. This interest in historic preservation was connected to two other significant motives for Egyptian historical writing: patriotism and pride in the wonders that Egypt possessed. In addition, authors wrote about ancient Egypt to satisfy the curiosity of a general, literate public and to provide information for the tourists who came to visit Egypt's wonders.

One strong impetus for the writing of Egyptian history was national pride and patriotism. Medieval Egyptians felt a strong love for their country and believed it to be unique among Muslim nations. This pride is reflected in texts praising the assets and merits of a particular nation, region or city. As the greatest of the wonders of Egypt, medieval scholars were understandably preoccupied by the pyramids. They were so wondrous, massive and so skillfully built that even the scholarly audience concluded they could only have been constructed with magic. Medieval writers pondered whether the pyramids were built before or after the Flood, and by

whom. They put forward theories about who was buried in the pyramids and why the monuments were built. They also waxed eloquent about the staggering treasures that accompanied the dead in the pyramids, treasures that had mostly vanished by the medieval period. The pyramids were above all a great tourist attraction, and medieval Egyptian writers recorded illustrious visitors to the tombs as an indication of their importance as one of the world's great wonders.

The second topic of great interest to medieval scholars was the nature of hieroglyphs. Scholars, rulers, tourists and people from all levels of society shared a fascination with the ancient writing. What is significant is that in the Middle Ages it was understood that hieroglyphs represented a writing system, and were not thought to be simply images or illustrations. Medieval writers believed the inscriptions they saw on ancient buildings contained all ancient Egyptian knowledge, but scholars would have to wait several centuries for the decipherment of the language that would reveal this wisdom.

Finally, a last and fascinating aspect of these medieval texts on ancient Egypt is the tendency to Islamize, i.e. make Islamic, the pharaonic past. Ancient rulers were given Arabic names and secretly professed monotheism. Medieval writers also believed pharaonic monuments could be made acceptable, redeemed, as it were, through their connection to pious Muslims. One author in particular, al-Idrisi, noted that the companions of the Prophet legitimized the ancient sites by living, dying and being buried near the pyramids and ancient temples. Their presence sanctified the space and made Giza a holy site that everyone should visit.

CONCLUSION

So, what conclusions can be drawn from the visual and textual evidence concerning medieval attitudes towards ancient Egyptian culture? The reuse of ancient materials in medieval, particularly Mamluk, buildings, and the scholarly fascination with ancient history and culture manifest a generally positive attitude towards ancient Egypt.

Medieval viewers could admire the beauty and technical skill inherent in the ancient monuments and appreciate the great knowledge concealed in hieroglyphic inscriptions. It was clear from the remains that this was a great civilization, one that could be admired for its power, wealth and longevity.

The Mamluk period in Egypt was a time of political instability and economic difficulty, and this turning to the ancient past, its rituals and beliefs, could have provided reassurance for the general population. The Mamluks were foreign invaders, separated from the local population by ethnicity and language, and their references to ancient Egypt in architectural structures and their patronage of historical works on Egypt could have served to legitimize their reign and establish them as the worthy successors to the pharaonic rulers of this ancient culture.

Karen Mathews received her Ph.D. in art history from the University of Chicago. She has taught at Southern Methodist University, the University of Notre Dame and the University of Texas. Most recently, Mathews was Visiting Professor at the University of California, Santa Cruz. She is now completing a book-length project on Mamluk architecture in Cairo.

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Time Trials:

Implications of the Thera Volcano and Tel el-Dab'a for Egypt, Part 1

Robert C. Bigelow

Ancient Egypt interacted with many different peoples around the eastern end of the Mediterranean Sea: Hittites, Hurrians, Babylonians, Cypriots, and Canaanites to name some of the better known. From about 2000 BCE on, Egypt also interacted with a lesser known people from Crete we call the Minoans. Until recently, there was very little evidence of direct interaction between the Minoans and Egypt during its Second Intermediate Period. However, Minoan frescoes unearthed at Tel el-Dab'a, in Egypt's southeastern Delta, have raised new questions about Egypt's relationship with these people.

A violent volcanic eruption on the island of Thera occurred in the middle of the second millennium BCE. The eruption buried a culturally Minoan town, called Akrotiri, on the south coast of Thera and spread tephra (ash and pumice) over the eastern end of the Mediterranean. If ash-fall from the eruption can be found in a datable Egyptian context, it may have a major impact on calculations of Egyptian chronology. The archaeological and physical methods of dating the eruption have led to markedly different results. After a brief description of the Minoans, this paper surveys the limitations of those methods, how their results disagree, and the attempt to interpret the frescoes and their relationship to the volcanic eruption on Thera.

