

THE TEMPLE OF MAN

APET OF THE SOUTH AT LUXOR



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Translated from the French by
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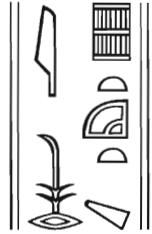
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THE
TEMPLE
OF MAN



VOLUME 2



Statue of Amun and Mut

Here we draw near to secret Egypt, the aspect that will reveal to us the pharaonic mentality, the mode of thought of the masters of this empire.

(Chapter 4)

Part 5

THE PHARAONIC TEMPLE



Chapter 23

THE ARCHITECTONICS OF THE PHARAONIC TEMPLE

The master builder said to the disciple:

“You come from the earth, it has nourished you, and you will return to the earth. This element holds and keeps the other elements.

“Know that everything that, of itself, diffuses outward without form needs a receptacle. Thus, Air retains the Fire of the Universe, and Water retains Air, as Earth is the vase that holds Water and gives it form. Thus, Earth is the container of All. I speak to you of the earth upon which you tread, the gross image of the spermatic Earth of which you are made.

“Always see, in the lower things that your senses reveal to you, the image of things that your spirit alone can conceive when your senses are closed to the world of transitory appearances.

“I will speak to you of architecture, not of building technique.

“The man of the earth lives in his houses of earth. The *neter* comes from heaven and creates earth; the house is but emptiness enclosed. The forms of the world, in which are inscribed the laws of the Becoming and the Return, frame this emptiness. It is necessary to learn to read these signs in order to reach the sanctuary through the labyrinth of ‘possibilities.’ Learn how the doors are bolted by the secret of Nature, or else you will never attain the goal.

“But the emptiness is defined only through the law of numbers. Numbers impose the form of the limits. This is the foundation. And through this Idea the formless spirit becomes, grows, and vegetates into formed matter, since everything is sustained by the process of vegetation.

“There is growth from the earth skyward; there is formation in going from one horizon to the other. Then there is what is inside and what is outside. From the inside comes the ripened sap that gives the seed; from the outside comes the nourishment that the sky brings to earth. This is the Idea of the Temple, the House of God.

“Listen. The man who lives in his house imprints it with his thought, the rhythm of his being. The house where a *neter* dwells is impregnated by its Idea and the nature of its being. It is *its* house and not another’s; do not search for what will not be there. But the Whole converges to define this *neter* because it is He and yet inseparable from the Whole.

"When you know the orientation of the God for which you wish to construct a dwelling place, you know the Idea that will take form, that is, the basis of the plan. On this basis draw the number, or "geometry" of this *neter*. This element of the origin will necessarily guide you toward all the forms that can result from it, but it will only be a guide and not an image.

"Know the secret of number because it engenders. It is a seed that carries a fruit of its species within it. Mark the plan of this 'inevitability' on the floor of the temple for those who will come after you, so when the time arrives to remake this dwelling, they may construct a new one on this base. Any new form is made from the death of the preceding one. The heavens are a sphere that rolls the Becoming; the *neter* is of the heavens; come to live on earth, it must take form there in accord with the heavens, like a plant.

"Next, arrange the enclosures according to number as they are found to be in the living organism of this *neter*, in keeping with its 'becoming.' Thus you will make the geometry live. Time is growth and becoming; it is your only true measure. Each *neter* has its time, as does each seed that gives fruit. And know that, for man, the soul is fixed in forty days: Maāt; and it stirs in the fourth month. It can live at the seventh lunar month: Osiris; or else at the ninth solar month: Horus.

"Transcribe these numbers into cubits, digits, and thumbs, and into diameters, through the secret of measures; then set the boundaries of your houses in the house of the *neter*.

"Thus, the indestructible idea will take form in transitory matter. It will grow in its plane, and from this plane it will grow like a plant toward the heavens. Open and close the corollas of the columns according to the nature of the months of gestation of the *neter*, from the entrance to the naos, and choose the stones in this spirit. Know that the work of your hands, if it conforms to the Idea, will be creative and harmonious; thus the temple will be made indestructible. What difference if the stone and earth crumble; the Idea is of the nature of the *neter* and will be merged in God.

"All this is archi-texture.

"In order to understand numbers, know that Unity is triple in nature like the Verb of God. All number is founded on this trinity of point and on the triangle of surface; but the ternary volume is constructed on the four columns of the Elements or essential qualities of things. Only the Creator can proceed from a point toward volume, and from nothing, create All.

"But you, as creature, must look for the point by proceeding from volume; because every perceptible thing is volume, is space or Spirit enclosed.

"The logic of your brain has no power over number. Number is the Verb of God and governs intelligence. Leave the numerals that count things to the intelligence of the head; search for number in the intelligence of your heart.

"Look at your hand. On its inside surface, which is active, the destiny of your incarnate soul is drawn. Do not confuse it with the back of this hand where the law that presides over Becoming is inscribed. On this side the three phalanges of the fingers give the proportion of the sacred number, the section of all harmony. Never prostitute this number, under pain of disgrace; however, its secret is well protected from the profane.

"Your hand has four fingers, the elements of Osiris; it has twelve phalanges, the zones of the sky. The fifth finger governs the others, as spirit does form. It is the fifth essence of things. The inside of your hand is active, but I will also tell you this: The second inside phalanx belongs to Min-Amun, the procreative milieu. Now you will be able to make hands speak.

"The first surface is the triangle and its root is the incomprehensible Unity. When this Unity-surface—the triangle—divides in two, there is male and female, a couple procreating through the four Elements: this is the square cut by its diagonal.

"The four Elements are the square of heaven. Understand that the side of a square is the

foundation of every right triangle. Draw the diagonals in the square; they form four triangles that are equal to one another and thus manifest the essential law that rules right triangles, the law of the whole applied science of numbers. Now you know only its function. Look for its nature and on this basis draw the *canevas* for the architecture of the world.

"The first number is Three, the second is Four, the third is Five. These are the primary values of the sides of the sacred right triangle, whose application has innumerable consequences.

"Every surface is curved, because the world is a Becoming and a Return; all within it is cyclic. Calculate as if a surface were a plane, but with numbers that rectify this plane into a curve; otherwise you will be a surveyor and not a geometer of the Temple. Only draw the curve for the sky and for what relates to Osiris: the Becoming and the Return. Our numbers are universal and our measures are established to rectify the straight line into the curve, planes into volumes, length into time, heaven into man, genesis into life. God is the model because he is the Master of all in All.

"Watch a man grow when he is detached from his mother, because the living soul in him tends to shape this body toward a perfect proportion.

"Man is made in the image of heaven; look at the imperfections of the body to know the faults he has yet to pay for, but know that he *is the Universe*; this is why you should take him as your model, as the reflection of the creator God. The whole work of creation is in man; put man in his place in the Temple. He is born and he will die; between these extremes he lives.

"This life is the expression of consciousness.

"The heart beats the rhythm of time; the lungs breathe and link intangible substance to living matter; the organism digests, separating the pure from the impure.

"His face is his life's utterance; his mouth expresses his thought; his eyes reveal his consciousness. His voice can render all the sounds of Nature, any words that are expressed. Each gesture of man speaks. He is the complete incarnation of the intangible and inaudible Verb that through this form makes itself known. Make the statue live by causing the truth of the *neter* to be expressed in it.

"If you represent a human body on the wall, show only one of its sides if the other is identical; show it facing forward if there is an inequality in the two parts, because human beings are a duality in their fallen nature, but Unity in their origin.

"In man, the east side receives, the west side gives. Evil is in his brain, which always separates; good is in his heart, *ib hati*, which—always—unites.

"Thus, you will make the image of man speak.

"Watch the animals of the air, the water, and the earth. Each expresses one of the aspects of which the whole is Man-King. Each one expresses one of the words of the divine language that is the Universe. Make the animals, plants, and colors speak; make them say what they in truth are. Guard yourself from making them spokesmen of what you yourself think. Elevate what is light; lower what is heavy; learn to know what causes the heavy to rise and what makes the light fall and gives weight to it. Spirit is that which is most light, and the "odor of the *neter*" is that which is most heavy, as the seed incarnates spirit and reduces it into body.

"In this way make the temple speak; and then draw the encircling wall around it, the collar of Fire, in order to drive away the enemy of life, this life that desires eternity. Plant flagpoles at the entrance, magnets of heaven, that their flame may be nourished by the spirit of the four winds.

"I have given you here the rudiments of a great science, so that you might learn to distinguish the builders of human dwellings from the master builder of the temple. May this guide you in what you must learn."

The disciple, remaining alone, saw the companion of the master builder coming toward him.

"My brother, I have been directed to lead you through the science of architecture, to show you particularly the sites at which you can observe what will subsequently be hidden from your eyes in the finished work. But I would be ungrateful if I were to attribute to myself the high science that was taught to me. So I will explain these things to you in the same way the answers to my questions were given to me.

"First of all, is not water the beginning of everything? Thus, we use the mean level of the highest groundwater to establish the horizontal and the foundation mark of our monuments.

"The fathers of our fathers observed long ago the time it takes for the earth to increase through the depositing of silt and for the heavens to cause the level of the waters to rise. Thus, we know in advance the time of the collapse of our works, gnawed away in their foundations like a root that dies after giving its fruit, and which then reinseminates the earth; and we calculate its life by the rhythm of the cycles of the sky so that the growth of our temples might conform with the changing of the great seasons of the Universe.

"Let us now consider the principal directives of applied architecture.

"Without philosophy there is no architecture, only building technique.

"The temple must be read like a book. If it had nothing to teach, it would be but a house for people instead of the house of God. If the *neter* that it shelters is beautiful, the house will be beautiful; if the *neter* is displeasing, the house will also be so because it is the description of the *neter*.

"If it were only a matter of describing a myth, one would be able to write on the walls as one does on a papyrus; this would not be THE TEMPLE. To build the house of a *neter* is to create the Idea of this *neter* in every sense, with the material as with the measurements and the texts on the stones. The Idea, thus materialized, is inscribed forever in the substance of the Universe; but there must be no error.

"The secret is in understanding the meaning represented by the *neter*. Now, every *neter* is but one aspect of the Whole that is Unity; it can only be considered when integrated into one or the other of the great lineages, the one to which it belongs.

"The teaching as a whole is that of the genesis of the world. To situate only a phase of it would make no more sense than to describe one part of the human body without connecting it to the entire body through a general function. This is the first directive.

"What good would this teaching be if it were not the key to a science that we could usefully apply in our lives, and still more so in the afterlife? We are not concerned with a play of thought, but with a sacred reality. If fantasy embellished a *neter* with attributes for an aesthetic purpose, it would be an unpardonable error, even though done in ignorance, because its image must be true, without a trace of falsehood. This is the reason for a rigid canon that cannot be changed except by the sage who has the knowledge of the time and the secret of the writing.

"The teaching is given for those who live on earth, who come and come again to search there for the way that leads toward the Immortal. This is our world of duality, of birth and death, and of rebirth in bodies. Everything here is double, and one of the two defines the other; everything here is crossed, the weak defines the strong, the low measures the high, and aversion calls forth sympathy. Here reigns the fallen Sethian prince, who in making good created evil, and in making evil called forth good. This determines the succession in the architecture of the temple, and it is the second directive.

"Those who already know how to renounce the body for the life of the soul alone no longer need

walls to delimit the emptiness and fix it into mortal forms. For them the time has come in which God alone is the Temple; for them there is no longer a temple on earth. Know what you search for; but when you look at the temple, know that you do not look at the unique Creator, but at the teaching of this world, born of the Unique; therefore let your work conform to the goal that this imposes.

"Do not be concerned with the material duration of your work. Place sandstone, which represents Earth, upon limestone, representing Air, if the Idea requires it. What does it matter if the limestone crumbles, or if the construction of clay and silt, representing Water, risks caving in. Choose granite for Fire because that is where it comes from.

"Know also that all life is the fruit of the black destruction of death, that this blackness is the root, the origin of what will be white or red, like the veins that sometimes run through our black stones.

"Cut the stones in the quarry itself; choose them judiciously. Give them the measurements foreseen on the plan, because the joints must measure the images; they can separate the head from a figure, or cut out a part of the body. Choose the stone stratum that conforms to the principle to be expressed.

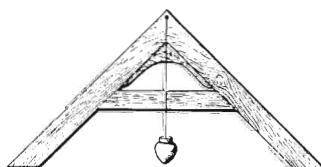
"Let each room—each chapter of your book—be conceived as an entity, even if it means building walls that will one day fall; but place a link through joining walls only if the idea 'traverses' from one room to the other. Embed your key-stones in the wall and the ground at the exact places of the measures and numbers that establish the plan. Make the Idea rise from the ground to the architraves, from the earth to heaven, where the laws are inscribed. Make the gods rise toward God, as the sun attracts to itself the flower of the plant.

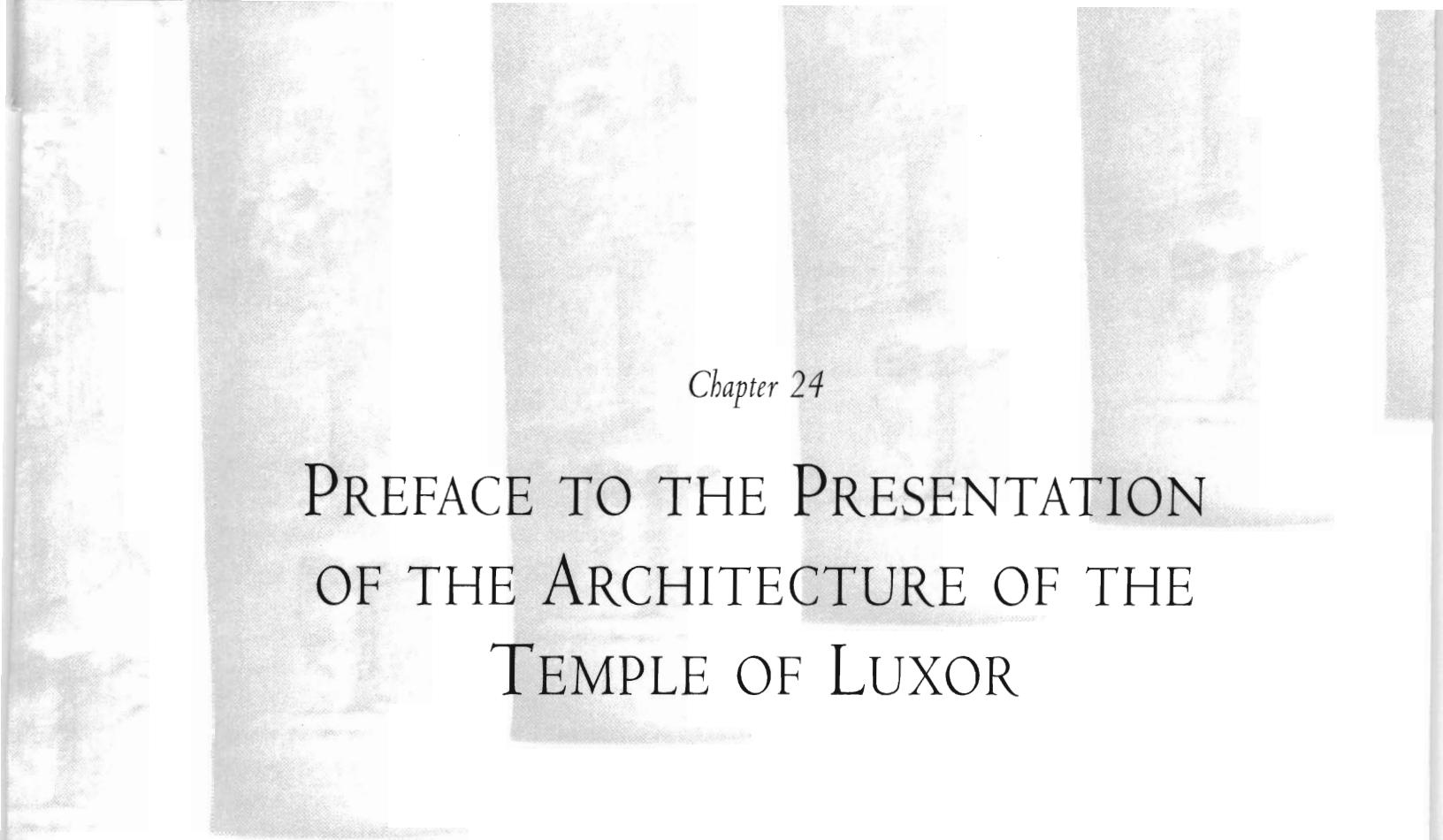
"This is the third directive.

"The number of scenes represented is limited by the general canon, but each scene is the foundation on which, through measures and attributes, a thousand nuances of thought are inscribed.

"Know that the door expresses the key of the idea that is transcribed in the place into which it leads. Make this door a precise study, because the temple will only be consecrated if no error is committed. As for the obelisks, they will search the sky for the generative Fire of the temple; the master will inscribe on them the laws that cause the worlds to revolve.

"And now come, touch with your hands and see with your eyes the transcription of what I have said to you, because you must observe how we work. You will see that we carefully 'turn under' the previous temple in order that it be the seed and the bed of life from which will come forth the new temple conforming to a new time. You shall count the number of stone layers in the foundations, and you shall learn their significance. You shall observe the choice of inscriptions: they will be guides for those who know how to read them. You shall look for the teaching in the foundation deposits and the cornerstones. You shall see with what love of truth our masters founded the empire of knowledge and of great prayer."





Chapter 24

PREFACE TO THE PRESENTATION OF THE ARCHITECTURE OF THE TEMPLE OF LUXOR

As archaeology and philology, standard Egyptology is addressed to specialists; but the teaching, which the knowledge implied in the established facts allows one to gather, is addressed to a public that is interested in the “causes” of life. It is correct to acknowledge that the guiding thought behind the establishment of the pharaonic empire, which in its writing, its myth—in short, in all its essential elements—persisted over millennia, must have been of a solidity such that it could not grow old. In its reality and because of this fact, pharaonic Egypt should still be at least as relevant as our most recent discoveries in microphysics.

There has been the desire to view this myth and its symbolism as a syncretism of various beliefs and tribal totemisms; but the uncovering of the tombs of the first dynasties shows that, from the time of its historical origin, the writing, myth, and symbolism were complete and constitute a solidly established base.

Moreover, we search in vain in pharaonic Egypt for explanatory written documents, or for “theories” in the sense accepted in the West since the time of Greek influence. Theory belongs to the era of research and no longer has any meaning when the problems are resolved.

The historical era of this empire presents itself as a period of political and religious application of a certain knowledge and a proven science; it no longer shows any interest in demonstrations and experiments, but simply applies the preserved tradition.

It is understandable then that this received science became altered more and more as it was passed on. It is psychologically sound to see a teaching become more and more complicated, a teaching that, at the time of the first dynasties, was still very pure and, accordingly, was transcribed by simple and essential methods—that is, in a synthetic spirit—as numbers, geometry, and biological symbioses.

This “progress” into complexity through the extension of the *symbolique* became clearly manifest after the Middle Kingdom, and reached its climax with the Ptolemaic conclusion of the pharaonic empire’s political existence.

There is *knowledge* in Egypt; it has been there since the most remote times and has nourished humanity for millennia. In the end, its routine application was able to induce the invaders—particularly the argumentative Greeks—to look for the “reasons” that demonstrate such and such an axiom or tradition, which previously was transmitted and retransmitted as an article of faith with no curiosity about investigating the causes and the knowledge that led to it.

But there is a fundamental difference between an investigation of the grounds of knowledge through a posteriori reasoning and this same investigation through intuition, illumination, and spiritual experience with its experimental *demonstration*, in a word, through the esotericism of Nature.

The first leads to a necessarily mechanistic rationalism because it is based on quantitative data and their interactions; the second leads to spiritual sources, accessible only to the privileged few of the “Temple.”

Ancient Egypt never explains the reasons for its behavior; the papyri give practical applications in mathematics and medicine that imply knowledge that was never revealed to the practitioners. The general conclusions of experiments and the theory of laws, indispensable in the phases of research that belong to our era, have no reason to exist in pharaonic Egypt, where, nonetheless, we meet an extraordinary civilizing work of exceptional duration.

It is the architectural monument, consecrated to worship based on the *symbolique* of the myth, which supports the evidence of this certitude, demonstrating a science whose applications radiate in all directions. Until now the pharaonic temple was never studied in its significance as a work that *speaks* to us because it kept mute before the questions put to it by a rational and analytical mentality.

Knowledge can only be synthetic; because of this it can only be intelligibly transcribed by the architectural monument, that is, by a *simultaneity of plane and volume*, accomplished in Egypt through the *symbolique* of the writing, the image, and the statuary. To this is added a complete architectural *grammar*, represented by the shape of the stone blocks: their joints, overlappings, and “transparencies” and “transpositions” in the walls comprise a subtle grammar in which the finish of a carving or its rough aspect, the absence of essential parts—such as the eye or the navel—the reversal of right and left, and so forth, play the role of accents, declensions, conjugations, and conjunctions.

Being consecrated to a definite principle, an Egyptian temple becomes what might be called a “library,” summarizing, in an exhaustive manner, all that can be known about that subject.

This is the result of our study of the temple of Luxor, which we are trying to prove by the facts presented in this book, which is a development, and a continuation, of *The Temple in Man*.

It is, however, impossible for us to reduce to a “plane” description, that is, a rational one with logical connections, that which is a simultaneity of planes and volumes and a simultaneity of complementaries. This is the only descriptive form possible for esoteric teaching, unless one has recourse to literary parable, which would only add another enigma to that of the architecture.

The link between the various given elements must be made *intuitively*, especially in this work where long parentheses (necessary for precision of thought) might appear to separate us from the subject.

For an architectural reading it is necessary to take into account all the impressions that one experiences upon entering the building. The first thing that stands out is the form of the room, that is, the plan. We are never indifferent to this form, whose quadrangle satisfies us through its equilibrium, but also seems to imprison us. The impression given by a square is very different from that given by an elongated rectangle, and, for example, if we enter into the round room of a tower, we are at a loss to know where to begin. As for volume, a low ceiling “crushes” us, whereas we “breathe” in a room with a ceiling of harmonious height. The high vault raises our vision in spite of ourselves.

Thus, the simple plan combined with the volume “speaks” to us, and it is this combination that initially can serve to express something to us without the intervention of reason. It addresses itself to the feeling that results from our living relationship to the milieu, alive through its form.

This is art, in its pure sense, which expresses itself in a verb that we cannot transcribe into words. In the same way, for example, the palm reader or the graphologist tries vainly to formulate systems that would make his practice more scientific, a practice that is and will remain a “-mancy” because the esoteric—that is, the inner meaning, the sense of volume, the sense of life (or vitalistic sense)—cannot be rationally transcribed on the surface plane.

In geometry, we know that it is impossible to cover the surface plane with pentagons in a continuous fashion; but pentagons do fit together in space to form a dodecahedron. Esotericism addresses itself to a sense of volume that we are unable to comprehend cerebrally without cutting it into planar slices, or without supposing it to be composed of planes in movement. *Rationalism is planar*. Only volume, and therefore architecture in general, is able to express the esotericism of a teaching for which an irrational moment is *prime mover*.

Through an assemblage of words we can describe the chronology of the creation, according to the tradition, by speaking of a ternary unity from which the passive-active duality results, which in turn forms the quaternary of the Elements. We can also symbolize this by the doors, the towers, and the levels of the facade of a cathedral but without, for all of that, being any more advanced in knowledge. These are empty words, empty of vital meaning, because the facade of this building is still only a plane.

But when this plane becomes a vertical facade elevated on a geometric plan based, for example, on the golden number, then the symbolic significance becomes complicated by a *function of growth* on the one hand, and by spatial location on the other, since this facade evokes the complementary walls that are going to make up the volume of the building.

Then the ternary of the doors comes alive, explaining the rite that, in words and gestures, expresses what the written word is unable to formulate. The central door consecrates the edifice, the faithful enter by the north door, as the living fluid enters at the North Pole of our terrestrial globe, and the south door becomes the holy door of “regenerations” (to be compared with the pharaonic *sed* festival).

We could thus analyze the esoteric meaning of the duality of the towers (or the double pylon with its obelisks) and the squaring of the cycle of the Elements—that which alone permits location in space, that is, volume.

To complete this example, let us note a *fourth dimension* in architecture, that of time, given by the *orientation*.

When we try to describe the teaching of a sacred architecture, we must necessarily proceed by piecemeal descriptions, and the connections must be made by the reader (because no one else can do it for him or her), after we have facilitated this understanding by specifying precise situations. But is this not the case for understanding anything of a living, moving character, in any sort of study? Is it not necessary to see a synthesis, indescribable in its simultaneity of place, volume, and time? For what purpose, we might ask? But is it not already a valid purpose to awaken a sense of superior intellection?

Current scientific research is leading slowly but surely toward the evidence of this logically inexpressible simultaneity. Mathematics is still a subterfuge obscuring our way back to the architectural methods that were so useful to the Ancients, who, as mathematicians, had recognized the impossibility of bequeathing the knowledge to future times in the form of theoretical mathematics alone, unless it become geometry in space.

Now, all this will appear strange and remain incomprehensible for those who never occupy themselves with the mystery of this phenomenon called "life," and with the problems inseparably connected with the reason for being and the goal of life.

During the last century it was believed that life was a mechanical complex that could be rationally understood; only the vegetable and animal kingdoms were considered living. The mineral kingdom—inorganic—was made part of a vitally inert state of Nature.

For the Ancients, on the contrary, life began with Spirit, that is, with the active—but still abstract—emanation of the One God, the indefinable source. In our day, with the advances in atomic theory, we begin to see this so-called inert mineral world peopled with strangely active atoms, with each molecule becoming a universe in itself, swarming with star-atoms in which forces play that no longer belong to the old physics of gravitation, but instead to powers of affinities and repulsions, of transformations of energy into light, and this occurring under the "supervision" of an extraordinary concentration of energy. And this energy, of which we know nothing (an ignorance that we mask under the name of "velocity"), again appears as the end of everything. In spite of their repugnance, the most conformist of our scientists begin to suspect the existence of a metaphysical world; perhaps one day they may also suspect transcendental powers, that is, powers both inside of and beyond matter, which appear as matter.

Life begins with the atom, a word that is inappropriate, by the way, when we consider that this atom is still a composite and still allows a scission, precisely into those energetic elements that manifest life. Now with the atom we are still far from organic life, but it is probable that we will eventually discover that organs are only "crystallizations" or materializations of these qualities, that is, of these potentialities characterizing the primitive, energetic functions of the atom; natural transmutations, indisputably demonstrated today, are but a symbolic form of that vital action, fundamental for all life, which is assimilation.

For the moment, we have only begun to approach this frontier where the attempt will be made to translate the function, in physics, into *vital function*, where, as with "alchemy," it is thought possible to justify the so-called dream of the Ancients through scientifically verified facts. Following this, as one might suppose, will come the phase in which we will find the *synthetic expression* for all domains of life, including the energetic, kinetic life of the atom, in the psychospiritual and metaphysical affirmations of the old tradition.

I appear to be prophesying and to believe in a sort of return to the past. This is incorrect. From pharaonic Egypt to our day, there has been an acquisition for humanity—an acquisition belonging to a domain for which there is no accounting—that thought does not know how to define, and which, it seems, is the only aspect of the phenomenon of life that constantly evolves: consciousness.

Our philosophers declare that consciousness is indefinable because it is indissociable from thought. This is true for the cerebral or psychological consciousness. But the self has no need to be *aware* of itself for there to be consciousness. From the sole fact that anything whatsoever *is*, it is its "me," in other words, it is qualified; it is itself defined in time and space, and in its own functions. The chemical affinity of a molecule is a selective function, therefore a first form of consciousness, and this will evolve until it becomes, in the organized being, psychological consciousness. Now, the chemical consciousness of a molecule is but the manifestation of a functional, global consciousness of the potential powers of the energetic grouping of the atom. Then, even closer to the reality, we observe that this atom is formed of a "Sirian" nucleus (from Sirius, the Sothis of the Ancient Egyptians, which they called the Great Provider), that is, of a sun with a double nucleus, one positive and the other neutral, surrounded by seven stages (from K to Q), actual or potential, of negative particles, each with its own rotation, and turning at enormous speeds around the nucleus

in various elliptical orbits, undergoing precessions that incline the planes of the orbits in all directions, creating magnetic fields . . . ultimately, this atom is a universe that our mathematics is no longer sufficient to calculate.

From the moment there is an identity of nature with function, largeness or smallness becomes irrelevant. If we need a telescope to observe one and a microscope to observe the other, it appears that we also need the vision of the spirit, because the senses are no longer able to observe the reality of the facts in their complex simultaneity.

Finally, the atom of the mechanists, of the mathematicians and engineers, leads us straight toward the Anthropocosmos, and this means that we will find in the constituent forces of matter potential arrangements analogous to those which are manifest in the final goal of this Universe, the goal that for us is man.

Life appears first in the atom; then, passing through present man, life wants to become Man Accomplished: cosmic consciousness.

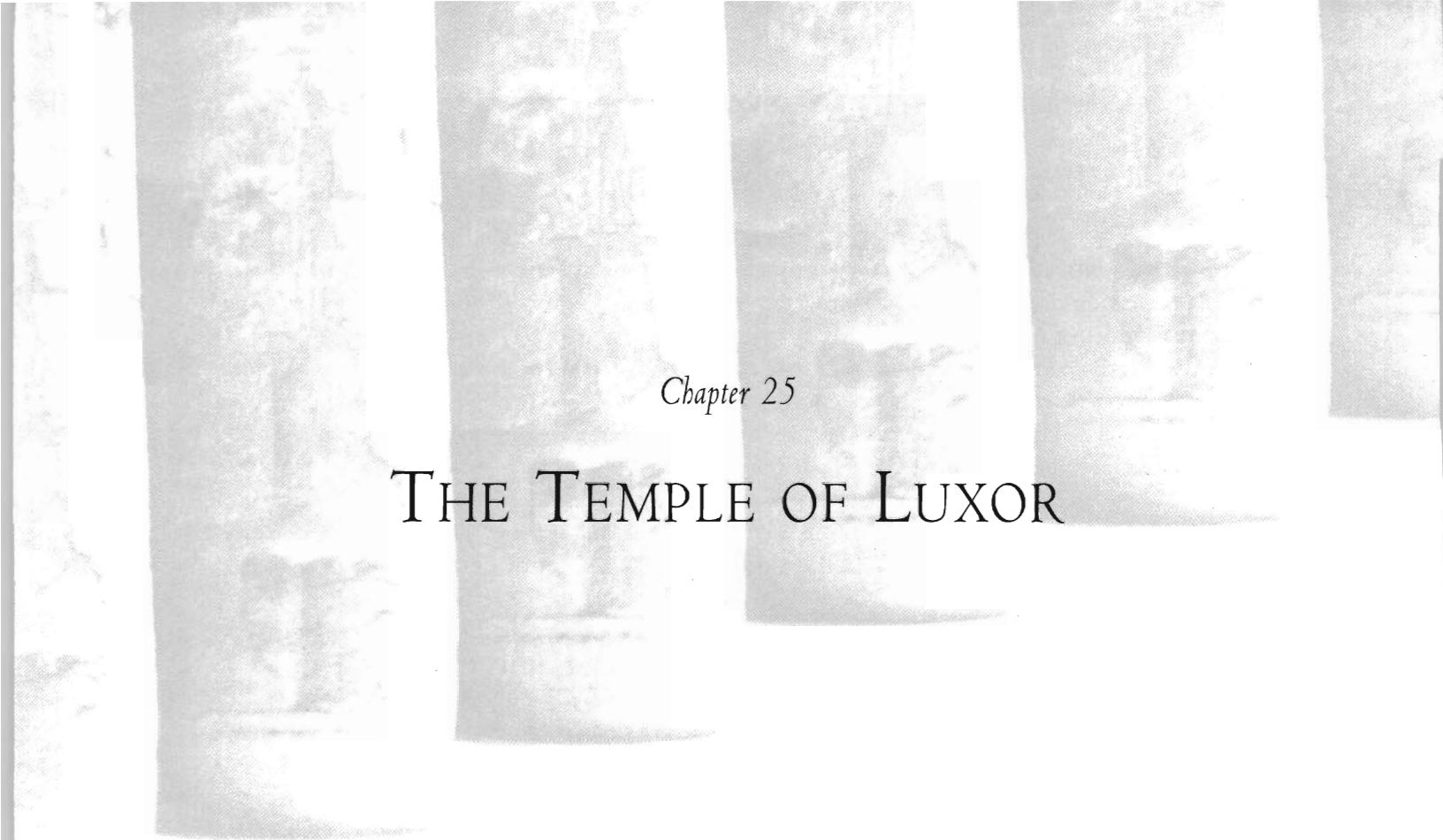
It is in the possibility—acquired by a large part of humanity—of being able to observe and understand the existence of this reality that *our progress* consists, in comparison to a very small minority of privileged beings admitted to the “Mysteries” of the ancient Temples.

The “Temple in Man” has expanded.

I prefer to envision existence as being caused by a scission or separation within itself of an incomprehensible Unity, then . . . how the Tum of the pharaonic sages, being of the same nature as the chaotic waters, Nun, coagulates these waters to cause the appearance of Atum (the original Adam) under the form of the “Ogdoad,” the four elements doubled into male and female. Thus, the Heliopolitan Mystery symbolizes the creative function of this “Fire,” which at Memphis will fall to earth to be the Luciferian Ptah, both the generating and the destroying fire: Sethian and Horian.

If the *raison d'être* of life is to become conscious of itself, then *the goal of life* is cosmic consciousness, the consciousness of the Whole, beyond all transient, mortal contingencies.

To admit this and to try to deepen our experience of it, which is the teaching of all revelatory religions, is worth the pain of living. We are now going to look at how, through the remains of a great temple, the pharaonic masters passed on the foundations of knowledge.



Chapter 25

THE TEMPLE OF LUXOR

The conception of the pharaonic temple differs completely from our own. Each temple is consecrated to a divine principle, and it is also entirely adapted to the *symbolique* of this principle, while being inseparable from the whole.

In order to illustrate these differences in architectural conception, we can compare the temples of Luxor or Karnak with the temple of Edfu. The latter is conceived as a nesting of seven naoi, one inside the other, whereas the temple of Luxor is conceived in its length as a sequence of phases of growth.

Taken together, pharaonic temples, throughout the whole of this empire extending the length of the Nile, represent an overall teaching; each temple can be seen as a particularly developed theme or chapter. This will be verified in a study of the geographical division—what I call the “mystical geography”—of pharaonic Egypt,¹ but even a general glance affirms that no pharaonic temple is the exact replica of another. Therefore, there is a question with each one as to whether it is an arbitrary conception or a systematic instruction.

Architecture is a living language. When the printing press dethroned architectural teaching, it eliminated the Spirit as well, leaving the empty letter.

Any building, no matter how simple, has a soul because it is a volume. Volume is necessarily indefinable Spirit-substance arrested in space. It is living, it is specified, it is number, and therefore music.

The more consciousness presides at its realization, the more clearly this volume-edifice explains the teaching that it contains. The African village hut serves as a symbol of the metaphysics of a tribal tradition, as does the Hindu temple, the Christian cathedral, and—supremely—the pharaonic temple.

And the building can speak in all ways, through the material, the foundation, the plan, the elevation, the covering, the lighting, the orientation—not to mention the site. The building speaks the language that only spirit can understand; it is sacred writing. Above all, it is to the monuments that the archaeologist looks in order to draw nearer to the soul of the history of a past time. But, do we still know how to read the architectural message?

¹ Work in preparation [never completed].

It is as much to relearn this way of reading as it is to rediscover the Ancient Egyptian teaching it transmits to us that we have gone more deeply into the study of the temple of Luxor, the pharaonic “Apet of the South.” It is located on the right bank of the Nile, from which it is now separated by a road that goes to Karnak. Today, the sandstone blocks on the banks of the river still show the location of the ancient loading dock.

The real orientation of the temple is given by the axis of Amun, an occult axis in the sense that it is not practically useful as a reference for the architecture. Moreover, the median construction axis is broken at precisely marked places and veers toward the east. This deviation is warranted by the intended figuration of the temple.

The geodetic location is $25^{\circ}43'$ north latitude and $32^{\circ}39'$ east longitude relative to Greenwich.² With respect to a “real” longitude that uses 0° passing through the Pyramid of Cheops, the temple of Luxor is then at about $1^{\circ}30'$ east longitude.³

We do not have sufficiently precise *astronomical* data relative to the axes of the temple to be able to note them here. Generally, we can affirm that these axes relate to Jupiter and the Moon for all of the temple up to the court of Ramesses (the narthex), where the sun intervenes in the strong deviation marked at this point.

Precise calculations should be made by an astronomer with a sufficiently open mind to devote to this research, and with, for that matter, a fundamental interest in the study.

Let us recall here our previous allusion to the habitual confusion concerning the orientations. We say “north-south” and “east-west”; this is vitally (esoterically) false. North-south is the axis of the rotation of the terrestrial globe. The north attracts, absorbs; the south repels, rejects. This is the magnetic axis of the world.

The orientations depend upon the *cycle* and include east for rising, midday for maturity, west for retiring and conception, then midnight for the mystic birth.

The temple of Luxor has its entrance at the north, that is, toward midnight of the cycle, and the essential sanctuaries, as well as the apse, are located toward the south, at midday, the formal realization.

Christian initiatic cathedrals generally have the entrance at the west (the evening, conception), and their apse is at the east, the rising, the advent. The Divine Passion begins with night, the ascent of Golgotha with morning, and the highest moment of the cosmic crucifixion is at midday. The redemptive death takes place in the afternoon, and the placement in the tomb is in the west, at evening. The Resurrection takes place on the *third day*, not after three days. It takes place in the morning—the east—two days later.

Thus, the orientations in the temple speak in accordance with the cycles of time. The north-south axis creates the seasons, it is an alternation. The diurnal cycle is a continuous succession of birth, maturity, death, and renewal.

Alternation produces existence, the maintenance of the species by the seed. The cycles of renewal make evolution, the march toward the Beyond; it is the same being that, by and in itself, is renewed.

With the temple of Luxor we begin with night, toward midnight, and have realization toward midday, symbolized by the south. The infant is born headfirst, oriented *downward* (the south). Here, north and south are combined with midnight and midday. This is not a metaphysical birth and passion, but a cosmic-human realization.

² H. Engelbach, *Introduction to Egyptian Archaeology* (Cairo: I.F.A.O., 1946), p. 77.

³ In pharaonic Egypt we have good reasons to adopt a meridian system based on this spot.

The construction of this temple was made in four stages, and each stage left an architectural "anchor point" for the following, from which one can conclude that a plan of the whole existed from the beginning. These stages correspond to human measurements at birth, and to the essential phases of growth, according to the most recent biometric data.

The materials utilized consist principally of rose sandstone and white limestone, according to the symbolic directive. Black, rose, and gray granite are reserved for statues.

The apparent disorder of the pavestones in the covered temple revealed to us the existence of a mosaic that depicts a head, the precise model for which exists in room XX in bas-relief. The size of this mosaic face serves as a reference for the proportions of the human figure, if the temple represents the height of a man.

The figure we call king B on the west wall of sanctuary I gives us the exact measurements of the size of the temple. The king's head, resculpted, but in a manner that does not obliterate the first proportion, indicates the two important phases of his growth, that of twelve years and eighteen years, which relate to the human genesis of this temple.

Because it was the first one of its type ever observed in Egypt, the reality of the pavestone mosaic⁴ was at first doubted. But since then similar pavestone mosaics have been discovered at the temple of Menty at Karnak, during the I.F.A.O. excavations by Robichon, Leclant, and Barguet.⁵

The existence of the head depicted in the pavestones, the coincidence of the phases of human growth with the phases of construction of the temple (the newborn being the size of the covered temple), and the coincidence of the divisions (head-neck, chest, belly, thighs, legs, and feet) of a skeleton constructed according to biometric data with the architecture, already constitute a body of evidence proving that the temple of Luxor actually represents the human body. We were satisfied in 1949 to present these arguments. We agree, however, that a doubt might have nevertheless remained. This doubt disappears with the reading of the joints of the stones as we present them here.

It was important to develop these proofs, which probably make the temple of Luxor a unique monument in the world, although all initiatic temples have had the projection of the Universe in Man as their object. Here, however, the form and the proportion of the architecture superimpose themselves on the complete body of man, which gives to the inscriptions (ritual hieroglyphics, bas-reliefs, transparencies, transpositions, connections given through the joints, and geometric keys) the value of biological revelation, according to their location on the human body, which, thus, plays the role of an atlas for *vital functions*.

The pharaonic ritual, well known to Egyptologists, reveals here all its vital, mystical significance. This not only concerns the living, organic, divine manifestation in the Universe, but also the law of genesis in general, encompassing the astronomical and mineral worlds.

Man as issue of Original Creation is Universe. On his body, senses, organs, assimilative functions, and vital nervous centers—both physical and those of cosmic, energetic coincidence—all knowledge is inscribed.

Through the geometry and proportions of the plane, numbers, the stages of consciousness from the abstract to the physically concrete, symbolized by the registers of the walls and the principles inscribed on the architraves, allow for everything to be said in volume.

⁴ *The Temple in Man*, chapter 6.

⁵ Cf. Jean Leclant, "Fouilles et travaux en Egypte," *Orientalia* 19 (1950), p. 368 and fig. 25; Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, p. 20, and figs. 40, 41, and 42a.

That we might know how to read all this is, for the time being, less important than knowing that all has been said there; thus, we can learn how to approach the thought of these masters who were able, and who dared, to raise such a monument. This temple is still in good enough condition for us to be able to learn a great deal from it, except for, of course, what was deliberately effaced by sages who saw no reason to put within reach of the unworthy what is reserved for those who recognize only the Unique as the sole value worthy of being investigated.

Part 6

PLATES, LEGENDS,
AND
COMMENTARIES



... the use of images as signs for the expression of thought leaves the meaning of this writing ... as clear and accessible as it was the day it was chiseled in stone; for a seat, a falcon, a vulture, a piece of cloth, a placenta, a leg, or a human posture will never change so long as there are people on earth. This [is] ... sacred writing.

(Chapter 2)

Let us look at each thing in its natural name. This name is written—it is the Symbol—but it cannot be uttered; it speaks for itself.

To explain the Symbol is to kill it, it is to take it only for its appearance, it is to avoid listening to it.

(Introduction)

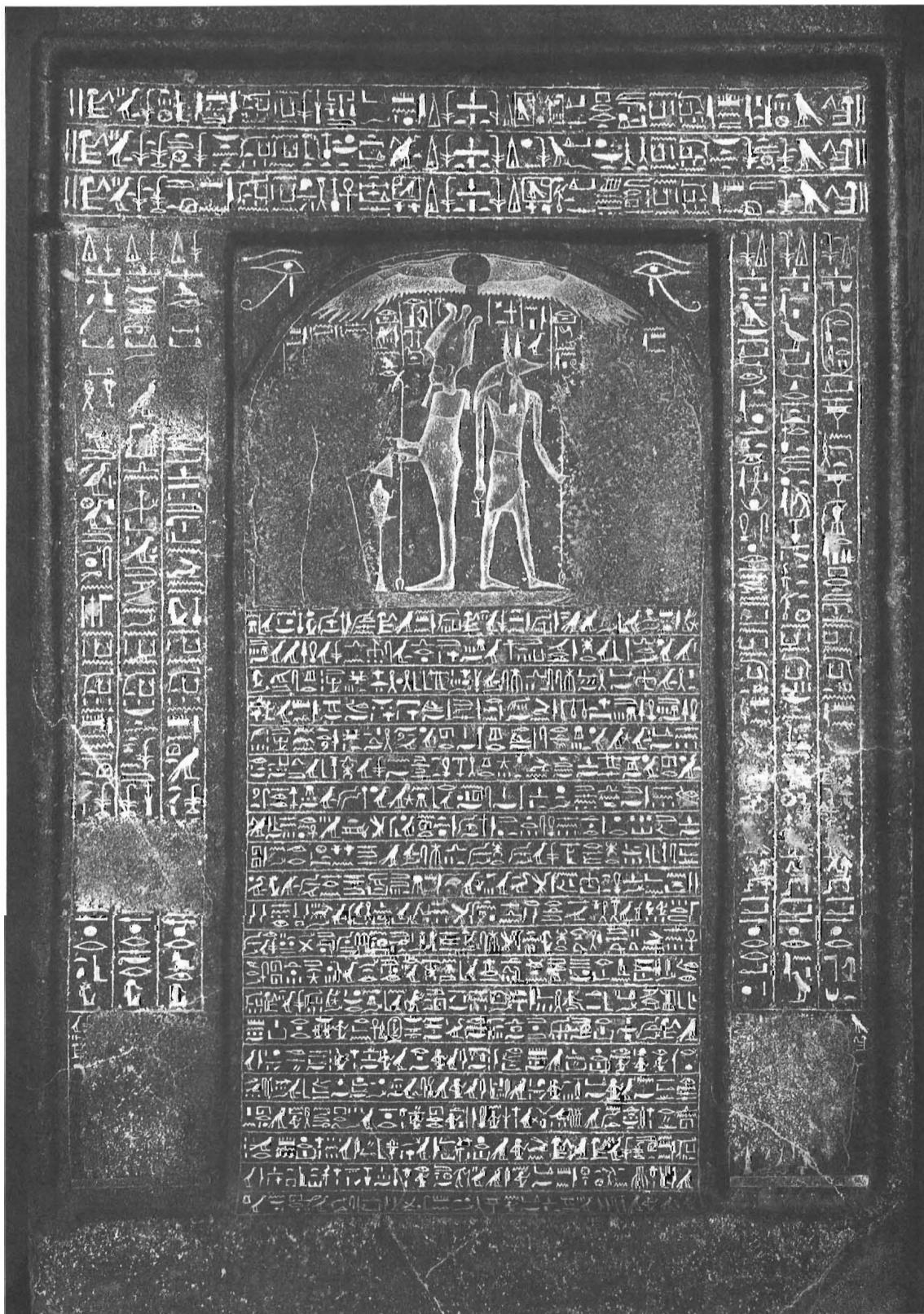
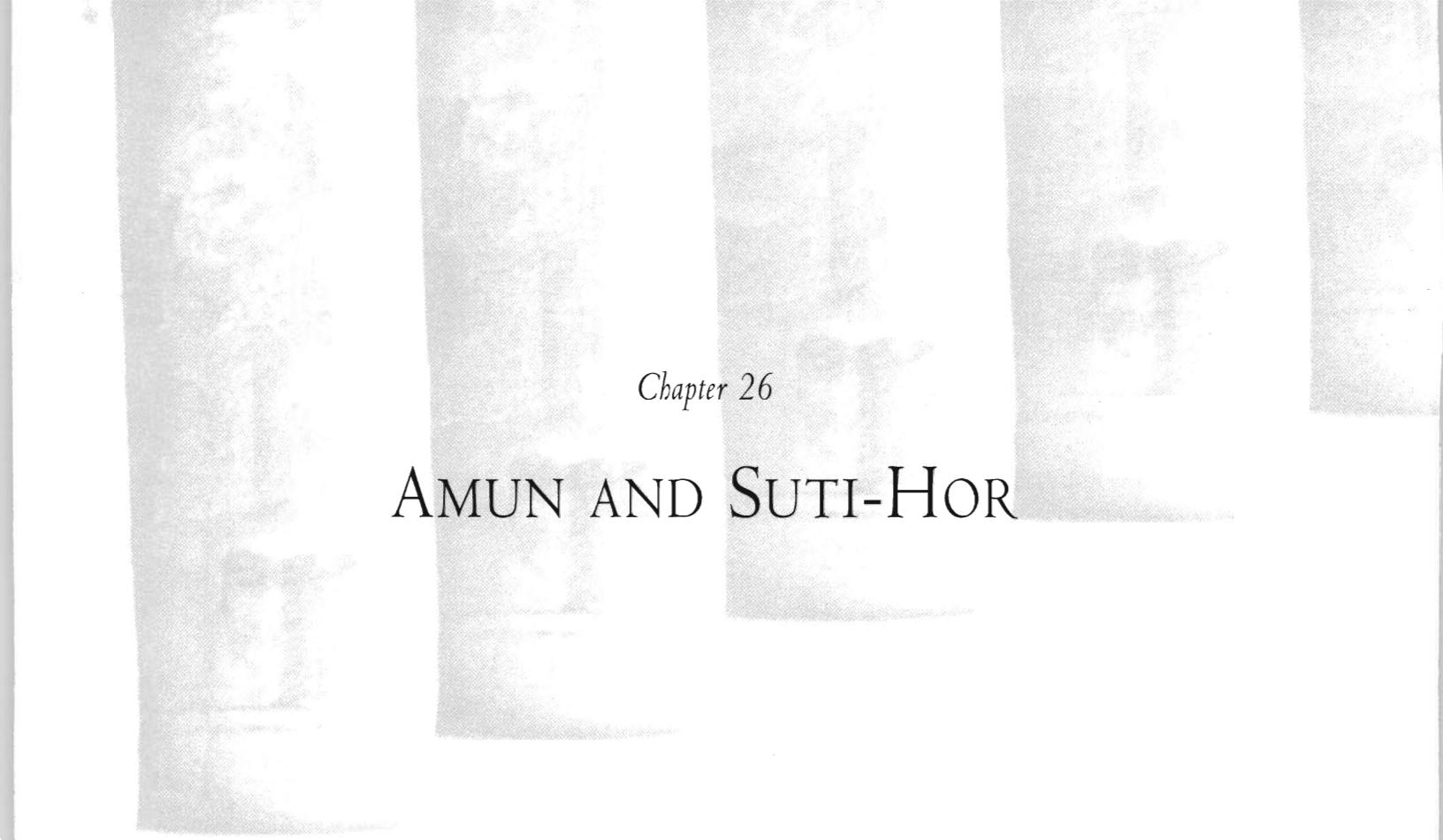


PLATE 1

Stele of Suti-Hor



Chapter 26

AMUN AND SUTI-HOR

AMUN, SOURCE OF BIRTHS, CREATOR OF THE NETERS

*Amun, creative Verb, ternary Unity, Amun, the unknowable,
He makes Eternity by closing the ring of Becoming and Return,
He makes Existence, He who is the Being, the Being who animates, Father of the Neters.
He is in the nourishing Water of things,
He is that which in things receives nourishment.
All that exists is from Amun, all is offered to Him.
He appears in Horakhty who opens the doors of Knowledge,
The colors Black and Green and White and Red are of Amun, Master of the Four Winds.
Amun is the Life of the ocean waters of the world, Nun.
He, the imponderable, contracts himself into that which is weight,
Amun, the unknowable, is seed and matrix of all things.*

Amen.

(Inspired by the litanies to Amun carved on the east wall of the court of Ramesses in the temple of Luxor.)



FRONTISPICE • STATUE OF AMUN AND MUT

This statue, in white limestone, is located at the entry to the nave (the knees), on the west side, facing toward the sunrise.

SUTI-HOR: THE ORIGINAL BUILDERS

PLATE 1 • STELE OF SUTI-HOR

Standard Egyptology provides a historical context for the brothers Suti and Hor, who are said to have played a preeminent role as architects in the reign of Amenhotep III and directed the works of Amun in Luxor, as the stele specifies.

On this granite stele, presently in the British Museum (no. 838), it is impossible to see the figures of Suti and Hor, which were effaced during ancient times. Suti and Hor parallel Seth and Horus, the two aspects of the archangel fallen to earth.¹ We discover them again in the preestablished plan of the pylon drawn on the east and west faces of the wall separating room VI, the room of Amun's barque, from room II, the room of purifications and crowning.

As an homage to the memory of our friend and collaborator, Alexandre Varille, we give here his translation, done in 1942, of the "Hymn to the Sun" from the stele of Suti-Hor. If he were still with us, he would know how to evaluate the living meaning hidden in this text under the historical form.

HYMN TO THE SUN

Salute to Amun when he rises as Horus of the eastern horizon by Amun's master of the works Suti, and by master of the works Hor. They say:

"Homage to you who is the perfect Ra of each day, who rises each morning without respite, and who is the Khepri burdened with work. We have your rays in our eyes and are not able to perceive them. The most pure gold is not comparable to your splendor. Carver whom you carved yourself, you have cast your own body, O sculptor who has never been sculpted. You who are alone in your species, you who travel over the heights of eternity, and under whose Image are the ways of millions, such is your splendor, such is the splendor of the firmament; your colors are more brilliant than its colors.

"When in navigating you traverse the heavens, all men contemplate you; you continue (under the earth as well) hidden to their eyes. You present yourself in the morning as a daily task. The navigation of your barque is impeccable, under Your Majesty. In a short day you devour a space of millions of hundreds of thousands of miles. Each day is for you but a moment, and after traveling through it, you retire. In the same way you accomplish the hours of the night. You carry out this course without respite from your efforts.

"All eyes see by your grace; and they cease to see when Your Majesty is retired. You put beings in movement in order to emerge. Your rays create the morning; they open the eyes that awaken. You lie down in the regions of Manu, and at the same instant they sleep as if they were dead.

"Homage to you, Disk [Aten] of the day, who has created humans and who has given them life. Grand falcon of speckled plumage who has come in order to raise himself up by his own means, appearing of his own accord without being put in the world, Horus the elder who is in the middle of the celestial Nut, for whom gestures of joy are made at the rising as at the setting.

¹ Suti and Hor speak sometimes in the plural and other times in the singular, as if they were a single person, the fallen archangel.

"Founder of what produces the ground, Khnum, Amun of humans, who carries along with him the inhabitants of the Two Lands, from the greatest to the smallest. Beneficent mother of the Gods and of men, patient and untiring worker when he makes them in incalculable number. Valiant herdsman who leads his beasts; their shelter, he who gives them life.

"He who hurries, he who runs, he who accomplishes his revolutions, Khepri of the illustrious birth, raising his perfection in the belly of celestial Nut; giving light to the Two Lands from his Disk [Aten], the primordial of the Two Lands, who created himself and who saw himself while he was creating himself.

"Unique master, who reaches the extremity of the earths each day, viewed by those who circle on them, emerging as a figure who contemplates from on high what passes during the day. He composes the seasons with months, sets the atmosphere ablaze to his liking, makes the freshness of the air to his liking. He causes the human body to extend or to retract. The whole earth gesticulates like the monkeys who awaken at his rising each day to salute him."

The master of works, Suti, [or] the master of works, Hor, he says:

"I am master in your Apit and director of works in your official sanctuary, which your son has made whom you love, the master of the Two Lands, Nebmaātre,² gifted with life. My master has confided in me the direction of your monuments, knowing my vigilance. I have been an energetic master, in what concerns your monuments, having done things in conformity with your desires, because I know that you take pleasure in the observances of Maāt. You make great he who practices it on earth; and, as I have practiced it, you have made me great. You have accorded me favors on earth in Karnak, because I take part in your retinue when you show yourself in public. I am an equitable man who has a horror of injustices. There is no man who prides himself on the words of a liar, and in particular my brother, my double, with whom I share opinions, because he came out of the belly (at the same time as me) on this blessed day."

The director of Amun's works in Luxor, Suti [or] Hor [he says:] "Whereas I am the master in the west, he is master in the east [and vice versa]. We are to direct great monuments in Apit, to the south of Thebes, city of Amun. Allow me to grow old in your city, to act by ruling myself according to your perfection, to be at the west place of the heart's peace. That I may be united with the favorites, continuing my way in peace. Give me a soft wind at the time of boarding, and may I receive the headbands on the day of the *wag* festival."³

² Neb-maāt-re is one of the names of Amenhotep III.

³ Alexandre Varille, *Hymne au Soleil des architectes d'Amenophis III, Suti et Hor*, Bulletin de l'I.F.A.O. (Cairo, 1942).

Chapter 27

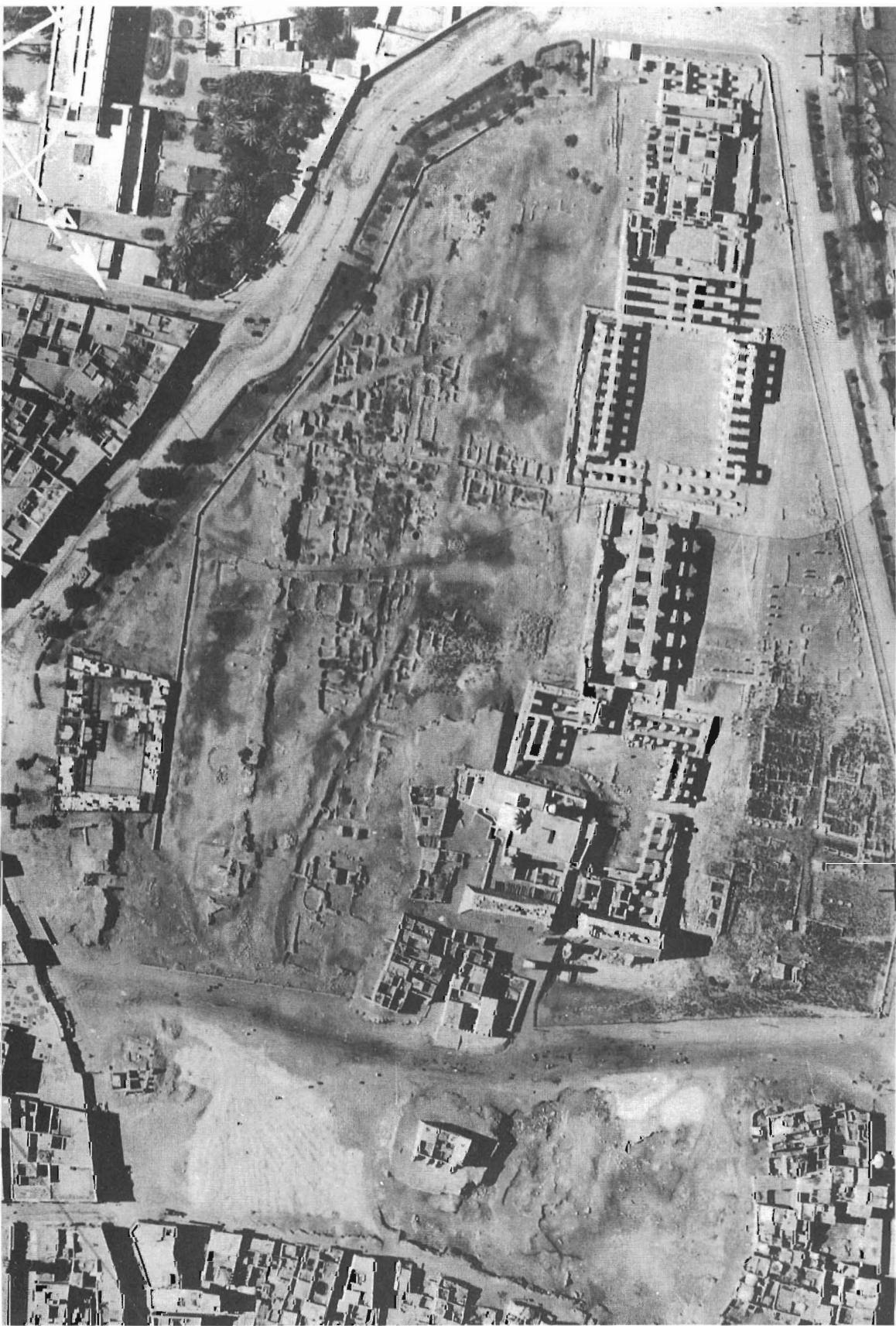
GENERAL VIEWS
OF THE
TEMPLE OF LUXOR

Plates 2–11

*The whole universe is held in a single gesture.
Here, consecrating a temple is identical to giving
life to the terrestrial body and, generally speaking,
animating in the sense of the highest science.*

(Chapter 30)

PLATE 2
Aerial View of the Temple of Luxor

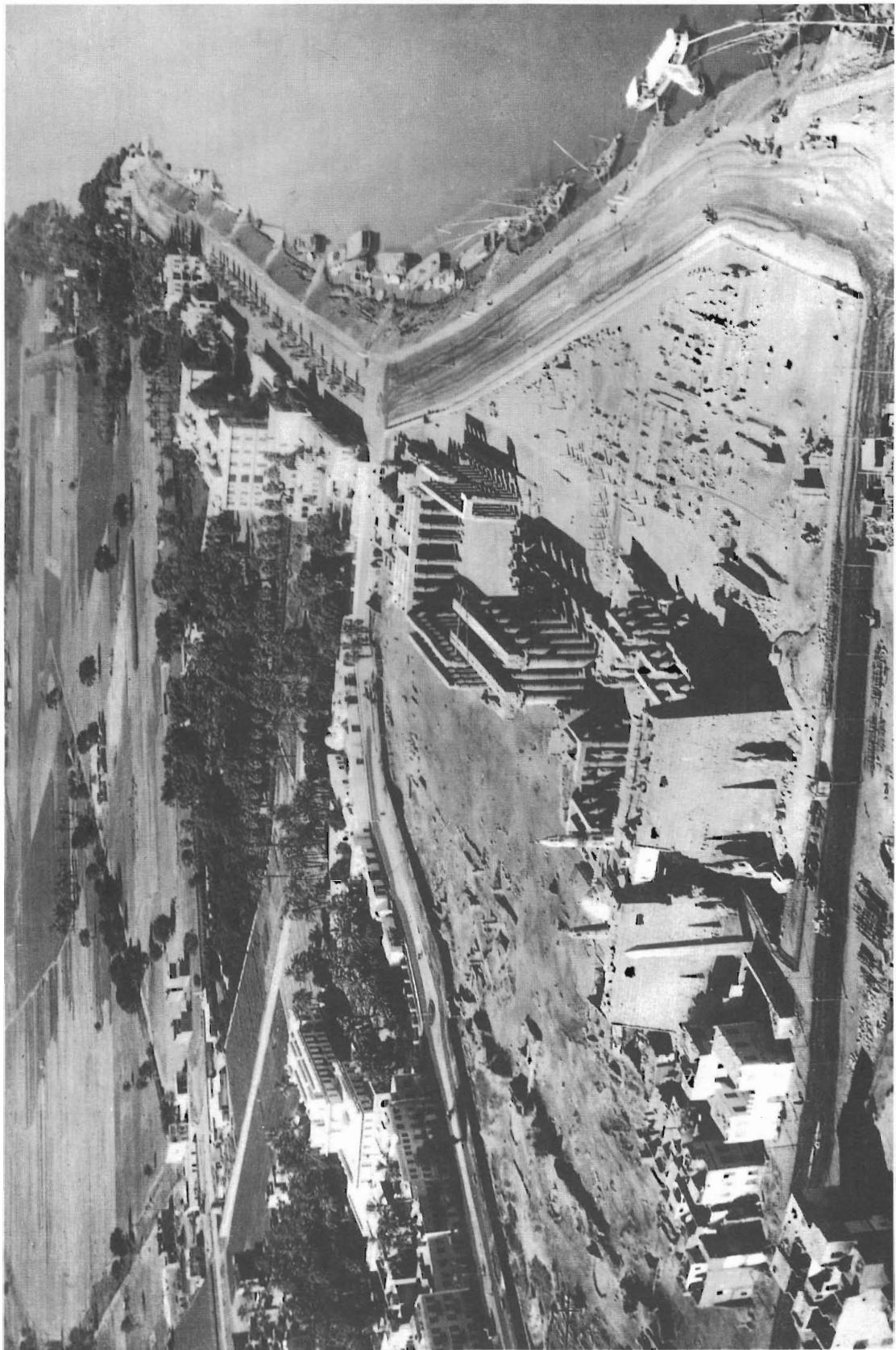


*. . . the temple of Luxor is conceived in its length
as a sequence of phases of growth.*

*Taken together, pharaonic temples, throughout
the whole of this empire extending the length of
the Nile, represent an overall teaching; each temple
can be seen as a particularly developed theme or
chapter.*

(Chapter 25)

PLATE 3
Aerial View of the Temple from the North



*The history of the monument seen as time-genesis
is intermingled with the theological esotericism
described by myth and given expression through
the geometry (the cosmic measures) of numbers.*

(Chapter 13)

PLATE 4

The Temple Seen from the Northeast



*Pharaonic Egypt is essentially practical.
It deals with Nature and works with
natural means, in which it sees the symbols of
spiritual states, knowable only intuitively.*

(Chapter 2)

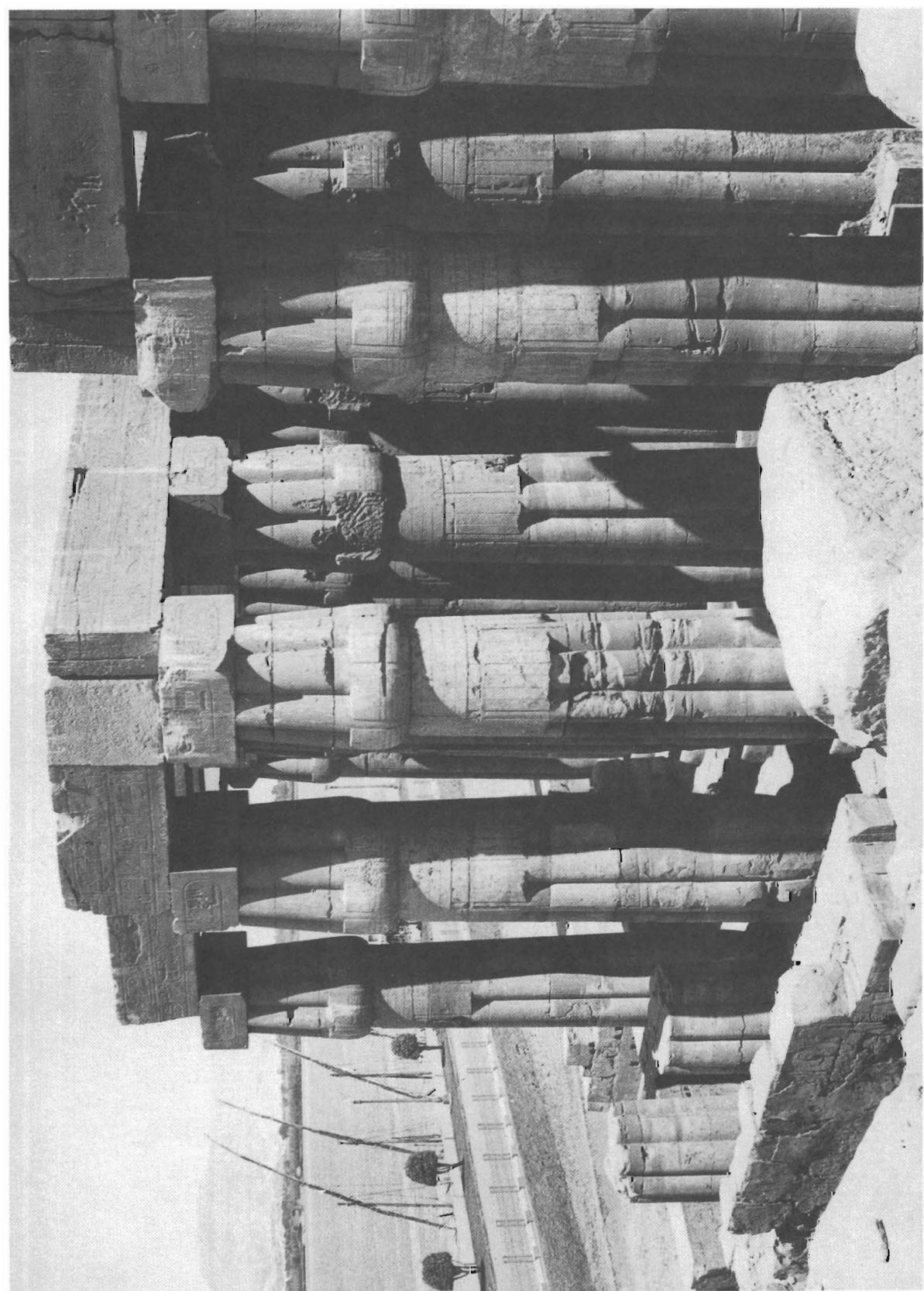


PLATE 5
Part of the Colonnade of the Hypostyle Room

Through the geometry and proportions of the plane, numbers, the stages of consciousness from the abstract to the physically concrete, symbolized by the registers of the walls and the principles inscribed on the architraves, allow for everything to be said in volume.

