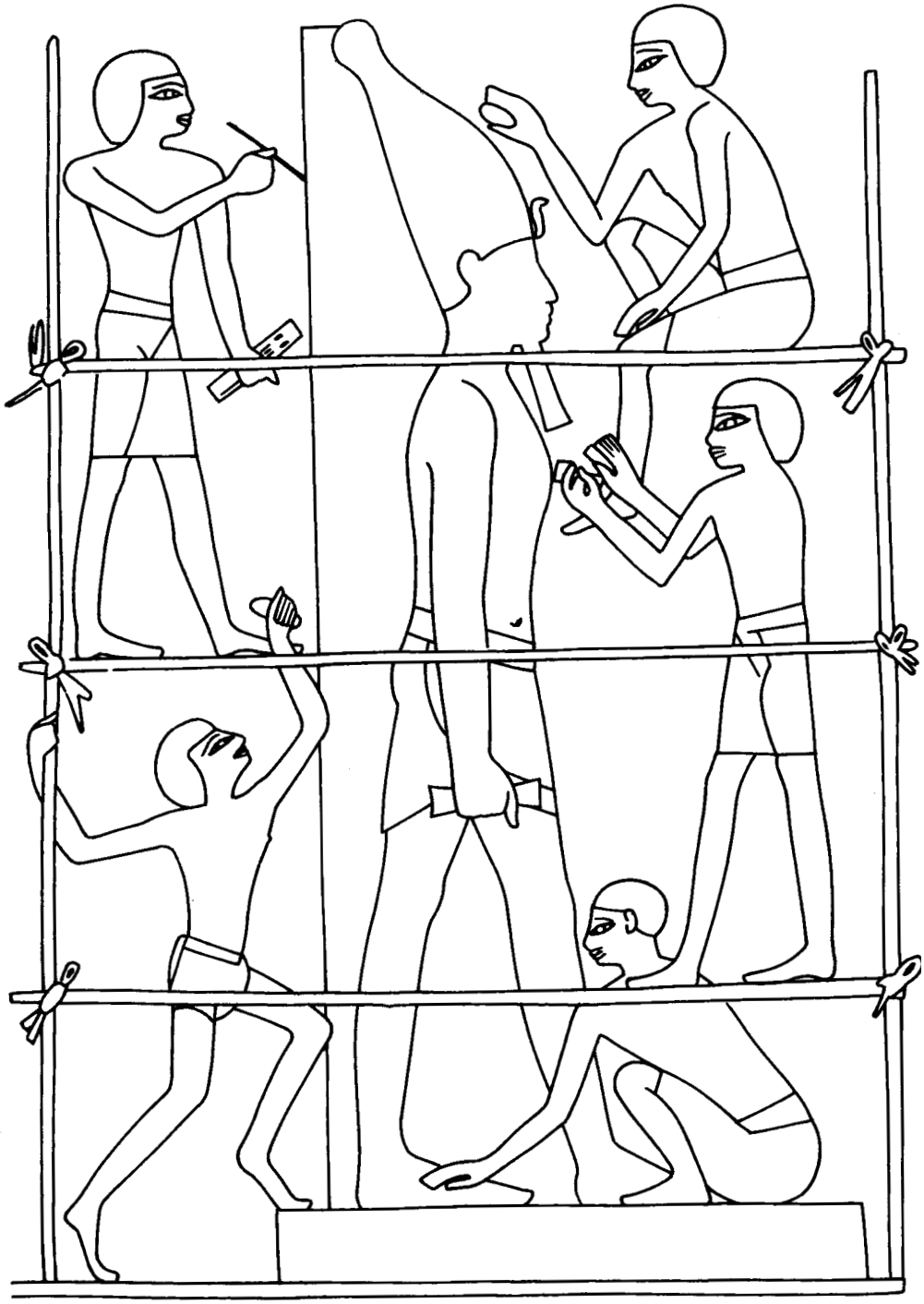


Sculptors polishing a colossal statue of Thutmosis III and a scribe drawing outlines for inscriptions to be carved on the back pillar. Line drawing after a painting in the tomb of Rekhmire.