WHO WERE THE MINOANS?

"Out in the dark blue sea there lies a land called Crete, a rich and lovely land, washed by the waves on every side, densely peopled and boasting ninety cities. Each of the several races of the isle has its own language. First there are the Achaeans; then the genuine Cretans, proud of their native stock; next the Cydermans; the Dorians, with their three clans; and finally the noble Pelasgians. One of the ninety towns is a great city called Cnossus, and there, for nine years, King Minos ruled and enjoyed the friendship of almighty Zeus" (Homer [Rieu Trans.], 292). Thus does Homer's Odysseus describe Crete, its land, and peoples; thus too does Homer provide the name by which the first civilization on Crete is now known—the Minoans.

The Minoan language is unknown to us. No convincing connection to any other ancient language, including Greek, has ever been made. They wrote in their own hieroglyphic and linear scripts, and apparently taught their successors, the Mycenaeans (Homer's Achaeans), how to write a form of their linear script. That script, called "Cretan Linear B", is the earliest known form of Greek writing. It is slightly ironic that Sir Arthur Evans, who excavated the great

palace of Knossos on Crete and named the civilization, should have called it "Minoan" since Minos was quite possibly the name or title of one or more Mycenaean Greek kings whose people conquered Evans's Minoans.

While we do not know what these Cretan people called themselves, Castleden (1990, 21) suggests: "A tablet found far away at Mari in Mesopotamia mentions a weapon adorned with lapis lazuli and gold and describes it as 'Caphtorite'. The Egyptians called Crete 'Kefti', 'Keftiu' or 'the land of the Keftiu', while in the Near East Crete was known as 'Caphtor'; it is as Caphtor that ancient Crete appears in the Old Testament. 'Caphtorite' clearly means 'Cretan'. The similarity of the words 'Caphtor', 'Caphtorite' and 'Keftiu' strongly implies that the Minoans themselves used something like the word 'Kaftor' as a name for their homeland."

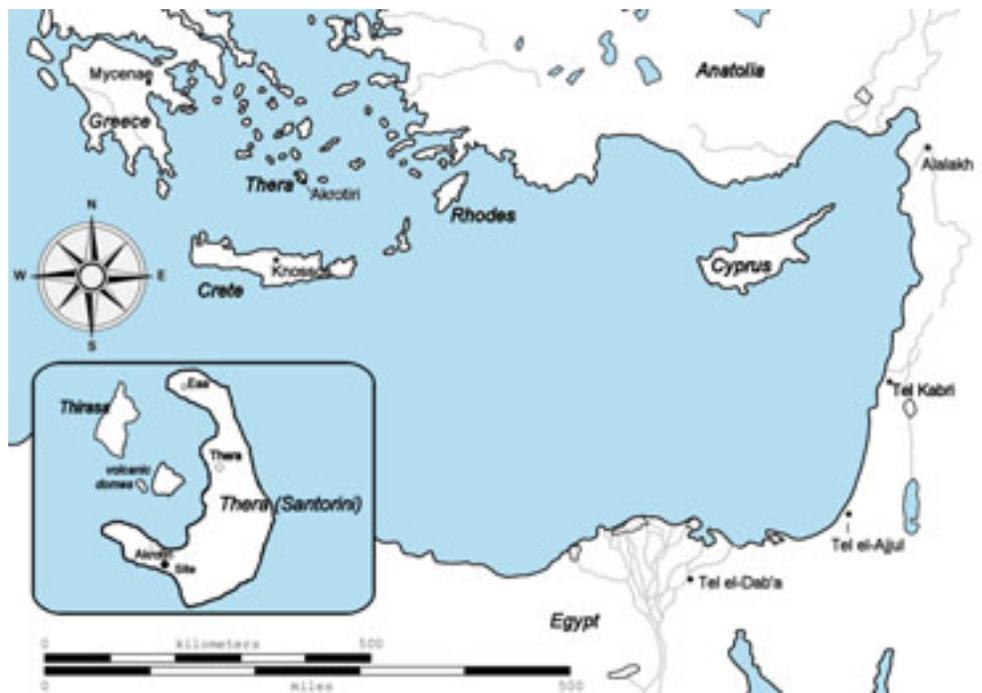


Fig. 1 Map of The Eastern Mediterranean. Inset: the Island of Thera

While these Minoan people influenced and were influenced by Egypt and other advanced civilizations of the Near East, they were a distinct civilization unto themselves. Crete (Fig. 1) was apparently first settled around 6000 BCE by people who could, at a minimum, build good, seaworthy boats. They possibly migrated from Anatolia (modern Turkey in Asia Minor) by island-hopping. Crete is at least 40 miles from the nearest major island and 190 miles from the Libyan coastline, so open-water sailing was necessary. They apparently traded with others from earliest times and eventually spread to the nearby island of Thera (also called Santorini), which itself became a trading center (Manning 1999, 109), as well as to other islands near the Greek mainland. They had, for example, obsidian from as far away as the island of Melos and possibly from