(Chapter 25)

. . . hieratic symbolism chooses from nature the most typical minerals, plants, and animals for functional expression.

(Chapter 18)

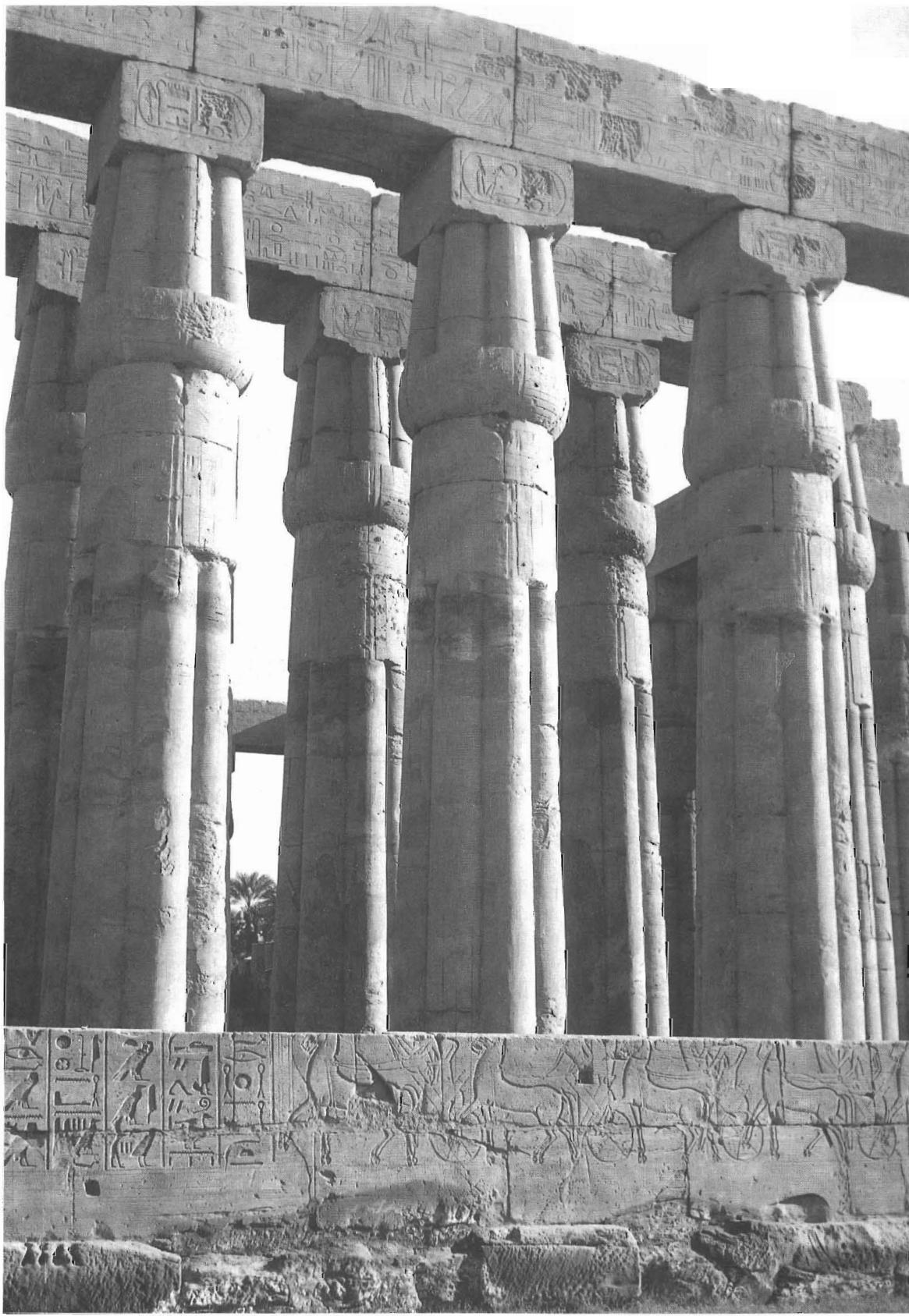
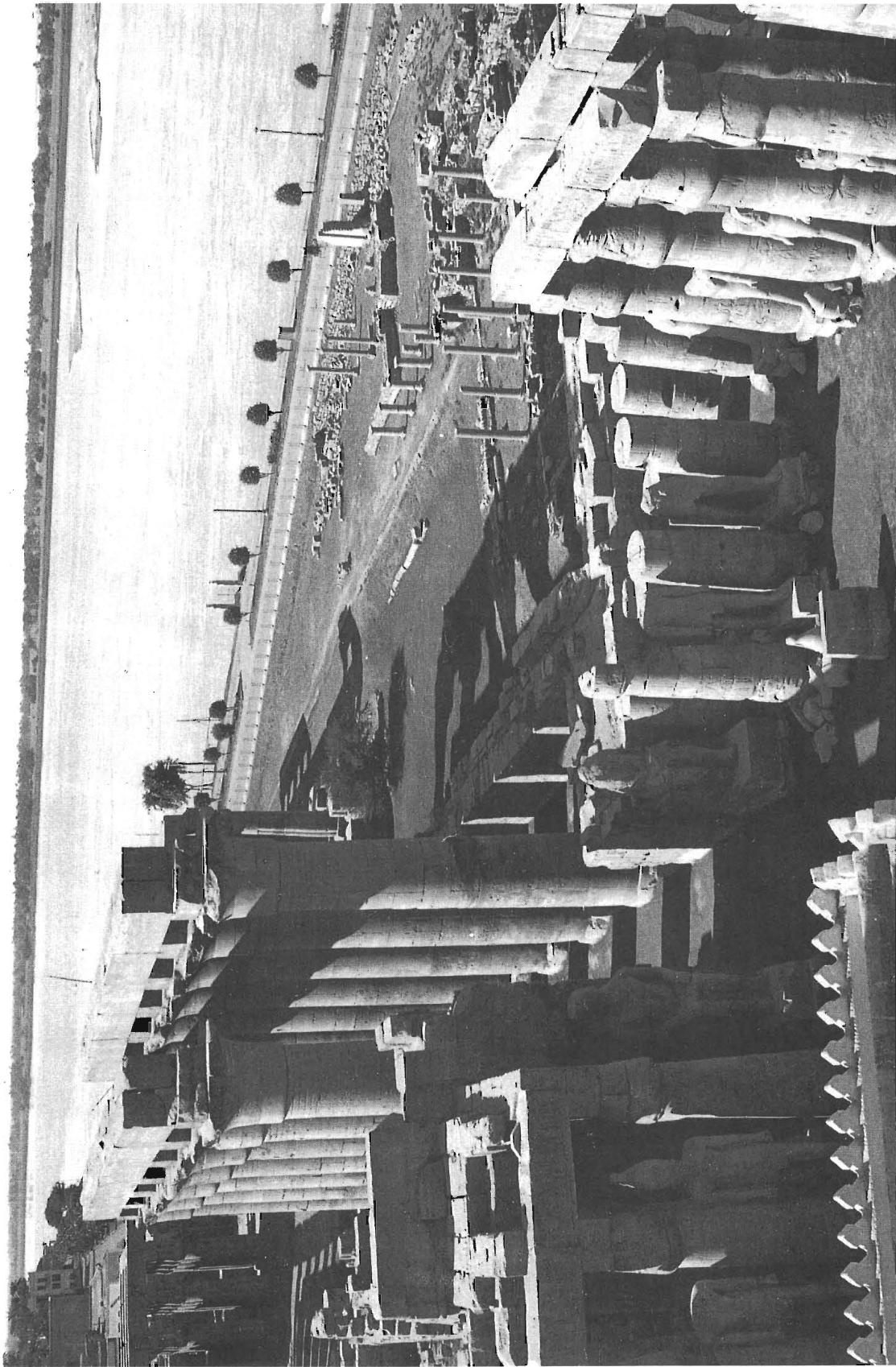


PLATE 6
Part of the West Colonnade of the Transept (Peristyle Court)

*Knowledge can only be synthetic; because of this
it can only be intelligibly transcribed by the archi-
tectural monument, that is, by a simultaneity
of plane and volume, accomplished in Egypt
through the symbolique of the writing, the image,
and the statuary.*

(Chapter 24)

PLATE 7
The Colonnade of Amun and the Southwest Corner of the Court of Ramesses



Whether it was a question of spirit, life, cosmogony, theology, or geometry . . . in general, the pharaonic sages did not conceive of any separation in principle among these domains.

(Chapter 5)

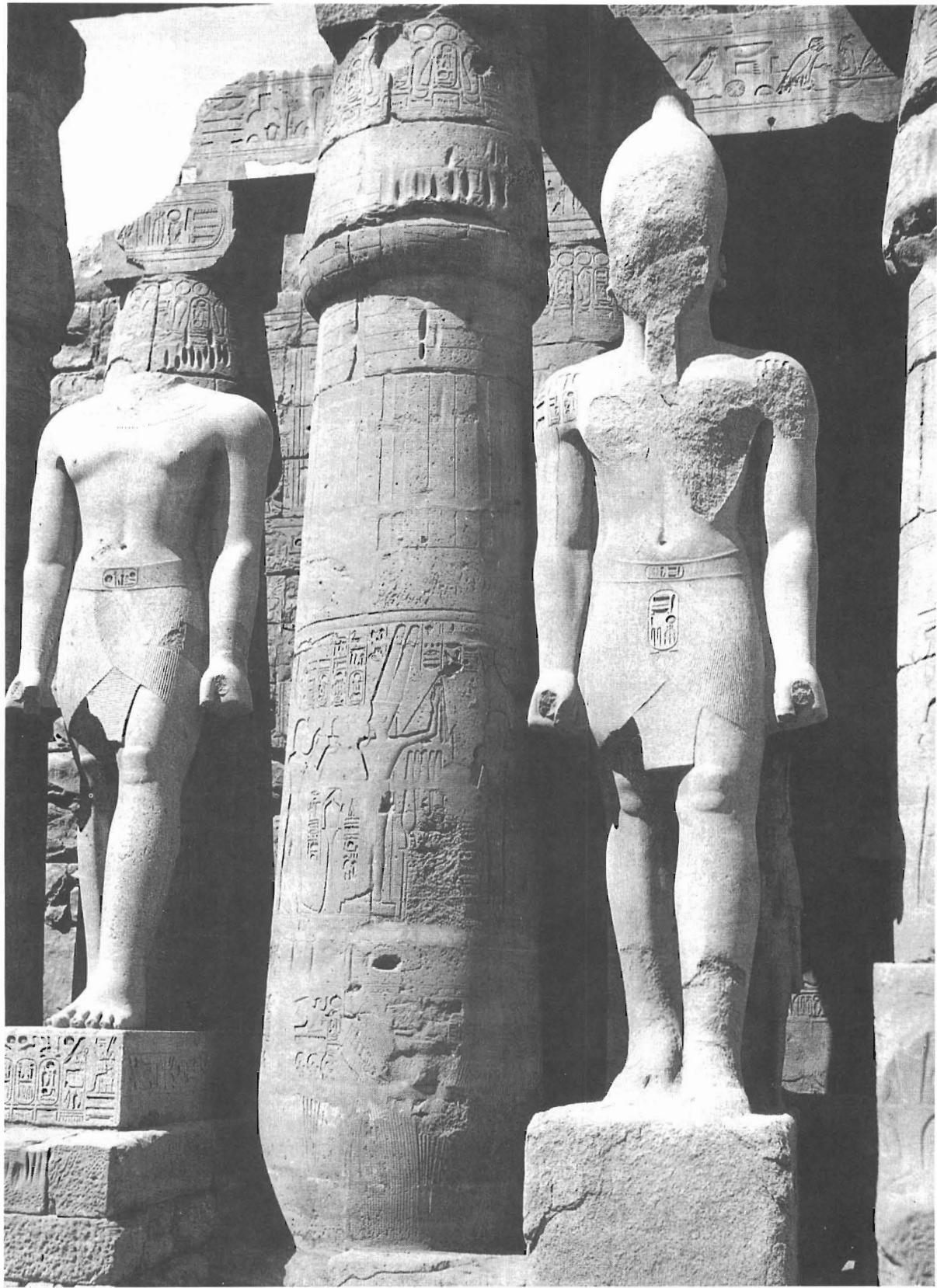
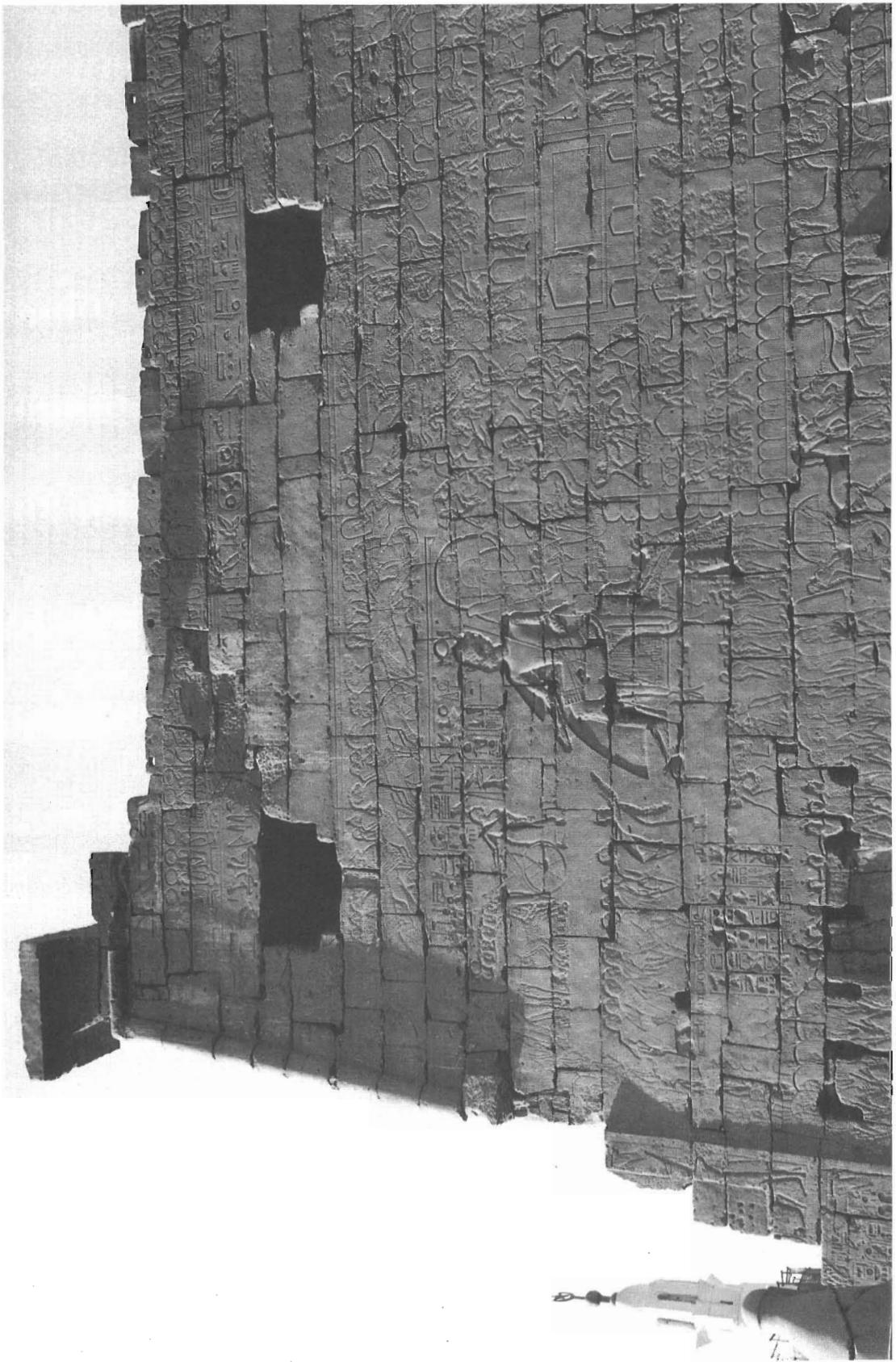


PLATE 8
Two Colossi from the South Portico of the Court of Ramesses

. . . the empire of the pharaonic sages is so marvelously instructive, for it recounts the cosmic genesis and all the revelations of the spirit through its forms, names, and works—the symbolique of its existence.

(Elements)

PLATE 9
North Façade of the West Wing of the Pylon



*This empire is a book that speaks of the slightest
nuances of thought, just as the ancient temples and
our cathedrals are books that speak through their
architecture and figurations.*

(Elements)



PLATE 10

Pylon and Eastern Obelisk

Being consecrated to a definite principle, an Egyptian temple becomes what might be called a “library,” summarizing, in an exhaustive manner, all that can be known about that subject.

(Chapter 24)



PLATE 11A

Avenue of Sphinxes, View from the East



PLATE 11B

Avenue of Sphinxes, View from the North

Chapter 27

GENERAL VIEWS OF THE TEMPLE OF LUXOR

The architectural or pictorial inscription of the pharaohs has no more an immediate, didactic goal than does the apple tree, the fruit of which is an apple and not a peach. The inscription is the description of the phases of knowledge, that is, of the cosmic genesis, expressed in radiant forms, speaking simultaneously of all aspects, from the physical to the spiritual.

At first glance, the architecture of the temple of Luxor is disconcerting. From the south sanctuary to the north pylon the axis continually deviates. Nearly every enclosure on the plan is irregular; what seems to be square has a rhomboidal form; the space between columns sometimes enlarges in the direction of the sanctuary, thus modifying the effect of perspective. Furthermore, the entire construction is executed in several phases. We could call the temple of Luxor a parthenon on the basis of its kinship in principle with the Parthenon of Athens. Its preferred designation is "theogamic" temple; but it is actually, in the profound sense of its consecration, the true Parthenon, that is, the temple dedicated to the spiritual conception of Man.¹

Even though they never acquiesced to aesthetic considerations, but only to the reality of the symbol, the pharaonic builders always achieved masterpieces of harmony, even in the intentional deformities and distortions required to create symbolic and geometrical precision.

For them nothing was sensual, and this shocks our Western aesthetic sense. All becomes didactic, of an esoteric character, through the correct *symbolique*; it is a teaching for the understanding, for the pure intellect, which no explicit word can describe.

¹ Parthenogenesis is taken here in the sense of "creation," not in the "zoological" meaning of being male and female at the same time, as is the case with androgynous mollusks.

We have a great many proofs that nothing in their work was the result of negligence, chance, or personal fantasy, enough to cause us to look for the hidden meaning under apparent disorder. To avoid this research would be to miss the point of archaeology, which is to learn what the past has to teach us, not to impose our own concepts on the Ancients.

The temple of Luxor can be compared with a Gothic cathedral. But in Christian architecture one must not confuse the basilica with the cathedral taken in the sense of the "high place of teaching." Karnak is the royal temple of synthesis; *Luxor is the cathedral of high teaching.*

The general plan of the cathedral corresponds to a precise canon: two towers, a narthex, a nave triple in principle with seven windows, and on the walls of which would later be drawn the Stations of the Cross. Then comes the transept and the entrance proper to the sanctuary.

The choir, separated from the transept by the rood screen, is itself divided according to the importance of the worship, with the altar being the table of daily sacrifice, and the repository carrying the Sacred Host in its silver, moon-shaped barque. In churches with the privilege to celebrate the papal mass, the bishop has his throne behind the altar, hidden from the public. It is there that he celebrates the sacrifice, as in the Holy of Holies (as is the case in Orthodox worship).

The arrangement of the temple of Luxor is identical to that found in the canon of the Gothic cathedral.² A double pylon here replaces the two towers; the court of Ramesses is the narthex; and the two rows of seven high columns with opened corollas together with the two side aisles, the walls of which are decorated with bas-reliefs depicting the procession of the barques, form the nave. After the nave with the two rows of seven columns comes the peristyle, jutting out to the east and west, forming a cross (the transept);³ then comes the covered temple and its striking parallel with the choir of the cathedral.

The high altar, here represented by the naos that contains the sacred barque (symbolizing the lunar crossing) is found in the choir proper, room VI, with rooms IV and VIII taking the place of the front choir. Originally, the room for the naos did not connect to the rooms to the south.⁴

The side chambers, linked by room XII, recall the ambulatory around the choir; the twenty-seven small chapels opening onto the chambers indicated above would correspond to the "radiating chapels." Finally, the central sanctuary, room I, where the statue of Amun is found, is located in the place of the apsidal chapel.

The old tradition required the choir to be separated from the transept by a rood screen, and the ambulatory itself could be closed by decorative works such as wrought-iron grills, tombs, and so on. At Luxor there is no connection except for the central door opening into room VI, between what we call the "choir" and the rest of the temple; the chapels destined to receive the barques of Khonsu, Mut, and the king are only connected with the great hypostyle hall. It is thus these last chambers, along with room VIII and the two small adjoining chambers, that would constitute the rood screen of the cathedral.

² Cf. plate 2, aerial photograph of the temple and its surrounding walls, and fig. 198, plan of the temple giving the names of its different parts and the numbers of the rooms; also fig. 283.

³ Customarily, a more learned etymological meaning for *trans-saeptum* is "beyond the enclosure." One forgets that the nave is septuple in length.

⁴ This is noted by Pierre Lacau in *Le Plan du temple de Louqsor*, Mémoires de l'Académie des Inscriptions et Belles Lettres 18, no. 2 (1941).

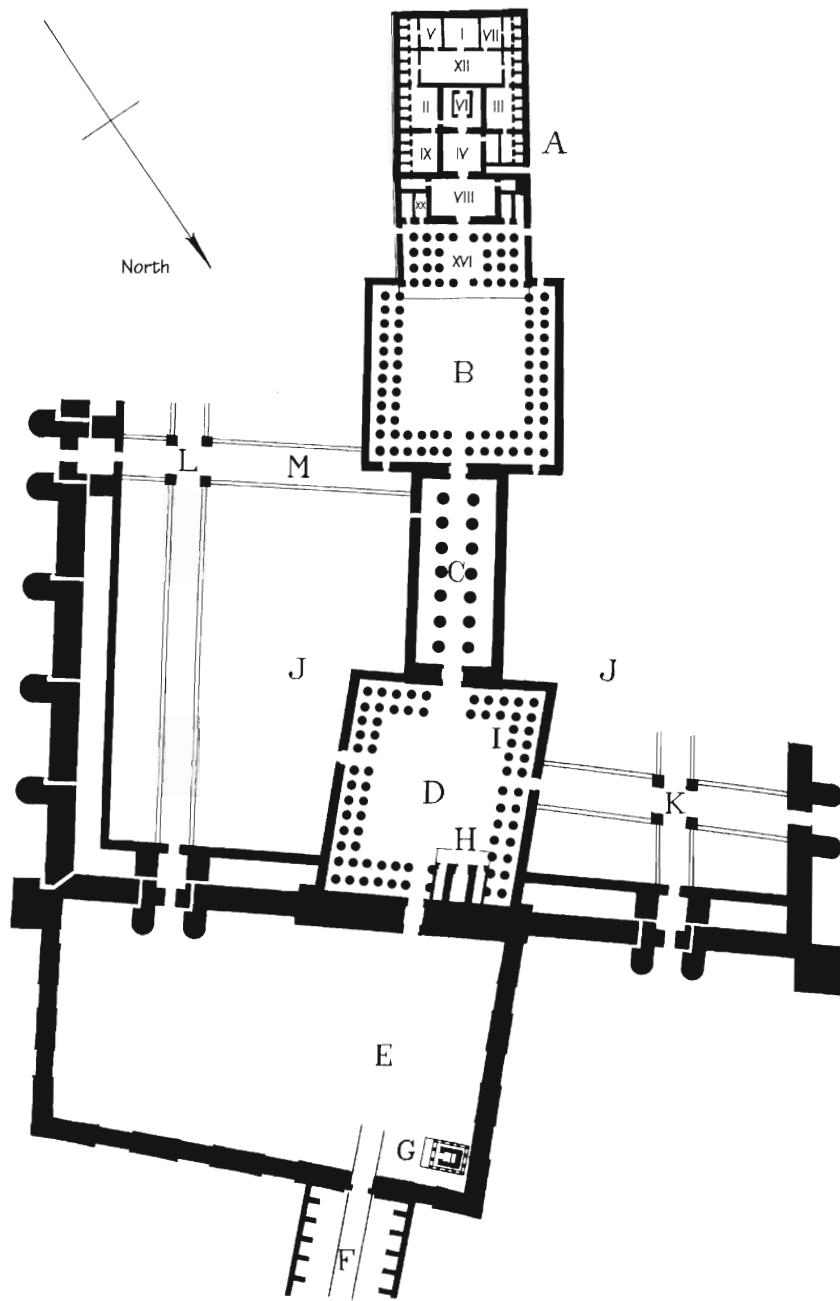


Fig. 198. Designation of the different parts of the temple and numbering of rooms

A, covered temple; *B*, peristyle (transept); *C*, great colonnade (nave); *D*, court of Ramesses, (narthex); *E*, courtyard of Nectanebo (parvis); *F*, avenue of the human-headed sphinxes; *G*, domus of Isis; *H*, repository of the barques, chapel of the reflection of Amun; *I*, bas-reliefs of the royal princes' ascent to the temple; *J*, Roman fortress; *K*, crossroads of Aquarius; *L*, crossroads of Scorpio; *M*, *via vitae*.

Rooms: *V*, *I*, *VII*, the three sacred sanctuaries; *XII*, room of the solar journey; *II*, room of animation and of the crowning; *VI*, sanctuary of the barque; *III*, room of the descent into the Dwat, partly destroyed; *IX*, room of the royal conception (theogamy); *IV*, room of offerings (the four elements); *VIII*, room of transformations, of solar character; *XVI*, hypostyle room (the *haty*); *XX*, chamber of Mut.

This rood screen includes stairways to the right and left. In the temple of Luxor a stairway remains to the west and some indications show that in the original construction there may have been another stairway to the east.

In the following pages we will describe the bas-reliefs as they appear to the uninitiated and in the way that they are still seen in our day by most Egyptologists, but we should not forget that we are dealing with gestures in the symbolic sense that must be interpreted according to their vital intent.

PLATE 2 • AERIAL VIEW OF THE TEMPLE OF LUXOR

This aerial view was taken on September 18, 1945, by the Egyptian Army Air Force.⁵ The courtyard of Nectanebo and the avenue of sphinxes are not shown, as these were only excavated in 1949–50.

This photograph allows us to see the location of the eastern part of the Roman wall with its towers, today concealed under a garden. We can also notice the four pillars at the crossings of the roadways executed by the Romans to the east and west of the temple (fig. 198, *K* and *L*).

In 1881 the temple of Luxor was not yet excavated; only the southern part was visible. In 1885, G. Maspero, director of the Service of Antiquities, undertook the work of excavation. This work was continued periodically until 1945 by Grébaut, de Morgan, Legrain, Daressy, Baraize, Ahmed Fakhry, and Labib Habachi. In 1949–50, Zakaria Goneim uncovered the courtyard of Nectanebo north of the pylon and the beginning of the avenue of sphinxes going toward Karnak.

PLATE 3 • AERIAL VIEW OF THE TEMPLE FROM THE NORTH

This photograph shows the Roman wall east of the temple, with its towers, the door, and the crossing roadways.

To the west the Roman door can be seen, giving access to the north-south lane that, bordered by columns, crosses the east-west lane leading from the loading dock to the narthex. A few blocks from this dock are visible at the edge of the Nile.

Exterior Bas-reliefs

Doubtlessly, none of the exterior walls of the temple had any bas-reliefs under Amenhotep III. It was during the Ramesses period that the east and west faces of the covered temple were decorated, leaving the exterior walls east of the nave and transept in their unfinished state.

Ramesses II constructed the narthex as well as the pylon, the exterior walls of which are covered with bas-reliefs relating (according to the official version) tales of his battles against “foreign countries,” particularly the battle of Kadesh, a city that has been located in the valley of the Orontes in northern Syria.

Figure 199 shows the location of the bas-reliefs in the temple of Luxor cited in this work (circled numbers) and the numbers of the corresponding plates.

⁵ This and the following photograph were taken at our request through the intermediary of Alexandre Varille.

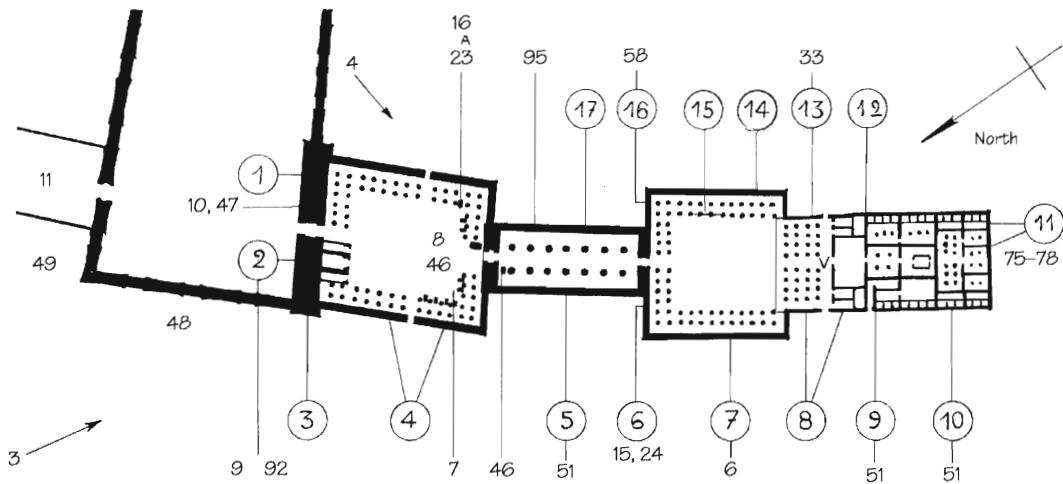


Fig. 199. Location of the bas-reliefs and corresponding plates

1. On the east wing of the pylon, a depiction of the battle of Kadesh in the valley of the Orontes. Near the door between the two wings of the pylon, eight archers in nine chariots, each harnessed to a pair of horses, can be related to the theme of the "nine bows" on which the king rests his feet (plates 10 and 47B).
2. On the west wing of the pylon, a depiction of the Egyptian camp south of the city of Kadesh. This scene has been modified while allowing the lines of the preceding bas-relief to remain (plates 9 and 92).
3. Bas-reliefs removed from the west face of the pylon.
4. Ramesside bas-reliefs.
5. A figure on a horse, riding sidesaddle, preceding a line of chariots. This is a very rare representation whose appearance at this point of the temple has a symbolic meaning in relationship with the projection of the Man of the Temple (plate 51B).
6. Bas-relief depicting the foreign prisoners whose hands have been severed. The location of this scene of "severed hands" in this particular place coincides with the height of the wrist of the man projected on the temple (plates 15 and 24).
7. Representation of thirteen pairs of horses harnessed to thirteen chariots (plate 6).
8. Part of the base of the covered temple, left unfinished.
9. Beginning of the dedication of Amenhotep III, carved on the exterior periphery of the subfoundation of the covered temple (plate 51B).
10. A passage in the text of the dedication that mentions a gold statue of Amun with a ram's head, found in sanctuary I (plate 51B).
11. Bas-relief entirely remade by an Ethiopian king of the Twenty-fifth Dynasty. The kings of this dynasty are characterized by the fact that they wear a double uraeus, and it is noteworthy that the bas-reliefs recarved by one of them are located in the temple at the level of room V, related to the royal uraeus (plates 75 to 78).
12. End of the dedication on the base of the platform.
13. Exterior wall of the hypostyle room upon which bas-reliefs of all sizes are carved in no particular order. Some "pieces" of stone are embedded in them as proof of more ancient monuments underlying the various parts of the bodies of the figures (plate 33).

14. The exterior wall of the peristyle court remained in unhewn stone under Amenhotep III and was never finished.
15. Text inscribed on the architrave of the east colonnade of the peristyle court, relating that the temple is the place of the birth of the king, where he was reared as a child and from where he would leave, crowned.
16. Representation of the *kamutef* carved during an undetermined period (plate 58).
17. Exterior east wall of the nave, remaining unfinished from the time of Amenhotep III (plate 95).

Figure 199 also indicates the position in the temple of Luxor of the following plates: 3, aerial view from the north; 4, the temple seen from the northeast; 5, part of the colonnade of the hypostyle room; 7, southeast corner of the court of Ramesses; 8, colossus no. 4; 11, avenue of the human-headed sphinxes; 16 to 23, colossus no. 3; 46, seated black colossus and statue of Amun and Mut; 48 and 49, courtyard of Nectanebo.

PLATE 4 • THE TEMPLE SEEN FROM THE NORTHEAST

In this photograph, one notices that the exterior east walls of the transept and the nave have remained unfinished.

To the left, one can see the four bases that supported the columns topped by statues of emperors and erected during the Roman era (fig. 213).

On the right, in the foreground, can be seen the tomb of Abu el-Haggag, the Muslim sheikh about whom legends and the tradition of certain rites, perpetuated to our day, go back to the pharaonic era. Thus, in the court of this mosque, between the capitals of the Ramesses columns that had been used to support them, some barques can still be found. These are modern replicas of the three sacred barques that were kept in ancient times in the three chapels set against the west wing of the pylon in the interior of the court of Ramesses.

Every year on the feast day of Abu el-Haggag, these barques, filled with children, promenade around the city. This recalls the procession of the sacred barques coming from Karnak to Luxor on certain days of the year.

This procession is depicted on the interior walls of the nave. The journey from Karnak to Luxor is depicted along the west wall (right thigh), and the return to Karnak is drawn on the east wall (left thigh).

At the departure from Karnak, the three barques of Amun, Mut, and Khonsu, accompanied by the king's barque, are carried on the shoulders of the priests; they are then deposited in four large boats. The boats are drawn along the waterway by means of oars or a towline from the bank, where a large retinue accompanies them. At the head of the procession, a priest chants a hymn in honor of Amun. Then come the "functions," symbolized by soldiers, standard-bearers, guitar players, players of boomerang-shaped clappers, and so on. In the midst of those hauling the boat, some men drop to their knees when the sacred barques pass.

On the occasion of this grand ceremony, horned cattle are sacrificed and certain choice cuts are presented as offerings, just as it appears that they are still offered in our day to the sheikh of the mosque.

On their arrival at Luxor, the sacred barques enter the temple and are placed in the three repositories of the court of Ramesses. In the covered temple, the barques of Amun, Mut, and Khonsu are represented in room IV, carried by priests in windblown robes with no other officiant than the king, who perfumes them with incense (plate 31).

PLATE 5 • PART OF THE COLONNADE OF THE HYPOSTYLE ROOM
(SEEN FROM THE SOUTH)

The roof of the hypostyle room is open at the north and is supported by thirty-two papyriform columns arranged in two groups of sixteen. The shafts of these columns are composed of eight stems united at the upper part by five ties. The capital is formed by the extension of these eight stems. This form of column is also found in the covered temple and in the transept constructed by Amenhotep III.

The text of "Giving the House to Its Master" is located on the second register of the east wall in this room (plate 30). Under the dedicatory frieze encircling this hypostyle room, the enumeration of the nomes of Upper and Lower Egypt is carved, fragments of which remain on the east, south, and west walls.

Here, we are in the *haty*, the chest, which contains the heart and the lungs: respiration. The binding of the two Lands, Upper and Lower Egypt⁶ is made around the sign *sma*. Now the binding (*sma*) is made around the trachea, which culminates in a symbol that represents the lungs (*sma*). It is through respiration that the fixation of the spirit and the reanimation of the blood is made.⁷



PLATE 6 • PART OF THE WEST COLONNADE OF THE TRANSEPT
(PERISTYLE COURT)

The wall that borders the transept on the west side is located at the place of the spinal column.⁸ Depicted on this wall are thirteen pairs of harnessed horses, extending to the height of the thirteenth, or first lumbar, vertebra.⁹ The marrow that runs through the twelve thoracic vertebrae penetrates the first lumbar vertebra, from which comes the bundle of lumbar and sacral nerves that terminate it. In anatomy, this place is called the "horse's tail."

Here we see the vertebrae and their marrow symbolized by the wheel of a chariot drawn by moving horses, one of whose front legs (either left or right) is poised and abnormally rigid on the point of the hoof, while the other foot penetrates forward into the wheel of the next chariot.

On the basis of this *symbolique*, we have concluded that each time we encounter a series of chariots harnessed in this way, we can relate them to the marrow or to an influence on the central nervous system.¹⁰ Thus, we recall the direct relationship between the central nervous system and the sole of the foot, that is, the north face of the pylon, where a vertical series of harnessed horses

⁶ Cf. plate 46 and fig. 295, the representation of the two sides of the throne of the seated colossus, of the union of the Two Lands around the sign *sma*.

⁷ *sma-wi*: "to renew."

⁸ Cf. plates 15, 24, 28, and chapter 40, "The Three Axes."

⁹ That is, twelve thoracic and one lumbar vertebrae.

¹⁰ Let us recall here that the horse, the essential symbol of the Poseidonian initiation (cf. the front of the Parthenon at Athens), represents the living Amunian water, here the cerebrospinal fluid that bathes the marrow. The foal is born in the amniotic sac, which the mare shreds with her teeth after the birth, and the foal comes out streaming with water.

is carved. This fact caused me to state in *The Temple in Man* that the Ancients were aware of the nervous reaction called Babinski's reflex, the reaction that discloses an interruption in the central nervous system.

Now, with the Edwin Smith Surgical Papyrus, translated with commentary by Breasted, we have proof that the Ancients had this knowledge, which has only been classified by our scientists since Babinski's time.¹¹

PLATE 7 • THE COLONNADE OF AMUN AND THE SOUTHWEST CORNER OF THE COURT OF RAMESSES

In each intercolumnar space of the porticos of this court there is a standing colossus with its left leg forward. Two seated colossi in black granite are placed framing the entrance of the nave at the knees of the Man of the Temple.

In the nave there is a double row of seven bell-shaped columns supporting the roof. These columns, from Amenhotep III, are composed of a single stem of papyrus, and the capitals are flowers in full bloom. Three fine ribs run the length of the cylindrical shafts, recalling the characteristics of this Cyperaceae.

On the right, toward the Nile, are vestiges of Christian buildings.

On the left, in the lower part of the photograph, is the edge of the roof of the Abu el-Haggag mosque.¹²

PLATE 8 • TWO COLOSSI FROM THE SOUTH PORTICO OF THE COURT OF RAMESSES

The monolithic colossus¹³ on the right, bearing cartouches of Ramesses II on its loincloth, its shoulders, and its belt buckle, is cut out of a block of rose granite that rests directly on the ground, and today is slightly buried. The total height of the block is about 8.64 meters, that is, $4\frac{2}{3}$ fathoms or 28 *djezer* cubits of the black cubit.¹⁴

All the dimensions of this colossus are derived from the fathom. Its essential measure is the height measured from the soles of the feet to the forehead, corresponding to the upper edge of the ears of the colossus and at the level of the eighteenth square of a figuration on a *canevas*. This height is 5.55 meters, or 3 mean fathoms.

The line that determines the forehead (presently visible near the right ear) marks the base of the white crown that fits tightly around the king's head. Now the height of three fathoms is the unit of measure that determines, on one hand, the height of the crowned king, and on the other, his division at the navel according to the golden section:

$$\frac{\text{height of the crowned king}}{\text{height of the king to the forehead}} = \frac{7.06 \text{ meters}}{5.55 \text{ meters}} = \sqrt{\phi}$$

$$\frac{\text{height of the king to the forehead}}{\text{height of the navel}} = \frac{5.55 \text{ meters}}{3.43 \text{ meters}} = \phi.$$

¹¹ See case 8 of the Surgical Papyrus, chapter 14.

¹² Cf. plate 4 and legend.

¹³ The colossi are numbered starting from the northeast corner of the court of Ramesses. This one is no. 5.

¹⁴ On the one hand, the pedestal is covered with saltpeter, and on the other, its very acute slope does not allow greater precision than several centimeters in its measurement. The dimensions given here are established according to the average level taken on the cleared places of the stone at the level of the front foot.

The left colossus (no. 4), the head of which is destroyed, is characterized by very sharp sculpting that gives it very precise dimensions. The pleated loincloth and the beveled edge of the dorsal stele, for example, are remarkable for their distinctness and are astonishing to find in a hard white, red, and black granite that is very rich in large, white crystals. A black vein in the granite makes a bracelet around the king's left wrist.

Quite probably from Tuthmosis, this colossus today carries cartouches of Ramesses II, who had altered the pedestal as well as the dorsal stele and carved a figure of the queen in bas-relief on the backing under the left leg. The king rests his feet on nine bows, five under the back (right) foot and four under the front.¹⁵ The tail, *sed*, between his legs, is sculpted in fine waves and still shows traces of red and yellow paint.

Ramesses II recarved his cartouche in sunk relief at the place of the old cartouche on the belt. A necklace of five rows of pearls encircles the shoulders of the colossus. His breasts are widely aureoled.

The bottom of the nipples is exactly 4 meters from the soles of the feet.

The fastener of the left fist, measured in front, close to the thigh, is 2.22 meters from the pedestal, which is 1.2 mean fathoms. The bottom of the navel is 3.33... meters from the soles of the feet, which is 1.8 mean fathoms.

The height of the queen confirms the fact that the fathom is the unit of measure that governs this colossus. From the soles of the feet to the vertex she measures 1.84 meters, which is exactly 1 fathom at 0°. From under her sandals to the vertex, her height is 1.85 meters, which is 1 mean fathom.

Her height to the top of the plumes of her crown is 2.50 meters. As with the king, the meter and the fathom are associated, which is understandable if we remember that 27 mean fathoms equal 50 meters.

PLATE 9 • NORTH FACADE OF THE WEST WING OF THE PYLON

On the left we can see the right post of the doorway, the lintel of which is now broken, but the ledge of whose cornice is still visible. Below, two vertical grooves held the two flagpoles resting on granite pedestals. These flagpoles reached above the pylon and flew cloth streamers from their tops.¹⁶ They were held in place by heavy wooden beams going across the thickness of the pylon in openings above the grooves. These flagpoles, which must have been more than a meter in diameter, were made by assembling pieces of wood covered with a thickness of bronze plating. They were intended "to receive the four winds."¹⁷

The north facade of the west wing of the pylon is covered with scenes and inscriptions, distributed in the following way: Under the torus, two horizontal lines of text frame the uraeus frieze, alternating with cartouches of Ramesses II.

Under the openings reserved for holding the flagpoles, there is an immense tableau, bounded above by the sky and below by a band of water, and occupying the entire width of this wing. This scene essentially represents the royal camp established in the Orontes Valley, in northern Syria, a little to the south of Kadesh, just as Ramesses II prepares to engage the Hittites in battle.¹⁸

Starting from the horizontal band that depicts the water as far as the bottom of the pylon, the entire facade is divided into vertical columns of text that recount the events of this battle.

¹⁵ Cf. plate 47.

¹⁶ Cf. fig. 268.

¹⁷ It may be interesting to note here the Chinese saying, "The flag floats in the wind. Who moves it?" The response is, "It is neither the flag nor the wind; it is the spirit."

¹⁸ Cf. fig. 291.

The Egyptian army, commanded in person by the king, contained four divisions: the division of Amun, that of Ra, and those of Ptah and Seth. The king established his camp and left for reconnaissance. He then met two Bedouins who came to him and said that they were envoys of the tribal chiefs subjugated by the prince of Khatti whom he was preparing to fight. These Bedouins indicated the exact position of the prince of Khatti, and affirmed that the chiefs of the tribes, their brothers, desired to submit to the authority of the pharaoh and abandon their former master.

Now these two Bedouins were spies in the service of the prince of Khatti, delegated by him to give false information and to indicate to him the exact position of Ramesses II's encampment. In truth, the enemy army was hiding in ambush near Kadesh, as a spy in Ramesses' service hastened to inform him, revealing the true character of the two Bedouin spies. They were thrashed until they finally confessed that the prince of Khatti was allied with numerous neighboring countries and that his armies were admirably equipped with foot soldiers, archers, and assault chariots, "numerous as the sands."

While the king was hearing of this treachery, the greater part of his army, not knowing of all this, was attacked by surprise and retreated toward the position occupied by His Majesty.

It was in this way that the army of the prince of Khatti enveloped the people in His Majesty's escort, who were close to him. But when His Majesty became aware of them, he entered into a rage against them, like his father Month, the master of Thebes. He seized his war attire and he put on his armor; he resembled Baal in his wrath. Then he mounted his chariot, and drove it at great speed, all alone. He plunged into the army of the prince of Khatti and all his numerous allied peoples. His Majesty was similar to Seth, the powerful, as he battled and massacred them. After cutting them to pieces, His Majesty threw them one on top of another into the tides of the Orontes.¹⁹

The large tableau on the left indeed shows the king, seated on a throne, debating with his subjects while the two spies are given a flogging. To the right, behind the king, we see the camp formed by a surrounding wall of raised shields, in the middle of which rises the royal tent. The whole camp is filled with unharnessed horses and resting soldiers, while a line of chariots enters through the east door representing the attack of the Hittites. The battle of the Orontes is represented on the east wing of the pylon.

The representations conform with the story, so it is troubling to observe that this north wall of the west wing has undergone a major alteration by Ramesses himself. Originally, at the place in which the two essential scenes—the king seated on his throne, and his camp—are presently located could be found, respectively, Ramesses II seated, but facing the opposite direction, and the king standing in his chariot, drawing his bow. Traces of the older sculpture are still very visible and mark the intention to allow the two superimposed scenes to remain.²⁰

PLATE 10 • PYLON AND EASTERN OBELISK

To the left, we find one of the two obelisks that, generally speaking, frame the entrance to the temple. This obelisk is still partially buried, which prohibits us from knowing its dimensions. Its western counterpart is in Paris, at Place de la Concorde.²¹ It rested on a rose-granite pedestal, the north and south

¹⁹ Erman and Ranke, *La Civilisation égyptienne*, p. 713.

²⁰ Cf. chapter 41, the descriptions of the transformations of the bas-reliefs, plate 92, and fig. 291.

²¹ The dimensions of the west obelisk given by Lebas are as follows: height of the shaft without the pyramidion, 20.90 m, that is, about 40 cycle cubits (20.94 m); total height with the pyramidion, 22.84 m, a measure related to 44 cubits of 28 *remen* digits, each being 1/100 fathom. We find this measure again in the length between torii of the east wing of the pylon under the cornice (cf. plate 67).

faces of which are ornamented with four baboons with hands raised in sculpted relief. This granite pedestal is itself placed on a trapezoidal base.

One can see, in the right part of the photograph, the double crown of the seated colossus in black granite east of the door. This colossus is set against a stele, whereas the western one is supported on a small obelisk. The western colossus is sculpted in a block of black granite, chosen in the quarry so that the red crown is carved out of a red vein running through the block.

On the north face of the east wing of the pylon, to the left of the doorpost, we can see nine pairs of horses harnessed to eight chariots, each of which are occupied by a driver and an archer. This symbolizes the nine bows on which the king rests his feet, the pylon coinciding with the sole of the foot of the Man of the Temple. (Cf. plate 47 and fig. 244.)

PLATES 11A AND 11B • AVENUE OF SPHINXES (DROMOS)

We enter the temple of Luxor by way of the long avenue of sphinxes that begins at Karnak and ends at the esplanade (the parvis) located in front of the pylon. We pass through the door between the two towers of the pylon, against which are supported the colossi, incarnating the *neter*, the spirit within things.

During the excavations of 1949–50, the courtyard added by Nectanebo and the first sphinxes of the avenue leading from Luxor to Karnak were uncovered.²²

In 1893, Daressy had already noted that in the area occupied by the Luxor city police, a building from the Saitic period was found among some debris, and that the avenue of ram-headed sphinxes, which starts from Karnak and leads to Luxor, at this point undergoes a transformation: the ram's heads were replaced by human-headed sphinxes whose pedestals bear the royal legend of Nectanebo II.

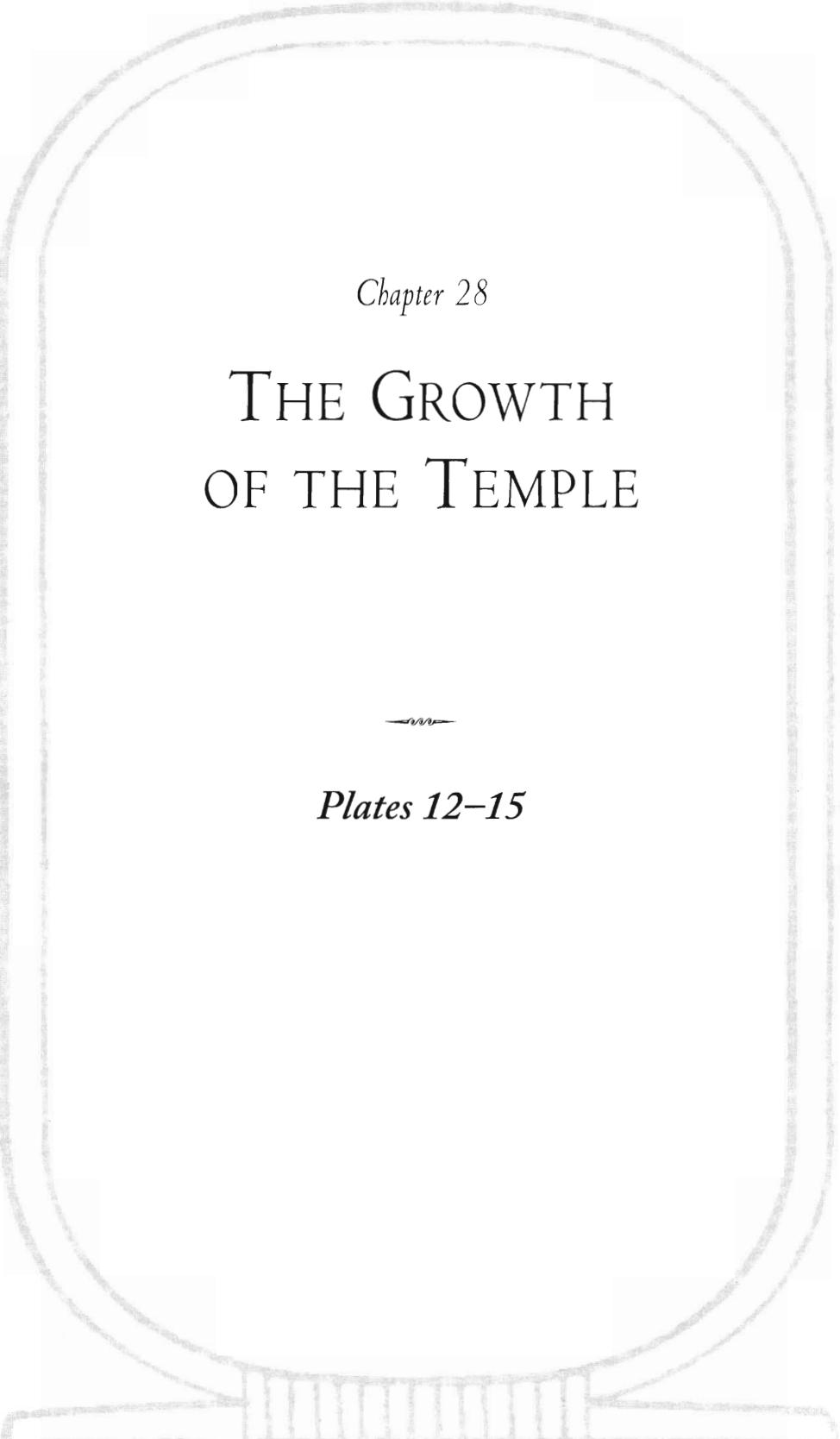
It is the point where this avenue arrives at Luxor that had then been recently discovered. The sphinxes indeed have human heads, which is notable because this avenue belongs to the Temple of Man, whereas the sphinxes on the avenue near its origin at Karnak—the basilica consecrated to Amun, the zodiacal Ram—are bordered by ram-headed sphinxes.

The total width of the dromos is 27 meters, which is 50 black cubits. It contains a roadway in the center, paved in sandstone, whose total width is 6.28 meters, or 12 royal cycle cubits.

Two rows of sphinxes with human heads and the cartouches of Nectanebo II line the dromos. These sphinxes are set against two unfired brick walls, 92 centimeters thick (1/2 fathom) covered with a whitewash that is still visible. These walls closed off public access to this paved road, which continues into the courtyard of Nectanebo.

The entryway to this courtyard is in sandstone, while the walls, about 5 meters thick, are of unfired brick and placed in curved layers so that they form bows both in plan and in cross-section (plates 48 and 49). At the bottom of plate 11B, we can see the pylon, the two seated colossi, and the eastern obelisk.

²² Cf. plate 2.

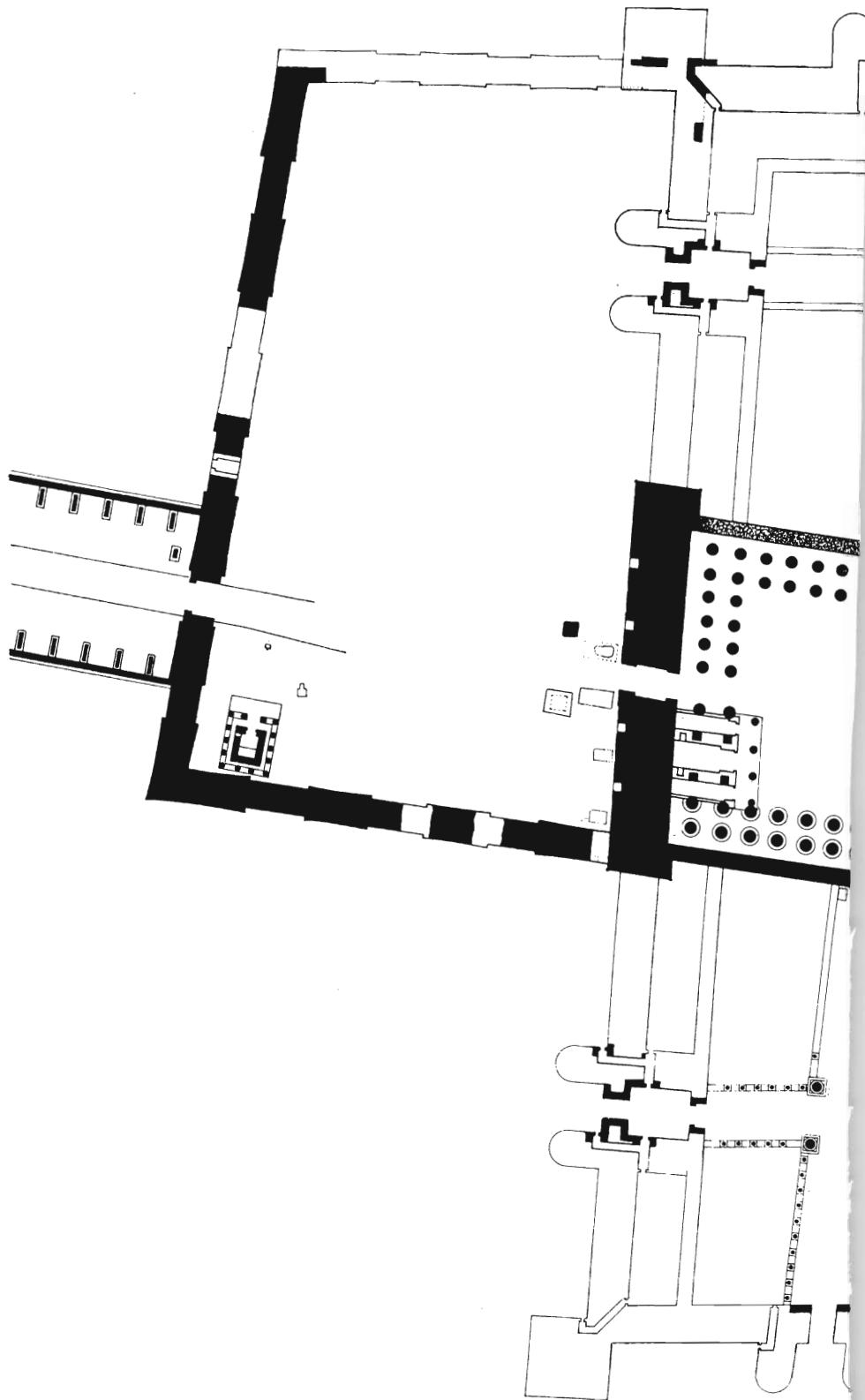


Chapter 28

THE GROWTH OF THE TEMPLE

Plates 12–15

This temple represents what I have called a "prototype" of our great cathedrals. There is a double pylon; a nave of two times seven columns recalling, with the procession of the sacred barque, the fourteen Stations of the Cross; a transept; a choir; and an altar with its barque; then the apse with the secret sanctuaries.