Artists and Materials

ARTISTS

In ancient Egypt artists were basically included among craftsmen. There is, for instance, no separate word distinguishing sculptors and painters as a group from furniture makers and potters. On rare occasions designers of tomb reliefs were depicted—and their names mentioned—in a tomb, and there are also instances of inscriptions in which certain named artists claim to have been special favorites of the king. But as a rule artists worked like any other craftsmen, in a closely knit team under the ultimate supervision of an administrator, who was usually himself not an artist or craftsman. Free enterprise not really being known in ancient Egypt, craftsmen and artists were dependent on an institution such as the royal household, a temple, or the household of a dignitary to provide the raw materials, place of work, and the directives as to what works had to be created.

The workshops—as with everything in Egypt—were hierarchically structured with assistants and apprentices under the supervision of foremen and master craftsmen. But there was also division of labor. The relief decoration of a tomb, for instance, was first started by a designer/draftsman who would determine the general layout and draw the outlines of the figures. Then relief sculptors carved the figures, perhaps again in stages, with one group sculpting only the outlines and the next group modeling the interior details of the figures. Finally, painters colored the reliefs. In each group a master, or several masters, instructed and corrected the artists under them, perhaps drawing or carving important figures or parts of scenes themselves.

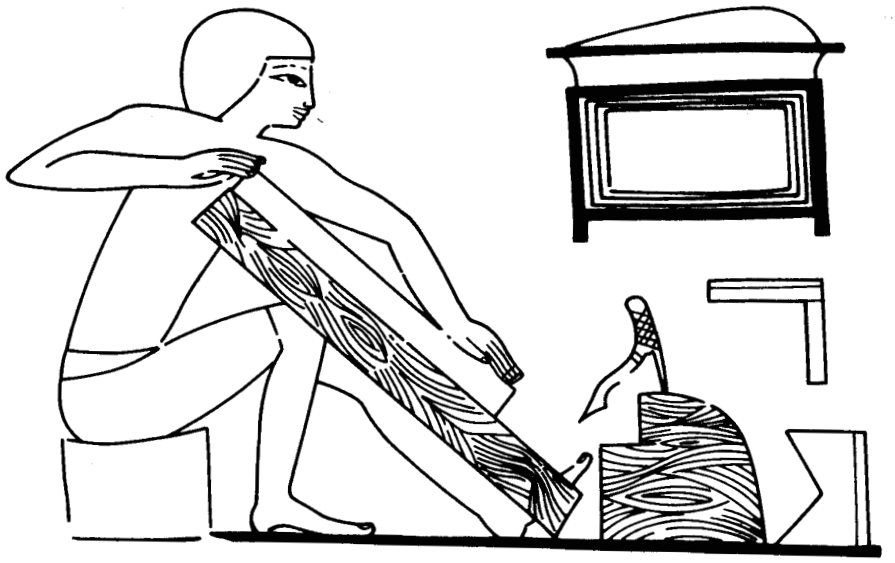
Since representations of sculptors creating statues in the round usually show several people at work on the same piece, it becomes a complicated matter to talk about "the" artist of a particular Egyptian work of art. In general, sculptures, reliefs, and paintings from ancient Egypt must be considered as works from a particular workshop, and their style and composition that of the workshop. Occasionally individual artists' "hands" might perhaps be detectable, but only after very detailed study.