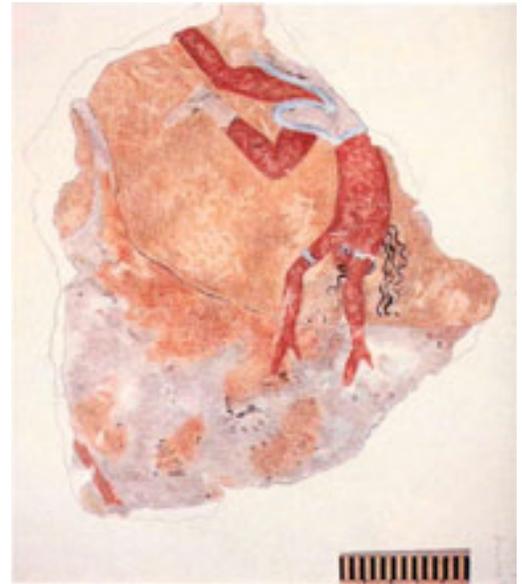
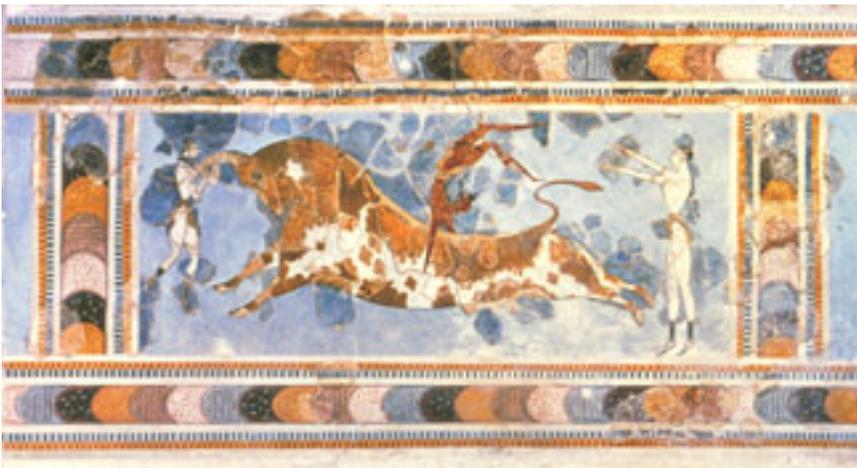
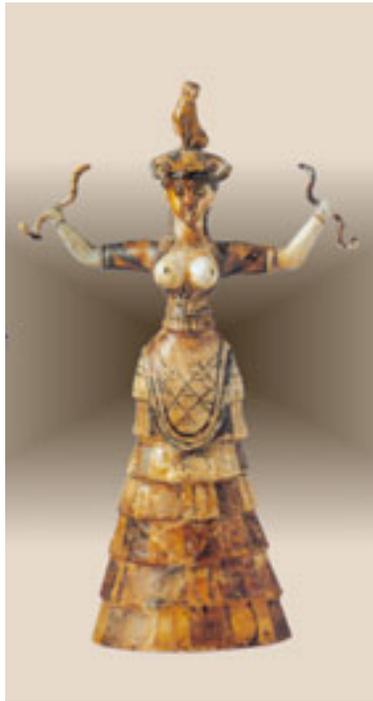


Fig. 2 Top, Left: "The Prince of the Lilies" fresco from Knossos, Crete. A solid red background is characteristic of many Minoan frescoes.

Fig 3. Top, Middle: "Minoan Snake Goddess". Faience figurine from Knossos, Crete. 34 cm. Head and left arm reconstructed by Evans. The small cat figure on her head was found near the figurine but originally may not have been part of it.

Fig. 4 Top, Right: "Saffron Gatherer" fresco from Akrotiri, Thera. Part of a set of frescoes in which women gather and bring saffron to a seated priestess/goddess called "The Mistress of Animals." (After Doumas 1999).

Fig 5. Middle Left: "The Toreador Scene" fresco from Knossos, Crete. Male (darker) and female (lighter) figures perform acrobatics over a bull.

Fig. 6. Middle, Right: Reconstruction drawing by Lyla Pinch Brock of a fresco fragment from Tel el-Dab'a showing a bull-leaper. (After Bietak 1992).

