An Egyptian Silver Statuette of the Saite Period—A Technical Study

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A calm, warm day. Theo came back from Luxor this noon, with a most beautiful statuette in silver he had bought of Mohassib. In style and treatment it suggests that Egyptian statuette in bronze and silver, the Lady Takûshit now in Athens and shown in the "Struggle of Nations" by Maspero.[1]

THIS FIRST REFERENCE to an exquisite silver figure now in The Metropolitan Museum of Art (Figures 1–4) appears in the diary of Mrs. Emma B. Andrews, a traveling companion of Theodore M. Davis.[2] Davis was a wealthy collector, generous donor, excavator, and patron of Egyptian archaeology.[3] The silver statuette, together with over one thousand other Egyptian antiquities and non-Egyptian works of art, was bequeathed by Davis to the Metropolitan Museum and accessioned in 1930.

The silver figure, which was dated on stylistic grounds to the Twenty-sixth, or Saite, Dynasty (664–525 B.C.), was placed on display but did not receive scholarly attention until 1986, when a detailed technical examination was carried out to determine the feasibility of cleaning the statuette, as well as to study its manufacture and to obtain evidence concerning the identity of the woman represented.[4] The results of this examination, including a discussion of the cleaning of the statuette, are the subject of this paper.

The statuette represents a graceful woman standing with her legs straight and her feet together. Her right arm hangs at her side with the fingers of the hand extended.[5] Her left arm is bent at the elbow with the clenched fist held over her right breast.[6]

The woman wears a bobbed wig that bulges out above the ears (Figures 5, 6). In outline the wig is straight across the forehead, angled downward on the sides, and gently rounded across the nape of the neck. It curves up over the ears, which are fully exposed. A thin band, perhaps representing a cloth beneath the wig, separates the wig from the forehead. At each end of the band a small rectangular tab extends down in front of the ear. These tabs, which are separated from the band by scored horizontal lines, may represent the woman's natural hair peeking out from under the cloth.

The locks of the wig are depicted as raised, echeloned, slightly tapered rectangles with rounded corners. A thin horizontal strip crosses over near the bottom of each lock. The top of the wig consists of a flat unadorned circle approximately one centimeter in diameter (Figure 7). The locks emanate from this circle, gradually increasing in size until the point where the wig bulges out to its greatest extent and then gradually becoming smaller.

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Figure 1. Statuette of a woman. Egyptian, Twenty-sixth Dynasty, reign of Necho II (601–595 B.C.). Silver, h. 23.6 cm. The Metropolitan Museum of Art, Theodore M. Davis Collection, Bequest of Theodore M. Davis, 1930, 30.8.93

Figure 2. Front view of the statuette in Figure 1

Figure 3. Right profile view of the statuette

Figure 4. Back view of the statuette

Figure 5. Three-quarter view of the right side of the statuette's head

Figure 6. Left profile view of the head

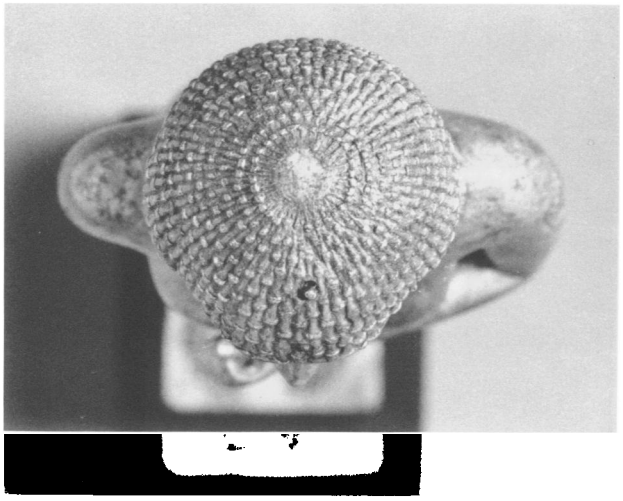

Figure 7. Detail of the statuette's wig

Figure 8. Detail of the statuette's head and shoulders

The woman's ears are pierced but only the left earring is extant. The earring consists of two interlocking silver bands, the larger of which tapers as it enters the pierced earlobe (see Figure 6). The woman's narrow, slanting eyes have raised cosmetic lines and eyebrows, and her pupils are slightly recessed. Her mouth is narrow with full lips turned up in the suggestion of a smile. Her chin is small and rounded, her cheeks are full, and her nose is straight with a high bridge.

Around her slender neck the woman wears a broad collar consisting of eight alternately raised and recessed concentric bands bordered on the outer edge by a row of raised flower-petal pendants in imitation of a beaded *usekh* collar (Figure 8). She wears a bracelet on each wrist and an anklet on each leg; the anklet on the right leg is partially lost. The bracelets and anklets both consist of a flat band decorated with three parallel, raised ridges.

Except for her wig and jewelry the woman is unclothed.[7] Her breasts are full without any indication of nipples. The musculature of the abdomen is sensitively rendered and anatomically well observed. The woman is slender with a high waist and prominent hipbones. Her right hip is higher and more angular than the left, a feature more noticeable from the back. The pubic triangle is defined by a raised pubis and a series of round holes in horizontal rows. The median line of her back and the triangular indentation above her small buttocks are summarily indicated.

The musculature of the woman's long arms is simplified, with no definition of the elbow on the right arm. The fingers of the outstretched hand are attenuated and without articulation other than that of the fingernails.

Her legs are long, muscular, and well proportioned. Her knees are flat but the anklebones are defined. She has large, slender feet with high insteps, and the toenails are shown. The figure stands on an undecorated, low, rectangular base only slightly larger than her feet.[8]

The upper arms bear raised cartouches of Necho II (610–595 B.C.). On the right arm is "Wehem-Ib-Re," a prenomen given upon accession to the throne, and on the left arm is the nomen "Nikau" (Figures 9–11). There are no other inscriptions on the figure or the base.

Technical studies provide information about the physical aspects of works of art that help to determine their date and place of manufacture, the ma-

Figure 9. Detail of the right cartouche

Figure 10. Detail of the left cartouche

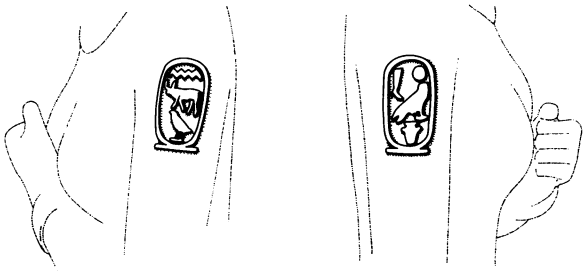

Figure 11. Drawings of the cartouches in Figures 10 and 9 (by Barry Girsh)

terials and techniques used by the artist, the original appearance of the object, and the changes it has undergone over time. Choices regarding the manufacture and materials are not merely based on pragmatic or aesthetic considerations. They often are influenced as much by an artist's particular relationship to his craft and the materials he manipulates, as well as by his perceptions of the physical world. While to some extent personal, these choices ultimately express the cultural and spiritual values of the society in which the artist lives.

The technical examination of the Metropolitan Museum's silver statuette included visual examination under magnification, X-ray radiography from multiple viewpoints,[9] and instrumental analyses to determine the composition of the metal and to identify corrosion products and inclusions.[10] As the examination progressed, a clearer picture emerged of the sculpture's original appearance and its state of preservation beneath the corrosion layer. This information was necessary in order to make informed decisions regarding the desirability and feasibility of cleaning the figure. Moreover, technical studies undertaken both before and after cleaning provided new insights into the production of silver statuary in ancient Egypt and illustrated the high level of achievement attained by Egyptian craftsmen in this medium.

