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Immortal Egypt

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commissions. When the new High Dam at Aswān was to be built, it was he who was gotten to be the American member and eventually chairman of the UNESCO Consultative Committee for the Salvage of the Nubian Monuments. So great was the demand upon his time that at one point at the height of his involvement on many fronts he was to complain that he had become "only a stuffed shirt." But it was precisely because he applied the same acumen and orderliness of mind to organizational matters as he did to Egyptian texts that he was found to be a useful advisor and consultant.

When Wilson graduated from Princeton in 1920 he expected to go on to graduate study, perhaps in Eastern European history, but he needed money for that so he accepted a three-year teaching post at what later became the American University of Beirut in Lebanon. He taught English there and came to know a longtime faculty member, Harold H. Nelson, who had taken a doctorate in Egyptology under James H. Breasted at the University of Chicago. Nelson introduced Wilson to Egyptian hieroglyphs and also to Breasted, who visited Beirut in the spring of 1923. Upon Nelson's recommendation Breasted offered Wilson, who had become fascinated with ancient Egypt on a 1922 trip up the Nile, a fellowship in his new Oriental Institute. Wilson came to Chicago in 1923, earned his doctorate in 1926, and was sent as an epigraphist to Luxor, Egypt, on the staff of the also new Epigraphic Survey, the director of which was Harold H. Nelson. In 1931 Wilson returned to Chicago to the faculty as a visiting assistant professor. In 1936, upon Breasted's death, he succeeded to the directorship of the Oriental Institute and continued as Director until 1946 through the most difficult of financial times for the Institute. In 1953 he was honored by being named a Distinguished Service Professor in the University.

Among the many honors conferred upon him by American and foreign societies and universities were a D. Litt. by his *alma mater*, Princeton, in 1961 and a D.H.L. by Loyola University of Chicago in 1974. He was elected a corresponding member of the German Archaeological Institute in 1937, a member of the American Philosophical Society in 1954 and of the American Academy of Arts and Sciences in 1968, and a corresponding member of the Institut d'Égypte in 1969. Perhaps the most extraordinary of all these honors was the establishment, by the gift of an admirer, of the John A. Wilson Professorship of Oriental Studies in the University of Chicago in 1968 on the eve of his becoming *emeritus*. Finally, on his seventieth birthday in 1969 his colleagues and former students presented him with a volume, *Studies in Honor of John A. Wilson*.

John Wilson was above all else a precise and exacting scholar who made a large and lasting contribution to Egyptian studies, and that was the basis of all the demands upon him and all the honors that came to him.

*An Early Recording System
in Egypt and the Ancient Near East**

by

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I. Introduction

In 1969-71 I received a fellowship from the Radcliffe Institute to investigate the beginnings of the uses of clay by man in the Middle East.¹ Among the earliest clay artifacts I observed was a group of minute objects that began to appear ca. 8500 B.C. and were formed into geometric shapes, including spheres, discs, cones, tetrahedrons and cylindrical rods (Ill. 1). I called them "geometric objects" and found them very intriguing because their use was unknown; but their specific shapes, the great care with which some were manufactured, and their abundance suggests a function of some importance. I began looking for them in site reports and collections and soon discovered that they are virtually omnipresent and that rare are the Middle Eastern sites dating between the IXth and IInd millennium B.C. in which they do not occur. I had assumed that they were solely a Western Asiatic phenomenon until the arrival in Austin of an exhibit of Egyptian art, *Images for Eternity*, which gave me the opportunity to teach a course on Egypt. For my class preparation I went back to early site reports and was greatly surprised to find the same geometric tokens in Egypt and in particular at Khartoum² and Abydos.³ The heading under which they are published in the Khartoum report, "small objects of uncertain purposes," indicates that they are also a puzzle to Egyptologists. I would like to take this opportunity to report how it became evident that the "geometric objects" were used as counters (Akkadian: *abnu*, pl. *abnati*) in an early archaic system of recording.⁴ I will attempt in this paper to (1) describe the abnati system; (2) show how it evolved into writing; and (3) draw some of the implications of the fact that Egypt and the Near East may have shared a prewriting recording system.

II. The Abnati System of Recording

The abnati are of many shapes. There are spheres, discs, cones, tetrahedrons, cylinders, and many shapes that are very difficult to describe because they are so odd. The various types come in various sizes, which, although

* This article is the result of a study sponsored by the Radcliffe Institute in 1969-71 and a travel grant to study early clay collections in the Middle East by the Wenner-Gren Foundation (grant no. 2684, 1970).

¹ Denise Schmandt-Besserat. "The Use of Clay before Pottery in the Zagros," *Expedition*, Vol. 16, No. 2, 1974; "The Earliest Uses of Clay in Syria," *Expedition*, Vol. 19, No. 3, 1977; and "The Earliest Uses of Clay in Turkey," *Anatolian Studies*, Vol. 27, 1977.

² A. J. Arkell. *Early Khartoum*, Oxford University Press, 1949, p. 79ff.

³ Walter B. Emery. *Great Tombs of the First Dynasty*, Vol. II, Egypt Exploration Society, Oxford University Press, 1954, p. 56-59.

⁴ Denise Schmandt-Besserat. "An Archaic Recording System and the Origin of Writing," *Syro-Mesopotamian Studies*, Vol. I, Issue 2, July 1977.

not standardized, may have had a meaning. There is also a series of objects in each type that bear various incised and punched markings (III. 2).

The abnati reported in Khartoum are of two types: spheres and discs. There are 16 spheres, which vary in size from 5 mm to 26 mm in diameter. Another group of 10 spheres bear incised markings. They vary from 18 mm to 37 mm and have one or several deep grooves. There are also 49 spheres at Abydos, measuring ca. 10 mm. The second shape represented at Khartoum are discs: all of them have incised markings. Seven discs have a nick in the rim, five others have two nicks at roughly opposite sides on the rim, and two final examples bear one groove on the surface of one face.

The abnati assemblages of both Khartoum and Abydos are poor compared to most sites of the Middle East, where at least the four basic types of abnati are generally represented. For instance, an assemblage of 219 abnati, which includes 20 various shapes and dates back to the IXth millennium in Iran, was found at Tepe Asiab.⁵

The abnati found in Khartoum are made with very little care and present coarse surfaces and very irregular shapes. On the other hand, most of the Abydos examples are very carefully made. The majority of the abnati are made of clay and are modelled with the hands, either by rolling them between the palms or pinching them with the finger tips. Their color, which ranges from buff to red with many blackish examples, suggests that light firing was involved. A few examples in the Middle East are made of various stones, but all the examples reported at Abydos are made of either limestone, steatite, or alabaster.

Tepe Asiab⁶ and Ganj-i-Dareh Tepe⁷ in Iran as well as Beldibi⁸ in Turkey are the earliest sites where abnati are presently known to occur in the Middle East (chart 1). The three sites are contemporary and may be dated to the middle of the IXth millennium B.C. (Ganj Dareh Tepe Level E 8450±150 B.C., GAK 807). The wide distribution of abnati suggests that, at that time, the abnati system was already well known. The abnati become virtually ubiquitous in the Middle East in the VIIIth millennium B.C. and are, for instance, represented in the Neolithic sites of Khartoum (Nubia), Jericho (Palestine), Tell Ramad (Syria), Jarmo (Iraq), and Anau (Iran). They continue to be found in Chalcolithic assemblages, for example, at Tell Arpachiya, Tell-as-Sawwan, and Tal-i-Iblis. In the Bronze Age they occur in the Mesopotamian urban centers of Ur, Tello, Fara, Uruk, Kish, Jemdet Nasr, as well as in Egypt at Abydos, and in the Indus Valley at Chanhu Daro, thus including all the major Near Eastern civilizations of the time.

The small tokens are often discussed in site reports, but they seem to have escaped special attention of archaeologists because they are usually reported under various headings. The cones are sometimes incorporated with the figurines, the spheres with "games", and the rest under headings such as "small objects of uncertain purposes." They are never seen as belonging together. At Abydos, the spheres are classified under the heading "games," but Emery does mention the possibility of their being counters.⁹ The number of the geometric tokens at each site may reach sizeable proportions; for instance, the Jarmo report mentions 1153 spheres, 206 discs, and 106 cones.¹⁰

When I started collecting data about the clay tokens, I was asked by many archaeologists what they represented. The answer to the question was to be found in the work of two scholars: A. Leo Oppenheim, of

⁵Collections of the Prehistoric Project, The Oriental Institute, The University of Chicago.

⁶R. J. Braidwood, Bruce Howe, Charles A. Reed. "The Iranian Prehistoric Project," *Science*, June 23, 1961, Vol. 133, No. 3469, pp. 2008-10.

⁷P. F. L. Smith. "Survey of Excavations: Ganj-Dareh Tepe," *Iran*, Vol. VIII, pp. 174-76, 1970.

⁸E. Bostanci. "Beldibi ve Magracikta Yapilan 1967 yaz Mavsimi Kazilari ve Yeni Buluntular," *Turk Arkeoloji Dergisi*, Vol. XVI, I, 1968, p. 58, fig. 3.

⁹W. B. Emery, *op. cit.*, p. 56.

¹⁰Vivian L. Broman. *Jarmo Figurines*. Unpublished Master's Thesis, Harvard University-Peabody Museum Library, Cambridge, Mass., 1958. pp. 62, 63, 58.

the Oriental Institute of the University of Chicago, and Pierre Amiet, of the Musée du Louvre, Paris. In 1958, Oppenheim described an interesting accounting system based on tokens used to keep count of the animals in the herds of the palace of Nuzi.¹¹ Each animal was represented by an abnu and deposited in a basket. Abnati would be transferred to appropriate baskets to keep track of change of pasture or shepherds, when animals were shorn, etc. Oppenheim was able to deduce this information by the presence of short notes written in cuneiform script on clay tablets, all referring to "abnati". They mentioned, for instance, that abnati had been "deposited" or "transferred" or "removed." In the same context, a singular tablet was found that was hollow and contained 48 abnati corresponding to a list in cuneiform script written on the surface of the tablet enumerating various animals including rams, ewes, kids, sheep, etc. and totalling to 48. The hollow tablet was found intact in excavations and was carefully opened to check the content. The abnati found inside were the first tangible evidence found of a system of accounting based on tokens. The hollow tablet probably represents a transfer of abnati from one service of the palace to the other, such as mentioned on the short notes.

The findings of Nuzi allowed Pierre Amiet to understand the significance of a series of hollow clay balls (bullae, pl. bullae) filled with small tokens found at Susa and dated to about 3100 B.C. (III. 3).¹² As the Susa bullae predated writing, they bear no inscription except cylinder seal impressions rolled upon their surface, which attested to their official use. Amiet identified the clay balls as devices similar to the Nuzi hollow tablet and he identified the small objects inside as counters. The Susa bullae, therefore, produced the first abnati available to study, following the loss of the Nuzi samples. Their shapes included spheres, cones, tetrahedrons, disc, cylinders, and various odd shapes. I was able to add the third piece of the puzzle when, long after knowing of Pierre Amiet's work on the Susa bullae, I suddenly realized that my small "geometric objects" of the early Neolithic period were identical to the Susa abnati. It remained for me to prove that the recording system could be traced without discontinuity from 8500 to 3100 B.C. The three studies thus amounted to documenting the existence of a recording system based on abnati that was used in the five millennia that preceded writing and that continued well after the appearance of clay tablets.

The system of abnati seems to have been widespread in Mesopotamia. It was probably used in households to keep business accounts and to keep track of belongings, just as Iraqi shepherds today still keep count of their animals with pebbles.¹³ It must have been used for all kinds of commodities, and the Bible pictures Yahweh keeping account of all humans with the same device: each living individual was represented by a token in a receptacle. Death was believed to occur when an angel would whirl a token away with a sling.¹⁴

What was the meaning of the various shapes of the abnati? We may presume, as mentioned by Amiet, that each shape represented a type of goods—garments, sheep, oil, etc. . . . and that the number of tokens of a kind, as well as their size, would confer the quantity. As I will discuss later, I also believe that some of the most common abnati had a numerical value and that the cone stood for one and the sphere for ten.

III. From a Recording to a Writing System

In excavations of sites from the IXth to the middle of the IVth millennium B.C., the abnati are usually found loose on the floor of the houses, courtyards, magazines, and in burials. Starting about 3100 B.C., some abnati are found enclosed in bullae.

¹¹ A. Leo Oppenheim "An Operational Device in Mesopotamian Bureaucracy," *Journal of Near Eastern Studies*, Vol. XVIII, 1958, pp. 121-28.

¹² Pierre Amiet. *Glyptique susienne, mémoires de la délégation archéologique en Iran*, Vol. XLIII, Paris, 1972.

¹³ Thorkild Jacobsen. *In Human Origins*, Series II. Second Edition. University of Chicago Press, 1946, p. 245.

¹⁴ Otto Fissfeldt. *Der Beutel der Lebendigen*. Berichte über die Verhandlungen der Sächsischen Akademie der Wissenschaften zu Leipzig, Philologisch-Historische Klasse, Band 105, Heft 6, Akademie Verlag, Berlin, 1960.

Bullae are hollow clay balls that are found totally closed. When shaken they produce a rattling noise, indicating some loose content, and when broken they produce a certain number of abnati. During a period covering the second half of the IVth Mill and beginnings of the IIIrd Mill B.C., the bullae appear not only at Susa, where they were first identified, but also at various sites such as Chogha Mish,¹⁵ Tepe Yahya,¹⁶ and Shah-dad¹⁷ in Iran; Warka¹⁸ in Mesopotamia, and Habuba Kabira in Syria.¹⁹ Bullae of the same appearance and covered with undeciphered signs have also been found at Abydos, in Egypt. However, they seem to be part of a funerary rite and their content and purpose seem totally different. One series of bullae found in a tomb contained small textile pellets.²⁰ In another case, the content was a tuft of child's hair.²¹

The bullae may have been devices to transfer abnati from one account to another in an institution, such as the Nuzi Palace mentioned above. The bullae were duly sealed for authentication, and Amiet notes that there are usually two different seal impressions,²² probably one represents the accountant and the second the supervisor or recipient, such as a shepherd. Amiet suggested that the bullae may have also been used as bill of lading, accompanying finished products, such as textiles manufactured in the country and transferred to the temple. The producer consigned his goods to the care of the middleman together with a bulla containing the number of tokens equivalent to the shipment.²³ In this case one seal would be from the sender and the second from the middleman. The recipient of the delivery could, by breaking the bulla, check the accuracy of the shipment upon arrival.

Accounting device, or bill of lading? — the interpretations are certainly not mutually exclusive. In general terms we may consider the bullae as convenient containers or envelopes to isolate the abnati representing a particular transaction. The bullae had, however, one great disadvantage: the opacity of clay did not allow any verification without breaking the bulla itself and with it the seals of authentication. To overcome this shortcoming, check marks began to be impressed on their surface repeating not only the number of abnati contained inside but also their shape (III. 4). One finds, for instance, a conical mark for a cone and a circular mark for a sphere. Of course, as soon as the system of check marks was generally adopted and understood, the abnati inside were no longer needed. The clay balls with abnati inside were replaced by a full clay ball a tablet with check marks on the outside. The marks on the clay bullae may therefore be viewed as the turning point between the archaic system of abnati and writing. Indeed, the check marks on the clay bullae are identical to the check marks on the clay tablets (III. 5). The first written signs made by the Sumerians—or their neighbors, the Elamites of Susa—were in fact representations of the shapes of abnati. As we know that the conical marks on the archaic tablets mean the number "1", we may assume that the small cone of the abnati system also had the value of "1". For the same reason the sphere probably meant "10".

¹⁵ Helene J. Kantor, and Pinhas P. Delougaz, "New Light on the Emergence of Civilization in the Near East," *The Unesco Courier*, November, 1969, pp. 22-28.

¹⁶ Denise Schmandt-Besserat and S. M. Alexander, *The First Civilization: the Legacy of Sumer*, Exhibit catalogue, pp. 52-53 No. 97.

¹⁷ A. Hakemi, Catalogue de l'exposition: Iut Xabis (Shahdad)—Premier symposium annuel de la recherche archéologique en Iran—Teheran, 1972. Pl. XXII. A.

¹⁸ H. J. Lenzen, "New Discoveries at Warka in Southern Iraq," *Archaeology*, Vol. 17, No. 2, p. 128, 1964.

¹⁹ Eva Stommenger, "Ausgrabungen in Habuba Kabira und Mumbaqaat," *Archiv für Orientforschung*, 1973.

²⁰ T. Eric Peet, "A Remarkable Burial Custom of the Old Kingdom," *The Journal of Egyptian Archaeology*, Vol. III, 1916, p. 128.

²¹ Winifred M. Crompton, "Two Clay Balls in the Manchester Museum," *The Journal of Egyptian Archaeology*, Vol. III, 1916, p. 128.

²² Pierre Amiet, *Elam*, Auvers-sur-Oise, 1966, p. 70ff.

²³ Pierre Amiet, "Il y a 5000 ans les Elamites inventaient l'écriture," *Archeologia*, Vol. 12, 1966, pp. 16-23.

I am convinced that in the future we will be able to identify other abnati with a numerical connotation and in particular for the numbers 3, 5, and 3600. These numbers seem to be considered as entities in the Sumerian system of counting. Three, for instance, also meant "many," "much; 3600 was "everything"; and five was the root of the words for 6: *as*, five, a single one; 7: *imin*, five, two; 9: *ilimnu*, five, four.²⁴

The impressed signs marked on the bullae could not reveal many details, and incised signs came to supplement them to render the more complicated abnati shapes on the tablets. Early pictographs may therefore reveal the meaning of some of the abnati representing commodities. The discs with one incised cross look similar to the sign for sheep; the abnu in the shape of a teardrop with an incision around the maximum diameter is identical to the sign for oil, and the cones with an incision around the base are the same as the sign for bread, etc. Viewed in this perspective, the abnati provide a meaningful explanation to the abstract shapes of the written signs that represented current commodities of daily life (Ill. 6). The abstraction process was elaborated well before writing, and five millennia of use of the abnati system contributed greatly to its development. The presence of true pictographs can further be explained by the introduction of new vocabulary that did not exist in the ancient system, such as chariot and sledge, or with commodities that were not usually traded, such as the ibex and the wild goat.