Fig. 7. Bottom, Left: Griffin from the "Mistress of Animals" fresco at Thera (after Doumas 1999). Red Outline: a fresco fragment from Tel el-Dab'a area H/I superimposed on the griffin's wing. The extraordinary match implies the fragment is also from a Griffin image at Tel el-Dab'a. (After Bietak 1996, 2003).

central Anatolia. As Willetts (1977, 34) points out, “If deep sea navigation began so early and materials could be carried over fair distances between mainland and islands, it is necessary, from the beginning, to think of Crete, in the broadest sense, as forming part of a major complex of development in its neighboring continental areas.” From Early Dynastic times onward, that major complex included Egypt (Warren 1995, 1).

There are indications of cultural upheavals around 3000 BCE with “new arrivals from Asia Minor” (Higgins 1973, 13). After that, Neolithic Cretans developed slowly and gradually into a Bronze Age people and by all evidence did so quite peacefully. Even when they began to build palaces (ca. 2000–1900 BCE), with the centralized government that implies, those palaces were unfortified. For over 600 years, the culture of Minoans flourished and then waned. Rather than war or dynastic politics, the principal agents of their destruction seem to have been earthquakes and volcanic eruptions. Crete is geologically unstable and Thera with its volcano lies just 90 miles to the north.

The post-2000 BCE history of Crete¹, insofar as we can make it out, is punctuated by occasional violent earthquakes. Two of these are notable: one occurred around 1700 BCE and another around 1450 BCE (Higgins 1973, 13–14). These destroyed palaces and settlements all over Crete. The Knossos palace partly escaped destruction in 1450 BCE and was apparently rebuilt “to foreign tastes and rituals” (Willetts 1977, 136). It has been suggested that the Mycenaean Greeks took over parts of Crete around 1450 BCE, and kept Knossos for their own use, but there is no proof of that. Certainly by 1380–1350 BCE, the Mycenaeans were present (Castleden 1990, 34–35) and the palace at Knossos was destroyed. Dickinson (1994, 76) contends that a palace at Chania, about 120 km west of Knossos, survived as a presumably Mycenaean center, but after about 1350 BCE Minoan civilization faded away and, except by Homer, was all but forgotten by 1000 BCE. There may be a folk memory of Cretan dominance over mainland Greece in the legend of Theseus the Athenian, who went to Crete to destroy the Minotaur, the Bull of Minos (Hamilton 1940, Chapt. II), but the existence of that legend cannot be verified before about 800 BCE.

Fortifications of any kind and indications of conflict are very rare until quite late in the history of Minoan Crete. Many contemporary societies, including Egypt, gloried in representations of victorious kings overcoming enemies. By contrast, there exists only one Minoan fresco wall painting of a possible leader, called “The Prince of the Lilies” (Fig. 2), and he appears to be entirely peaceful. The Mycenaeans were quite warlike and after they took over Crete, weapons, body armor, and Hyksos-style chariots with four-spoke wheels were all present on the island (Castleden 1990, 21–22).

Minoan Cretans buried their dead in communal graves well into the Bronze Age. Single burials, when they occurred, were in rectangular or round tombs that seem to have been influenced by practices from outside Crete. No definitely royal Minoan burials have ever been found. The richest grave listed by Castleden (1990, 155) is that of a high-status lady, possibly a queen or priestess, in Tholos tomb A at Phourni, on Crete. That tomb yielded 140 pieces of gold jewelry. Cretans worshiped their deities in caves or in the countryside and those deities were predominantly female (Fig. 3)—so predominantly that it is easy to believe that Minoans provided the prototype for the “Goddess religions” of ancient Greece.

With a few exceptions, Minoan wall paintings generally depict peaceful, often religious scenes. Examples include women

picking saffron on Thera (Fig. 4) and Cretan athletes leaping over bulls (Figs. 5, 6). The wall art of Crete, especially at Knossos, was of high technical quality. It tended to be formal and became more so in Mycenaean times. Knossos was a palace complex and its wall paintings were assumed by Evans (and most other scholars) to have religious connotations.

Thera is one of the Cycladic islands and its Neolithic traditions resemble those of its neighboring islands. By the middle of the second millennium BCE, Thera came under the influence of Crete. Its architecture, pottery, and wall paintings are strongly Minoan in character (figs. 5, 7). Just as it is today, the land-form of Thera was a broken ring of islands around a volcanic caldera² when the volcano erupted sometime between 1650 and 1450 BCE (Manning 1999, 15). Bichler et al. (2004) estimate that the eruption spewed the equivalent of 16 to 35 cubic kilometers of dense rock into the atmosphere. Thera’s eruption is often compared to the 1883 eruption of Krakatoa, itself one of the largest in recorded history.