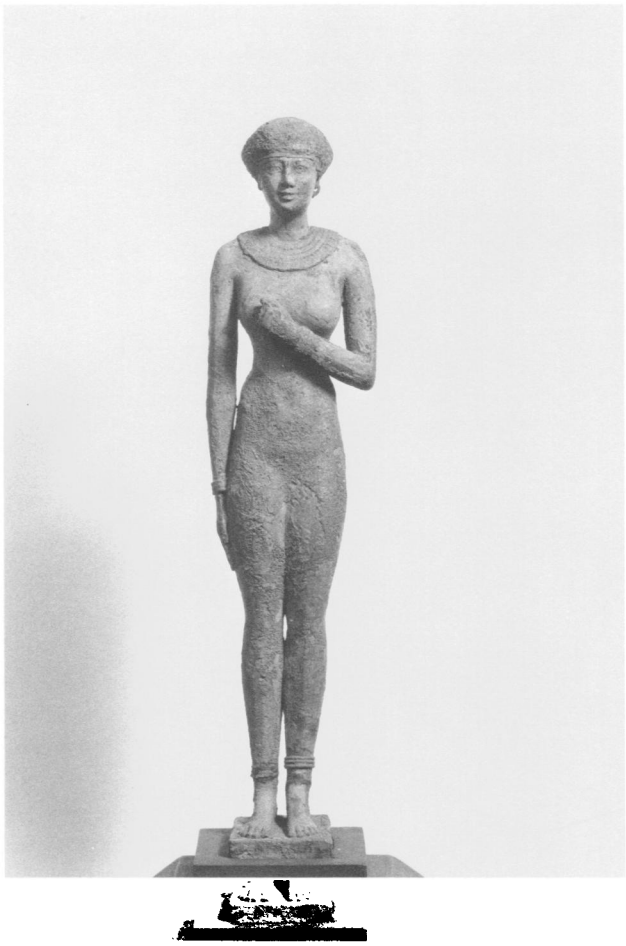

Figure 12. Front view of the statuette before cleaning

When first examined in 1986, the statuette was covered with massive silver and copper corrosion products with an admixture of several mineral inclusions (Figure 12). This corrosion layer consisted predominantly of a waxy, sectile, purplish-brown material. Three samples from the outer layer of the silver corrosion were examined using X-ray diffraction and identified as bromium chlorargyrite [Ag(Cl,Br)].[11] Elemental analysis indicates a wide range in the relative proportions of bromine and chlorine in the samples examined, although the latter always predominates. The presence of bromine in silver archaeological corrosion products was first noted in 1976,[12] but the extent to which the presence of bromine may provide information concerning burial environment is a subject that has not been well explored.

Scattered occurrences of a bright green corrosion product were observed in the bromium chlorargyrite layer. This material was identified by X-ray diffraction as paratacamite [$CuCl_2 \cdot 3Cu(OH)_2$], a common copper corrosion product on copper and copper-containing metallic archaeological objects from saline environments.[13] In addition, scattered white, black, and yellow inclusions, as well as sand, were present in the corrosion layer. X-ray diffraction analysis identified the yellow particles as gypsum ($CaSO_4 \cdot 2H_2O$) and quartz (sand), presumably stained by iron, which was detected by elemental analysis along with silicon, calcium, sulfur, potassium, and aluminum. Gypsum was also detected in X-ray diffraction scans of the silver corrosion samples.[14]

Upon probing, a powdery white material, identified by X-ray diffraction as aragonite ($CaCO_3$), was noted in many areas between the corrosion layer and the silver surface.[15] Distinct aggregates of a red powdery material were also observed, particularly on the head.[16]

When the figure was first examined, basic features of the underlying sculpture were discernible beneath the thick corrosion layer. While the corrosion layer remained largely intact, it clearly had been abraded or smeared in isolated areas, such as the face (Figure 13). This may have resulted from

Figure 13. Detail of smeared corrosion on the statuette

Figure 14. Detail of "carved" corrosion on the statuette

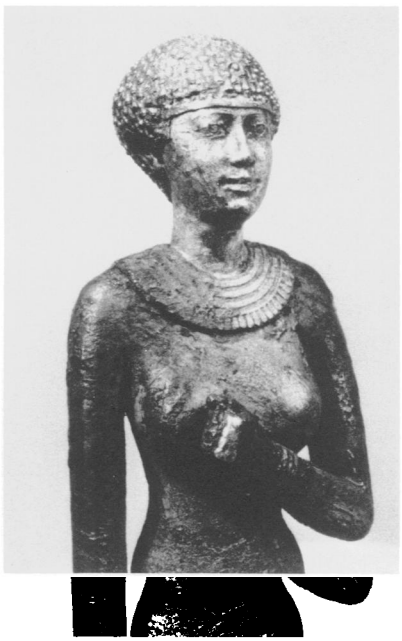

Figure 15. Head and shoulders of the statuette during cleaning

an abortive attempt to clean the statuette or, more likely, to even out the corrosion layer so that it would correspond more closely to the original contours of the figure. Series of parallel tool marks, especially visible on the upper right arm (Figure 14), the right side of the back, the small of the back, and the buttocks, suggest the use of a file in these areas. Other scattered scratches and gouges were also evident. There is a cut into the metal on the bottom of the right front side of the base, which is probably the result of an attempt to remove the figure from a modern mount with a saw.

The knuckles of the left hand and the arch of the right foot had been cleaned down to the bare metal and then polished to display a reflective surface.[17] Such localized cleaning, which left several deep V-shaped gouges on the hand, was probably not the prelude to a more extensive treatment but an attempt to illustrate the presence of an intact underlying silver layer to a prospective purchaser (Figures 12, 15).

Both of the figure's legs had been broken just above the ankles. The anklet on the right leg was broken into several pieces, and only about half survives. The metal of the left leg is bent forward at the break, indicating that the force came from behind. Radiographs revealed that the legs and ankles had been drilled to accommodate metal dowels (Figure 16). The dowels began one centimeter above the breaks and continued through to the underside of the base. The metal above the breaks is cracked. When the feet were rejoined to the legs, they were improperly aligned and the figure leaned backward (Figure 17). These repairs predate a 1931 record photograph.

The corrosion on the fragment consisting of the feet and base was stained a rust color in many areas, perhaps from contact with iron or an iron-rich soil during burial. The disparity in appearance between the base and the body suggests that the statuette was probably already broken in antiquity.

The decision to clean the statuette was based on a number of considerations. Since the corrosion layer had been burnished and distorted by previous interventions, it was no longer representative of the original archaeological surface. In addition, X-ray radiography, supplementing visual examination, had indicated that the sculpture was essentially intact and retained a wealth of surface detail beneath the corrosion layer. The most surprising elements revealed in the radiographs were the cartouches on each of the figure's shoulders present underneath the corrosion layer (Figures 16, 18).[18] A further consideration in favor of cleaning was the probability that additional evidence relevant to technological and art-historical issues would be revealed. For example, the question of whether or not the figure is unclothed could not be definitively answered before cleaning.

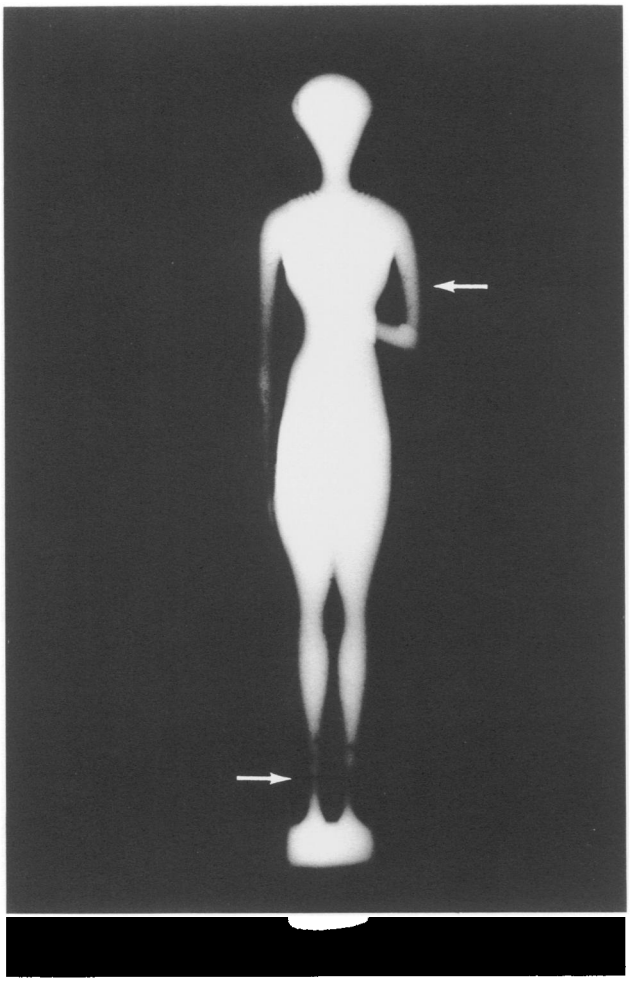

Figure 16. Front view X-ray radiograph of the statuette

Figure 17. Detail showing unaligned repairs on the statuette

The cleaning of archaeological silver has always been problematic. Chemical and electrochemical methods, which in the past were the most common means of cleaning silver, are now used to a much more limited degree. They are difficult to control; moreover, these methods can radically alter the original surface of an object and destroy technical evidence.