IV. The Implications of the presence of the Abnati System at Khartoum and at Abydos

Although previously unsuspected, the presence of a recording system in Nubia dating back to 7000 B.C., does not seem implausible. Indeed most human societies at any level of culture have devised mnemonic systems to record facts of importance to them. The earliest known examples of the kind are the tallies carved in animal bones as early as 30,000 B.C. by the Paleolithic hunters of Europe. They have been interpreted by Marshack to be sophisticated calendars.²⁵ At the other extreme, the Peruvian Incas sent messages by means of threads or cords of different lengths, thicknesses, and colors called quipus.²⁶ Because of their simplicity, these mnemonic systems have survived in literate societies. This is the case of the Nuzi bulla in the Jld Mill in Mesopotamia, and for the Romans who were using pebbles as calculi. Even today the abacus is widely used in Middle Eastern bazaars, and it is the necessary tool of all grade schoolers of Europe to learn how to count.

The puzzling thing is that this recording system of Khartoum is so similar to that used in the Middle East. It uses the same material, the same shapes, the same use of nicks and incisions for further notations: it seems in fact, to be one and the same. Scholars who have focused their attention on the study of Egyptian foreign relations, maintain that the pre-Gerzean cultures (3600 B.C.) drew their antecedents from Africa and were seemingly in almost complete isolation from the rest of the Middle East. The first rare tangible evidence of external relations with the East does not appear until the Badarian period (4000 B.C.) and consists of shells from the Red Sea, turquoise and copper from the Sinai, wood such as pine and precious woods such as cedar, cypress, and juniper from Syria.²⁷ It is also only at this time that isolated objects, which could be of foreign origin, such as pottery, begin to appear. The Khartoum abnati seem, therefore, to be the only link to the East three thousand years before the time of the first tenuous connections attested with the Middle East.

²⁴ Marvin A. Powell, Jr. "The Origin of the Sexagesimal System: The Interaction of Language and Writing." *Visible Language*, Vol. VI, No. 1, Winter 1972.

²⁵ A. Marshack. "The Roots of Civilization," McGraw-Hill, New York, 1972.

²⁶ D. Diringier. *Writing*, Thames and Hudson, London, 1962, Pl. 31-32.

²⁷ H. J. Kantor, "The Relative Chronology of Egypt and its Foreign Correlations before the Bronze Age" in R. S. Ehrlich, *Chronologies in Old World Archaeology*, The University of Chicago Press, 1965.

It may be different if we keep in mind that, although objects of Eastern origin cannot be traced so far, currents of ideas can. In particular they include the practice of agriculture, animal and plant husbandry, and crafts such as pottery. Could the abnati be considered as part and parcel of the Neolithic package? The fact that they appear consistently in the earliest sedentary settlements throughout the entire Middle East, and that they are made of clay, which is the Neolithic material *par excellence*, would make me inclined to think so. The spread of what has been conveniently called "the Neolithic Revolution" was coming to Egypt from the East. This is, therefore, where we have to look for the possible origin of the Khartoum abnati. The closest geographic evidence for the presence of Abnati is in Palestine at the Natufian site of Ain Mallaha,²⁸ and abnati have also been found in the contemporary site of Tell Aswad in Syria.²⁹ There are no geographical boundaries between Egypt, Palestine, and Syria. The Sinai Peninsula has water holes regularly spaced along the Mediterranean coast, and it would be difficult to imagine this land bridge without a perennial movement of people, in particular pastoralists, who followed the rhythm of the rainy seasons or were pushed by droughts. The movements of ideas, which spread through the Middle East crossing deserts, mountain ranges and seas, may thus explain the presence of abnati in distant places such as Khartoum.

The abnati of Abydos appear on a totally different background. A great deal of evidence exists of Egypt's extensive relations with Mesopotamia and Elam during the Gerzean period, ca. 3500 B.C. Contacts took place either by the overland route through Palestine and Syria that began at headwaters of the Euphrates, or by sea around the Arabian peninsula and up the Red Sea. The evidence of these contacts consists of objects, such as cylinder seals, and stylistic motifs, such as the line of animals, the tree of life, composite creatures, and the master of animals. Around 3000 B.C., while the relations with Syria seem to have intensified. This is illustrated by the great number of Syro-Palestinian pottery vessels, which probably contained oil and perfume, found in royal and private tombs.³⁰

The presence of an early recording system shared by the early Neolithic cultures of Egypt and the rest of the Middle East in the IXth and IIIrd Mill B.C. was totally unsuspected and raises important questions. Can we, for instance, assume that the same shapes of abnati had different meanings in different places, or should we consider the archaic recording system as a *lingua franca* throughout the Middle East? One argument in favor of the latter is the fact that the meaning of the cone for "1" and for the sphere for "10" seem to have been shared by a wide area, including at least Mesopotamia and Elam because the two retained this value in both the Sumerian and Elamite script. Of course each shape of abnati could be expressed orally in different languages without alteration of the meaning since the tokens did not stand for specific sounds. A second argument is that a basic similarity exists between the early scripts of Sumer, Elam, Egypt and the Indus Valley. Will the abnati system prove to be the common ancestor hypothesized by Diringier for the four early Middle Eastern writing systems?³¹

V. Conclusion

The abnati were a recording system that preceded writing by 5,000 years. The early counters were shaped from clay in varied geometric and odd shapes and probably represented numbers or items to be recorded. About the IVth millennium B.C., it was customary to enclose the specific number of a transaction in a clay envelope (called a "bulla"). For convenience, the number and shapes of the counters enclosed were repeated on the surface of the bulla by means of punched marks of the same shape and number. The marks, were, in fact, the

²⁸Personal Communication of Jean Perrot.

²⁹Henri de Contenson. "Tell Aswad, Fouilles de 1971," *Annales Archéologiques Arabes Syriennes*, 1972.

³⁰H. J. Kantor, *op. cit.*, 1965.

³¹D. Diringier, *op. cit.*, 1962, p. 36.

earliest pictographs that developed and evolved on the Sumerian and Elamite tablets. These facts imply that writing was not a sudden discovery brought about by the Sumerians or Elamites but the continuum of an indigenous recording system shared by many cultures of the Middle East. The most impressive feature of this early three-dimensional system may not be its antiquity (which pushed back the origin of writing by five millennia) but rather its wide extent (Map 1). The recent discovery of geometric objects in Egypt indicate that it may have shared a prewriting system of recording with the other cultures of the ancient Middle East. It may explain some of the similarities of the four early Middle Eastern systems of writing: Sumerian, proto-Elamite, Egyptian and that from the Indus Valley.

*Perspectives on Irrigation Civilization
in Pharaonic Egypt*

by

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Irrigation agriculture provided the economic base for the first civilizations in the Near East. Most alluvial soils in subtropical and tropical environments are naturally fertile and agriculturally productive where water is adequate. The added element of labor and technology—implied in the concept of irrigation—optimizes the distribution of available water to improve median crop yields and to reduce their annual variability. The potential yields of such an intensive form of land use greatly increase carrying capacity and may allow human populations to remain closer to such carrying capacities. Given the primitive communication systems inherent to early civilizations, a ring of high-productivity lands could support large populations within reasonable distance of high-order central places. It is therefore not surprising that the archeological and historical records suggest a more than casual coincidence between foci of irrigation farming, urban centers, and evidence for complex economic and social stratification.

The apparent relationships between irrigation farming and socio-political forms has long intrigued historians of one generation, and social scientists of another. One classic view was articulated by V. Gordon Childe (1929, and later), who argued that irrigation provided the agricultural surplus essential to economically-complex societies, thereby creating opportunity for the development of vertically-structured, urban civilizations. Another, related hypothesis was explicated by Karl Wittfogel (1938, and later), who linked "hydraulic" civilizations with his socio-political model of a highly-organized peasantry, exploited by an absolute, bureaucratic, and centralized state ("oriental despotism"). These notions have provoked the growth of a prodigious body of secondary, discursive literature as well as several fresh archeological or historical analyses at various scales. Yet, the ecological framework of an ancient hydraulic society has never been systematically examined. Any ecological perspectives to emerge in these general discussions have considered too few variables or have been patently erroneous, and their significance has accordingly been dismissed or ignored.

This is unfortunate, since the basic "procedures" of a cultural ecology were outlined over two decades ago by Steward (1954). Their basic intent has become central to much of the best archeological theory, but their implementation has proved elusive, in the main part because the data base is or appears to be inadequate. I have long suspected that the comparative lack of success in implementing a more effective ecological approach in past contexts has been symptomatic of disciplinary isolation and ineffectual methodologies. An ecological framework should focus on three independent variables, on or through which the fourth variable is modelled. These independent variables are environment, technology, and population (including settlement and demography). The dependent variable in this equation is social organization and differentiation. Interrelationships between nature and culture cannot be deciphered without a sophisticated comprehension of the environment, nor without reasonably good information on technology and population. Such relationships are rarely appreciated by the many social scientists who concern themselves exclusively with the dependent variable of the above equation.

The emergence and evolution of an hydraulic civilization in the Nile Valley provide a unique possibility to explore this critical matter of cultural ecology. It is quite pertinent to Childe and Wittfogel, and to what has been written and argued since. Here there is an unusual wealth of cultural and environmental data that span five millennia of historical time and an even longer range of prehistory. My own interests in the natural and cultural landscape complex of Egypt have profited from repeated research efforts on Egypt, interrupted by extended studies in Spain, Ethiopia, and South Africa dealing with both similar and different time periods. Each time I returned to the Egyptian materials with more experience and broader perspectives. The result has been a systematic attempt to analyze the archeological and historical record of environment, technology, settlement, and land use in ancient Egypt. The data are at once imperfect and exciting, and are more fully documented in the original publication (Butzer 1976). The present paper outlines the basic arguments and re-examines some existing hypotheses.

The Nile floodplain and delta represent free-draining, seasonally-inundated alluvial surfaces. In such a model, exemplified by the Nile or the Mississippi, the river generally remains within its channel but, in the case of the Nile, between late summer and early autumn, it spills out to flood the low-lying basins to an average depth of 1.5 m, laying down a thin increment of fertile silt and clay before the waters drain back naturally into the river, or evaporate from the floodplain. The highest alluvial ground follows the river channel, or that of its major branches, in the form of silt berms or natural levees that are topped by flood waters only briefly during 1-in-10-year episodes of peak discharge. The flood basins are subdivided by such levees, and further demarcated by the rapid rise of land at the desert margins. Such natural basins vary in size from a few square kilometers to over a hundred, being largest where the alluvial valley is widest and where the river is farthest away from one desert edge. The flood waters enter by low points in the levees, often along small but defined diverging channels, to drain back into the Nile, as the floods recede, by a network of gathering streams. Flood stage comes earliest in the south, latest in the north, with the flood basins filling for an average of 4 to 6 weeks, and then draining except for small, residual water bodies or marsh in the low-lying backswamps.

The hydrology of the Nile River is remarkably predictable by the standards of other river systems. The upper basin taps two major climatic provinces for its water: the summer monsoon in Ethiopia and the southern Sudan, and the double, equinoctial rainy season of Uganda and Tanzania. The blending of these water supplies south of the axis of the Sahara, and the specific hydrographic pattern of river basins at different latitudes, provides a comparatively balanced and reliable flood regime between August and November, followed by a long low-water season in which the river is increasingly sluggish, but essentially never fails. The basic seasons can be easily recognized according to the state of the river—its minute fluctuations of level and persistent trends, its color and condition. The temporal framework thus provided is far more explicit and foolproof than any available elsewhere on the basis of hydrographic or climatic seasons, and would have been recognized long before the invention of an astronomical calendar.

Given these physical premises, which have persisted with little change since at least 25,000 years ago, the biota of the Nile flood-plain received a new lease on life each year as the waters began to rise. Such a hydrological system, combined with the specific topographic arrangement within a "convex" floodplain, provided a natural mechanism of irrigation and drainage. Along other, comparable African rivers it supports a fringing forest on the banks and levees, a grassy savanna on the floors of the flood basins, and sedge, reed and papyrus marsh or lotus-studded ponds in the backswamps, channel cut-offs, and in coastal proximity. The levees provide suitable settlement sites, while the basin floors can be cultivated as the flood waters recede, or generally used for grazing until the next flood. The excellent record of Upper Paleolithic and Epi-Paleolithic settlement shows a decided preference for riverbank sites and there was no conceivable need to "colonize" the alluvial lands at a comparatively late date, by first draining the flood basins and clearing any hypothetical jungle-like thickets.

It has, then, been widely overlooked that the Nile flood basins are free-draining and naturally irrigated. Upper Paleolithic groups harvested a variety of plant foods and successfully hunted a broad spectrum of

aquatic, woodland, savanna, and desert game from encampments located on the river banks. Equally so, Neolithic groups since about 5000 B.C. grazed their herds quite freely and, as the floods receded, planted fields for a single crop that grew to maturity on the basis of stored soil moisture and a relatively high groundwater table. Even in late Pleistocene times, rainfall in Egypt proper would have been inadequate for agriculture away from the waters of the Nile. But natural irrigation was always available, so that *artificial* irrigation was supplementary rather than essential for agricultural subsistence on the floodplain. The purpose of artificial irrigation in the Nile Valley was to increase crop acreage and to help equalize year-to-year productivity versus relatively small but ecologically significant fluctuations in flood level and persistence.

The technology and organization of Egyptian irrigation in Pharaonic times was consequently geared to a specific environmental system and intended to extend and intensify the agricultural base. This was implemented in the form of traditional basin irrigation, such as persisted in Upper Egypt until late in the 19th century A.D. Modern analogs suggest several logical steps for rudimentary, artificial irrigation. Deliberate flooding and draining of natural basins, by breaches or more elaborate sluice gates in the natural levees, is the first and most obvious procedure. Such controlled irrigation would be easiest in the smaller flood basins of southern Egypt and, further north, primarily along the narrow alluvial strip east of the river. Eventually, the natural levees would be strengthened and equalized by superimposition of longitudinal dikes. Ultimately the larger flood basins would be subdivided into more manageable units by transverse dikes. Development of such an irrigation system, particularly in the larger basins, required a massive input of labor and large-scale community cooperation much like it did a century ago. This applied both to the regular opening and closing of the dikes, particularly at times of exceptionally high floods, as well as to the initial construction and maintenance of artificial dikes. Canals, except for ditches, cut through dikes, were probably unknown at first, but by 1st Dynasty times (ca. 3050 B.C.) networks of small canals served to distribute water to the fields below sluice gates. However, large-scale canalization was only implemented in Egypt during the 19th century A.D. Lift irrigation, other than manually—by single bucket or by a shoulder-yoke to support two buckets—was not practiced until the later 18th Dynasty (ca. 1400 B.C.), when the lever or shaduf was introduced. The far more effective waterwheel or saqiya diffused through Egypt much later, during the last 3 centuries B.C. In effect, lift irrigation was only utilized on a localized, horticultural basis in Pharaonic Egypt, serving to water vegetable, fruit, and ornamental gardens. Summer garden crops, or cultivation of the higher-lying levees, were impossible without lift irrigation, and even in Ptolemaic times, when summer staples such as sorghum were introduced, the limitations of natural fertility precluded more than one crop per year on any one plot of land.

The prevalent image of intensive and sophisticated irrigation in Pharaonic Egypt is, then, misleading. During the early Middle Kingdom, ca. 2000 B.C., it appears that pasture and cultivation were practiced on roughly equal areas of the Nile floodplain, while a millennium earlier it is probable that hunting was still important in extensive areas of unutilized "wilderness."

To what extent was this progressive development of Egypt centrally directed or organized? The mace-head of the Scorpion King, ca. 3100 B.C., shows Pharaoh ceremonially breaching a dike, to inaugurate the flood season—as interpreted in analogy to early 19th century custom. There are a number of 6th Dynasty allusions to the cutting of canals by the king, but large-scale development is first suggested for the 12th Dynasty (1991-1786 B.C.), which "opened up" the Faiyum Depression, a low-lying marshy adjunct to the Nile Valley with a central lake. Expansion of the cultivated lands into the northern half of the Nile Delta was apparently favored by the Ramessids (1320-1070 B.C.), the Saite Dynasty (663-525 B.C.), and particularly by the Ptolemies (323-30 B.C.), who also organized a systematic expansion of cultivation in the Faiyum, constructing a radial irrigation network similar to those prevalent in ancient Mesopotamia.

Unlike the entrepreneurial and mercantile administration of the Ptolemies, the agricultural policies of the Egyptian Pharaohs seem to have been mainly directed towards administration of the scattered royal domains and the rewarding of retainers, veterans, and temples with land grants. This did lead to demonstrable founding of new settlements or to the intensification of productivity in the Delta and Faiyum, and to some

degree in more thinly-settled areas upvalley. But there never was a centrally-organized irrigation system, nor a formal bureaucracy to deal with irrigation. In fact, water legislation is conspicuously absent among the written records relevant to the Nile Valley (as opposed to the Libyan Desert oases and Syria), indicating that irrigation procedure and water rights were already firmly committed to oral tradition in late prehistoric times, requiring no subsequent redefinition. Despite the symbolic identification of Pharaoh with the annual flood cycle from the earliest times, irrigation was implemented at the community level, by the input of all able-bodied men, just as it was in the 19th century A.D. Each natural flood basin formed a logical unit of social organization, for general maintenance and effective interdigitation of the artificial subbasins. As the settlement record shows, such basins were commonly linked to central places positioned at intervals along the length of the Nile or its major branches. Several larger and a number of smaller basins of this type constituted the basic polities, or nomes, of Egypt. The political infrastructure was therefore anchored—however indirectly—within an ecological framework and with reference to scale components of the fundamental social organization. In contrast to radial systems, where water inputs are artificially regulated at each distributional node, there was no competition for water between individual flood basins, each of which had direct access to the Nile and was unaffected by water use or regulation upstream.

The distribution of settlements in Pharaonic Egypt provides clear evidence of population gradients and centers of concentration. Densities were markedly greater in the narrower floodplain segments in the south, and in the far north, near Memphis. It can be argued that intensive utilization of the intervening section of broader floodplain was rendered difficult by the great size of the natural flood basins. These would have required massive labor to bring under control, and there is evidence for a persistence of extensive as opposed to intensive land use in these underdeveloped nomes until at least the 12th century B.C. It is also possible that internal colonization was inhibited by a nome structure originally based on tribal subdivisions among the Nile flood basins. Only in the New Kingdom did government resettlement of veterans and mercenaries, and more spontaneous emigration from the densely populated, smaller, southern nomes, begin to fill out the broad floodplain north of Abydos. But even this process was only completed in Coptic times some two millennia later. This illustrates that population gradients need not be population pressures, and that Carneiro's (1972) ideas on the matter represent a far from universal model.