Tephra from the Thera eruption buried ancient Akrotiri, thus preserving it in the same way that Pompeii was preserved in Roman times. Wall paintings in Akrotiri’s buildings have survived remarkably well owing to their burial by tephra. While the quality of Thera fresco wall paintings is uneven, their frescoes are fluid, sensual, and more free-form than those of Crete, and they are found in what appear to be private homes as well as in public buildings (Doumas 1999). That Thera frescoes are distinct from those on Crete suggests that Thera’s population was heavily influenced by Crete, but the island was probably not a colony of Crete.

ARCHAEOLOGICAL EVIDENCE

Archaeological dating almost always is a patchwork of inferences from inadequate data. Archaeologists argue for earlier (“high”) or more recent (“low”) dates as they attempt to correlate events in Egypt with those in Mesopotamia, Syria, Canaan, Anatolia, and the Aegean. The situation is even more difficult for the Bronze Age Aegean than for Egypt because we cannot interpret Minoan written languages. Linear B (Greek) inscriptions seem to be mostly commercial transactions and are relatively uninformative; furthermore, those writings are late in the Aegean Bronze Age. Thus Aegeanists must rely on pottery and on chance finds from elsewhere. However, scholars disagree over the exact dates of the Aegean and other pottery periods.

Pottery comparisons are particularly difficult when they are made across the sea or even just from one end of an island to the other. For example, a now-lost bowl from Cyprus in the “White Slip” style was found beneath the pumice and ash that buried Akrotiri. Similar White Slip bowls are found in Egypt in 18th Dynasty contexts. This appears to date the Thera eruption to 18th Dynasty Egypt (Bietak 1996, 76). However, according to Manning (1999, 323), the northwest part of Cyprus adopted White Slip pottery long before the rest of the island did and it may have supplied the bowl found at Akrotiri. Eastern Cyprus traded with Avaris (Tel el-Dab’a) in Egypt. If Manning is correct, Akrotiri could have gotten White Slip pottery long before Egypt’s 18th Dynasty got it, thus breaking the perceived connection between the Thera eruption and the 18th Dynasty. Bietak (2003, 23–26) counters that the Akrotiri bowl was old when it was buried, that an assessment by Robert Merrill implies that the bowl is a mature style, and emphasizes that no White Slip pottery is found at Tel el-Dab’a or anywhere in the Near East before the time of Tuthmosis I. He maintains that the connection between the eruption and the 18th Dynasty is correct. The debate is ongoing.

Trade goods may help establish correlations between different areas. From early Egyptian dynastic times, there was lively trade around the Mediterranean that included Egypt (Warren 1995, 1). Goods packed in pottery were widely traded and pottery styles were sometimes imitated from place to place. The Minoans appear to have imported metals and exported finished goods. According to Betancourt (1997, 16), however, there is very little Minoan pottery in Second Intermediate Period Egypt. Bietak (1996, Plate I) shows only two fragments of Cretan pottery found at Avaris and they are probably from the 13th Dynasty. Cyprus, however, was very active in trade, to judge from the number of Cypriot pots found elsewhere, and it was a major source of copper. Byblos, Ugarit, and Avaris under the Hyksos were also major traders.

The evidence of trade always carries a caveat: it is difficult to know whether such trade is direct or indirect. Consider, for example, the case of the Tod treasure (Warren 1995, 3). A cache of 153 fine silver cups and one gold cup were found in Tod, 5 km south of Luxor, Egypt. This treasure, stylistically Minoan and probably Cretan in origin, dates to the time of the 12th Dynasty king Amenemhet II (ca. 1900 BCE); however, it appears to have come from a Syrian king (possibly of Byblos) as tribute to Egypt. Stone vases of Egyptian manufacture have been found in Crete, as has hippopotamus ivory

(certainly from Africa and probably via Egypt) and ivory seals in Egyptian shapes. Warren (1995, 1) notes there are stone vessels from Knossos “ranging in date from Predynastic to 6th Dynasty”. Some locally produced Cretan stone vases copy Egyptian models. All beg the question: did Egypt trade directly with the Minoan world or not? The answer appears to have been “probably yes” on the basis of apparent Egyptian religious influences on Crete including the strange excursion of the goddess Taweret into the Minoan world.