MATERIALS AND TECHNIQUES

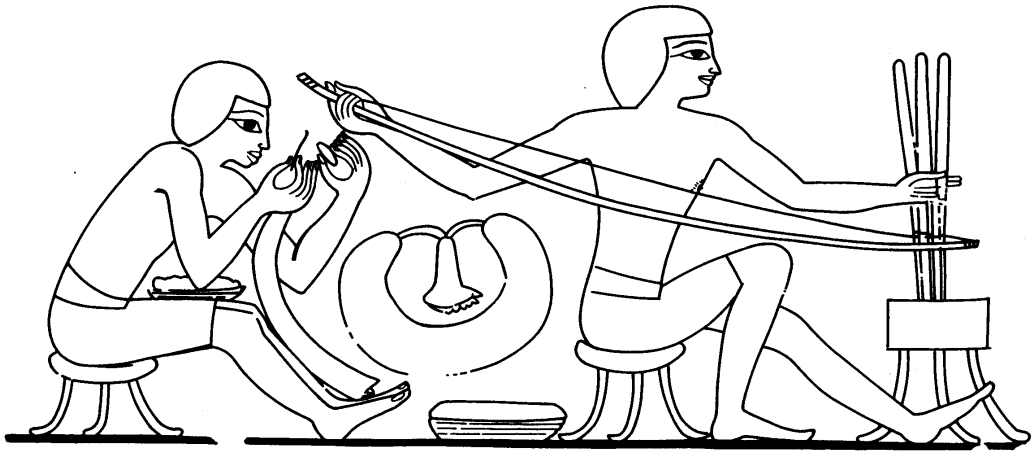
Because Egypt's climate is so dry, perishable artistic materials such as wood, leather, linen, and papyrus have survived in much greater quantities than in other ancient cultures; even remains of ancient food have been found in tombs.

Stone

For the Egyptians the hardness and durability of stone symbolized permanence and eternity. Stone was, therefore, the material from which temples and tombs were built, while the dwellings of the living (ordinary houses as well as royal palaces) were built of mud brick. Along the Nile Valley there were plentiful supplies of limestone and sandstone, and there was granite at Aswan. Hard rocks



A cabinetmaker measuring wood to make a small chest like the one at upper right. His two essential tools, the adze and the carpenter's square, are also at right. Line drawing after a painting in the tomb of Rekhmire.



Jewelers at work: one bores holes in stone beads with a bow drill while another strings them to form a broad collar necklace. Line drawing after a painting in the tomb of Rekhmire.

such as gneiss and graywacke were available in the eastern desert mountains, and basalt was found north of the Faiyum. Egyptian sculptors first used only flint tools, then tools made of copper and, later, bronze. In the first millennium B.C. iron tools were added. However, in working the hardest stones, such as granite and diorite, sculptors sometimes used hard stone hammers lashed to wooden handles to pound the stone until it was close to the final shape of the sculpture. Then, for final shaping and smoothing, they would use very hard rubbing stones and fine sand pastes.

Although it is durable, stone is also brittle. When a stone sculpture is knocked over, it usually breaks, and small parts that project are often smashed beyond repair. For this reason many ancient stone sculptures are missing noses, fingers, beards, and so on. During pharaonic times facial features were sometimes obliterated on purpose by those who, for whatever reason, disliked or feared the person portrayed. Because of the ancient Egyptian belief that a statue contained the spirit of a person, it may be that noses were sometimes smashed to make it impossible for the figure to breathe, thereby killing it. Eyes, ears, and mouths may also have been defaced to destroy the senses.

Painters might be called upon to color limestone and sandstone sculptures, and relief was almost always painted. Usually a thin layer of gypsum plaster or gesso (chalk and glue) was applied first, then pigment of various colors (see pages 56–57). When the statue was of granite, gneiss, basalt, graywacke, or other hard stones that could take a fine polish, the piece was usually left unpainted except, perhaps, for the details of the eyes, headdress, and other adornments.

Wood

Because of the arid climate, not many large trees grow in Egypt today, except for palms, which are too fibrous for carving. There were more trees in ancient times, especially in certain regions of Middle Egypt. Acacia and sycamore provided much of the wood used to make furniture and coffins, and also many statues and statuettes.

Artists used the trunks and branches of trees to make small statues. In making larger figures and wooden coffins, carvers had to peg pieces of wood together. Flint, copper, and bronze tools were used to cut away and shape the wood. These types of works were usually finely sanded or covered with plaster and painted (slide 10).

For large wooden constructions such as ships and architectural structures, and also for fine statues, furniture, and coffins, Egyptians imported wood from the cedar forests of Lebanon. Ebony and other types of hardwood imported from central Africa were the best woods available for the most beautiful statues and the finest furniture, which were often inlaid with precious metals and ivory.