Given the local organization and rudimentary technology of Pharaonic irrigation, it is probable that periodically deficient or excessive floods kept population levels well below carrying capacity, particularly during times of incompetent government. So, for example, the poor flood of A.D. 1877 was only 2 m. below average, but it left as much as 75% of the land of some provinces unirrigated and therefore uncultivable. Similarly, excessively high floods, such as in A.D. 1818-19, breached transverse dikes, razed settlements, destroyed food stores and seed stocks, and decimated livestock. Control over such natural catastrophes was technologically impossible in Pharaonic Egypt. And, at the administrative level there is no evidence for centrally-organized food storage and redistribution until the mid-18th Dynasty (ca. 1450 B.C.), when the local temples assumed redistributory and managerial functions that could potentially serve to alleviate the impact of periodically poor crop yields. Expansion of populations to levels somewhat closer to carrying capacity should therefore have been increasingly possible during times of effective government. Conversely, the negative demographic impacts of recurrent intervals of economic decline would have been accentuated.

The available information on fluctuations of the Nile floods indicates a general downward trend during the third millennium from the 1st Dynasty to the end of the Old Kingdom, with one or more sets of catastrophic Nile failures between perhaps 2250 and 1950 B.C.; flood levels generally improved thereafter, with at least 28 exceptionally high floods of disastrous proportions ca. 1840-1770 B.C. (see Bell, 1970, 1971, 1975). Floods remained generally high until about 1200 B.C., after which they declined rapidly and then remained lower until at least the time of Herodotus. These trends are closely comparable to those documented by radiocarbon-dated lake-level or flood-discharge fluctuations in the central Sudan, in Ethiopia and the Kenya Rift, as well as in the Chad Basin and southern Sahara. When calibrated to calendar years

they can be dated more precisely: critical reductions of lake levels and stream discharge began 2700 ± 100 B.C., were reversed in the wake of substantially wetter conditions in subsaharan Africa 1850 ± 50 B.C., with another negative hydrological trend beginning 1200 ± 50 B.C.

In the Nile Valley, there was a 30% decline in discharge during the course of the Old Kingdom, a trend that would have favored greater reliance on artificial irrigation. It is also difficult not to see causal linkages between the disastrous economic recession or the collapse of the political order after the death of Pepi II (ca. 2260 B.C.) and the Egyptian "lamentations" describing Nile failures, desiccation of marshlands, severe famine, general poverty, and mass deaths. During the second half of the Middle Kingdom (2040-1715 B.C.), a new form of stress was created by the Nile: one flood out of three or four equalled or exceeded the highest floods of the 19th century A.D.. It remains to be explored whether the agricultural system was able to withstand such a battering, and whether the collapse of the Middle Kingdom and the successful infiltration of the Asiatic Hyksos were preconditioned by Nile-related economic deterioration. For the late Ramessid period there is significant evidence that food prices—with respect to metals—were rapidly inflated ca. 1170-1100 B.C., most likely in response to inadequate harvests and low Nile floods. The significance of the inferred ecological stress for the abrupt decline of Egypt during the 12th century B.C. may have been considerable.

These examples have not yet been proven beyond reasonable doubt, but they serve to suggest that major segments of ancient Egyptian history may be unintelligible without recourse to an ecological perspective. They further suggest that the cyclic crises in hydraulic civilizations that Wittfogel (1938) attributed to social disequilibrium, in response to overexploitation of the masses by an unproductive ruling bureaucracy, may in fact have rather different explanations, such as the recurrence interval and magnitude of natural catastrophes.

A multi-tiered economy was already established in Egypt by 3000 B.C., judging by the monumental architecture of the 1st Dynasty, while complex social stratification in the urban sector is abundantly evident from the written records of the Old Kingdom. Yet the Mesopotamian model of rapid population growth leading to greater competition for water, increased labor efficiency, intensified irrigation, a more intricate division of labor, social stratification and, ultimately, state superstructures (Adams 1972), cannot be documented for Egypt. Competition for water was never an issue, except locally. At the social and administrative level, flood control and irrigation were also managed locally, and well into the 19th century A.D. most Egyptians continued to live the traditional way of life in villages and small centers where division of labor and class distinctions remained minimal, in a subsistence economy based on irrigation. Although Old Kingdom Egypt (ca. 2850-2250 B.C.) was strongly centralized in terms of its political superstructure, there is reason to assume that the infrastructure, at least in Upper Egypt, continued to function on more traditional lines via a number of indirect agents and agencies that mediated between the capital and the local communities. Ecological problems appear to have been preeminently handled at the local level, so that the development of a professional, full-time bureaucracy must be related to a different social impetus. There is, then, no direct causal relationship between hydraulic agriculture and the development of Pharaonic political structure and society.

Hydraulic agriculture did indeed provide the indispensable economic resource base for the complex, state-centered society that emerged in the form of the Old Kingdom, but high economic productivity is essential to any complex society. More relevant to the socio-political system of Pharaonic Egypt is the socio-economic anchoring of the nomes into the explicit ecological framework of a riverine oasis. These primeval nomes appear to have provided the necessary political infrastructure that allowed the military unification of Egypt. Similarly, there is growing evidence that the economic history of ancient Egypt was primarily one of continuous ecological readjustment to a variable water supply, combined with repeated efforts to intensify or expand land use in order to increase productivity. It is in this sense that hydraulic civilization in Egypt remains inconceivable without its ecological determinants, but not by a linear causality model of stress favoring irrigation development, so creating a managerial bureaucracy, and ultimately leading to despotic control.

The Egyptian case study outlined here appears to have implications for other, early hydraulic civilizations. There is good reason to believe that sociological hypotheses are by themselves inadequate to explicate the processes involved in the emergence of floodplain civilizations. Indeed, it would appear that the origins of early irrigation civilizations are far more complex than existing assumptions and paradigms allow. It therefore becomes pertinent to reexamine other critical areas from an ecological perspective.

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References

- ADAMS, R. M.
1972 "Demography and the 'Urban Revolution' in Lowland Mesopotamia." In *Population Growth: Anthropological Implications*, ed. B. Spooner, pp. 60-63. Cambridge: M.I.T. Press.
- BELL, BARBARA
1970 "The Oldest Records of the Nile Floods." *Geographical Journal* 136:569-73.
1971 "The Dark Ages in Ancient History: I. The First Dark Age in Egypt." *American Journal of Archaeology* 75:1-26.
1975 "Climate and the History of Egypt: The Middle Kingdom." *American Journal of Archaeology* 79:223-69.
- BUTZER, K. W.
1976 *Early Hydraulic Civilization in Egypt: A Study in Cultural Ecology*. Chicago: University of Chicago Press.
- CARNEIRO, R. L.
1972 "From Autonomous Villages to the State: A Numerical Estimation." In *Population Growth: Anthropological Implications*, ed. B. Spooner, pp. 64-77. Cambridge: M.I.T. Press.
- CHILDE, V. G.
1929 *The Most Ancient East*. London: Routledge and Kegan Paul.
- STEWART, J. H.
1954 "The Concept and Method of Cultural Ecology." In *Theory of Culture Change*, pp. 30-42. Urbana: University of Illinois.
- WITTFOGEL, K. A.
1938 "Die Theorie der orientalischen Gesellschaft." *Zeitschrift für Sozialforschung* 7:90-122.

*Aspects of Egyptian Art: Function and Aesthetic*¹

by

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Our appreciation of the art of Ancient Egypt is enhanced through an understanding of its development through three thousand years of permanence and change. As with the arts of Africa, Pre-Columbian America, and many other parts of the world, we must first recognize that Egyptian art can only be understood as an integral aspect of Egyptian religion. This does not necessarily mean that we must have a comprehensive understanding of Egyptian religion in order to understand its art, but that we cannot disassociate a statue or wall relief from its original use.

Statues and wall scenes were in fact completely functional and even utilitarian, in the same sense as a cooking pot, an agricultural implement, or a vehicle is utilitarian. A statue served a purpose as clearly as did a shovel or hoe, although the purpose in the former case may have been magical. "As a substantial part of Egyptian art was never intended to be seen by mortal eyes, the manifestation of decorative and aesthetic qualities cannot have been its principal aim, which was undoubtedly of a metaphysical and magical nature. . . . Sculptural representations were consequently not primarily things of beauty and delectation, but magical entities fraught with fateful significance."²

It is equally clear that the function of a statue is not as immediately evident as the function of a hoe or an axe. What then, in simplest terms, were some of the uses for which statues were created? As might be expected, these uses were multiple as well as specific.

The tomb statues of the deceased which were placed in the offering chambers of the burials of the Old Kingdom served as representatives or deputies of the departed individual. These had the purpose of receiving the offerings of food, drink, clothing, and other produce and consumer goods which were brought to the chapel under contractual agreements with his survivors and suppliers. Copies of such legal documents have occasionally been found. The statue served as a substitute for the deceased for the purpose of receiving these goods and hearing the spells recited at prescribed intervals by the scroll-reading priests, and as the intermediary whereby the mouth, eyes, and ears of the deceased could be magically opened and rendered functional by the spells read by the priests.

The temple statues, on the other hand, represented the individual as a participant in the temple processions and ritual feasts. The individual continued, therefore, even after his death, as an active participant on the

¹A substantial part of the text of this lecture has been utilized in two recent publications by the author: *The Face of Egypt: Permanence and Change in Egyptian Art*. The Katonah Gallery, Katonah, New York, 1977, and *The Offering Chapel of Sekhem-ankh-ptah in the Museum of Fine Arts, Boston*. Department of Egyptian and Ancient Near Eastern Art, Museum of Fine Arts, Boston, 1976.

²Erik Iversen, *Canon and Proportions in Egyptian Art*, 2nd ed., Aris and Phillips, Warminster, England, 1975, 6.

feast days in the presence of his gods and as a consumer of the income of property donated to the temple by him.³ For proper acknowledgement of the receipt of this income, whether in tomb chapel or temple, it was essential to have the name and official position of the individual inscribed on the statue or relief.

In brief, the statues of officials were fashioned to serve as a kind of insurance that the man, even after death, would continue to enjoy the consumer goods to which he was entitled by prior contractual arrangement and to participate in the temple festivals. From the form of the statue, the position of the hands, and the nature of the inscription, it is often possible to determine whether the statue was fashioned for tomb or for temple, although types created for one of these functions were often borrowed for the other.

A third type of statue is the *ex voto*, or statue offered to fulfill a vow. These statues are of gods and goddesses and their worshippers, and were placed as an act of donation in the temples. To this category belong the many bronzes of the Third Intermediate Period and of the later Saite and Ptolemaic Periods. Many of them have the name and offices of the donor inscribed on the base to insure proper recognition of the act of piety. Often these bronzes were part of elaborate compositions relating to the barques of the gods.⁴

The three types cited above apply to statues and statuettes of the nobles and bureaucrats represented in Egyptian texts. The situation was similar for the king, but not identical. In the major temples the statues of the king, sometimes with his queen and sons and daughters, were set up on a monumental scale in an imposing architectural setting provided by the pillars and columns. These statues had the additional function of serving to impress the viewer with the might and piety of the ruler.

Egyptian art, as well as much of Egyptian literature,⁵ was very much in the service of the propaganda of the state and the state religion and corresponds to the modern media of public relations and advertising. Exhibited on the walls of the temples was the figure of the king smiting the enemies of Egypt and conquering foreign peoples, as well as engaging in a series of pious rituals in the presence of the gods. Detailed lists of donations to the temples, both from agricultural estates and from the spoils of war, were inscribed on the walls as a permanent record of the ruler's devotion. In return for these donations the ruler expected to receive on a contractual basis a long and successful life on earth and life among the gods after death. The prosperity of the land of Egypt with the annual inundation of the Nile, the abundance of the crops, and the increase of the herds of cattle depended upon the good will and favor of the gods. It was the duty of the king to satisfy the gods through offerings and service and, as it were, to bribe them to insure a good harvest at home, the successful exploitation of mineral wealth, and security of the country's borders. The king is thereby shown as the player of a role. He enacts the rituals, presents the offerings before the gods, and conquers the traditional enemies of the land in exchange for the gods' approval and guarantee of the prosperity and security of Egypt.⁶

The viewer of today judges the merits of a statue or relief on its aesthetic value rather than in terms of the success of its magical function. This must also have been the case in Ancient Egypt among competing craftsmen and their clients, and on occasion the work of the past was studied and even copied in detail.

³H. Bonnet, "Herkunft und Bedeutung der naophoren Statue," *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 17 (1961) 91-98.

⁴E. L. B. Terrace, "Three Egyptian Bronzes," *Bulletin of the Museum of Fine Arts, Boston* 57 (1959) 48-53.

⁵Georges Posener, *Littérature et politique dans l'Égypte de la XIIe dynastie*, Bibliothèque de l'École des hautes études, Fasc. 307, Honoré Champion, Paris, 1956.

⁶Erik Hornung, *Geschichte als Fest*, Wissenschaftliche Buchgesellschaft, Darmstadt, 1966.

From Dynasty 26 there are examples of close copies of wall reliefs and paintings of the Middle Kingdom and the New Kingdom.⁷ At about the same time reliefs of these earlier periods were overlaid with red grid lines by the copyists.⁸

It has often been noted that the typical Egyptian statue retains the austerity of the rectangular block or cube from which it was carved. The Museum of Fine Arts in Boston has a series of unfinished small statuettes of King Mycerinus of Dynasty 4 which exhibit various stages of completion.⁹ After the initial cutting of the block, a grid of red lines was overlaid on it as a guide. These aided the sculptor and represented the prescribed canonical points, such as, the top of the brow, the chin, the knees, and the feet. Traces of these grids can be seen in the statues just cited.

It is evident that statues were intended to be seen from the front and the sides, rarely in a three-quarter view, and seldom from the back. Indeed, the placement of many statues against the pillars and walls which served as their architectural setting prevented the viewer from seeing the back. Often the back consists of a sort of wall in one piece with the statue, or a pillar, or an extension of the seat.

In general, the individual's name and offices or the name of the reigning king were inscribed on the base, the sides of the seat, the space between two figures, the back support, part of the garment, the front of the cloak, or any other convenient space. When no inscription is present, we must assume one of several possible reasons: the setting or emplacement made the inscription unnecessary; the statue was carved by a sculptor for a client still unspecified; the text was in ink and is now effaced; or the part of the statue with the text is missing. Since the statue served as the representative of the individual, it was more important for it to have the credentials of an inscribed name than for it to resemble facially and physically the specific individual for whom it was created.

It is interesting to assess the ways in which the Egyptian artist dealt with the subject of portraiture and the extent to which the statue or relief reflects the traits of the subject. In the case of the kings and also some of the great officials there are numerous representations of the same person. In general, Egyptian art reflects the particular shape and features of the individual, and it is often possible to assign a head which lacks an identifying text to a specific king or more rarely to a courtier.¹⁰ The statue of the official Hemium of Dynasty 4 in the Hildesheim Museum can be compared to a relief portrait from his tomb in the Boston Museum, and a funerary head of a treasury official named Nofer of the same period in the Boston Museum resembles the reliefs from the official's chapel. However, there is also a general tendency within a dynasty or reign for a certain sameness in portraiture, influenced to some degree by the official likeness of the king. This attempt to represent a standardized ideal is obviously at variance with the appearance of a particular individual. The faces of a husband and wife in a pair statue, for example, may seem identical. In such cases, the artist expressed a standardized ideal rather than an adherence to fact. In addition, there are examples of sculptures which were turned out in large numbers for sale to clients, carved by a sculptor who probably had no specific individual in mind as he worked.

The head is usually the only part really individualized even in the best work. The iconography of the body, however well executed, merely makes a statement: a prosperous fatness to indicate wealth and well-

⁷Portions of the tomb of Aba at Thebes, an official of the reign of Psamtik I of Dynasty 26, were copied from the tomb of an earlier namesake at Deir el Gebrawi of Dynasty 6: N. de G. Davies, *The Rock Tombs of Deir el Gebrawi*, Part I. *Tomb of Aba and Smaller Tombs of the Southern Group*, Archaeological Survey of Egypt, Eleventh Memoir, London, 1902.

⁸Iversen, *Canon and Proportions*.

⁹George A. Reisner, *Mycerinus: The Temples of the Third Pyramid at Giza*, Harvard University Press, Cambridge, 1931, pls. 62-63.

¹⁰Claude Vandersleyen, "Objectivité des portraits égyptiens," *Bulletin de la Société française d'Égyptologie* 73 (1975) 5-27.

being, a trim athletic build to indicate confidence and vitality, or signs of age to indicate maturity or wisdom. These features connote well-being, vitality, or wisdom instead of a realistic rendering of the subject. Portraits of Akhenaten and Nefertiti executed during the course of their reign seem to show an increasingly younger couple, contrary to reality.¹¹ Throughout the history of art, and even today, there is a tendency to stress youthfulness at some times and maturity at other times.

These tendencies underline a significant feature of Egyptian art: a commitment to representing and explaining things as they should be or must be ideally, as opposed to the impressions of a fleeting moment or the recording of emotions. Serenity and seriousness of purpose characterize the faces, and one looks in vain for traces of laughter or agony. In carved relief and in tomb painting there is a certain amount of characterization: the wailing and distraught professional mourners following the funeral procession, the gaarded herdsman, the joyful dancers, the famine-stricken enemies, the outlandish physiognomy, physique and costume of foreigners, and even the suffering of wounded animals in the hunting scenes. Yet in all these cases the emphasis is on the explicative gestures of the figures rather than on facial features and emotions.

To describe some of the differences in the Egyptian method of representation, recent scholars have used two contrasting terms, perspective and aspective.¹² In perspective drawing the nearer figures are larger and those in the distance correspondingly smaller. This method was alien to most of Egyptian art. Aspective art emphasizes the qualities of an object or group of objects from the viewpoint of their geometrical form and their importance in a hierarchical order. The most important figures are shown on a much larger scale, irrespective of their placement in the composition. Most figures are placed on ground lines and arranged in bands one above the other. In the representation of a box, a draftsman may show the front, top, and both sides, although the eye cannot see all four of these elements at the same time. In representing the saddle bag on a donkey, the side not seen by the viewer may be flipped up to stress its existence.