In Crete, a number of artifacts bear the figure of Taweret, the Egyptian goddess of pregnant women (Fig.8). According to Judith Weingarten (1991), these are local Cretan images of what she calls the Minoan Genius³ but they clearly derive from Taweret. In Egypt, the early Taweret is a pregnant hippopotamus with a dorsal appendage and either a crocodile’s or a lion’s head. In later, New Kingdom form, the appendage becomes a crocodile with its head on hers (Wilkinson 2003, 28). Weingarten sees direct copying of early Egyptian forms on Minoan sealings from Knossos and Phaistos, and dates the Cretan forms to 12th Dynasty Egypt. Furthermore, after Egyptians began showing Taweret with a leonine head, the Minoans followed suit. This argues for sustained, direct contact between the two cultures.

Much like the dwarf-god Bes, Taweret had no formal cult but was popular among the common Egyptians. Because she had no formal cult in Egypt, it is unlikely that royal or high level contacts spread her usage. It is possible that sailors brought her to Crete where she is shown holding a libation jar rather than a sword or the “Sa” (z3) hieroglyph for ‘protection’ (Wilkinson 2003, 185-6).

One of the more striking items in Warren’s lengthy list of Egyptian artifacts found in Crete is a clay sistrum from a Cretan cemetery dating to Middle Kingdom Egypt. It is of local manufacture but is clearly a working copy based on an Egyptian model, comparable to a faience sistrum from the pyramid of Amenemhet I (1963–1934 BCE) (Warren 1995, 2). Warren interprets this as Minoans not just copying an object but actually adopting a religious concept as well. For him, this argues for direct contact and sustained Egyptianizing of Minoans.

During the last 100 years of Egypt’s Second Intermediate Period, foreign kings, called Hyksos, came to dominate the Delta region (Table 1). These kings, possibly from Canaan or Syria, built their capital, Avaris (Fig. 1), at a fork in the Nile at Tel el-Dab’a (Bietak 1996, 1997). A calcite or alabaster jar lid with the cartouche of the Hyksos king Khyan was found at Knossos; other objects of his have also been found at Hattusas in Anatolia, and in Mesopotamia (Cline 1998, 201). These have been taken as indications that Khyan had diplomatic contacts with his neighbors. International trade was very extensive at Avaris. Pottery from the Levant, Tel el-Yahudia and even from Nubia has been found there, as has copper from Cyprus (Bietak 1997). The Hyksos claimed control over all of Egypt but much of the south was still under native Egyptian control. Theban king Kamose, the last king of the 17th Dynasty, rebelled against Apophis, the last Hyksos king, and attacked Avaris (Redford 1992, 118-129). Kamose boasts that he took from Avaris “... hundreds of ships of new cedar, filled with gold, lapis lazuli, silver, turquoise and bronze axes without number, over and above the moringa-oil, incense, fat, honey, willow, box-wood, sticks and all their fine woods; all the fine products of Retenu [Syria]” (Redford, 1997, 14). Kamose’s boast inadvertently describes how wealthy Avaris was in trade. That trade was almost certainly unavailable to the hostile Theban kings as long as the Hyksos were in power. Kamose did not capture Avaris or expel the Hyksos; those tasks were accomplished by his younger brother, Ahmose, the first 18th Dynasty king.