Mechanical cleaning,[19] while currently the method of choice for archaeological silver, is not without its limitations. The physical characteristics of silver and silver alloys—principally their softness and tendency to become embrittled when corroded[20]—and of chlorargyrite—its sectility and tendency to take a metallic luster when burnished—make it difficult for the conservator to locate the original surface without scratching, fracturing, or distorting the silver. In addition, pits of corrosion that extend below the original surface can produce an unattractive, splotchy appearance. Sometimes, particularly in the cases of smaller figures or hammered objects, such as vessels with thin walls, corrosion may extend through the object. In extreme instances, the silver is entirely replaced by corrosion products. The extent of the mineralization is sometimes difficult to ascertain before cleaning. In the present case, the relative thickness of the figure, which was revealed in the radiographs to be a solid cast, provided grounds for optimism regarding both the survival of the silver and sufficient retention of its metallic properties. The Metropolitan Museum's figure provided an opportunity to study a relatively well-preserved silver surface on an ancient object of the highest quality. Unfortunately, such an opportunity is rare, because of the poor state of preservation characteristic of archaeological silver and because of the aggressive cleanings that have been undertaken on most ancient silver artifacts in public and private collections.

Several mechanical test cleanings were carried out

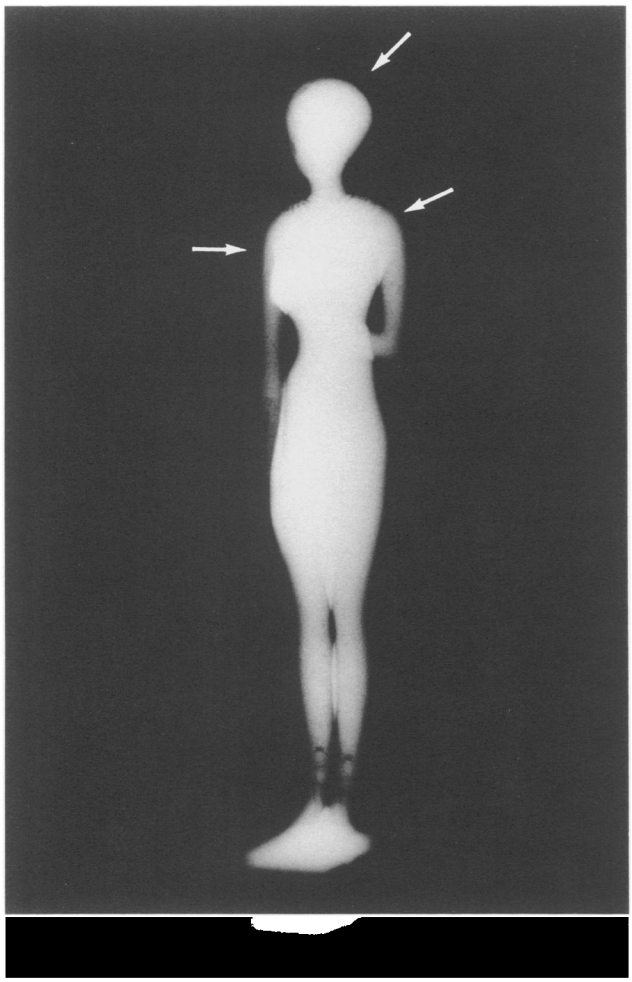

Figure 18. Right oblique view X-ray radiograph of the statuette

and in each case a visually presentable silver surface resulted. Cleaning proceeded slowly with a variety of specially shaped tools made from silver, steel, bamboo, and ivory (Figure 15). In many areas the mechanical cleaning was facilitated by forming a water-soluble complex with the aragonite inclusions present in the chlorargyrite layer.[21] In three areas (the forehead, pelvis, and cartouches), where the corrosion was particularly tenacious and mechanical cleaning without damage to underlying surface detail was not feasible, localized chemical cleaning was undertaken.[22] The figure's overall appearance after cleaning was silvery but irregular in color, luster, and surface morphology. It was decided, however, to refrain from polishing the surface, in order to retain some of the visual character and physical evidence of the figure's archaeological origin and to preserve evidence of its manufacture. Aesthetic considerations also played a role in this decision. Fine modeling and delicate details are easily altered by the abrasion, compression, and smearing of the metal that result from polishing.

Before the surface cleaning was begun, a modern fill material was removed from the repairs in the legs and the exposed dowels were cut in half with a jeweler's saw. When the cleaning was finished, the old dowels were removed and replaced with stainless-steel dowels. The two pieces were correctly aligned so that the figure no longer leans backward.

Although gold and silver were already in use in ancient Egypt during the Predynastic Period, their frequency and relative value varied considerably during different historical epochs. Until the Middle Kingdom silver was more highly valued than gold, as evidenced by its primacy over gold in texts.[23] By the time of the New Kingdom, gold was considered to have twice the worth of silver,[24] although the latter continued to be more highly valued in Egypt than elsewhere in the Mediterranean world.[25]

Geological sources of silver in Egypt are limited.[26] While notable exceptions do exist, works of art in silver were comparatively rare before the New Kingdom.[27] From the Eighteenth Dynasty onward silver objects were more plentiful, probably due to closer contact between Egypt and the civilizations of the eastern Mediterranean where silver was more readily available. Eighteenth Dynasty texts, for example, describe the large amounts of silver received in tribute by the Egyptians.[28] However, despite its lesser value relative to gold, until the Ptolemaic Period silver still appears to be the less frequently used metal.

There are relatively few extant Egyptian examples of large silver statuary representing human figures.[29] In any case, a consistent production of figural sculpture in metal, even of the more common copper alloys, must be considered a relatively late development in ancient Egypt. Surviving from the Old Kingdom is a pair of sheet-copper statues of Pepy I and Mernera(?) in the Egyptian Museum in Cairo. Dating to the Middle Kingdom is a modest number of small and large copper and copper-alloy figures in various collections. The production of small bronzes became more common in the late New Kingdom, and bronze statuary reached its height in terms of ambition and technical mastery during the Third Intermediate Period. Although vast amounts of gold were used in ancient Egypt, surviving examples of gold statuary of any size are rare at all times.[30]

There are textual references to silver statuary

Figure 19. Statuette of a king offering a figure of Maat. Egyptian, New Kingdom. Silver with gold leaf, h. 19.5 cm. Paris, Musée du Louvre, Département des Antiquités Égyptiennes, Donation Ganay (photo: Musée du Louvre)

Figure 20. Statuette of Amun. Egyptian, Eighteenth Dynasty, Silver with gold leaf, h. 23 cm. London, British Museum (photo: courtesy Trustees of the British Museum)

from early in the Eighteenth Dynasty.[31] Three notable large silver statuettes said to date from later in the New Kingdom are a figure of a king presenting Maat in the Louvre (E 27431) (Figure 19),[32] a striding figure of Amun in the British Museum (EA 60006) (Figure 20),[33] and a seated figure of Horus in a private collection.[34]

More silver figures are known from the Third Intermediate and Late Periods, but most of them are small. An unpublished amulet in the British Museum (EA 32770) is of particular relevance since it may be the only other extant Saite Period sculptural representation in silver of an unclothed woman (Figure 21).[35] This representation is also noteworthy, because amulets have a protective function and those with human attributes generally represent deities or parts of the body, and only rarely mortal beings. In addition to the Metropolitan's female figure, large silver statuettes dated to the Late Period include figures of Nefertem in the Saint Louis Art Museum (223:1924) (Figure 22),[36] the State Museum of the History of Art, Moscow (no. 5451),[37] and a Swiss private collection.[38] Three additional large representations of Nefertem appeared in sales catalogues of the 1890s, but their present locations are not known.[39] Other documented pieces include an Osiris,[40] a Horus,[41] and a figure of Imhotep seated as a scribe.[42] There are a number of Ptolemaic Period silver statuettes, some of which exceed fifty centimeters, from the temple at Dendara.[43]

In ancient Egypt, many natural substances had symbolic meanings that sometimes influenced the contexts in which they were used. The three main

symbolic associations of silver were the moon, ritual purity, and the bones of the gods.[44] Thoth is the god primarily associated with the moon, but silver may have had a symbolic connection to the nocturnal aspects of other deities principally associated with the sun, such as Horus and Hathor.[45] None of these conventional associations of silver seems to relate to the Metropolitan Museum's statuette but there may be other, more esoteric associations that could explain the identity of the woman represented or her status in Egyptian society.[46]

In addition to clarifying the original appearance and state of preservation of the Metropolitan Museum's silver statuette, the technical examination provided information about the materials and methods used in its manufacture. Elemental analysis carried out on a polished cross section indicated that the figure was made from an alloy containing approximately 96.7 percent silver and 2.6 percent copper.[47] Lesser amounts of gold (0.6 percent) and iron (0.1 percent) were also detected.