Our understanding of Egyptian art is enhanced when we restrict our inquiry to a specific period, medium, and function. Such a case is the relief of the offering chapels of the Old Kingdom (ca. 2700-2200 B.C.). The numerous structures of the officials at the great Memphite cemeteries at Giza, Sakkara, Abusir, and elsewhere have long been known as mastaba tombs on the analogy of their shape to the common bench seen in the villages to this day (Arabic: *mastaba*).¹³ These structures comprise two essential elements: a subterranean burial chamber in the rock, with the coffin of the deceased and associated burial gifts and equipment, and a massive superstructure, in stone or brick, usually with an offering chapel, above ground. The superstructure exhibits a wide variation in its arrangements and frequently has interior and exterior offering chambers as well as one or more statue chambers (serdabs). The offering chamber was an area open to the living where the cult of the deceased was celebrated, food offerings delivered, and spells recited for his benefit in the hereafter. The burial chamber, reached through a shaft in the mass of the superstructure, was intended to be sealed off forever.

The offering chamber was frequently decorated in bas-relief with a series of standard funerary formulae and prescribed scenes from a wide repertory. The essential scene is that of the owner seated before a table of offering breads partaking of his meal, for the principal context of the entire program is the provision of sustenance for the owner in the hereafter. This concept is expanded and amplified, particularly in the later mastabas of Dynasties 5 and 6, with a host of scenes of daily life on the estate. The owner views them passively from the vantage point of a departed spirit. In addition to the texts which provide his

¹¹ Cyril Aldred, *Akhenaten, Pharaoh of Egypt: A New Study*, Thames and Hudson, London, 1968.

¹² Emma Brunner-Traut, "Epilogue - Aspective," in Heinrich Schäfer, *Principles of Egyptian Art*, ed. with an epilogue by Emma Brunner-Traut, translated and edited, with an introduction, by John Buines, Clarendon Press, Oxford, 1974.

¹³ Auguste Mariette, *Les mastabas de l'ancien empire*, F. Vieweg, Paris, 1884-1885, pp. 22-23.

name and the offices which he had held on earth, there are captions and identifications to these scenes of daily life, as well as the standard ritual formulae. Foremost among the latter is the invocation-of-the-offering text, beginning with the statement that it is the king and the gods who have accorded him a burial in the west and granted him the rights and privileges specified.¹⁴ Provision is made for the upkeep of the chapel through the entailment of the produce of specified properties, usually from agricultural holdings, and through the employment of officials and custodians, who were paid from the income of these properties to conduct the services in the chapel, deliver the meals, celebrate the festivals, recite the proper formulae, and manage the property. In the texts the owner frequently specifies that he has made his tomb on a site unencumbered by earlier tombs, that he did not appropriate the tomb or building materials of another man, and that he paid his workmen in full or was granted the architectural elements of the chapel by the king. Contractual arrangements with his priests and children are also included, detailing that the endowments are to be handed over in custody from one generation to the next and not subdivided among the priests themselves, with the stipulation that a priest relinquishing his duties must also relinquish the property to another man who will carry out the duties.¹⁵

Although the texts occasionally include autobiographical details and even in rare instances narratives, they are usually restricted to often repeated set phrases. The chief appeal of these chapels to the present day visitor is the representation of the activities on the agricultural estate and the artistry of the draftsmen and relief sculptors who executed the reliefs. To illustrate the activities being carried out for the provisioning of the deceased owner the relief sculptor selected from a set repertory of scenes those which he or his patron preferred and which could be accommodated to his means, essentially the available wall space in the single or multiple offering chambers. Among the scenes frequently selected are those of the provision of food and drink, clothing, incense, and ointments and oils. To these are added scenes of work on the estate: the sowing, ploughing, and harvesting of barley and wheat, threshing, winnowing, and the delivery of grain, the flax harvest, the raising and care of cattle, milking, butchering, fowling and fishing, the raising of domesticated fowl, hunting in the desert and the bringing of the various desert animals to the owner (oryx, antelope, hyena, etc.). The preparation of food plays a major role: baking, brewing, cooking, and the activities of the kitchen. The workshops are shown with carpenters hewing timbers to fashion boats, beds, chairs, and a variety of furniture. Jewelers string necklaces. Leather workers prepare their hides.¹⁶

These scenes provide us with an insight into the details and the level of the technology of the Old Kingdom: the methods of weaving, fashioning statues, operating the furnace, growing the grape and making wine, etc. The hieroglyphic captions to the scenes provide many of the terms for the operations and introduce us to the names of the professions: the fowler, the fisherman, the butcher, the baker, the carpenter, the jeweler, the weaver, the herdsman, and many others.

There are also the officials responsible for the offering cult: the scroll bearing lector priests, the *ka*-servants, and others. In several tombs are shown the burial rites with the transportation of the deceased to the

¹⁴The history and development of the formula with its various clauses and specifications are discussed by Winfried Barta, *Aufbau und Bedeutung der altägyptischen Opferformel*, Ägyptologische Forschungen 24, J. J. Augustin, Glückstadt, 1968.

¹⁵Several of these texts are edited and discussed by Hans Goedicke, *Die privaten Rechtsinschriften aus dem Alten Reich*, Beihefte zur Wiener Zeitschrift für die Kunde des Morgenlandes, 5. Band, Verlag Notring, Vienna, 1970.

¹⁶The scenes are discussed and treated by several scholars. Of primary interest are the following: Luise Klebs, *Die Reliefs des alten Reiches (2980-2475 v. Chr.): Material zur ägyptischen Kulturgeschichte*, Abhandlungen der Heidelberger Akademie der Wissenschaften, Phil.-hist. Klasse 3, Abhandlung, Carl Winters Universitätsbuchhandlung, Heidelberg, 1915; Jacques Vandier, *Manuel d'archéologie égyptienne*, Tome II, 1: *Les grandes époques, L'architecture funéraire* (1954); Tomes IV-V, *Bas-reliefs et peintures, Scènes de la vie quotidienne* (1964, 1969), Éditions A. et J. Picard et Cie., Paris; Walter Wreszinski, *Atlas zur altägyptischen Kulturgeschichte*, Teil III: *Gräber des alten Reiches*, J. C. Hinrichs Verlag, Leipzig, 1923-1939; Rosemarie Drenkhahn, *Die Handwerker und ihre Tätigkeit im alten Ägypten*, Ägyptologische Abhandlungen 31, O. Harrassowitz, Wiesbaden, 1976.

house of embalming and thence to the tomb, the funeral procession with mourners and the text of their lamentations, and other stages involved with the burial.¹⁷

In many of the scenes the captions provide the conversations among the participants, the overseer giving orders, the reply of the fieldhands, an occasional jest, a warning, and the usual banter of men at work.¹⁸

In all these wall surfaces the owner of the tomb, the deceased, is represented on a much larger scale to emphasize his importance and almost supernatural significance. When his wife or mother is seated beside him, she shares this scale; children are usually reduced to the smaller scale. In one of the traditional scenes he is shown playing a game of draughts with his figure on the larger scale and the opponent shown on the smaller scale. In most cases he is shown passively unengaged, viewing the activities yet not participating.¹⁹ He inspects the processions of offerings from his estates, the work in the fields and workshops, the fishermen, fowling, butchers, and herdsmen. He carries or leans on a staff and is rarely connected to the other figures. When he is involved, it is in terms of receiving rather than participating. This passive participation is illustrated in his holding a lotus flower extended to him by his son or accepting with his hands the accounts of his produce from his steward. For this reason he is generally regarded as a deceased landlord viewing the on-going activities of the living. Rare are the scenes in which he is clearly shown during his lifetime in an actual event, such as his visit to the offering chamber in a carrying chair to inspect the work on the tomb.²⁰

The essentially non-participatory figure of the owner is emphasized by the convention of his representation: the head always in profile with the eye shown full front, the torso shown full front, the hips in profile, the legs in profile with the big toe shown foremost and the toes never articulated. The right and left hands are frequently interchanged to provide a more pleasing composition.

In contrast to the representation of the passive owner, the other figures are never inactive. Each is shown actively and energetically at his assigned task: "all gestures are practical, explicative of action, not of purpose or emotion."²¹ The well being of the estate is emphasized, emotion and dramatic confrontation avoided, and military activities almost never shown.

The decorative program which resulted in the completed reliefs of a mastaba offering chamber was the outcome of the plans and realization of a team of craftsmen. The selection of themes and their disposition on the walls, probably in collaboration with the client who commissioned the tomb, were the initial steps. This involved certain prescribed elements: the emplacement of the funerary formulae, the disposition of one or several "false-doors" on the west wall, the provision for the texts which contained the owner's name and the specification of his offices and ranks, and the selection of such texts as the address to the visitors, sometimes with a benediction of the visitor who recites the invocation formula and a curse upon the miscreant who damages the chapel or removes its blocks, quotations from royal letters, and legal stipulations.

¹⁷Hartwig Altenmüller, "Bestattungsritual," in *Lexikon der Ägyptologie* (ed. Wolfgang Helck and Eberhard Otto), Band I, Lieferung 5, 745-765, O. Harrassowitz, Wiesbaden 1973; John A. Wilson, "Funeral Services of the Egyptian Old Kingdom," *Journal of Near Eastern Studies* 3 (1944) 201-218; Jürgen Settgast, *Untersuchungen zu altägyptischen Bestattungsdarstellungen*, Abhandlungen des Deutschen Archäologischen Institut Abteilung Kairo 3, 1960.

¹⁸Adolf Erman, *Reden, Rufe, und Lieder auf Gräberbildern des alten Reiches*, Preussische Akademie der Wissenschaften, Abhandlungen, Phil.-hist. Klasse 1918, Nr. 15, Berlin, 1919; Hermann Junker, *Zu einigen Reden und Rufen auf den Gräberbildern des Alten Reiches*, Sitzungsberichte der Akad. der Wiss. in Wien, 221. Band Wien-Leipzig, 1943; Pierre Montet, *Les scènes de la vie privée dans les tombeaux égyptiens de l'ancien empire*, Publications de la Faculté des Lettres de l'Université de Strasbourg, Strasbourg, 1925.

¹⁹H.-A. Groenewegen-Frankfort, *Arrest and Movement. An Essay on Space and Time in the representational Art of the Ancient Near East*, Faber and Faber, London, 1951, 28-36.

²⁰In the tomb of Ankhmare at Giza (G 7837/7843), unpublished.

²¹H.-A. Groenewegen-Frankfort, *Arrest and Movement*, 42.

Once the selection and emplacement of these elements were settled, the outline draftsman drew the scenes and texts on the smoothed limestone surface. Following his work the relief sculptor cut back along the outlines to bring the figures and hieroglyphs into relief and carved the interior details. Finally the painter colored the reliefs with his pigments, adding details such as the beads of the necklaces, the patterning of the garments, the characteristics of materials such as the veining of stone vessels and the surface of wood, the feathering of the bird wings, and the colors of the hides of the oxen.²²

The visitor, in ancient times as well as today, is conscious of three related matters: (1) the function of the offering chamber as the cult place of the deceased; (2) the meaning of the scenes and their identification; and (3) the relative merit of the artists who carried out the program, as compared with those of other mastaba tomb chapels. The study of the last element is still in its infancy, and further research may enable the scholar to identify several groups or schools of artisans, and to trace the originator of a scene and the stages through which the scene is altered in subsequent copies. What at first sight appears to be an original idea turns out upon investigation to be a stock element in the repertory,²³ the cow weeping at the loss of its calf, the stubble on the chin of the farmer with his pitchfork, and the man who holds the beak of a fowl so that it will not bite him.

Even within the formalized program of these representations, it seems that the artist was able to comment in his delineation of the features of the men and women as well as in the positions. The face of the tomb owner is generally treated without relevance to his age, suggesting a timeless and admittedly bland outlook. The scribe seems to show a trace of seriousness, intellect, and preoccupation (Ill. 1). The field hands have heavy features, large lips, and weak chins, and we may suspect that the artist deliberately conveyed a sense of stupidity (Ill. 2). The artist worked with stock elements for characterization: the stubble beard of the pitchfork men, the disshevelled hair of the herdsmen, the protruding stomachs of the fowlers and fishermen. Yet we can see a refinement in these characterizations in his treatment of the faces, and this line of study may also repay our efforts.

²²The steps are discussed in W. Stevenson Smith, *A History of Egyptian Sculpture and Painting in the Old Kingdom*, Harvard University Press, Cambridge, 1946, 244-272; Caroline Ransom Williams, *The Decoration of the Tomb of Per-Neb: The Technique and Color Conventions*, Metropolitan Museum of Art, Department of Egyptian Art, Vol. 3, New York, 1932.

²³Peter Seibert, *Die Charakteristik Teil I: Philologische Bearbeitung der Bezeugungen*, Ägyptologische Abhandlungen 17, Otto Harrassowitz, Wiesbaden, 1967.

*The Impact of the Art of Egypt
on the Art of Syria and Palestine*

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The distinguished authors in this volume have naturally emphasized aspects of native Egyptian art. However, ancient Egypt's extraordinary contribution to pictorial and plastic art must also be measured by its effect on the art of the lands beyond the borders of Egypt. The art of all the lands which came into contact with the art of Egypt came under its sway and was permanently altered by it. The art of Nubia, the Levant, and to an extent, even the art of the Aegean, is imbued with the spirit and legacy of Egypt. In this paper, I would like to discuss the impact of Egyptian art on the art of the Levant.

Though I lack the space to adequately trace the course of Egyptian foreign relations with Syria-Palestine, I would like to briefly mention aspects of the history of Egyptian foreign relations with Syria-Palestine which make the aforementioned impact of Egyptian art on the art of the Levant intelligible.

There is a growing body of evidence to support the notion of Egyptian contacts with Palestine beginning in the Palestinian Chalcolithic period¹ which corresponds to the Egyptian pre-Dynastic period. These contacts continue into the Early Bronze Age² (c. 3200-2150 B.C.).

Yet to argue, as some have,³ that Egyptian hegemony extended over most of Canaanite Syria-Palestine during the Old Kingdom is forcing the evidence. While military expeditions may have been sent into the Levant, they were not prompted by imperialistic aims and were of no lasting consequence.⁴ Existing evidence has tempted some scholars to advocate the notion of Egyptian domination of Palestine in Middle

¹Helene J. Kantor, "The Relative Chronology of Egypt and its Foreign Correlations Before the Late Bronze Age," *Chronologies in Old World Archaeology*, Robert W. Ehrich, ed., Chicago, 1965, pp. 6-7; J. B. Hennessey, *The Foreign Relations of Palestine During the Early Bronze Age*, London, 1967, pp. 26-35; see additional references cited by Ruth Amiran in "An Egyptian Jar Fragment with the Name of Narmer from Arad," *Israel Exploration Journal*, 24, 1974, p. 9, notes 25-28.

²R. de Vaux, "Palestine in the Early Bronze Age," *The Cambridge Ancient History*, Vol. I, Part 2: *Early History of the Middle East*, 3rd ed., Cambridge, 1971, pp. 231-233; Hennessey, *op. cit.*, 1967, pp. 49-62, 69-74. These contacts, perhaps unabated since Chalcolithic times, begin at the start of Dynasty I. Sherds with the name of King Narmer were discovered in excavations at Tell 'Erani (S. Yeivin, "Early Contacts Between Canaan and Egypt," *Israel Exploration Journal*, 10, 1960, pp. 193-203) and more recently at Tell Arad (Amiran, *op. cit.*, 1974, pp. 4-12).

³W. F. Albright, "The Role of the Canaanites in the History of Civilization," *Studies in the History of Culture: The Discipline of the Humanities*, Percy W. Long, ed., Menasha, Wisconsin, 1942, p. 16; cf. Ram Gophna, "Excavations at 'En Besor," *Atiqot* 11 (1976), pp. 1-9.

⁴John A. Wilson, *The Culture of Ancient Egypt*, 9th ed., Chicago, 1963, p. 82.

Kingdom times.⁵ Egypt, however, does not appear to have had a strong economic or political influence, or exercised political control over Palestine even at this time. Indeed Egyptian contacts with Palestine were expanded at the end of the Middle Bronze IIA period, but that expansion comes precisely at the eve of the Egyptian collapse at the beginning of the Hyksos period.⁶ On the other hand, the Egyptian domination of Syria-Palestine in New Kingdom times is well documented. With the victory of Tuthmosis III at Megiddo, Syria-Palestine was brought under Egyptian hegemony.⁷ Though Egyptian control of Palestine and Syria was lessened during the Amarna Age, the region, particularly Palestine, remained under the control of Egypt throughout the fourteenth century.⁸ Egypt's control of Palestine waned through the course of the Ramesside Age. While Ramesses III managed to retain his holding in Western Asia, there is no clear evidence that Egypt retained her dependencies in Palestine and Syria after his death.⁹ Egyptian relations with Palestine were resumed during the reign of Solomon as evidenced by the biblical evidence of Solomon's marriage to the daughter of pharaoh,¹⁰ and the commercial relations of both states.¹¹ Egypt assumed an aggressive military policy towards Palestine following the death of Solomon in 931/930. In 925 Shishak I, the founder of Dynasty XXII, swept through Judah and Israel destroying numerous cities and marching off with the wealth of both kingdoms.¹² Though the victory may have established Shishak as the overlord of Palestine, we were told neither of further Egyptian incursions into Palestine nor of any interference in the affairs of either Judah or Israel.

As a result of these contacts through the ages, Palestinian craftsmen had ample opportunity to familiarize themselves with Egyptian art. While some Levantine craftsmen may have visited Egypt, it is more likely that they familiarized themselves with the art of Egypt through the presence of examples of Egyptian minor arts in Syria-Palestine, which were found in increasing numbers from the Chalcolithic period to the new Kingdom.

I would like to proceed with a presentation of a sampling of the evidence which illustrates the enormity of the impact of the art of Egypt on the art of Palestine and Syria.¹³ The earliest examples of genres of locally made Palestinian and Syrian art objects with obvious Egyptian affinities date to the Middle Bronze Age (c. 2150-1550).

⁵W. F. Albright, *The Archaeology of Palestine*, 6th ed., Baltimore, 1961, p. 74; Wolfgang Helck, *Die Beziehungen Ägyptens zu Vorderasien um 3. und 2. Jahrtausend v. Chr.* (Ägyptologische Abhandlungen, Bd. 5), Wiesbaden, 1962, p. 69; B. Mazar, "The Middle Bronze Age in Palestine," *Israel Exploration Journal* 18, 1968, pp. 71-75.

⁶For a recent, full discussion of the question, see: James M. Weinstein, "Egyptian Relations with Palestine in the Middle Kingdom," *Bulletin of the American Schools of Oriental Research*, 217, 1975, pp. 1-4. Cf. William C. Hayes, "The Middle Kingdom in Egypt," *The Cambridge Ancient History*, Vol. I, Part 2: *Early History of the Middle East*, 3rd ed., Cambridge, 1971, pp. 500, 501, 508.