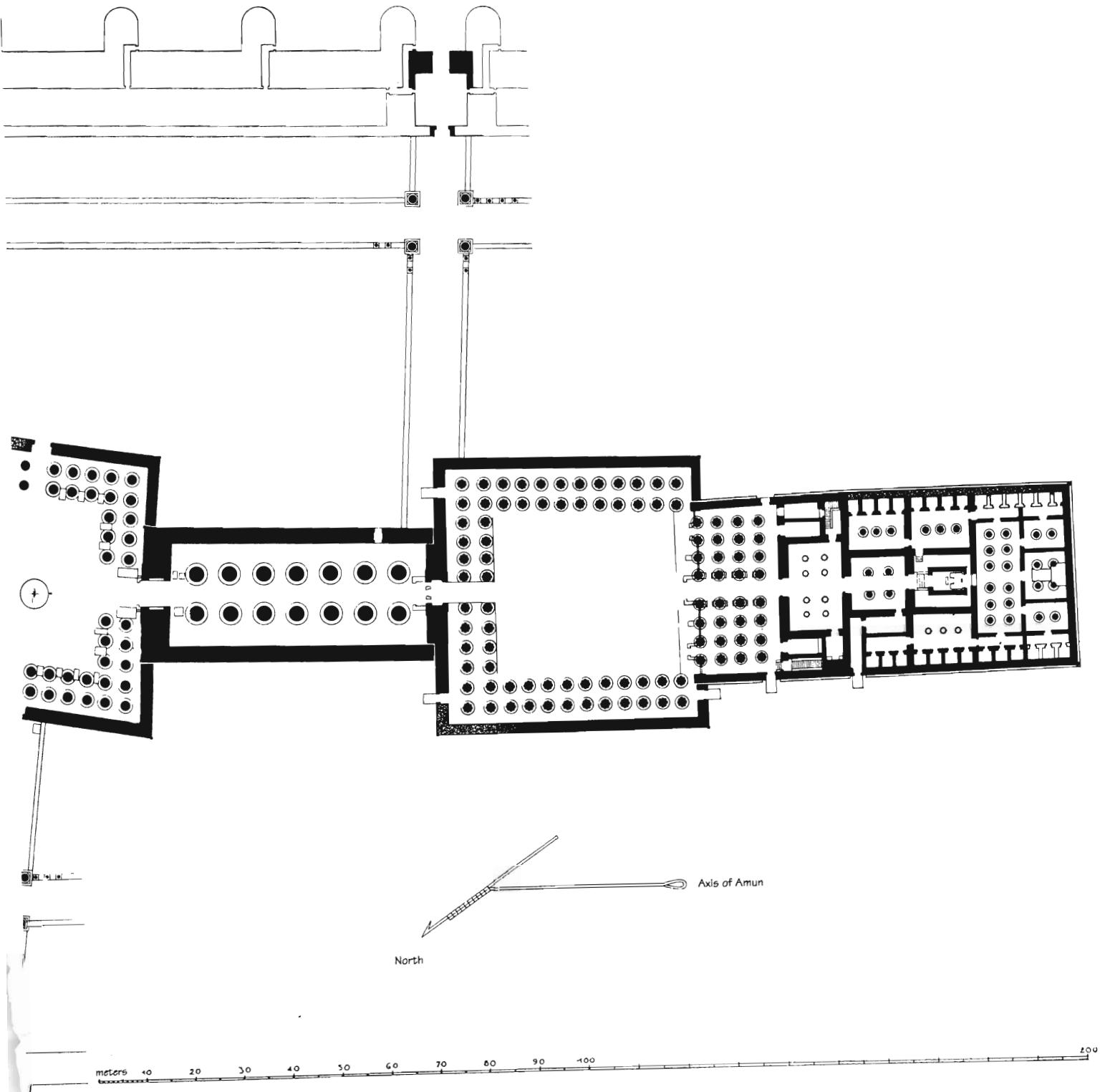


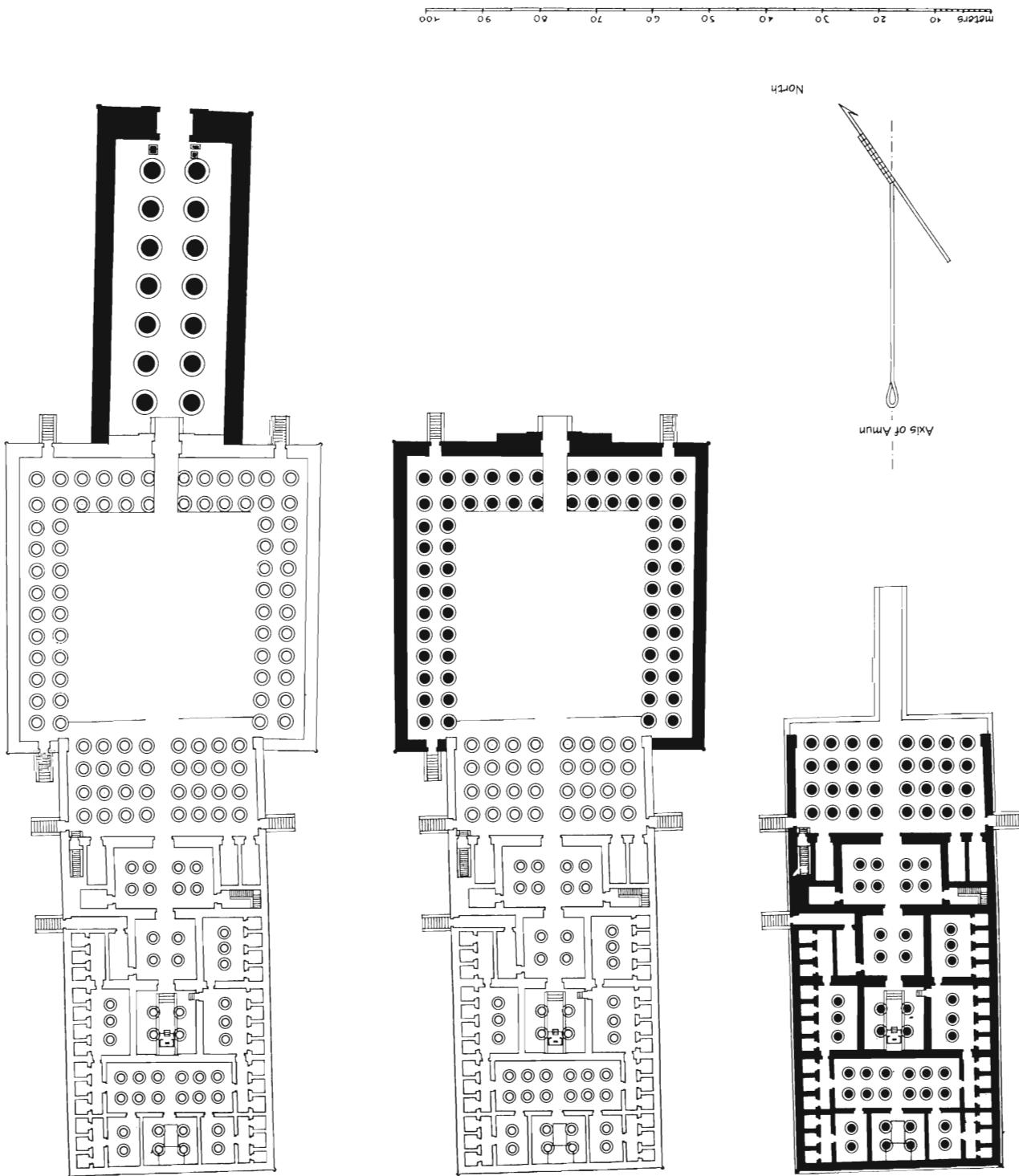
PLATE 12
Plan of the Temple in Its Present Condition

Pharaonic thought refuses to build on such an invariable base because life is moving and progressing. Destruction and death are likewise moments of life; they are transitions, and “tomorrow” contains the past.

(Chapter 6)

Plan of the Three Successive Constructions of Amenhophy III

PLATE 13



*. . . today contains yesterday. The solar genesis
contains the terrestrial genesis in one of its periods,
and the terrestrial genesis, in one of its periods,
contains the genesis of the empire, just as the
empire contains in one of its periods the entire
human genesis.*

(Chapter 20)

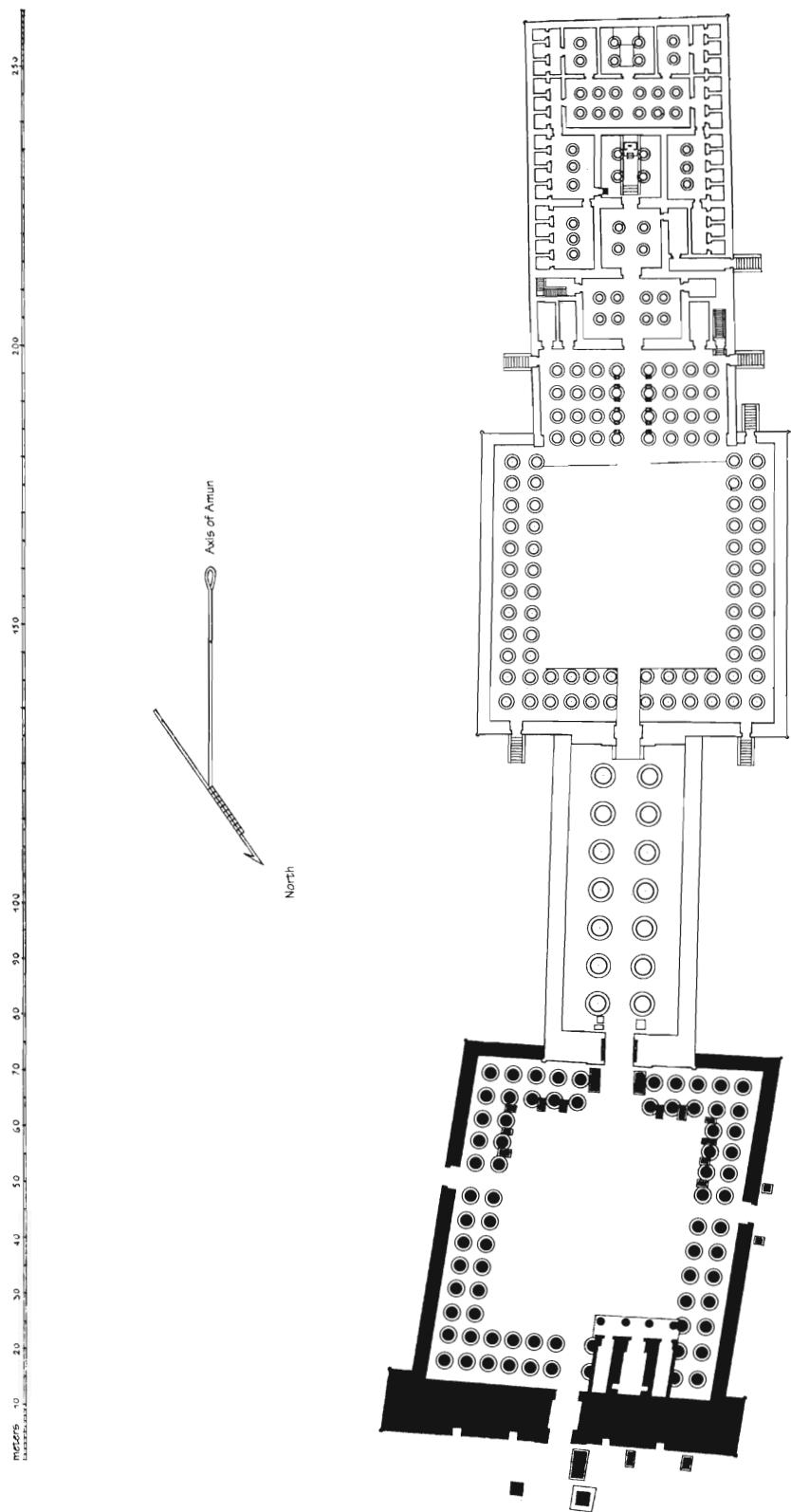
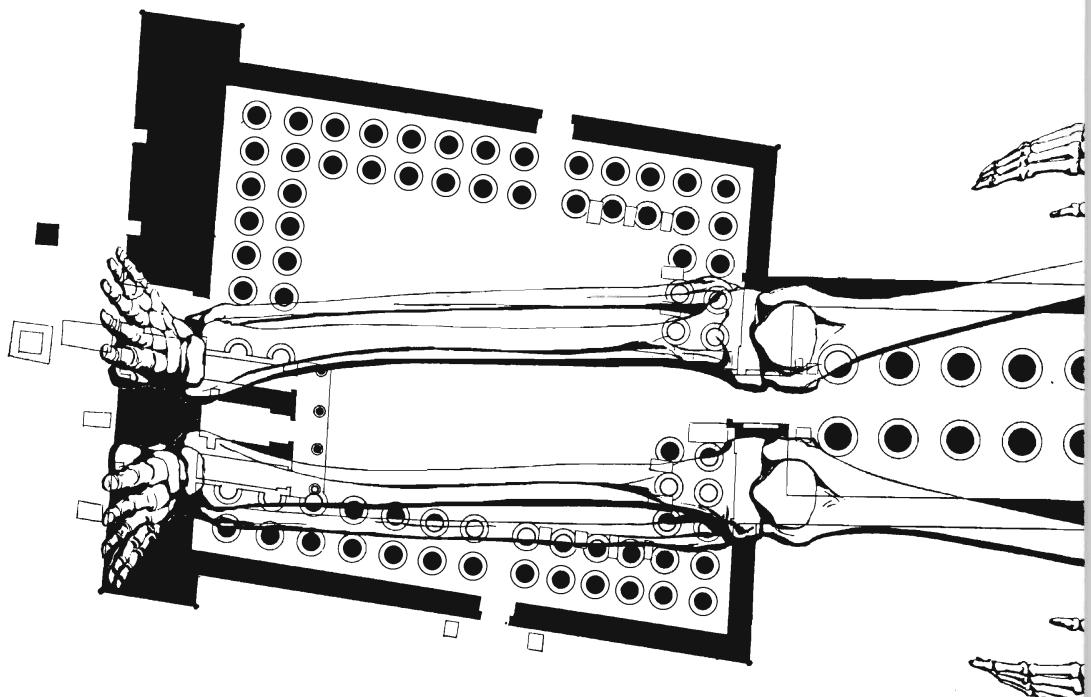


PLATE 14
Plan of the Temple in the Ramesside Period

*Man conceived by the
Creator is Universe.
On his body, senses, organs,
assimilative functions,
and vital nervous centers,
both physical and occult,
all knowledge is inscribed.*

(Cf. Chapter 25)

North



meters 10 20 30 40 50 60 70 80 90 100

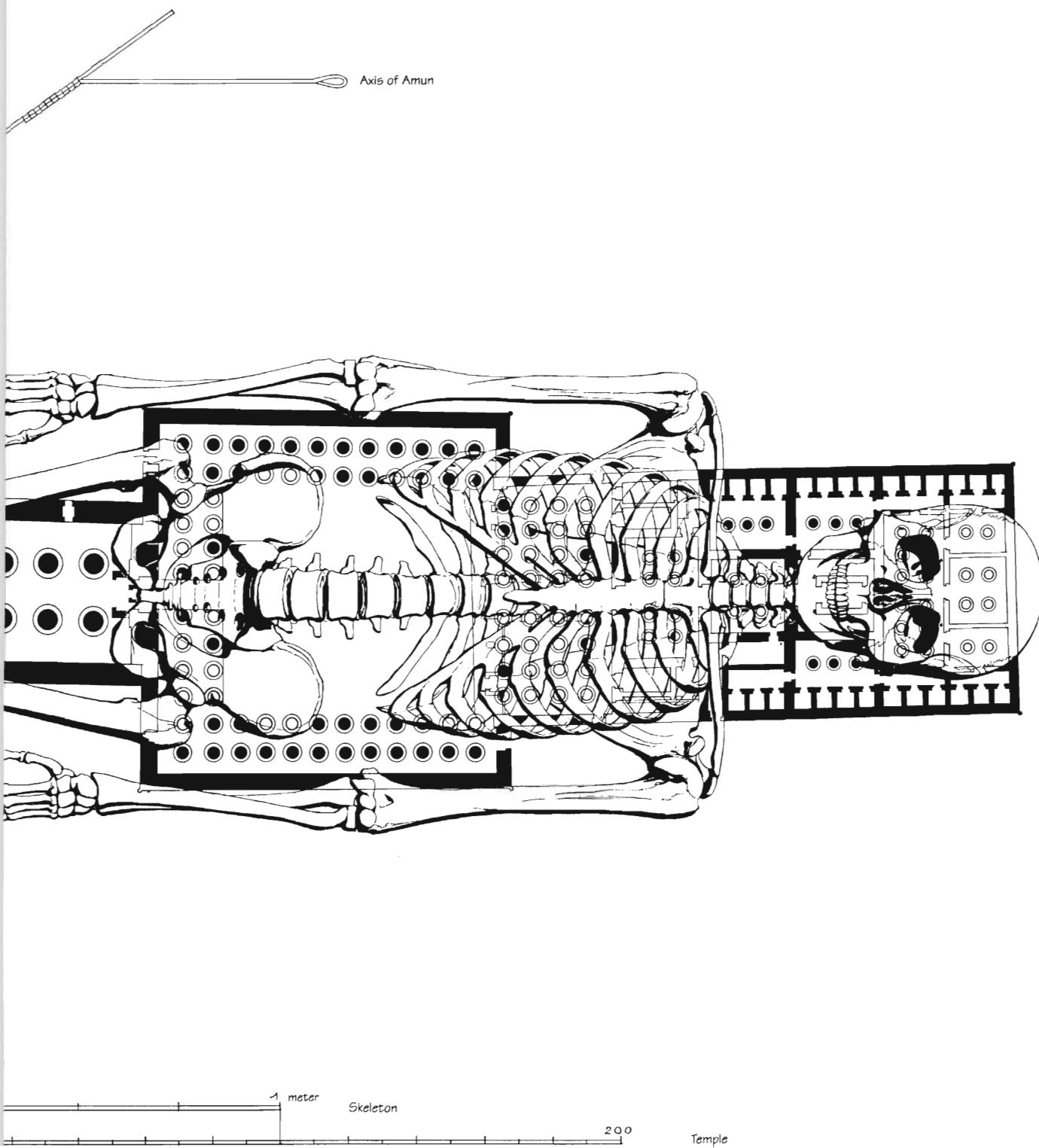
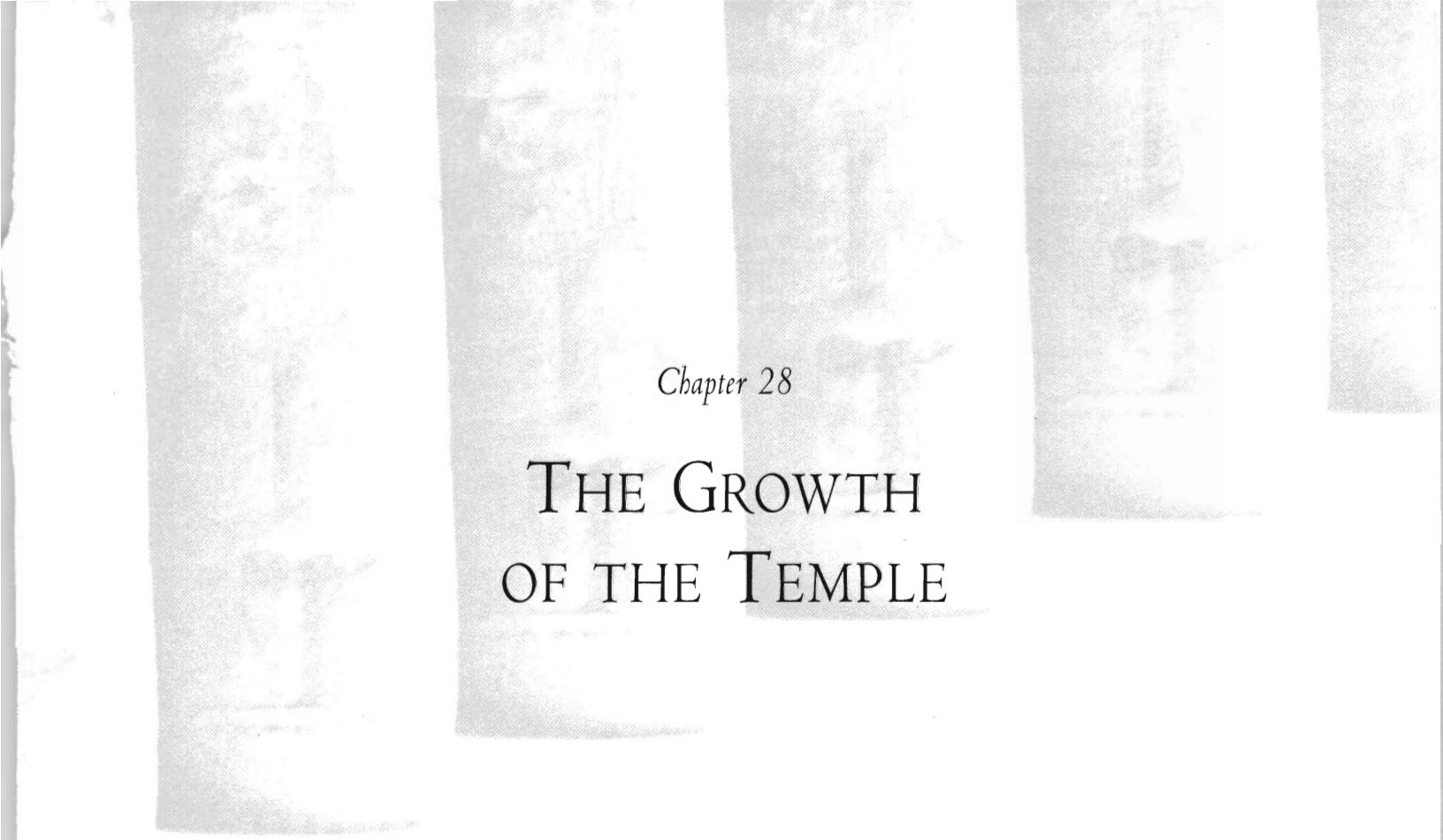


PLATE 15
The Temple and the Proportions of Man



Chapter 28

THE GROWTH OF THE TEMPLE

We should, once and for all, conceive of the pharaonic temple as a seed in the process of bearing its fruit. This is truly the most grandiose conception of architecture. But a building is rigid by nature. One could, if need be, produce figurations that would bring to mind this gestation, but that would be rational, not vital, as was the spirit of the Ancient Egyptians. For them, every part of a building must be alive. This characteristic of gestation may have been what prompted Herbert Ricke¹ to consider pharaonic architecture as "vegetal." This is correct, since all gestation comprises both growth and vegetation; but this strict framing into a formula, corresponding to the Western mentality, is devoid of life. Growth unfolds in three dimensions; and gestation is a constant transformation until it reaches the perfection of the new seed.

"Man, knowest thou thyself and thou shalt know the Universe and the gods," says the wisdom. In this spirit, it is appropriate also to cite John (2:25): "... he could tell what a man had in him."

For his part, did not Moses—who grew up in Egypt—also affirm that "Man is made in the image of God"? Man is then considered as the summation of the Universe. The temple of Luxor was built in order to explain these things.

PLATE 12 • PLAN OF THE TEMPLE IN ITS PRESENT CONDITION

Plate 12 is a precise survey of the temple of Luxor and its surroundings in 1952 and shows the condition of the various structures at the time of their discovery. These include the temple of Amenhotep III, its enlargement with the court of Ramesses and the exterior pylon, the courtyard of Nectanebo, in which we find the chapel of Isis located on the extension of the axis of Amun,

¹ Herbert Ricke, *Bemerkungen zur ägyptischen Baukunst des Alten Reichs*, vol. 1 (Zurich: Borchardt Institut, 1944).

and, finally, the Roman constructions, the surrounding east wall of which, visible in the aerial photographs, is now under the city garden.²

PLATE 13 • PLAN OF THE THREE SUCCESSIVE CONSTRUCTIONS OF AMENHOTEP III

First Phase

On the “tank”-shaped foundation filled with stones from previous buildings, and where the definitive “growth” of the seed thrown into this place will be realized, the platform of the base is established.³

On this platform, in accordance with the idea of the temple, the “geometric functions” defining the measures and the principal axes governing the construction will be traced. The unit of measure that provides the geometric foundation will also be used for the face laid out in the pavestone mosaic,⁴ and on the outlines etched in this pavement will be raised the walls and columns that rest on the mosaic with no other foundation.

The whole of the covered temple is divided into two unequal parts, the longer of which, toward the south, contains the sanctuaries; the shorter opens toward the north with the hypostyle room, the roofing of which is supported by two times sixteen columns.

Second Phase

Amenhotep III added a square peristyle court to the covered temple, wider than the original structure, and surrounded on the interior east, west, and north faces by a portico of sixty-four columns arranged in double rows.⁵ At the time of this construction Amenhotep III removed the dedication on the north face of the platform of the covered temple as well as the long ramp that gave access to it; incidentally, this ramp, envisioned from the beginning, began at the height of the navel of the adult man and gave access to the covered temple representing the infant at birth.

Third Phase

Next, added to the peristyle court—this time constructed lengthwise—was the great colonnade of Amun, the nave, containing a double row of seven columns; this ended the work of Amenhotep III.

PLATE 14 • PLAN OF THE TEMPLE IN THE RAMESSIDE PERIOD

The temple of Amenhotep III was continued widthwise by Ramesses II with the strongly offset court (the narthex), bordered on its four sides by a double row containing seventy-four columns plus four square pillars built into the thickness of the east and west walls of the chapel of Amun’s barque, two on the right and two on the left of the axis of Amun and its return.⁶ The repositories of the barques of Mut and Khonsu are each side of this chapel.

Today the Abu el-Haggag mosque conceals the bases of the columns of the northeast corner of the court. To the north, this court is bordered by the pylon.

² Cf. plates 2 and 3.

³ Cf. plate 94, the various foundations.

⁴ Cf. plates 34–37, the pavestone mosaic.

⁵ The colonnade of the peristyle court is bordered on the south by the hypostyle room, forming with it a total of ninety-six columns.

⁶ Cf. plates 85 and 86.

General Laws of Human Growth

For a long time it has been recognized that the essential characteristic of the phenomena of growth is its discontinuity. On envisioning the whole of an organism or one or another of its parts, one is struck by the fact that development does not progress in a regular and continuous manner, but proceeds, on the contrary, by alternate phases of rest and sudden bursts. The rhythm of these alternations is, moreover, quite irregular and affects a physiognomy in a particular way according to the type of tissue and organ considered. . . .

It is especially with regard to the skeleton that the great *law of alternation* is verified. The long bones thicken for six months and elongate during the following six months. These two phases alternate between the two segments of the same extremity of whatever kind. For example, the bones of the forearm thicken while the humerus elongates, and vice versa. . . .

After birth, there are three periods where growth is particularly rapid. The first occurs during the first year and continues during the second year. The height, which was about 50 centimeters at birth, lengthens by 20 centimeters the first year and by 10 centimeters during the second. At two years, the height is about 80 centimeters. This is three-fifths more than it was at birth and nearly half the size it will attain in adulthood. The second period of lengthening occurs at six or seven years. A last phase of rapid growth occurs around twelve or thirteen years, that is, the time of the first manifestations of puberty. . . .

In the intervals between the periods of lengthening, growth continues at a very decelerated rate. On the other hand, the largest weight gains occur during these times.⁷

This is the alternation of lengthening and thickening, an alternation that we can observe in the successive stages of growth of the temple, one time in length, the next in width.

The first stage of the temple represents the size of the infant at birth. The newborn is characterized by the considerable development of its skull, the volume of which is equal to half of what it will be in adulthood; further, the circumference of the head is 2 to 3 centimeters larger than the thoracic perimeter; and finally, the height of the head of the newborn is contained four times in the total length of the body.

In the temple, the head of the child-king will include the south sanctuaries and room XII, thus all the vital centers⁸ whose placement will remain unchanged during the development of the man. These centers do not move during growth, and *it is as if the central organs of life and of the intellect, located in the sanctuaries, were the fixed point that governs the whole growth of the body.*

The height of the infant at birth is divided into two equal parts by the navel. Now, at the halfway point of the length of the covered temple, in room IX, the representations of the "theogamy" and of the childbirth are found.⁹ The sex organs, which divide the adult into two equal parts, divide the height of the newborn in the proportion of 3 to 5 (the first F series ratio of ϕ).

The Westcar Papyrus, a prophetic text attributed to the Fourth Dynasty concerning the child-king who would be the head of the lineage of the Fifth Dynasty, gives a cubit for the length of the newborn; now, the royal cubit of 28 digits represents "a cubit plus a palm," which is 7/24 fathom.

The height of the royal infant at birth, according to the ancient tradition, allows one to know his future arm span, thanks to which it is possible to determine his height both to the vertex and without the crown of the skull as an adult, if one knows his personal coefficient.¹⁰

⁷ Vandervael, *Biométrie humaine*, pp. 78–82.

⁸ Cf. plate 38.

⁹ Cf. fig. 223.

¹⁰ Cf. chapter 11.

Numbers and the Growth of the Man of the Temple

We call "seed" the synthesis of all the characteristics that are still potential that this seed is going to generate. The same is true for the infant child, who is born with all the characteristics, definitively arrested, of that which it will physically become. Consequently, we must consider the sizes indicated at birth. We will find there a general law of human growth that vitally summarizes all the fundamental data we have seen applied in the cubits, the human canon, the axes of the Temple of Man, and so on.

The first proportion that stands out in the newborn is the length of the head to the total height, which is 1 : 4. The second proportion that stands out is the division in half of the total length by the position of the navel. These are the first two lineages of the harmonic decomposition.

On the basis of the initial division by 4, the developed harmonic decomposition gives the proportional moments that are applicable to the adult human body.¹¹ Its projection onto the covered temple (fig. 200) determines the placement of all the essential east-west walls (with the exception of the one that separates room XII from the secret sanctuaries), and, because of this, what is drawn on these walls relates back to the same proportional points of this harmonic decomposition on the adult body. Thus, through the law of harmony we can follow the becoming, which is also human growth from birth to the adult state. This is a stable and undeniable basis.

All this is confirmed in the room of the birth (room IX) through the fact that Khnum, the potter who fashions the human body, gives the newborn the proportions he will have as an adult (fig. 201).

The harmonic proportion with 1 to 4 for origin generates, toward *P*, the fraction 1/7 of the total length *PA*. Each seventh is 4 digits of the royal cubit. The length of the covered temple representing the newborn is thus one royal cubit of 28 digits, confirming the tradition, and the entire temple representing the human adult has a length equal to the royal cubit in which each digit is represented by 1/2 fathom.¹²

The distance between the exterior facade of the southern wall of the covered temple, *P*, and the northern facade of the door of sanctuary I is contained seven and one-half times in the total length of the covered temple, *PA*, which corresponds to the proportion of the human head in relation to the height of the adult man.¹³ This also confirms our suggestion of seeing in the three secret glands the fixed point of attachment with regard to the entire development and growth of the human body; the pituitary, the central gland, controls the others.

Harmonic proportion determines the location of the vital centers in the body (plexuses, *cakras*), while it is the function ϕ and its corresponding arithmetic form, the root of 2, that governs growth.

The harmonic decomposition starting with 1/4 leads in one direction (toward *P*) to the numbers of the royal cubit, and in the other (toward *A*) to the number 19 of the human canon. This might lead us to establish a *canevas* of nineteen units for each of the four phases of growth, *A*, *B*, *C*, *D* (figs. 202, 203, and 204). Now, if we were to represent growth as a juxtaposition of squares of a *canevas*, the sizes of which correspond each time to arrested numbers, we would be reasoning in a schematic fashion. This then would only be an addition of what we call corpses. In reality, growth indicates a becoming. We should therefore envision a geometric growth where, figuratively speaking, one phase engenders the following one: size *A* must pass to size *B* through the function ϕ , with size *A* giving the original value. *The child carries potentially in itself the elements of its particular growth.*

¹¹ Cf. vol. 1, figs. 136 and 138.

¹² Cf. plate 64, the cubits and the plan of the temple measured in fathoms.

¹³ The length between the southern facade of the covered temple and the northern facade of the door of room I (without cornice) is 10.70 m, and the length *PA* (without cornices) is 79.75 m. The exact ratio is then 1 to 7.454.

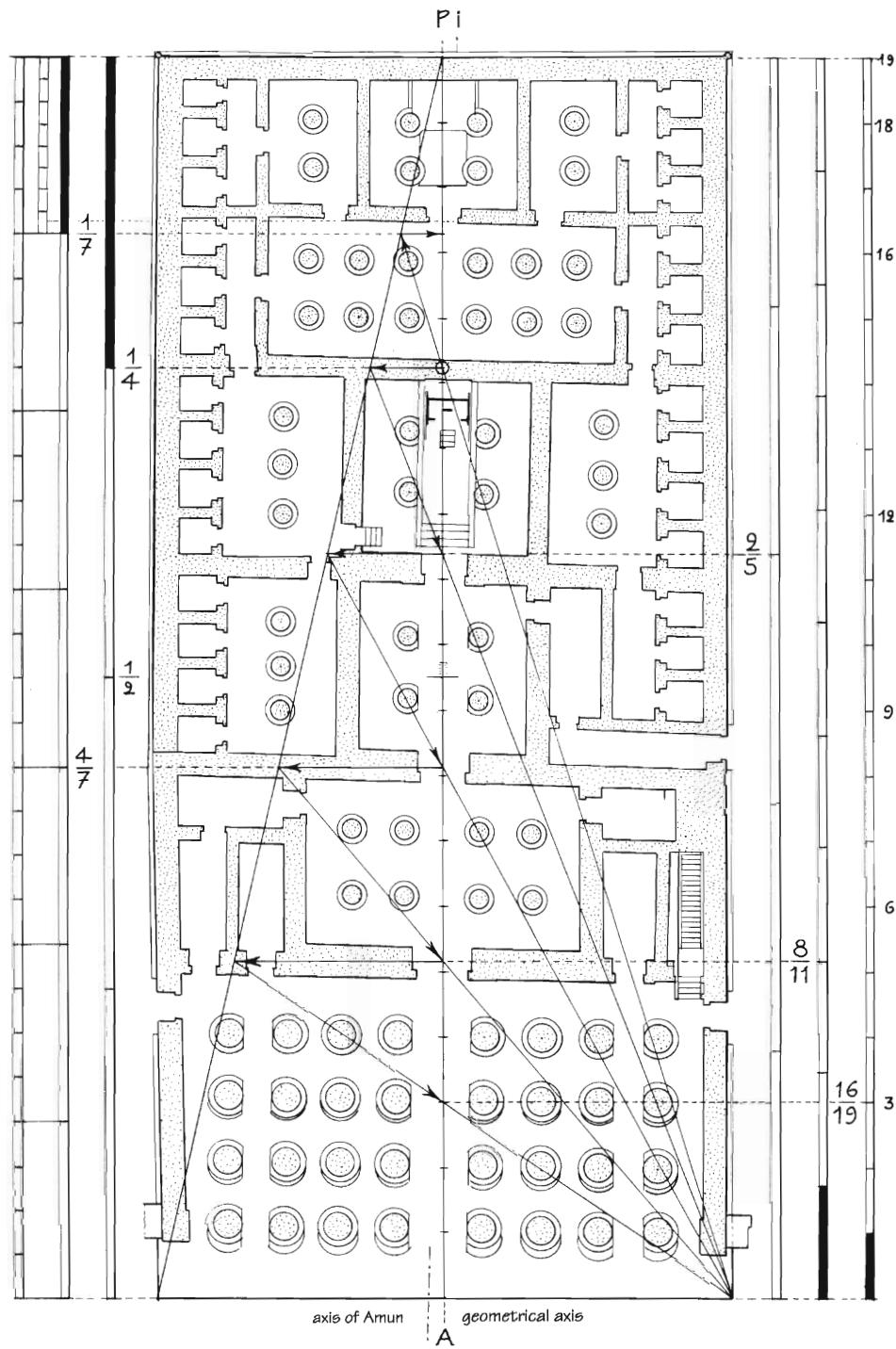


Fig. 200. Projection on the covered temple of the harmonic decomposition starting from 1/4 of the total length PA

The decreasing development toward P determines $1/7$ and the 28 digits of the royal cubit (at left). The increasing development toward A successively determines the ratios $2/5$, $4/7$, $8/11$, $16/19$. The ratio 8 to 11 governs the orientation of the nave with respect to north. The ratio 16 to 19 determines the division by 19 of the human canon. The crossing of the axes on the threshold of rooms IV and VI corresponds to the division of PA into two segments, which are to each other as 8 to 11.



Fig. 201. Khnum modeling the child-king and his ka (double) on his potter's wheel

Hathor gives them life with her left hand. Her right arm bears a left hand and Khnum has two right hands. Luxor, room IX, west wall, first register, first scene toward the south (restored).

The length OA of the covered temple represents unity [see fig. 204].

The second stage of the temple adds the “court of the belly” and marks the end of infancy, that is, about two to two and one-half years. This is the age called “the age of the belly”¹⁴ during which the thorax remains relatively small relative to the abdomen.

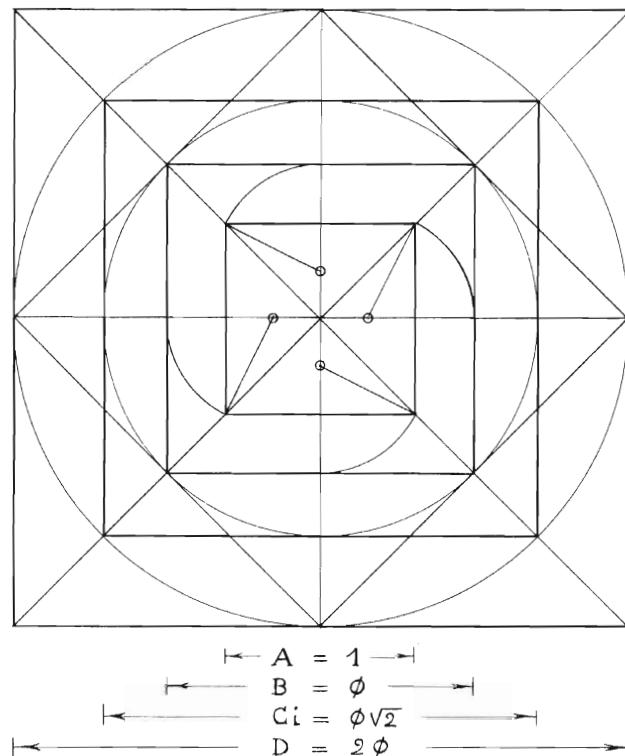
At this age the child attains half of its future height, and it is therefore at this stage of the construction that we can know, on this basis, the length of the adult Man of the Temple: in relation to the unit defined as OA , the second stage of the temple, OB , represents ϕ , and the total length OD is consequently 2ϕ .

The third stage of the temple of Amenhotep III is comprised of the nave, in which the seven times two columns have capitals of blossoming corollas. This period of growth is called “the age of respiration”¹⁵ and is not without relation to the development of the thyroid (the weight of which has doubled since birth), which affects growth in length.¹⁶ This is the period of the sudden growth spurt of the lower limbs. It is a vegetative phase.

¹⁴ A. Thooris, *La Médecine morphologique* (Paris: Doin, 1937), p. 211.

¹⁵ Ibid.

¹⁶ Here, we can compare the processional barques of the nave with the barques of the east wall of room IV that corresponds to the location of the thyroid, which we also saw in the sanctuary of Amun (pituitary gland). Cf. plate 31 and fig. 223, and plate 38.

Fig. 202. Diagram of growth by ϕ and by $\sqrt{2}$

A represents the unity corresponding to the length OA [fig. 204] of the covered temple; $B = \phi$ and corresponds to the length OB ; $Ci = \phi\sqrt{2}$ and is obtained by pivoting the preceding square on its diagonal; $D = 2\phi$, total length of the temple OD .

Growth occurs based on the root of 2, taking OB as the new starting unit. In other words, the diagonal of a square of side OB determines the length OCi , culminating at the southern face of the pylon of Amenhotep III. The length OCi in its turn becomes a new unit or side of a square in which the diagonal leads to D (figs. 202 and 204).

Now, the architecture of Amenhotep III ends with his pylon at *Ce* and not at *Ci*. There is thus a reason for the fact that the construction surpasses the limit *Ci*. First the measures, then the harmonic decomposition, and finally the axes of Amun and Mut impose on us the numbers and proportions that are derived from the pentagonal function (fig. 203).

This imposed pentagonal function has its reason for being insofar as it is a function of vegetation, but in its turn, it obliges us to consider the initial length 1 of the newborn as having the value ϕ . In this way, the second stage OB will be ϕ^2 ; the third stage will be $2\sqrt{3.618\dots}$, that is, 2×1.902 , and the final length OD will be $2 \times \phi^2$, the two royal men who functionally represent the royal cubit.¹⁷

The intermediate phase of rapid growth that occurs in the child at about twelve or thirteen years of age is indicated by the western door of the Ramesside court, at which the avenue coming from the loading dock ends. In the axis determined by the southern doorposts of the eastern and

¹⁷ Cf. chapter 10.

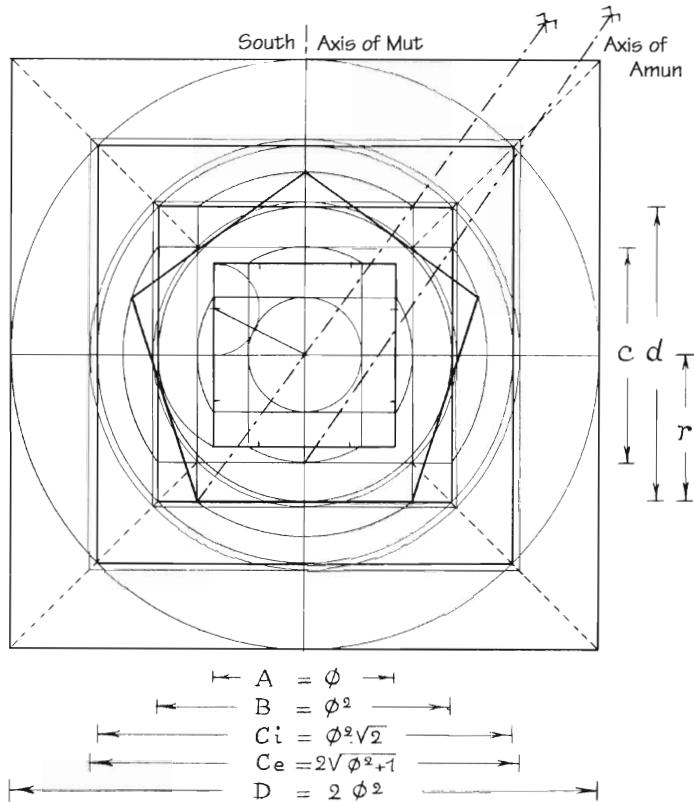


Fig. 203. Diagram of the development of the pentagonal function combined with the functions ϕ and $\sqrt{2}$

The side of the initial square, A , equals ϕ . Its division by ϕ determines the square at the center with 1 for its side. The diagonal of the rectangle 1 to ϕ is equal to $\sqrt{1+\phi^2}$ or $\sqrt{3.618} = 1.902\dots = c$. This diagonal is the side of a pentagon that is the diameter of the inscribed circle of the square with side B or d .

$$\frac{d}{c} = \frac{2.618\dots}{1.902\dots} = 1.376, \text{ and determines the angle of } 36^\circ \text{ or } \frac{11}{8}\hat{\wedge}$$

$$\frac{c}{r} = \frac{1.902\dots}{1.309\dots} = 1.453\dots, \text{ and determines the angle of } 34^\circ 30' \text{ or } \frac{16}{11}\hat{\wedge}.$$

These ratios are those of the orientations of Mut (nave) and of Amun with respect to the north-south axis.

western doorways of the court of Ramesses, a variation in level and a stone piece embedded in the pavestone mark the point where the axis of the nave (axis of Mut) culminates.¹⁸ The princes, coming from the Nile (Hapi), enter into the temple through the western door of the Ramesside court.

Now, if the covered temple represents unity, the length OE is ϕ^2 , and if the length OA is ϕ , this length OE becomes ϕ^3 .

¹⁸In *The Temple in Man* we noted the importance of this point, which a subsequent excavation showed us to be especially marked by the Ancients with this key.

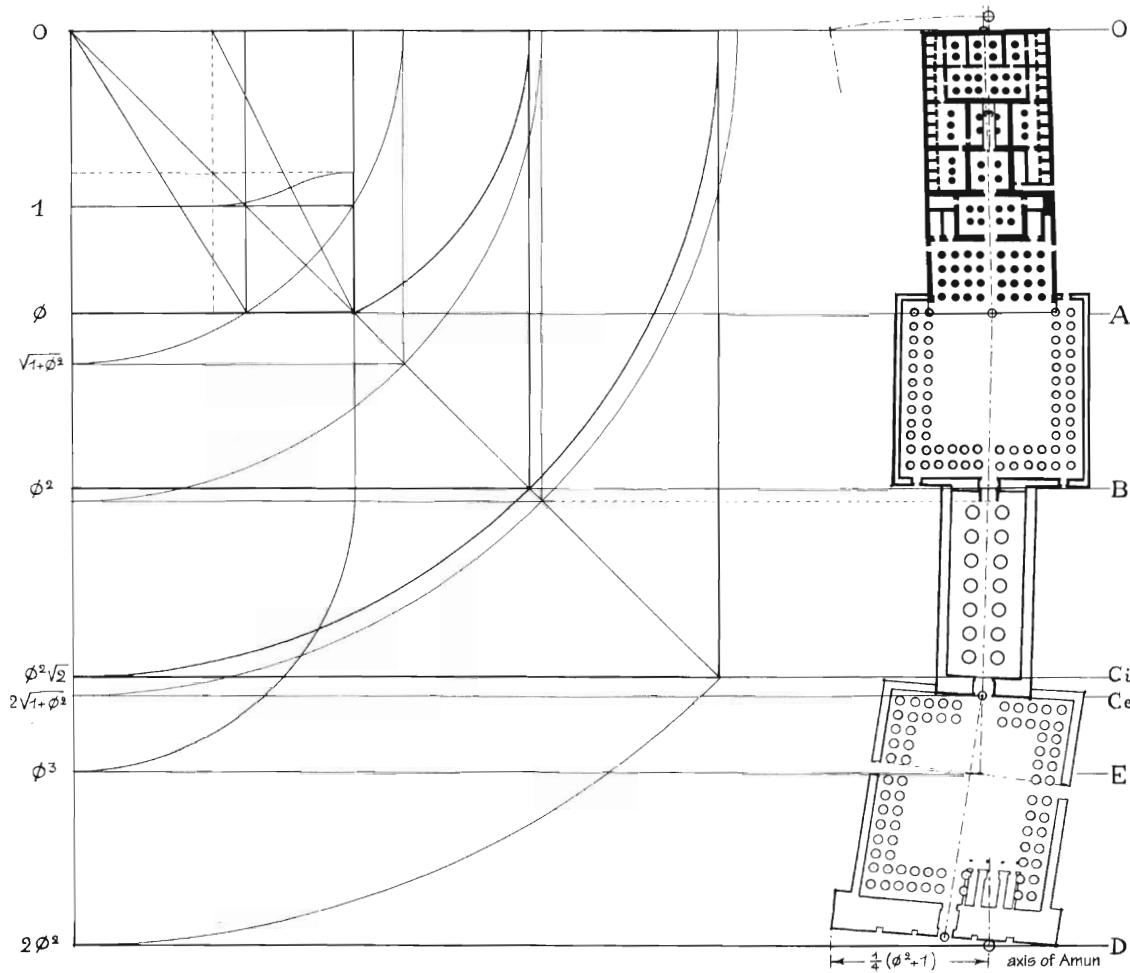


Fig. 204. Growth of the temple

	Measure : ± 10 cm	Function	Calculated
OA = covered temple	79.75 m	ϕ	= 79.82 m
OB = north transept wall	129.15 m	ϕ^2	= 129.15 m
OC_i = south nave wall	182.60 m	$\phi^2\sqrt{2}$	= 182.64 m
OC_e = north nave facade	187.75 m	$2\sqrt{\phi^2+1}$	= 187.67 m
OD = northwest corner of pylon	258.35 m	$2(\phi^3)$	= 258.30 m
OE = princes' entrance	209.15 m	ϕ^3	= 209.00 m

The total length of the temple not including the cornice and socle is 258 meters, or 140 fathoms at 0° , measured on the axis of Amun and its perpendicular. With the foundation of the base of the pylon of Ramesses the total length comes to 258.35 meters, and with the south cornice of the covered temple, the total length comes to 258.65 meters, corresponding to 140 fathoms of 1.8475 meters. (One hundred of these fathoms measure the arc of meridian at 30° north latitude, the location of the Pyramid of Cheops.)

The complete series, ϕ , ϕ^2 , $2\sqrt{3.618\dots}$, ϕ^3 , and $2\phi^2$ summarizes the numerical functions of the growth of the Man of the Temple (fig. 204).

The first stage of the temple, OA , considered as a unit with the value of ϕ , gives the half-length OB of the entire temple OD ending with the pylon of Ramesses II when it is multiplied by ϕ .

Now, the half-length of the temple coincides with the exterior facade of the north wall enclosing the transept (measured from its northwest corner on the perpendicular to the axis of Amun), and Amenhotep added a rabbet to this length at the north, to the right and left of which would be fitted the walls of the nave.

The total length of the covered temple and of the transept, counting this rabbet, represents 250 royal cycle cubits, which gives the formal indication that the temple conforms to the functions and essential measures governing the cubits:

On one hand, the monument measures 140 fathoms (258 m) and functionally is $2\phi^2$ in comparison to the length of the covered temple, which is ϕ . On the other hand, the Man of the Temple measures ϕ^2 in meters, that is, 500 royal cycle cubits, or 261.80 meters. The difference between the 500 royal cubits and the 140 fathoms represents the crown of the skull cut by the south wall of the covered temple.¹⁹

PLATE 15 • THE TEMPLE AND THE PROPORTIONS OF MAN (PROJECTION OF A SKELETON ONTO THE TEMPLE)

The skeleton represented in plate 15 is shown facing front. It has been drawn according to the averages established by modern biologists for the proportional sizes of each bone and the general proportions of the human body.²⁰ The most general constants are, first, the division of the height of the human body by the navel according to the golden section: the two parts are to each other as 1 is to ϕ with the elimination of the crown of the skull. Now, the numbers for the growth of the temple give it the function ϕ^2 for length. This length, measured from the pylon to the south wall of the covered temple, is 140 fathoms and corresponds to the Man of the Temple without the crown of the skull.

The Man of the Temple, summarizing functions and measurements in one monument, is actually valued as ϕ^2 in meters when the skullcap, cut off by the south wall, or the difference between 258 meters and 261.80 meters, or 500 royal cycle cubits, is added to him. Moreover, on the west wall of sanctuary I, which gives all the measurements and essential functions of this temple, king A furnishes—by his height to the vertex—the unity that when multiplied by 19×10 , corresponds to 500 royal cubits, thus confirming the height of the Man of the Temple.²¹

The second constant is the division of the height into two equal parts by the pubic symphysis: the total measure is given by the length from the north face of the Ramesses pylon and the wall that separates the nave from the transept and corresponds on the skeleton to the pubic symphysis. Taking the 130.90 meters on the monument, we must double this length to obtain the height of a person with the crown of the skull, which will be 261.80 meters, or 500 royal cubits, that is, in meters, $100 \times \phi^2$, corresponding to 10×19 times the height of king A in sanctuary I.

¹⁹ The diagonal of the rectangle having a length of $2\phi^2$, or 5.236..., and a base of $1/4(\phi^2 + 1)$, or 0.9045..., is 5.31364.... The ratio between the length and the diagonal of this rectangle is 1.01481..., the coefficient by which 140 fathoms at 0° must be multiplied to obtain 500 royal cubits (fig. 204). This coefficient is identical to the one that serves as a link between the two measures of the kings A and E of sanctuary I.

²⁰ Cf. chapter 11, "Human Biometrics and Invariable Principles."

²¹ Cf. chapter 13, "The Teaching of the Five Kings of the Sanctuary of Amun," and plate 80.

The skeleton is projected onto the temple so that the pubic symphysis coincides with the wall that represents it; the remainder must allow us to verify whether or not the general proportions of the other parts of the body correspond with the architecture. The scale is as follows: 1 meter of the skeleton equals 150 meters of the temple, which is therefore 150 times larger than man.

This man would measure 1.7454 meters, a dimension that is 18/19 fathom at 0°. This 18/19 plays an important role in the *canevas* and in the orientation, as we shall see later on. Let us note now that the axis of the court of Ramesses in relationship to north is at an angle of 18/19 in *a/n* notation.

Let us now look at the projection.

By placing the soles of the feet at the level of the pylon, the knees coincide with the thick wall that separates the narthex from the nave. The iliac crest, which corresponds to the level of the navel, would locate the navel at the center of the “court of the belly” (transept). The inscription on the architrave of the east colonnade mentions at this point that “here is the place of the birth of the king, where he will spend his infancy and from which he will go out crowned.”

The xiphoid process (the point of the sternum) is at the last row of columns of the hypostyle room, the *haty*. The clavicles are superimposed on the thick wall that separates the first two hypostyle rooms (XVI and VIII) of the “closed temple,” properly speaking. Room IV is at the level of the seventh cervical (and first thoracic) vertebra, an important vital node corresponding to the stellate ganglion. It is at this point that the *neters*, in certain cases, give life (ankh).

Rooms IV and IX correspond to the level of the throat, above the clavicles. We should remember here that the first and last points of ossification are formed in the clavicles and that, also, room IX, the north wall—therefore on the clavicle—represents the adult king in the room in which his spiritual conception, his birth, his future evolution, and his second birth (*sed festival*) are described.

The head takes up all the sanctuaries. The room of the barque (VI) is the place of the mouth, the creative Verb, according to tradition. Indeed, we find there the figures of the great Theban “Ennead”²² on the west wall, and the representations of the *neters* on the north and south walls.

The eyes are in room XII, the room of the solar cycle, the twelve hours of the day and the twelve hours of night. The sun enters at the east in its morning barque, and goes to rest in the west, in its evening barque. Now, the sun is called the “eye of Ra,” symbolized by the falcon.

The part of the brain containing the three vital centers is located in the “secret sanctuaries,” I, V, and VII.

In sanctuary I we find, on the west wall, the five kings that give us the units of measure of the temple, units that vary from the first king to the last and that confirm the play of growth in the monument (cf. plates 80 and 81).

The arms do not figure in the temple, but nevertheless we find at the height of the left wrist of the skeleton, on the exterior north wall of the transept, bas-reliefs showing severed hands (cf. fig. 199, no. 6). Notice that the representation of the *kamutef*, “the androgynous Adam,” is sculpted exactly at the level of the pubic symphysis (cf. fig. 199, no. 16).²³

²² “Ennead” (*sic*) of fifteen *neters*.

²³ We regret not having been able to excavate at the location of the top of the humerus.

Plate 15 has but one goal: to show that a human skeleton marks the correspondence of the principal points of the edifice in accordance with the human form. The proofs that this was actually the intention of the master builder of the temple are given further on.

One might be surprised at the specific measures we give, with an uncertainty of only ± 10 centimeters, on a monument so in ruins. Nevertheless, we affirm after checking many times and with much difficulty, that we have specified nothing that is not absolutely correct. It is this conscientious study alone that has allowed us to draw the conclusions given in this book.

Our plans of the different phases of the temple were drawn to a scale of 1/100, the pavement, to a scale of 1/25, and the walls, to a scale of 1/20.

CONCLUSION

The geometry and numbers demonstrating the coincidence of the architecture of the temple of Luxor with the phases and proportions of human growth, the principal instances of which we have just noted, are undeniable.

This demonstrates a real knowledge of the phenomena of life on the part of the Ancients, and leaves us astonished before the strength of their faith, which could synthesize this knowledge in a monument with such skill. Faced with these facts, readers who are less critical than myself might pose the following questions:

We judge these problems on the basis of data presently known on growth, and then rediscover that data in this architecture. How, then, did this work of stone teach these things without the benefit of our present knowledge?

To this I respond: If we had not discovered these numbers and proportions in this monument, *which we knew to represent man*, we would not have deemed it necessary to compare them with those of our science in order to identify here the science of the Ancients for a public unaware of these matters.

This first objection that could be posed is therefore not viable.

Let us admit then that the master builder wanted to represent the proportions as well as the phases of gestation of the growth of the human being through the monument; does this communicate something more than our present science can explain in words, and thus without using a monument?

My initial response is no, if we are content to regard the problem in a superficial way and according to our analytic way of thinking. But . . . when we see these ratios and numbers inscribed in the monument related to those of the pharaonic calendars, or to the division of time according to the double influence of the lunar and solar periods, and, then, to the lunisolar periods of nineteen years, as well as to the *double rhythm* of the vague year in the Sothic cycle that serves as a reference throughout the great periods of the precessional months, then we begin to glimpse, by means of these coincidences, the *causes* of the variations in time of organic growth and of the alternations between the elongations and widenings of the bones and muscles, as well as the nature of the periods that affect the development of the head, of the *baty*, of the abdomen, and of the legs.

These facts allow us to glimpse the existence of a functional identification of the particular with cosmic causes.

When we observe that these same numbers, which determine the grid on which the plans of the various ages of man are traced, are the numbers that derive from harmony and determine the five regular (Platonic) polyhedrons, as well as their relationships to one another—those polyhedrons

that Kepler used to calculate and establish his famous formula, $R = \sqrt{t^2}$, in order to determine the distances of the planets²⁴—then we see in these numbers more than a simple phenomenon interesting only as human biometrics, because they correspond to cosmic mechanics.

I therefore conclude: through these few basic elements concerning human growth that we have given here, established in this astonishing monument that is the temple of Luxor, is revealed to us the existence of a synthetic vision that unifies all vital phenomena under one unique law.²⁵

"Man, know thyself."

²⁴ Cf. chapter 9.

²⁵ Let us note here that just as, with regard to the axes, the axis of Amun is occult and governs, for planes, the pentagon is occult and governs, and for volumes, the dodecahedron is occult and governs.

Chapter 29

A COLOSSUS OF THE TEMPLE

Plates 16–25

*Man, or the human principle considered as
an incarnation of cosmic functions, that is,
Anthropocosmos, is the universal symbol to
which everything relates.*

(Chapter 4)

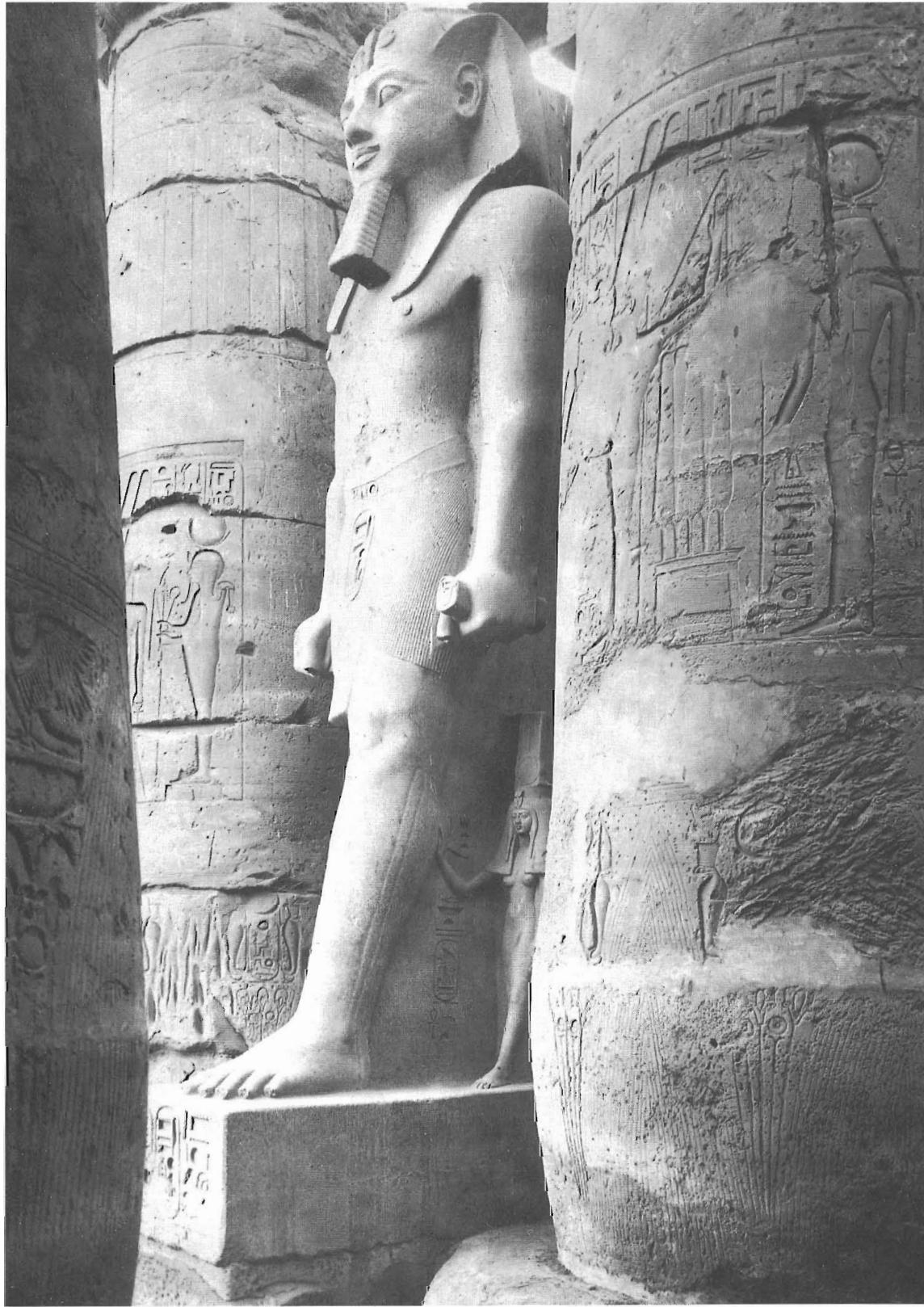


PLATE 16
Colossus No. 3 of Ramesses II, Three-Quarter View

The form-idea cannot be described; it must be felt and lived.

True poetry is magic, and magic is identification with form, body with body, Spirit with Spirit. The All in One, Ecce homo, is the symbol above all symbols; and man is not an image, a condensation of the Universe; man is the Universe.

(Introduction)

In Ancient Egypt, as in China, the king embodies the Cosmos for his people and represents the incarnation of the present state of humanity's achievement. . . .