The two main sources of silver traditionally believed to have been available to ancient Egyptian metalworkers are auriferous alluvial silver and argentiferous galena.[48] For the earlier periods it has long been assumed that local auriferous silver was used, whereas from the New Kingdom onward imported silver derived from argentiferous galena is believed to be the primary source of silver.[49] Because of the figure's relatively late date and the presence of only a small amount of gold in the silver, it is likely that argentiferous galena is the source of metal for the Metropolitan Museum's statuette. The failure to detect lead in the silver does not preclude galena as a possible source, because efficient cupellation can reduce the level of lead in cupelled silver to as low as 0.05 percent,[50] which is considerably below the limit of detection for lead (0.5 percent) under the prevailing operating conditions of the analysis. Copper impurities in silver derived from argentiferous galena rarely exceed 0.5 percent;[51] it is therefore likely that the copper in the alloy is an intentional addition.

The Egyptian tradition of silver working included both hammering and casting, although it appears that statuary was produced almost exclusively by casting.[52] Whereas there are no known surviving examples of Egyptian silver statuary made from hammered sheet, at least before the Ptolemaic Period, it is nonetheless possible to create elaborate hollow thin-walled silver forms by hammering. In fact, much hollow silver statuary from other ancient cultures is hammered.[53] Considering the entire corpus of silver objects from ancient Egypt, artistic production appears to be limited in scope and quantity when compared to that of the cultures of the Aegean and the Near East, where local silver ores could be exploited.

As mentioned earlier, the Museum's figure and its integral base are a solid cast.[54] The statuette weighs approximately 1.13 kilograms. The seated Horus figure in a private collection and the figure of Nefertem in the Saint Louis Art Museum are also known to be solid and weigh 16.5[55] and 1.03 kilograms, respectively. On the other hand, the Louvre king[56] and at least some of the figures from Dendara are hollow.[57]

There are advantages and disadvantages inherent in the techniques of both solid and hollow casting. In ancient Egypt both methods would have proceeded from wax models. Large solid casts tend to be porous and require considerable surface finishing; they also necessitate a greater expenditure of metal and fuel. Hollow casts demand greater skill in the preparation of the core, wax model, and investment before casting but have fewer of the shrinkage and porosity problems that are associated with the

Figure 21. Amulet in the form of an unclothed woman. Egyptian, Twenty-sixth Dynasty (664–525 B.C.), Silver, h. 4.5 cm. London, British Museum (photo: courtesy Trustees of the British Museum)

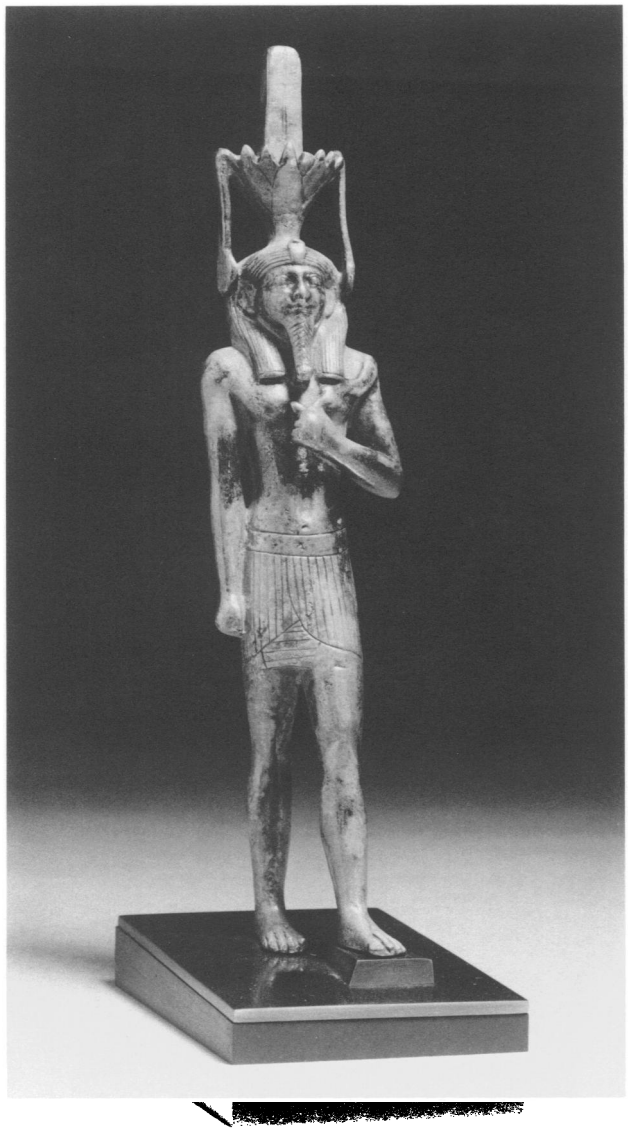

Figure 22. Statuette of Nefertem. Egyptian, Twenty-sixth Dynasty (664–525 B.C.), Silver, h. 24.8 cm. The Saint Louis Art Museum (photo: The Saint Louis Art Museum)

solidification of large masses of metal. Perhaps most important in a culture where metal is valuable, hollow casting conserves resources. However, sometimes the desire to express wealth or power or to conform to ritual specifications supersedes the need to save metal.[58]

The Metropolitan Museum's figure has considerable porosity. The parts of the body thin enough to be penetrated by the X-radiation display a relatively uniform distribution of small pores caused by gases that were trapped in the metal when it cooled (Figures 16, 18). Examination of the figure clearly shows that the surface was covered with casting flaws when it was first removed from its investment. These flaws, in the form of rounded pits, were the result of gases that migrated toward the surface but were unable to escape through the investment. In order to finish the surface, the craftsman enlarged and squared off the pits with a chisel and filled them with shallow, rectangular silver plugs that were hammered and burnished in place (Figures 23, 24). The plugs are of various sizes and in some cases they overlap. Overlapping plugs may have been necessary to repair large irregular pits or to fill separate but adjacent pits. The plugs would not have been visible in ancient times but are now clearly outlined by corrosion that has formed at the junctures between the plugs and the surrounding metal.

Radiographs of the figure of Nefertem in the Saint Louis Art Museum display a similar internal distribution of small pores, although there is no evidence of porosity on its surface, in the form of either pits or plugs (Figures 22, 25). This may be the result of the destruction of the surface by the harsh chemical cleaning, followed by heavy burnishing that was carried out before the figure was acquired by the Museum in 1924. The seated Horus figure in a private collection has many small unplugged pits visible on its surface, in addition to large and small plugs and several square cavities where plugs have fallen out.[59]

After the casting flaws were filled, chasing tools were used to remove surface irregularities left from casting as well as to further define existing features and introduce additional details. For example, the pubic hairs were indicated by holes made with a round punch (Figure 26), and there is evidence of the use of chasing tools in the delineation of the fingers and toes. While the evidence on the face, where the surface of the metal is somewhat smeared, is not so clear, chasing tools were probably used there as well to refine details. The ears were probably pierced with an awl-like tool.

As a final step the surface was polished with increasingly fine abrasives. Evidence of the use of coarse abrasives is visible as long, roughly parallel scratches in less accessible areas—such as on the front of the body adjacent to the right arm—that inadvertently did not receive a final polishing (Figure 27).

The cartouches on the Metropolitan Museum's figure are unusual because they are raised rather than recessed (Figures 9, 10).[60] While the backgrounds of the cartouches are as highly polished as the rest of the figure, for reasons that are unclear the surface of the raised relief is uneven. The car-