⁷Wilson, *op. cit.*, 1963, pp. 167-86; George Steindorff and Keith C. Seele, *When Egypt Ruled the East*, 2nd ed., 4th impression, Chicago, 1965, pp. 53-66; Margaret S. Drower, "Syria c. 1550-1400 B.C.," *The Cambridge Ancient History*: Vol. II, Part 1: *The Middle East and the Aegean Region*, 3rd ed., Cambridge, 1973, pp. 444-62.

⁸Cyril Aldred, "Egypt: The Amarna Period and the End of the Eighteenth Dynasty," *The Cambridge Ancient History*: Vol. II, Part 2, *The Middle East and the Aegean Region*, 3rd ed., Cambridge, 1975, pp. 81-86. Cf. William C. Hayes, *The Scepter of Egypt, II: The Hyksos Period and the New Kingdom (1675-1080)*, Cambridge, 1959, pp. 280, 281, 295; Wilson, *op. cit.*, 1963, pp. 230-31; Steindorff and Seele, *op. cit.*, 1965, pp. 80-81.

⁹J. Černý, "Egypt: From the Death of Ramesses III to the End of the Twenty-first Dynasty," *The Cambridge Ancient History*, Vol. II, Part 2: *The Middle East and the Aegean Region*, 3rd ed., Cambridge, 1975, pp. 614-15.

¹⁰1 Kings 3:1.

¹¹1 Kings 10:28.

¹²1 Kings 14:25, 26; see also K. A. Kitchen, *The Third Intermediate Period in Egypt (1100-650)*, Warminster, England, 1973, pp. 294-96. The dates follow Kitchen's chronology.

¹³A headless, female ivory figurine discovered in the Chalcolithic level of Bir Safadi, near Beer-sheva (Jean Perrot, "La 'Venus' de Beerheva," *Eretz-Israel*, 9, 1969, pp. 100-01, pl. XIII) closely parallels a female ivory figurine discovered in

Let us first examine several stelae from the Syrian coastal site of Ras Shamra, ancient Ugarit. The stelae from Ugarit are carved on one face, and feature a single standing deity which fills practically the entire vertical space of the stela. The basic stance of the Resheph figure, which dominates the stela commonly called the Baal au Foudre¹⁴ (III. 1) from Niveau II, and dated by Schaeffer to 1900-1750 B.C., harks back to the classic stance of the pharaoh smiting his enemies. This motif is found on the Narmer Palette¹⁵ and continues in the Egyptian repertoire into the Middle Kingdom, where it is found on a pectoral of Amenemhet III (1842-1797)¹⁶ and on royal reliefs of the New Kingdom.

However, the Syrian figure differs from the Egyptian prototype in the choice of attributes. The spiked and horned helmet and the curled locks of the Syrian figure¹⁷ are absent on the Egyptian prototypes. The figure also differs stylistically from the Egyptian prototypes in the way in which the back of the legs arch out, a feature characteristic of Hittite sculpture.¹⁸ The proportions of the body also lack the balance achieved in Egyptian statuary and relief.¹⁹ Furthermore, in contrast with Egyptian relief, which has modeled surfaces, the relief on the Ugarit stela is flat and lacking in detail.

The subsidiary motif on the Ugarit stela, a figure standing on a pedestal, with its right arm bent at the elbow and raised in front of the face, while the left arm and hand are lowered and covered by the cloak, is Egyptian in character. But, the treatment of the motif finds its closest comparison in an LB I bronze plaque from Hazor.²⁰

a grave of the Badarian period in Egypt (G. Brunton, G. Caton-Thompson, *The Badarian Civilization*, London, 1928, pl. XXIV.2). The figurines are similar in the daring treatment of the arms, which are separated from the torso, in the stylized placement of the hands on the waist, in the separation of the legs, in the bend of the knees and the stylization of the feet, and in the treatment and placement of the breasts and the emphasis on the pubic triangle. The ivories differ in that only the Palestinian figure is featured as pregnant. Moreover, while the head of the Palestinian example is missing, on the basis of similar Palestinian ivories of the same period, it may be safely assumed that whereas the eyes of the Egyptian example are incised, the eyes of the Palestinian example were inlaid. Nevertheless, the parallel is significant. While the Palestinian example is typical of a number of other Chalcolithic Palestinian ivories (cf. Perrot, "Statuettes en ivoire et autres objets en ivoire et en os provenant des gisements préhistoriques de la région de Beersheva," *Syria*, 36, 1959, pp. 8-9, pls. II, III), the Egyptian example is not typical of other known Badarian figurines. I am therefore inclined to consider the possibility that the Egyptian example is an import from Palestine. Therefore, I do not cite this parallel as evidence in support of Palestinian dependency on Egyptian art.

¹⁴C. F. A. Schaeffer, *Ugaritica II*, Paris, 1939, pp. 121-30, pls. XXIII, XXIV. Schaeffer identifies the figure as Baal on the basis of literary analogies, but is puzzled by the absence of the bull, the animal attribute of Baal (*Ugaritica II*, p. 127). It is more likely that the figure can be identified with Resheph. See, Sarah B. Jones, *Resheph Statuettes from Syria and Palestine*, unpublished M.A. thesis, New York University, 1966, p. 42.

¹⁵Schaeffer, *op. cit.*, 1939, p. 123.

¹⁶Cyril Aldred, *Middle Kingdom Art in Egypt*, pl. 73. Here, however, the pose is slightly different, since the pharaoh bends forward somewhat. But the motif is basically the same. See also the Dynasty XI wall painting depicting a figure grasping the tail of a bull with his left hand, while he holds a branch in his raised right hand, about to strike the animal (W. Stevenson Smith, *The Art and Architecture of Ancient Egypt*, Baltimore, 1965, pl. 58-B).

¹⁷These attributes are paralleled on a cylinder seal attributed by Porada to her second Syrian Group (Edith Porada, ed., *Corpus of Ancient Near Eastern Seals in North American Collections*, New York, 1948, pl. CXLVI. 964) and by a cylinder seal from Tell el-Ajjul (Flinders Petrie, *Ancient Gaza*, IV, London, 1931-1952, pl. XII.2) of uncertain date, but which probably dates to the Late Bronze Age.

¹⁸Henri Frankfort, *The Art and Architecture of the Ancient Orient*, Baltimore, 1963, pls. 127, 129-A.

¹⁹The left leg is more substantial than the right leg, the head is too large for the body, the chest is exceptionally small, and the right arm is awkwardly joined to the shoulder.

²⁰Yigael Yadin, et. al., *Hazor I*, Jerusalem, 1958, pl. CCXXXIX.1,2; See also Briggs, Buchanan, *Catalogue of Ancient Near Eastern Cylinder Seals in the Ashmolean Museum of Ancient Near Eastern Cylinder Seals*, Vol. I, Oxford, 1966. The seal is included in his section on seals of his Old Syrian Style. He notes that seals of this type have been called Hyksos (*Ibid.* p. 177).

The pose of the goddess with the feathered robe²¹ and the god with the stylized tree projecting from his head²² on two additional stelae from Niveau II is common on Egyptian statuary and relief. Egyptian figures, with the right arm at the side and the left arm bent at the elbow and slightly extended, usually hold a staff in the extended and raised hand. The pose is perhaps the most popular in the Egyptian repertoire.²³ But, once again note the differences in the choice of attributes. The gods on the Ugarit stelae carry lances in place of the more usual staff of the Egyptian prototypes.

A comparison of the treatment of the legs of the male figure with the legs of the female figure on the two latter stelae provides additional evidence for coastal Syrian dependency on Egyptian prototypes. As in Egyptian prototypes,²⁴ the stride of the male figure is obviously longer than that of the female.

There are also iconographic points of comparison between these Ugarit stelae and Egyptian art. The god holds the crook of Osiris in his right hand, and the diagonal projection ending in a coil emerging from his forehead recalls an element of the crown of Lower Egypt.²⁵ However, the other attributes of the gods, such as the lances, the scabbard attached to the god's belt, the stylized tree coiffure, the torque and the short kilt on the god, and the sandals on both the god and goddess on the stelae from Ugarit succeed in recasting the figure into a native coastal Syrian iconographic representation.

In the Middle Bronze Age, numerous examples of human figurines in metal were found in coastal Syria at Ugarit, Tell Sukas, Tell Simiryan and Byblos; relatively few examples were found further inland at Alalakh and at Hama; and a fair number were found in Northern Palestine at Nahariyah, Megiddo and Beth Shan.

Elsewhere, I have divided the Palestinian and Syrian Middle Bronze Age bronzes into fifteen distinct types.²⁶ With the exception of a stone mold for figurines found at Tell Sukas, Type I to VIII are found exclusively at Byblos.²⁷ The motifs of these Byblos figurines are for the most part inspired by Egyptian prototypes with varying degrees of modification in the stylistic treatment. The figurines conforming most closely to the Egyptian prototypes in stance, wig type, facial treatment, and style are represented by those of Type IB.²⁸

²¹ Schaeffer, *op. cit.*, 1939, pl. XXII.1. and pp. 89,90.

²² *Ibid.*, pl. XXII.2. and pp. 90-93.

²³ Examples are numerous. A few characteristic examples from the Old Kingdom, the First Intermediate Period, and the Middle Kingdom will suffice. An example in relief is found in the Dynasty IV offering niche of Iynefer (Smith, *op. cit.*, 1965, pl. 28-A); an example in wood sculpture is found in the fifth dynasty statue of the Province Administration Mitry (William C. Hayes, *The Scepter of Egypt*, Vol. I, New York, 1953, Fig. 64). An example in relief from the First Intermediate Period is found on a painted limestone stela in Philadelphia (Smith, *op. cit.*, 1965, pl. 28-A); an example in wood sculpture from the same period occurs on a statue from Assiut (*Ibid.*, pl. 56-B). There are two wooden Dynasty XII statues of Senusret I (*Ibid.*, pl. 65-B). A painted limestone relief of courtiers bringing offerings to Senusret I depicts a variation on the motif where in place of the staff in the extended left hand, the hand is used to balance a basket on the courtier's left shoulder (Hayes, *op. cit.*, 1953, fig. 114).

²⁴ Compare the two male courtiers in the mortuary temple of Senusret I at Lisht (Hayes, *op. cit.*, 1953, fig. 114, p. 186) with the daughters of Thuthotpe on a painted relief fragment from Bersheh (Smith, *op. cit.*, 1965, pl. 74-A).

²⁵ Cyril Aldred, *Middle Kingdom Art in Ancient Egypt*, London, 1956, pl. 16.

²⁶ Harold A. Liebowitz, *Regionalism in the Art of Syria and Palestine in the Middle Bronze Age*, Ann Arbor, 1972, pp. 136, 148 (University Microfilms, Ph.D. Dissertation).

²⁷ *Ibid.*, p. 149.

²⁸ There are very few copper and bronze statuettes from Middle Kingdom Egypt. Several purchased examples dated stylistically to the Middle Kingdom were published by Hall. See the copper figurine in the Fitzwilliam Museum at Cambridge dated by Hall to Dynasty XI-XII (H. R. Hall, "Some Early Copper and Bronze Egyptian Figurines," *Liverpool Annals of Archaeology and Anthropology*, 16, 1929, pl. XII-A-C, and p. 16). Note also the Dynasty VI statue of Pepy I (Kazimierz Michalowski, *Art of Ancient Egypt*, trans. and adapted from the Polish and the French by Norbert Guterman, New York, 1968, fig. 232, p. 366) and the Dynasty VI copper statuette of Merenre (Smith, *op. cit.*,

The figurines of Type IA also accord well in stance and in spirit with the essential flatness of the torso and the treatment of the facial features are un-Egyptian. Perhaps the finest statuette from Byblos,³⁰ from Deposit (14433-14500), belonging to Type IA, represents the most fully developed example of the type. However, even this example, in spite of its fine modeling, is relatively flat, elongated, and lacks the mass and volume associated with Egyptian statuary.³¹

Silhouette figurines cut from sheet bronze, gold or silver comprise my Type VIII.³² The poses struck by these figurines are often borrowed from the Egyptian repertoire. Figurines of this type, from the Obelisk temple at Byblos, recall one of the typical Egyptian figure stances, though the genre of the flat, metal silhouettes is atypical of Egypt. However, recent excavations of the structure formerly called the Pyramid of Mentuhotep II yielded figures crudely cut from sheet bronze similar in style to some of the Type VIII figurines.³³ In spite of the fact that the Egyptian examples stand on plinths, the association is significant and permits a dating of some of the undated Byblos figures of Type VIII to the reign of Mentuhotep II (2060-2010 B.C.).

The Middle Bronze II strata in Palestine, and to a lesser extent in coastal Syria, are characterized by the presence of decorated bone strips and silhouettes applied to wooden boxes. The bone strips are primarily decorated with geometric motifs and the silhouettes primarily include birds rendered with interior incised details. While, as I have argued elsewhere, the genre is indigenous to Palestine³⁴ and the decorated bone strips and silhouettes from Sedment in Egypt are probably imports, several bone strips and silhouettes are decorated with Egyptianizing elements.

A remarkable group of silhouettes, apparently correctly identified by their excavator as ivory,³⁵ was found in a Middle Bronze II tomb near el-Jisr in Palestine.³⁶ These silhouettes differ considerably from the bone silhouettes discussed above in the expanded repertoire of motifs, such as human figures and lions; in the more naturalistic style; and in the Egyptianizing tendencies, seen most emphatically in the dress, positioning of the limbs, and style of the male and female figure (Ill. 2), and in aspects of the manner of treatment of the animals.

The greater interest in naturalism is reflected in the more life-like contours and in the more true-to-life treatment of details. The eyes, for example, are not rendered as dotted circles, but rather as naturalistic organs seen frontally as in Egyptian, Mesopotamian, and Aegean art. The naturalistic tendencies of the

1965, pl. 53-B), the Dynasty VI wooden statue of Methethy (Aldred, *op. cit.*, 1956, pl. 59) and the painted and inscribed early Middle Kingdom statuettes of the Scribe of the Divine Offerings, Merer (Hayes, *op. cit.*, 1953, fig. 129, p. 212).

²⁹ Cf. the wooden Dynasty VI statue of the Overseer of the Granary, Kaemseny (Hayes, *op. cit.*, 1953, fig. 66, p. 113) and the twin painted wooden statues of Senusret I (Aldred, *op. cit.*, 1956, pl. 20).

³⁰ Maurice Dunand, *Byblos*, II, Paris, 1954, pl. CXV.144467.

³¹ Cf. Donald P. Hansen, "Some Remarks on the Chronology and Style of Objects from Byblos," *AJA*, 73, 1969, p. 284.

³² Dunand, *op. cit.*, 1954, pl. CXXVII.15023.

³³ Dieter Arnold, "Sechster Vorbericht über die vom Deutschen Archäologischen Institut Kairo in Qurna unternommenen Arbeiten (8. Kampagne)," *MDAIK*, 27, 1971, pp. 125-30, pl. XXII, 11, 12, 14.

³⁴ See abstract of paper delivered at the General Meeting of the Archaeological Institute of America, 15 December, 1971, *AJA*, 76, 1972, p. 214; cf. Liebowitz, *op. cit.*, 1972, pp. 329-33.

³⁵ Since with this possible single exception there is not attestation of the use of ivory by Palestinian craftsmen in the Middle Bronze Age I considered these silhouettes bone. Cf. Helene Kantor, *JNES*, 15, 1956, p. 158. However, for a recent opinion that they are ivory, see Ruth Amiran, *Israel Museum News* 12 (1977), pp. 65-69.

³⁶ J. Ory, "A Middle Bronze Age Tomb at el-Jisr," *Quarterly of the Department of Antiquities of Palestine*, 12, 1945, p. 31-42.

el-Jisr examples are also seen by comparing the bone silhouettes of quadrupeds from Megiddo³⁷ with the ivory silhouettes of cows from el-Jisr.³⁸ In addition to the more naturalistic treatment of the contour and the eyes of the bulls, note the detailed rendering of the tail and its attachment to the hind-quarters. On the other hand, a stylized treatment of natural features is represented by the curved incised line extending from the upper edge of the forward line of the right foreleg to the upper edge of the forequarters. This feature occurs on animals in the Egyptian Twelfth Dynasty tomb of Senbi, son of Ukhotepe at Meir.³⁹ The frontal rendering of the horns also accords with Egyptian style.

The standing male human figures are rendered in the Egyptian tradition with the head and legs in profile and the eyes and shoulders frontal. The contours of the slim male figures are carefully cut and attention is given to inner detail.

The female figure⁴⁰ stands with her right arm at her side and her left arm bent at the elbow with her left forearm and hand placed diagonally across her chest in a traditional Egyptian pose.⁴¹ The long garment worn by the figure is also characteristic of Egyptian female apparel, except that the manner in which the garment billows out in front of her is notably un-Egyptian.

Two bone strips from Tell Beit Mirsim D, MB IIC (ca. 1600-1550)⁴² are decorated not with the usual geometric motifs, but with a running fawn incised on each strip. The fawn on the larger strip faces left towards an obliquely placed stylized bush (Ill. 3). The fawn on the smaller strip faces right, towards the left side of a vertically placed stylized bush at the right edge of the strip. The legs of the fawns are stretched out in front and back and are firmly placed on the ground in a conventional Egyptian running attitude. The outlines of the fawn are angular, but relatively naturalistic, as opposed to the stylization of the bone bird silhouettes. The pose, with the hindlegs and the forelegs stretched out, is seen on a dog and on long-horned antelopes on the east wall of the slightly earlier Twelfth Dynasty tomb chapel of Senbi's son Ukhotepe at Meir.⁴³ The legs of the two long-horned animals on the Meir relief⁴⁴ are bent as are the legs of the fawns on the Tell Beit Mirsim inlay. However, the bend in the legs on the Palestinian example is far more extreme.

A second example of this genre manifesting Egyptian influence is represented by a bone strip depicting a male prisoner in a long robe.⁴⁵ This strip, found in the First Palace at Tell el-Ajjul, probably dates to late MB IIB or MB IIC⁴⁶ and is, therefore, essentially contemporary with the examples from Tell Beit Mirsim. The standing male prisoner dressed in a long robe fills the entire vertical space, as do the fawns on the Tell Beit Mirsim examples. The long robe on the figure is characteristic of Asiatic dress at the beginning of the second

³⁷ Megiddo, II, pl. 193:4; 194:12.