(Chapter 3)

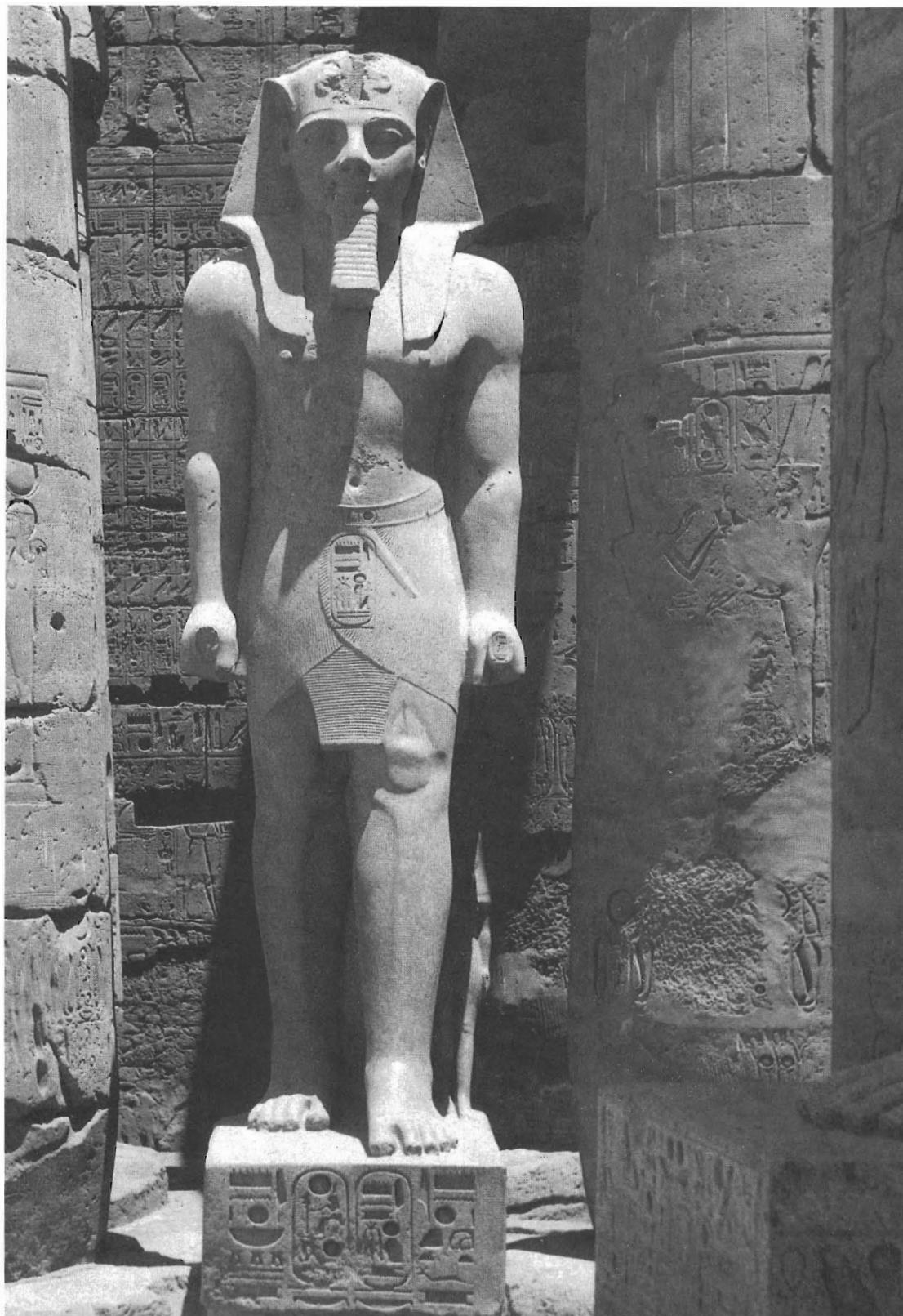


PLATE 17

Colossus No. 3 of Ramesses II, View from the Front

. . . the pharaonic teaching shows us Man composed of three beings: the corporeal being, the sexual being, and the spiritual being. Each has its body and its organs. These three beings are interdependent through the flow of fluids and the nervous influx; the spinal marrow is the column of "fire" that connects the whole and effects the transformation of the corporeal into energy and spirit.

(Chapter 17)



PLATE 18
Colossus No. 3 of Ramesses II, View from the Back

Everything lives and therefore assimilates, grows, and reproduces, a fact that extends to monuments and statues, conceived and executed on multiple axes simultaneously.

(Chapter 4)

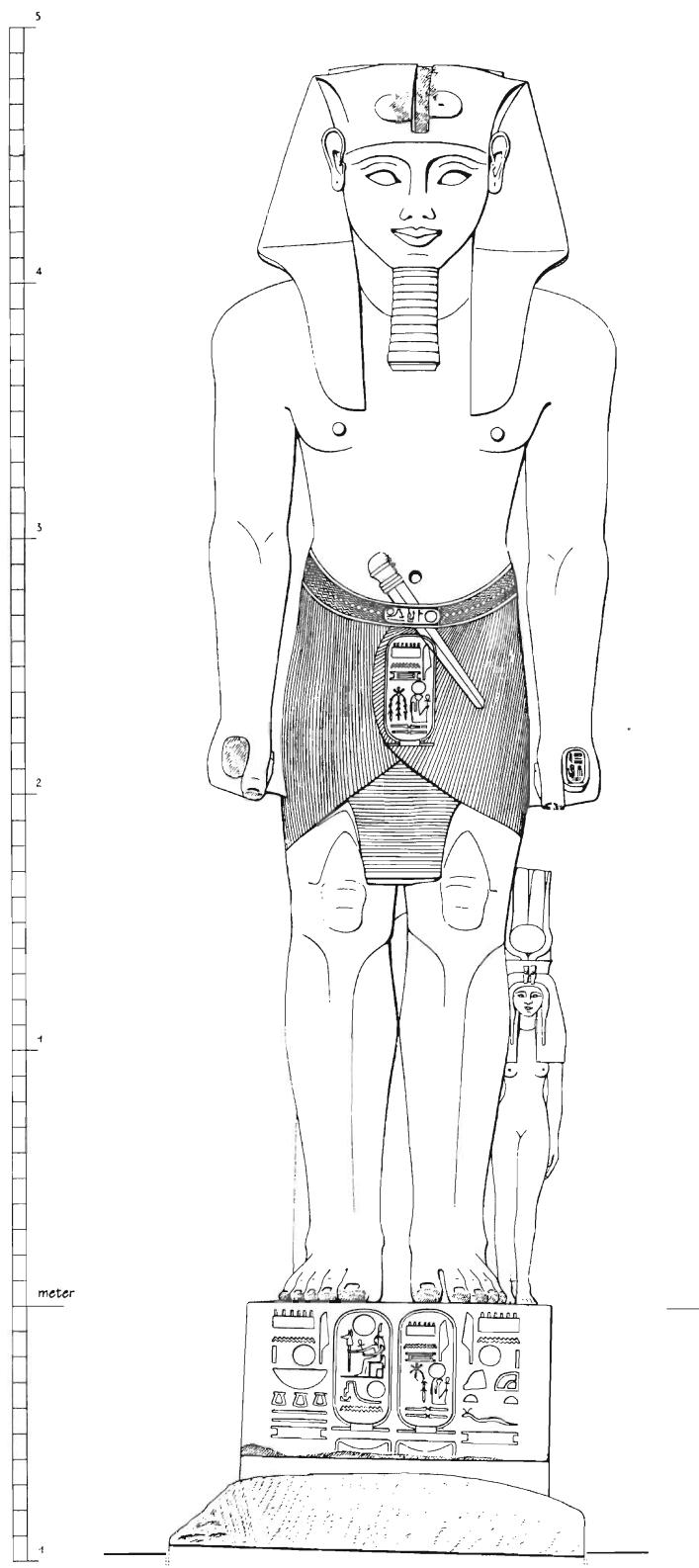


PLATE 19

Scale Drawing of Colossus No. 3 of Ramesses II, Front (West)

. . . the only indisputable doctrine is the doctrine that synthesizes all possible points of view around the basic “forms.” This simultaneity of vision is the essential quality to be developed, the only quality valid for the “spirit of the problems” of knowledge. A describable solution to a problem is only possible if none of its elements is fixed as an invariable form; the solution must adapt to all possibilities.

(Elements)

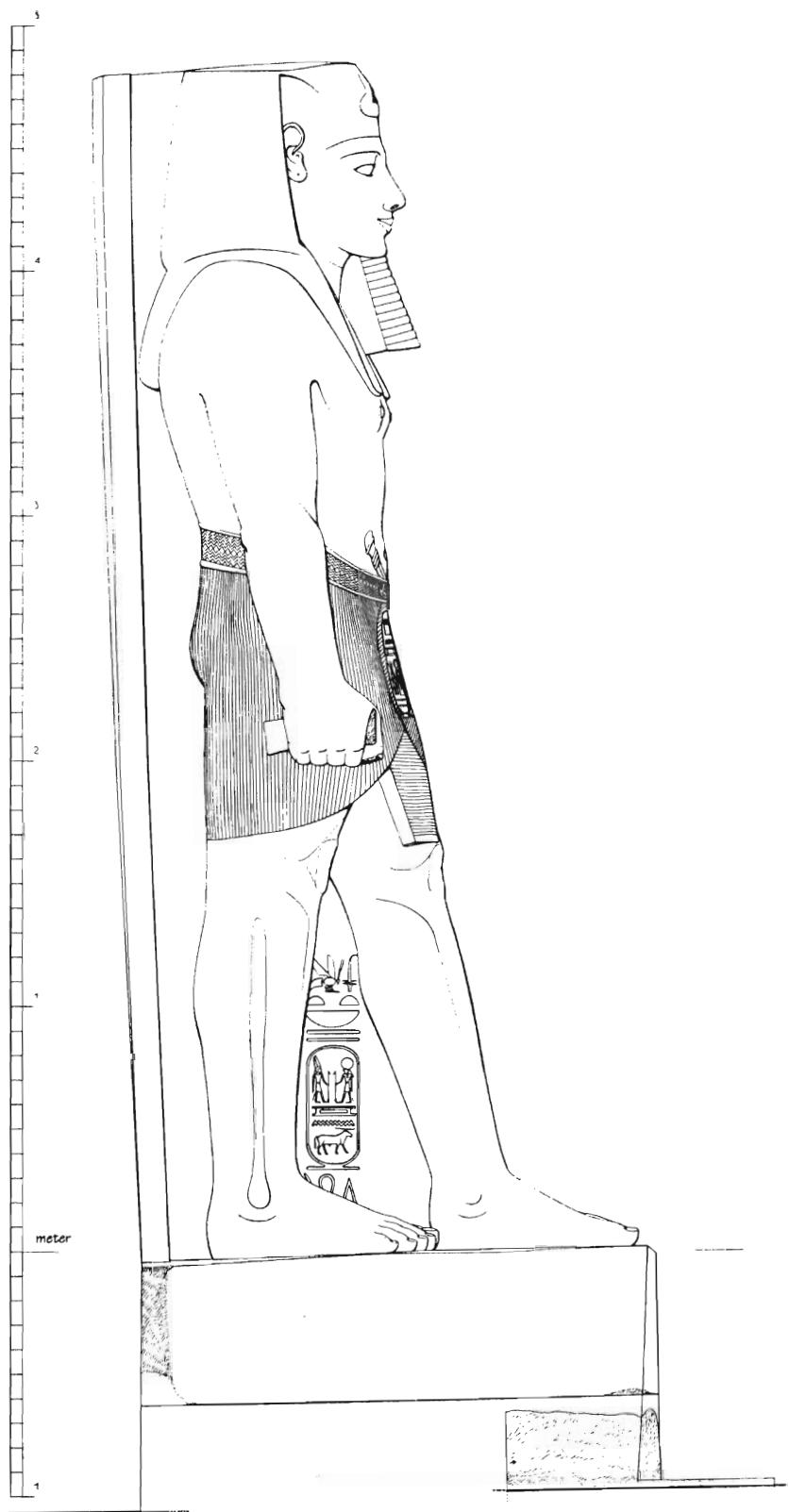


PLATE 20

Scale Drawing of Colossus No. 3 of Ramesses II, Right Profile (North)

All architecture and all representations of figures or objects are constructed on a canevas-guide; this canevas, resulting from the theological directives of the Ancients, brings all proportions back to a basic idea. Now, these proportions are in no way arbitrary but correspond, for monuments, to astronomical principles, and for figures, to cosmic functions as they relate to human proportions.

(Chapter 11)

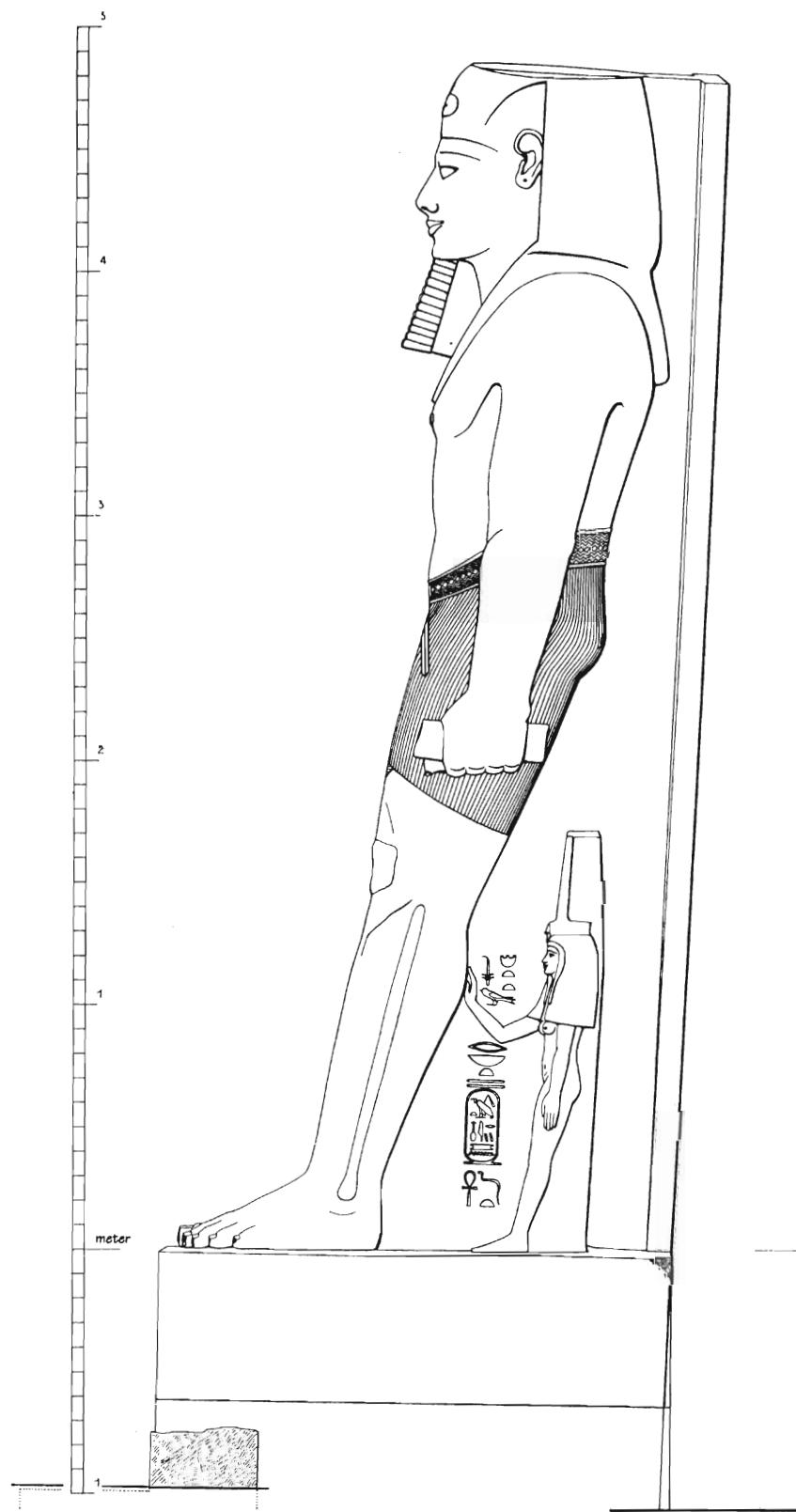


PLATE 21

Scale Drawing of Colossus No. 3 of Ramesses II, Left Profile (South)

. . . man, being the last creature, is a unity, an image of the Unique. And the violet of the field is equally a unity in the image of the Unique, who, Himself, is indefinable, save by all the unities (finite images) of all the possible types of the creation.

(Chapter 6)

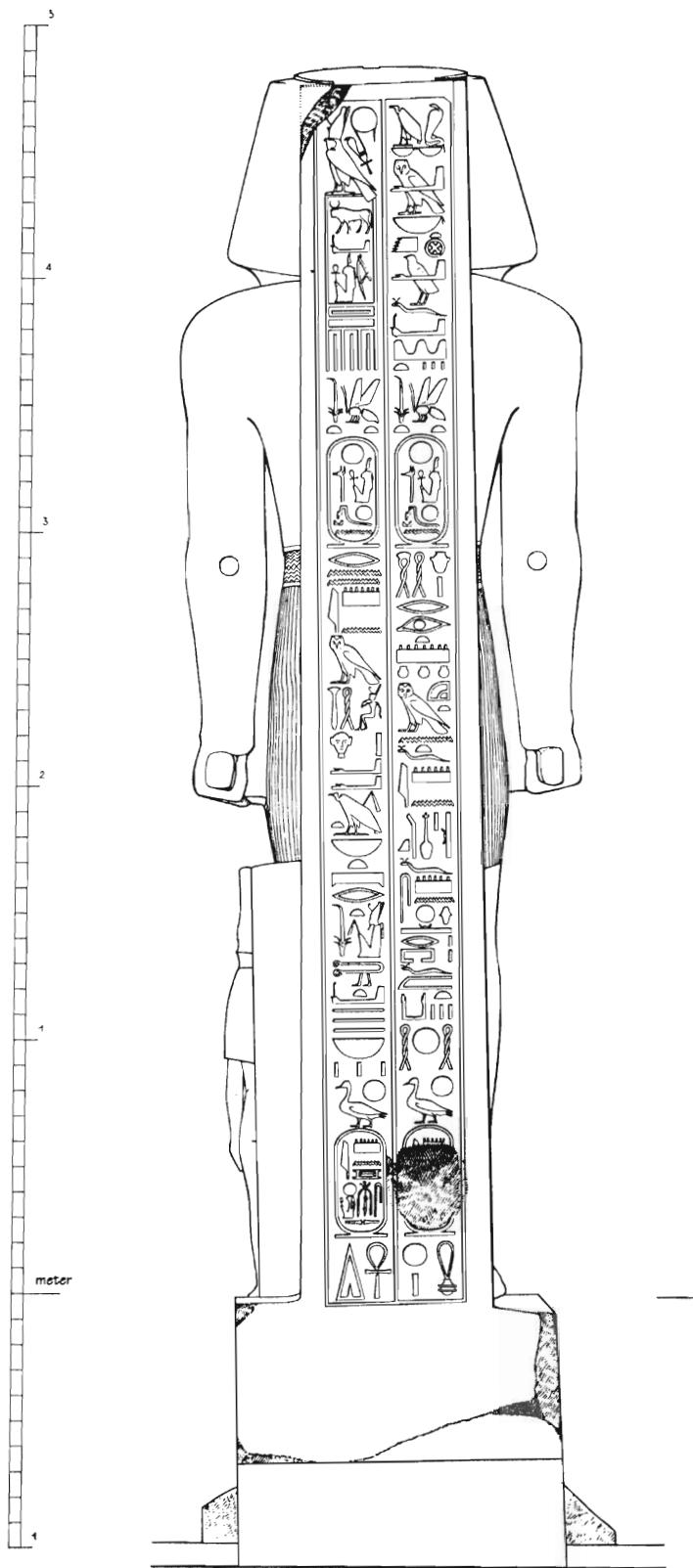


PLATE 22

Scale Drawing of Colossus No. 3 of Ramesses II, Dorsal Stele (East)

To live is to grow and to keep growing in all directions at the same time. Evocation belongs to the sense of space; it is the vision and experience of volume with and within volumes.

(Introduction)

To demonstrate the esoteric sense we have only the symbol that, through architecture, speaks to us in volume.

(Chapter 5)

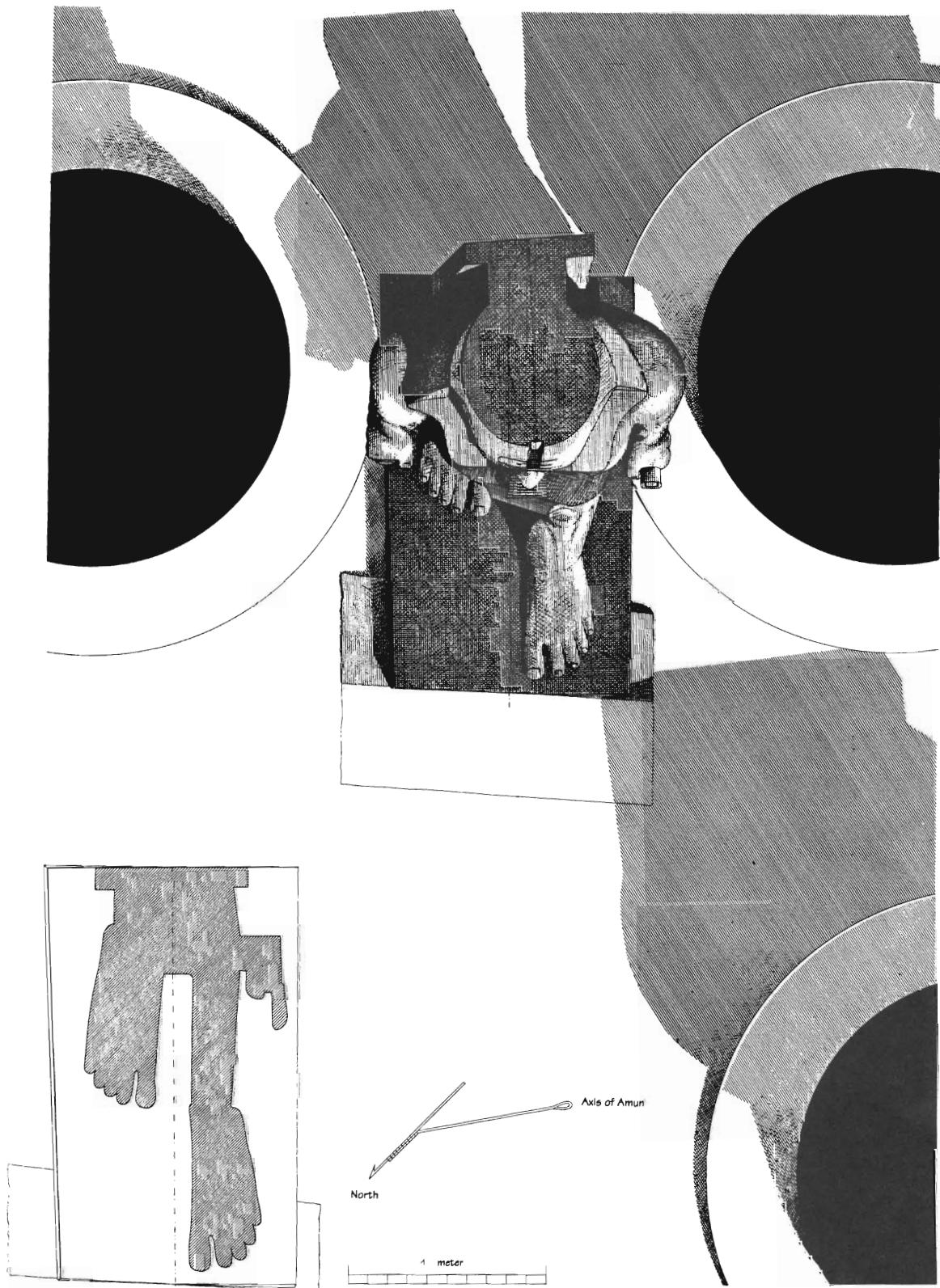
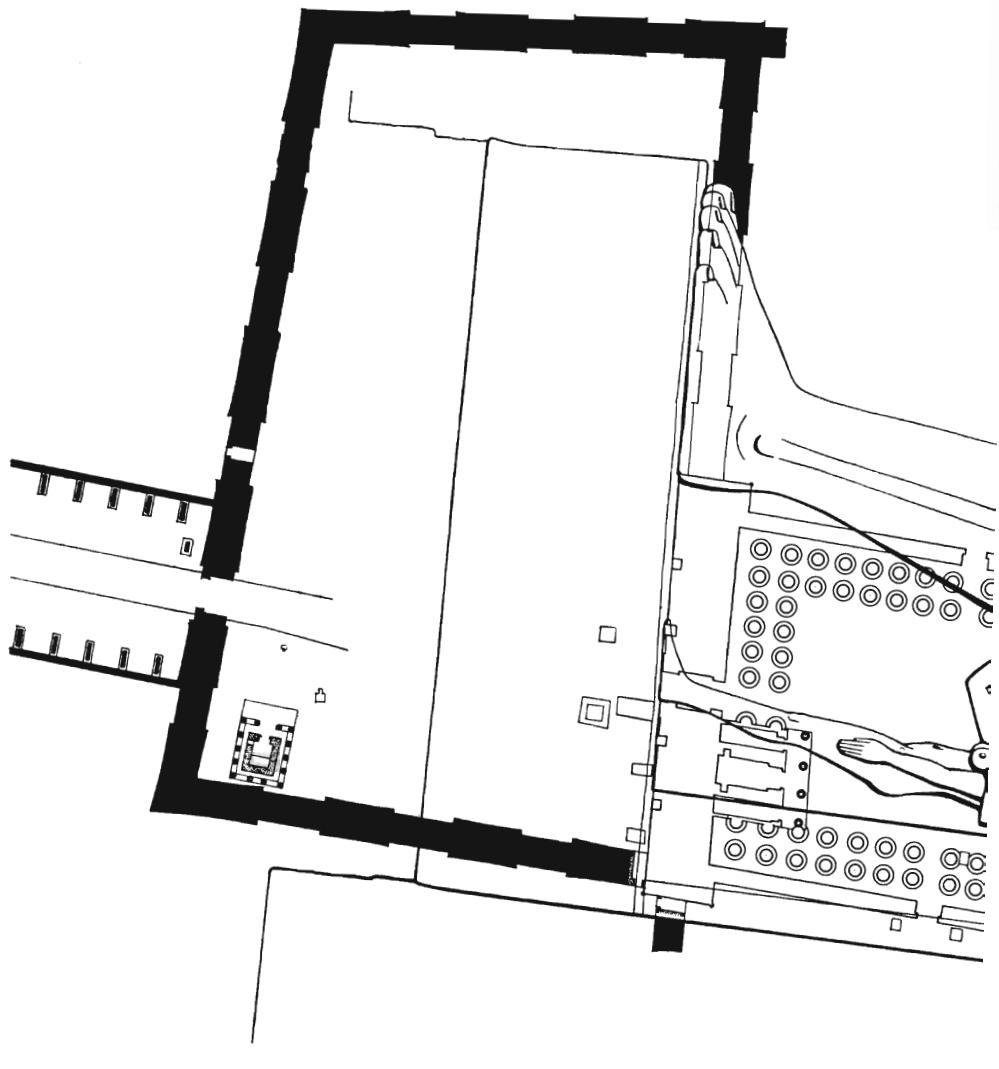


PLATE 23

Colossus No. 3 of Ramesses II, View from Above

The anthropocosmic philosophy bases all functions and all measures on the “crystallization” or “incarnation” of the Cosmos in man.

(Chapter 11)



Colossus
Temple



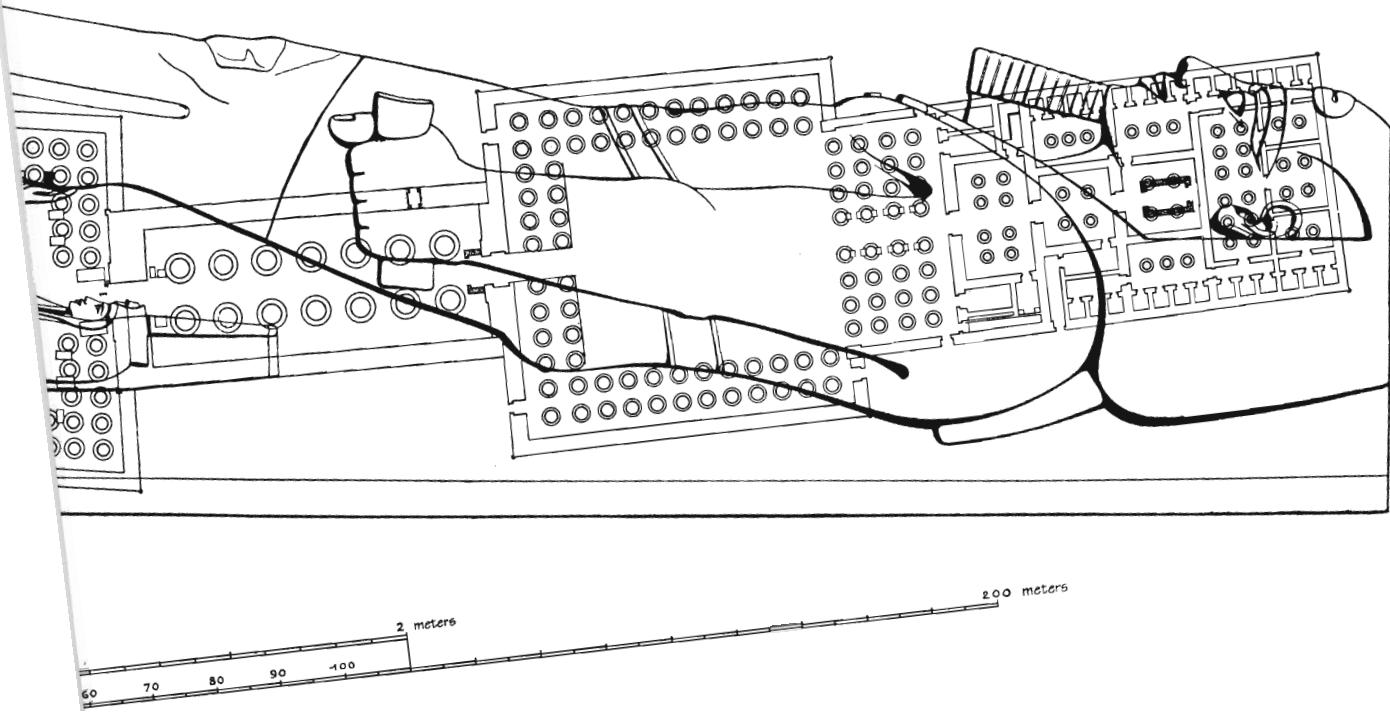
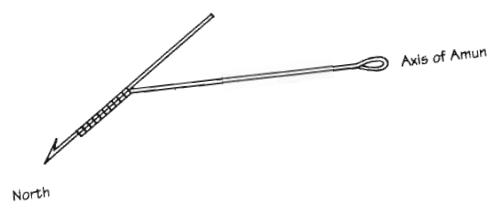
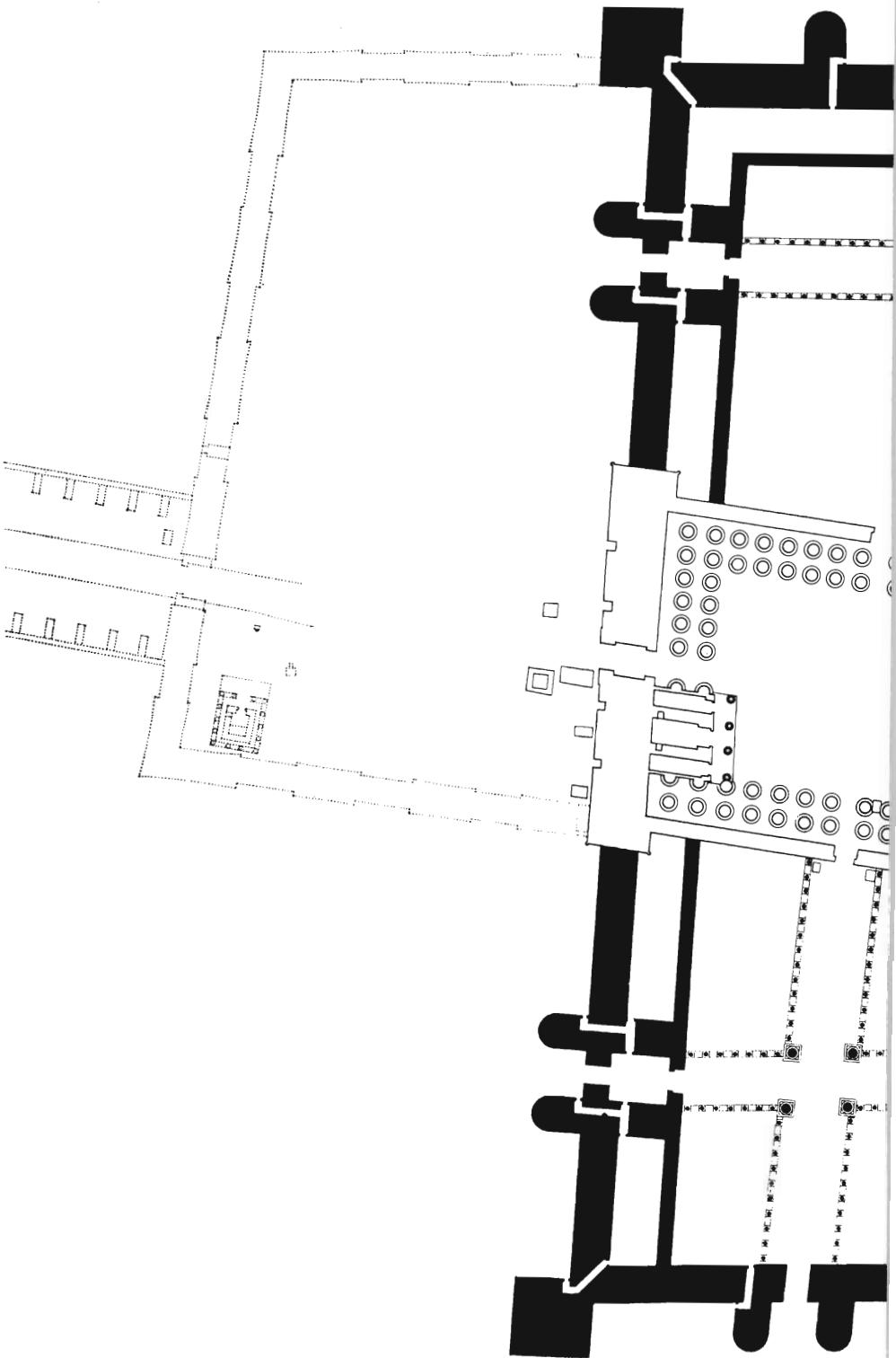


PLATE 24
Projection of Colossus No. 3 onto the Temple of Luxor

With the Christic revelation, the natural and logical consequence of Ancient Egypt, the Osirian cycle—the cycle of terrestrial renewals—ends. The dogma of the Redemption renders man independent of the obligations of reincarnation.

It is a promise that each must realize individually.

(Cf. chapter 20)



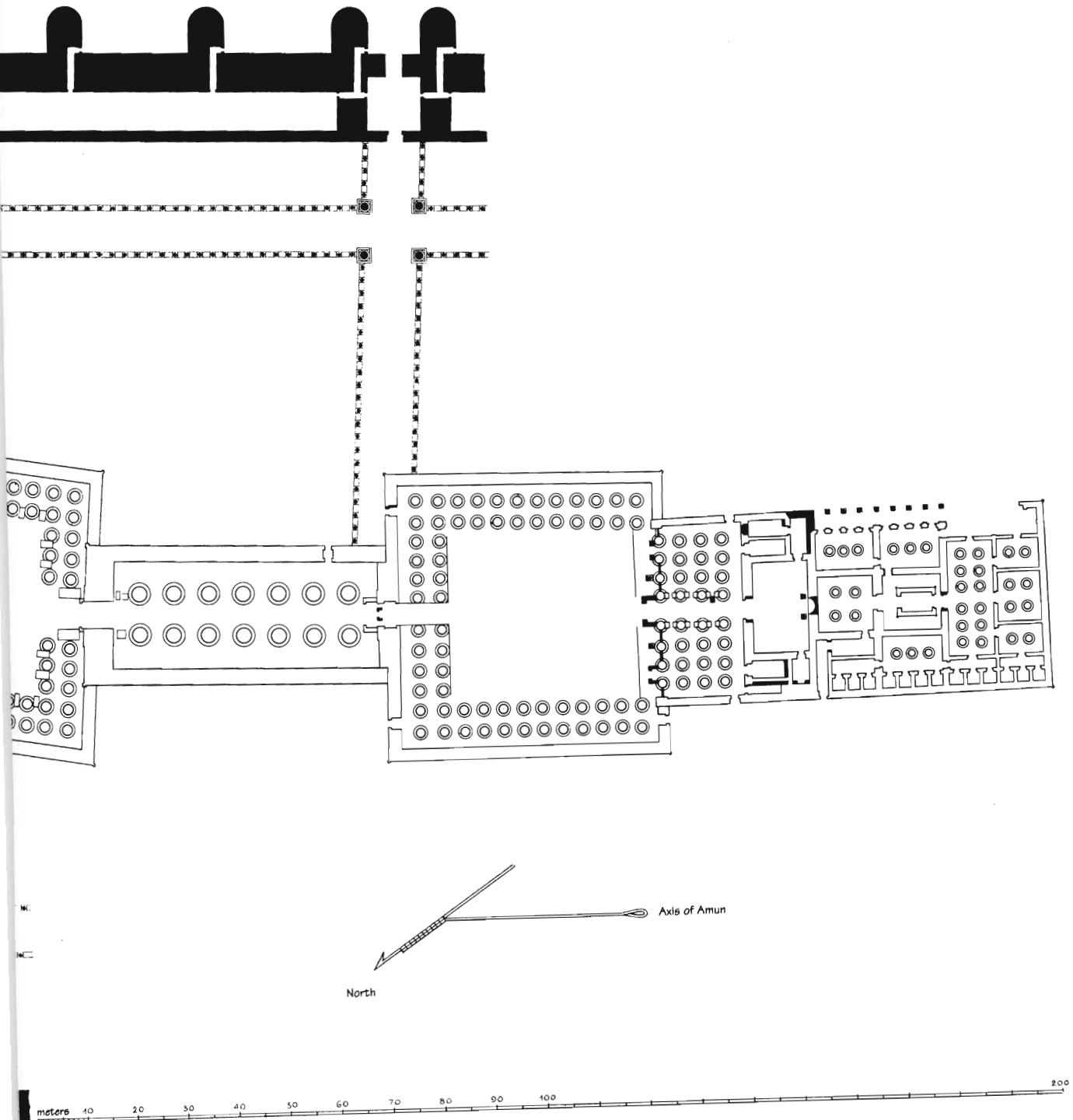


PLATE 25

The Temple in the Greco-Roman Period

Chapter 29

A COLOSSUS OF THE TEMPLE

Characteristics carried by the seed and natural environmental influences can modify the normal constitution of the human body. In one case, the legs may be too short or too long; in another, hydrocephalus may deform the head, or the hands can have six fingers—these are easily observed phenomena.

On the statues in the sanctuaries we often find represented intentional modifications of the norm for the body. It is no longer a matter of simply observing these peculiarities, but on the contrary, we are moved to investigate the natural (cosmic) causes that could produce these anomalies.

When the *hotep* [peace] of lunar Amun (Amenhotep) is realized and Ra (the sun) must appear, or be born (*mes*), with Ra-mes-s (Ramesses), it is necessary to establish this power on the earth. So the bas-reliefs and hieroglyphs, until then only lightly incised, will be deeply cut into the stone.

Ramesses finished the temple of Luxor with the court of the narthex and the pylon. The important statues then give the measure of man, but they have lower legs that are abnormally reinforced and too large with respect to the femur.

We want to point out the importance given to the lower legs specifically in this court, which in relation to the temple represents the lower leg; on the outsides of the calves one can see the strongly accented marking outlining the peroneal muscles, characteristic of great walkers.

Ramesses is the solid terrestrial seat, the entrance into matter of what is spiritualized by the Amenhoteps and the Tuthmoses. At the same time it is the passage from the eighth month of the embryo and the entry into the maturity of human birth.

This is a strange teaching.

To illustrate one of the obvious aspects of the importance of these colossi of Ramesses, we show here, thanks to very precise measurements, the relationship that exists between one of these colossi and the measurements of the temple, or more exactly, the functions that govern them.

PLATES 16–18 • COLOSSUS NO. 3 OF RAMESSES II

This colossus is located between the columns of the eastern portico of the court of Ramesses (narthex). It is the third starting from the north, and faces northwest.¹

¹ Cf. fig. 199.

The statue and its pedestal, which have been neither altered nor recut from an older group, are sculpted out of a single block of rose granite. Although perfectly finished, the cutting of the edges has less of a living quality than that of colossus no. 4, described in plate 8.

The double crown is missing. It was cut from another block and was placed on the upper part of the *nemes* headdress, the surface of which is flattened to receive it. The uraeus on the forehead has also been taken away; above the headband that encircles the forehead the body of the coiled serpent can be seen, as well as the notch made in the granite to receive the projecting part of the chest and head of the raised cobra.

This colossus carries the cartouches of Ramesses II on the facade of its pedestal, on its loin-cloth, on its belt, and on the stele against which it leans. He holds the royal seal in his two closed fists, and the left one, intact, has his name carved on it.

A dagger passes through his belt, below the navel. Behind his left leg, the queen, sculpted in the round, places her right hand on the king's calf. There is a vertical inscription under the queen's elbow that gives her name: "The great wife of the king, mistress of the Two Lands, Nefertari, beloved² of Mut."

Opposite the buttress bearing this text, on the north face, an inscription can be found in the name of Merneptah,³ son of Ramesses II.

The stele that supports the king carries (east face) two columns of text. The text of the south column (at left) reads: "The solar Horus, vigorous bull, beloved of Maāt, the king of the South and of the North, Usermaātre, chosen of Ra, whom Amun has raised [nourished] as a child in the arms of Mut, mistress of heaven, that he could become the king stirring all the lands. The son of Ra, Ramesses beloved of Amun, gifted with life."

The text of the north column (at right) reads: "The two mistresses vulture [and] cobra, the protector of Egypt Kemi [black earth], the one who subjugates the foreign mountains, the king of the South and of the North, Usermaātre, chosen of Ra, inspired of heart to create a foundation in the *apet* of his father Amun who created his perfection [realization]; the one who solidly established his temple in eternal work, the son of Ra, Ramesses, beloved of Amun, as Ra."⁴

Let us note that in the inscription in the south column of the stele, the passage, "whom Amun has raised as a child," is found at the same level as the one on the north column, "in order to create a foundation in the *apet*," so that we can read from left to right "the child in the *apet*."⁵ The decoration of the columns that frame this colossus includes a tableau surmounted by the "sky," which is found at the level of the king's breasts.⁶

² We adopt for *mer* and *meri* their true sense, *aimant* ["loving," "beloved," but also "magnet"] as the magnet attracts iron, as the earth attracts the dew.

³ *Menephtah*, inexact transliteration of the Egyptian name *Merneptah*.

⁴ French translation by Alexandre Varille, 1942.

⁵ Cf. plate 22, drawing of the dorsal stele.

⁶ This fact is verified by measurement. Here then are some characteristic measurements of these columns (within 1 or 2 cm, given their deterioration), and their variations:

width of the abacus = small diameter of the capital = 1.40 m to 1.42 m

diameter of the base of the shaft = 1.74 m to 1.76 m

maximum diameter of the shaft = 1.98 m to 2.00 m

height from the pedestal to the base of the capital = 7 m

height from the pedestal to the base of the abacus = 9 m

height from the ground to the base of the abacus = 9.43 m or 18 royal cubits

height from the ground to the base of the architrave = 10.32 m or 20 cubits of 28 *remen* digits, each being 1/100 of a fathom

height from the ground to the top of the architrave = 11.58 m or 22 royal cubits.

It is notable here that the cut of the column at the level of the base of the abacus is principally square, and that the diameter of

PLATES 19–22 • SCALE DRAWINGS OF
COLOSSUS No. 3 OF RAMESSES II

Cut out of a single block, the colossus with its pedestal does not rest directly on the ground, but is lifted up and supported on a group of sandstone blocks to the height of the bases of the neighboring columns. Of this subfoundation, a single stone is still visible; the others, coated with saltpeter on the surface, are in large part presently covered by cement. This stone on which the granite pedestal is supported is of a piece with the pavestones of the court, but projects above its neighboring stones. In a circular arc to its upper part, it formerly extended past the granite pedestal to the north, the west, and the south. As is shown by markings, the west face has been recut, certainly at the time of the placing of the colossus, in order to make it fit the surface of the pedestal (plate 23).

Today, the entire statue is slightly inclined toward the south. Our plans show it in its present position, but through a detailed study we have been able to discover the position it must have had when it was put in place during the Ramesside era.

Presumed Position of the Colossus in the Ramesside Period

The median line of the dorsal inscription of the name of Ramesses II, along with the axis of the west face of the pedestal, between the two cartouches of the king, determines a vertical front-to-back plane.

The two columns of text to the right and left of the buttress of the king's left leg are not parallel (cf. plates 20 and 21); that of the name of Mut Nefertari (plate 21) inclines toward the back, and the other, the name of Merneptah (plate 20), inclines toward the front. The colossus can be considered in its vertical position when the right-left plane coincides with the bisecting line of the axis of the Mut Nefertari and Merneptah texts, and when the front-back plane, determined by the median line of the dorsal stele, is rectified vertically toward the north. When the statue is in this position, the lower part of its granite pedestal is horizontal and the principal characteristics are as follows:

Front view (plate 19)

- The cartouche on the king's loincloth is vertical.
- The ground of the pedestal between the two feet of the king is horizontal.
- The south, lateral edge of the pedestal is vertical.
- The queen's axis is inclined toward the south and is parallel with the north edge of the pedestal.

North profile (plate 20)

- The top of the left foot is horizontal.
- The top of the right foot is perpendicular to the Nefertari text (in transparency with that of Merneptah).
- The east, lateral edge of the pedestal is parallel to the axis of the Merneptah inscription.

South profile (plate 21)

- The upper edge of the pedestal behind Queen Nefertari is perpendicular to the queen's text.

the capital at this level is a *circle inscribed* in the square, while the maximum diameter of the shaft is that of the *circumscribing circle* of this square. On the other hand, the interval between the axes of these columns oscillates between 3.95 m and 4 m, the rectangle formed by the ground. The base of the architrave and this interval are in the proportion of 1 to ϕ^2 .

- The upper edge of the pedestal between the queen's left foot and the king's left foot is perpendicular to the Merneptah text (in transparency with that of the queen).
- The upper edge of the pedestal under the king's left foot is perpendicular to the bisecting line of the angle formed by these two inscriptions, and which we consider to be the real vertical axis of the colossus.
- The west lateral edge is vertical and forms a right angle with the upper edge of the pedestal.
- The east lateral edge is parallel to the queen's text and forms a right angle with the upper edge of the pedestal corresponding to it.

General Proportions and Measurements of the King

Further on, we give a table of the principal measures of the king's height adjusted to a mean level taken between his feet. Here are his essential measurements:

1. The pubic symphysis, necessarily invisible, is marked by the location of the solar Ra engraved on the cartouche on the loincloth. It divides the total height into two equal parts.
2. The navel divides the height between the soles of the feet and the base of the ureaus into two parts that are to each other as 1 is to ϕ .
3. It is interesting to note another characteristic function of this colossus: the height from the soles of the feet to the height of the breasts, multiplied by $\sqrt{2}$, determines the total height of the king to the vertex.

Measurements and General Proportions of the Queen

First, the navel divides the height between the soles of the feet and the forehead, under the uraeus, into two parts that are to each other as 1 is to ϕ . Second, the height from the soles of the feet to the nipples, multiplied by $\sqrt{2}$, determines the total height to the vertex.

In the two tables, we give all the measurements that allow us to verify these proportions. We indicate the dimensions in meters and give their equivalence in cubits or in digits. Finally, we give the number of squares of the appropriate *canevas* to this statue, with the height of the king considered to be 19 to the upper corners of his headdress (fig. 206).

THE NORTH AS THE SIDE OF INSPIRATION OR PRINCIPLE (PLATE 20)

The total height of the king represents ϕ^2 for the unit of 1 fathom. The use of this unit of measure is confirmed on the dorsal stele by the indication of the 2 fathoms between the baseline of the stele and the base of the section containing the Horus name of the king (fig. 205).

This stele also refers to the height " ϕ fathoms" through the base of the royal cartouches that correspond on the colossus to the upper limit of the belt at the back as well as to the left elbow (thus the north).

The total height of the king to the vertex again represents $\sqrt{2}$ in relation to the height of his nipples; this proportion is indicated on the dorsal stele by the upper curves of the two royal cartouches.

The total height of the king corresponds finally to $10/\phi^2$ or 3.81966... in relation to the back width of his pedestal taken as unity. The total height of the pedestal is then $\phi/2$, and its width on the north face is ϕ ; the pedestal, which represents the seat, also confirms the function ϕ governing this colossus.⁷

⁷ Cf. chapter 5, "The Mystical Number."

The King's Measurements from the Pedestal at the Level of the Left Heel

Heights	Meters	Cubits; functions	Squares
Top of <i>nemes</i> headdress	4.85	9 black cubits	19.2
Corner of headdress	4.80		19
Bottom of uraeus	4.63		
Top of ears	4.60	10 human cubits	$18\frac{1}{4}$
Forehead	4.55		18
Chin	4.06		
Shoulders	4.02		16
Breasts, top of nipples	3.43	$4.85 \text{ meters} \div \sqrt{2}$	$13\frac{1}{2}$
Left elbow	2.91		$11\frac{1}{2}$
Center of navel	2.845	$4.60 \text{ meters} \div \phi$	$11\frac{1}{4}$
Top of cartouche	2.62	5 royal cubits	
Center of solar Ra	2.415	half-height	$9\frac{1}{2}$
Right fist, attached	2.00	2 meters	
Left fist, bottom of royal seal	2.025		8
Bottom of loin cloth	1.67		$6\frac{2}{3}$
Knee under kneecap	1.455		$5\frac{3}{4}$
LENGTHS			
Left foot	0.82		
Right foot	0.92	$1/2 \text{ fathom} = \frac{4.82 \text{ meters}}{5.236}$	
UPPER PLANE OF PEDESTAL			
Length of north edge	2.06	110 R digits	
Length of south edge	2.10	4 royal cubits	
Width of east face	1.27	68 R digits	
Width of west face	1.19	64 R digits	

The Queen's Mean Measurements from the Pedestal

Heights	Meters	Functions; digits	Squares
Top of plumes	$\left\{ \begin{array}{l} 1.735 \\ 1.71 \end{array} \right\}$	92 R digits ^a	
Crown	1.365	72 D digits	
Uraeus	1.345	72 R digits	$5\frac{1}{3}$
Vertex	1.31	$2\frac{1}{2}$ royal cubits	
Queen's headband	1.275	68 R digits ^b	
Bottom of uraeus	1.265		
Forehead	1.255		5
Chin (broken), approx.	1.145	61 R digits	
Breasts	0.925	$\frac{1}{2}$ fathom	$3\frac{2}{3}$
Navel ^c	0.79		$3\frac{1}{8}$

Note: There is a difference of 1 cm between the measurements taken in front and on the side of the foot. It is thus necessary to add or subtract 0.5 cm to the mean measures given here according to whether they are read from the front or in profile.

^aThe R digit is 1/28 of the royal cubit of 52.36 cm or about 52.5; cf. plate 64, cubit C. The D digit is 1/28 of the basalt cubit, found at Dendera, of 53 cm; cf. plate 64, cubits D and E.

^bSixty-eight R digits = 1.2716 m, instead of 1.275 m measured on the queen and 1.27 m measured on the east face of the pedestal of the colossus.

^cHeight of the navel, from the soles of the feet, multiplied by ϕ is $0.79 \text{ m} \times 1.618 = 1.2782 \text{ m}$ = height of the queen's headband. The height of the breasts multiplied by $\sqrt{2}$ is $0.925 \times 1.4142 \text{ m}$, which equals the height of the vertex of the queen. Exactly $2\frac{1}{2}$ royal cubits = 1.309 m, the royal cubit being the fundamental measure that governs the Man of the Temple.

Originally the statue wore the white crown encased in the red, and the classic proportion given by the figures in the bas-reliefs of the temple of Luxor for the determination of the height of the crowned king presents two possibilities. First, *for the crown encasing the forehead*, the height between the soles of the feet and the forehead, multiplied by $\sqrt{\phi}$, determines the total height of the king with his crown, a proportion we find applied to colossus no. 5.⁸

Second, *for the crown placed on the headdress* and thus added to the total height for the vertex; in this case, the total height of the king, multiplied by $\sqrt{\phi}$, determines the height of the crowned king, a proportion we find applied to colossus no. 3.

If we take as our base the crown presently lying on the ground, belonging to colossus no. 2 and of the same dimensions as no. 3, we can verify what the total height of the latter would be with the double crown: $4.85 \text{ meters} \times \sqrt{\phi} = 6.17 \text{ meters}$ to the top of the red crown, the measurement to the knob of the white crown being somewhat greater. Now, 6.17 meters represents 20 *djezer* (or sublime) cubits for each 16 digits of a mean fathom, that is, a geodetic measurement.

⁸Cf. plate 8 and its legend.

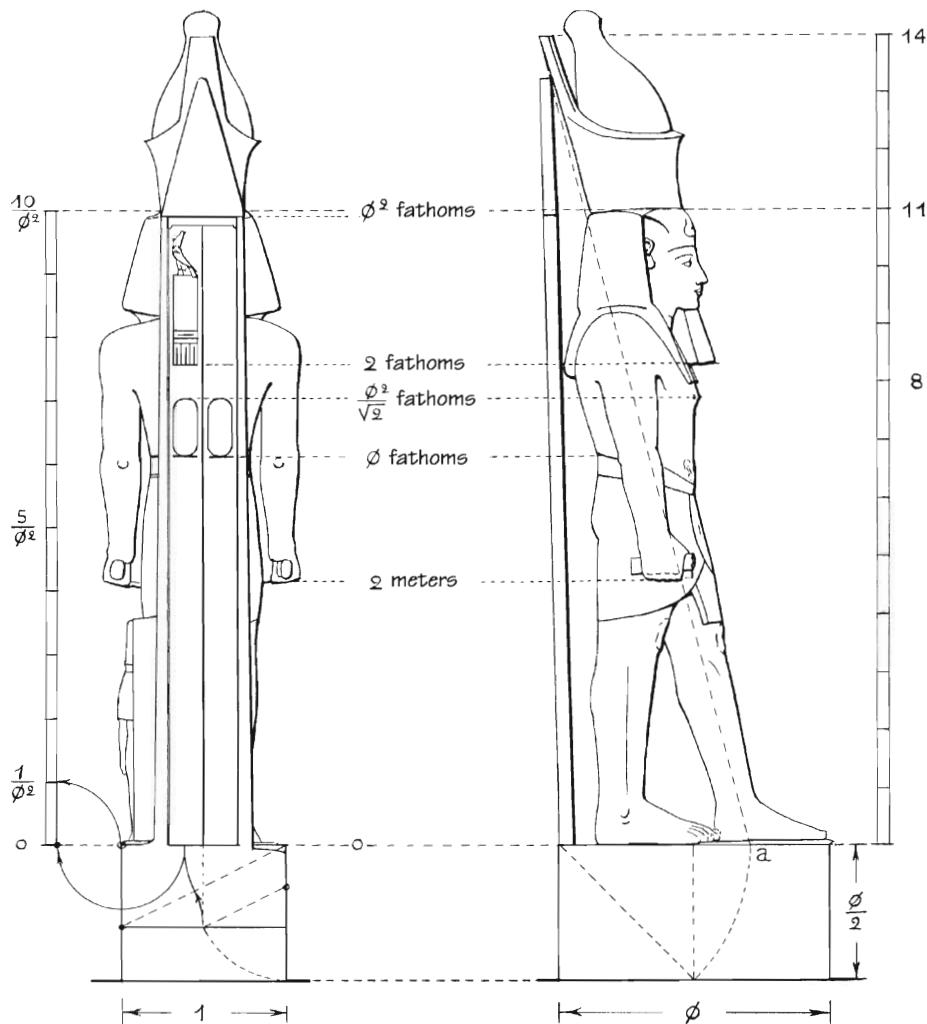


Fig. 205. Measurements and functions of colossus no. 3

Width of back of pedestal = 1.27 meters = unity.

Length of north surface of pedestal = 2.06 meters = ϕ .

Height of the back surface of pedestal = 1.03 meters = $\phi/2$.

King's height to vertex = 4.85 meters = $10/\phi^2$.

Total height of the colossus is ϕ^2 fathoms at 45° = 1.852... meters $\times \phi^2$ = 4.849... meters.

Height of dorsal stele is ϕ^2 fathoms at 0° = 1.843... meters $\times \phi^2$ = 4.825... meters.

Measurements of 2 fathoms and of ϕ fathoms indicated on the stele are related to the fathom at 0° .

The north face of the pedestal is inscribed in a 1 to 2 rectangle, not counting the surface irregularities. This surface then represents a double square. The rabattement of the diagonal of one of them from the upper edge of the pedestal determines point a . The line leading from this point to the top of the red crown corresponds to the angle of the crown and to the movement of the king's left leg. At the right, the ratio 14 : 11 defines the height of the red crown.

Moreover, the study of the pharaonic canon has revealed, based on harmonic decomposition, the essential numbers for determining the height of the crowned king.⁹ The genesis of this decomposition leads to 8/11, and the quantity carried over from the difference 3/11 defines the ratio 14/11. This ratio is framed by two irrational functions and offers the possibility of two interpretations: $\sqrt{\phi} = 1.2720\dots$; $14/11 = 1.2727\dots$; $4/\pi = 1.2732\dots$.

In arrested numbers, the crowned king has the value of 14/11 of his height to the vertex, but, functionally, he can be considered as either $\sqrt{\phi}$ or as $4/\pi$.

These two coefficients are from the numbers of growth functions: ϕ or $\sqrt{\phi}$ is the number of the Horian or solar function of growth, which is continuous; π and the function of π is the function of cyclic growth, which is Osirian or lunar.

THE SOUTH AS THE SIDE OF REALIZATION (PLATE 21)

The functions that relate the measures and proportions of the king, the queen, and the pedestal are as follows:

- Height of the queen to the headband equals the width of the back of the pedestal.¹⁰
- Height of the queen to the headband times ϕ equals the north length of the pedestal.
- Height of the queen to the headband times 1.902 equals the diagonal of the pedestal.
- Half-height of the colossus equals the diagonal of the pedestal.¹¹

The diagonal of the pedestal carried over two times determines the height of the king, so that if the queen has the value of 5 to the headband, the king will then be 18 to the forehead and 19 to the vertex as marked by the angles of his headdress. Nineteen being the normal division of human height for this canon, the queen is thus 5 if the king is 19.¹²

The functional number of the king is 19. This number, however, can result from two distinct functions, each of which is as essential as the other: the diagonal of the 1 to ϕ rectangle = $\sqrt{\phi^2 + 1} = 1.902$, and half the square of $6.18034 = 60/\pi = 19.0983\dots$.

It is a question here of nuances between the two functions that are indicated by the two possible heights of the king to the vertex, that is, 4.80 meters to the corners of his headdress and 4.85 meters to the top of his headdress. The two heights theoretically equal 19. On the pharaonic *canevas*, the height to the forehead is 18; it is therefore this measurement that must be the basis for establishing the unit of length of the *canevas* (fig. 206).

The unit of measure corresponds exactly to the fifth part of the height of the queen to under the base of the uraeus, which is $1.264/5$ meters, and the correspondence between the *canevas* projected in fig. 206 and the measurements taken on the colossus itself can be metrically verified on the table of measures.

If now we were to take one-fifth of the exact width of the pedestal (1.27 m) for the unit of the square, we would have 0.254 meter as the unit of the square. Now, 19.0983 of these squares determine the maximum height of the *nemes* headdress, which is 4.85 meters.

⁹ Cf. fig. 136.

¹⁰ We should note here that the width of the back of the pedestal represents 68 digits for its north length of 110 digits, 1.27 m and 2.06 m, respectively. In these numbers of digits we recognize the ratio 55/34 in the F series.

¹¹ Cf. tables of the king's and queen's measures and the note relating to the latter.

¹² The division of the queen's height by 5 recalls the function of 5 and the pentagram of Hathor. [Hathor's face conventionally describes a pentagon.]

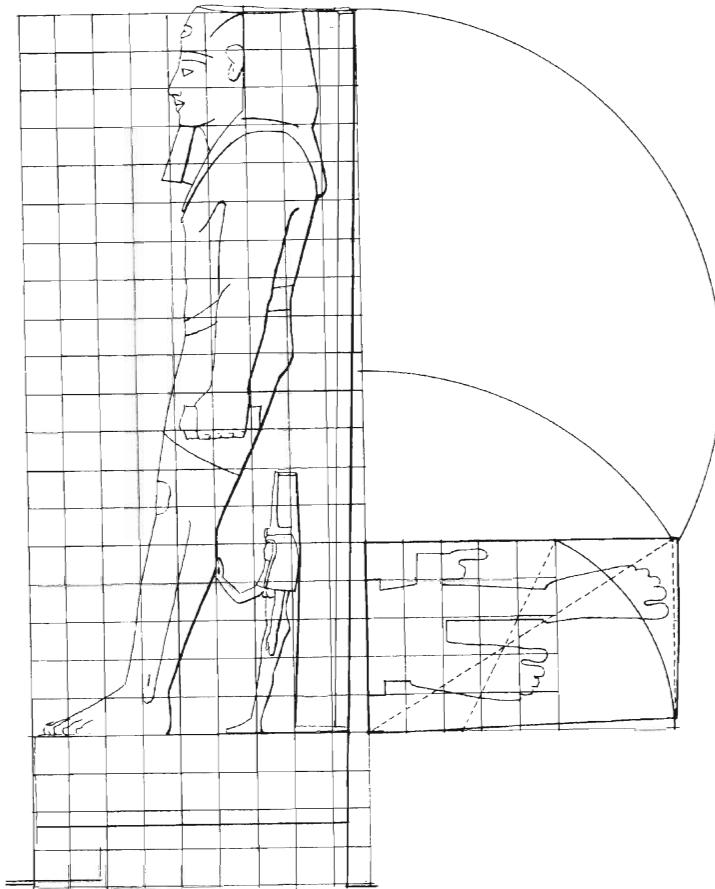


Fig. 206. Projection of the standard canevas on colossus no. 3

$$\frac{\text{Height of the king to the forehead}}{18} = \frac{4.55 \text{ meters}}{18} = 0.25278\dots \text{ meters}$$

for the side of the square that is the unit for drawing the *canevas*.

The slight differences between the two measures that we observe here (for example, 4.80 and 4.85) correspond to the two moments of the walking colossus,¹³ since the hips necessarily are somewhat swayed by the forward position of the left leg, which otherwise would be longer than the right leg.