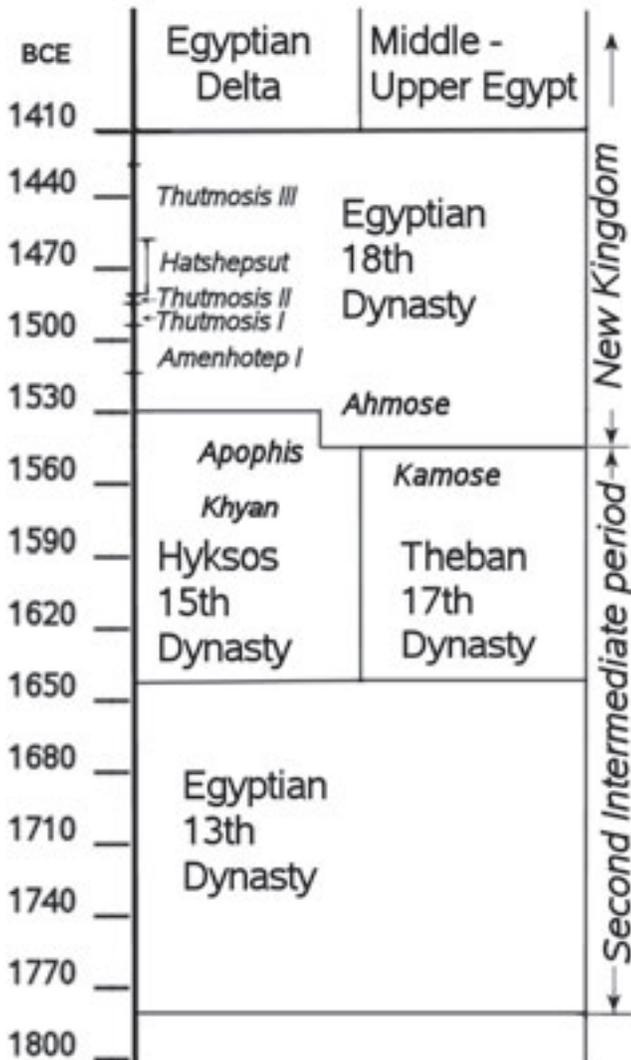


Table 1. Second Intermediate Period and Early New Kingdom Dynasties. Dates according to low, conventional chronology.

If there is some question whether earlier contacts between the Minoans and the Egyptians were direct or not, there is no question that there were direct contacts during the New Kingdom. Cretans (Keftiu) are depicted in five Theban tombs dating to the middle of the 18th Dynasty (ca. 1480–1400 BCE): those of Senenmut, Anref, Useramun, Rekhmire and Menkheperresoneb. “Although the tomb of Rekhmire is the earliest actually to label certain figures as ‘Keftiu’,



Fig. 8. Taweret. Left: a Minoan form with libation jar. Right: Two Egyptian forms, an amulet and a scarab with a sword. (Adapted from Weingarten 1991)

there is general agreement among scholars that all of the tombs listed here illustrate Aegean natives, depicted as tribute-bearers bringing offerings to pharaoh. These figures share certain characteristics: they are slim, often with waists that are narrower than those of the Egyptians in the same paintings; they have long hair, sometimes with curls over the forehead or crown and strands trailing over the shoulders and down the back; they sometimes wear sandals with pointed toes; and many of them carry metal vases that are recognizable as Aegean products because related vessels have been found in archaeological contexts on the mainland and in Crete” (Rehak 1997, 40). There seems to be a mixing of foreigners in some of the wall paintings. People with Syrian costumes carry what appear to be Minoan rhytons (vases). Some bearers of copper ingots appear to be Minoans, but the copper is more likely to have come from Cyprus which was a major exporter of copper and much nearer to Egypt than is Crete. Examples such as these may indicate that an international merchant class had developed at least by 1480 BCE (Rehak 1997, discussion).

Even more dramatic evidence of international contact is provided by fragments of Minoan-style frescoes that have been found at Tel el-Dab’a (ancient Avaris), in the Egyptian Delta, by an Austrian team led by Manfred Bietak (Fig. 7). Minoan frescoes are distinct from Egyptian wall paintings in subject matter and technique. Minoan paintings are on lime plaster and are true *fresco* style, painted while the plaster is wet, and *secco* style, painted and over-painted after the *fresco* is dry.

As Bietak (1996, 75-76) observes, “The style and execution of the paintings are extraordinary, although differences in quality can be observed. There is no doubt that Minoan artists were employed. This is clear from the use of the same techniques as are to be observed in Minoan wall-paintings, involving a basic coating of two or three layers of lime plaster, the surface polished with a stone float and the paintings then executed in a combination of fresco and secco. Other techniques, such as the application of string lines as guides for the painting of patterns (especially the maze-patterns and borders ...), as well as the clearly Minoan motifs, leave no doubt as to the origin of the artists. The style of painting is not provincial in any way.

Most of it is of a high quality and compares well with the best of the Minoan paintings at Knossos. The same is true of the quality of the plaster, which is superior to the quality of the plaster at Thera and compares well with that of Knossian plaster.”

Fresco paintings have been found in three areas of Tel el-Dab’a. The initial finds (Bietak’s area H/I) were found in debris and scattered in a garden near the remains of a massive mud platform. The second ones were found in the context of buildings 200 meters away (area H/II) and the third group was found *in situ* in a separate area (H/III) on both sides and on the portal of an enclosure wall (Bietak and Marinatos 1995, 49). The Tel el-Dab’a frescoes, which are in very fragmentary condition, seemed to Bietak (1996, 76) more closely related in subject matter, materials, and workmanship to those on Crete than to the ones on Thera. In particular, the frescoes of bull leaping that are so prominent at Knossos (Fig. 5) have not been found on Thera. The style of bull-leaping depicted at Tel el-Dab’a includes scenes that appear more like bull-wrestling. Those scenes may simply be one phase of a complex ritual or set of gymnastic feats. Castleden (1990, 146ff) analyzed all the bull leaping scenes known to him and concluded that one part involved men holding the bull’s head so others could leap. More recently, Bietak (2003, 29) has drawn parallels between some of the Tel el Dab’a frescoes and those from Akrotiri. He notes that his Tel el-Dab’a “toreadors have shaved heads, like youths in Thera frescoes and he emphasizes the similarity between an H/I fragment showing part of a griffin’s wing and the wing of a griffin from Akrotiri. For those reasons Bietak believes that the frescoes at Tel el-Dab’a are from the same time period as those at Akrotiri, the volcanically buried settlement on Thera.