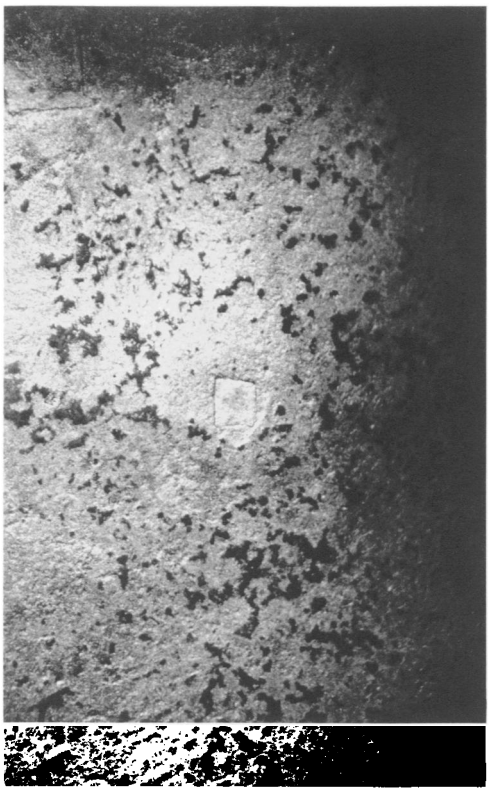

Figure 23. Detail of plugs on the statuette in Figure 1

Figure 24. Detail of overlapping plugs on the statuette in Figure 1

Figure 25. Detail of frontal X-ray radiograph of statuette in Figure 22

Figure 26. Detail of the pubic triangle of the statuette in Figure 1

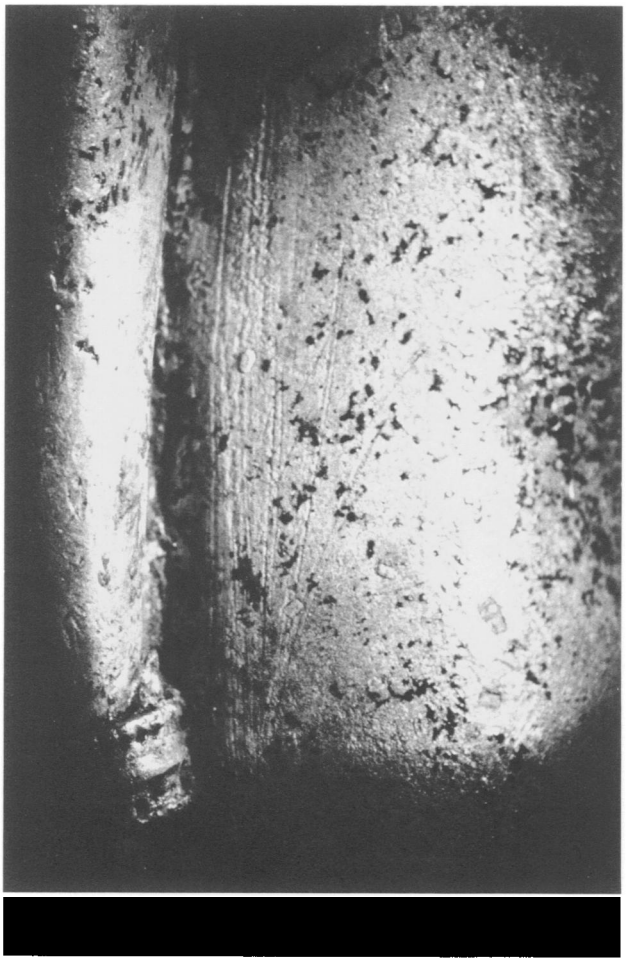

Figure 27. Detail of polishing marks on the statuette in Figure 1

touches are likely to have been included in the wax model. It is not evident whether the raised areas were simply left as cast or were further roughened by cold-working. It is possible that the uneven surfaces of the relief were intended to exploit the visual contrast between them and the adjacent polished surfaces. A less likely possibility is that the rough surface was intended to receive a painted gesso layer.

The radiographs show a distinct boundary between the inside of the wig and the head, indicating that the wig is a separate element (Figure 18). They also show that the basic shape of the head beneath the wig is rounded. The wig seems to have been merely slipped over the head and its edges burnished to secure it. Whether the wig was cast or hammered could not be determined.

Two circular holes, one above the other and approximately one centimeter apart, have been cut slightly to the left of center in the front of the wig (Figure 8). A silver wire protrudes from each of these holes. These wires do not appear to have been used in attaching or aligning the wig. While the wires may be the remains of a uraeus or other attachment, the presence of a uraeus would be problematic.[61]

Radiotransparent lines on each shoulder visible in the frontal radiographs indicate that the collar was also a separate element (Figure 16). The collar must have been open when it was applied, or made in two sections, because when closed it would have been too small to fit over the head, even before the wig was added. A faint line running diagonally across the width of the collar on the left shoulder probably indicates a seam (Figure 28). The collar was set into a shallow recess in the body. This is evident in the radiographs and visible on the back of the figure where an edge of the recess was not burnished (Figure 29). All of the petals on the collar are in relief except for one on the left shoulder, which is recessed (Figure 30). It is unclear if this was intentional, and its significance is not known.

In contrast to the elegant design and precise workmanship manifest in the fabrication and fitting of the wig and collar, the execution of the anklets and bracelets seems cursory. Each was made from a single overlapping strip of hammered silver sheet with simple chased decoration. Only a clumsy attempt was made to hide the overlaps by placing them between the inner arm and the figure in the case of the bracelets and on the insides of the legs for the anklets. Although some excess metal is coiled between the inside of the wrist and the body, the bracelet on the left arm is still too long to be drawn tightly around the wrist (Figure 24). These

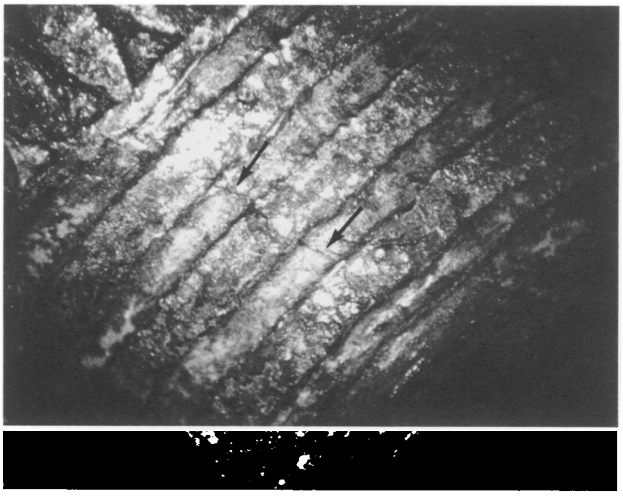

Figure 28. Detail of join on top of the broad collar on the statuette in Figure 1

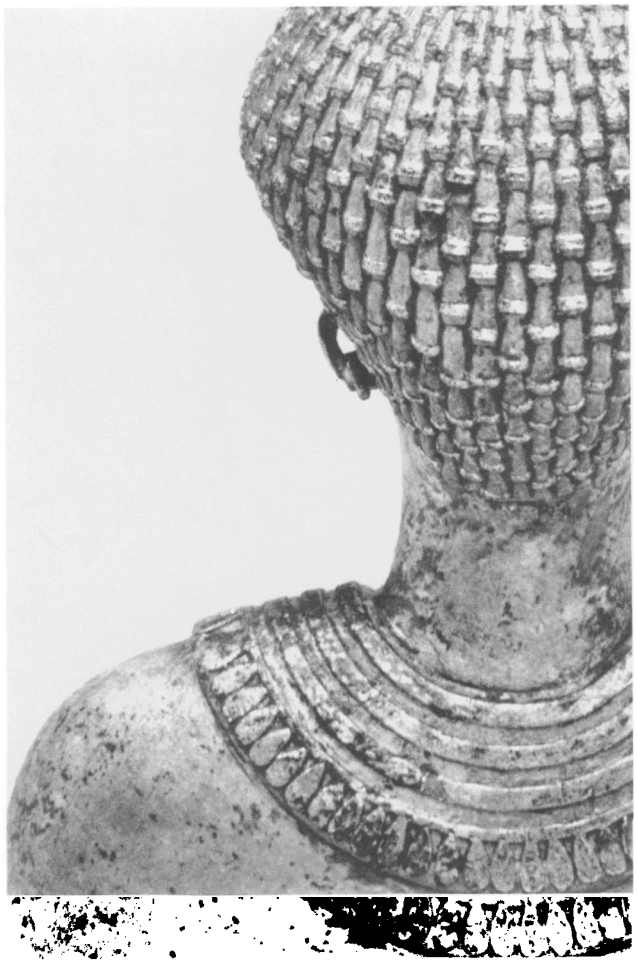

Figure 29. Detail of the broad collar and recess on the statuette in Figure 1

observations raise the possibility that the anklets and bracelets may be a later addition.[62]

As mentioned earlier, aggregates of a friable red material were observed in the corrosion layer. As the cleaning progressed, this red material was found to be concentrated on the surface of the wig. Elemental analysis indicates that iron, calcium, and silicon are the predominant components; silver, bromine, chlorine, aluminum, copper, and sulfur were also detected. However, only bromium chlorargyrite was detected in X-ray diffraction analyses of several samples of this material. It is difficult to interpret these results. Chlorargyrite is not red, and the material does not have the appearance of iron-stained silver chloride. Its presence almost exclusively on the wig and concentrated directly on the surface of the metal suggests that it might be intentional. On the other hand, red wigs are rare in ancient Egypt and the figure is otherwise strikingly monochromatic. Red grounds are sometimes used for the application of gold leaf, but this practice is generally limited to nonmetallic substrates.[63] In any case, no trace of gilding was found on the wig.