Here, as in the whole temple, one notes living movement while remaining faithful to the exact relationships among the numbers. This is the reason that the surface of the pedestal is not absolutely flat, but takes account of movement, which slightly differentiates the height measurements when they are taken, for example, from under the right foot or the left foot of the king, and for the queen, whether from in front or in profile.

¹³ Walking, movement in the vital sense, is, as we affirm elsewhere, the vital function of growth. Cf. above, legend accompanying plate 20 with regard to the two functions ϕ and π .

ESSAY:

THE COLOSSUS WITH RESPECT TO THE GEOGRAPHIC POSITION OF LUXOR

The tilt of the earth's axis with respect to the ecliptic was assumed by the Ancients to be 24° (fig. 207, angle *A*).¹⁴

The position of Luxor on the globe is $25^\circ 43'$ north latitude ($\pm 1'$) (fig. 207, angle *B*). With respect to the vertical at the summer solstice at Luxor, the solar rays at midday make an angle of $25^\circ 43'$; this less 24° equals $1^\circ 43'$ (fig. 207, angle *C*). With respect to the vertical, and at the winter solstice at Luxor, the solar rays at midday make an angle of $25^\circ 43'$; this plus 24° equals $49^\circ 43'$ (fig. 207, angle *D*).

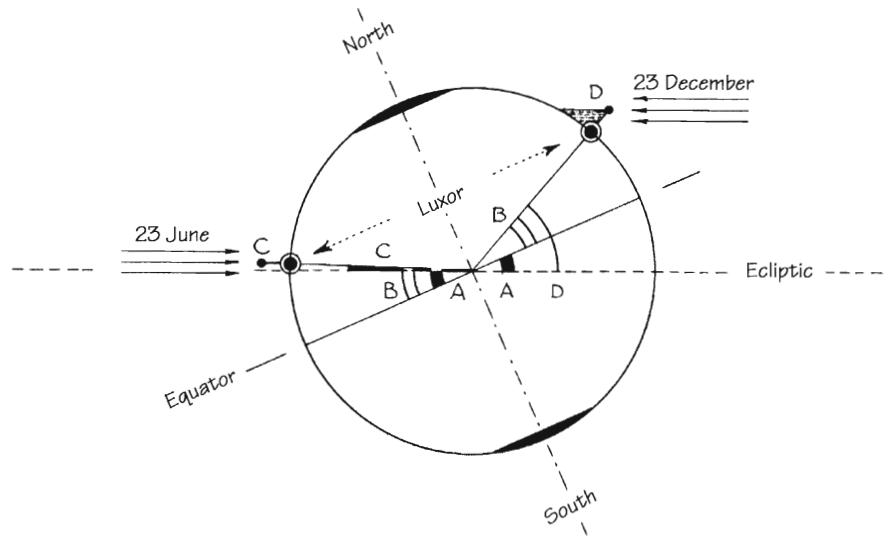


Fig. 207. Position of Luxor on the globe

In figure 207, angle *A*, the position of the equator in relation to the ecliptic (24°), is determined by the right triangle formed by the vertical height of the stele from its upper, inner edge dropped to the plane of the pedestal and forming a right angle with it (see fig. 208). The diagonal runs from the front edge of the pedestal to the interior, upper edge of the stele.

Angle *C*, or the angle of the shadow of a gnomon at the summer solstice, is equal to the slope formed by the south side of the dorsal stele upon which the king leans in relation to the vertical, so that if we were to place the colossus facing north, his stele would incline in oblique light at $1^\circ 43'$ at noon, on 23 June. This is the place where the name of Horus is carved on the spinal column "of fire," which the stele represents.

Angle *D* is that of the shadow that would place the forehead of the queen on the front of the pedestal on 23 December; an opposition of lunar (*yin*) feminine to the solar (*yang*) masculine, that is, the culminations of the two solstices.

We must note that each colossus has its own characteristics as to its measurements, its proportions, and its angular plays.

¹⁴ In the Ramesside era, the tropic of Cancer passed several minutes south of 24° , but tradition seems to have preserved the angle of 24° for the obliquity of the ecliptic, probably because of its function linking the hexagon and the pentagon.

Fig. 208. Definition of the angles of the colossus

Sloping height of the stele = 4.825 meters.
 Length of the south face of pedestal = 2.10 meters.
 Thickness of stele at top = 0.10 meter.

Angle *C* is the angle of the tilt of the stele with respect to the vertical. It is $1^{\circ}43'$, or about $3\frac{1}{100}$ in whole numbers. The vertical height becomes 4.822... meters, and the distance between the vertical and the stele is 0.1445 meter.

Angle *A* is defined by the vertical height from the interior edge of the stele through its perpendicular dropped to the level of the pedestal. The angular relationship is $4.822/2.1445 = 2.2489 = \cot 23^{\circ}58'20''$, or about $4\frac{1}{9}$ in whole numbers.

Angle *D* is defined by the triangle with its vertical height equal to the height of the queen to the vertex, and for the base, the distance is contained between the end of the pedestal and the vertical tangent to the queen's forehead.

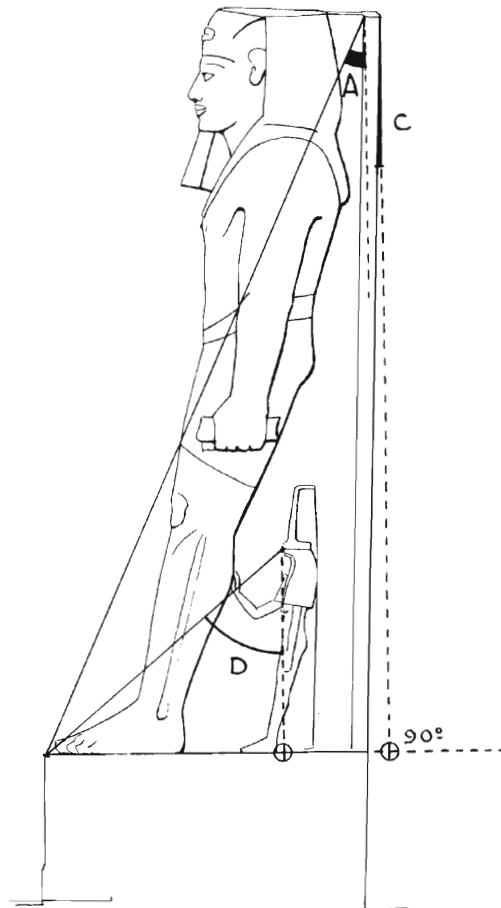


PLATE 23 • COLOSSUS NO. 3 OF RAMSES II, VIEW FROM ABOVE

Relationships of the Pedestal of the Colossus to the Courtyard of Nectanebo, the Parvis

The plan of the pedestal and the different horizontal sections of the colossus allow us to perceive the twisting movement impressed on the dorsal stele so that the king, looking west, slightly turns his head toward the south, *carrying along with his gaze the inscription drawn on the stele*. The axis of the flattened surface of the headdress is perpendicular to the oblique line made by the upper edge of the stele in relationship to its base. The stele thus undergoes a helicoidal torsion.

We have seen that the pedestal of the colossus is the seat upon which are inscribed the geometric functions whose development determines the measures and proportions of the king and also those of the queen. Similarly, the Nectanebo courtyard, the parvis, is the *foundation* of the Man represented by the Temple, figured as "colossus."¹⁵

The surveys of the base of the colossus on the one hand, and the Nectanebo courtyard on the other, were made with the greatest precision and with no preconceived ideas, which allows us to summarize their measurements and to establish their metrical and functional ratios.

¹⁵ Cf. plate 24.

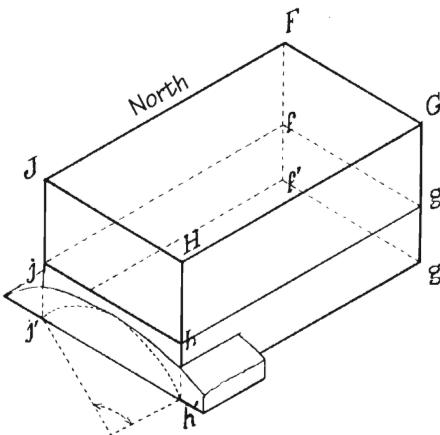


Fig. 209. Measurements of the pedestal of the colossus

The granite pedestal forms the irregular parallelepipeds $FGHJ$ and $f'g'h'j'$. The extension of its vertical sides to the ground determines the lower plane $f'g'h'j'$.

Upper plane	Lower plane (± 5 mm)
Lengths $GH = 2.10$ meters	$g'h' = 2.10$ meters
$FJ = 2.06$ meters	$f'j' = 2.095$ meters
Widths $GF = 1.27$ meters	$g'f' = 1.29$ meters
$JH = 1.19$ meters	$j'h' = 1.21$ meters

Mean height to the front on the axis of the cartouches equals 0.975 meter. Mean height to the back from the baseline of the stele to the ground is equal to the height Gg' , which is 1.03 meters.

Verified on the scale drawings and calculated taking the slope and the two single right angles FGH and $Gg'f'$ into account, the essential diagonals are as follows:

$$\begin{aligned}
 \text{diagonal of the surface of the base } f'h' &= 2.465 \text{ meters} \\
 \text{diagonal of the back side } f'G &= 1.65 \text{ meters} \\
 \text{diagonal of the volume } Gj' &= 2.618 \text{ meters.}
 \end{aligned}$$

Henceforth, let us note that the length of the temple, with the addition of the crown of the skull, is equal to fifty times the axial diagonal of the colossus.¹⁶ Taking this reference into account, it is possible to compare the Nectanebo courtyard, which is an irregular quadrilateral shape, with the pedestal of colossus no. 3, characterized by inequalities in all its dimensions.

The pedestal of the colossus breaks down into two parts: the granite pedestal, which is part of the same stone as the statue, and the sandstone base that connects this pedestal to the pavement of the courtyard (fig. 209).

¹⁶ This diagonal is measured from the upper edge of the front of the pedestal to the upper edge of the back of the stele. Cf. fig. 212 and plate 24.

On the western side of the sandstone base there is a stone that extends past the pedestal to the north and to the south, and that has an arched upper edge. This stone has been cut at a right angle on its western side and is of a piece with the face of the granite pedestal to the level of the pavement into which it is fitted.

The height of the granite pedestal and of its base is not the same on its eastern and western sides, which allows us to postulate a small walkway between the courtyard itself and the portico. The measurements taken show us that the pavement in front of the portico is higher by a few centimeters than what it is in back of the colossus under the colonnade. (fig. 209).

The Nectanebo courtyard is surrounded by a wall of unbaked bricks. The construction of the walls in both plan and elevation is bow-shaped,¹⁷ and the pylon is set into this surrounding wall such that its own exterior contour is also slightly bowed. Only the northwest corner (*C*, fig. 210) is presently visible, characterized by its stone construction resembling the shape of the prow of a ship, resting on the corner of raw bricks.¹⁸ The northeast corner (*D*, fig. 210) is determined by its interior corner, found intact in the excavations; its exterior reconstruction is based on that corner and the average thickness of the walls, which is about 5 meters. The southeast corner (*A*, fig. 210) has been demolished since the construction of the surrounding wall by the Romans, but vestiges of its interior corner (*a*, fig. 210) have been found in the foundation. The west and north walls of this courtyard have been found almost whole, so that with these elements it is possible to arrive at a close approximation of the measurements and orientations of this courtyard.¹⁹

The *axis of the south wall* is parallel to the north facade of the pylon and corresponds to its median longitudinal axis. The *axis of the west wall* is parallel to the northern part of the west wall of the Ramesses court, and forms a deviation of 10°, or about $3\frac{1}{7}$, with the axis of Mut (geometric axis of the head).

The *northwest corner* is determined by the crossing of the west wall of the Nectanebo courtyard with the axis of Mut (geometric axis of the head). The *axis of the north wall* together with the axis of Amun forms a right angle less 10°, with the result that the ratio between the west and north walls of the courts is, perpendicularly, the same as that between the axes of Amun and Mut (head).

The *axis of the east wall* with that of the north wall forms a right angle when increased by the angle 1 to 7 (angle of reflection of Amun).

Now that we have determined the orientations of the enclosing walls of the Nectanebo courtyard, we only have to consider their respective lengths.

The south wall corresponds to the place where the colossus places his feet. Let us recall in this regard that man is considered to be the radius of the earth, placed on the plane of the equator.²⁰ The earth measured at its "polar skullcap" has the same number of royal cubits that the circumference contains in fathoms, just as the "colossus" of the temple measured at the diadem (south wall of the covered temple) has the same number of royal cubits as the plan of the foundation measured in fathoms. We find here the rigorous application of this function, but with a reversal of notions: the royal headband measures 20 fathoms, and the south wall of the parvis is 250 royal cubits long,

¹⁷ Cf. plates 47–49.

¹⁸ Ibid.

¹⁹ Cf. plan in plate 12.

²⁰ Cf. fig. 179.

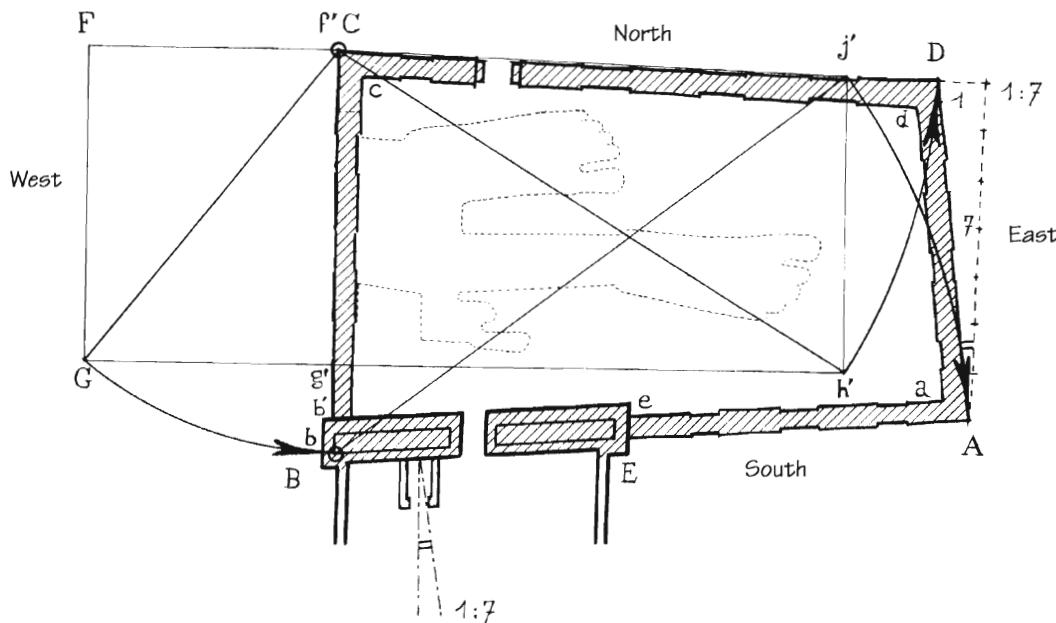


Fig. 210. Projection of the inverted pedestal of the colossus,
enlarged fifty times, onto the Nectanebo courtyard

Comparison of the dimensions of the courtyard with those of the diagonals of the pedestal.

South wall	{ north face { thickness of surrounding wall 5.00 meters interior length <i>ae</i> 63.80 meters length of pylon <i>eb'</i> 62.20 meters total length	131.00 meters
North wall	{ south face { exterior length <i>AE</i> 69.20 meters exterior length <i>EB</i> 63.60 meters total length <i>AB</i>	132.80 meters
West wall	{ interior length <i>cd</i> 113.50 meters exterior length <i>CD</i> 123.50 meters	
East wall	{ exterior length <i>Cb'</i> 75.60 meters exterior length <i>Cb</i> 82.50 meters	
	{ interior length <i>ad</i> 60.20 meters exterior length <i>AD</i> 70.20 meters	
Diagonal <i>f'h'</i> of the surface of pedestal comparable to length of north wall	$2.465 \times 50 = 123.25$ meters 123.50 meters	
Diagonal <i>f'G</i> of back side of pedestal comparable to length <i>Cb</i> of west wall	$1.65 \times 50 = 82.50$ meters 82.50 meters	
Diagonal of the volume <i>Gj'</i> or <i>bj'</i> of pedestal comparable to length of south wall, north face	$2.618 \times 50 = 130.90$ meters 131.00 meters	

which, functionally, by a double crossing of the measures and the intervention of the square root of 2, comes to²¹

$$\begin{array}{lll} \text{royal headband} & = \text{south wall of covered temple} & = 70.71 \text{ royal cubits} \\ \text{equator} & = \text{south wall of parvis} & = 70.71 \text{ mean fathoms.} \end{array}$$

The length of the south wall of the parvis, measuring 250 royal cubits or 70.71 mean fathoms, represents half the height of the Man of the Temple.²²

As we have seen previously, the length of the west wall is defined by the crossing of the two essential axes. This length, added to the total length of the temple, that is, from the south wall of the covered temple to the northwest corner of the Nectanebo courtyard, gives a total length of 180 fathoms.²³ We still have to determine the lengths of the east and north walls of the parvis.

The projection of the inverted pedestal of the colossus onto the Nectanebo courtyard, enlarged fifty times and with its face turned toward the east, puts the corner f' of the pedestal into coincidence with the northwest corner C of the courtyard, which allows us to observe that the rabattement of the three essential diagonals defining the volume of the pedestal of the colossus determines the sizes of the four irregular sides of this courtyard (fig. 210). The back edge $f'g'$ of the pedestal is oriented following the axis of the west wall of the courtyard. The edge $f'j'$ of the pedestal will thus be perpendicular to the avenue of the sphinxes.

The diagonal of the lower surface of the pedestal determines the length of the north wall of the courtyard. The diagonal of the east back side of the pedestal defines the length between the northwest corner of the courtyard and the point of crossing of the extension of the south wall in b (fig. 210).

Finally, the diagonal of the volume defines and confirms the length already found for the south wall, which is 250 royal cubits.



As a plane surface, the Nectanebo courtyard is constructed on the diagonals of the volume of the pedestal of the colossus. By bringing this surface of the Nectanebo courtyard over into the volume of the pedestal, one obtains figure 211 in which $b'j'$ is the chord of an arc the length of which is AD , the east wall of the courtyard.

In conclusion, the trapezoidal shape of the enclosing walls of the Nectanebo courtyard represents the matrix form that contains all the elements for determining the pedestal of colossus no. 3 and its height above the ground. This is said only for the sake of demonstration, because it is the pedestal of this colossus that is the container giving the elements of the Nectanebo walls.

PLATE 24 • PROJECTION OF COLOSSUS NO. 3 ONTO THE TEMPLE OF LUXOR

The study of the measures and proportions of the colossus of Ramesses has allowed us to observe that the position of his navel divides his height by the golden section,²⁴ thus determining his adult age. Now in order to correspond to this age, the proportion of the height of the head in relationship to the total height of the figure ought to be as 1 is to 7.5, which we can verify by the following dimensions:

²¹ Cf. chapter 10.

²² Cf. chapter 28 and plate 15.

²³ The total length of the temple with the parvis is 258 m plus 75.60 m, which equals 333.60 m, or 180 fathoms of 1.853 m or 181 fathoms at 0°.

²⁴ Cf. above, table of the king's measurements.

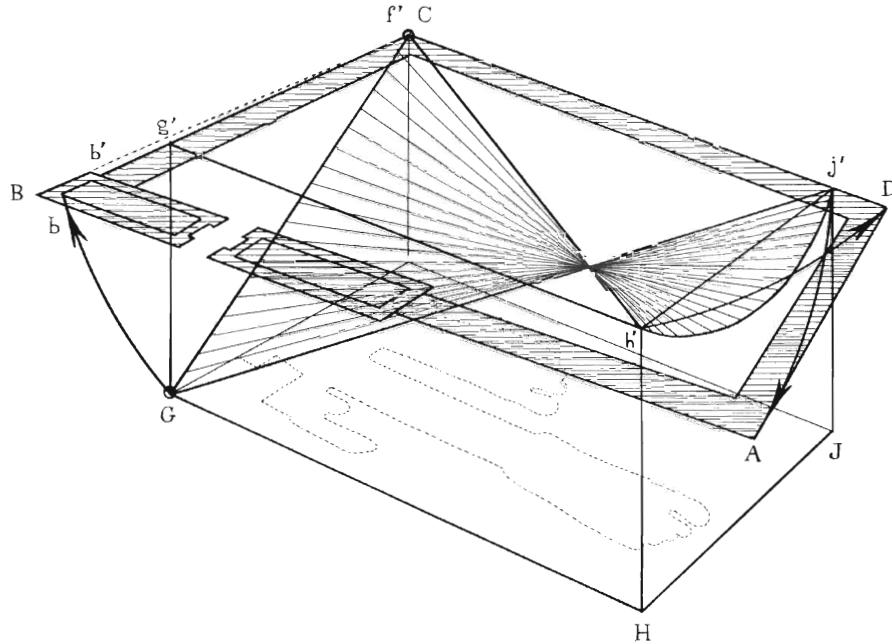


Fig. 211. Projection of the plan of the courtyard of Nectanebo onto the inverted pedestal of the colossus enlarged fifty times.

The measurement from the level of the chin to that of the edges of the headdress is 0.74 meter, and the height of the colossus to this point is 4.80 meters. The ratio is thus

$$\frac{\text{total height}}{\text{height of head}} = \frac{4.80 \text{ meters}}{0.74} = 6.48\ldots,$$

and not 7.5 as the canon would require. We observe this same proportion between the face represented by the pavestone mosaic²⁵ and the total length of the reconstituted Man of the Temple with the crown of his skull established on the proportions of this face.

Moreover, the study of the Nectanebo courtyard in relation to the pedestal of the colossus has confirmed the essential relationship that also exists between the colossus and the temple: *the diagonals of the pedestal times fifty determine the dimensions of the parvis, as the axial diagonal of the colossus times fifty defines the length of the Man of the Temple.*

The hypotenuse of the triangle determined by the vertical height of the stele lowered onto the plane of the pedestal on its central axis is the fiftieth part of the length of the Man of the Temple.

This hypotenuse measures 5.308 meters, or 2.88 fathoms at 0°, so that the length of the temple is 144 fathoms at 0°, or 265.392 meters.

Now, while the height of the head was contained about 6.5 times in the vertical height of the colossus, the hypotenuse represents 7.17 times the height of the king's head, which corrects the indicated proportion by giving the statue, as seen from a certain distance and by means of perspective, the correct proportion between the head and the height corresponding to the age of eighteen to nineteen years. Now, since this colossus gives this double proportion by its vertical height and by its diagonal, it is possible, by virtue of the indicated angle, to find how far away the observer must be in order to reestablish the correct proportion through perspective.

²⁵ Cf. plates 35–37 and their commentaries.

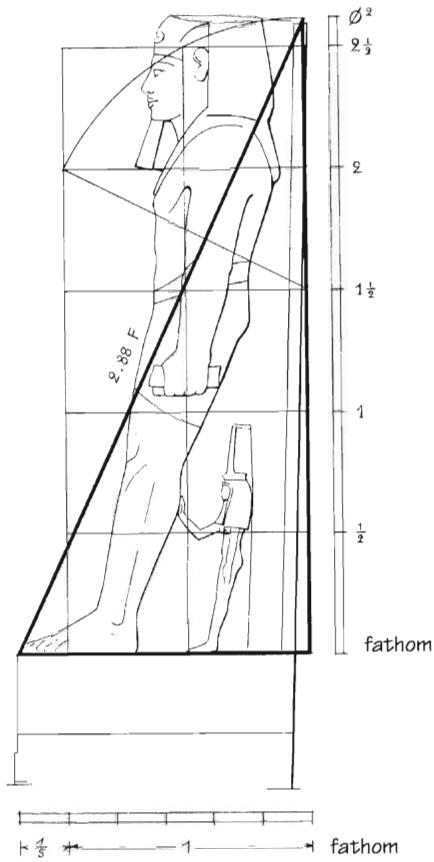


Fig. 212. Axial diagonal of the colossus

The length of the axial diagonal of the colossus measured on the scale drawings at 1 to 10 is 0.53 meter, which is 5.30 meters on the monument. The following calculations verify this dimension.

The stele being twisted, its angle at its median part is about $1^{\circ}28'$. The distance between the vertical and the pedestal is 0.123 meter, and is added to the base of the pedestal, which on the median axis is about 2.09 meters. The base of the triangle then measures 2.21 meters for the vertical height of 4.825 meters. These dimensions correspond in fathoms to:

$$\begin{aligned} \text{base} &= 2.211 \text{ meters} = 1.2 \text{ fathoms at } 0^\circ \\ \text{height} &= 4.825 \text{ meters} = 2.618 \text{ fathoms at } 0^\circ \\ \text{hypotenuse} &= 5.308 \text{ meters} = 2.88 \text{ fathoms at } 0^\circ. \end{aligned}$$

Numerical function: $\sqrt{(1.2)^2 + \phi^2} = \sqrt{8.2941}$ in absolute value, comparable with $\sqrt{8.2944} = 2.88$.

Three important points result from this construction:

$$\begin{aligned} 1\frac{1}{2} \text{ fathoms} &= 2.765 \text{ meters} = \text{bottom edge of belt, front left} \\ 2 \text{ fathoms} &= 3.686 \text{ meters} = \text{bottom of the king's beard} \\ 2\frac{1}{2} \text{ fathoms} &= 4.607 \text{ meters} = \text{bottom of the ureaus} = \text{height of ears.} \end{aligned}$$

It is evident that this hypotenuse will always be the same, whatever the angle of the stele.

In conclusion, the colossus carries in itself the “two rhythms” that are everywhere affirmed in the course of our observations. This double rhythm is connected as much to the problem of growth as to the different cubits found in Egypt.

The double rhythm indicates the following two lineages of measure: 500 royal cycle cubits²⁶ and 144 fathoms at 0°.²⁷

The projection of the scale drawing of colossus no. 3 on the plan of the temple gives all the numbers and measurements we have just indicated. This is again justified by the fact that the hand of the queen on the king’s calf is exactly at the spot where this colossus is located in the court of Ramesses.

SUMMARY OF THE CHANGES TO THE TEMPLE DURING THE PHARAONIC PERIOD BETWEEN THE EIGHTEENTH AND THIRTIETH DYNASTIES

Each temple can be related to a historical moment. This fact becomes important when the mystical names of the kings of that era are taken into account.

The construction executed under Amenhotep III²⁸ (1411–1375 B.C.), son of Tuthmosis IV, contains, in the thickness of its walls as well as in its “tank”-shaped foundation, numerous blocks from a previous temple.²⁹

A probe into sanctuary I has shown that the “tank” contained—like the one of Mentu at Karnak—column drums and smoothed pavestones, together with a block of limestone bearing the inscription “the house of the *neter*.³⁰

The pavement of the covered temple contains numerous cube-shaped blocks that very likely were the foundations, in squared sections, of the pillars. In one case, the disjunction of the stones revealed the cartouche of Tuthmosis.

The numerous sixteen-sided column drums, characteristic of certain buildings of the Tuthmoses at Karnak, were reused in the southeast and west walls of the covered temple.³¹

Most of the embrasures have blocks at their bases, one surface of which is cut on a bias that corresponds to the slope of the pylons. The walls themselves sometimes contain one or two of these blocks, which always represent something of symbolic interest.³²

Only the lower courses of the west wall of the nave currently remain, permitting one to observe that numerous drums of large cylindrical columns were used in the construction of this wall, which is entirely “filled,” in contrast with the east wall of the nave, which is “hollow.”³³

Looking at all these facts together, we are certain of the existence of a previous temple. In addition, four monolithic columns in red granite—of admirable cut and curve—are presently

²⁶ Plate 15, projection of the skeleton onto the temple.

²⁷ Plate 24, projection of the colossus onto the temple.

²⁸ The Greek form of this name is Amenophis.

²⁹ Cf. plate 94C, tank-shaped foundation.

³⁰ This fragment of limestone did not have a cartouche that allowed it to be dated and was respectfully put back in its place (fig. 293).

³¹ Cf. plate 78.

³² Cf. plates 99 and 100 and their commentaries.

³³ Cf. plate 95.

structural elements in the portico that comes before the three chapels of the barques erected by Ramesses II in the narthex. Their architraves still carry the remains of an inscription of Tuthmosis III on their upper surfaces. Ramesses thus turned these architraves over to reuse them, as was quite probably the case with the four columns that support them.³⁴

The character of the reused stones and columns in places that correspond to the same symbolism in the building of Amenhotep shows a kinship between the two succeeding temples.



Until now we have only developed the essential phases of the growth of the temple.³⁵ It is necessary to point out some important modifications that took place during this growth, especially concerning the bas-reliefs. Amenhotep III covered all the rooms of the covered temple with bas-reliefs, with the exception of the small chamber opening onto the hypostyle room and located to the east of the room of the barque of Mut.³⁶ The facade of the doorway of this "unfinished" chamber³⁷ has a representation of Khonsu on the lintel. The west wall has no bas-reliefs, and on the east partition only the first register has been begun and left unfinished by Amenhotep III. Now, it is worth mentioning that *this bas-relief was never reworked by any of the kings who succeeded him, because Khonsu is still a primitive stage of what the king will become*. We observe this primitive character, heavy and somber, in the temple of Khonsu at Karnak, which is, moreover, joined to the temple of Apet that contains the tomb of Osiris reborn. There are two aspects of Khonsu, one of the Osirian, lunar phase, and the other of the Horian, solar phase.

The few fragments remaining of the interior partitions of the peristyle court (transept) are from Amenhotep III.

In the nave, the two doorposts of the southern doorway opening onto the transept bear the ritual scene of "Giving the House to Its Master," above which five lines of dedication describe this pinewood door, worked with copper, bronze, and fine gold, and designate this scene by its name, which speaks of the power and the majesty of Amun of the origin.

The exterior facade of the northern doorway of the nave marks the end of the constructions of Amenhotep III, and on the doorposts the ritual scene of the consecration of the temple is represented, similar to the preceding one (that of the southern doorway).³⁸ The texts on the architraves of the great colonnade of the nave, inscribed from north to south, were drawn by Amenhotep III, but as we shall see later on, they were hammered out and reworked by Seti I.

As for the two interior partitions of the nave, it is difficult to know if Amenhotep restricted himself to the single decoration of the southern doorway described above, or if he began the bas-reliefs that now bear the cartouches of his successors.



³⁴ Cf. plate 87. We limit ourselves here to the most characteristic examples.

³⁵ Cf. chapter 28.

³⁶ Cf. fig. 198; room XX is the chamber of Mut.

³⁷ Egyptologists want to see this as the chamber of the king's barque in spite of the bas-reliefs representing Khonsu. It is true that Khonsu is at the genetic origin of the king.

³⁸ Cf. plates 29 and 30, and figs. 217, 218, and 219. These two representations are now the only ones that bear the cartouche of Amenhotep III on the bas-reliefs of the "third stage" of the temple.

At Luxor as everywhere else, Akhenaten (Amenhotep IV, 1375–1358) effaced, by means of systematic hammering out, all figures of Amun and all the *neters*, as well as their legends, with the exception of Tum of Heliopolis. This was a considerable task, for none of the architraves—the lowest of which was nearly 8.4 meters high, and the highest was 20 meters—were spared.

This pharaoh constructed an edifice consecrated to Aten (the solar disk) at Karnak. This monument was subsequently entirely razed. Ramesses II reused a large number of blocks with the name of Akhenaten on them in his pylon at Luxor. We should recall that with Akhenaten begins the material, concrete phase of the sun; this phase would be continued by the Ramesses, who will implement the *reversal* of its domination.

Amenhotep IV took the name Akh-n-aten, “advent of the solar disk,” and not “advent” or “birth of Ra,” the solar principle that Ra-mes-s, or Ramesses, would come to represent.



From the historical point of view, the Eighteenth Dynasty ends in great confusion, and it is therefore difficult to put the royal names in their chronological order. At the temple of Luxor we meet the name of Ay (Kheper-Kheperu-Ra, “transformation of the sun’s transformations”) in the dedication on the doorposts of the southern doorway of room VIII and under the bas-reliefs of Amenhotep III. This point corresponds to the clavicle of the Man of the Temple.³⁹ Also, the bas-reliefs of the exterior facade of the north pylon of the nave⁴⁰ (that is, at the knee) are attributed to Ay.

The cartouche of Tutankhamun is visible in the nave under the capitals of certain columns, and there is considerable uncertainty about the decoration elements of the nave that can be attributed to him.

Finally, Horemheb (“Horus in a state of renewal”), according to current opinion, altered the cartouches of the previously mentioned kings. Also, today, we find his name on all the interior partitions of the nave as well as on the facade of the pylon of Amenhotep III. In one of his texts, Horemheb, incidentally, attributes to himself only the renovation of the temple constructed by Amenhotep III.



With Ramesses II (“birth of the sun,” 1298–1232), the Nineteenth Dynasty brings the important addition of the narthex. His predecessor, Seti I (1318–1298), restored the Amunian bas-reliefs hammered out by Akhenaten in the constructions of Amenhotep III. Everywhere the stone was resurfaced and recarved, and sometimes replastered, and Seti I left his cartouche in numerous places, along with a dedication attesting to the fact that he had “renewed” the temple; all his work is in shallow relief.

Ramesses II covered with bas-reliefs the exterior and interior sides of his pylon, as well as the exterior and interior facades of the narthex. The construction of the south portico of the narthex entailed the reworking of the bas-reliefs on the facade of the Amenhotep III pylon, the lower part of which has been demolished, while the upper part is still visible above the roofing.⁴¹ Ramesses

³⁹ Cf. plate 28, no. 12. The two signatures of Ay are found on the right and left doorposts under figure no. 12 and its opposite.

⁴⁰ Cf. plate 27 and its legend.

⁴¹ Cf. note 39.

made major modifications to his own carvings, as, for example, the "reversal" of certain tableaux;⁴² he also covered the exterior west partition of the nave with bas-reliefs.⁴³ The bas-reliefs executed by Ramesses are in sunk relief.

The son of Ramesses, Merneptah ("beloved of Ptah") inscribed his name on the buttress supporting the front leg of the colossus in the narthex, on the king's right. His cartouche is also found at several important points in this court, notably at the entrance to the repository of Amun's barque on the two doorposts,⁴⁴ and in the southwest corner of the narthex under the representation of the "ascent of the princes" toward the pylon depicted at this point.⁴⁵

Finally, Seti II, the last pharaoh of the Nineteenth Dynasty (which ended in 1200 B.C.), filled in the sloping steps of the northern doorway of the nave, covered with bas-reliefs by Ramesses II, and thus removed the double door that was there and that had an architectural and symbolic importance. He then covered his "padding" of bas-reliefs with his name.⁴⁶ These carvings are in sunk relief, and his cartouche is again seen in the nave and in the transept.

This removal of the door that had connected the two knees now allows them to separate, since with Ramesses, the Man had grown from seven to twelve and then to eighteen years (maturity), giving him, with his mobility, his independence. At least one could thus interpret the gesture of removing this door between the two *future* knees, since with Amenhotep this pylon was the resting place of the feet of the Man, still a child of seven or eight years. Now, it is evident that this child also had knees, and the growth of the legs was not made by simply adding on to the soles of the feet. Since, on the other hand, all the proportions of the human body accord with the measures and proportions of the finished temple, *in which the phases of growth are marked*, we should see the different gestures (such as the opening or the closing of a door, a double swinging door becoming a single door, and so on) as functional symbols and not as concrete facts.



In the course of the Twentieth Dynasty (1200–1085), Ramesses III covered the exterior walls of the covered temple with bas-reliefs and left a stele describing his works. He also carved his cartouches in the hypostyle room under the dedication of Seti II and altered the dedication carved by Merneptah in the narthex under the "ascent of the princes."⁴⁷

Ramesses IV deeply carved the dedications that we presently see at the base of the east and west partitions of the nave. Below these he added his cartouches, which he also carved at the bases of the partitions of the hypostyle room (the *haty*) as well as at the bases of the shafts of the columns of this room.⁴⁸ Ramesses VI altered the cartouches of Ramesses IV at the bases of these columns.



⁴² Cf. plates 9 and 92.

⁴³ Cf. fig. 199, the description of all the exterior bas-reliefs.

⁴⁴ Cf. plate 87, the repository of Amun's barque.

⁴⁵ Cf. fig. 268.

⁴⁶ Cf. plate 28, fig. 7, located at the knee of the Man of the Temple.

⁴⁷ Cf. fig. 268.

⁴⁸ At Karnak, Ramesses IV inscribed his cartouches beside those of Ramesses II on the columns of the hypostyle room; they are to be found on the capitals as well as on the bases of the shafts.

During the Twenty-first Dynasty (1085–950) a votive inscription by the priest Pinedjem, and another by his son Ramenkheper, let it be known that they made repairs in the temple.⁴⁹

In the Twenty-fifth Dynasty (751–656), the last decan of the gestation (entering into the ninth month),⁵⁰ the black Ethiopian kings governed Egypt. The first of these kings, Shabaka, covered the interior doorposts at the entrance of the pylon of Ramesses with bas-reliefs, as well as the interior east face of the recess of this door, which had only a single swinging panel, placed on the west side, where the hinge socket is. A single swinging door panel about 5 meters long can only have had a symbolic meaning, as would narrower double doors; a double door necessarily means an entrance through a separation.⁵¹

Shabaka presumably also constructed a pathway paved in granite on either side, a colonnade constituting a portico to the north of the pylon of Ramesses II. The drums of these columns, carved in relief and bearing the cartouche of this pharaoh, are presently serving as pavestones in room VIII of the covered temple and testify to the existence of this colonnade. Moreover, at the north of this pylon of Ramesses II, the excavations of 1950–52 revealed a paved pathway formed from large blocks of red granite, of which only the west part could be cleared. The first block presently visible is at a distance of around 23 meters and the last about 40 meters from the north face of the pylon. Some of these blocks of granite had also been reused as paving in the east and west parts of room VIII, most probably by the Romans when they elevated the level of this room. These elements allow us to suppose that Shabaka had erected on the parvis at Luxor a colonnade similar to the one whose complete elements can still be seen at Karnak, executed by Taharka, some distance in front of the second pylon.⁵²

Shebitku, the successor of Shabaka, demolished a bas-relief of Ramesses III on the exterior south wall of the covered temple at the level of room V and replaced it with two scenes bearing his cartouche. Now, these Ethiopian kings were characterized by the wearing of a double uraeus, of which one was systematically scraped off by the following.⁵³ The period of the black kings corresponds to the time from the eighth month of fetal gestation to the ninth month of completion, after which comes the birth: the Greco-Roman period.

The Thirtieth Dynasty (378–341) brings to a close the history of pharaonic Egypt with Nectanebo (the last king before the conquest by Alexander), who constructed important buildings throughout the entire empire.

⁴⁹ The inscription of Pinedjem is found on the north face of the pylon of Amenhotep III, behind the seated black granite colossus, to the east, that is, at the knee. That of his son is found at the door of the hypostyle room, that is, at the *haty*.

⁵⁰ Cf. chapter 20.

⁵¹ The dimension of this door is exactly 5.17 m and represents 10 cubits of 20 *remen* digits. Cf. chapter 10.

⁵² Jean Leclant, "Fouilles et travaux en Egypte 1950–51," *Orientalia* 20, no. 4 (1951), notes the existence at Karnak of a granite pavement in the great colonnade of Taharka in front of the second pylon, another granite pavement in the Ethiopian colonnade to the east, and finally a similar pavement in the temple of Mentu, dating from the same period.

⁵³ Cf. plates 75–78, sanctuary V and its relation with the serpent, the uraeus, olfaction, and dualization. See fig. 199 for the location of this bas-relief.

At Luxor, there is a stele in quartzite in front of the left doorpost of the entrance to the parvis, relating to this door and bearing the cartouche of Nectanebo II, attributing to him the construction of the door in question and the enclosing wall of unbaked bricks outlining the parvis. The dromos is lined by sphinxes with human heads in his name, and Nectanebo thus concludes the history of the genesis of the Man of the Temple.



The fact that the dimensions of the parvis are defined by the diagonals of the pedestal of the colossus inverted in the ground and turned around so that it faces toward the east, whereas in the court of Ramesses it looked west, corresponds to the following symbolism: (*a*) the colossus goes out of the temple; (*b*) he is upside down in the ground; (*c*) his orientation is turned around, with east becoming west, but since he is upside down as in a vertical mirror, the south corresponds to the south.

The reversal of orientation is related to the reversal of the Ramesside bas-reliefs of the west pylon.⁵⁴ The inversion in the earth evokes, in its association with the thematic group of the bow, the black earth, and so forth, the constructions executed "under the feet" of the Man of the Temple by the Ethiopian kings, Shabaka and Shebitku. This relationship comes through in the addition by Shabaka of a portico with red granite pavement and the red granite pedestal that serves as the base of the colossus projected onto the temple, and the fact that this pavement is the only part that still remains of this portico.

It is necessary to insist on the fact that through the inversion, what was high is now low and vice versa. Now, the two inscriptions carved in the temple by the Ethiopian kings are found "high up" in the temple on the royal headband, and "low" in the temple at the feet.⁵⁵ Thus these kings, wearing the *double* uraeus, carved their inscriptions at the *double* part of the brain, the part in which man is "upside down,"⁵⁶ and at its opposite end, the feet,⁵⁷ the physiological importance of which we have seen through their reactions' revealing the condition of the central nervous system.

In this study of the inscriptions of the royal cartouches, it is essential to observe the correspondence of the mystical name of the king with the physiological part of Man, revealed to us by the temple of Luxor.

The points where the successors of Amenhotep III carved their cartouches are principally the clavicle, the knee, the thigh (the nave) during the Eighteenth Dynasty, then in the *haty*, the knee, the thigh, and the calf during the Nineteenth Dynasty.

It is again necessary to observe the particular character of these so-called usurpations; thus Tutankhamun carved his cartouches high up on the columns of the nave, while Ramesses VI carved them on the bottom of the shafts of the columns of the hypostyle room, and Ramesses IV carved them on the bottom of the lateral partitions of the nave, for example.

PLATE 25 • THE TEMPLE IN THE GRECO-ROMAN PERIOD

We can clearly distinguish two periods: the Ptolemaic period (332–30 B.C.), and Roman rule (30 B.C. to A.D. 395).

⁵⁴ Cf. plates 9 and 92.

⁵⁵ The south wall of the covered temple.

⁵⁶ The pylon, the two wings of which are separated by a door.

⁵⁷ Cf. chapter 15, "The Crown of the Skull," and fig. 154.

From the Ptolemaic period, graffiti in the name of Kap-ha-amen, located on the north face of the north wall of the transept, mentions the repair in acacia wood of the naos, which had fallen into ruins.⁵⁸

Graffiti of Ankh-pa-khrod, priest of Amun, royal scribe, and chief of works of the temple, mentions the execution of repairs at Luxor. The restorations began in the third year of Alexander, lasted thirty-nine months, and were taken up again under Philip Arrhidaeus.⁵⁹

The most important modification effected under the reign of Alexander the Great was that of room VI. Alexander removed the four columns of Amenhotep III that were supporting the roof and constructed the sandstone naos that bears his name. At the base, he left the pedestals of the old columns visible.⁶⁰ He raised the floor about 30 centimeters and reworked most of the bas-reliefs in this room, as he did those of room IV. Prior to Alexander, the entire north partition of room VI had to have undergone serious damage, because he entirely rebuilt the northern entrance with small blocks of stone that allow us to define very exactly the parts restored by him, which he signed in this room by replacing the cartouches of Amenhotep III with his own.

In addition to these restorations, for which the cartouches designate the period, there are numerous modifications in the bas-reliefs throughout the covered temple, especially on the doorposts, which are discernible only by some particularities of style. Very often these doorways have had the edges of their posts trimmed, and the ankh that marks their central axis on the lintel remade or moved, which leaves us to suppose that the leaning of the walls toward the west, presently observed in the whole western part of the temple on the side of the Nile, was already beginning to threaten the monument at the time of Alexander, through the infiltration of river water.⁶¹

Philip Arrhidaeus constructed an outer door in his name in front of the northern door of the nave between the two seated colossi of black granite.⁶² Another outer door was constructed at an undetermined period, north of the southern door of the nave.

With regard to the Roman period, during the excavations of 1950–51, a small peripheral building was uncovered in the northwest corner of the Nectanebo courtyard. A small sanctuary open toward the east, surrounded by a portico of fourteen columns, it was set on a platform of baked and unbaked bricks. The sanctuary itself is built with unbaked bricks, with the exception of some parts emphasized in baked bricks. The columns are also made from unbaked bricks coated with stucco.

Only the two columns that frame the eastern entry of the portico were resting on sandstone foundations. One can still see the two sandstone doorposts at the entry of the sanctuary, and at the ground level of the sanctuary, two column drums reused as pavestones and etched with an axis line.

A sandstone lintel, 2.10 meters wide and 0.47 meter high carries a Greek dedication from A.D. 127: "For the emperor Caesar Trajan Adrian Augustus and to all his family; to Zeus Helios, the Great Serapis, Gaius Julius Antoninus, the honorable uncrowned, at his own cost, who having restored the sanctuary, consecrated the statue, by reason of his vows and his piety, under the prefect of Egypt [name hammered out]. He was also neocorus of the Great Serapis himself, and he consecrated the other statues. Year 10 of the Emperor Caesar Trajan Adrian Augustus, 29 of the month of Tybi."⁶³

⁵⁸ Cf. Georges Daressy, *Le Temple du Louqsor* (Cairo: Imprimerie Nationale, 1893), p. 52.

⁵⁹ Cf. ibid.

⁶⁰ Cf. plates 83 and 90, plans of room VI.

⁶¹ We approach then the end (birth of man) of pharaonic times, the period of the precessional passage from Aries to Pisces.

⁶² Cf. plates 24 and 25.

⁶³ Cf. Leclant, "Fouilles et travaux en Egypte 1950–51," p. 456.

The interior walls of the sanctuary had at first been covered with a coating of blue stucco, and a second time with a coating that imitated marble plaques. Among the statues discovered in the interior, an Osiris-Canopus was found on the ground, and a limestone statue of Isis was found in the edge of the sanctuary, probably in place. Two bulls, one in limestone, the other in granite, were later discovered during the excavations.

On the exterior partitions of the sanctuary, a semicircular niche at the south was emphasized by a row of baked bricks 1.85 meters (1 fathom) long. A rectangular niche on the exterior west partition was also underlined with a row of baked bricks and also measured 1 fathom in length.

After the construction of this monument, the area between its west face and the wall surrounding the Nectanebo courtyard was filled in by a buttress of unbaked bricks that enveloped the western columns of the edifice. This restoration probably dates from the same era as the baked brick channels traversing the north wall of the Nectanebo courtyard and culminating in the avenue of sphinxes, to the right and left of the dromos.

The Serapeum that we just described was consequently buried at the same time as the Nectanebo courtyard, quite probably at the time the temple of Luxor was transformed into a fortified camp. Let us note that this small sanctuary is exactly on the extension of the axis of Amun.



The city of Antinoe is in another part of Egypt, in the fifteenth nome—the nome of the hare—not far from Khemenu, the sanctuary of Thoth, “master of the Eight.” This city was founded by Hadrian in A.D. 130.

The legend recounts that Antinoüs, a Bithynian slave of great beauty and a favorite of Hadrian, sacrificed his life by throwing himself in the Nile to avert an oracle that predicted a painful loss to the emperor. To honor his memory, Hadrian built the city of Antinoe on the eastern bank of the Nile where Antinoüs drowned, as well as a temple consecrated to Antinoüs divinized. He had numerous statues erected in his image, the beauty of which were famous.

Let us put legend and fact together concerning the emperor Hadrian.

According to the legend, the most beautiful of men sacrificed himself for the good of the emperor. In fact, Hadrian built the city and the temple to the glory of Divinized Man.

During the same period, there was an inscription carved in Greek on the lintel of the entrance door of the Serapeum at Luxor and, nearly a century and a half later, after uncovering the construction of Nectanebo *representing* the pedestal of the Man of the Temple, the Romans put up a double wall around the temple of Luxor, transforming it into a fortress. This enclosing wall in baked bricks is characterized by semicircular towers that rise up at regular distances with square towers at the corners.⁶⁴ Four doors pass through this wall; two are at the north and one is at the west that opens onto the roadway leading to the loading dock. The one to the east is at the level of the mid-point of the temple. Starting from each of these doors and within the wall, four pathways bordered with columns cross each other, two by two. There are two on the east and two on the west in the image of the city of Antineopolis (Antinoe). At each of these crossings, the Romans erected four columns on four square-based pedestals, with human statues on top (fig. 213). These four pedestals are still intact and allow us to read the inscriptions that give the exact date of their construction.

⁶⁴ Cf. plate 25. The changes attributed to the Romans are in black. The surrounding wall and its towers are visible in the aerial photographs (plates 2 and 3). It can be noted that the northern door of the west part shows traces of grooves, which makes us think of a portcullis-like gateway. The raising up of the paved floor of room VIII must coincide with the closing of the southern door of this room and its transformation into a semicircular niche in order to accommodate a statue.

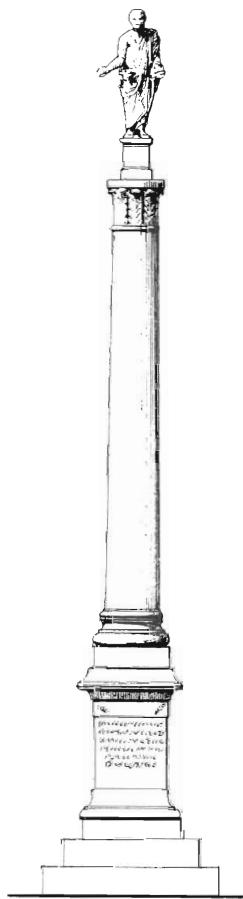


Fig. 213. Roman column reconstituted according to elements found at Luxor

To the west, these four bases were dedicated to the emperors of the first tetrarchy, two Augustuses, Diocletian and Maximian, and two Caesars, Constantius Chlorus and Galerius (A.D. 300), by Aurelius Reginus. These four inscriptions are opposite the east-west pathway, the axis leading from the river to the temple. The name of the dedicatory is inscribed on a carved line that straddles a joint between two blocks.

To the east, the four pedestals are dedicated to the emperors of the second tetrarchy, two Augustuses, Licinius and Galerius, and two Caesars, Constantine and Maximinus Daia (A.D. 308–309), by Aurelius Maximus. “Under the first tetrarchy Diocletian and Galerius, and under the second Galerius and Maximinus Daia, who have been the two Augustuses and the two Caesars of the east, are *Jovians*, that is, they claim to be the descendants of Jupiter, who in Egypt is Amun.”⁶⁵

The four inscriptions of the pedestals are opposite to the north-south pathway, the principal directions of the crossing. One epigraphic characteristic of these dedications is that the names of the emperors on all four of them are painted in yellow whereas the rest are painted in red.⁶⁶ “These

⁶⁵ Cf. Lacau, *Inscriptions latines du temple de Louqsor*, p. 20.

⁶⁶ Ibid.

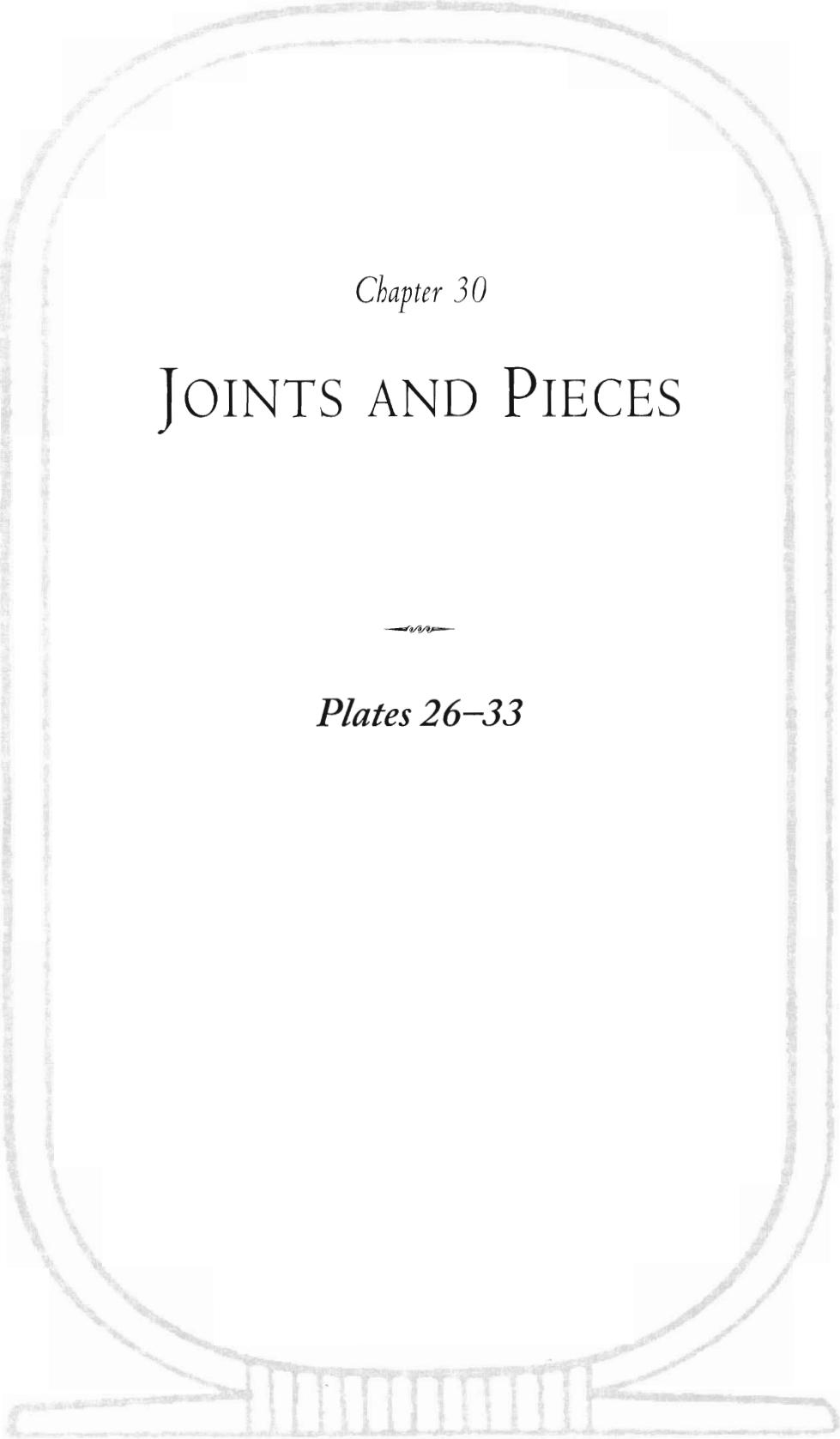
two groups of four columns are of the same type as the four columns that also marked the *crossing* of the two main streets in the city of Antinoe. The four columns of Antinoe carry a dedication to Alexander Severus.”⁶⁷

This comparison between the city of Antineopolis, dedicated to the *divinization of a man*, and the modifications brought to the temple of Luxor *after* the turning over of the colossus in the earth is compelling. In the legend of Antinoüs and Hadrian we are invited to see a meaning that is less human and more profound than simple personal history.

Throughout historical Egypt, the common people lived in the Osirian faith, which is a teaching of renewal and evolution through reincarnation of the living soul; man then lived under the sky, under the ordinances of the heavens. The Horian cult, that of deliverance and redemption, was reserved for the initiates of the temples, for those who knew how to renounce joyously the appearances of the world for the sake of the Divine Verb that animates them.

With the end of the pharaonic mission, preparing the advent of Christianity, which is the word of deliverance for all, man begins to raise himself up and symbolically places himself in the Heaven of the Temple, a symbol that is maintained to our day in Roman churches, after having appeared in Greece and, in the Greco-Roman era, in Egypt at the very end of the sign of Aries-Amun.

⁶⁷ Ibid, p. 44.



Chapter 30

JOINTS AND PIECES

Plates 26–33

The myth is a whole, the synthesis of all science, since it transcribes the fundamental knowledge of the laws of genesis that apply to everything. Thus the neters have their significance, in medicine as well as in astronomy or theology, which is the metaphysic of the Becoming and the Return.

(Chapter 17)



PLATE 26
The Young King Standing in the Persea Tree

Every natural type is a revelation of one of the natures and abstract functions that rule the world, a verb of the divine language, that is, of the entities or fully realized principles (neters). They are fully realized in the sense that they are types or definite stages in the cosmic embryology of humanity.

(Chapter 2)

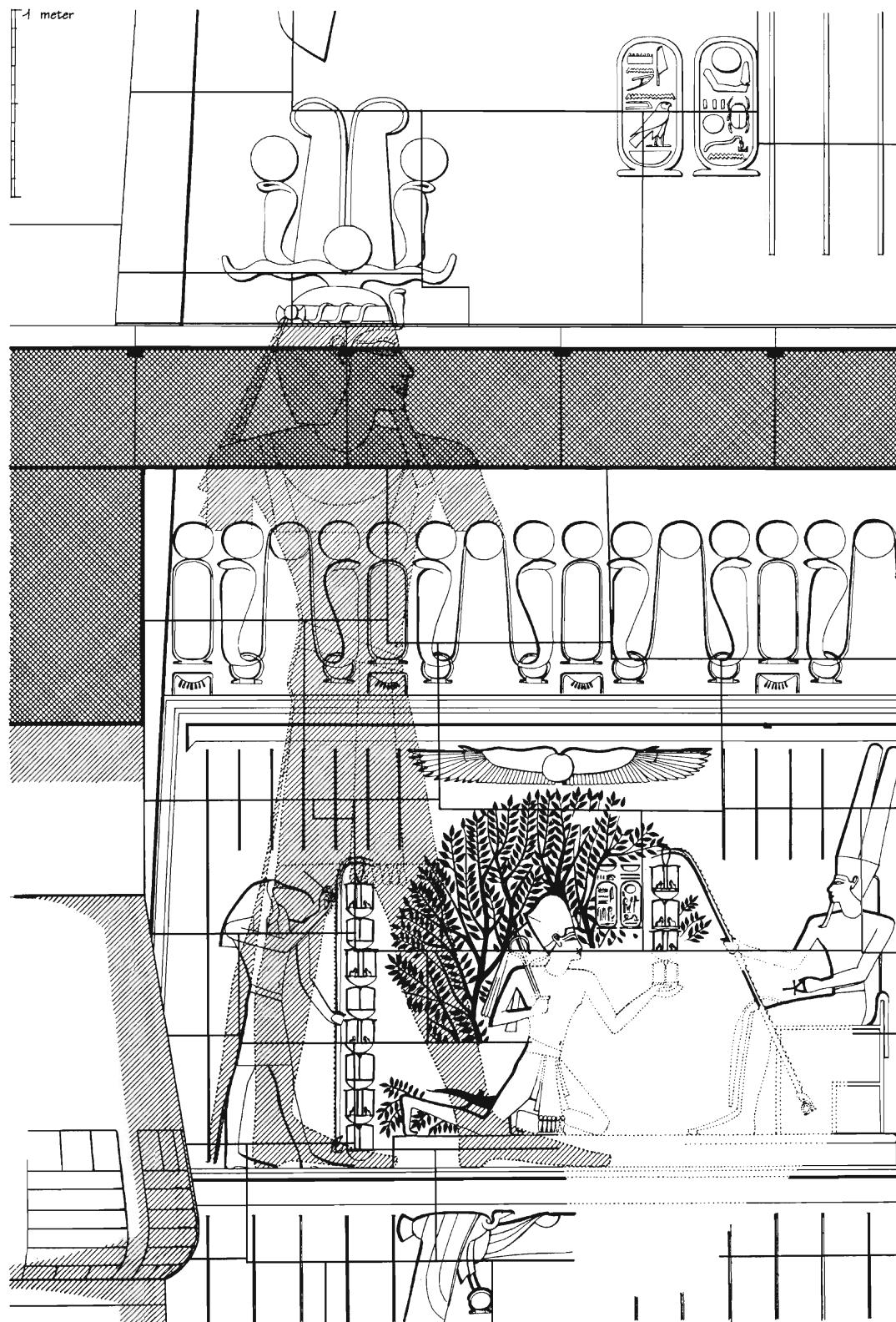
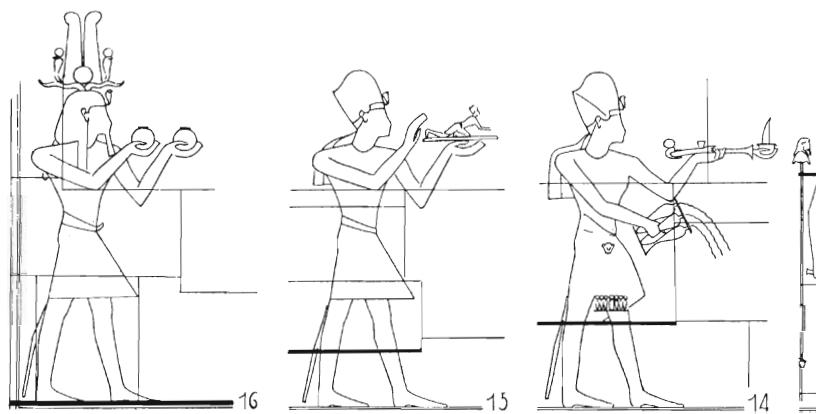
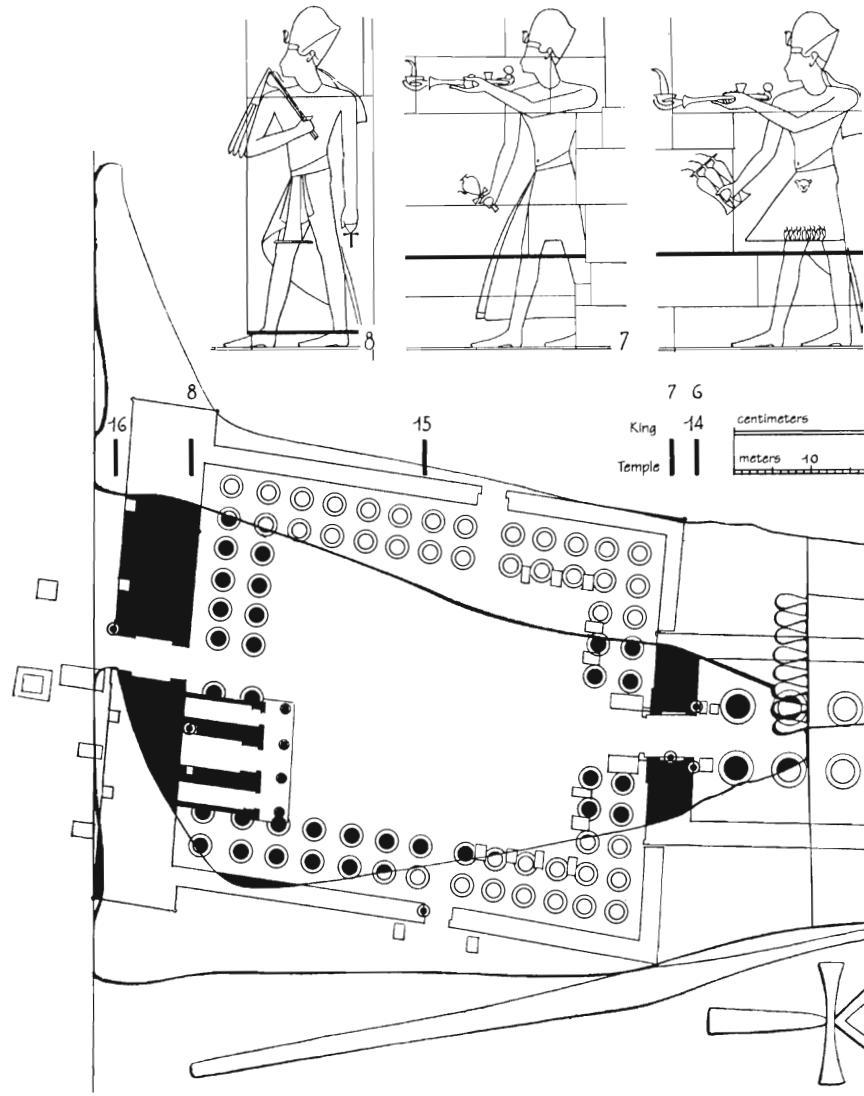


PLATE 27
The Adult King Kneeling in the Persea Tree

*The joint between two stones
links as much as it separates,
and it always emphasizes.*

(Chapter 16)



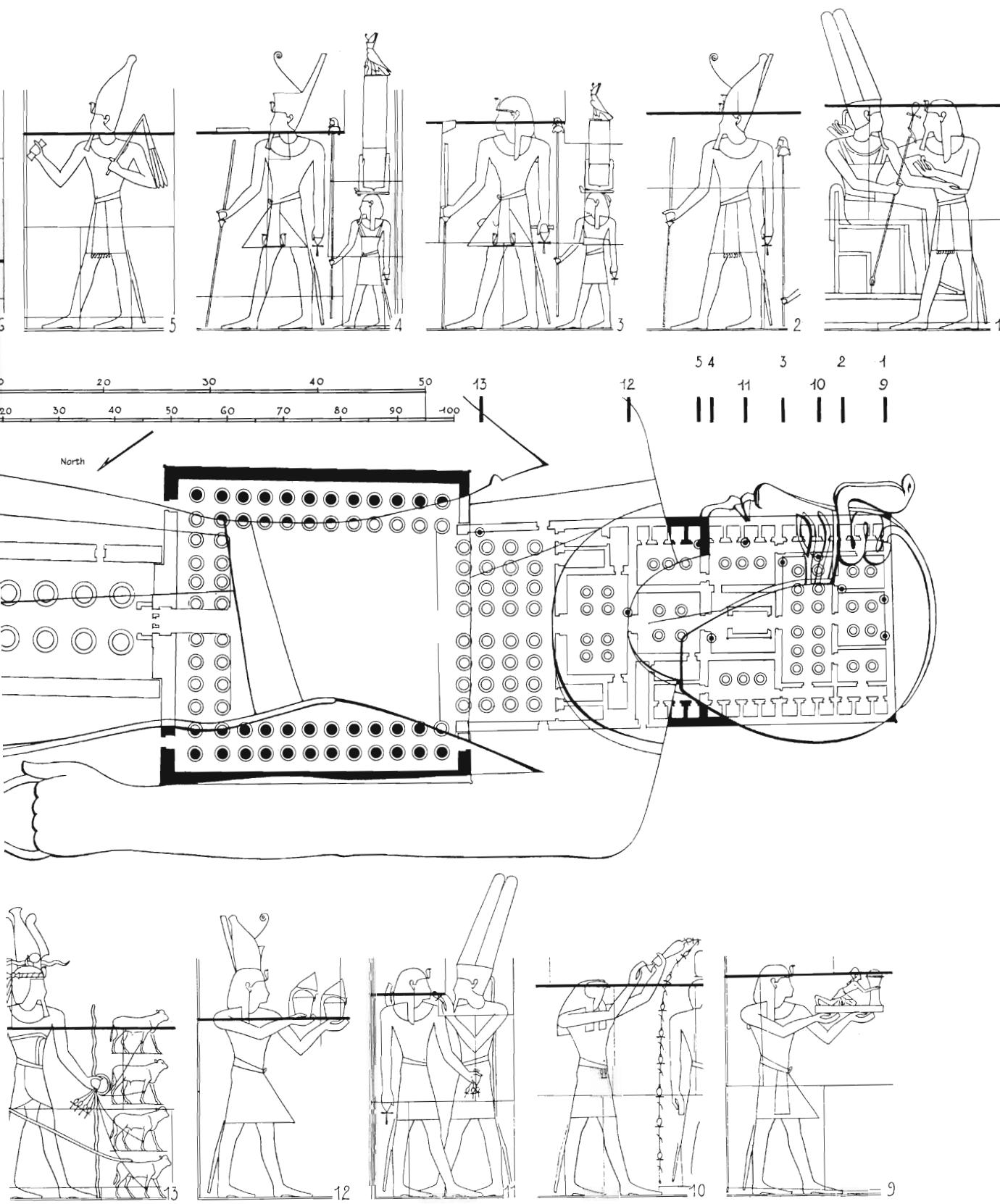


PLATE 28
Some "Location" Joints on the Man of the Temple



“Giving the House to Its Master.”
Who is the true master if not life?
Its true terrestrial house is the human body.