Initially, Bietak identified the H/I fresco fragments as dating from the Hyksos period, the H/II finds as either Hyksos or 18th Dynasty, and the H/III finds as being definitely Ahmose-era 18th Dynasty (Cline 1998, 204). In his book, Bietak (1996, 68) writes that he is forced to re-date all the frescoes to the 18th Dynasty and consequently concludes that the volcanic eruption must have occurred in the 18th Dynasty and not during the Hyksos Period (Bietak 1996, 76). The re-dating is, to put it mildly, controversial.

Cline (1998, 202) describes the reaction to Bietak’s frescoes and to his re-dating: “The wall paintings, depicting bulls, bull-leapers, and labyrinths, among other motifs, created an instant sensation, for they portrayed scenes and spectacles which were more at home in the Bronze Age Aegean than in the Nile Delta of Hyksos Egypt. Without a doubt, these are the most sensational discoveries concerning Minoan Crete to have been made in the last decade, and have certainly been the most-discussed aspect of Minoan international relations during that time-span, with the identity of their creators, their precise meaning, and the very reason for their existence still matters of great debate.” Cline describes as “positively astounding” the number of articles written in response to “each iota of data” and the considerable confusion that has resulted from re-dating Tel el-Dab’a’s frescoes.

In part, the fresco re-dating controversy arises over the question of whether the Hyksos had trade relations with the Aegean or not. If some of the Tel el-Dab’a frescoes date to the Hyksos period then the Minoans were almost certainly trading there; if they date only to Early New Kingdom times⁴, then the Hyksos may not have had trade relations with them. Evidence of Minoan-Hyksos trade weakens Persson’s hypothesis (Cline 1998, 201) that Aegeans actually helped the native Egyptians against the Hyksos and would contradict Warren’s assertion (1995) that there was little direct Hyksos-Minoan contact.

The fresco re-dating strongly affects whether a “high” or a more traditional “low” chronology is correct for the Early New Kingdom. For example, Cline (1998, 216) had been inclined to accept a “high” chronology but now finds himself unsure about it because of the re-dating. Layers of ash-fall from the volcano could provide a dating benchmark all over the eastern Mediterranean, including Egypt (Bichler et al. 2004). However, identifying Thera ash-fall in secure Egyptian contexts remains an important but unfulfilled quest. Without ash-fall data, there is controversy over the dates of the Early New Kingdom that pits archaeological evidence against physical evidence. Radiocarbon measurements provide a very early date for the eruption of Thera, ca. 1650–1600 BCE (Manning 1999, Chapter 5; Manning and Ramsey 2003). Even when faced with the radiocarbon data, Bietak (2003) maintains that the eruption must have happened during the Early New Kingdom. However, traditional archaeology dates the Early New Kingdom to 1540–1420 ±10 years BCE (Kitchen, 2003) and the dates of other Middle Eastern societies are closely tied to those of Egypt.

The chronological stakes are very high with the Thera eruption. *If* the radiocarbon measurements prove to be accurate, and *if* that eruption can be accurately tied to the Egyptian Early New Kingdom, then the New Kingdom would have to start much earlier than is currently believed; possibly by as much as 150 years (Bietak 2003, 30). Those turn out to be very big *ifs* and no author cited here is comfortable with such a major shift in New Kingdom dates.

Part II of this article will examine attempts to use physical evidence to date the eruption of Thera, will outline how that evidence appears to contradict the archaeological evidence, and will discuss possible ways to reconcile the contradiction.

ENDNOTES

- 1 The dates quoted here are very approximate and generally follow Higgins (1973) with additional details from others.
- 2 Note that Thera was not a single, round island in the Bronze Age and is not a candidate for Atlantis. Manning (1999, 14) shows an approximate reconstruction by Druitt and Francaviglia of Thera just prior to the volcano’s eruption. The island appears much as it does today but with a much larger lava dome in the center.
- 3 “Genius” is used here in the sense of “Spirit.” Wilkinson (2003, 186) identifies the Minoan form of Taweret as a “goddess of water.”
4. “Early New Kingdom” refers here to the reigns of Ahmose, Amenhotep I, and Tuthmosis I, II, III. Hatshepsut’s reign overlaps that of Tuthmosis III.

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