³⁸ Ory, *op. cit.*, 1945, pl. XIV, 83, 84, 86.

³⁹ Aylward Blackman, *The Rock Tombs of Meir, I: The Tomb Chapel of Ukh-Hotep's Son Senbi*, London, 1914, pl. VI.

⁴⁰ Ory, *op. cit.*, 1945, pl. XIV, 71.

⁴¹ This pose is found already in the Dynasty III statue of Sepa (Smith, *op. cit.*, 1965, pl. 23).

⁴² W. F. Albright, *The Excavations of Tell Beit Mirsim, Vol. II: The Bronze Age*, AASOR, Vol. XVII, New Haven, 1938, pl. 34.

⁴³ Blackman, *op. cit.*, 1914, pl. VI.

⁴⁴ *Idem*. One long-horned animal is facing right with a spear through its foreparts, and another, to its left, is being attacked by a dog.

⁴⁵ Petrie, *op. cit.*, 1931-1952, pl. XXIV.

⁴⁶ A date of late seventeenth-early sixteenth century B.C. was proposed for Palace I both by Albright (*AJSL*, 55, 1938, pp. 348-50, chart p. 359) and Kathleen Kenyon ("Palestine in the Middle Bronze Age," p. 28).

millennium, as indicated by the Twelfth Dynasty painting in the tomb of Khnumhotpe at Beni Hasan depicting a group of Semites on their way to Egypt.⁴⁷

The garment is filled with short vertical incisions similar to the filling motif on the bodies of the dogs, the lion, and the antelopes on the underside of a game box from a Theban Seventeenth Dynasty burial.⁴⁸ The late Second Intermediate period date of the Theban example accords with the late MBII date suggested for the Tell el-Ajjul incised strip.

The cylinder seals represent yet another area in which Egyptian artistic influence is manifested, albeit limited. Confronting male figures striking Egyptian stances, and with *ankh* signs serving as filling motifs, are found in Palestine and Syria, for example, on a cylinder from Tell Beit Mirsim⁴⁹ and on a seal from Ras Shamra (III. 4).⁵⁰ A seal impression from Alalakh features, in addition to the *ankh* sign to the left of the central figures, an Egyptian sun disc to the right of the central figures above four smaller figures with identical poses.⁵¹ A fragmentary sealing from Tell Mardikh in inland Syria which may possibly have featured a similar composition to the Alalakh seal, also has an *ankh* sign and a winged sun disc.⁵²

The Late Bronze Age ushers us into the period which may be called the High Renaissance of Palestinian art. Late Bronze Age strata yield examples of orthostats, stone sculpture in the round, bronze figurines, and elaborate cylinder seals. However, the artistic spirit of the age is perhaps best represented by the ivories, which represent, in my opinion, the major achievement of Palestinian and Syrian art.

In the realm of bone and ivory work, three major changes occurred in the Late Bronze Age. Ivory replaced bone, relief carving largely replaced incised drawing, and complex compositions replaced the individual motifs characteristic of the Middle Bronze Age. In addition to these internal developments in the art of the period, the art of the Levant in the Late Bronze Age is characterized by a spirit of internationalism. The foreign influences on the art of Syria and Palestine range from Egypt to the Aegean and Anatolia. Nevertheless, the strongest influence is exerted by the art of Egypt. Its impact is felt both in motif and style.

The borrowed motifs include, among others, a recumbent winged sphinx, such as the one seen on an ivory openwork plaque from Megiddo VIIA⁵³ which is paralleled by a recumbent winged sphinx on a bracelet of Queen Tiy the wife of Amenhotep III.⁵⁴ While the similarity between the winged sphinx on the Megiddo ivory and the winged sphinx on the bracelet is evident, the uniqueness of the Canaanite style is apparent in the fanciful headdress on the Palestinian example and in the substitution of a meaningless cup for the cartouche in the Egyptian example.

⁴⁷Percy E. Newberry, *Beni Hasan I*, "Archaeological Survey of Egypt," F. L. Griffith, ed., London, 1893, pl. XXX.

⁴⁸Hayes, *op. cit.*, 1959, fig. 10, p. 25. The lower edge of the garment, which is formed by two tangent arcs, is thoroughly un-Egyptian. This treatment of the lower edge of the garment is found in the Aegean in the Late Bronze Age. Examples of the type are found on the mainland in the Mycenaean period on a Procession Fresco in the House of Kadmos in Thebes (Emily Vermeule, *Greece in the Bronze Age*, Chicago, 1965, pl. XXVII), and in the Late Minoan Palace III Period; however, this treatment of the garment does not occur in the Aegean in the Middle Bronze Age.

⁴⁹Albright, *op. cit.*, 1938, pl. 30.1, 3.

⁵⁰Claude Schaeffer, *Stratigraphie comparée et chronologie de l'Asie occidentale* (III et II² millénaires). *Syrie, Palestine, Asie Mineure, Chypre, Perse et Caucase*, Oxford, 1948, fig. 5, pl. 31.

⁵¹Leonard Woolley, *Alalakh: An Account of the Excavations at Tell Atchana in the Hatay, 1937-1949*, Oxford, 1955, pl. LX.9.

⁵²Giorgio Castellino, et. al., *Missione Archeologica Italiana in Siria: Rapporto Preliminare Della Campagna, 1965* (Tell Mardikh) Rome, 1966, pl. LXXIX 3.4.

⁵³Gordon Loud, *The Megiddo Ivories*, Chicago, 1939, pl. 7, 22.

⁵⁴Hayes, *op. cit.*, 1959, fig. 147, p. 243.

Egyptian elements are also evident in the ivories with complex compositions. The Egyptian elements in these hybridized ivories provide opportunities for dating that have not been fully utilized. For example, three ivory objects in various states of preservation, which feature aspects of military and feast scenes, can be securely dated on the basis of comparisons with dated Egyptian objects.

Among the ivories found in the Megiddo VIIA treasury room is an ivory plaque featuring a military and feast scene (Ill. 5).⁵⁵ While the archaeological data has been utilized to establish the terminal date for stratum VIIA at around 1150 B.C., some of the ivories could have been made earlier.

Both Henri Frankfort and William F. Albright cited the plaque as a reflection of the impact of Egyptian art on the art of the Levant. Yet each suggested a different date for the production of the ivory. Albright stated that this particular ivory was representative of ivories made during the first half of the 12th century and dated it to around 1150 B.C. or possibly earlier. Frankfort on the other hand suggested "a fourteenth century date, for in the Ramesside times Egyptian motifs seem to have been more slavishly imitated." In view of the controversy it appeared that a detailed stylistic analysis was required to establish a more accurate date.

The plaque shares various iconographic and stylistic features with Egyptian representations. The most salient iconographic parallel is with the depictions of horses hitched to chariots. In a study of nonrearing horses hitched to wheeled vehicles in Egyptian art, I noticed that three distinct phases in the treatment of horses' legs can be distinguished in New Kingdom art:

- (1) The pre-Amarna Phase in which the horses are depicted with all four legs on the ground. The forelegs are spread apart forming a narrow-based isosceles triangle, and the hindlegs are similarly treated.
- (2) The Amarna Phase, during which time the forelegs are placed together and thrust slightly forward, and the hindlegs are in a similar position.
- (3) And the Ramesside Phase, which is characterized by two outstanding features. First, the treatment of the hind legs is similar to that in the pre-Amarna phase, but the treatment of the forelegs is entirely new. One foreleg is straight and touches the ground, practically perpendicular to it, and the other is brought forward and lifted in a ceremonial-like stance. The second feature is the position of the near leg; it, rather than the far leg, is brought forward in the majority of instances.

The Megiddo plaque can be dated with certainty to the Ramesside period on the basis of the similarity between the treatment of the legs of the horses on the Megiddo ivory and the treatment of horses' legs portrayed in Ramesside times in Egypt. Not only is one leg almost perpendicular to the ground and the other brought forward and lifted, but the leg brought forward is the near leg, a stylistic detail which first occurs with regularity during the Ramesside period. The horses on the Megiddo plaque correspond most closely with the horses on a relief on a wall of the Temple of Ramesses II at Abydos, dated to the fifth year of his reign.

Trotting horses also appear in two additional ivories from the Megiddo hoard; one depicting the heat of battle and the other depicting the victorious march home. I initially dated these bars also to the Ramesside

⁵⁵For a full discussion of this ivory and for the evidence upon which the stylistic conclusions are based see Harold A. Liebowitz, "Horses in New Kingdom Art and the Date of an Ivory from Megiddo," *Journal of the American Research Center in Egypt*, VI, 1967, pp. 129-34.

period on the basis of the treatment of the horses' legs, yet I noted the existence of somewhat troublesome parallels to Amarna art: the treatment of the fallen warriors on one of the ivory bars recalls the treatment of fallen warriors on Tutankhamun's painted box, and the posture of the attendants on the feast scene on another of the ivory bars recalls the posture of attendants in Amarna wall decoration.⁵⁶ I therefore suggested that these ivory bars dated to a very early phase of the Ramesside period. In retrospect, I am more inclined to date these bars to a late phase of the Amarna period or the Post Amarna period (Late Dynasty XVIII) because of the aforementioned parallels to the art of the Amarna period and since the treatment of the horses' legs still retain qualities more in keeping with the art of the Amarna period.⁵⁷

The motif of the feast scene is also featured on ivory fragments from Tell el-Fara (South). One fragment depicts the hunting of provisions for the feast (Ill. 6), and the other depicts the seated prince at his victory celebration (Ill. 7). The scene with the gathering of provisions on the ivory is paralleled by a similar scene on a late Nineteenth Dynasty silver bowl⁵⁸ found near the temple of the goddess Bubastis in the eastern Delta. These ivory fragments from Tell el-Fara are generally considered undatable with any precision. However, one additional Egyptian feature permits the establishment of a date for the production of the ivory. Note the garments worn by the seated prince and his attendants. They wear ankle-length and elbow-length pleated garments and are bedecked with bread-collar necklaces. While the general style of the garment is Syro-Palestinian, the elbow-length pleated sleeves recalls the somewhat shorter version of the fashion, current in Egypt during the reign of Horemheb, as can be seen on the statue of Horemheb seated as a scribe.⁵⁹ Thus, the earliest conceivable date for this ivory is the reign of Horemheb, the first king of the Nineteenth Dynasty, who reigned in the second half of the 14th century.^{59a}

The first few centuries of the Iron Age represent a dark age for Palestine and coastal Syria from the perspective of the art historian. First, beginning with the ivories of the 9th and 8th centuries B.C. from Samaria in northern Israel, and Arslan Tash in Syria, we witness the revival of Palestinian and coastal Syrian art. When the new age dawns, Egypt once again serves as the dominant influence. The Egyptianizing ivories from Syria-Palestine fall into two categories: openwork plaques decorated with figures in relief, and reliefs on solid plaques. Objects of the latter category are often decorated with inlay of insets placed in deeply grooved settings. The openwork plaques are decorated with hybrid Egyptian and Syro-Palestinian elements: as for example, the Levantine cherub, who in the Iron Age wears the Egyptian double crown and is set in a Nilotic environment (Ill. 8). The reliefs on solid plaques are very close in style to the Egyptian originals from which they were borrowed, and are sometimes difficult to distinguish from true Egyptian works of art. Indeed, the slavish imitation of Egyptian prototypes is one characteristic of the ivory carving of the Iron Age.

A second Iron Age art form which is strongly influenced by the art of Egypt is represented by the numerous scarabs and scaraboids which begin to make their appearance in the 8th century.⁶⁰ The Egyptian influence is apparent not only in the beetle shape of the scarab back, but also in the Egyptian motifs and figure style with which the intaglio bases are decorated. One example of a scarab with Egyptianizing motifs on the base may suffice to demonstrate the impact of the Egyptian art on the genre. While the lower half of one of the seals bears the inscription "Belonging to Eshna the Servant of Ahaz," in Paleo-Hebrew, the upper half is decorated with Egyptian symbols.

⁵⁶*Ibid.*, p. 134, n. 50.

⁵⁷The warlike atmosphere in Palestine during the Amarna age is likely to have encouraged the revival of the combined motifs of military and feasts scenes, already known from Mesopotamian Early Dynastic times (cf. Frankfort, *op. cit.*, 1963, pls. 36, 37).

⁵⁸Hayes, *op. cit.*, 1959, fig. 226, p. 359.

⁵⁹*Ibid.*, fig. 190, p. 305.

^{59a}In a recently completed manuscript I adduce evidence to support a mid-14th century date for the ivory, around the reign of King Ay.

⁶⁰A. Reifenberg, *Ancient Hebrew Seals*, London, 1950.

The Palestinian and Phoenician seals differ significantly from their Egyptian prototypes since they characteristically provide the name of the owner of the seal. Nevertheless, the Egyptian influence is evident.

The foregoing evidence supports the conclusion that the impact of Egyptian art on the art of Palestine and coastal Syria was considerable. Given the historical situation which existed in the region, the result is not surprising. However, this student of the area is surprised by the virtual restriction of the impact of Egypt on the Levant to the realm of art. The poetic imagery of Ugaritic and Biblical texts, Canaanite and Israelite attitudes towards government, Levantine cultic ritual, and the Israelite legal traditions do not reflect a commensurate Egyptian influence. I am not certain that I can fully account for this phenomenon. But I think that two related factors are relevant to the question. One is that, for reasons which I cannot go into in this paper, Palestine and Syria never created an independent iconography, and were, therefore, prepared to adopt a ready-made artistic language, much in the same way as the Akkadians adopted the written script of the Sumerians. Secondly, I believe that the Syro-Palestinians did not necessarily adopt the mythological associations along with the imagery. The Syro-Palestinian craftsmen may very well have borrowed the ready made Egyptian imagery and put it in the service of indigenous western asiatic religious conceptions, for whether the Samaria ivories were carved by Israelite craftsmen, as they very well may have been, or whether they represent Phoenician imports, it is noteworthy that the Biblical authors, while noting the opulence of the "ivory house" of Omri, did not take exception to the flagrant paganism of the symbolism. Be that as it may, the debt of Palestinian and Syrian art is immeasurable.

Tin and the Egyptian Bronze Age

by

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The picture of ancient tin everywhere has been changed in one fell swoop by a reconnaissance in the Eastern desert of Egypt in December, 1976. There a team inspected three mines of cassiterite.¹ All three of these offered placer cassiterite in a form immediately evident to the prospector. At the third, Gebel Mueilha, M. F. El-Ramly of the Egyptian Geological Survey has found eight inscriptions dating to Pepi II of the 22nd century B.C. suggesting a deliberate working of this area for tin ores.

In addition, in 1976 there were two separate finds of tin ingots, one of two Cypro-Minoan ingots off the coast of Israel, the other of a single, probably not ancient, ingot off the coast of Saudi Arabia.

I might add that there was at least one Nubian source of cassiterite lying on the sixth cataract of the Nile, in Sudan, similar to those in the granites of Egypt. I came across this on my January 1977 visit with members of the Geological Survey of the Sudan and the staff in geology at Khartoum University.² This adds to the suggestion that gold-bearing quartzes along the Red Sea introduced the ancient Egyptians to placer cassiterite.

Let us take a brief look at this substance tin, both as a metal and as an ore.³ Heavy and bright, easily melted but not easily reduced from the ore, its atomic number is 50 and its atomic weight 118.69. With 10 isotopes, it has the largest number of any element, posing problems for isotopic finger-printing. It is rarer than the element hafnium in the earth's crust, appearing as the final phase of precipitation in certain granites.

Tin lies in the belt of granites running from Yunnan province in China down the Malaysian peninsula to Tasmania; in Europe in England, France, Spain, Saxony, Czechoslovakia, and Italy; in South America in Bolivia; and in Africa in Egypt, the Sudan, Nigeria, and the Congo. It does *not* appear in the granites of western North America, the Canadian Shield, Brazil, South Africa, West Australia, the Urals, and Siberia. In the ancient Middle East then, tin for the most part was not a mainstream geological phenomenon.

Egypt, as noted by Alfred Lucas, is the home of perhaps the most consistent archeological application of the metal from the Eighteenth Dynasty or Late Bronze Age onward.⁴ There were such items as a ring and

¹W. F. Hume. 1937. *Geology of Egypt*. Vol. II, Part III. *The Minerals of Economic Value*. (Cairo: Government Press), p. 856. Participants in the inspection team were James D. Muhly, George Rapp, and Theodore A. Wertime.

²A. J. Whiteman. 1971. *The Geology of the Sudan Republic*. (Oxford: Clarendon Press), pp. 246-47.

³Rhodes W. Fairbridge. 1972. *The Encyclopedia of Geochemistry and Environmental Sciences*. (New York: Van Nostrand), pp. 1191-92.

⁴Alfred Lucas. 1934. *Ancient Egyptian Materials and Industries*. (London: Arnold), p. 209ff.. Lucas lists a ring, a pilgrim bottle, tin glaze in glass, a winged scarab, two Nubian finger rings, two tinned bronze bowls, and a bowl of pewter. For bronze, see pp. 174ff..

*Tradition and Revolution
in the Art of the XVIIIth Dynasty*

by

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It has become a commonplace that the art of the XVIIIth Dynasty in Ancient Egypt reverted to the inspiration of the early Middle Kingdom style as a point of departure and thereafter went its own way.¹ Indeed, the evidence for this at Thebes is rather compelling. The reliefs of Amosis from Abydos and Karnak,² and those of Amenophis I at Karnak³ show in their iconography and the character of their inscriptions a departure from the design of the monuments of Kamose and his immediate predecessors⁴, and a return to the style which prevailed during the late XIth and early XIIth Dynasties.

The stela of Amosis from Abydos⁵ recalls the work of Nebhepetre from Tod⁶ closely in its style and proportions (Ills. 1 and 2). The reliefs of Amenophis I in the alabaster shrine from the Third Pylon at Karnak,⁷ and the fragment in Brooklyn⁸ take their inspiration from the monuments of S'ankhkare at Tod and Armant.⁹ Only the inscriptions and the details of dress, such as the king's Blue Crown and the queen's sceptre distinguish the work of the later from that of the earlier period.