Metalworking

Gold was especially treasured. Its color and sheen symbolized the sun and, because gold does not tarnish, it was also a metaphor for eternal life. Gold was imported from Nubia and was mined in the Egyptian desert. Copper was obtained principally from Sinai. Tin probably had to be imported a great distance, either as pure tin or already alloyed with copper to make bronze. Most silver was imported, for example from western Asia or the Aegean. Metal objects were fabricated from sheet metal or were cast.

Jewelers in the royal workshops excelled in making gold cloisonné-inlay adornments such as pectorals, broad collar necklaces, bracelets, and diadems. Semiprecious stones or pieces of colored glass were cut in the required shapes and set within cells (called cloisons) formed by fusing thin strips of gold at right angles to a flat gold back piece (slide 17).

Bronze was used, among other materials, for tools, weapons, and armor from the Middle Kingdom onward. Before that time, and on occasion even during the Middle Kingdom, copper was the most common metal for tools and weapons. Being very valuable, copper and bronze were continually melted down and reused.

The history of copper alloy and bronze statuary is not yet fully clear. Only a few pieces have survived from before the Third Intermediate Period. We know that metalworkers cast solid or hollow figures using the lost-wax technique. In solid bronze casting, figures are usually first formed entirely in wax, including all the details. The wax then is covered with a layer of clay, and the form is fired, which causes the wax to melt and run out and the clay to turn into terracotta. Finally, molten metal is poured into the space where the wax was, and when it has completely cooled, the terracotta is broken away. Alternatively, with the more complicated procedure called hollow casting, the wax model is formed around an anchored clay core. This core remains as the inside of the metal statuette. This technique has the advantage of reducing the amount of metal necessary. In either technique, after cooling, the surface of the metal can be burnished, and details can be added with pointed tracing and chasing tools. For the bronze cat (slide 29), two molds were made, one for each half; after casting, the halves were soldered together.

Painting

Egyptian artists usually decorated houses with striped dadoes; palace ceilings, floors, and walls were painted with elaborate designs and representations. Artists also painted the walls of temples and tombs, wooden and stone statues, and the surfaces of coffins, boxes, and furniture. Such surfaces were usually covered with a ground of mud plaster, gypsum plaster, or gesso, on which the designs were drawn and colored. Painted scenes and symbols of events in the afterlife were integral parts of funerary papyrus scrolls.

Pigments were made from various natural substances. Red and yellow generally came from ocher, found in abundance in the desert. White was often made from

gypsum, black from soot or manganese. Blue was mostly an artificial pigment called "Egyptian blue." This was made by heating a mixture of ground desert sand, natron, and a copper compound such as malachite. The resulting calcium-copper silicate frit (a grainy substance on the way to glass) was also used to create beads, small vessels, and figures. Yellow added to the blue frit produced green, which could also be ground malachite. To make paint, these substances were ground into powders and mixed with water to which a binder, such as a vegetable gum, was added to make the paint adhere to the surface.

Faience

The Egyptian word for the material called "faience" by Egyptologists means "brilliant," and indeed the surface of fired faience objects is usually brilliant in color, most often blue or green. Egyptian faience is not, however, glazed earthenware like the "true" Italian faience (from Faenza). In fact, what Egyptologists call faience is not clay based but consists mainly of quartz. It was made from ground desert sand—which naturally contains some limestone, clay, and mineral particles—to which natron and water were added. Firing this paste produced the typical porous, whitish or grayish core of Egyptian faience.

The surface glaze was achieved in a number of ways. In one technique the coloring material (copper, often in the form of malachite) was added directly to the core paste, or ground mass, and during the drying and firing process the glaze formed by efflorescence on the surface (a process called self-glazing). Another self-glazing method, called cementation, consisted of placing the unglazed but dried faience object in a powder that, upon being heated, partially melted to form the glaze on the surface. Among other techniques was application of glaze with a brush or other instrument or by dipping the object into the glaze.

Objects made of faience were often molded; vases were usually turned on a wheel. Areas of different colors were produced by application of various colored glazes or inlay of differently colored pastes.

Guests playing draughts and musicians playing instruments.
Line drawing after a stone relief from the chapel of Nikahor
in the Metropolitan Museum's collection (acc. no. 08.201.2).