In fact, there is no evidence of gilding or inlay anywhere on the Metropolitan Museum's figure,[64] although these features occur on many of the large silver statuettes mentioned above. For example, the figures of the striding king in the Louvre (Figure 19), the British Museum Amun (Figure 20), and the standing Horus, whose present location is not known, are partially gilded.[65] In each of these cases, it is the clothing, wigs, crowns, jewelry, or other attributes that are gilded.[66] The seated Horus in a private collection was completely covered with gold sheet, most of which is now lost, and some of the Dendara figures may also have been entirely gilded. The eyes and the headdress of the seated Horus were inlaid with rock crystal and lapis lazuli, respectively. Some of the Dendara figures also have inlaid eyes as did, most probably, the royal figure in the Louvre.[67]

Among extant Egyptian statuary the Metropolitan Museum's silver figure is unique. The sumptuous use of silver, in conjunction with the woman's nudity and several other unusual characteristics, particularly in the absence of an inscription qualifying the cartouches, has made it difficult to determine her identity. The problem of identification is compounded by the general decline in the number of stone sculptural representations of women during the Late Period, leaving only a few contemporaneous female figures of high artistic quality to which the Metropolitan Museum's statuette can be compared.[68]

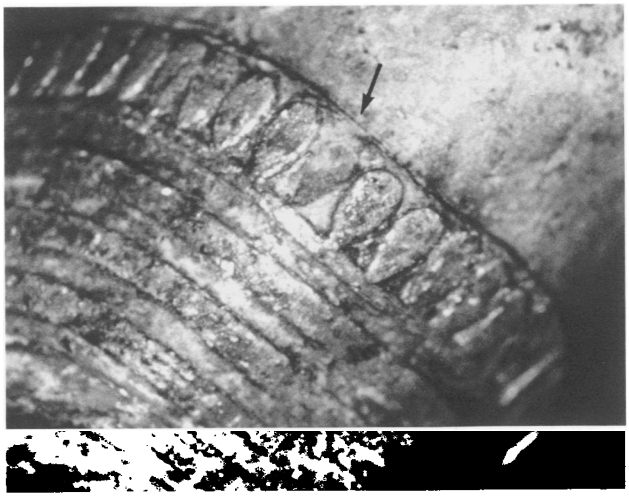

Figure 30. Detail of the "recessed" petal on the broad collar of the statuette in Figure 1

Although the identity of the woman remains ambiguous and the function of the statuette is not known, the visual impact of the sculpture is undeniable. The woman's assertive, powerful stance conveys a strong sense of individuality. Despite her slenderness, she possesses weight and solidity. The overall representation is austere but punctuated with exquisite details, such as the wig, while the lustrous quality of silver is beautifully exploited in the sensitive modeling of the woman's body.

The importance of the statuette is asserted by the wealth of silver and the high quality of workmanship, as well as by the presence of King Necho's cartouches. These features, together with the artistic refinement of the sculpture and the clarity with which it exemplifies the aesthetic standards of the Saite Period, lead one to conclude that the Metropolitan Museum's figure is the product of a royal workshop.

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NOTES

1. E. B. Andrews, "A Journal on the Bedawin 1889–1912: The Diary Kept on Board on the Dahabiyeh of Theodore M. Davis During Seventeen Trips up the Nile" (unpublished typescript, 1918) II, pp. 72–73.

2. The Mohassib mentioned in Andrews's diary was an important, if not the most important, antiquities dealer in Luxor during the late 19th and early 20th century. Given Mohassib's widespread activities, the place of purchase does not necessarily provide information about the figure's provenance.

3. See D. Gordon, "The Robber Baron Archaeologist—An Essay About the Life of Theodore M. Davis," unpublished M.A. diss., Johns Hopkins University (Baltimore, 1991).

4. The examination was initiated as part of an art-history project undertaken by L. Pilosi, "A Silver Statuette of the Saite Period," unpublished M.A. qualifying paper, Institute of Fine Arts (New York, 1988). Prior to this, the figure had been mentioned briefly and illustrated in A. Lansing, "The Theodore M. Davis Bequest, The Objects of Egyptian Art," *MMAB* 26, 2 (1931) pp. 3–7, fig. 11, and N. E. Scott, *Egyptian Statuettes* (New York, 1946) p. 34, pl. 35. An art-historical treatment of the statuette is being prepared by E. R. Russmann.

5. The designations "right" and "left" in the text indicate proper right and proper left, respectively.

6. The general stance of the MMA figure is not uncommon; see B. Hornemann, *Types of Ancient Egyptian Statuary* (Copenhagen, 1966) VII, pp. 869–879. However, it is rarer to find the left clenched fist directly on the right breast. In those instances, the figure usually holds some attribute, such as a sistrum or a flower. Representations of unclothed women in this stance without attributes occasionally appear as mirror handles. One New Kingdom example, excavated at Akko, is in the Israel Museum in Jerusalem (IAA 71–95); see MMA, *Treasures of the Holy Land*, exh. cat. (New York, 1986) cat. no. 62.

7. Nudity is not common in ancient Egyptian art; see *Lexikon der Aegyptologie* s.v. "Nacktheit" (Wiesbaden, 1975–91) IV, cols. 292–294; see also O. Goelet, "Nudity in Ancient Egypt" (forthcoming). Many of the representations of unclothed women that do exist can be grouped, with a great deal of overlap, into several loosely defined categories. The representations in these groups often span several epochs of Egyptian history, but some chronological developments can be recognized as well. "Fertility figures" form one large group of unclothed women. This designation is broad, probably conflating a number of subgroups, and includes

those figures formerly known as "concubines." The clarification of the concept of "fertility figures" appears in G. Pinch, "Childbirth and Female Figurines at Deir el-Medina and el-Amarna," *Orientalia* 52 (1983) pp. 405–414. In general, the figures of this type are generic women, but a subgroup of wooden figures dated to the First Intermediate Period and Middle Kingdom from Assiut and other sites, some of which are finely carved and seem to represent individuals, may also have functioned as "fertility figures." At least some of these last-mentioned wooden nude figures were wrapped in linen "clothing"; see, most recently, E. Delange, *Statues égyptiennes du Moyen Empire* (Paris, 1987) pp. 156–157, 188–189.

Another large group of unclothed women consists of maturing adolescents, some of whom are recognizable as servants. These figures often exhibit a high level of workmanship and include both freestanding examples and figures that are part of luxury objects, such as mirrors, cosmetic spoons, cosmetic vessels, and small pieces of furniture; see *Egypt's Golden Age—The Art of Living in the New Kingdom,* exh. cat., Museum of Fine Arts (Boston, 1982) pp. 204–205. A finely carved ivory figure in the Louvre (E 27429) dated to the Third Intermediate Period may belong to this group. However, the question of her identity and function is complicated by the remains of a broken-off element on the top of her wig, which may have been a crown, an emblem, or an attachment to a larger object.

A further group of representations includes poorly known minor goddesses of apparently foreign derivation; see R. Stadelmann, "Syrisch-palästinensiche Gottheiten in Aegypten," in *Probleme der Aegyptologie* V (Leiden, 1967). Possibly belonging to this category is a series of representations in various media of full-figured women, some of whom wear uraei, dated to the 25th Dynasty; see E. Riefstahl, "Doll, Queen, or Goddess?," *Brooklyn Museum Journal* (1943–44) pp. 7–23.

Finally, there are rare instances of unclothed, individualized mortal women. One example is the early-19th-Dynasty figure of Rennutet, wife of Yuny, carved in very high relief on the sides of the deep back pillar of her husband's limestone *naophoros* statue in the MMA (33.2.1); see *Masterpieces of The Metropolitan Museum of Art* (Boston / New York, 1993) pp. 20–21. Rennutet wears only a festive wig and holds a necklace in her hand, which along with the inscribed texts suggests a connection to the goddess Hathor; Do. Arnold, personal communication, Sept. 9, 1993. Another example is found at Medinet Habu in relief scenes of Ramesses III attended by several young women. The latter, unclothed except for their necklaces and unusual headdresses, serve the king and receive his caresses; see *Medinet Habu, The Eastern High Gate with Translations of the Text,* Oriental Institute Publications 94 (London, 1970) pls. 630–633, 636–642, esp. 637.

Several Late Period figures representing unclothed women, whose identities or social status are unclarified, are also of potential interest in the study of the MMA figure. Slightly earlier in date are two 25th-Dynasty statuettes in the Aegyptisches Museum, Berlin, one of wood (16999, H. 20.5 cm) and one of ivory (17000, H. 15.5 cm), from the grave of Taza at Abusir- el-Meleq; see K. Bosse, *Die menschliche Figur in der Rundplastik der ägyptischer Spätzeit von der XXII bis zur XXX Dynastie* (Glückstadt / Hamburg / New York, 1936) p. 64. A problematic representation of an unclothed woman of the Saite Period is an amulet in the British Museum; see text, p. 46.