There were good reasons why the Theban craftsmen should have reverted to the examples of an earlier age for their inspiration. The re-establishing of a unified Egyptian state in the XVIIIth Dynasty had been the work of the aggressive Thebans under the vigorous leadership of their princes. The patriotism that was aroused in the peoples of Upper Egypt by the so-called war of liberation against their Hyksos overlords found expression also in the local pride of the Theban craftsmen, who in seeking to re-establish the highest standards, looked naturally to their own past achievements for guidance. Monuments of the Mentuhoteps and Sesostri I at Armant, Karnak, Tod, Medamud and Western Thebes were still standing, virtually intact, as classic examples of splendid works commissioned by the illustrious and deified ancestors of the Theban line. As late as the early reign of Tuthmosis III the funerary temple of Nebhepetre at Deir el-Bahri could provide a challenge and an inspiration to the architect of Hatshepsut's great monument on the same site, though the first tentative imitation was soon replaced with a more ambitious and grander conception as the building progressed.¹⁰

¹ Hayes (1959) p. 43; Smith (1965) p. 128; Redford (1967) p. 78.

² James (1965) p. 18; Porter & Moss (1927-74) II, rev. edn. p. 73.

³ *Ibid.* pp. 63-64.

⁴ James (1965) p. 18.

⁵ Lacau (1909) No. 34002.

⁶ Bisson de la Roque (1937) figs. 25-30, pls. XVII-XIX (Cairo Museum J. E. No. 66329-31).

⁷ Porter & Moss (1927-74) II, rev. edn. pp. 63-64.

⁸ Fazzini (1975) No. 48.

⁹ Bisson de la Roque (1937) figs. 32-50, pl. XXV (Cairo Museum J. E. No. 66333-7); Mond-Myers (1940) pp. 21-22.

It is not only the royal monuments that betray the influence of Middle Kingdom archetypes. The private statuary of the period in its predilection for the figure wrapped in a cloak and either seated or squatting, maintained the volumetric qualities of the Middle Kingdom style, as in the statues of Ahmose-Ruru at Brooklyn,¹¹ Senmut in Berlin and Cairo¹² and Sennefer in London.¹³ They differ only in showing the bland features of their owners cast in the mould of the contemporary king, Tuthmosis III, and have little of the introspection of their Middle Kingdom counterparts.

In assessing this debt to Middle Kingdom inspiration, however, it should not be forgotten that our knowledge of the art of the early XVIIIth Dynasty comes from the monuments found at Thebes. The vanished contemporary world of Lower Egypt is almost totally unknown to us, and we can perceive only darkly the influence of the metropolitan style of Memphis, which since the Archaic Period had engendered and sustained the highest traditions of Pharaonic art. But the overthrow of the last Hyksos ruler by Amosis necessarily ensured that the Theban princes fell heirs to the resources, officials, traditions and perhaps even the harim of a dynasty, which whatever the successful rebels in Thebes may have thought of it, was always regarded in Lower Egypt as a line of legitimate pharaohs. We can see that the influence of the more cosmopolitan and sophisticated culture of Lower Egypt increases as the XVIIIth Dynasty wears on, and is particularly evident in the field of religion or ideology.

A beginning is perhaps indicated by the founding at Memphis of a vast palace complex by Tuthmosis I which was still flourishing at the end of the dynasty. It was in the reign of this same king that limestone slabs sketched with a draft of the Book of Imy Duat were evidently prepared as a lining for the burial chamber of his tomb.¹⁴ This is the first of those editions of the sacred books which under the influence of the revived solar cult of Heliopolis were to decorate the royal hypogea and their burial furniture at Thebes.¹⁵

There is other evidence of the impact of this same sun religion on the architecture of the Dynasty. The temple of Hatshepsut at Deir el-Bahri adds two of the colonnaded courts in which the sun-cult was observed, to the hypostyle hall and shrine of the upper terrace, essential features both of the primal temple of Egyptian Creation.¹⁶ From thence onwards most Egyptian temples were to have such a colonnaded court or courts with the twin towers of the pylon added as a visible testimony of the solarization of Egyptian regional cults.¹⁷ The steady growth in the authority of Heliopolitan sun-worship was to culminate in the monotheistic sun-religion of Akhenaten near the end of the Dynasty; but the antiquarian aspects of this Lower Egyptian influence have scarcely been mentioned by historians, and it is perhaps time that the balance was in some measure redressed.

In the first place, the political situation in the XVIIIth Dynasty was nearer to that which had prevailed during the early Old Kingdom. The Pharaoh was no longer the feudal lord, *primus inter pares*, which had been his fate after the end of the VIth Dynasty.¹⁸ He was now a Homeric champion, a victorious warlord, the incarnation of such warrior gods as Baal or Mont.¹⁹ He had attained the same lonely pre-eminence as the

¹⁰Smith (1965) pp. 128-29.

¹¹Fazzini (1975) No. 49.

¹²Vandier (1952-69) III, pls. CLI, 1; CLXII, 2; Aldred (1961) No. 32.

¹³Aldred (1961) No. 48.

¹⁴Porter & Moss (1927-74) I, rev. edn. pt. 2, p. 557.

¹⁵Plankoff (1964) pp. 121ff.

¹⁶Reymond (1969) Ch. 13.

¹⁷Derchain (1966) pp. 17ff.

¹⁸Hayes (1961) pt. 1, pp. 7, 21, 35.

¹⁹Hayes (1961) pt. 2, pp. 3-5.

divine kings of the IVth Dynasty who had built their gigantic monuments at Dahshur and Gizeh. He ruled Egypt unchallenged with a similar centralized authority, though it was now a military caste rather than a technocratic élite. The tombs of his high officials were clustered on the hills of Western Thebes in sight of his mortuary temple, just as the burials of the ruling class in the IVth Dynasty were huddled around the pyramids of their lords. Not the least of the privileges that Akhenaten promised his followers was the assurance that they should have their tombs near his in the new residence-city of Akhetaten.

The impact of these ideas on the art of the period becomes more evident as the Dynasty progresses. The reliefs with which Hatshepsut decorated the walls of her mortuary temple at Deir el-Bahri appear to be inspired in their proportions and style by the reliefs from the pyramid complex of Phiope II at Sakkarah, the last great utterance of the legendary pharaohs of a classical past. This stylistic influence is particularly striking in the processions of offering-bearers in the Southern Hall of Offerings²⁰ (Ils. 3 and 4). It would be a matter of some delicacy, however, to decide whether this inspiration came to Hatshepsut's craftsmen direct, or through the intermediary of Middle Kingdom versions of the style of Dynasty VI.²¹ Nevertheless the writer is tempted to postulate direct influence for reasons which will shortly become clearer.

In other scenes at Deir el-Bahri, the contemporary dress and accoutrements tend to give an entirely up-to-date rendering of the subjects for illustration. But it is surely permissible to wonder whether the subjects have not been selected for their traditional significance. To us they appear new because they are isolated in that context of Egyptian art which has survived to our own day. Such themes as the netting of birds, or the Pharaoh as sphinx trampling the nations underfoot which exist in a greatly damaged state in the lowermost colonnade are traditional in iconography, and congeners can be found on the shattered remains of Old Kingdom monuments.²² On the other hand such scenes as the voyage to Punt and the transportation of the obelisks, appear to be unique since we lack any earlier examples. Yet isolated fragments of relief that have survived from the causeway of the pyramid of Wenis, show such cognate themes as the transportation of monolithic granite columns, and the arrival of Asiatics aboard ship, raising their hands in wonderment and praise.²³

Such themes may have suggested the subjects of the Hatshepsut reliefs, if not their exact design. The expedition to Punt in the reign of the queen repeated the exploits that had been made during the Vth Dynasty, for example, in the reigns of Sahure and Isesi; and it is surely not overbold to postulate that such subjects may well have been illustrated in the lost causeway reliefs of those kings, and given inspiration to Hatshepsut's artists, whether direct or through Middle Kingdom re-interpretations. The scenes of the divine birth of Hatshepsut, too, though they were copied in the main by subsequent monarchs such as Amenophis III at Luxor and Nectanebo I at Denderah, are not likely to have been the first of their kind. They may have had their genesis in the lost reliefs in the sun-temples of the Old Kingdom, though the earliest survival of the legend dates to the XIIth Dynasty.²⁴

It may be objected that all this is really very tenuous; and perhaps it is specious to compare scenes at Deir el-Bahri with conjectural Old Kingdom reliefs which in any case have not survived. Let us at any rate admit that the XVIIIth Dynasty showed a keen and persisting interest in the monuments of the Old Kingdom. The representation of the *per wer* on the facade of the inner chambers of the Hathor shrine at Deir el-Bahri, for instance, is usually taken to be derived from a traditional design of which early examples are to be seen in the chapels on the western side of the Jubilee Court of the Step Pyramid of Djoser.²⁵ Evidently no one has

²⁰Naville (1894-1908) IV, pls. CVII-CXII; Jéquier (1936-40) II, pp. 26-27; Smith (1965) p. 134.

²¹Smith (1965) p. 95, pl. 64a.

²²Naville (1894-1908) VI, pls. CLX, CLXIII; Borchardt (1910-13) II, pl. 8.

²³Hassan (1955) p. 137, fig. 1; cf. Borchardt (1910-13) II, pls. 12, 13, fig. 12, p. 134.

²⁴Redford (1967) p. 83, n. 130.

²⁵Borchardt (1938) pp. 23-28, pl. 10; Naville (1894-1908) IV, p. 5, pl. CIII.

considered whether the Hatshepsut version may not be a direct copy of the Djoser archetype: yet the special reverence which was shown for the great achievements of Djoser's architect, Imhotep, from this point onwards in Egyptian history, had already been paid by visitors in the reign of Amenophis I.²⁶ Other graffiti disclose that scribes were making such pilgrimages in the reign of Hatshepsut,²⁷ who boasts that she restored monuments in Middle Egypt which had stood in ruins since the Hyksos wars.²⁸ This rehabilitation, doubtless in Lower as well as Middle Egypt, presupposes that careful surveys of all the standing monuments were made as a necessary preliminary to any re-building schemes.

The officials of her co-regent and successor Tuthmosis III reveal the same concern for the monuments of the Old Kingdom. The First Herald Amunedjeh left a scribble in the sun-temple of Weserkaf, the first king of the Vth Dynasty, showing that he had inspected that monument.²⁹

Another scribe in this same reign wrote in praise of King Sneferu of the IVth Dynasty on the walls of the mortuary temple of the pyramid of Meydum,³⁰ where the scribe May later added a famous graffito in regnal year 30 of Amenophis III.³¹ But probably the most interesting of such enterprises was the building of a sanctuary to Sekhmet within the mortuary temple of Sahure at Abusir, evidently as early as the reign of Tuthmosis III.³² It is beyond credence that the architect and craftsmen who erected this shrine would have been entirely unaffected by the subject matter if not the style of the adjacent Old Kingdom reliefs. It is perhaps significant in this connection that the only reliefs of kings known to the writer in which the muscles of the neck are delineated are those of Sahure and Akhenaten³³ (llls. 5 and 6).

The excavation of the great sphinx of Gizeh, which was correctly identified as representing the IVth Dynasty king Khephren, in the reign of Tuthmosis IV, was a spectacular investigation of an ancient monument in the XVIIIth Dynasty, though there had been some activity on this site earlier in the period.³⁴ But doubtless the most notable, and from our point of view the most significant, of these archaeological enterprises was the search for the tomb of the god Osiris at Abydos. The identification in the archaic cemetery there of the cenotaph of Djer, the second or third king of the Ist Dynasty, as the holy place in question was a fair deduction. The peculiar character of the blue decorated pottery that Petrie found in the lowest levels of the mass of votive sherds that covered the site suggests that this identification was made in the reign of Amenophis III when there was marked increase of activity at Abydos.³⁵

An inscription in the tomb of Kheruef, the High Steward of Queen Tiye, informs us that the celebration of the First Jubilee of Amenophis III was made in accordance with the records of olden times, and goes on to infer that the festival had not been so made since the time of the ancestors.³⁶ Actually, earlier kings in the Dynasty, such as Tuthmosis III and Amenophis II had celebrated jubilees,³⁷ and there must have been

²⁶ Wildung (1969) p. 66, Dok. XVI, 70a.

²⁷ *Ibid.* Dok. XVI, 70b.

²⁸ Gardiner (1946) pp. 47-48.

²⁹ Porter & Moss (1927-74) III, rev. edn. pt. 1, p. 325.

³⁰ Wildung (1969) p. 142, Dok. XX, 400a.

³¹ *Ibid.* Dok. XX, 400b.

³² Borchardt (1910-13) I, p. 107ff.

³³ *Ibid.* II, pl. 17; Aldred (1973) No. 12.

³⁴ Wildung (1969) pp. 206-07.

³⁵ Petrie (1901) p. 17.

³⁶ Fakhry (1943) p. 492, 11.9-11 of text.

³⁷ Aldred (1967) pp. 1-6: for a contrary view, see Hornung-Staehelin (1974) p. 77.

enough precedents available to determine the correct observance of the rites in the reign of Amenophis III. The emphasis upon special research into earlier records underlines the intense antiquarian interest in such subjects during the reign of this king. Perhaps we may have an example of this research in the archaic design of the cloak which Amenophis III wore on this occasion;³⁸ and in the fragment of an early dynastic slate palette probably from Abydos and shared between Cairo and Brooklyn, which is carved on the obverse with part of a ceremonial scene, evidently an early example of the Jubilee rites, and on the reverse with part of the figures of Queen Tiye and Amenophis III. The latter scene may also well commemorate a jubilee ceremony.³⁹

One of the pundits doubtless concerned in such a scrutiny of the ancient records was the sage Amenophis-son of Hapu whose family rose to great importance during this reign. In Ptolemaic times he was deified as Amenothos a god of healing. He figures large in the jubilee scenes carved in relief on the walls of the temple which Amenophis III built at Sulb,⁴⁰ and his antiquarian leanings are shown in a statue of him from Karnak which breaks entirely with the stylistic conventions of his period and revives the features of the XIIIth Dynasty in its pose, costume, musculature, heavy-lidded eyes, and in the lined face with its introspective expression.⁴¹ If it were not for the inscription, this piece would almost certainly be dated to the late Middle Kingdom.⁴²

The evidence for an interest in the monuments of the Old Kingdom as a source of inspiration during the XVIIIth Dynasty seems to the writer established as a *prima facie* case, and worthy of fuller investigation. It still continued in the reign of Akhenaten. We have already mentioned the research undertaken for the celebration of the first jubilee of Amenophis III. If the writer is correct in his belief that this coincided with the first jubilee of the Aten under Akhenaten,⁴³ then some explanation is available for the extensive illustration of this rite in one of the temples built to the Aten at Karnak in the first years of the reign.⁴⁴ An important feature of the decoration of Old Kingdom temples from the time of Kheops onwards was the representation of the Sed Festival. At Karnak, Akhenaten is shown wearing similar costume, carrying similar sceptres and moving through similar shrines as Niuserre in the reliefs from his sun-temples at Abu Ghurab⁴⁵ (llls. 7 and 8). Moreover it is noteworthy that with the sudden appearance of the revolutionary Karnak style of art under Akhenaten, his courtiers should be shown deferentially bowing low in the same posture adopted by the palace officials of Sahure, Niuserre, Wenis and Phiops II.⁴⁶ Perhaps it is not entirely a coincidence that the pose of an infant on the lap of an adult which appears in the Brooklyn statue of Phiops II and his mother, Queen Ankhes-mery-re, should not be repeated until the reign of Akhenaten;⁴⁷ or the statuettes of Akhenaten and his queen holding hands should depart so radically from the conventions of royal standing statues in the XVIIIth Dynasty though they do recall a triad of King Mykerinus of the IVth Dynasty.⁴⁸ At least we receive more than an echo of the Old Kingdom at Amarna where three of the courtiers for this brief interlude revive the Old Kingdom title of *rekh nesut*, King's Acquaintance.⁴⁹

This enhanced interest during the XVIIIth Dynasty in the classic past of the Old Kingdom, however, did not prevent the age from being one of innovation, particularly as a result of more intimate contacts with the world

³⁸ Aldred (1969) p. 74.

³⁹ Bothmer (1964) pp. 1-4.

⁴⁰ Lepsius (1848-59) III, pl. 83b.

⁴¹ Legrain (1906) I, No. 42127.

⁴² Cf. Koefoed-Petersen (1950) pp. 18-19, No. 25.

⁴³ Aldred (1959) p. 19ff.

⁴⁴ Hornung-Staehelin (1974) pp. 36-37.

⁴⁵ Bissing (1905-28) II, pl. 16.

⁴⁶ E.g. Borchardt (1910-13) I, pls. 11, 32, 52.

⁴⁷ Bothmer-Keith (1974) pp. 30-31. An earlier version in the same tradition however, is the damaged statue of Hatshepsut in the lap of her nurse (Cairo, J.E. No. 56264).

⁴⁸ Aldred (1973) figs. 39-41.

⁴⁹ Davies (1903-08) I, pl. xxxvii; II, pls. viii, xx; V, p. 7.

of the Eastern Mediterranean. The new international social order based upon a chariot-using military caste with the king at its head did not repudiate the Egyptian past, but rather saw in it a vindication of its contemporary viewpoint. Akhenaten's claim to "live in truth" appears to be no more than an affirmation of the validity of the Egyptian cosmic system as at its first creation. These constraints kept the Egyptian artist well within the bounds of tradition. Egyptian art had grown up in the service of its kings and could not be fundamentally changed until a new conception of government prevailed. Though Akhenaten introduced into Egyptian religious thinking a more joyous acceptance of the natural world and a more rational belief in a universal sole god, he did not change any of the ideas of kingship. Indeed, under the influence of the sun cult he appears to have reverted to some concepts of the divinity of the Pharaoh that belong to very early times.⁵⁰ The Royal Family are represented on the monuments in precisely the same aspective manner as had come down from the Archaic Period when the forms of art were first established. Only some idiosyncratic distortions were introduced, undoubtedly at the insistence of Akhenaten himself, in the portrayal of the persons of the King, the Queen and their daughters.

There were, however, two aspects in which the art of the Amarna period differed fundamentally from the Pharaonic art which had preceded it. The sudden introduction of these innovations entitles us to regard it as revolutionary. The first concerning subject-matter was deliberate; the second concerning a new space-concept, was unconscious.

When Akhenaten proscribed the representation of his sun-god in iconic form, he banished at a stroke nearly all the traditional subjects that had been reserved for the decoration of temples since earliest times. Even when he felt obliged to preserve conventional themes, he gave them a new look. Thus the scene in which the Pharaoh frees Egypt from evil forces by dispatching the traditional foes before the god of the temple is changed to show the slaughtering being undertaken beneath the elaborated symbol of the new sun-god in the presence of the Queen and the eldest daughter⁵¹ (Ill. 9).