(Chapter 30)



A

PLATE 29
Bas-Reliefs of the Consecration of the Temple



B

... the joints play a very important hieroglyphic part in indicating the esoteric meaning of the inscriptions . . .

(Chapter 16)

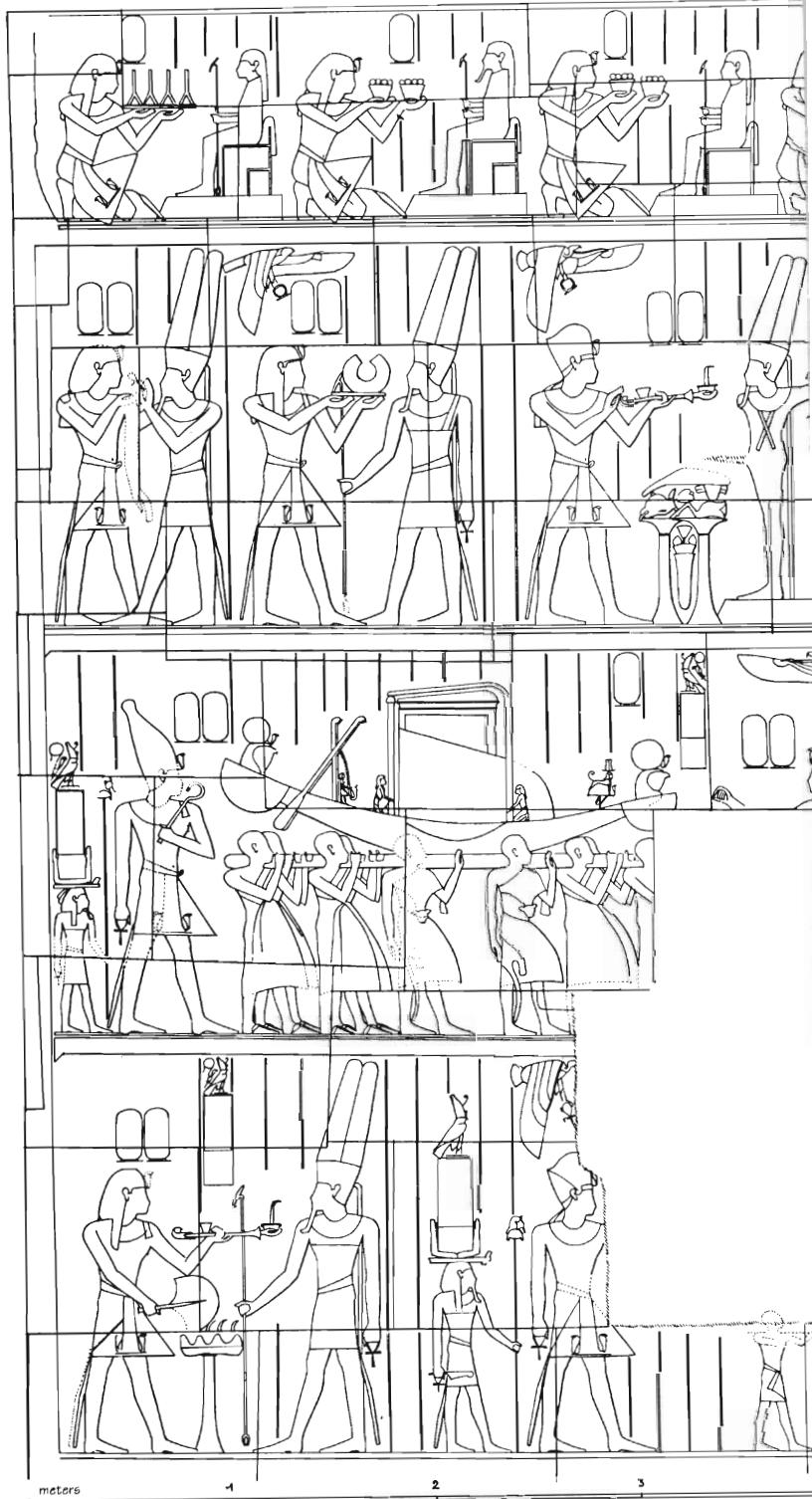
PLATE 30

Text of the Consecration of the Temple



... these sages believed in indestructible life; they lived and drew their knowledge and their science, and therefore also their symbolism, from the manifestations of life. . .

(Chapter 7)



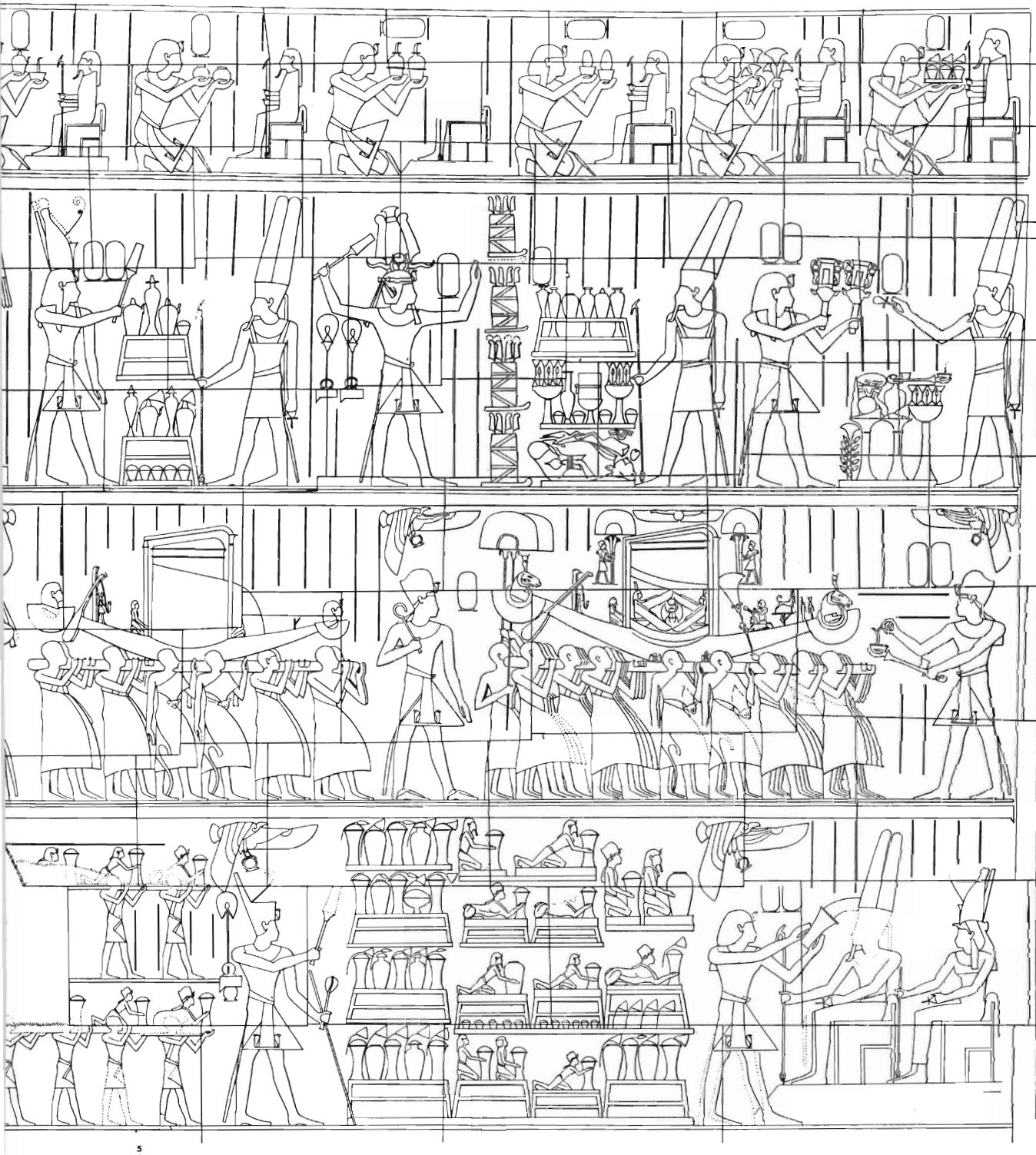
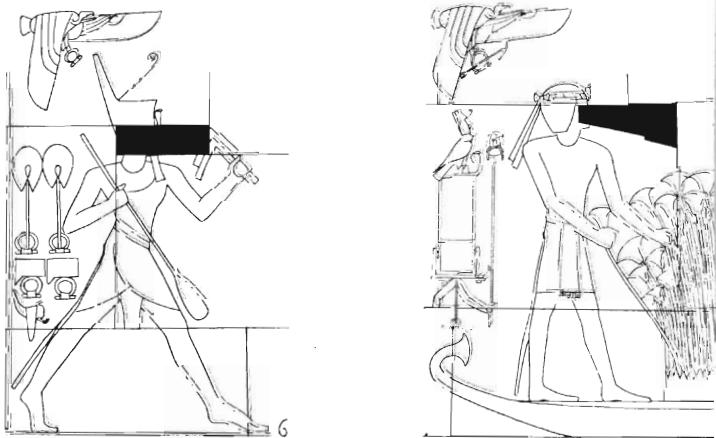
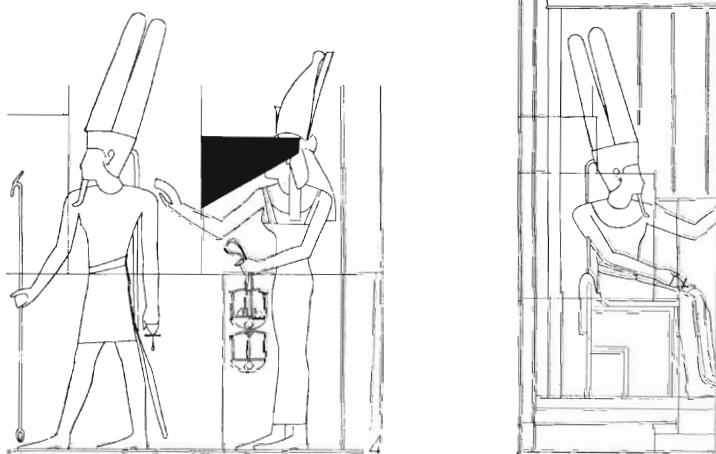
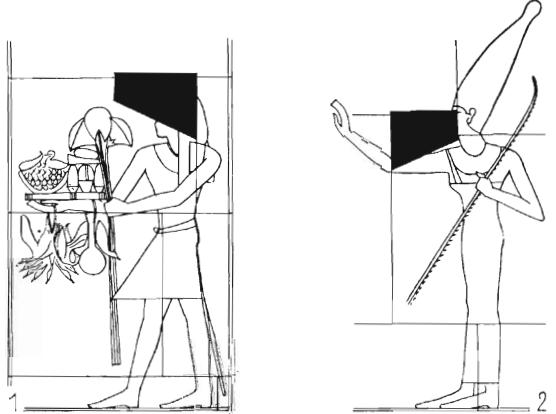


PLATE 31
East Partition of the Offering Room (Room IV)

*The joints and pieces . . .
take on . . . the character
of magical symbolism,
necessarily creating, in
a spiritual sense, an
atmosphere of cosmic reality
strangely disconcerting to
the visitor.*

(Chapter 16)



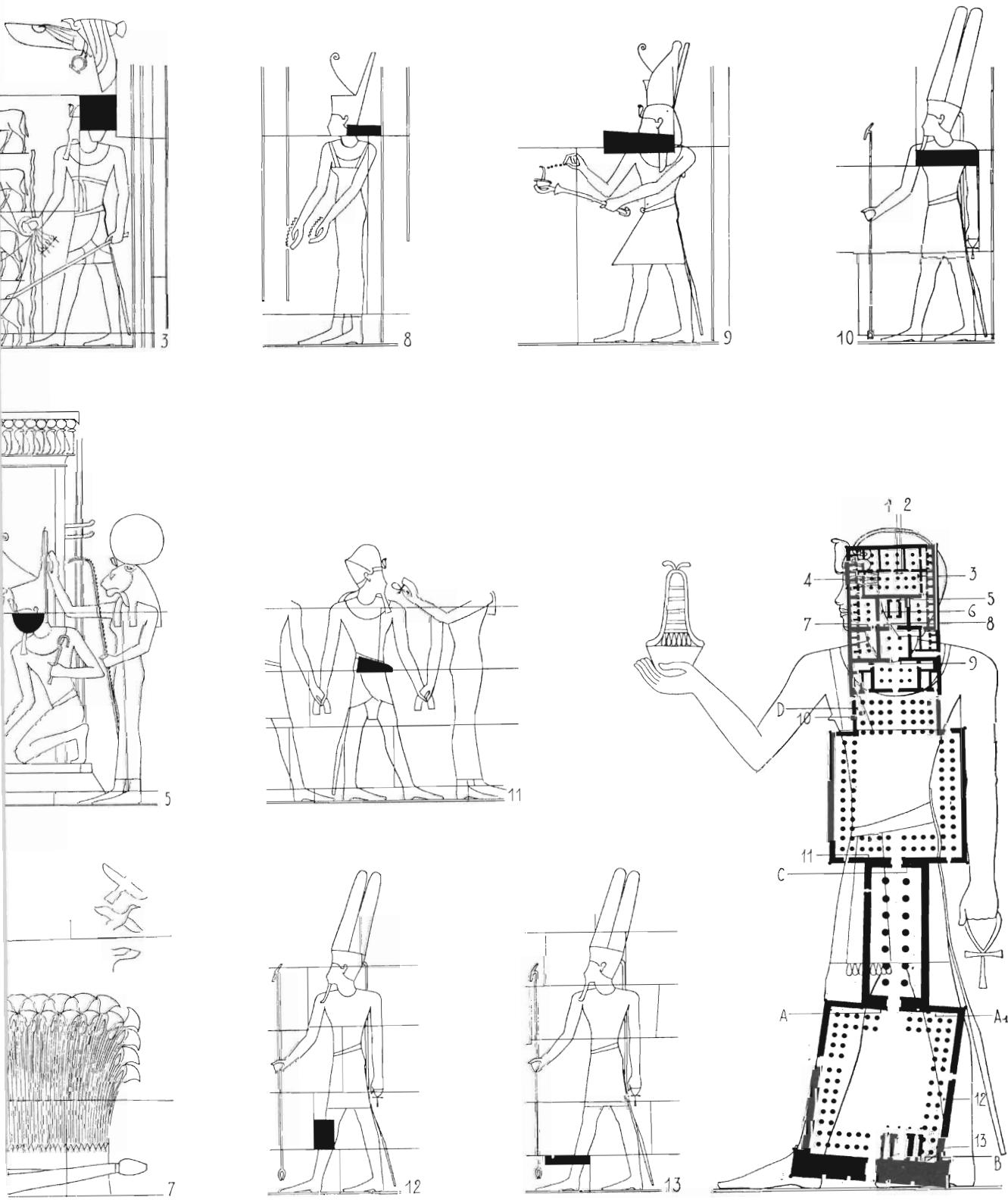


PLATE 32
The "Location Pieces" in Relation to the Bas-Reliefs

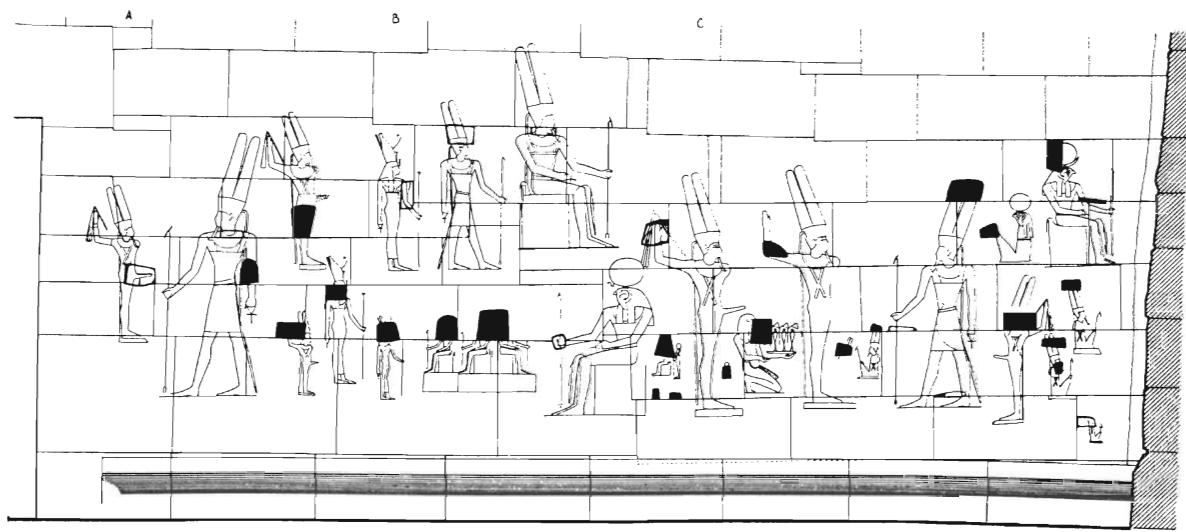
Form is what animates and characterizes, but form cannot be described when the thing is a Symbol.

By definition, the Symbol is magic; it evokes the form bound in the spell of matter. To evoke is not to imagine, it is to live; it is to live the form.

(Introduction)

In order to know the true secrets of life, it is necessary to abandon the quite alluring but misleading arguments of science and learn how to look upon that which, by dint of our seeing, we no longer notice.

(Chapter 2)



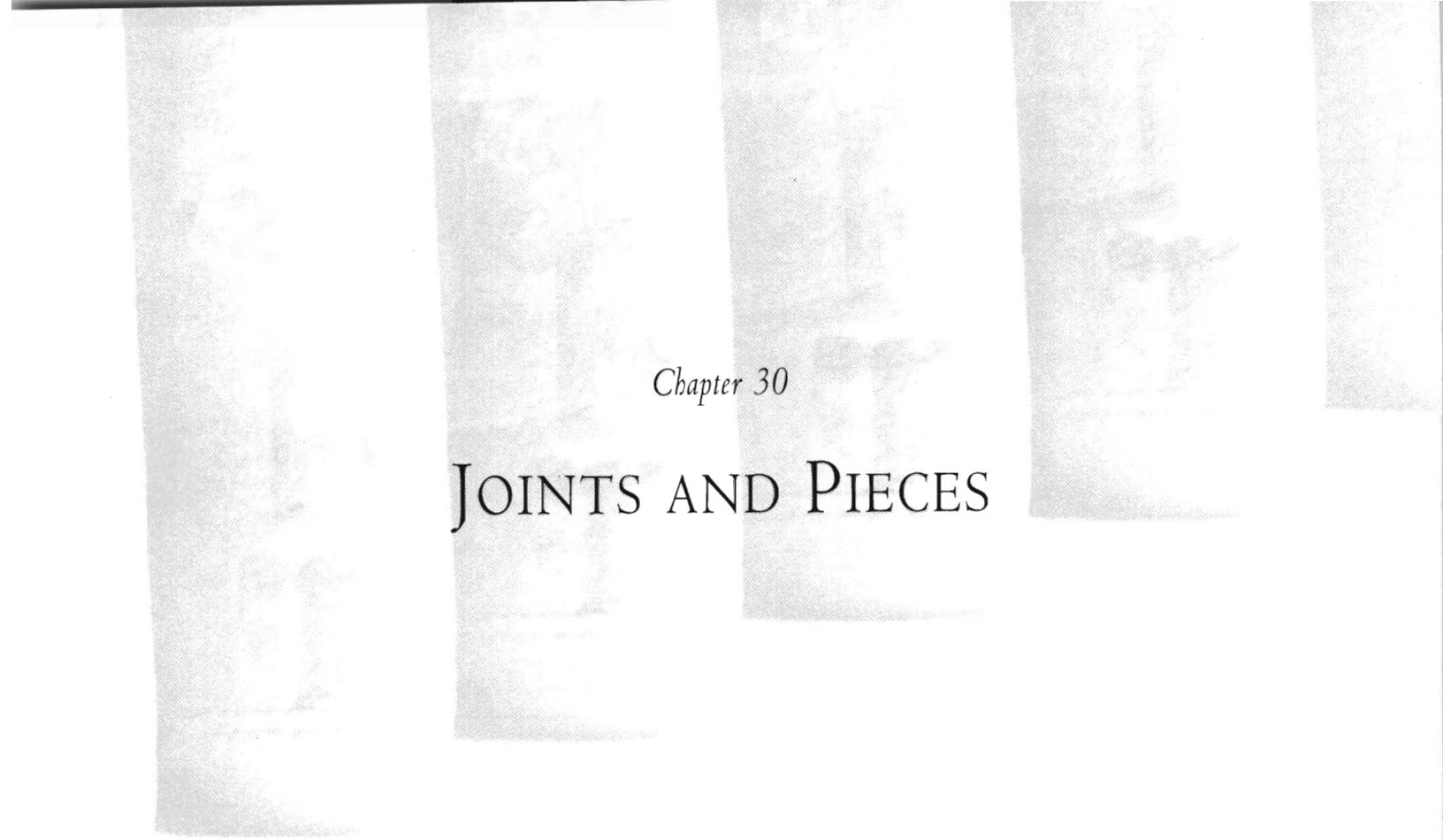
A

B

C

PLATE 33

The Seed Pieces



Chapter 30

JOINTS AND PIECES

We maintain that each stone in the walls of the Luxor temple was cut according to preestablished measurements; likewise, the layer of stone was chosen with an exact knowledge of the tableau to be drawn on it, with the joints being located in such a way that they intentionally cut the head, feet, hands, attributes, and so forth, of the figures. All of this makes up part of the hieroglyphic writing. Epigraphy alone will never reveal the secret teaching of the sages. It is necessary to learn to *read the images*.

The plans and figures given here show, better than any explanation, the reality of this figuration of Man as the basis of the architecture of the temple. This representation—verifiable by the indicated proportions—is only an image, however. The intention of the master builder goes far beyond a simple figuration. Since we are dealing with Man, and since the architecture takes into account his vital centers and passageways, the meaning of the sculpted and bas-relief figuration refers to these as well.

It is a magnificent lesson for all to be able to study, across time, the knowledge—then already thousands of years old—that was passed on to these builders of true temples. Each vital center is marked. The glands and vital relationships between the organs, represented in the tableaux, show their correspondences with the *neters* who control them; this sheds a great deal of light on one of the true meanings of the pharaonic pantheon, and on pantheism in general.

To read them requires that we observe the following:

1. The *placement of the scenes*, taking into account whether two, three, or four registers are used, and the character of the controlling, as well as the reacting, organ.

2. The *cross-references* establishing the physiological relation between the organs emphasized by the joints and their *vital functions*: thus the relationship of blood and lymph flow, that is, irrigation and nutrition; then the metabolism to which the different centers contribute, complemented by the indication of acupuncture points. We must no longer overlook the occult centers, the *cakras*. One same anthropocosmic knowledge links all the traditions.

3. The *conducting joints* that teach us how to read the meanings of the ritual formulas.

PLATES 26 AND 27 • CORRESPONDENCE JOINTS

Plates 26 and 27 show a very important case in which the pituitary is referred to a point located on the knee.¹ It is tempting to say—as has been said with regard to certain assertions in *The Temple in Man*—“What did the Ancient Egyptians know about the endocrine glands?” After sufficiently observing the matter in the study of the temple, we believe that pharaonic science was certainly further advanced than our present science, but by a different path than that of our mechanistic and analytical mentality.

Let us take the example of the bas-relief located on the north face of the south wall of room XII, above the lintel of the door leading to the secret sanctuary of Amun, room I.² This bas-relief represents a royal figure standing in a tree of leaves and fruits. He seems to play the role of the trunk of the tree from which the branches spread out, marking exact places on the body. This royal figure offers two fruits, one in each hand. Amun is seated on a throne before him, holding the ankh (key of life) in his left hand, while in his right hand he holds a stylus in order to write the king’s name on the fruit.

According to his proportions, the royal figure is between seven and eight years old, which is demonstrated by the fact that the height of his head is contained 6.7 times in the height of his body, and by the ratio of his total height to the height of his navel.

The tree depicted is the persea of the classical authors.³ The fruit of the persea has a noteworthy characteristic: if one places a piece of white linen on the seed and draws letters or figures on it, the lines will appear blood red and are indelible. We can thus assume that Amun draws the name of the king on and with the fruits.

To summarize, the eight-year-old royal child receives his indelible name from the principle, or *neter*, Amun. The child is put in a tree, and the branches mark places on his body as if they were growing out of them. Two cartouches are placed above his left shoulder; above them are the symbols “son of Ra” and *neter-nefer*.

A horizontal joint passes through the eyes of Amun and those of the royal child. Another horizontal joint, after cutting the calf of Amun, is diverted so that it passes under the patella of the royal child’s knee. A third, vertical joint cuts the nose of this figure, the left shoulder and the right arm, and meets the one that passes under the patella of his left knee, clearly isolating it.

We can now analyze this symbol, *but only on the condition that it might have a significance in relation to the general meaning of the temple*, which represents a new approach to the scholarly study of the thought of the Ancients.

According to the figure outlined on the pavestones on the floor of the covered temple, and according to the study of the proportions of the general figure of the man represented by the architecture of the temple, the bas-relief sculpted above this door is located at the place of the pituitary stem, extending toward the south into the Amunian sanctuary room I, and toward the north into room XII, consecrated to the twelve hours of daylight, and located at the height of the eyes.⁴

¹ The importance of the knees in relation to the pituitary action will be clarified in the appendix (p. 664), but we must note here that the point known in acupuncture as *san-li*, whose action on the pituitary is very important, although generally unknown, is located precisely at the indicated spot. [*San-li*, “three-mile point,” is St 36.]

² Cf. chapter 18, “The Essential Secret Sanctuaries,” and fig. 183.

³ Cf. appendix note on the identification of the ancient persea tree, p. 662.

⁴ Cf. appendix note concerning the relation between the pituitary gland and sight, p. 666. Also, see plate 38 and chapter 17.

If, then, the temple of Luxor actually represents man, the joint of the knees, and particularly the left knee, invites us to search in the architecture for the place where this knee might be found.

Now, on the wall of the second pylon, in front of which are found the seated black colossi—representing the knees—we find this same figuration of the persea reproduced, with the royal figure pictured no longer as standing, but kneeling. Nowhere else in the temple is this living tree represented.

This bas-relief was carved by Ramesses on the north face of the pylon that marked the end of the construction of Amenhotep III (fig. 214).

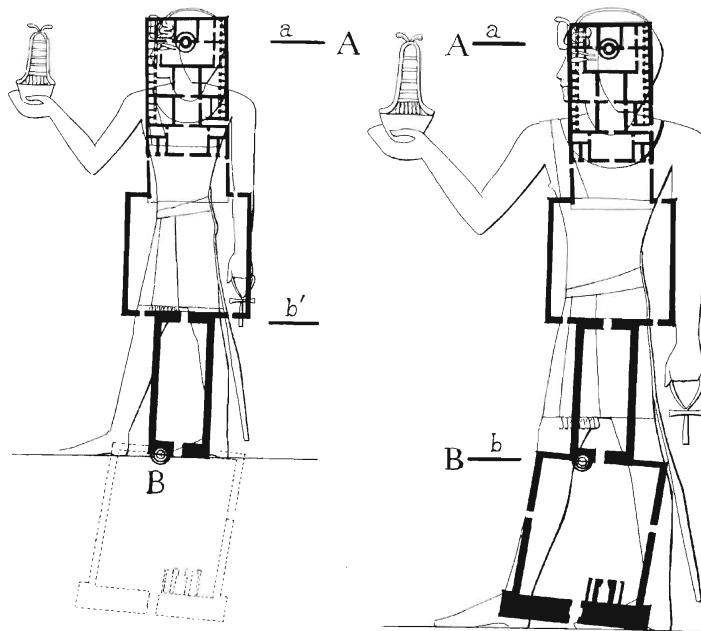


Fig. 214. Two stages of the construction of the temple

Left, the temple at the end of the reign of Amenhotep III; right, under Ramesses II. King B, depicted on the west partition of sanctuary I, is projected on the temple in two phases corresponding to his growth (prepuberty and adolescence). The bas-relief of plate 26 is located at point A. The bas-relief of plate 27 is located at point B.

The position in the temple of the two bas-reliefs in plates 26 and 27 thus corresponds to the two places in the body emphasized by the horizontal joints cutting the royal figure depicted in room XII (fig. 215): at point A the young king is pictured standing in the persea (plate 26); at point B the adult king is pictured kneeling in the persea (plate 27).

The *upper joint* (*a*) passes through the eye and is therefore at the level of the representation of the tableau at point A. On the figure of the adult king, the *lower joint* (*b*) passes under the patella at the level of the representation of point B carved by Ramesses, which did away with the older bas-reliefs carved by Ay on the pylon of Amenhotep III.

The *lower joint* (*b'*) on the figure of the young king coincides with the level of the sex organs of the adult king and evokes the vital relationship eye—pituitary—sex organs—knee (fig. 214 left, and fig. 215).

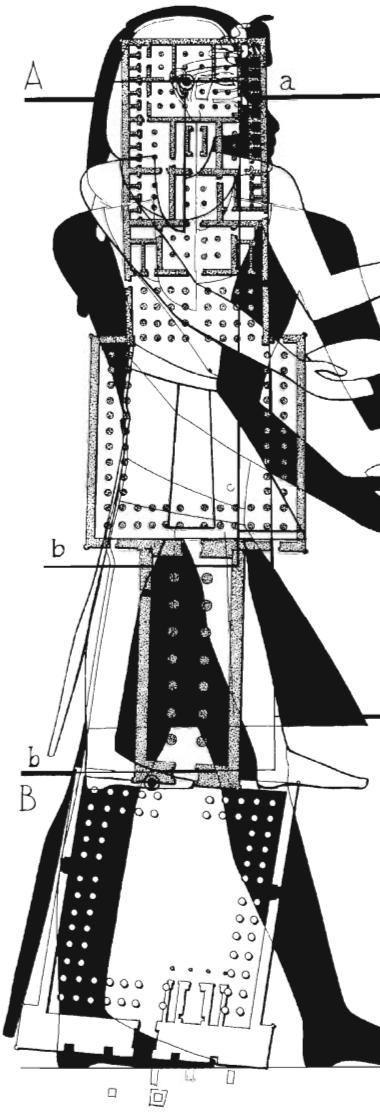


Fig. 215

Superimposition of the royal principle depicted in room XII in *A* onto the temple at the two stages of its construction (third stage of Amenhotep III and Ramesses II) and at the two corresponding ages of his growth.

The bas-relief illustrated in plate 27 is found on the second register of the interior partition of the south wall of the Ramesses court, under the roof of the portico added by this pharaoh.

Still visible above this roof, on the facade of the pylon of Amenhotep III, are the crown, the headband, and the top of the head of the large figure of Horemheb, which was probably carved under Ay.

During the construction of the narthex under Ramesses II, the upper edge of the roof tiles of the south portico were laid to coincide with the base of the king's headband carved by Ay, whereas the upper part of this roof corresponds to the level of the eye of this figure. These coincidences refer back, in the temple, to the eye and to the line of the forehead, that is, to the representation of point *A* in room XII.

Plate 27 shows the transformation brought about by Ramesses to the bas-relief of Ay. We can see that Thoth, carved behind the kneeling king in the persea, inscribes on the palm frond the number of years at the height of the knees of the older figure effaced by Ramesses.

These two figures of the king in the persea teach us the significance of the correspondence joints and furnish us with a new proof that the architecture of the temple indeed symbolizes Man. The significance of such a play of inscriptions is that it makes the vital relationships between the physiological centers tangible, as in an anatomical drawing, but in an imaged form that alone can express synthetic thought. The branches that issue from the man's body mark the places affected by the influence of the pituitary. The inscription in red (blood red) occurs only on the figure in the room of the eye with the standing king. For the same representation (the king then being on his knees) at the place of the knee, Thoth marks the age on the palm frond: this is related to growth. Amun, seated in front of the royal figure, holds the key of life in one hand and presents the palm of years, thus the duration of life, in the other.

The location of the tableau above the door connecting the room of the eyes with the secret sanctuary consecrated to Amun, and its relation to the knees, reveals to us that the Ancients knew about the vital relationships between the controlling centers of the head and all the parts of the body. In the following appendix⁵ there is information as to what we presently know about the pituitary functions related to the eyes and the effects of light—thus related to room XII, consecrated to the eyes—as well as to their influence on genital evolution and growth. We can compare our present knowledge to what the Ancient Egyptians teach us.

The obligation to say everything, not only in plan but also in volume through the architecture of the temple, naturally requires a method. It is very difficult to explain in words the abundance of teachings that only the monumental symbol can transcribe, but the essential point is here demonstrated by the proofs that bear witness to the temple of Luxor as consecrated to anthropocosmic Man, represented in architecture, sculptures, texts, and statuary.

APPENDIX

Notes on the Persea

Determining the species of the tree represented in plate 26 raises a complex problem. Based on the image, Dr. L. Keimer designates this tree as being the persea of the Ancients; but since naturalists do not agree about the identity of the persea of the classical authors, we will present here the different views that have been advanced.

1. Keimer and Schweinfurt both suggest that the persea of the classical authors is quite probably the *Mimusops schimperi* Hochst. of the Sapodilla family.⁶ The fruit of this tree is a berry of one or several locules, and as large as a nut.

2. The majority of naturalists identify the Egyptian tree described by Theophrastus under the name of persea as the avocado or *Persea gratissima* Gaertn. The leaves are alternately oval and elliptical, and become narrow at the base. They are somewhat leathery, smooth and green on top, being fuzzy and bluish green underneath. The fruit has the form and the size of an average pear, about 10 centimeters long; the flesh is thick and succulent, the flavor recalling somewhat that of butter or certain squashes.

"The lines drawn with the pit on a white wall become blood red after a time and can only be effaced by repainting the wall, and then with some difficulty."⁷

⁵ See the sections on the pituitary gland and the sexual mechanisms of birds.

⁶ Cf. Ludwig Keimer, *Die Gartenpflanzen im alten Ägypten* (Hamburg: Hoffmann und Campe, 1924), 1:31–37, 94–99, 144–46, 176–77.

⁷ G. Nicholson, *Dictionnaire pratique d'horticulture* (1892–93), 4:27, 28.

3. Rafeneau-Delille thinks that the *persea* of the Ancients described by Theophrastus was not the avocado at all, as had long been believed, but rather a *balanites*. The *balanites* cannot be related to any family, but seems to be a relative of the Olacaceae. The *balanites* of Egypt, which Linne called *Xymenia aegyptica*, is quite a rare tree today, native to Egypt, Nubia, and Abyssinia. Its fruit is a unilocular and monospermous ovoid drupe, with a pentagonal, lined pit.

Here are the passages from Theophrastus concerning the *persea*:

Thus in Egypt there are a number of trees which are peculiar to that country—the sycamore, the tree called *persea*, the *balanos*, the acacia, and some others. . . .

[T]he *persea*, which in appearance is large and fair . . . most resembles the pear in leaves, flowers, branches, and general form, but it is evergreen, while the other [carob] is deciduous. It bears abundant fruit and at every season, for the new fruit always overtakes that of last year. It ripens its fruit at the season of the etesian winds;⁸ the other fruit they gather somewhat unripe and store it. In size it is as large as a pear, but in shape it is oblong, almond-shaped, and its colour is grass-green. It has inside a stone like the plum, but much smaller and softer; the flesh is sweet and luscious and easily digested; for it does no hurt if one eats it in quantity. The tree has good roots as to length, thickness, and number. Moreover, its wood is strong and fair in appearance, black like the nettle-tree; out of it men make their images, beds, tables, and other such things.⁹

Let us review the three identifications proposed for this tree:

1. *Mimusops schimperi* has a fruit the size of a nut, which is a berry. Therefore it does not have a pit. It is difficult to see how this could be the *persea* described by Theophrastus, whose fruit is “as large as a pear, but in shape it is oblong, almond-shaped, and its colour is grass-green, [and] inside a stone like the plum. . . .”

2. Given that Theophrastus cites both the *balanos* (*balanites*) and the *persea*, he therefore distinguishes these two trees, and it still seems there is no way that they could be thought of as a single tree.

3. The fruit of the *Persea gratissima*, or avocado, in the hand of a child (fig. 216), is indeed the size of a pear, has the oblong shape of an almond, is green in color, and contains a pit as large as a

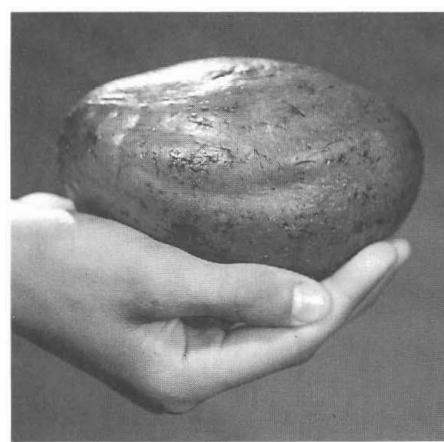


Fig. 216

Photograph of an avocado in the hand of a child of ten years instead of a child of eight years. The proportions are those of the bas-relief described here.

⁸ The summer winds, according to Pliny (*Natural History*, 18.68) correspond to the month of July. In 13.17, Pliny repeats nearly verbatim the passage of Theophrastus, but in a slightly confused manner.

⁹ Theophrastus, *Enquiry into Plants*, trans. Sir Arthur Hort, Loeb Classical Library (New York: Putnam's, 1916), 1:291, 295–97.

plum in its interior. It also ripens during the season of the "etesian winds," that is, in July. Finally, the leaves of the avocado are evergreen. All these characteristics lead us to favor the avocado as conforming to the description of the "persea of the classical writers."

We have ourselves made the experiment of drawing with a steel stylus on a piece of linen placed over the pit of a fresh avocado fruit. It is certain that any fruit with a more or less tannic pit would give a brown or black, more or less indelible line, but we have obtained a truly indelible, blood red line from this pit.

Notes on the Pituitary Gland

The pituitary gland is lodged in the sella turcica, and located behind the optic chiasm. It is connected to the brain (third ventricle) by a small gray column, the pituitary stem (which crosses the door between room XII and sanctuary I; fig. 226).

The pituitary gland consists of two lobes, the anterior lobe, a reddish, ovoid mass, which results from an invagination of the primitive pharynx, and the posterior lobe, a smaller, gray-colored mass, which derives from the brain and depends on the middle (or third) ventricle. There is a synergy of the pituitary gland, the infundibular region—that is, the entire area of implantation—and the middle ventricle located between the two optic tracts.

The anterior lobe of the pituitary gland controls the development of the skeleton, the growth of the body, the development of the genital organs, and governs the menstrual rhythm of the ovaries.

The posterior lobe exercises a cardiovascular hypertensive action and facilitates the contraction of the smooth muscles of the organism. It is the regulating center of the metabolism of water (Amun) in the body and probably has an action on urinary secretion.

Growth and Prepuberty

The secretions of the anterior lobe have a direct action on growth, and in particular on the connecting cartilage of the lower limbs—the femur, the tibia, the side of the knee—and on the nails.

The removal of the anterior lobe stops growth. Conversely, the injection of an extract of this lobe provokes gigantism to such an extent that the connecting cartilages of the growing bones are not able to knit. Gigantism is due to hyperfunction of the pituitary gland.

At puberty, growth occurs in the lower limbs, often to the extent that there is an actual pelvic gigantism (which helps us to understand the connection of the pituitary gland to the knee). The tree on the lintel of the door of room XII leading toward room I is to the left, that is, on the side of the anterior lobe of the pituitary gland. (It is understood that the entire figuration of this lintel can be studied in the same fashion.)

Hormones

The anterior lobe produces, among others, two genital hormones, one of which activates the secretion of folliberin each month, and the other then provokes secretion by the corpus luteum. The removal of this lobe causes atrophy of the adrenal glands, the thyroid, the parathyroid, and the genital glands.

The posterior lobe secretes a hormone called vasopressin, which governs the tone of the vessels, and also secretes a hormone called oxytocin, which provokes the contraction of the smooth fibers of the organs.

Among the most recent studies on the sympathetic nervous system are the following extracts from the work of J. Delmas and G. Laux:

It is thus that the neuroendocrine diencephalon governs the various forms of metabolism, anabolic through the parasympathetic and catabolic through the sympathetic. It rules the metabolism of glu-

cosides, lipids, and proteins; it maintains the constant chemistry of the blood environment; it acts on the secretion of hormones, of diastasis (enzymes). It is a hydro- and thermo-regulator; it controls the equilibrium of blood tension and governs the alternations of the waking and sleeping states. By its morphogenetic action it triggers the increase in weight and height of the individual and the harmonious development of the genital area. It governs the entire lissomotor system, all the glands, external and internal. Finally, it is the essential factor of the instinctive, emotive, and feeling life, without which psychic life would only be pure and cold ideation. Harvey Cushing, cited by Delay, writes, "There, in this small, middle, and archaic zone at the base of the brain, which could be hidden in the tip of one's thumb, is concealed the essential resiliency of the instinctive and emotional life that man tries his best to cover with a coat, a skin, an inhibiting cortex."

After this long enumeration, we should include the idea of individual temperament, or better, of the "terrain" with its reactions specific to each individual. This notion summarizes the visceral, somatic, and psychic behavior of each human being, and gives us, henceforth, a solid, scientific base through the diencephalic functions.¹⁰

Therefore, the same conclusions are reached as those that are evident with regard to the human canon.¹¹

The pituitary gland is the endocrine gland that holds all the other endocrine glands under its dependence by means of hormones. The importance of the endocrine glands for the correct operation of the organic functions is so great that we can see that the pituitary-hypothalamus coupling is truly the great center of organic regulation (P. Chauchard).¹²

To summarize a very complex study concerning the diencephalic, autonomic centers of the sympathetic system from which we have taken the above two quotations, here is the conclusion of Delmas and Laux:

In conclusion, we can isolate three fundamental regions in the middle diencephalon that are certainly connected with each other, but their afferent and efferent channels allow us to imagine that they are *functionally specific*. These are the regions of the hypothalamus or the infundibulum framed by the optic tracts and *systematically centered on the optic canals and on the pituitary body*; the tubero-mamillo-trigonal region that appears as the autonomic center of the olfactory passages; finally, the *epithalamic region centered on the pineal gland*.¹³

Here, then, demonstrated by the science of today, are the reasons for the existence of the three secret sanctuaries, the mooring posts of life, as we maintained in *The Temple in Man* in 1949.

Notes on the Seasonal Sexual Mechanisms of Birds

In order to emphasize the intimate relation between the eye, the visual centers, the pituitary gland, and the sexual cycle, here is a summary of some experiments and observations concerning the seasonal sexual cycle of birds:¹⁴

¹⁰ Delmas and Laux, "Centres autonomes diencéphalistiques," *Système nerveux sympathique*, p. 50.

¹¹ Cf. chapter 37, "The Problem of Establishing a Human Canon."

¹² Delmas and Laux, *Système nerveux sympathique*, pp. 57-58.

¹³ Ibid., p. 58, our emphasis.

¹⁴ Summarized from Jacques Benoit, "Reproduction, caractères sexuels" and "Hormones, déterminisme du cycle sexuel saisonnier," *Traité de zoologie*, vol. 15, *Oiseaux* (Paris: Masson, 1950), p. 462 et seqq.

A. External Factors

1. The influence of muscular exercise reveals itself to be weak or nil on the seasonal sexual cycle of birds.
2. The alimentary factor has no noticeable action; however, wheat exposed for 250 hours to light rich in ultraviolet rays strongly stimulated genital activity.
3. Heat, which stimulates the sexual activity of fish, amphibians, arthropods, coelenterates, and so on, does not influence the sexual activity of birds.
4. Light is certainly the most active factor; artificial light was able to advance the period of reproduction by several months, including the seasonal development of the testicles, the period of singing, and so forth, and even increased the latter up to three times per year. Conversely, a sudden reduction of light caused a reduction of growth, or a regression of the sexual organs.

The specific nature of the action of light is confirmed by experiments on ducks who were given a diet reduced by one-fourth or even one-third, and at the same time exposed to artificial light. In three weeks they showed strong testicular growth. In short, artificial light brings with it a precocious puberty in a few days.

Similar experiments made with females give the same results, only less rapid. It seems, moreover, that being around males is necessary in order to make them capable of ovulation.

B. Role of Internal Factors

The pituitary (to which certain encephalic nervous centers, particularly the hypothalamus, must be associated) is at the origin of the sexual cycle. . . .

Pituitary activity varies cyclically during the year, in synchronization with the activity of the gonads, which it controls. Increasing progressively in winter, this pituitary activity reaches its maximum in spring, accentuating the sexual cycle in birds, which thereafter diminishes, toward the end of spring, and in summer comes again to a state of rest, which lasts several months.

There exists therefore a seasonal cyclic activity of the pituitary. It persists in the absence of genital glands in the case of castrated male ducks.¹⁵

C. Action of Light on the Pituitary Gland

In spite of a certain autonomy of cyclic activity, the pituitary can be "influenced by light, which controls it and assures in most cases its synchronization with the meteorological cycle of light. . . ." Various experiments, which we will summarize briefly, further show to what degree and by what means light acts in domestic ducks to stimulate the pituitary gland and the gonads.

The removal of the anterior lobe of the pituitary in male ducks previously stimulated by light is followed by a rapid regression of the testicles, which withdraw to a state of total rest, including their tubes and their interstitial elements, in spite of the continuation of the artificial light. If we implant the pituitaries of ducks that have been stimulated by light into prepubescent female mice, the cytological examination of these pituitaries supplementarily and incontestably proves the *real activation of the pituitary by light*, which thus plays the role of a *strictly indispensable intermediary between the rays of light and the gonads*.

But how is light able to excite the pituitary? Various experiments where light was focused on different parts of the body and the head show that the rays are only active at the level of the orbital region. Light localized on the retina releases the gonadostimulating mechanism by an oculopituitary

¹⁵ Ibid., p. 465.

reflex. But light also acts in a powerful way by other means. It actually stimulates the gonads when the optic nerves are cut and also when the eyes are surgically removed. In this case light acts as a stimulant of the nerve centers linked to the pituitary and located in the hypothalamus¹⁶ (particularly to the supraoptic nucleus) and even in the rhinencephalon. Indeed, if we direct light to these different regions and to the pituitary itself by means of a thin quartz rod appropriately directed, the pituitary and the testicles are strongly stimulated. In addition, sectioning the pituitary stem, in other words, separating the pituitary gland from the brain, prevents the pituitary from being stimulated by light. This leads us to suppose that light rays can stimulate the anterior pituitary by means of nerve channels, either by lighting the retina and thus releasing an *optico-hypophysio-sexual reflex*, or by directly stimulating the deeper nerve centers situated and localized in the encephalon (hypothalamus, rhinencephalon) (*encephalo-hypophysio-sexual reflexes*). In fact, these various pathways intertwine. Indeed, the experiment shows that rays of light, at least visible rays of long wavelength, penetrate very easily and deeply into the tissues, going through skin, bone, muscle, and vessels to strike the anterior and interior periphery of the brain as far as the hypothalamic region.¹⁷

Discussion

The seasonal sexual cycle of birds therefore reveals two essential causes that combine their effects: an internal physiological rhythm of pituitary activity, which has a certain autonomy, and an external rhythm, mostly but not exclusively determined by the seasonal variations of solar light. It is presently impossible to say how the parts are related to the internal and external factors in the seasonal sexual cycles in different bird species. These parts are different for different species and their precise determination requires long and patient experiments. In all cases, whether or not they are due to internal factors (autonomous pituitary rhythm), we must recognize that solar light plays an important role in the regulation of this rhythm and in the fulfillment of the sexual cycle. It acts first of all to synchronize the pituitary cycle with that of the seasons. We must understand that in normal cases such a synchronization (which obviously varies according to the species) is always found. In some cases, it also acts to give a supplementary action to the spontaneous pituitary function. Sometimes even these two combined factors are insufficient to draw out complete sexual activity, for example, ovulation in sparrows or starlings. In these species, as with the pigeon and others, a psychic factor of the proximity of other birds, and essentially of males, becomes necessary to bring sexual activity to its maximum realization.¹⁸

Let us recall that room XII is the room of the diurnal solar cycle consecrated to the eye of Ra, symbolized by the falcon.

PLATE 28 • LOCATION JOINTS

We should here reproduce all the walls of the temple, because everywhere the joints are located at places related to the human body: the eyes, room XII; the mouth, room II; the chin, room IV; the breasts in the hypostyle in the columns with lunar bases; the knees at the north door of the nave; the calves at the west entry to the court of Ramesses, and so on. In plate 28 we present a series of figures that show the systematic use of the joints in this spirit.

It is necessary, however, not to forget that the method of "cross-reference" and the "conducting joints" of which we have already spoken are everywhere and are combined with the "location

¹⁶ The projection of the sagittal section onto the temple (plate 38) shows that room I indeed corresponds to this zone.

¹⁷ Benoit, "Reproduction," p. 467.

¹⁸ Ibid., pp. 468–69.

joints." Further, location joints are found in the high registers for certain regulating organs in the head, and in the lower registers for organs of action. Thus the jaw will be marked on the "physical," that is, the lower register, and the eyes or the glands of the head will be in the upper registers.¹⁹

The system for conducting the reader through the Man of the Temple consists of looking at the first royal figure on the first register to the right or the left of the entrance to the room, which *always has a horizontal joint corresponding to the place where this figure is located on the human body that the temple as a whole represents.* The joint designating this location is not necessarily the only one cutting that particular figure, but it is the principal indication of the location, and—since it is actually a question of the Anthropocosmos symbolized by the royal figure—the other joint becomes a vital *correspondence joint* on the body. It guides us toward the part of the temple that, physiologically and vitally, corresponds with the place on the body indicated by the location joint.

In plate 28 we project onto the plan of the temple the human figure that summarizes the measures and proportions of its double play, that is, king B (cf. plates 79 and 80). The plate will also take us through some of the rooms of the temple, as we observe only the joints and horizontal stones in order to verify their correspondence with the location of the room in the human body.

All of the figures represented here, with the exception of Horus, are *the first figures located next to the entrance or on the first tableau of a wall on the lower register.*

Nos. 1 and 9 frame the support of the "chest" or naos that formerly must have contained the statue of Amun. They are carved on the south partition of room I, and the upper joints cut the crowns of their skulls in the same way that this wall removes the skull of the Man of the Temple.

No. 2 is in room V, west partition. The upper joint underlines the forehead, in the same way that the wall to the corner on which it is carved cuts the forehead of the king in the projection onto the plan. On this same wall the joints cut the foreheads of the five kings who are represented on the first register, rising from the forehead to the height of the headband (cf. plate 76).

No. 10 is in room XII, east partition, which is consecrated to the entrance of the sun, Ra, the falcon. Also, it is particularly the eye of the falcon Horus that is emphasized by the upper joint. We recall in this regard the importance of the eye for birds, and especially falcons.²⁰

No. 3 is located at the east corner of the north partition of room XII. We see on the projection that we are concerned here with the area of the nose; thus, the upper joint cuts the figure at this point.

No. 11 is in room II. This is the opening of the mouth, the entrance, to which, moreover, all the symbolism of this room also corresponds. A break in the joints of the stones cuts the king's mouth but not that of Amun, who "gives him life" through the mouth and the nose.

Nos. 4 and 5 are located, one in room VI, north partition, to the right of the entrance, and the other in room IX, east partition. These two figures are on opposite sides of the thick wall that corresponds to the chin. It is actually in the thickness of this wall, encrusted in a threshold tile of the door that connects rooms IV and VI, that the "piece" that allows us to define the exact length of the face in the pavestones is found (plate 37).

No. 12 is on the left post of the doorway leading from room VIII to room IV, that is, on the north face of the wall separating the sanctuaries from the hypostyle rooms, and corresponding to the clavicles.

No. 13 belongs to the first scene represented on the east wall of the hypostyle room: the king leads the four calves (the thymus), and a joint crosses his chest exactly at the place that it occupies in the temple.

¹⁹ See the detailed explanation of plate 28 below.

²⁰ Recalling what we said previously, we will find the joints emphasizing the eye of the royal figure in the upper registers of this partition.

Nos. 6 and 14, carved by Horemheb, frame the doorway going from the nave to the narthex. Here we are here at the knees, thus the lower joint crossing these figures passes through this point.

No. 7 is located in the thickness of this same doorway and was carved by Ramesses; a joint here also emphasizes the knees.

No. 15 is at the interior of the west side entry to the court of Ramesses. The lower joint cuts the calf of the figure.

We note that on the interior partition of the west wall of this court, from the west side entry to the Ramesses pylon, the lower part of the calves of a series of figures is systematically emphasized by a joint that, through successive interruptions, descends progressively from midcalf to the ankle.

No. 8, located in the small east chapel of the repository of Amun's barque on the south face of the west wing of the pylon, has the heel cut by a joint.

Finally, no. 16 is placed on the doorpost of the entrance to the temple. It is on the north face of the pylon that represents the soles of the feet. It is also accentuated by the joint of the stones.²¹

PLATES 29 AND 30 • CONDUCTING JOINTS

Plates 29 and 30 provide an example of the reading of the correspondences for the very important liturgical formula "Giving the House to Its Master."

As the joints will prove, it is not solely a question of a simple formula of inauguration, or of consecration of the temple. The whole Universe is held in a single gesture. Here, consecrating a temple is identical to animating the terrestrial body and, generally speaking, animating in the sense of the highest science.

Up to now, this formula, as with many others commonly found, only signified in Egyptology a banal phrase that affirms the consecration ritual of a temple to a *neter*, its "patron."

Thanks to this exceptional temple, which becomes a general key by depicting *man represented through architecture*, we are able to give to the ritual formula a meaning in vital relationship to the human cosmos. In plates 29 and 30 and in figures 217 to 221 we present the four tableaux (A, B, C, D) in which the formula of "Giving the House to Its Master" is inscribed; they are located at points 1, 2, 3, and 4 of the temple, with the joint-guides that oblige us to follow the steps of the reading and to see their connections to the human body.

These drawings and photographs are intentionally placed here out of their reading order. The text of "Giving the House to Its Master" refers to a vital function; in this spirit there is thus a subsequent logic that we are going to investigate, allowing ourselves to be guided by the position of the joints.

Tableau A (fig. 218), carved by Amenhotep III on the eastern post of the north door of the nave, is located at point 3 on the plan. *A single horizontal joint cuts the two figures at the height of the sex organs, that is, at point 2 of the plan.*²²

Tableau B (fig. 219 and plate 29A), carved by Ramesses II on the interior face of the west wing of the pylon, is located at point 4 of the plan. Before the text of "Giving the House to Its Master," and facing Min-Amun, the king holds the *mäkes* staff as well as the white *bedj* club in his left hand. *Four horizontal joints emphasize four points on the bodies of the two figures.*

The king, in the white crown, is placed slightly lower than the lines of the joints that on the ithyphallic Amun are correctly located at points 1, 2, 3, and 4 and that intentionally mark the phallus, which, on him, is at the level corresponding to the height of the king's navel, and recalls the *kamutef* and the androgyny of the origin.

²¹ The door of the pylon being partly buried, it has been impossible to see the lower register; this figure is carved on another register.

²² This scene, placed behind the pedestal of the seated black granite colossus, and located at the knee, cannot be photographed because it is too close to the statue.

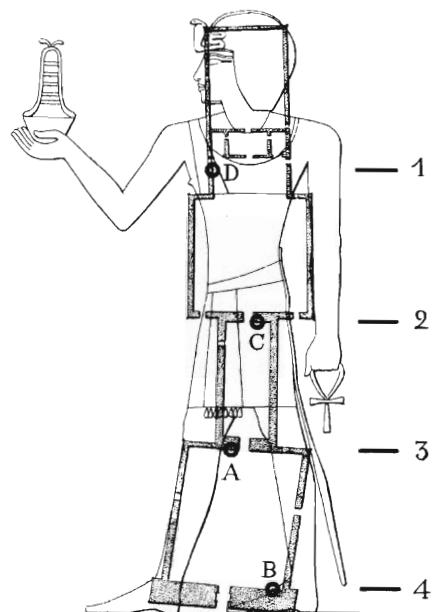


Fig. 217. Placement in the temple of Luxor of the scenes of "Giving the House to Its Master"

Location of tableaux A, B, C, and D at points 1, 2, 3, and 4, and their relation to the human body represented by the projection of king B of sanctuary I.

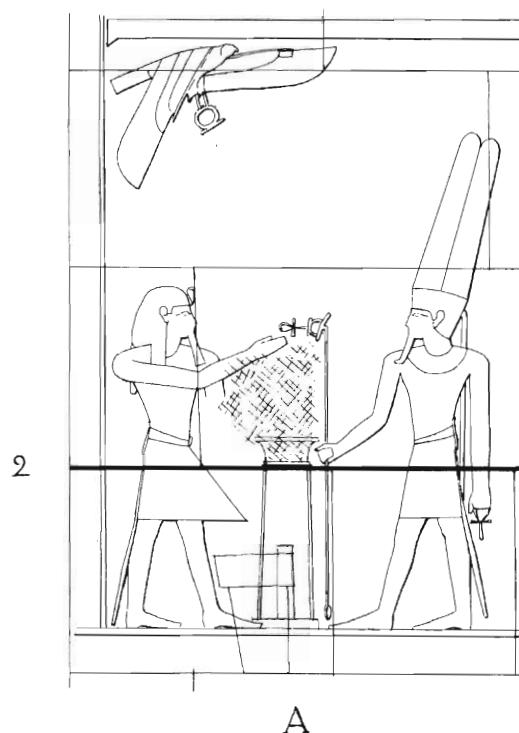


Fig. 218. North facade of the pylon of Amenhotep III

Tableau A, located at point 3 of the plan. The one horizontal joint cuts the two figures at the height of the sex organs, corresponding to point 2 of the plan.