Formerly dated to the 25th Dynasty is a bronze unclothed female figure (H. 18.2 cm) in the Musées Royaux d'Art et d'Histoire in Brussels (E 7278). This statuette wears a uraeus and a fish pendant necklace and has been published as a representation of a divine consort; see M. Werbrouck, "Princesse égyptienne," *Chronique d'Égypte* 15 (1940) pp. 197–204. However, recent technical findings have prompted a reassessment of the figure; L. J. H. Limme, personal communication, July 2, 1993.

8. The base measures 3.1 cm in width, 3.9 cm in depth, and 0.8 cm in height.

9. Initial radiographs of the MMA figure were taken with a Philips-Norelco MG 300 Industrial X-ray unit with a 36-inch film-to-target distance. Exposures were made at 300 kilovolts with Kodak Industrex M-5 Industrial X-ray film between .005-inch lead filters. Subsequent radiographs of the figure and the Saint Louis Art Museum Nefertem were taken with a Philips Industrial MG 321 X-ray unit. Exposures were made at 320 kV, using the same film-to-target distance and lead filters. All radiographs were taken at 3 milliamps with exposure times between 60 and 180 seconds and developed manually using standard Kodak products.

10. Elemental analyses were carried out using an Amray 1600I scanning electron microscope coupled to a Kevex Delta IV energy-dispersive X-ray spectrometer using MAGIC IV ZAF corrections. For this analysis a sample was removed from an area adjacent to the drill hole on the inside of the right leg (see text) and prepared as a polished cross section. Samples of corrosion products and accretions were also removed from the surface of the statuette and mounted on carbon stubs. X-ray diffraction analysis of crystalline corrosion products and inclusions was carried out with microsamples in a Debye-Scherrer powder camera.

11. Chlorargyrite, also called cerargyrite, is commonly known as horn silver. The name embolite was formerly used to describe intermediate members of the solid solution series between chlorargyrite (AgCl) and bromyrite or bromargyrite (AgBr).

12. R. E. M. Hedges, "On the Occurrence of Bromine in Corroded Silver," *Studies in Conservation* 21 (1976) pp. 44–46.

13. The statuette contains a small amount of copper, which is the source of the copper in the corrosion product. The analyses of the metal are described in the text.

14. Several other unusual corrosion products or accretions could not be identified. In a few areas, where the chlorargyrite layer was discontinuous, black tabular hexagonal crystals were observed in close contact with the silver. This material, which upon probing was found to extend somewhat beneath the predominant corrosion product, may be a silver sulfide, although this is rare in archaeological contexts. Occasionally interspersed in the corrosion layer were relatively large euhedral dark pink translucent crystals. Only bromium chlorargyrite was detected in the X-ray diffraction scans of the pink crystals.

15. White particulate accretions are often observed in the corrosion layers on archaeological silver. Such accretions have generally been identified as calcium carbonate ($CaCO_3$) on the basis of microchemical tests. As these samples have rarely been examined using X-ray diffraction, it is not possible to establish which species of calcium carbonate—calcite or aragonite—is more common. The chemistry of this phenomenon and its possible relationship to silver corrosion processes have not yet been explored.

16. This material is discussed in the text on page 51.

17. The cleaned area on the knuckles of the left hand can be seen on a 1931 record photograph.

18. Composite images derived from X-ray radiographs taken from oblique angles made it possible to decipher the hieroglyphs before the figure was cleaned.

19. Mechanical cleaning, as distinguished from chemical cleaning, is a term commonly used by conservators to describe the use of tools to physically remove unwanted material from the surface of a work of art.

20. Since much of the corrosion that attacks silver is intergranular, that is, proceeding along grain boundaries below the surface of the object, the extent of embrittlement may not be evident from visual examination.

21. The aragonite ($CaCO_3$) between the metal and the silver corrosion was complexed with an 8 percent solution by weight of 1:1 sodium carbonate (Na_2CO_3) and sodium metaphosphate [$Na(PO_3)_n$ Na_2O] in distilled water. After treatment the figure was rinsed in distilled water. The dissolution of the aragonite facilitated cleaning by undermining the layer below the silver corrosion.

22. Chemical treatment consisted of limited local applications of a saturated solution of sodium thiosulfate ($Na_2S_2O_3 \cdot 5H_2O$). The areas treated were immediately flushed with distilled water.

23. J. R. Harris, *Lexigraphical Studies in Ancient Egyptian Minerals* (Berlin, 1961) p. 41.

24. Harris, *Lexigraphical Studies*, p. 42; J. Cerny, "Prices and Wages in Egypt in the Ramesside Period," *Cahiers d'Histoire Mondiale* 1 (1954) pp. 903–921, esp. 904–906.

25. R. J. Forbes, *Metallurgy in Antiquity* (Leiden, 1950) p. 186.

26. See note 49 below.

27. Examples of silver artifacts predating the New Kingdom include a group of some 20 inlaid silver anklets that belonged to the Fourth Dynasty Queen Hetepheres (G. Reisner, "The Tomb of Queen Hetep-Heres," *Bulletin of the Museum of Fine Arts* 25, supplement [1927] pp. 2–36, esp. 21–22) and the two scarabs (40.3.11–12) and a necklace (40.3.19) from the Middle Kingdom burial of Wah, now in the MMA (H. E. Winlock, "The Mummy of Wah Unwrapped," *MMAB* 35 [1940] pp. 253–259). This burial has recently been redated to the early 12th Dynasty; see Do. Arnold, "Amenemhat I and the Early Twelfth Dynasty at Thebes," *MMJ* 26 (1991) pp. 5–48. A substantial find of silver, also dating to the Middle Kingdom, is the so-called Tod Treasure. This hoard, which was found in wooden coffers bearing the name of Amenemhat II, includes large silver chains, gold and silver ingots, and small objects of gold and lapis lazuli, as well as a few small objects of silver and a substantial number of silver vessels that are probably of foreign manufacture; see *Un Siècle de fouilles françaises en Egypte, 1880–1980* (Paris / Cairo, 1981) pp. 137–163.

28. Forbes, *Metallurgy in Antiquity*, p. 186.

29. For the purposes of this paper, large silver statuettes are defined as those greater than 15 cm.

30. Harris, *Lexigraphical Studies*, p. 33, esp. n. 18. A noteworthy example of Egyptian gold statuary (H. 17.4 cm, without feather crown) is the Third Intermediate Period figure of Amun (26.7.1412) in the MMA; see C. Aldred, "The Carnarvon Statuette of Amun," *Journal of Egyptian Archaeology* 42 (1956) pp. 3–7.

31. K. Sethe and W. Helck, *Urkunden der 18. Dynastie*, in Urkunden des Aegyptischen Altertums, G. Steindorff, ed. (Leipzig / Berlin, 1903–61) IV, pp. 23, 634, 666; cited in Harris, *Lexigraphical Studies*, p. 42 n. 23. A Ramesside inscription describes silver statues of deities with a total weight of one ton that were dedicated by Ramesses III. W. Erichsen, *Papyrus Ḥarris I Hieroglyphische Transkription*, in Bibliotheca Aegyptiaca V (Brussels, 1932–72) p. 67, ll. 11–68a, 5; cited in C. Ziegler, "Jeune pharaon présentant l'image de la déesse Maât," *Revue du Louvre* 3 (1988) pp. 181–185, p. 183.

32. H. 19.5 cm. This figure has been attributed to the 19th Dynasty in a recent publication; see Ziegler, "Jeune pharaon."

33. H. 21 cm; S. Quirke and J. Spencer, *British Museum Book of Ancient Egypt* (New York, 1992) p. 76, fig. 55.

34. H. 42 cm; N. Reeves and J. Taylor, *Howard Carter Before Tutankhamun*, exh. cat., British Museum (London / New York, 1993) p. 172.

35. H. 4.5 cm; unpublished.

36. H. 24.8 cm; see S. M. Goldstein, "Egyptian and Near Eastern Art," *Bulletin of the Saint Louis Art Museum* n.s. 19 (1990) pp. 1–52, esp. 26–27.

37. H. 22 cm; V. V. Pavlov and S. E. Khodach, *Egyptian Statuettes* (Moscow, 1985) no. 142 (in Russian).

38. H. 15 cm; unpublished.

39. *Collection de Monsieur le Baron de Menascé*, sales cat., Hôtel Drouot, March 23–24 (Paris, 1891) p. 34, no. 299, pl. VII; H. 19 cm; G. Legrain, ed., *Collection H. Hoffmann, Catalogue des antiquités égyptiennes* (Paris, 1894) p. 108, nos. 336, 337, ill.; H. 19.5 and 19 cm.