This example, however, is almost the only one of the traditional subjects to be retained. In their place appear incidents from the life of the Royal Family such as one finds in the house stelae from Amarna. There were no precedents for such themes and the court artists had to create from scratch an iconography which would express the ideology of the new faith. For this they fell back upon equally novel departures from the traditional subjects that had been introduced into the Theban tomb-paintings of the Dynasty, where incidents in the life that was past or the eternal life to come were given a fresh gloss.⁵²

Thus on a house stela in Berlin (Ill. 10) Ankhesenpaaten plays with Queen Nefertiti's ear-ornament in much the same way as the child of a peasant woman reaches up to pull her mother's hair in the painting in the tomb of Menna at Thebes.⁵³

Such new subjects for illustration in the cult of the Aten, however, are unlikely to be the invention of the craftsmen who carved the simple house stelae. They are more probably the products of the master artists who designed the scenes that were selected by Akhenaten himself and destined for the decoration of palaces and temples and particularly the walls of the vanished inner courts of the Amarna temples. Though only scattered fragments have survived from such reliefs, we are able to reconstruct whole scenes from parallels in the Amarna tombs and from objects found in the tomb of Tutankhamun. Thus a fragment of the reliefs from the dismantled temples of the Aten at Tell el-Amarna, excavated at Hermopolis and now in the Schimmel

⁵⁰ Aldred (1971) p. 6.

⁵¹ Aldred (1973) p. 67.

⁵² Mekhitarian (1954) p. 53ff.

⁵³ *Ibid.* p. 79.

collection is not easily capable of interpretation without a complete version found in the tomb of Tutankhamun, where the carved ivory appliqué on a box shows the scene of the King shooting at duck and fish in a pool.⁵⁴

But the attractive domestic nature of these new icons should not obscure their fundamental religious import. The back-panel of the lion throne of Tutankhamun, for instance, made at the very end of the Amarna period and showing Queen Ankhesenpaaten anointing her husband, who wears the triple Atef-crown of his coronation, recalls in its composition and sentiment a relief in a late tomb at Tell el-Amarna of Nefertiti waiting upon Akhenaten.⁵⁵ To describe both icons as representing a vernacular and domestic scene, however, is to miss their proper significance. A comparison with the side panels of the throne of Tuthmosis IV in Boston and New York⁵⁶ will show that king seated upon his throne in the presence of Thoth and the lion-headed Weret-Hekau, the Great Enchantress, a goddess particularly associated with the royal crowns and with Isis, the personified throne. The scenes on both thrones show the Pharaoh being attended by the goddess of coronation, in the one case Isis-weret-hekau, in the other by the royal heiress Ankhesenpaaten in whom Tutankhamun's right to the throne lay.

The small gold-covered shrine from the tomb of Tutankhamun is a keypiece in preserving for us in the scenes with which it is embellished an idea of the decoration of the inner walls of the Amarna temples with the theme of the daily life of the royal pair as a significant rite.⁵⁷ It is noteworthy that despite the domestic nature of nearly all the reliefs, the shrine apparently housed a statue of the king as the god incarnate, while the queen, described as the Lady of the Palace, is also referred to as the Great Enchantress, doubtless identifying her with Isis-weret-hekau.⁵⁸

As many observers have pointed out, Akhenaten was not averse to claiming a considerable share of the Aten's godhead and that share sometimes approached complete identity. But until very recently it has passed without comment that Nefertiti, too, is also a great divinity.⁵⁹ She alone makes offerings to the Aten on a par with the king and it is only this royal pair that the life-giving rays of the Aten sustain. On the Berlin house stela she sits on a royal throne while he is content with a simpler stool.⁶⁰ In the pair of statuettes in London and Paris, it is she who holds the king's hand.⁶¹ She usually appears in a tall blue crown which seems to have been chosen to match the *khepresh* or "war crown" so often worn by her husband. In the earlier years of the reign, at least she is represented as an eminently desirable woman according to an Oriental ideal of attractiveness (III. 11); and this degree of allure is emphasised by the epithets that are frequently applied to her—"Fair of Face, Mistress of Joy, Endowed with Favours, Great of Love". There seems little doubt that like her husband she is to be regarded as a deity, in her case as a Venus figure.⁶²

The Aten as the Heavenly Father had assimilated all the sun-gods and masculine principles in the Egyptian pantheon. While he is sometimes regarded as the mother and father of mankind, he remains a distinctly male concept, a sole god, a king in jubilee, lord of heaven and earth. The great female divinity who had existed since prehistoric times as a pervading influence in Egyptian religious thought, and had manifested herself as the primordial mother-wife-lover in such aspects as Nut, Hathor, Isis, Mut, Sekhmet, Amunet, etc., was notably lacking in the new sun-cult. As recently as the earlier part of the reign of Amenophis III a great temple to

⁵⁴ Aldred (1973) No. 150; Edwards (1972) No. 21.

⁵⁵ Carter (1923-31) I, pl. ii; Davies (1903-08) II, pl. xxxii.

⁵⁶ Hayes (1959) fig. 84.

⁵⁷ Edwards (1972) No. 25.

⁵⁸ *Ibid.*

⁵⁹ Wilson (1973) pp. 235ff.

⁶⁰ Aldred (1973) No. 16.

⁶¹ See Note 48.

⁶² Aldred (1973) p. 20.

the mother goddess Mut had been built at Karnak and furnished with hundreds of statues of the goddess. It is perhaps as something instinctive and subconscious, therefore, that Nefertiti with her children takes on the role of the divine female counterpart.

The XVIIIth Dynasty had seen a growth in the worship of deities grouped into trinities consisting of a god, his consort and their offspring. This characteristic was to become dominant in the later cults of Egypt; and the idea was not suppressed by the Aten religion, but rather transformed into the worship of the Royal Family. It is this family that is the focal point in the daily worship that was conducted by private persons in the chapels of their houses at Tell el-Amarna. The ostensibly informal and secular nature of the themes illustrated on the house stelae should not conceal from us that it is the subject-matter of a new cult, concerned with the significant domestic acts of a Holy Family who are the visible intermediaries between man and the godhead—supreme, the invisible sun-god.

While historians have tended to stress the human and secular aspects of these new icons of the Aten religion, and to ignore that they replace the images of the old ruling gods with representations of the new divine rulers, there is yet a second and more subtle characteristic of Amarna art which has been almost entirely overlooked but which gives it a truly revolutionary significance.

If we examine the Berlin house stela for instance a little more closely we shall become aware that new trends are subverting the old traditional aspective view of reality. Even the Karnak talatat had adhered to the time-honoured canon of representing human feet as though they were seen in their interior aspect; and each pair of hands often as duplicates of the same hand. In place of these mere symbols of feet and hands, the Berlin stela carefully distinguishes the left and right feet, and the hands of the children also appear to be differentiated though the scale is too small for certainty. What is clear, however, is that while the side-lock of Meketaten is shown in detail worn on her right side, those of the other children are obscured since they are facing left. In other words, the artist conceived of his figures as existing within the reality of space and not within the two dimensional confines of the picture area.⁶³

This is an entirely new vision on the part of the sculptor which is rare in the ancient world before this time. Admittedly in that vernacular art which is particularly evident in the Theban wall-paintings, left and right feet had appeared as an artistic aberration, at least as early as the tomb of Djoserkaresonb, but such occurrences are only sporadic.⁶⁴ Thus, one scene of guests at meat from the tomb of Nebamun in the British Museum distinguishes between left and right feet whereas its companion painting from the same tomb makes no such discrimination.⁶⁵ The distinction between left and right feet is not made in the carefully sculptured tombs of Khaemhet, Surer and Kheruef dating to the last years of Amenophis III; nor does it appear in the Theban tombs of Parennefer and Ramose dating to the first years of the reign of Akhenaten. It puts in a tentative appearance on the Boundary Stelae at Tell el-Amarna, and is fully established on the Berlin stela and the carved slab from the Royal Tomb, the latter both dating to the period between Years 6 and 9 of the reign of Akhenaten.⁶⁶ It appears to be an innovation of the King's sculptors because it is confined to figures of the Royal Family. For others the old conventions prevailed, as is evident on the walls of the private tombs at Tell el-Amarna.

As with feet, so with hands. It is sometimes difficult to decide whether a left or right hand has been correctly drawn on the same body owing to the fact that a mere line defining the ball of the thumb is all that is required to differentiate one from the other. From the early Old Kingdom, the artist had distinguished a clenched right

⁶³*Ibid.* p. 72.

⁶⁴Mekhitarian (1954) p. 79.

⁶⁵B.M. Regn. Nos. 37984, 37986.

⁶⁶Aldred (1973) fig. 34, No. 16.

hand from a clenched left hand, though he did not always correctly represent them on the same figure, especially when it was shown facing left.⁶⁷ In the Amarna Period, however, there is frequently an effort exhibited to look at hands with a fresh vision and to represent them properly in a spatial context. Sometimes the result is a little naive, as in a relief of Akhenaten wringing the neck of a sacrificial duck, where the artist has attempted to give a twisting motion to the right hand.⁶⁸ But other essays are more successful, such as the fingers of the harpist and lutenists in the orchestra that provides incidental music for the royal feast. The relief in the Schimmel Collection showing an elegant mannerist hand dropping a lump of incense on the altar reveals a fresh observation alike of a novel scene and of the moment when the fingers open to release their burden.⁶⁹ This is an unmistakable right hand, seen with the fingers in recession.

But the relief, also in the Schimmel Collection (Ill. 12), showing a hand, probably that of Akhenaten himself, holding up an olive branch bending under the weight of its fruit to the caressing rays of the Aten is the best testimony to the spatial reality of the new vision.⁷⁰ The scene is unique. The olive, an exotic tree imported into Egypt in the New Kingdom, has here replaced the traditional bouquets that are offered to the Aten. The novelty of the scene may have induced the artist to draw the branch and the hand that holds it from life and not according to time-honoured convention. The grasping hand is drawn to show the thumb in relation to the branch and the enclosing fingers in an aspect which as nearly approached perspective as any Egyptian draughtsman ever attained. The contrast between the old and the new will be apparent by comparing the hand of the king in this relief with those of the Aten rays.

The view of such a hand drawn as though operating within a spatial reality necessarily involved the artist in attempting to give an illusion of depth within the confines of the scene he was representing in relief or painting. An example of this is the relief showing a stand of wheat, again in the Schimmel Collection⁷¹ (Ill. 13). In place of the conventional zone of ripened grain with ears in a uniform horizontal band, such as one finds in reliefs of the Old Kingdom and which recurred with little variation in harvest scenes of Dynasty XVIII, we see here an informal arrangement of bearded ears moving in the breeze. The heights of stalks and lengths of ears are varied to form a subtle rhythm interrupted by a few sword-like leaves. The effect, whether intentional or not, gives an illusion of depth; as though the spectator were looking through the moving stalks to what lies beyond and not at an impenetrable wall of straw.

A similar effect of depth is achieved in another relief showing part of an arbour (Ill. 14), evidently similar to that pictured on an ivory plaque in the Louvre.⁷² The trunk of the vine climbs up part of the arbour; the branches are more lightly carved, and the veined leaves are even more faintly indicated, some of them so delicately as to seem to recede into the background. By contrast the grape clusters are boldly carved, giving weight and volume to the ripened fruit. The sculptor has shown here not only his delight in texture, but also his skill in suggesting depth by spatial relationships between different parts of the growing vine.

This novel conception of space in Egyptian art is seen in the reliefs carved on the walls of the tomb chapels at Tell el-Amarna, which almost certainly copied scenes used in the decoration of the Aten temples. Instead of the traditional extracts from pattern-books selected according to the taste of the patron and represented in a juxtaposition of different subjects, each wall is considered as a single unit and covered with a complete scene. In a chamber in the Royal Tomb one subject is spread over two adjacent walls, and the same arrangement is used in the private tombs at Tell el-Amarna, such as those of Meryre I and Mahu.⁷³

⁶⁷ Schäfer (1974) pp. 297-99.

⁶⁸ Aldred (1973) No. 118.

⁶⁹ *Ibid.* No. 147.

⁷⁰ *Ibid.* No. 146.

⁷¹ *Ibid.* No. 93.

⁷² *Ibid.* No. 83.

⁷³ Davies (1903-08) I, pls. i, x, xxv; IV, pls. xiv, xx-xxii, xxiv-xxvi.

What is noteworthy in these scenes is that the vertical line defining the corner where two adjacent walls meet has been entirely ignored, whereas in the Theban tombs of the Dynasty, the division is emphasised by a twisted rope pattern and block borders.⁷⁴ In other words, at Tell el-Amarna the Egyptian artist was now conceiving of space as a totality and not as the contiguity of separate if adjacent planes.

The same management of space but in its exterior aspects is seen in the sarcophagi of the period. Tutankhamun has a sarcophagus with one of the goddesses of the four quarters standing at each exterior corner in such a position that half her body falls vertically on the long side and the other half on the short end.⁷⁵ This is the persistence of a new design which was introduced in the Amarna period to judge from a fragment in Berlin in which Nefertiti plays the part of a goddess.⁷⁶ That this was outside the natural experience of the Egyptian artist is suggested by the sarcophagi of Ay and Haremheb which although a mere five years or so later in date, show that the position of the goddesses has been shifted so that two are fully revealed on each long side, only their winged arms being visible at the head and foot ends, and so conforming more comfortably to Egyptian instincts.⁷⁷ That the Tutankhamun sarcophagus was no artistic sport is seen in the same disposition of the goddesses at the corners of the alabaster canopic chest which contained the King's viscera.⁷⁸

Even more significant is the design of the statues of these same goddesses who stand with arms outstretched to protect the gilded shrine enclosing the chest.⁷⁹ Three of them have their heads turned to the right while Selkis looks to her left (Ill. 15). It is therefore not possible to place these figures in their proper guardian stations without directing their gaze around three sides of the chest. The Egyptian designer has used them to encircle the square, a reversal of his usual practice of squaring the circle.

This new conception of space breaks out of the Egyptian artistic consciousness only in these somewhat oblique manifestations. Beneath the surface of Amarna art, a new idea of representing the space around them prevailed for a brief moment in the vision of the artists of the Egyptian Court; and as such it was a notable achievement in the art of the Late Bronze Age.

References

ALDRED, C.

- 1959 "The Beginning of the El 'Amarna Period." *Journal of Egyptian Archaeology* 45 (1959) pp. 19ff.
- 1961 *New Kingdom Art in Ancient Egypt, 1570-1320 B.C.* 2nd edn. London
- 1967 "The Second Jubilee of Amenophis II." *Zeitschrift für Ägyptische Sprache & Altertumskunde* 94 (1967) pp. 1ff.
- 1969 "The 'New Year' Gifts to the Pharaoh." *Journal of Egyptian Archaeology* 55 (1969) pp. 73ff.
- 1971 *Egypt: The Amarna Period and the End of the Eighteenth Dynasty.* Cambridge Ancient History, rev. edn. fasc. 71. Cambridge.
- 1973 *Akhenaten and Nefertiti.* London.

⁷⁴ Vandier (1952-69) IV, p. 14.

⁷⁵ Carter (1923-31) II, pl. LXV.

⁷⁶ Schäfer (1931) pl. 56

⁷⁷ Hornung (1971) pls. 62-65.

⁷⁸ Carter (1923-31) III, pl. X.

⁷⁹ *Ibid.* pls. VII, VIII.

- BISSING, W. VON.
1905-28 *Das Re-Heiligtum des Königs Ne-Woser-Re (Rathures)*. 3 vols. Berlin & Leipzig.
- BISSON DE LA ROQUE.
1937 *Bisson de la Roque*, (F). Fouilles de l'Institut français d'archéologie orientale du Caire, T. XVII. *Tod* (1934 à 1936). Cairo.
- BORCHARDT, L.
1910-13 *Das Grabdenkmal des Königs Sa-hu-Re*. 3 vols. Leipzig.
- BORCHARDT, L.
1938 *Ägyptische Tempel mit Ungang*. Cairo.
- BOTHMER, B.V.
1969 "A New Fragment of an Old Palette." *Journal of the American Research Center in Egypt* 8 (1969) pp. 1ff.
- BOTHMER, B.V. & KUTTH, J.
1974 *Brief Guide to the Department of Egyptian and Classical Art*. The Brooklyn Museum, New York.
- CARTER, H.
1923-31 *The Tomb of Tut.ankh.Amen*. 3 vols. London.
- DAVIES, N. DE G.
1903-08 *The Rock Tombs of El Amarna*. 6 vols. Egypt Exploration Society, Archaeological Survey of Egypt. *Memoirs* 13-18. London.
- DERCHAIN, P.
1966 "Réflexions sur la Décoration des Pylônes." *Bulletin de la Société française d'Égyptologie* 46 (1966) pp. 17ff.
- EDWARDS, I.E.S.
1972 *Treasures of Tutankhamun*. (Catalogue of the Tutankhamun Exhibition held in the British Museum) London.
- FAKHRY, A.
1943 "A Note on the Tomb of Kheruef at Thebes." *Annales du Service des Antiquités de l'Égypte* 42 (1943) pp. 449ff.
- FAZZINI, R.
1975 *Images for Eternity: Egyptian Art from Berkeley & Brooklyn*. The Brooklyn Museum, New York.
- GARDINER, A.
1946 "Davies's Copy of the Great Speos Artemidos Inscription." *Journal of Egyptian Archaeology* 32 (1946) pp. 136ff.
- HASSAN, S.
1955 "The Causeway of Wnis at Sakkara." *Zeitschrift für Ägyptische Sprache und Altertumskunde* 80 (1955) pp. 136ff.
- HAYES, W.
1959 *The Scepter of Egypt*. Part 2. Cambridge, Mass. 1959.
1962 *Egypt: Internal Affairs from Tuthmosis I to the Death of Amenophis III*. Cambridge Ancient History, rev. edn. fasc. 10. Cambridge.
- HORNUNG, E.
1971 *Das Grab des Haremhab im Tal der Könige*. Berne.
- HORNUNG, E., STAHELIN, E., ET AL.
1974 *Studien zum Sedfest (Aegyptiaca Helvetica I)*. Geneva.
- JAMES, T.
1965 *Egypt: From the Expulsion of the Hyksos to Amenophis I*. Cambridge Ancient History, rev. edn. fasc. 34. Cambridge.
- JEQUIER, G.
1936-40 *Le Monument Funéraire de Pepi II*. 3 vols. Cairo.