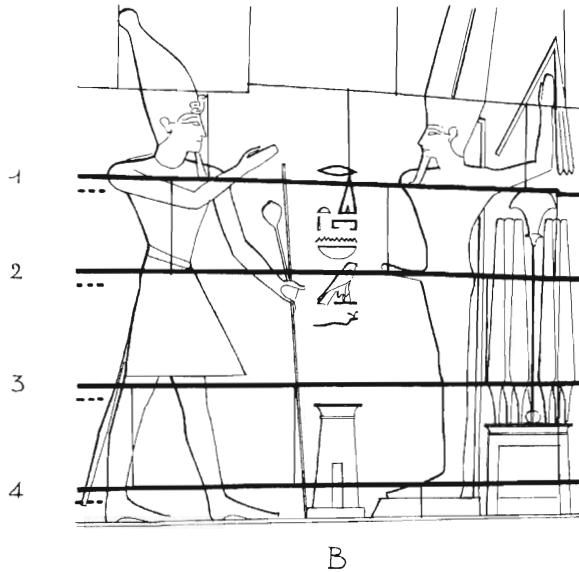


Fig. 219. Interior facade of the west wing of the pylon of Ramesses II

Tableau B, located at point 4 of the plan. The four horizontal joints mark the figures in four places on the body that correspond to points 1, 2, 3, and 4 of the plan.

If we raise the king to the height of the pedestal underneath Amun's feet, the joints will be located exactly at 1, 2, 3, and 4; the androgynous phallus will become the male phallus, a fact we must emphasize to understand this development.

Tableau C (fig. 220 and plate 29B), carved by Amenhotep III on the western post of the north face of the door that separates the nave from the transept, is located at point 2 of the plan.

The king, wearing the red crown, holds the *mäkes* staff in his left hand and the ankh in his right (the hands are reversed). Amun, facing the king, holds the *was* scepter in his left hand, from the end of which the *chen*, *djed*, and ankh are arranged horizontally so as to form, with the two scepters (that of the king and that of Amun), an elongated rectangle in which the "Giving the House to Its Master" formula is inscribed, above a symbolic representation of the facade of the sanctuary.

*A single horizontal joint marks these two figures at the level of the chest, and corresponds to point 1. This joint also crosses the hieroglyph *per*, signifying "house."*

Tableau D (fig. 221 and plate 30) is located on the interior partition of the east wall of the hypostyle room or *haty* and corresponds to point 1 on the plan. Between the king holding the *mäkes* staff and the white *hedj* club, and Amun holding the *was* scepter, there are fifteen columns of text that descend to the line of the ground and, above, end at the level of the upper joint of the tableau.²³

Two horizontal joints mark the two figures: the upper joint corresponds to the location of bas-relief D in the temple at point 1; the lower joint cuts the knees of Amun, and passes under the king's loincloth, stopping in front of his left knee. It corresponds to point 3.

²³ Cf. fig. 237 for proportions and measurements of this text, and fig. 238, which shows its location and orientation.

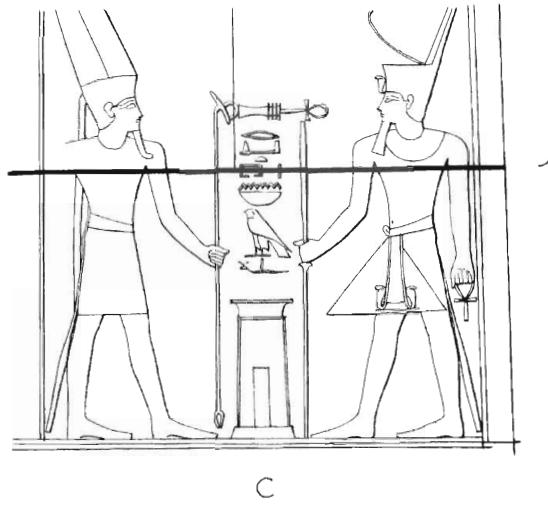


Fig. 220. North facade of the door of the transept

Tableau C, located at point 2 on the plan. The single horizontal joint cuts the figures at the level of the chest and corresponds to point 1 on the plan.

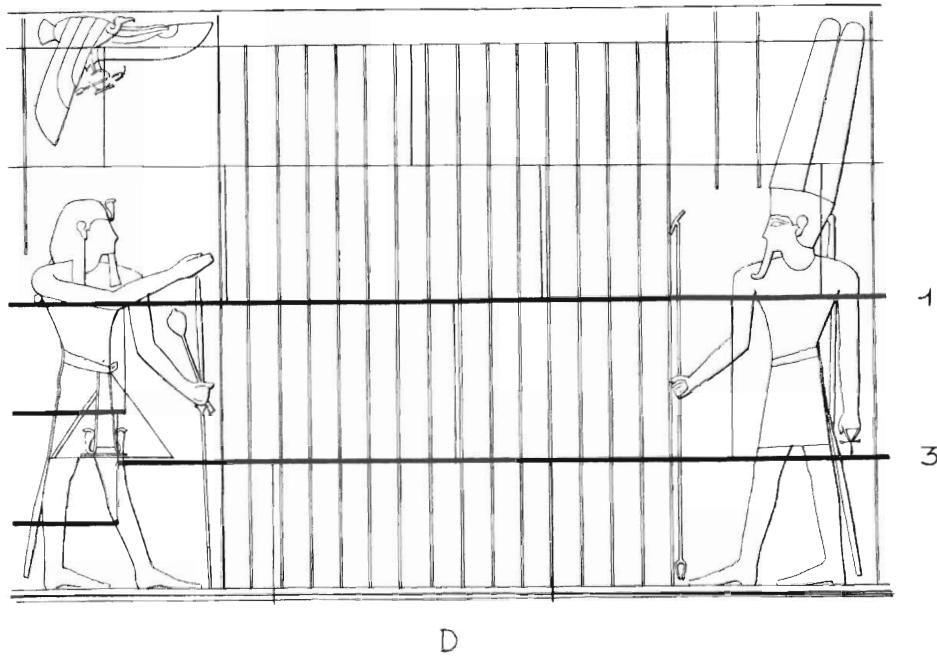


Fig. 221. Hypostyle room, east wall, register 2, location of the columns of the text of "Giving the House to Its Master"

Tableau D, located at point 1 of the plan. Two horizontal joints cut Amun at the level of the chest and of the knee, corresponding to points 1 and 3 of the plan.

The joint that crosses the back calf of the king is related to the entrance of the princes, that is, to their presentation at the temple;²⁴ the other joint cuts the top of the thigh²⁵ where, on the west and east walls in the nave, the procession coming from Karnak toward Luxor and returning to Karnak is depicted.

Let us now see how we must learn to read the teaching given by these different joints.

If we begin from the front door marking the end of the constructions in the era of Amenhotep III, that is, at point 3 where bas-relief A is located (fig. 218), we have *a single reference* that points, by means of the horizontal joint at the level of the sex organs, to point 2 where scene C is found (fig. 220).

From this point, the single horizontal joint passes through the chest and leads us to the hypostyle room at point 1, where we find scene D (fig. 221) and the large text concerning the ritual scene of "Giving the House to Its Master." From here we are sent back again to point 3 from which we began, since the upper joint 1 is the location joint of this scene, and no joint has led us to point 4, to scene B on the pylon.

So, proceeding in another way, if we begin from point 2 (the sex organs), the only horizontal joint leads us to point 1 (the chest), where we find the large text of this ritual scene. From there, the lower joint passing through Amun's knee leads us again to point 3, corresponding to tableau A, that is, we are obliged to recommence the same cycle in which scene B is excluded because it is a synthesis.

Conclusion

The first animation occurs through conception (the sex organs) at point 2, scene C. *Who is the true master if not life? Its true terrestrial house is the human body.*

The second animation is made by the "breath," respiration at actual birth, at point 1, scene D.

The third animation occurs at the beginning of the awakening of intellectuality, at the age of seven to eight years, the age of the transformation of the pineal gland, which marks intellectual awakening. This moment corresponds to point 3, scene A, at the knee.

Finally, the last animation occurs at maturity and corresponds to the crowned king going out of the temple, at eighteen to nineteen years of age, indicated by tableau B, at point 4, which at the same time refers to all the points in which this scene is portrayed. It marks the sexualization of the king crowned with the white crown.²⁶

PLATE 31 • EAST PARTITION OF THE OFFERING ROOM (ROOM IV)

We shall note on this partition only the essential correspondence joints. There are four registers, counting from bottom to top:

Register 1. The consecration by the king of the offerings, comprised of vases and unguents, in the presence of Amun and Mut. The only joint cuts the thighs of all the royal figures, and consequently refers to the nave (thigh), on the interior partitions of which are represented scenes from the procession of the sacred barques also found on the second register of room IV.

²⁴ Cf. fig. 268, the presentation at the temple, or the ascent of the royal princes toward the Ramesses pylon represented at the level of point 3 (fig. 217).

²⁵ Compare with fig. 136, vol. 1.

²⁶ Cf. chapter 15, "Diadem, I Assume Thee." The photographs in plates 29 and 30 imperfectly render the bas-reliefs because of lighting difficulties, and in the case of plate 29A, because of the damage done by the local people who inhabited these ruins for a time and dug out holes to secure wooden support beams.

Register 2. The three barques of Amun, Mut, and Khonsu are carried by priests whose robes have the form of sails filled by the wind. The lower horizontal joints cut the thighs, then the calves, then again the thighs of the carriers of the barques, tracing a curve that accentuates the curve of the barques (mosaic).²⁷

Register 3. Six scenes of the ritual are depicted here. The king, in the five scenes at the left, is cut by a single horizontal joint at the level of the thigh, consequently referring to the sacred barques represented in the nave.

Register 4. Nine kneeling royal symbols presenting offerings to nine *neters*.

In this section concerning the correspondence joints, we must be content to note the most characteristic examples, since it would be impossible in this limited space to make a detailed study of the teaching contained in all the joints.

The complexity of the joints and the difficulty of assembling the blocks, particularly in the second register, clearly shows that there is an intention there and that the joint plays an integral role in reading the tableau.

Each partition is a complete book, the meaning of which is vitally connected to the teaching of another partition,²⁸ even if the latter is located in another monument in Egypt. Man is the Universe in all its complexity.

PLATE 32 • THE “LOCATION PIECES” IN RELATION TO THE BAS-RELIEFS

In *The Temple in Man* we noted that there were always “keys” on the walls and on the ground of the pharaonic temple that are guides for measures.²⁹ It is too easy to attribute the “small pieces of stone” embedded in certain blocks to being the repairs of errors on the part of the sculptors. But the error lies in interpreting this fact in this way. *Each stone has a value and a significance.* We have found a great number of these “keys” that had to have been placed at the time of construction; certain keys are of such a particular size that they could not have been put in position at any other time.

Just as we have seen the joints of the stones marking, on the figures in the bas-reliefs, certain points of the body, indicating either their position on the Man of the Temple or their physiological relationship to other points, so we will also see that the pieces mark a “sector” of influence.³⁰ These pieces are to be read by taking into account the place in the temple where the bas-relief in which they are embedded is located, the vertical and horizontal lines that cut the figure, its attributes, crown, and gestures, and sometimes also the transparencies.

²⁷ Cf. fig. 223, the barque of Mut.

²⁸ Cf. chapter 17, where we discuss the systematic removal of all the royal beards on this partition as well as all the other partitions of this room. The beards were scraped down, replastered, then recarved, thus marking two successive transformations of the initial bas-relief in room IV that is located on the projection of the Man at the level of the throat and consequently the beard. Cf. figs. 136 and 138 (vol. 1), location of the seventh *cakra*.

²⁹ Cf. chapter 31, the “pieces” of the pavement marking the outline of the chin, the angle of the mouth, etc., and chapter 40, the “piece” where the axes of the covered temple cross, incised in the sanctuary of the barque, etc.

³⁰ The diagram of locations in plate 32 shows both the positions of the various pieces numbered from 1 to 13 and the position of the four scenes, A, B, C, and D of “Giving the House to Its Master” and A₁, the ascent of the princes, fig. 268.

Let us note, for example, the piece in the form of a half-disk in figure no. 5, in which the king's profile is carved. This piece had to have been intentionally cut in this form, which corresponds to the symbolism of the place.

The pieces in figures 1 and 2 located in room XII include a part of the head and face. It is possible to understand their importance in the light of relationships established in the Surgical Papyrus among ritual, architecture, and the human being. Each piece presented here would require a long explanation. But it may be sufficient to observe by means of the plan that all of them correspond, on each figure, to the location the bas-relief occupies in the Man of the Temple. We only describe one example in detail to give a glimpse of the method of reading.

Figure no. 3 is located on the second register of the west partition of the room (room XII) of the sun—the setting sun. The royal figure holds four coiled-up ropes in his right hand, which terminate with four keys of life, and which restrain four calves by their front left legs. The calves are speckled, white, red, and black. A stick with a phallic quality, which the king holds in his left hand, designates and isolates the black calf.

The royal figure wears a blue headdress with a uraeus, and this headdress conceals the ear. The piece that characterizes this figure, passing in front of the ear, marks out the whole back part of the skull, thus including the cerebellum. Now, the projection of the sagittal section³¹ specifies that this figure is located at the level (in the temple) of this organ, which is the center of coordination of perceived sensations (sight, hearing, touch) and controls the movements necessary for balancing, while the semicircular canals of the inner ear indicate the direction of movement in space. The vertical joint passing in front of the ear (center of balance) links the temple to the navel. From this point a horizontal joint serves as a baseline for the white calf.

A joint cuts the feet of the king at the height of the ankle, and the hoofs of the black calf. Now, the calves symbolize nourishment through the taking of milk. Mut, hovering above the king's head, carries the *chen*, that is, the "binding" through the lymphatic vessel.

This phase of gestation of a white "fixity" evidently cannot be separated from all the subsequent instruction described on the rest of this partition. We find at the beginning of the second register that the king wears a warrior's blue helmet, holds the key of life in his left hand, and pours water from three vases in his right hand onto a calf turned on its back in the position of a mummified gazelle.

This is the place of the sensory center of vision, that is, the lunar reflector of light that creates the center for the intelligence of vision. This zone, cut out by the piece, also contains the medulla and the pons. The only other joint cuts the two feet and therefore relates this part of the brain to the innervation of the feet.³²

PLATE 33 • THE SEED PIECES

The upper part of plate 33 represents the exterior side of the east wall of the hypostyle room. This group of bas-reliefs is on the side opposite the one on which the scene of "Giving the House to Its Master" is carved.³³

³¹ Cf. plate 37 and fig. 226.

³² Cf. chapter 14, case 8.

³³ Cf. plate 30 and fig. 221.

Each figure represented has a related piece. Certain of these pieces are still in place, and others are missing (in black on the drawing of the whole group).

The details of the three figures, *A*, *B*, and *C*, show three pieces still existing in the hollowed-out cavities that were made to hold them. These pieces clearly show that they were made as part of the bas-reliefs of other monuments, but they all relate to the part of the body in which they are inserted.

A, Min, or Amun the Generator. The piece comprises both the new bas-relief and an older one. Indeed, we can observe the line of a text that belongs to an earlier scene under the phallus of Min. The sculpture of the phallus in the piece is much deeper than that of the bas-relief in which it is embedded.

B, Mut. Here again the piece preserves the lines of an older representation. This piece cuts the arm, but the arm of the earlier figure was in relief and was not at the same angle. Note that a very small figure (graffito) has been carved in Mut's belly.

C, Min-Amun. The piece in the raised hand and the *nekhakha* scepter form an angle above the hand. The scepter of the earlier Min was also not at the same angle.

The *kamutef* represented in plate 58 carries a piece that also came from another bas-relief. A flower from an older decoration is carved on this piece, which suggests the stem of this flower and the naos on which it was set, elements now missing on the representation of this *kamutef*.

One can also note that this piece bears traces of an earlier dorsal pillar engraved in relief and larger than that of the *kamutef* to which the piece has been added. These elements, in combination, show that these pieces are not for the purpose of repair, but are symbolic gestures for reading the whole.



Chapter 31

THE MOSAIC FIGURE IN THE FOUNDATION OF THE TEMPLE

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Plates 34–38



For an architectural reading it is necessary to take into account all the impressions that one experiences upon entering the building. The first thing that stands out is the form of the room, that is, the plan. . . [T]he . . . plan combined with the volume "speaks" to us, and it is this combination that . . . addresses itself to the feeling that results from our living relationship to the milieu, alive through its form.

This is art, in its pure sense, which expresses itself in a verb that we cannot transcribe into words.

(Chapter 24)

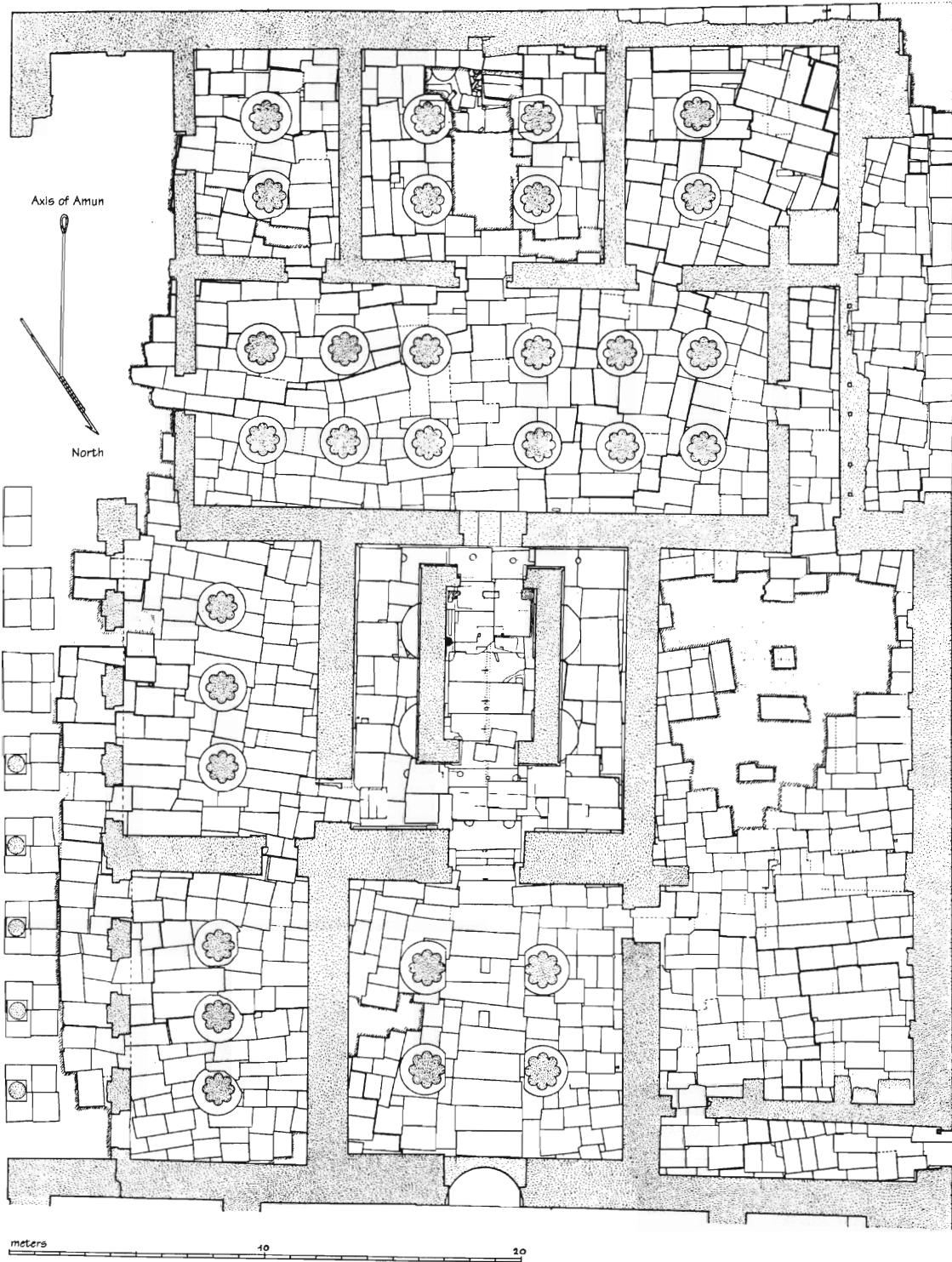


PLATE 34
Plan of the South Part of the Pavestone Mosaic of the Platform

*Let us recall, in the Gospel of Luke, the arrival
of the child Jesus in Jerusalem with his parents
when he was twelve, and how, getting lost in
the temple, he astonished the doctors with his
intelligence and knowledge.*



PLATE 35

The "King with the Diadem" of the Sanctuary of the Barque of Mut

Humanity is the measure, the “atlas” on which living lands and their astronomical influences are read; it is the laboratory of all the miracles of the world.

(Chapter 11)



PLATE 36
The Profile of the King on the Mosaic

*The head is . . . the “covered temple,” the sanctuary
of the human body where all the control centers are
gathered.*

(Chapter 15)

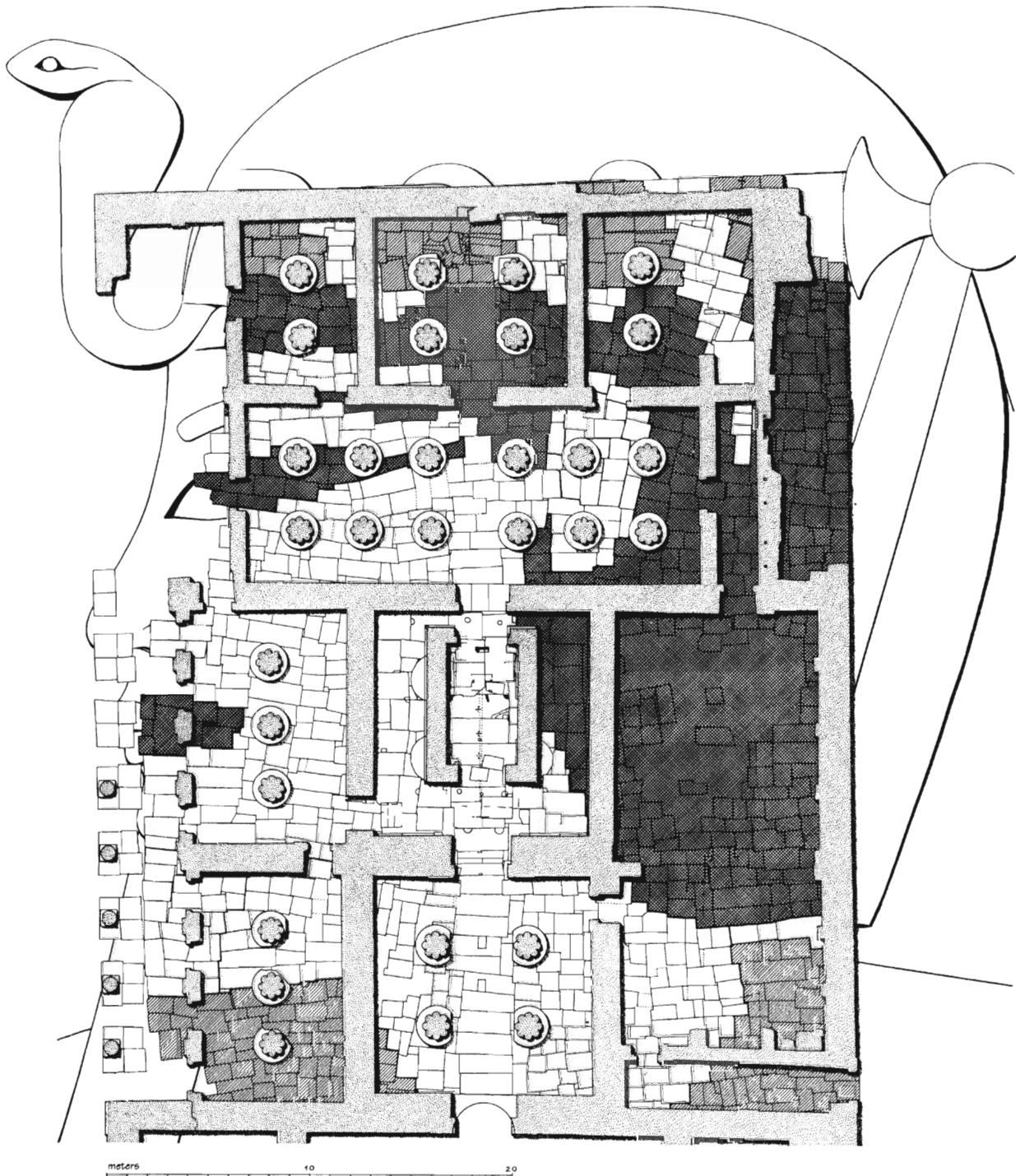


PLATE 37
The Covered Temple on the Mosaic

The formation of the organized being begins with the head. The head is the place of ideal determination of the body's organic functions, and thus one must look there to see the governing principles.

(Chapter 18)

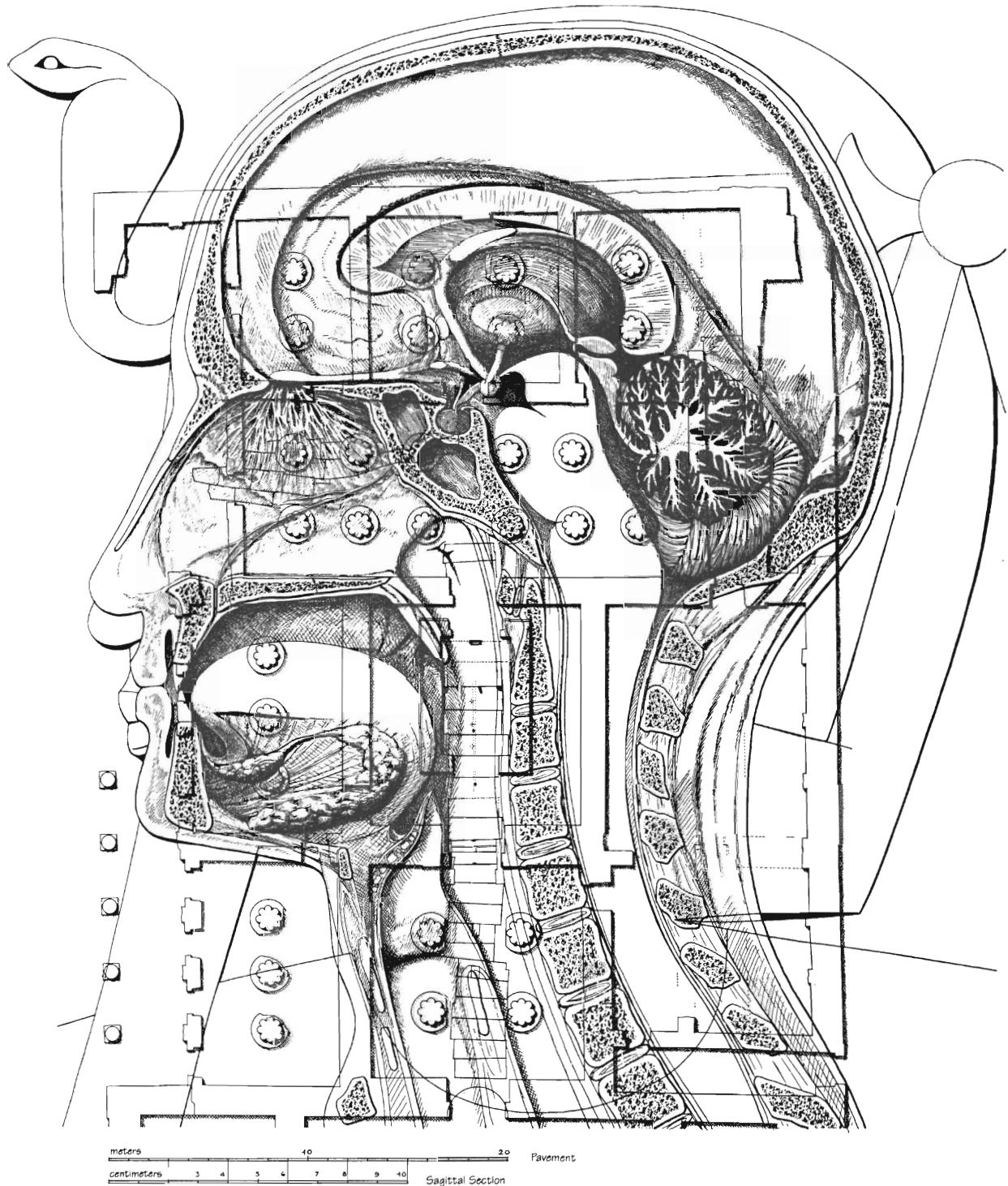
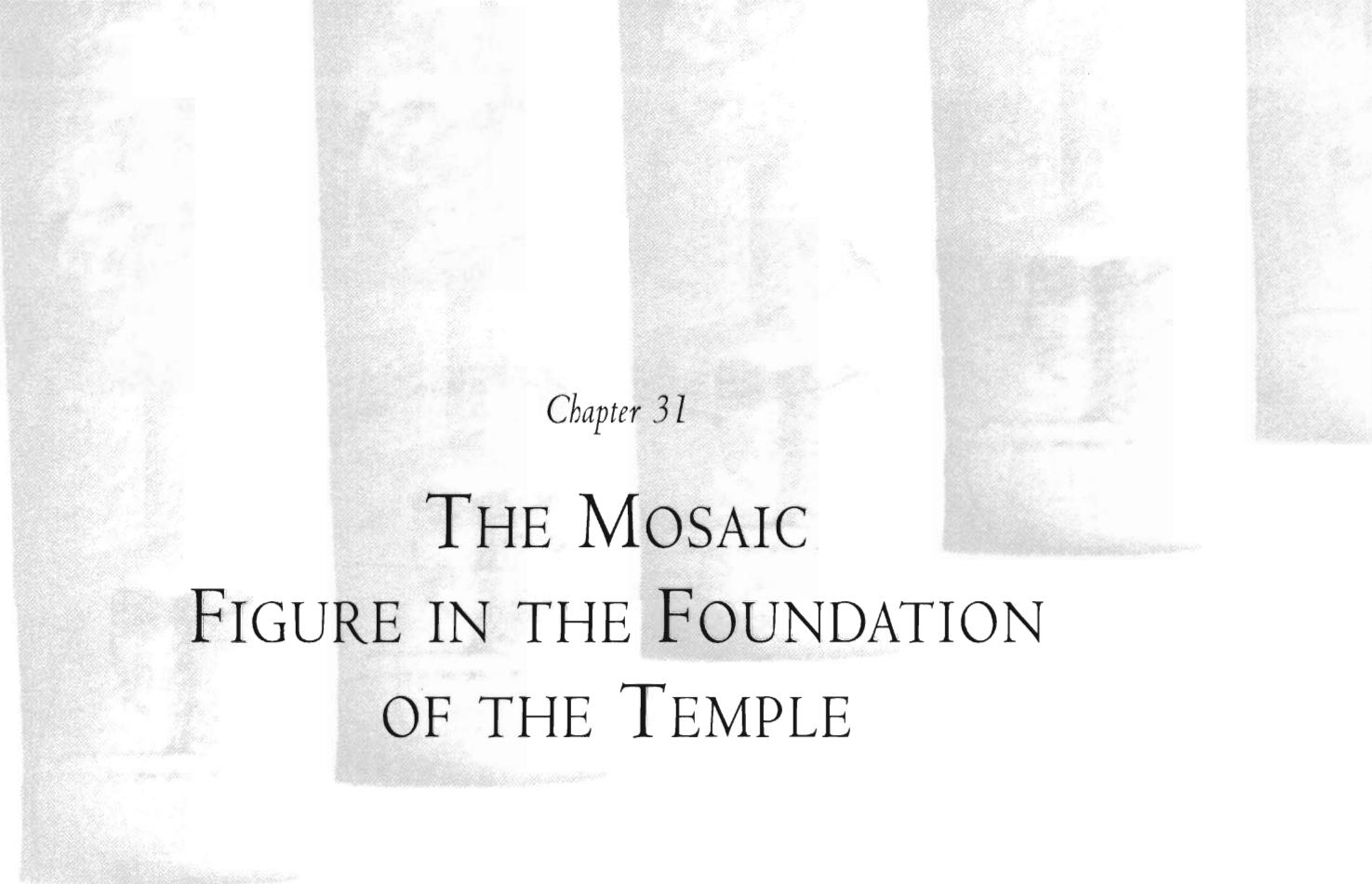


PLATE 38
The Controlling Centers of the Head in the Covered Temple



Chapter 31

THE MOSAIC FIGURE IN THE FOUNDATION OF THE TEMPLE

The covered temple at Luxor does not rest directly on the ground, but on a rectangular foundation crowned by a grooved cornice. This construction, upon which the pavestones that constitute its cover are placed, is in the form of a tank, or cistern.¹ Probes made at several points suggest a similarity between the foundation "tank" of the temple of Luxor and the one for the temple of Mentu, of which we show a sectional view in plate 94.

The bottom of the tank seems to be composed of new stones, and the tank itself is filled with a jumble of various stones, some of which are inscribed and reused from an earlier monument. All of this is mixed with earth.

The platform covering the tank at the Karnak temple of Mentu is at the upper level of the cornice, whereas at Luxor the pavement is set at the level of the torus of the cornice. The walls and the columns do not have their own foundations but rest directly on this stone platform (fig. 222).

The pavement of the platform of the temple of Luxor is conceived as a mosaic. It is made of very disparate pieces, which is surprising in itself, knowing with what care the rest of the building is constructed. This arrangement motivated us to investigate the reason. In our plan (plate 34), there is nothing "reconstituted;" we have only carefully sketched each stone.

The different elements of a face in profile are sufficiently visible to permit making a complete drawing of it giving the proportions of the face of the Man of the Temple, but without the crown of the skull. The walls of the temple are placed on this pavement (plate 37), situating the different parts of the head on it, as the sagittal section shows (plate 38).

The cornice crowning the stylobate is above the level of the pavestone mosaic (fig. 222). As a cornice, it plays the same role for the stylobate as does the cornice of a pylon, a naos, and so on.

¹ Cf. plate 94 and its legend.

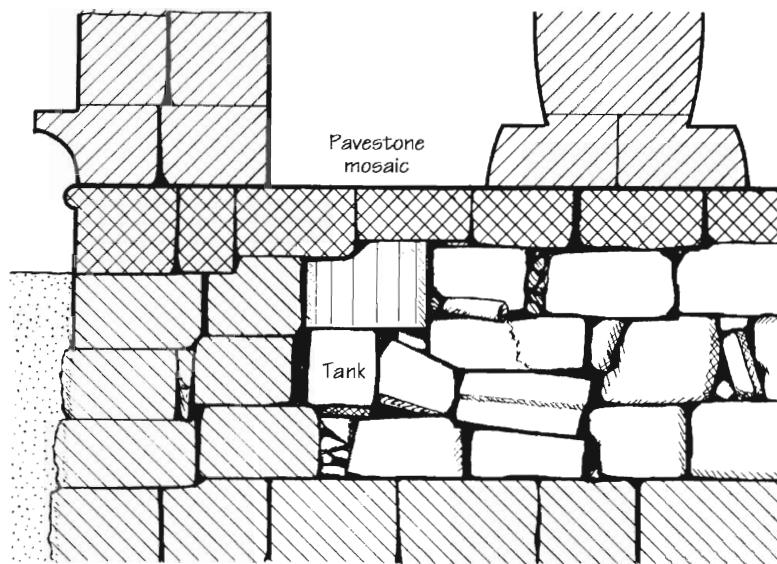


Fig. 222. Diagram of the vertical section of the tank-shaped foundation of the covered temple of Luxor

The pavestones are laid at the upper level of the torus. The first course above the pavestones constitutes the cornice upon which rest the exterior walls.

The exterior walls of the covered temple rest on the upper part of the cornice and with it create a crown;² and the whole temple placed on the pavestones thus represents the place for the recording of the teaching. It is necessary to accept this as a general image, the analysis of which is extremely complex.

PLATE 34 • PLAN OF THE SOUTH PART OF THE PAVESTONE MOSAIC OF THE PLATFORM

One is struck by the apparent incoherence of the arrangement of the stones that make up this pavement. The first three or four rows near the south wall are parallel and perpendicular to this wall up to a point toward the west, room VII,³ where all the blocks suddenly are placed at a very pronounced angle, which necessitated a skillful assembly between the two "movements" thus indicated. In room XII, on the east side, the stones were adjusted to evoke the curves of the eye, while on the west side the stones arranged on the angles imposed by the contour lines of the ear again become parallel and perpendicular to the walls toward the center.

Starting from the north in room IV, the central pathway, which then passes through the door leading toward the sanctuary of the barque, is marked by a succession of large stones that continue in room VI under the limestone paving and actually constitute a "path" that stops at room XII at the second stone from the north wall of this room.

In room II, in front of the central pillar of the east partition, a group of three stones creates an empty space in which there is a small block of granite that served as a door socket and contains a

² Cf. chapter 15, "Diadem, I Assume Thee."

³ For the location of these rooms, cf. fig. 226.

cavity in its central part. A key-point is marked here and determines the location of the mouth. Now, on the bas-reliefs, the corners of the lips are always indicated by circular hollows.

In the embrasure of the door leading from room IV to room VI, a large reused roof stone has a hollow down the center of its entire length; this straight cavity was filled with sand and various ritual materials, then covered by a long flat stone (today broken in two pieces). On the north and south sides of this large roofing stone, there are two small cavities, the north one of which contains a key-piece, the point of the crossing of the three axes of the temple, incised on the floor of room VI.⁴

In order to define the measurements of the pavestone mosaic, we must consider the essential points thus marked, such as the large stone tangent to the first column in the southeast corner of room XII, which determines the upper edge of the eye, and also another large pavestone north of the central column of the western group of columns in room XII coinciding with the base of the ear. The position of the chin becomes obvious in the thickness of the wall separating rooms IV and VI, just as the top of the headband can only be the south wall, and the headband itself is constituted by this wall and the rows of stones from the mosaic that are parallel to it. In the northwest entrance corridor, the line of pavestones includes a double curve that subsequently merges with the wall that marks the place of the clavicles.

We thus have all the essential points determining the measures and allowing us to seek out what face is represented by these pavestones (cf. plate 37, in which certain stones are indicated in a darker color to make the image of the face appear). The elements of the mosaic allow us to discover the bas-relief of the figure whose head will exactly superimpose itself on the face marked by the joints (plate 36).

Let us recall that on the architrave of the peristyle (transept), on the east side and at the height of the navel, we find inscribed the assertion that *the temple is the birthplace of the king*. This leads us to look in the room of the theogamy (room IX) for the birth of this king. There we find Queen Mutemwia (Mut in the barque) in the state of parturition. Now, the barque does not appear on this partition, but is located in "transposition" exactly at the same level in room IV (fig. 223).⁵

On the second register of the east partition of room IV, the barque of Mut is framed by the barques of Amun and Khonsu accompanied by royal figures, none of whom, out of discretion, look at the barque of Mut in which the divine birth is proceeding. It is therefore in the room of the barque of Mut (room XX) that we will look for the figure who is the human figuration serving as the model for the mosaic of the covered temple.

PLATE 35 • THE "KING WITH THE DIADEM" OF THE SANCTUARY OF THE BARQUE OF MUT

The room of Mut's barque (room XX) is in the form of an elongated rectangle. On the north side it opens onto the hypostyle room through a large door that takes up the whole wall, anticipating the passage of the barque and its bearers. The east, south, and west partitions only have two registers, each topped by a frieze of a uraeus coiled on a basket⁶ alternating with the royal cartouches. These uraei, with the royal disk above them, are oriented from north to south, where they meet on the south wall and frame the two cartouches containing the mystical names of the king,

⁴Cf chapter 40 and plate 84.

⁵Cf. plate 31 and chapter 17.

⁶What is referred to as a "basket" recalls the basket that was carried in Greece in processions during the Bacchic mysteries, and that was forbidden to be opened on pain of death. This symbol is represented by a half-disk, sometimes carved in lines forming a braid.

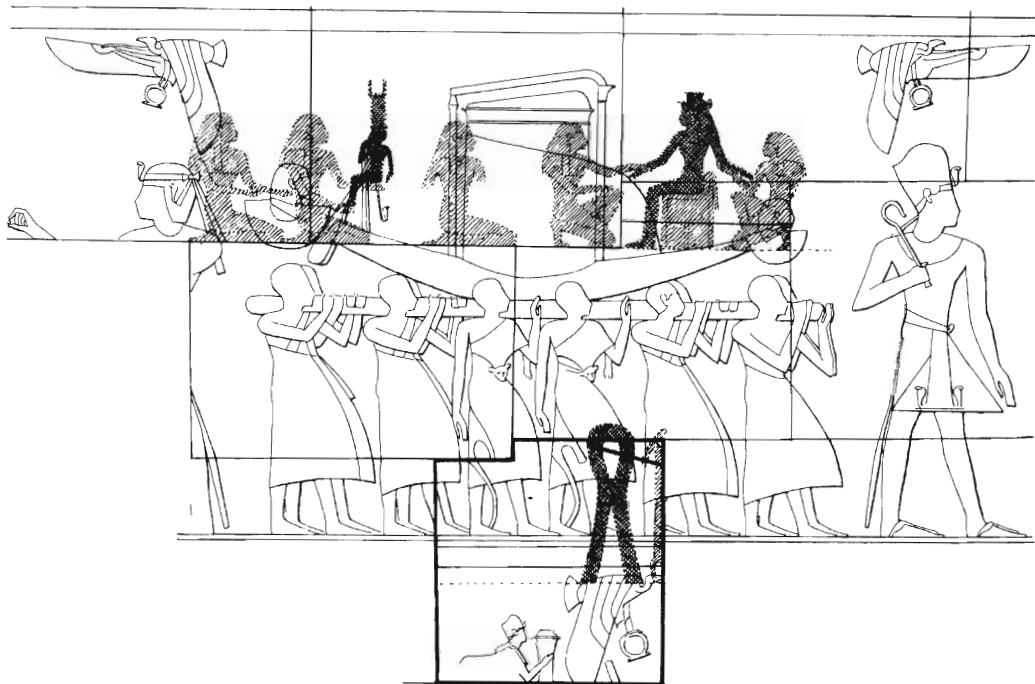


Fig. 223. The barque of Mut in transposition between rooms IV and IX; room IV, east partition, second register, room IX, west partition, second register

Shaded, Queen Mutemwia, awaiting the royal infant, seated on a cubic seat, projected on the front of the barque. The infant's *ka* is projected on the rudder. The stone that traverses the wall shows, in room IV, the vulture (gestating Mut) upon which rests, in transparency in room IX, the sign "the node of Apet, who gestates," next to which is carved the text relating to the birth.

Amenhotep and Nebmaātre,⁷ which constitute the axis of this room. From north to south, all the tableaux are sculpted on east or west partitions and are reflected on the opposite partition as if in a mirror. They meet on the south partition to the right and left of the axis of the room.

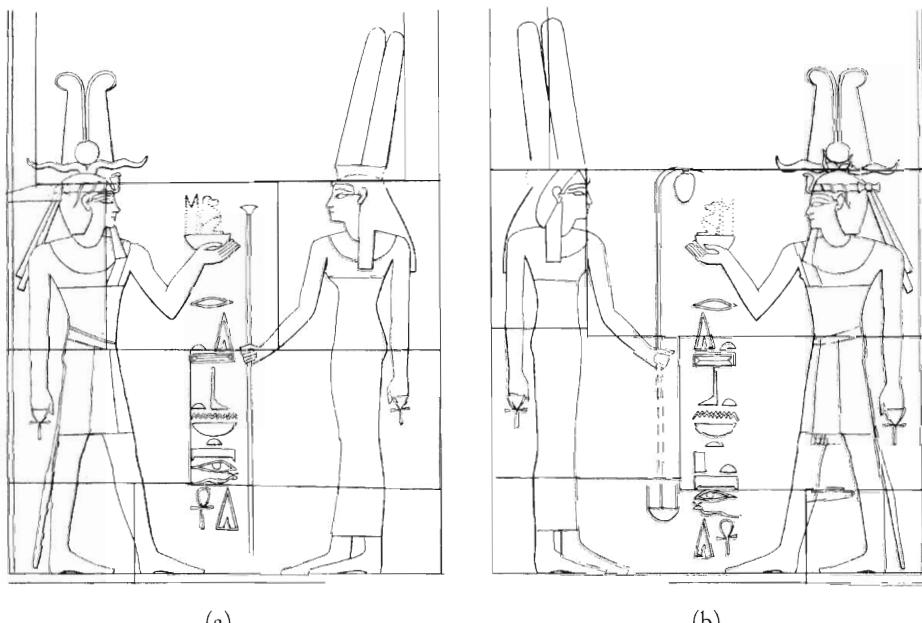
In the upper register the king, seated, then kneeling, makes the ritual offering in the presence of Mut's barque, placed on an altar in the image of the one that was kept in this place in earlier times.

In the lower register four tableaux show the king in the presence of Mut, in her different aspects, and in the course of four ritual scenes, similar from east to west but different in their details, as we shall see later on.

It is the fourth king from the entrance who serves as the model for the pavestone mosaic and who will henceforth be designated as the "king with the diadem."

⁷ All the names of Amenhotep are on the east part of this frieze, and "Neb-maāt-re" is on the west. There is thus a formal indication of *two* aspects. It is notable that in the entire area of the covered temple south of this room, the royal cartouche is never carved on the upper frieze, which carries only images of the uraeus or the *khakeru*.

At the end of the chapel, on the east and west partitions, there are two similar figures both crowned with the double plume and offering to Mut the symbol of the clepsydra,⁸ hammered out in the two scenes (fig. 224). This symbol of the clepsydra, here in Mut's chamber, certainly relates to the time of gestation, confirmed by the palm branch of years held in the hand of the Mut to the west. Now, the figuration of these two kings is an actual image of the mosaic of the temple; under their feet is a second line, emphasizing them, and these two figures are the only ones in the sanctuary with their feet placed on a double line.



*Fig. 224. The king offering the symbol of the clepsydra to Mut,
room XX (room of Mut's barque), first register*

(a) East partition, fourth scene (b) west partition, fourth scene.

Various nuances distinguish the figurations on these two partitions. On the east partition, Mut holds the *wadj* scepter of the opened flower, while on the west partition she holds the branch of the years and the symbol of the *sed* festival.

On the east, the upper joint cuts the skullcap of the king and coincides with the upper edge of the headband, while on the west, the upper joint passes just above his vertex.

On the east, a vertical joint passes through the axis of the king's eye and connects the two horizontal joints, one cutting the skullcap and the other passing under the belt. The navel, which should be located in front of this joint, has not been carved, whereas on the west, the middle horizontal joint passes exactly at the level of the figure's navel.

On the east, the breasts are not drawn, and the belt, as well as certain details of the crown, is left unfinished, whereas on the west, all the details are complete.

⁸The baboon is seated before the clepsydra and both are in a basket. The clepsydra is a cylindrical or conic vase, pierced at the bottom, in the interior of which there is a graduated spiral line. This vase was filled with water that emptied out drop by drop to mark time. Sometimes found at the opening of the hole was a baboon, symbol of time because of its behavior at the rising and setting of the sun and thus at the two equinoxes.

Finally, these two kings, who face each other, are presented as if they were reflections of each other at two different moments: the eastern king has two right hands, and the western king has two left hands. The eastern king is an apparition, still unfinished, with neither navel nor skullcap, while the western king is represented in extreme bodily detail, with the joint emphasizing the navel and the skullcap marked by the diadem; but both figures are standing on the double line indicating the earth.

The omission of the breast of the king to the east, which is perfectly drawn on the figure to the west, accents the nourishing, white, milky quality that is specific to this place in the temple, at the top of the lungs (*thymus*)⁹; this quality is also emphasized by the joints between the stones of this room that seem to allow the plaster to flow freely through their gaps.¹⁰

These two figures will determine the essential proportions that govern the face in the pavestone mosaic of the covered temple, through the relationship between the height from the soles of the feet to the upper edge of the headband (carved on one, and emphasized by the joint on the other) and their total heights to the vertex:

$$\text{eastern king: } \frac{\text{total height to vertex}}{\text{height to stone joint}} = \frac{1.54 \text{ meters}}{1.495 \text{ meters}} = 1.03\dots$$

$$\text{western king: } \frac{\text{total height to vertex}}{\text{height to headband}} = \frac{1.53 \text{ meters}}{1.488 \text{ meters}} = 1.0282\dots$$

The upper edge of the royal headband is compared with the south wall of the temple, and this relationship determines the size of the crown of the skull, which is added to the length of the temple (140 fathoms) from the north face of the pylon to the south wall. Now, with 140 fathoms representing the height of the Man of the Temple *without* the crown of the skull, it is sufficient to multiply this length by the coefficient indicated by the two "kings with diadems" in order to arrive at his total height, thus:

$$140 \text{ fathoms} \times 1.03\dots = 144.2 \text{ fathoms at } 0^\circ = 265.76 \text{ meters}$$

$$140 \text{ fathoms} \times 1.02857\dots = 144 \text{ fathoms at } 0^\circ = 265.40 \text{ meters.}$$

The two indicated variants, 1.03 and 1.02857, are indistinguishable in practice. We have already met them in the study of the general proportions of the human canon; these two coefficients are always derived from the function ϕ .¹¹

Furthermore, from the study of the proportions of the different parts of the face of the western king in the room of Mut's barque, we learn that if we give the value 1 to the height between the chin and the upper eyelid, the height between the upper eyelid and the top of the headband equals $1/\phi$, so that the crown of the skull equals $1/\phi^2$, and the total value is 2 (fig. 225).

In the covered temple, the key-stones cited above determine precise points in the pavement and allow us to define the measurements of the face in the mosaic. The distance between the long stone embedded in the threshold of the door between rooms IV and VI determines the level of the chin.

⁹The *thymus* reaches its maximum development in the child around two years of age, the end of breast feeding, then progressively declines.

¹⁰This characteristic of construction is peculiar to this room, where the joints of the stones for the most part have a centimeter of exposed plaster. This would suggest an enlargement of the chapel by a resurfacing of the walls. The proof that the exposed plaster is intentional is given by the fact that one of the *wadj* scepters of the uraeus frieze is *sculpted in relief* on a vertical joint *in this plaster*, projecting out from this joint. In this regard, remember also the use of exposed plaster in the *mammisi* (room of birth and breast feeding) of Dendera.

¹¹Cf. chapter 11, "Application of the Standard Pharaonic Canon," "Projection of the *Canevas* onto Two Royal Figures," and figs. 139, 140, and 142.

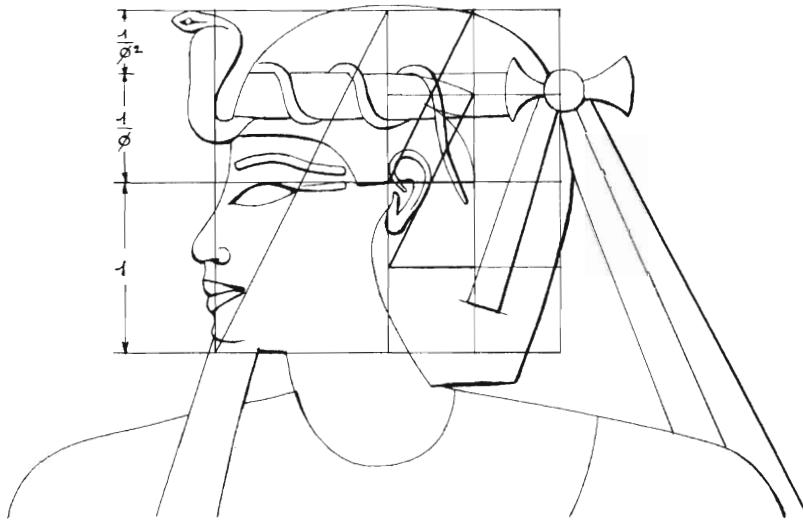


Fig. 225. Study of the proportions of the head of the "king with the diadem." Room XX, west partition, first register, fourth scene from the north

This level is 33.17 meters from the exterior facade of the south wall that determines the upper edge of the headband. The upper eyelid is marked in room XII by a large pavestone 20.50 meters from the key that indicates the chin. This fact allows us to compare the face in the mosaic to the proportions of the "king with the diadem" as follows:

$$\begin{aligned} \text{chin to upper eyelid} &= 1 = 20.50 \text{ meters} \\ \text{chin to headband height} &= \phi = 33.17 \text{ meters} = 18 \text{ fathoms at } 0^\circ \\ \text{chin to vertex} &= 2 = 41.00 \text{ meters.} \end{aligned}$$

The height of the missing skullcap is thus $1/\phi^2$, exactly 7.83 meters, which we must add to the length of the temple in order to have a representation of the complete Man, being 258 meters plus 7.83 meters, or 265.83 meters. We can compare this last result with the two previous results, 265.76 meters and 265.40 meters. The latter represents 144 fathoms at 0° .

This study of the facial proportions of the king with the diadem thus only confirms the measurements found previously, those defined by colossus no. 3, by king E in sanctuary I, and by the size of the covered temple,¹² all of which converge toward this final measurement of 144 fathoms, determined here by the pavestone mosaic, for the total size of the Man of the Temple.

PLATE 36 • THE PROFILE OF THE KING ON THE MOSAIC

In order to project the profile of the king with the diadem, which we have just studied, onto the pavement of the covered temple, we must know the relationship between the dimensions of this

¹² In the study of growth, we have seen that the covered temple, measuring 79.82 m, represents the size of the newborn, and that traditionally one royal cubit equals the size of the newborn, or $7/24$ of the adult armspan. Knowing the armspan and the height of the Man of the Temple *without the skullcap* (258 m), it is easy to calculate the height of this man to the vertex, knowing that it is the geometric mean between the two known heights. The result of this calculation gives 265.71 m for the height to the vertex for the Man of the Temple.

face and those of the temple. The height measured vertically on the king's face from the line that separates the jaw from the beard to the upper line of the headband is 0.174 meter.

As we have seen, the distance between the measurement key that marks the plane of the chin on the mosaic of the covered temple and the south wall considered as the upper edge of the royal headband is 33.17 meters, or 18 fathoms at 0°.

The ratio between these two measurements is then as follows:

$$\frac{\text{chin to headband height on pavement}}{\text{chin to headband height of king}} = \frac{33.17 \text{ meters}}{0.174 \text{ meter}} = 190.63\dots$$

Here we discover approximately ten times the coefficient 19.0983.... We have already observed this coefficient in the relationship between the half-height of colossus no. 3 and the back width of his pedestal.

The diadem of the bas-relief is perpendicular to the vertical axis of the figure. The south wall of the covered temple in its entirety is perpendicular to the axis of Mut, which governs the three sacred sanctuaries, while all the other east-west walls of the covered temple are perpendicular to the axis of Amun.

The position of the face projected so that the upper edge of the headband of the king with the diadem coincides with the south wall of the covered temple brings the vertical axis of the figure into parallel with the axis of Mut. It is this deviation that causes the king to lean slightly forward relative to the axis of Amun, which governs the temple, and displaces his eye, which could be superimposed on that of the pavement if the vertical of the figure were parallel to the axis of Amun.

Looking at the east wall of room V, we find that it corresponds to the point where the uraeus is on the human figure. On this east wall the bas-reliefs show the gift of the "perfumes of the festival," by virtue of whose unction the king is consecrated.¹³

PLATE 37 • THE COVERED TEMPLE ON THE MOSAIC

Plate 37 shows the south part of the covered temple with the walls *placed* onto the pavestone mosaic of the platform.

PLATE 38 • THE CONTROLLING CENTERS OF THE HEAD

IN THE COVERED TEMPLE

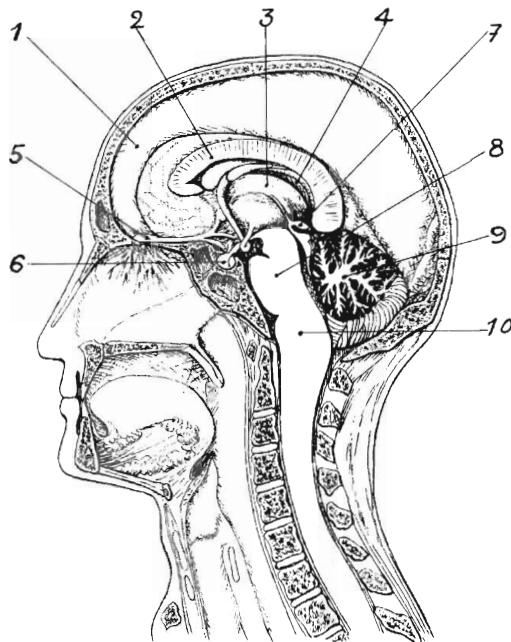
This sagittal section has been made according to present medical data and projected onto the temple. The profile of the king with the diadem is also indicated. The reference for these two figures is given by the height from the chin to the vertex.

We can observe a difference between the proportions of the pharaonic face and the profile of an actual person: the pharaonic profile shows a longer midsection for the face (the nose, emotive character), whereas the present profile reinforces the lower part of the face (the more material character).

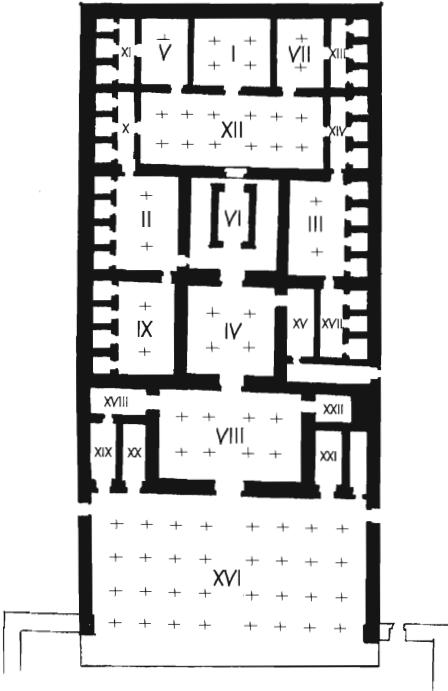
We see three "stages" on the sagittal section projected onto the plan. First, the upper stage comprises the entire cranium, containing the brain, which corresponds to the three southern sanctuaries, V, I, and VII. Next, in the front, on the east part, the ethmoid and sphenoid bones support the "viscera of the head," and separate the brain from the front and back nasal fossae,¹⁴ which

¹³ Cf. chapter 39, the description of the partitions of room V.

¹⁴ Cf. chapter 14, "The Interior of the Throat and Head" in the section "Some Anatomical Terms Used in the Papyrus," and fig. 168, no. 43 and related text, and fig. 169 and related text.



(a)



(b)

Fig. 226. (a) Sagittal section; (b) numbering of the rooms of covered temple

(a) 1, falk cerebri; 2, corpus callosum; 3, third ventricle; 4, choroid plexus; 5, olfactory bulb; 6, pituitary gland; 7, pineal gland; 8, pons; 9, cerebellum; 10, medulla oblongata.

(b) Rooms: I, secret sanctuary of the statue of Amun;
 II, room of animation and crowning;
 III, room of the descent into the Dwat;
 IV, offering room (the four elements);
 V, room of duality, offering of cloth and unguents;
 VI, sanctuary of Amun's barque
 VII, room of the presentation of the prince by his mother;
 VIII, room of transformations, of solar character;
 IX, room of the royal conception;
 X, room of the dawn;
 XI, room of the unction;
 XII, room of the solar journey;
 XIII, XIV, XV, XVI, XVII, XVIII, XXII, all destroyed;
 XVI, hypostyle room, the *haty*;
 XIX, room of Khonsu's barque
 XX, room of Mut's barque
 XXI, room of the king's barque (?), destroyed.

correspond, in superimposed sections, to the orbital cavities. This stage corresponds to room XII. The wall that separates room XII from room V represents the cribriform plate of the ethmoid, located under the olfactory bulb (fig. 226, no. 5). The soft palate coincides with the wall that separates room XII from rooms II and VI, containing the mouth.

In the back, west part, starting from room XII, the medulla continues into the marrow of the spinal column, represented by the west partitions of rooms VI and IV.¹⁵ Below the chin, room IX is located in the space between the beard and the neck; room IV corresponds to the throat.¹⁶ The upper part of the falx cerebri (fig. 226, no. 1) is outside the temple.

The three southern sanctuaries are united by the corpus callosum (fig. 226, no. 2), which connects the two hemispheres. Likewise, the walls separating these three rooms link them again by "transposition."

Sanctuary I corresponds to the third or middle ventricle (fig. 226, no. 3), located between the optic tracts and communicating with the lateral ventricles found in each hemisphere. These ventricles each have three extensions called horns. The lower extension in the temporal lobe is called "Ammon's horn."

The thalamus is a large ovoid ganglion that defines the third ventricle with its inner surface. Its commissural fibers fan out into the different cerebral lobes.

The choroid plexus, or four-pillared vault (fig. 226, no. 4), is located under the corpus callosum and, like it, is a commissure. The posterior pillars of the choroid plexus come back into the lateral ventricles, the horns of Ammon. The anterior pillars send out a bundle of fibers that enter the olfactory tract, thus uniting rooms I and V. Now, the wall separating these two rooms has on it the representation of the ritual scenes that depict the offering of cloths.¹⁷

The olfactory bulb (fig. 226, no. 5) corresponds to sanctuary V, the olfactory tract, which then divides and goes toward the four centers. In this sanctuary, the ritual requires the offering of four cloths of different color.¹⁸ The pineal gland is located in room VII (fig. 226, no. 7). It is here, at the age of the awakening of intelligence, that the royal child is presented to Amun and Mut, accompanied by his mother.

In room XII, to the east, the eye and nasal fossae are projected, including the zone of olfactory sensitivity. At the center, the pituitary gland (fig. 226, no. 6) rests on the sella turcica, the stem of which penetrates into sanctuary I, relating it to the thalamus.¹⁹ Finally, to the west, there is the pons and the medulla oblongata (fig. 226, nos. 8 and 10) out of which come twelve pairs of cranial nerves. We can again note that the circle of Willis is located at the level of room XII²⁰ (under the brain), assuring arterial circulation.