40. H. 19.5 cm; *Connoisseur* 198, 796 (June 1978) back cover.

41. H. 16 cm; Legrain, *Collection H. Hoffmann*, p. 110, no. 339, ill.

42. H. 17 cm; *Collections de Feu M. Jean P. Lambros d'Athènes et de M. Giovanni Dattari du Caire, Antiquités égyptiennes, grecques et romaines*, sales cat., Hôtel Drouot, June 17–19 (Paris, 1912) p. 62, no. 569, pl. LVIII.

43. This group includes human and animal representations. S. Cauville, "Les Statues culturelles de Dendera d'après les inscriptions pariètales," *Bulletin de L'Institut Français d'Archéologie Orientale* 87 (1987) pp. 71–117, esp. p. 116 and pl. XVI.

44. *Lexicon der Aegyptologie* s.v. "Silber" (Wiesbaden, 1975–91) V, col. 941; S. Aufrère, *L'Univers minéral dans la pensée égyptienne* (Cairo, 1991) II, pp. 409–423.

45. Aufrère, *L'Univers minéral*, pp. 411–412.

46. The case of Nefertem presents an interesting question. Nefertem, the third member of a triad with his parents Ptah and Sakhmet, manifests himself in the form of a lotus blossom, a symbol of daily rebirth; *Lexikon der Aegyptologie* s.v. "Nefertem,"

IV, cols. 378–380. Although there are no textual or traditional associations linking silver to this deity, by far the largest proportion of published silver figures are representations of Nefertem.

47. Analysis was carried out using an energy-dispersive X-ray spectrometer (see note 10 above).

48. N. H. Gale and Z. A. Stos-Gale, "Ancient Egyptian Silver," *Journal of Egyptian Archaeology* 67 (1981) pp. 103–115, esp. 108, suggest the possibility that pyrite ores also may have been exploited in the Mediterranean as a source of silver as early as about 550 B.C.

49. Although galena deposits exist in Egypt, to date none containing enough silver to be considered commercially exploitable has been found. For discussions of ancient silver sources in the Mediterranean world, with particular reference to Egypt, see, for example, A. Lucas, "Silver in Ancient Times," *Journal of Egyptian Archaeology* 14 (1928) pp. 313–319; J. Mishara and P. Meyers, "Ancient Egyptian Silver: A Review," in *Recent Advances in Science and Technology of Materials* (Cairo, 1974) III, pp. 29–45; Z. Stos-Fertner and N. H. Gale, "Chemical and Lead Isotope Analysis of Ancient Egyptian Gold, Silver and Lead," in *Proceedings of the 18th International Symposium on Archaeometry and Archaeological Prospection* (Cologne / Bonn, 1978) pp. 299–313; Gale and Stos-Gale, "Ancient Egyptian Silver"; Z. A. Stos-Gale and N. H. Gale, "Sources of Galena, Lead and Silver in Predynastic Egypt," *Revue d'Archaeométrie, Supplément* 3 (1981) pp. 285–295.

50. Gale and Stos-Gale, "Ancient Egyptian Silver," p. 107.

51. Ibid. Auriferous silver rarely contains more than 1.5 percent copper; Stos-Fertner and Gale, "Chemical and Lead Isotope Analysis," p. 306.

52. Although casting was the predominant method of producing silver statuary in ancient Egypt, hammering was routinely employed for the manufacture of silver vessels. In addition, there are, for example, full-sized silver anthropoid coffins and smaller canopic vessels dating from the 22nd Dynasty from Tanis that were manufactured by hammering; P. Montet, *La Nécropole royale de Tanis, Fouilles de Tanis* (Paris, 1947–60) II, pp. 37–38, 57–58, 130–132 and pls. XVII–XX, XXXIV–XXV, and C–CIII.

53. Early examples of hollow silver statuary include Proto-Elamite figures of a bull (66.173) and an antelope (47.100.89) in the MMA. These are constructed from a number of separate hammered sheet elements sleeved together and soldered in place; see D. Hansen, "A Proto-Elamite Silver Figurine in The Metropolitan Museum of Art," *MMJ* 3 (1970) pp. 5–11, and K. C. Lefferts, "Technical Examination," in ibid., pp. 15–24.

54. The figure does not stand securely on its small, low base. Without knowledge of its function or significance in ancient times, it is difficult to suggest how the figure originally might have been mounted.

55. Reeves and Taylor, *Howard Carter Before Tutankhamun,* p. 172.

56. This figure has been radiographed and is known to be a hollow cast; see Ziegler, "Jeune pharaon," pp. 182–183, fig. 6.

57. This statement is based on visual observation of a few of the figures on display in the Egyptian Museum, Cairo.

58. Without more knowledge of how, when, and where various types of ancient Egyptian statuary were displayed or used, and of workshop practices, the evidence of surviving metal casts is difficult to interpret. Using the example of copper-alloy casts, for which we have the largest corpus of surviving material, one finds that there are hollow-cast examples even among quite small objects. The larger statuary is generally hollow, although there are examples of figures of more than 80 cm that are solid. A Near Eastern example for which there appears to be a relationship between manufacturing method and cultural prerogative is a life-size statue of Queen Napir-Asu from Susa dating to the 14th century B.C. The figure, which weighs 1,750 kg, consists of an unalloyed copper shell cast over a solid bronze "core"; see P. O. Harper, J. Aruz, and F. Tallon, eds., *The Royal City of Susa,* exh. cat., MMA (New York, 1992) pp. 132–135.

59. This method of repairing casting flaws is relatively rare on Egyptian bronzes. Stone patches, fitted into cavities chiseled out around damages or flaws, and later disguised with plaster, were quite typical for ancient Egyptian construction; see D. Arnold, *Building in Egypt* (New York / Oxford, 1991) pp. 241–242.

60. There are also typological considerations with regard to the cartouches. From the New Kingdom onward representations of the king sometimes show his own cartouches on his upper body. A king's cartouches may likewise mark the upper body of his officials, but they are not found on female figures. In addition, isolated raised cartouches are extremely rare in any context. The cartouches on the figure indicate some connection to King Necho II, but as there is no accompanying text the nature of this connection remains obscure.

61. The use of a divine and royal symbol such as a uraeus would seem to be inconsistent with the figure's nudity since Egyptian goddesses, queens, princesses, and divine consorts are generally depicted clothed. However, nudity in conjunction with divine or royal insignia is typical for a group of female figures published by Riefstahl (see note 7), whose identities also are unclear.

62. It has been suggested that the figure's earrings, bracelets, and anklets are more unusual than the broad collar, which is of a traditional Egyptian type; C. Lilyquist, personal communication, June 28, 1993.

63. The use of a red ground as a support for gold leaf is unusual in ancient Egyptian contexts but is common in many other cultures. Egyptian examples of the Roman Period have been cited; see P. Hatchfield and R. Newman, "Ancient Egyptian Gilding Methods," in *Gilded Wood, History and Conservation,* D. Bigelow et al., eds. (Madison, Conn., 1991) pp. 27–47, esp. 39.

64. In the recessed petal on the collar discussed earlier there are traces of a red material similar in appearance to that observed on the wig. The material in the petal probably migrated from the wig during burial and is unlikely to be the remains of an inlay.

65. The applied metal on the Horus figure is described as being gold or electrum; see Legrain, *Collection H. Hoffmann,* p. 110, no. 339.

66. Of interest in this regard is a small silver figure (H. 5.5 cm) of the 18th Dynasty in the National Museum of Antiquities, Lei-

den; see *Rijksmuseum van Oudheden te Leiden* (Haarlem, 1981) p. 68. The figure is clothed in a curious gold outfit, which suggests that the woman represented may be a foreigner. Her hair or head covering is gilded. Along with some Middle Kingdom wooden figures mentioned in note 7, she raises the possibility that the MMA statuette originally had clothing that is now lost. The Leiden figure is also notable because its unusual "stepped" wooden base bears a cartouche of Tuthmosis III without an accompanying inscription describing the woman's relationship to the king.

67. Ziegler, "Jeune pharaon," p. 181.

68. B. V. Bothmer, *Egyptian Sculpture of the Late Period*, exh. cat., Brooklyn Museum (New York, 1960) p. xxxvii; *Antiquities from the Collection of Christos G. Bastis*, exh. cat., MMA (New York, 1987) p. 57; E. R. Russmann, *Egyptian Sculpture* (Austin, 1989) p. 182. Statues of female deities and especially queens and princesses or private individuals are unusual. The women most commonly represented in statuary during the Kushite and Saite Periods were the divine consorts of the god Amun. There are many small bronze figures of a few goddesses, such as Isis and Neith, conventionally dated to the Late Period. In general, these latter figures are not of a quality that permits comparison to the MMA figure or to contemporaneous stone statuary.