When we penetrate into the skull through the occipital foramen, it is quite remarkable that the two vertebral arteries are united into a single "basilar artery," in order to divide again in encircling

¹⁵ Cf. chapter 17.

¹⁶ Ibid.

¹⁷ Cf. chapter 18.

¹⁸ Cf. chapter 39.

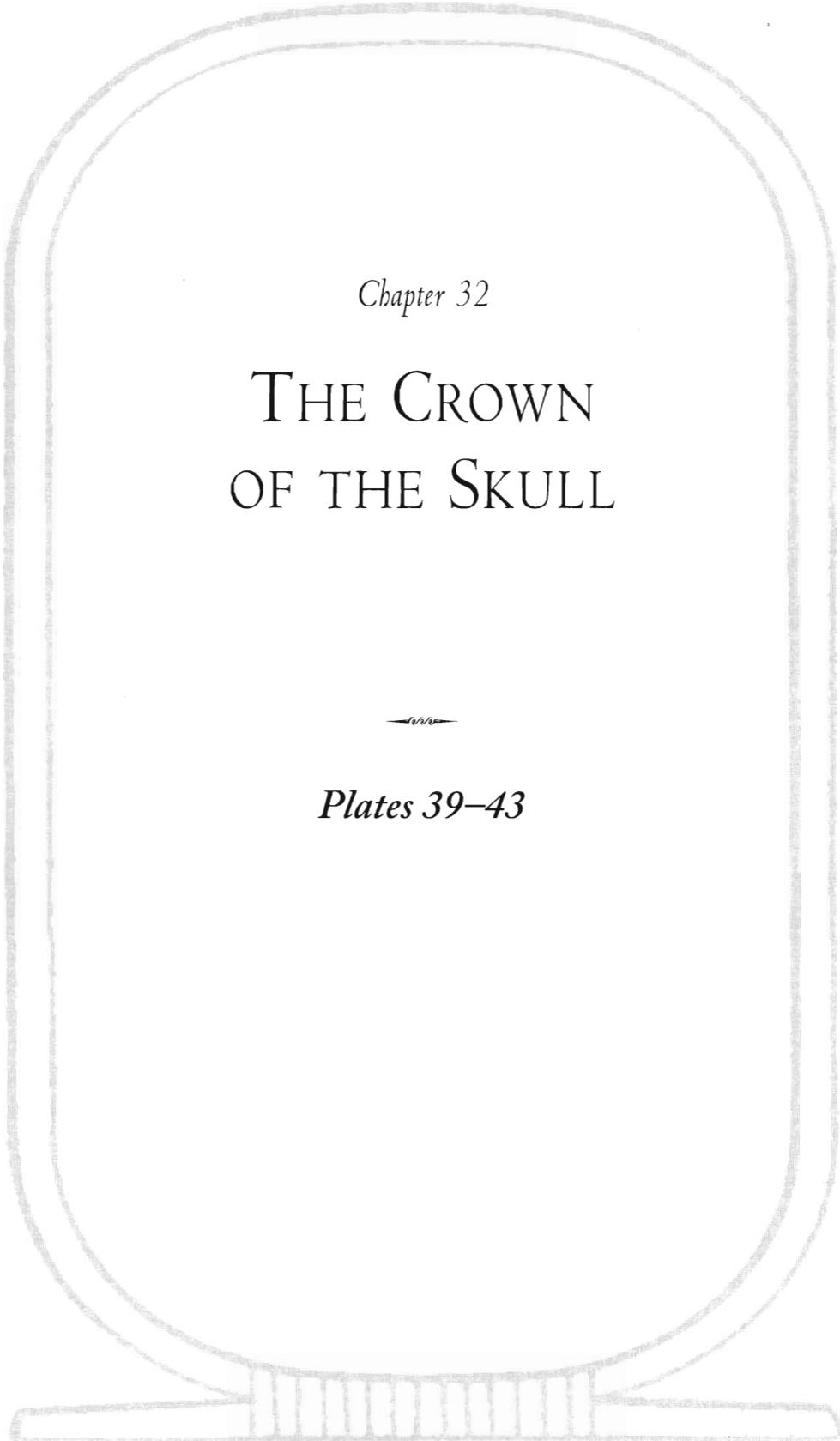
¹⁹ Cf. chapter 30, legends of plates 26 and 27, and the appendix on the physiological relationship between the pituitary gland and the optic tracts.

²⁰ Cf. vol. 1, fig. 133.

the pituitary stem. It is even probable that it is here that we must investigate the cause of the actions and reactions of the sympathetic and parasympathetic systems through the phenomenon of hysteresis (induction) of the nervous flux. Concerning this, we must remember the hexagonal construction that governs the door of sanctuary I.²¹

The cerebellum is at the extreme west of room XII (fig. 226, no. 9). This unconscious motor center controls the movements necessary for balancing by reflex, and is also capable of obeying the will.

²¹ Cf. vol. 1, fig. 183.



Chapter 32

THE CROWN OF THE SKULL

Plates 39–43

The royal principle is sacred provided not only that the imposition of the diadem be a symbolic gesture but that this king be naturally gifted, or educated to acquire this gift of “abstraction” or “mastery of the ego.”

(Chapter 15)

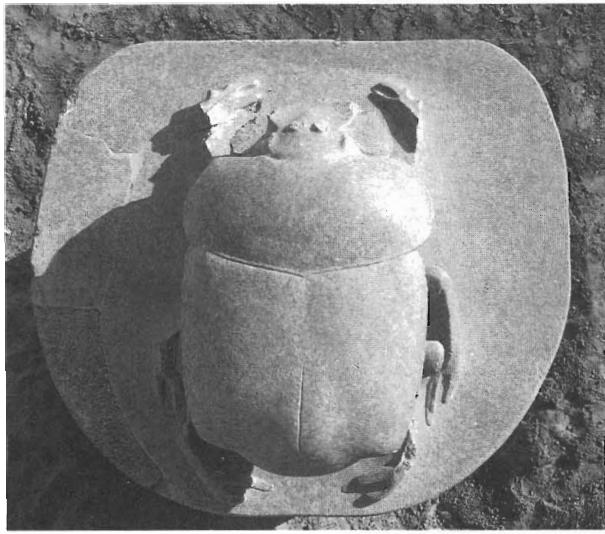


PLATE 39

The Crowned King in the Sanctuary of Mut's Barque

The pharaonic people, whose sole concern was the afterlife and who sacrificed everything to the life of the soul, which represents the immortal principle, were also extremely practical and very “down to earth” in all their expressions. Everything was for them a symbol of a function participating in the genesis of tangible Nature, an image of the genesis of immortality.

(Chapter 4)



A



B



C

PLATE 40

The Scarab and the Crown of the Skull

The Light of the World needs a substance to carry it in order for it to become visible; in this way the symbol carries the invisible, which it evokes and to which it gives life.

PLATE 41

Crypt of Dendera, the Appearance of Ra



The diadem as measure gives this measure its royal character by the line separating the human from the divine.

(Chapter 15)



PLATE 42
The Diadem of Tutankhamun

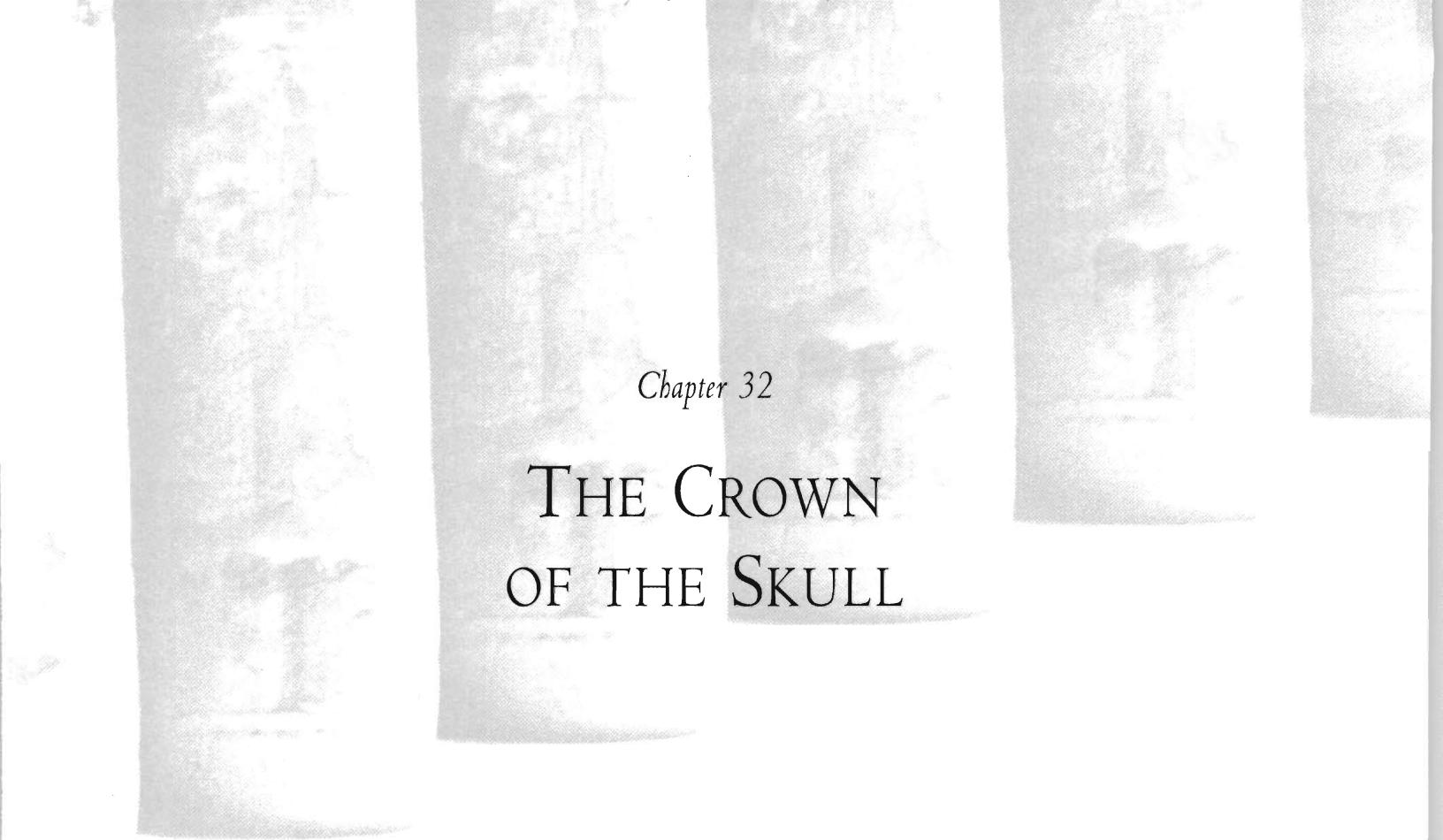
. . . the true prayer, that is, the merging with the neter, demands, on the one hand, the life of the person, and on the other, the abstraction of his ego, the selfish being of cerebral or mental reflection.

This alone is the victory over the mortal personality: Nicodemus, the second birth in the Gospel. This is why the still symbolic statuary of the cathedrals depicts this saint with the crown of his skull held in his hands.

(Chapter 15)



PLATE 43
Saint Nicasius Carrying the Crown of His Skull



Chapter 32

THE CROWN OF THE SKULL

The ultimate corporeal product of terrestrial nature, the human being, can in some ways be compared to a plant, the Tree of Good and Evil. The nature of the two extremes—the roots and the flowers, or intestinal organs and cerebral matter—show them to be connected by the same original spirit. In the intestinal convulsions, the nourishing substance undergoes a “co-ruption” that separates the pure from the impure, two aspects of the same fire from which the original chaos is made.

Thus, the biblical Kabbalah speaks to us of the fallen archangel who takes away with him the memory of the divine light, the chaos composed of Seth, the mephitic Satan, and of Horus-Lucifer, who carries the light and causes it to reappear. It speaks of the same history that the pharaonic cabala describes through the struggle between Seth and Hor—the builders of the temple that is Man. Finally, it is Hat-Hor, the house, the container of Horus, which, in the folds and recesses of its cerebral matter, gathers the pure, like the flower bearing the most subtle and sublime substance that will serve thought as well as form the seed of reproduction.

These are Hermetic utterances, of universal meaning, that link physiology to theology. Thus the lunar substance, which builds the “house of Horus,” *captures* the most subtle spirit of organic elaboration, holds it, and reduces it to earthly embodiment, dualizing what by nature is one. This lunar reflection of the original light is but a reaction: here the creation becomes procreation; the animating Breath becomes speech; the virtuality-synthesis becomes memory; love, or natural affinity, becomes desire; the ineluctable consequence of the Cause becomes intention; and the Cause becomes Mystery. This laboratory of imitation constitutes the problem, so important, of the crown of the skull.¹

PLATE 39 • THE CROWNED KING IN THE SANCTUARY OF MUT'S BARQUE (ROOM XX)

The royal figure represented in this plate is located on the first register of the west partition of the sanctuary of Mut's barque. We have seen that the four scenes on the lower register of this partition

¹ Cf. chapter 15.

each had their counterparts on the east partition, and that the scenes proceed from north to south.

In the first tableau, near the entrance, the king offers a vase topped with a flame and gives the incense. In the second tableau, the king presents to Mut two vases containing the *mm* grains,² drawn in detail on the west side, but summarized on the east side by a simple horizontal stripe.

The third tableau is a rather rare representation that we only find at Luxor on the east and west partitions of this sanctuary, and on the second register of the north wall (consecrated to Mut) in the room of the birth (room IX): the king “striking the ball.” In these three representations the king’s headdress consists of a headband and a crown composed of two plumes placed behind the solar disk (fig. 227). In room XX, however, the king’s crown has, in addition, the two horizontal horns of Khnum and two uraei that frame the two plumes.³

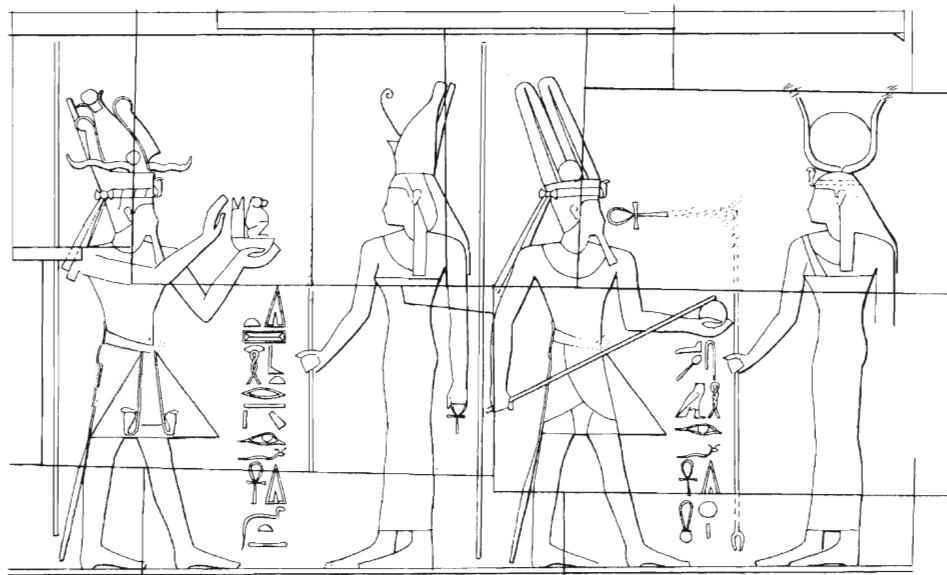


Fig. 227. The king offering the clepsydra, and the king striking the ball. Room IX, north partition, register 2.

Whereas in the chamber of Mut this figure is immediately behind the king with the diadem presenting the clepsydra, in the room of the birth he precedes him, but in the two rooms these two scenes are side by side.

The north wall of the birth room is located at the level of the clavicles, the first and last point of ossification of the skeleton; thus, the king here is represented as an adult. A stone “piece” cuts the right shoulder of the king offering the clepsydra, thus the right clavicle is emphasized by a horizontal joint, which is therefore the “location joint.” By an irregularity in the figure’s axis, this joint next passes at the upper level of the king’s chest, under his necklace and under the necklace of the king who strikes the ball. It then plays the role of a correspondence joint and refers us precisely to the room of Mut’s barque where we discover these same two ritual scenes, with variations only in the headdresses.

² We are not dealing with simple grains, but a substance that “causes the milk to rise.”

³ The head of the king who strikes the ball on the west partition is given in plate 39. Cf. vol. 1, fig. 136, the king striking the ball on the east partition.

The face of the king with the diadem in the fourth tableau (room XX) is the image of the mosaic in the pavement of the covered temple. But whereas the upper joint passes above the vertex, in the third tableau the joint passes above the head of the king striking the ball, marking out a very characteristic piece relating this joint to the upper part of the headband (plate 39). This piece replaces the crown of the skull and in the king's headdress cuts off a section that in height is proportionally equal to that of the skullcap of the Man of the Temple, which is missing on the pavestone face.

Above the headdress that encloses the king's head are two horizontal horns, similar to those of Khnum (the potter *neter* who fashions the body), supporting two plumes with a solar disk at their base and flanked by two uraei surmounted by disks. The horizontal joint cuts these horns. This figure of the king wearing his heavy crown, rich in symbolic meanings, is admirable for the simplicity of the drawing and the finish of the execution (of the ear, for example). The relief is so faint that it is the shadows that actually, and very skillfully, give the outlines and details of the face—the eye, the nose, the mouth—and the heads of the cobras. This level of mastery can only be the legacy of a long line of artists and artisans.

PLATE 40 • THE SCARAB AND THE CROWN OF THE SKULL

The design formed by the sutures on the upper surface of a skull is strangely similar to the dorsal surface of the scarab. It is also interesting to compare the braincase that holds the organs of the encephalon with the shell of this insect.⁴

There is a stylized scarab (plates 40A and 40C) currently located at the northwest corner of the sacred lake of the temple of Karnak. Sculpted in high relief, placed on a granite pedestal, and found broken at the edge of the lake, this scarab has been restored by archaeologists. The front surface of the cylindrical pedestal is flattened to form a stele completely carved in sunk relief and in the name of Amenhotep III. The kneeling king makes an offering of two *nw* vases to Tum of Heliopolis. The solar disk, alone in relief and in between the two extended wings crowning the text, forms part of the name Nebmaātre inscribed in the vertical axis of this stele. This disk, symbol of Ra, is the only element in relief in this intaglio group.

Because it is near the sacred lake, and because of the figures on it, this monolith is a synthesis of the Heliopolitan myth that teaches the birth of Ra who comes out of *nw*, the primordial waters. The winged disk Ra, the scarab *kheper*, and Tum of Heliopolis symbolize the ternary of the creation that serves as a symbol for the path of the sun.

The choice of the scarab to symbolize the creation, thus also the diurnal appearance of the sun, is worthy of meditation. One chooses an insect, and from among this animal-form, chooses the one that, in its becoming, obeys what thought can grasp of a mysterious function that is becoming without comprehensible cause. In the evolutionary chain of living beings, the insect is not biologically situable. Indeed, it is the *subterranean* form of life, which develops through the characteristic metamorphoses of worm and of pupa before it can live in the sun.

And among these beings of the hidden world—animals with external skeletons (shells) and not yet any internal bony structure or framework—the sacred scarab is typified by its manner of living, its way of feeding, and above all its mode of reproduction.

The scarab fashions a perfect ball with dung, which it rolls underground for nourishment and which it excretes as quickly as it eats. When it is time to reproduce, it fashions another perfectly round ball, but only from sheep's dung. Then begins a task from which the ancients borrowed all the symbols with which the myth of the mystery of creation was written.

⁴ Cf. chapter 15, "The Crown of the Skull."

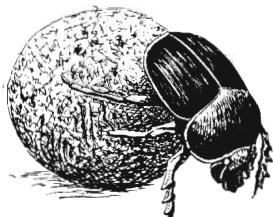


Fig. 228. The sacred scarab rolling its ball; compare with the scarab from the tomb of Ramesses IX, plate 42. Based on a photograph from J.-H. Fabre, Souvenirs entomologiques, 1st series (Paris: Delagrave, 1922), pp. 24–25.

The *kheperr* scarab⁵ is the only animal known on earth that makes the gesture of “rolling” a perfect sphere fashioned by itself, a gesture that can be compared to the diurnal movement of the solar sphere, which apparently moves across the sky from sunrise to sunset. The scarab is the only one to bury a ball in the ground and to give birth to its eggs there. The transformations are then made in total darkness, because this ball remains under the earth for several lunations, the birth finally occurring in a humid environment, which summarizes very well the Heliopolitan myth, recalled by certain phrases in the hymns to the sun: “Homage to you who is the perfect Ra of each day, who rises each morning without respite and who is the Khepri burdened with work. . . . Carver whom you carved yourself, you have cast your own body, O sculptor who has never sculpted. . . . You who travel over the heights of eternity . . . you continue (under the earth as well). . . . He who hurries, he who runs, he who accomplishes his revolutions, Khepri of the illustrious birth . . .”⁶

The very particular form of the *nw* vases, and their offering on the stele of the scarab at the sacred lake of Karnak, leads us to compare them to the sacred scarab’s ball during the hatching of the eggs. When the female has fashioned the ball in total darkness, she clammers up and begins the work of preparing the nest that will receive her egg. “The pill, at first exactly spherical, now has a strong pad that encloses a kind of crater that is not very deep. . . . The plastic ball, encircled on one side, becomes hollowed into a groove, beginning from the neck; it is then drawn into an obtuse projection. At the center of this projection, pressure is put that causes the material to flow to the edges, producing the crater with its deformed lips.”⁷

The profound meaning of this *nw* vase that is used many ways in hieroglyphic writing can only be revealed by the totality of the myth, symbol, and all the observed facts. One understands that the meaning of the *nw* vase containing, this time in the form of water, the three primordial principles might serve as the basis for a temple whose theme is that of the aquatic aspect of the origin.

Other themes will be based on the primordial Earth, or on the original Fire, or even on Air, that is, on one or another of the four Elements, which by their qualities are necessarily at the origin of things, but are also potentially contained in the *Fiat lux*. These variations have been the subject of multiple disputes among the Greek philosophers and also among the “alchemists” of the Middle Ages.

⁵ *Kheperr* is the name of the scarab; *kheper* is also the verb “to become,” “to transform.” Khepri is the name of the sun at its rising or at its setting, whereas Ra is more particularly the name of the sun at its culmination at noon. Tum, the third name of the rising or setting sun, is connected to the Heliopolitan myth of “He who does not yet exist.”

⁶ Cf. chapter 26, “Hymn to the Sun.”

⁷ Cf. Jean-Henri Fabre, *Souvenirs entomologiques*, 5th series (Paris: Delagrave, 1922), pp. 54–55.

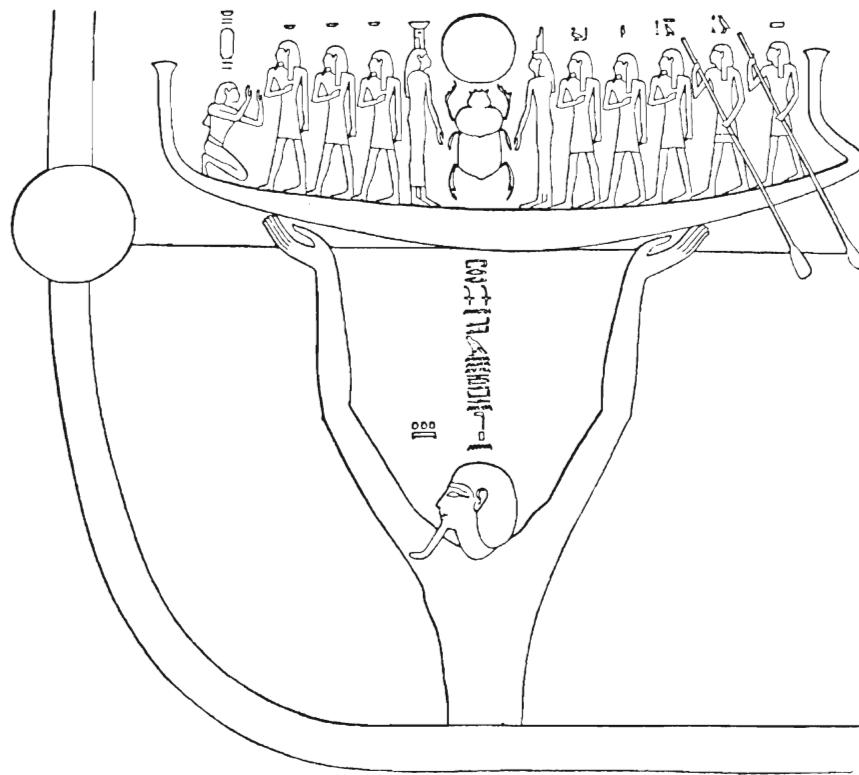
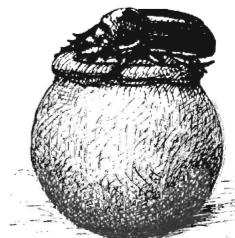


Fig. 229. The birth of the sun, Khepri, carried by the primordial waters, nww, after having created himself in Nun

Let us note the river Nun and the dualizing action indicated by the two arms. This explains the direct symbolism: Ra issued from the river Nun.

For example, at the temple of Mentu at North Karnak detailed excavations have brought to light a passageway to the main temple and to its entry door.⁸ Now, at the level of the upper paving four immense circular blocks of white limestone, contrasting with the double paving of red granite that preceded them on the ramp leading to the temple, attracted the attention of the excavators.



*Fig. 230. The female scarab preparing her ball for hatching.
Based on a photograph from J.-H. Fabre, Souvenirs entomologiques, plate 4, p. 128.*

⁸ Cf. Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, pp. 32, 34.

Buried in the ground just at the threshold to the entrance, these four cylindrical limestone blocks were found to be the bases of old columns. They had been turned upside down and recut to form *nw* vases. In the axis and in front of these blocks was a fragment of a broken statue, in green stone—a hand holding a *nw* vase (fig. 231).



Fig. 231. The *nw* offering vase

In the same foundations of the door and behind the “four bases,” a kneeling statue was found holding a *nw* vase in each hand, its hands resting on its knees. Is this not a perfect example of the observance of the symbol that we find in all of the objects or monuments that the Ancients have left us, thus sanctifying all their works? Knowing that *mnw* signifies “foundation” and associates the root *mn*, “basis,” with that which is symbolized by the *nw* vase shows us the relationship between the metaphysical, primal waters and the notion of the basis or foundation.

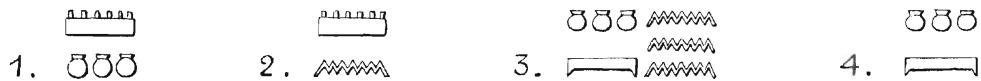


Fig. 232

1, *mnw*, “foundation” in the sense of that which persists. But the *nw* vases suggest also the idea of “to make appear” in the sense of “to create.” 2, *mn*, “established,” “fixed,” “the foundation” (same root as *mn.t*, “the thigh”). 3, *mw.w?* *nwnw?* *nnw*, “the primordial waters” (*Wörterbuch*, 2.14). 4, *nw.w*, name of the principle of the division of the primal waters (fig. 229).

The Legend of the Scarab Related by Horapollo

The choice of the scarab as the symbol of the sun and of becoming is explained by Horapollo in the following way.

Wishing to signify what is born alone, or the becoming, or the father, or the world, or a man (the male), the Egyptians depicted a scarab.

It is born alone because this animal proliferates itself without being carried by a female, because it is the only one who is created in the following way. When the male wants to procreate his young, he takes cattle dung and fabricates a ball of it with a form similar to that of the world. He rolls this with his hind legs from dawn to dusk facing toward the rising sun to reproduce the image of the world. Indeed, this ball is carried from the east toward the west as the course of the stars is directed from the west toward the east. Then, having hollowed a hole, he buries himself in his ball for twenty-eight days, that is, the number of days it takes the moon to go through the twelve signs of the zodiac.

During the time that they live under the earth, the young of the scarab takes on a living form. The scarab uncovers the ball on the twenty-ninth day and throws it in water because, it is believed, this is the day of the conjunction of the moon and the sun, as well as the birth of the world. When the ball opens in the water, the animals, that is, the scarabs, leave it.⁹

It is obvious that the description of the birth of the scarab by Horapollo has a symbolic goal. The tradition concerning the scarab as a symbol of transformations, of the becoming, the appearance, and the coming out of the waters, could have justified the apparent “errors” of Horapollo, who, in his story, gives true facts mixed with legend.

1. It is the female scarab, not the male, who fashions the ball especially destined to receive the single egg.¹⁰

2. Horapollo reverses the movements of the stars, which is true if, by the stars of which he speaks we understand the earth, which actually turns from west to east and creates the appearance that the Great World turns from east to west.

3. The scarab does in fact bury its ball in a hole hollowed out of the ground, but Horapollo omits one important detail: After she has dismantled her ball and carefully sorted out any large particles, the female scarab reconstitutes it and prepares it to receive the single egg, which, walled up in this exactly sculpted nest, will have to hatch completely alone and undergo the successive transformations into a worm and then a pupa before appearing in the light of day.

4. Horapollo speaks of only one lunation for the gestation of the scarab, whereas the real time that elapses between the burial of the ball and the appearance of the new generation is four lunar months, that is, one pharaonic season, not one lunar month. The first month is given to the brooding and hatching of the egg. The second month corresponds to the phase during which the worm grows and is nourished from the contents of the ball. During the third month—in a striking similarity to the royal mummy wrapped in his bandages—the pupa prepares for rebirth. Finally, when the scarab takes its completed form, “the head and the thorax are dark red except for the teeth, which are toned down with brown. The abdomen is an opaque white, the wing cases are a translucent white, very slightly tinted with yellow. . . . This costume darkens by degrees to form a uniform ebony black. Approximately one month is necessary for the horn armor to acquire a firm consistency and definite color.”¹¹

Now, according to Fabre, twenty-eight days represents the pupal phase. In his studies, this duration was an object of special attention; the time varies, but within the narrow limits of twenty-one to thirty-three days, with the average from about twenty observations being actually twenty-eight days, so that in fact Horapollo spoke accurately, and he found a way to mention in this regard the knowledge of the twelve signs of the zodiac.

5. It is not the scarab, as Horapollo says, that on the twenty-ninth day uncovers its ball and throws it in the water; but since the female forms it around the first fortnight of May in dry earth, this earth must necessarily be wet at the time of maturity in August and September to allow hatching. When Horapollo speaks of the birth of the scarab leaving the ball thrown in water, he alludes to the

⁹ *Hieroglyphica*, 1.19.

¹⁰ Cf. B. van de Walle and J. Vergeote, “Traduction des Hieroglyphes d’Horapollon,” *Extrait de la Chronique d’Egypte*, no. 35 (January 1943): 49.

a) “That which is born alone,” translated here from the word *μονογένης*, which can signify, according to the Church Fathers and the gnostic writers: 1) only son, or daughter; 2) *αὐτογενῆς*.

b) The scarab, *χήρ*, thus represents the verb *khpr*, “to become.”

c) “The father” is perhaps to be compared with *skhpr*, “to cause to become,” “to procreate.”

¹¹ Fabre, *Souvenirs entomologiques*, pp. 84–85.

birth of the world, that is, to what is related in the Heliopolitan Mystery, according to which Ra, as Tum, is born from the primordial waters. Bringing the myth close to reality, we observe that August-September, the period of the appearance of the new scarabs—which can only occur in Europe thanks to the autumn rains—is the time of the high waters of the Nile (the inundation) in Egypt.

PLATE 41 • CRYPT OF DENDERA, THE APPEARANCE OF RA

This plate shows a part of an extremely curious tableau above the entrance door (east) in a crypt of the temple of Hathor at Dendera (fig. 233). The entire scene shows Ra, then Tefnut and Shu, Nut, Hu, the cow Ahat, and again Ra, who is thus represented at each extremity but in two different forms. To the left he is standing with his thighs spread, but his legs are replaced by two forearms, with the hands making the gesture of picking up something. To the right he is represented by a human head, seen from the front but intentionally deformed, suggesting the image of the scarab. The crown of the skull has a scalloped sign above it similar to the one that crowns the hieroglyph signifying the appearance (fig. 234), and that is the stylized reproduction of the head of the scarab, whose eyes are recalled by the small buttons to the right and the left of the base of the crown. The name of Ra is written above in an unusual way.

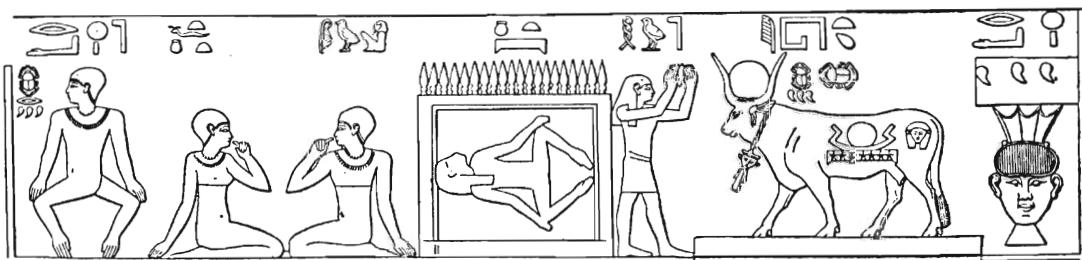


Fig. 233. Appearance of Ra

To the left of this curious figure, the celestial cow, Ahat, bears the face of Hathor carved at the top of its left thigh. Its belly is identified as the starry sky on which the solar barque navigates, the “sun that Nut [the sky] swallows each evening and puts into the world each morning. . . .”¹²

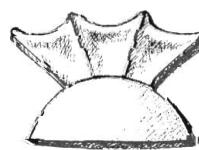


Fig. 234. Stylized hieroglyph symbolizing the appearance of the sun

According to the classical translation this is “a hill from which springs forth the sun in the morning” (phonetic *khā*), whence the expression “appearing gloriously” (*khai*) is derived, which is applied to the king.

¹²The symbol of the cow, as important in Ancient Egypt as in India, is related to Hermetic doctrine through its double digestion and its effect, the nourishing milk, as well as through its lunar nature.

Thus, each morning after its nocturnal course the sun Ra reappears, leaving the primordial waters *nw*. The caricatured face that symbolizes it is a cryptogram uniting the scarab (*kheperr*), the face (*hr*), and the appearance (*kha*) in a single image, alluding to cerebral substance insofar as it is a product of a Hathorian effect. Under this tableau is the text that relates the mythic origin of the plan of this temple.¹³

PLATE 42 • THE DIADEM OF TUTANKHAMUN

Here is the description of Tutankhamun's diadem given by Howard Carter, who discovered Tutankhamun's tomb:¹⁴

... a magnificent diadem . . . completely encircling the king's head—an object of extreme beauty and of simple fillet type. In design it comprises a richly ornamented gold ribbon of contiguous circles of carnelian,¹⁵ having minute gold bosses affixed to their centres, and . . . bordered with a lapis lazuli and turquoise coloured glass pattern . . . with, at the back, a floral and disk-shaped bow . . . inlaid with malachite and sardonyx¹⁶ . . . from which hang two ribbon-like gold appendages similarly decorated. On both sides of the fillet are appendages of a like but broader kind, and having a massive pendant uraeus attached to their front margins [which encircle the ears]. The back pendant ribbons, and the side appendages . . . are hinged to the fillet, and were thus adaptable to the wig over which the diadem was worn.

The insignia of northern and southern sovereignty of this diadem . . . were found lower down, separate, and on the right and left thighs respectively,¹⁷ and as the king lay within the sarcophagus, east and west—his head towards the west—the uraeus of Buto being on the left side [therefore to the north] and the vulture of Nekhebet to the right [at the south], the insignia took their correct geographical position, as did also those emblems on the coffins. Both of these golden emblems of royalty have grooved fastenings on the back, into which fit corresponding T-shaped tongues upon the diadem. They are thus movable and could be fitted on to whatever crown the king might have worn.

The golden Nekhebet, with obsidian eyes¹⁸ . . . is a remarkable example of fine metal-work. The shape of the head [and its particularities] make it quite clear that the bird, representing the Upper Egyptian goddess, was the *Vultur auricularis*.¹⁹ . . .

This diadem must have had a very early origin, inasmuch as it seems to have derived its name *Seshnen*²⁰ and form from the circlet-ribbon worn on the head by men and women of all classes, as

¹³ Text that we cite in chapter 33.

¹⁴ Howard Carter, *The Tomb of Tut-ankh-Amen* (London: Cassell, 1930), 2:110–11, 256.

¹⁵ The carnelian is assigned to the sign of Scorpio, the dwelling place of Mars, and has a feminine character. [Author's note.]

¹⁶ The sardonyx [sard] is a quartz of a fawn-orange color, finer than the carnelian with which it has some similarity. [Author's note.]

¹⁷ Let us note that the name of Tutankhamun is inscribed on the capitals of some columns in the nave at Luxor (the femur). On the other hand, the figures in the tomb of Tutankhamun also place a characterizing accent on the force of the thigh, but the proportions imposed by the size of the head give the royal figure different ages of transformation. [Author's note.]

¹⁸ Obsidian is a stone of the nature of feldspar, of volcanic origin, vitreous in nature and dark green or black in color according to where it is found. Obsidian, according to Pliny, had been discovered in Ethiopia by Obsius, fourteen centuries after Tutankhamun. "This stone is very dark in colour and sometimes translucent, but has a cloudier appearance than glass, so that when it is used for mirrors attached to walls, it reflects shadows rather than images. Gems are frequently made of it. . ." Pliny, *Natural History*, 36.67. [Author's note.]

¹⁹ Or "sociable vulture" of Shelley and Nicoll, corresponding to *Torgos tracheliotus nubicus* in Colonel R. Meinertzhagen, *Nicoll's Birds of Egypt* (London: H. Rees, 1930), 2:428, and to *Autogyps auricularis* or *Autogyps auricou* in A. E. Brehm, *La Vie des animaux* (Paris: Bailliére, 1878–85) 3:476. [Author's note.]

²⁰ The name *seshnen* is only one of the names of the diadem. [Author's note.]

far back as the Old Kingdom, some 1500 years before the New Empire. Moreover, there is evidence enough to show that we may consider it to be among ancient Egyptian funerary appurtenances, since it is to be found mentioned among the coffin texts of the Middle Kingdom, and diadems of this kind are known to have been found thrice in connexion with royal burials: once analagous but not identical, at Lahun, among the jewellery discovered by Professor Sir William Flinders Petrie of a Princess Sat-hathor-iunut of the Middle Kingdom; and twice in the royal Theban pyramid-tombs of the Seventeenth Dynasty—one upon a burial of an Antef, the other mentioned in connexion with the Ancient Egyptian plunderers of the burial of Sebek-em-saf.

It is again appropriate to observe that the uraeus carries the sign of Neith on its chest, and by its undulations the serpent divides the brain and continues to play its dualizing role.

PLATE 43 • SAINT NICASIUS CARRYING THE CROWN OF HIS SKULL

This statue of Saint Nicasius dates from the end of the fourteenth century.²¹ There is another representation of this saint on the north portal of the facade of Reims cathedral, to the right of the "smiling angel." Saint Nicasius, the second bishop of Reims, was murdered by the Vandals in 407. He is represented there also without the skullcap. His two hands are broken, but on his stomach the attachments of the skullcap that he carried in his hands remain. The costumes of these two figures are similar.

Now, Reims is the place of the consecration and the coronation of the kings of France. Here the holy chrism is preserved, which miraculously descended from the sky according to the legend that attributes this gift from heaven to Saint Remy.

The life of Saint Remy has been written by Hincmar, archbishop of Reims.

The birth of this glorious doctor and confessor of the faith had been prophesied by a hermit in the following circumstances. At the moment when the persecution by the Vandals desolated all of France, a saintly, blind hermit prayed ardently for peace for the church of the Gauls. Now, an angel appeared and said to him: "Know that the woman who is called Ciline will bring into the world a son by the name of Remy who will deliver his people from the attacks of the wicked." Thus the hermit, as soon as he awoke, made his way to the house of Ciline and told her of his vision. And as the woman refused to believe it because she was already old and had given up hope of bearing a child, the hermit said to her, "Know that when your child has taken the breast, you only have to rub my eyes with the milk that I might immediately recover my sight!" And indeed all came to pass in this fashion.²²

From his youth, Remy avoided the world and entered into a monastary. But at twenty-two years of age, his renown, which grew unceasingly, caused him to be chosen by the people to be archbishop of Reims. And he was a man of such sweetness that when he ate, the sparrows came to his table and he fed them from the palm of his hand. One day, he visited the house of a woman, and saw that there was no more wine there. Saint Remy entered into the cellar, and made the sign of the cross on the wine barrel; suddenly the wine sprang forth in such abundance that the entire cellar was flooded.

Clovis, the king of France, was then pagan, and his pious wife was not able to lead him to conversion. But one day, seeing himself threatened by the immense German army, he made a vow to the

²¹ The statue belongs to Mme. Hein, antiques dealer, 48 rue de Lille, Paris. Cf. chapter 15, "Diadem, I Assume Thee."

²² Cf. the legend of the eye of Horus being cured by Hathor with the milk of a gazelle, chapter 44, p. 1016.

God his wife worshiped. He would convert if God would grant him victory over his enemies. And God gave him the victory, so the king conveyed himself into the presence of Saint Remy and asked to be baptized. But arriving at the baptismal font, the bishop and the king found that the holy chrism was missing. But there was a dove hovering in the air carrying an ampule full of holy chrism in its beak, with which the prelate anointed the king. This ampule is preserved in the church at Reims, where it still serves today at the coronation of the kings of France.²³

Reims cathedral, begun in 1211 on the plan of Jean d'Orbais, replaced the church where Clovis was baptized. That church had been constructed by Saint Nicasius about 400 and was destroyed in 1210 by a fire.

"In the pavement of the nave, spanning the distance beneath the third and fourth ribs, there was formerly a labyrinth, in the center of which the four architects who can be considered as the authors of the monument were represented. It was removed in 1778, but ancient manuscripts have preserved the text of the inscriptions that accompanied these figures."²⁴ We have already seen the importance of this labyrinth based on the essential functions of the *canevas*.²⁵ In the image of this labyrinth, the two towers of the facade of the cathedral have an octagonal plan flanked by four turrets that rise up above the gallery of the kings.

"At Notre Dame of Reims, the balustrade above the promenade of the chevet and of the radiating chapels is unusually high and is proportionately out of scale, and causes the apse to wear a double crown. Now, the apse most often forms a semicircle, and "the apsidal sanctuary is the mystic 'pillow' of Our Lord, and the altar represents the head."²⁶

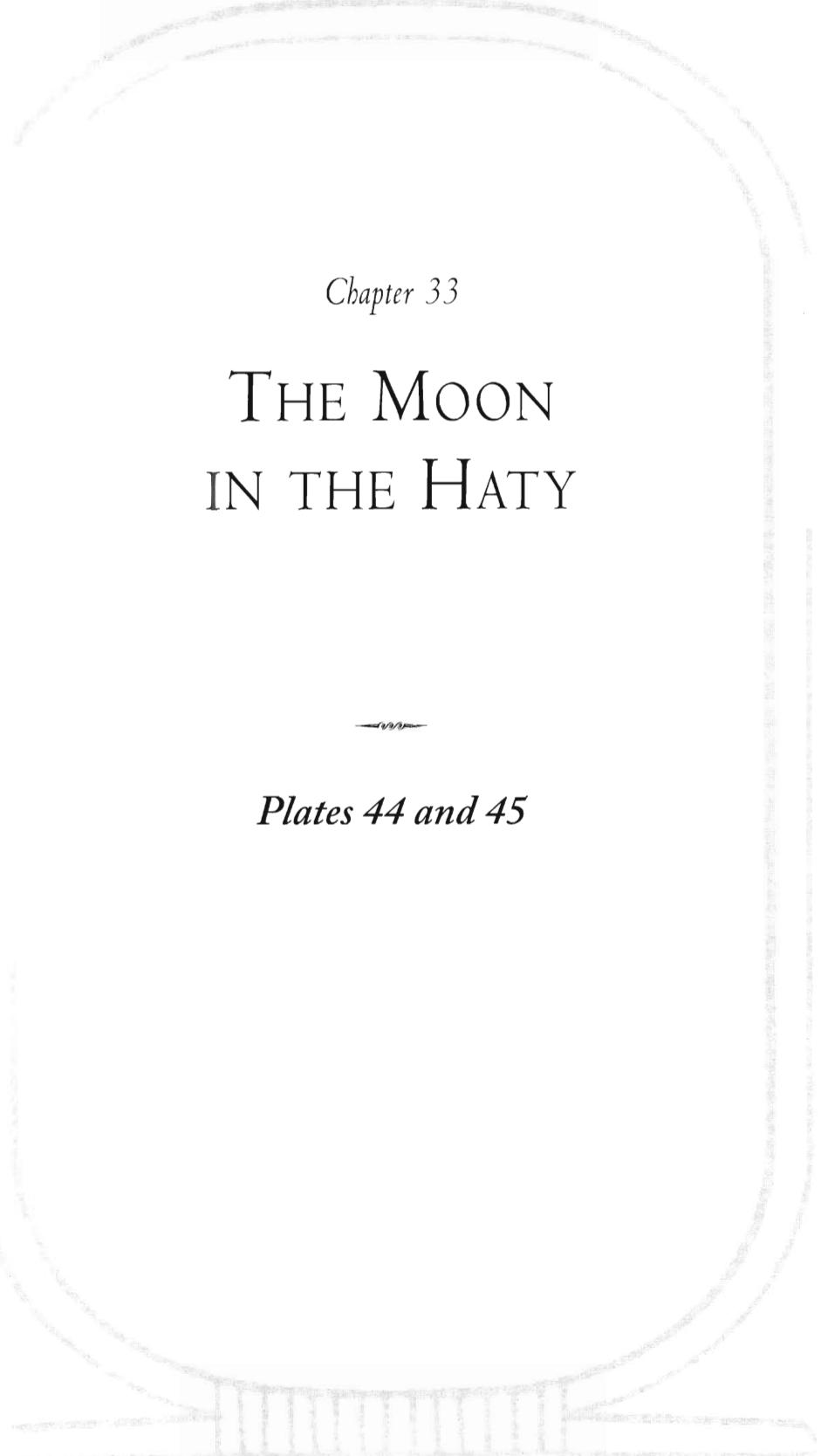
In a gothic cathedral the choir is always elevated by several steps. Now, at Reims a high walkway surrounds the whole choir and forms a curve a *segment of whose arc is cut* at the upper part of the choir. This recalls the front surface of the pedestal on which the scarab of Karnak rests; there a segment of the circle is also cut. These two removed sections of the curve symbolize the removal of the crown of the skull, both on the pedestal of Karnak and in the cathedral of Reims, where, during the royal sacramental ceremonies, personal thought is symbolically replaced by the crown.

²³ *La Légende dorée du Bienheureux Jacques de Voragine*, trans. Teodor de Wyzewa (Paris: Perrin, 1910), pp. 76–77.

²⁴ R. de Lasteyrie, *L'Architecture religieuse en France à l'époque gothique* (1926), 1:69.

²⁵ Cf. vol. 1, fig. 95b.

²⁶ L. C. Dezobry and T. Bachelet, *Dictionnaire général de biographie et d'histoire de mythologie, de géographie ancienne et moderne comparé* (Paris: Delagrave, 1889).



Chapter 33

THE MOON
IN THE HATY

Plates 44 and 45

*There is no function in the Universe that in its
humanly energetic, psychological, psychic, and
mental form cannot be observed and recognized by
the human being. But the key is reason. This is
why the pharaonic sages . . . have attributed a
neter, a cosmic principle, to each part of the
human body, its organs and vital functions.*

(Chapter 3)

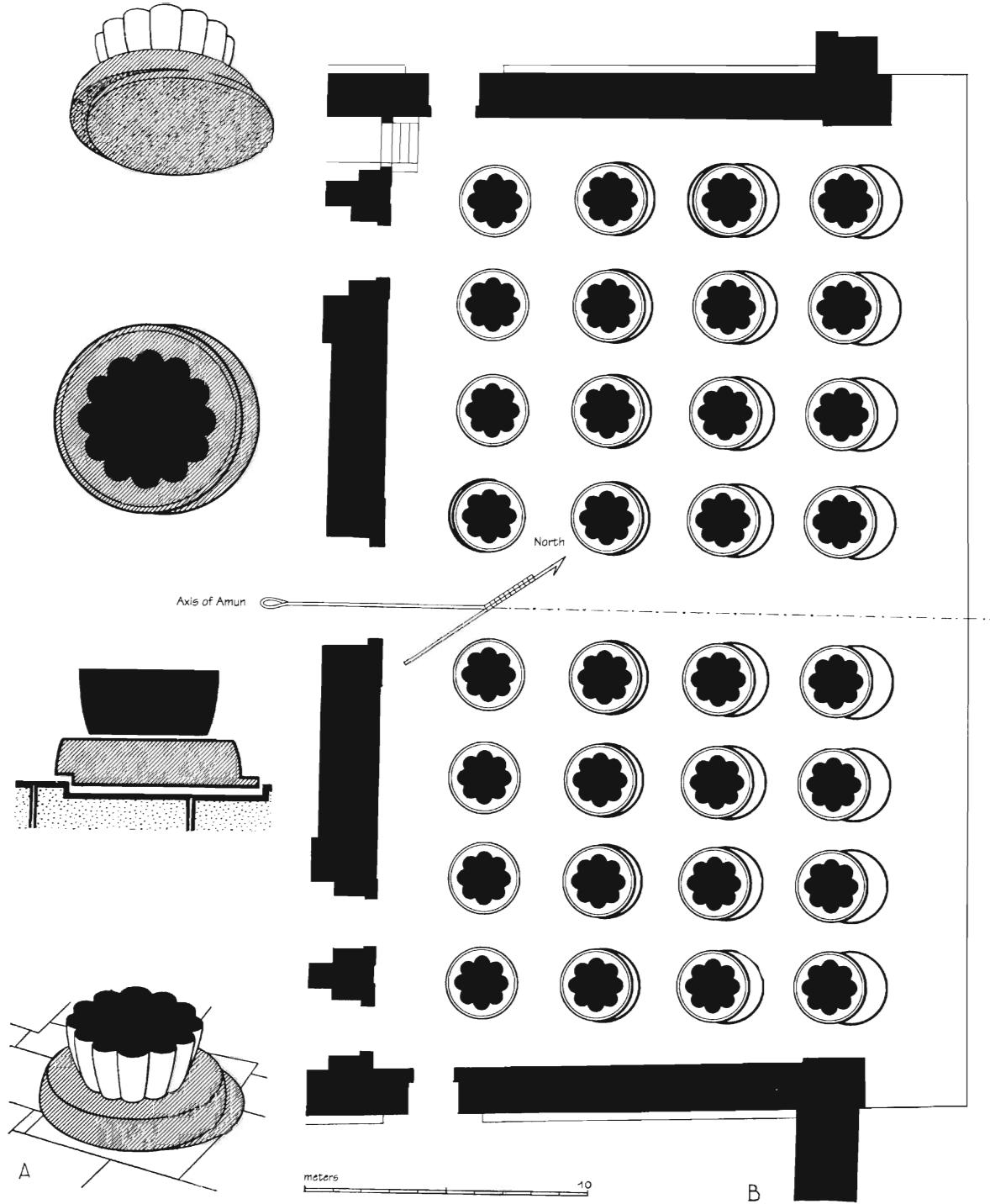


PLATE 44

The Lunar Crescents in the Hypostyle Room of the Covered Temple

*Whether it is a natural or a compound image,
or a conventional sign, the property of the
symbol is to be a summarizing representation,
which is commonly called a synthesis.*

(Chapter 2)

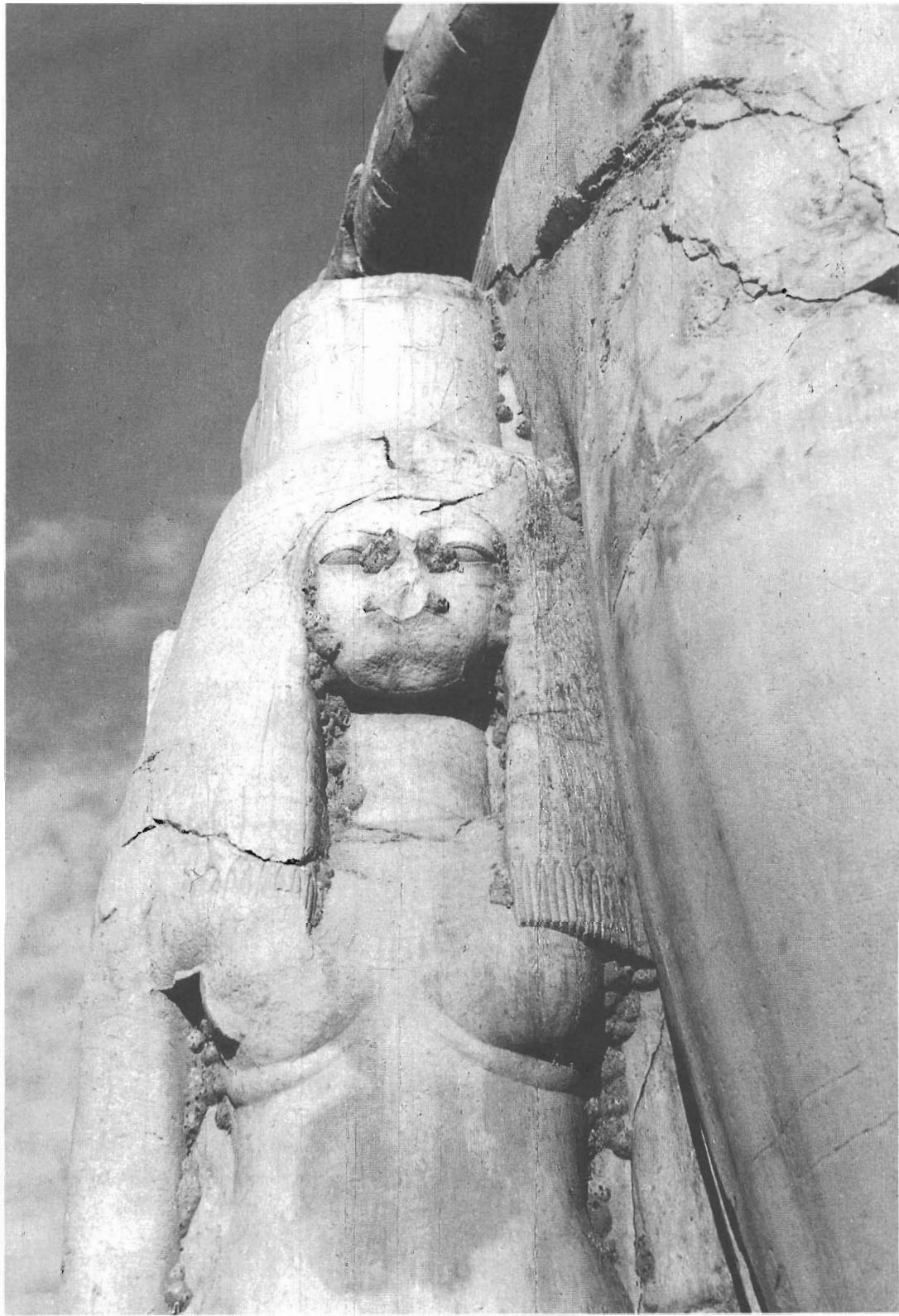
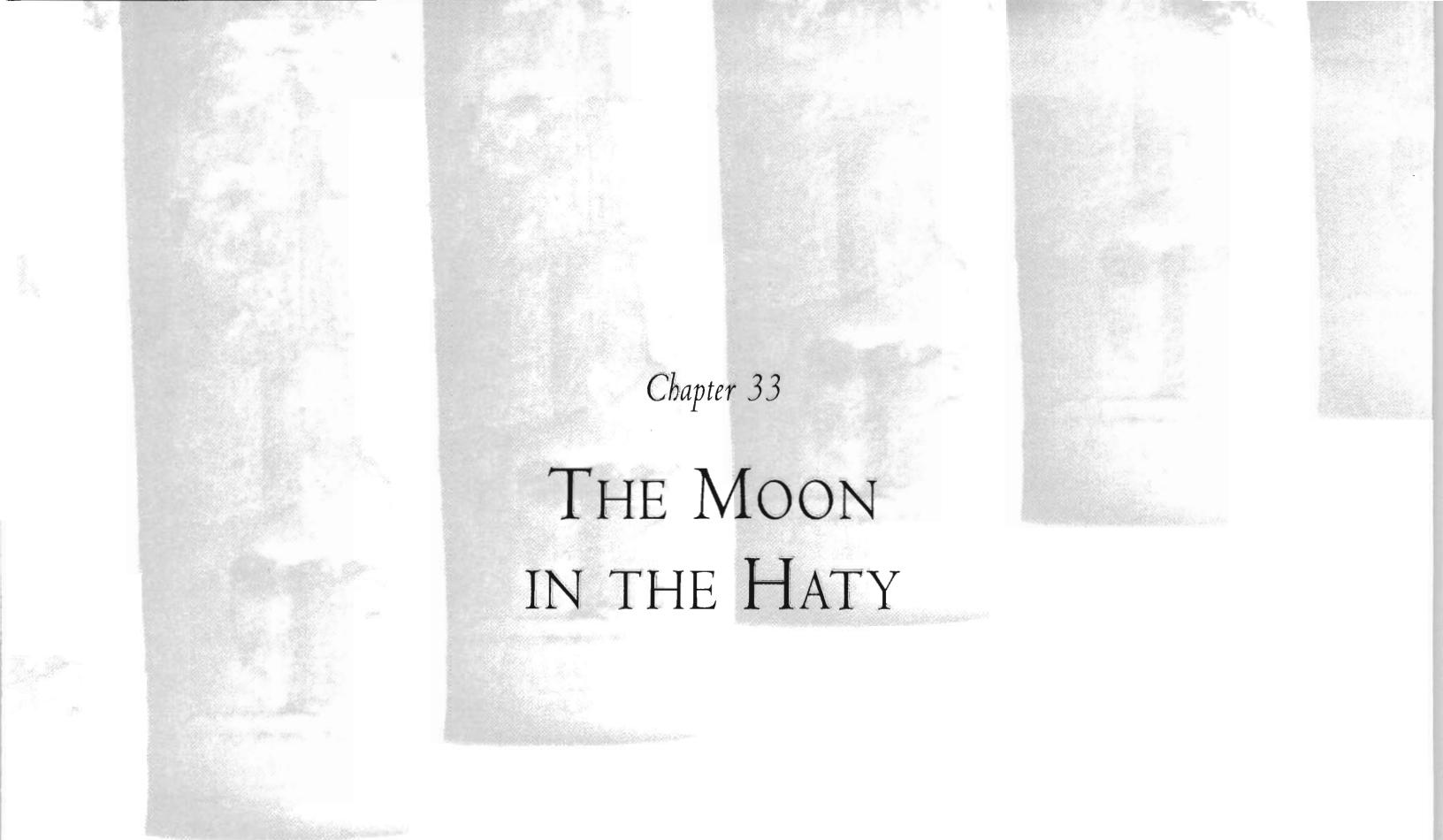


PLATE 45

The Lunar Crescent and Femininity



Chapter 33

THE MOON IN THE HATY

Here in the *haty* we are at the place where, through respiration, the joining of spirit with body is accomplished. It is the place of the second animation through the breath, birth into this world; it is here and here alone that we find the great inscription of which there is but one other known example, that of the temple of Tuthmosis III at Medinet Habu (west bank, *amenti*, of Thebes).

The two texts are identical and graphic variations are practically nonexistent. . . .

As will be seen, we have more here than a text of "Giving the House to Its Master";¹ it is also more than a text for "consecration of the temple" (*Hausweihe*, according to Sethe); it is a ritual foundation of the temple in a very concise form, a kind of summary, beginning with the scene of "stretching the cord" and concluding with the consecration of the divine dwelling through the sacrificial ritual.

This extremely concise, archaic ritual leaves no apparent link that relates the sentences to one another. . . .²

In order to understand better how a single word of this inscription can summarize a whole group of ritual gestures, and the reason why it is carved precisely in this place in the temple, we believe it is necessary to give here a summary description of the foundation ritual as the bas-reliefs show it in some temples of the Late Period. These bas-reliefs transcribe in imaged form facts either observed during the course of certain recent excavations or recounted in various ancient texts.

The dedication that encircles the "tank" on which the covered temple of Luxor rests informs us about the author of this monument:

Long live Horus, victorious bull, appearing in truth [Kha-m-maāt], who maintains the laws, who pacifies the Two Lands, golden Horus, of the victorious arms that crush the Asiatics [Setiu³], *neter*

¹ The traditional formula is found again at the top of our text: "How beautiful this dwelling is! There is no dwelling equal to it."

² P. Barguet, "Le Rituel archaïque de fondation des temples de Médinet Habou et de Louqsor," *Revue d'Egyptologie* 9 (1952): 2–3.

³ Setiu, or Sethians, implies "who crushes the wicked" (the burning fire).

*nefer . . . eldest son . . . inestimable egg [ikr] of Amun, reared⁴ in the castle . . . master of the Two Lands, master of the rites, Nebmaātre, son of Ra from his belly, his “beloved” master of appearances, Amenhotep, prince of Thebes, he has made in foundation [monument, *mnw*] for his father Amun . . . the sublime Apet, his great place of the first time, in perfect works of eternity . . .⁵*

Thus it is the king, the master of the two crowns and of the laws and rites, to whom the building of this temple whose name is Apet of the South is attributed. We only have to read his titles to know that as the “son of Ra,” the God-chosen, this king has the right to build. Now, all the texts relating to the building of a temple represent the king as the active power, acting in the name of his father, “Universal Master.” When the king is spoken of in these sacred texts, it is well understood that the royal person is only a symbol of the True King, the universal son of Ra, because the limited power of terrestrial kings is only a pale reflection of the omnipotence of the True King.

Myth says that when the *neters* (the gods) reigned, a “book of foundation for the temples of the *neters* of the first Ennead” was drafted by Imhotep, son of Ptah. This book was carried away to the heavens by the *neters*, but Imhotep “let it drop to the north of Memphis.” The temple at Edfu was erected in the Late Period following the prescriptions of this book, which was used to establish its “great plan.”⁶

In one of the crypts of the temple of Dendera, a text attests to the divine origin of the plan of this temple, executed “following a general plan written in ancient script on the skin of a goat at the time of the servants of Horus.”⁷

Thus the divine origin of the prescriptions according to which the plans of the temple were drawn is attested to in monuments of the Late Period and confirmed by the more ancient texts. Now, it is the king, consecrated and crowned, the inspired one, having set aside his “personal thought,” who transmits the divine will to man throughout the phases of the empire. A manuscript on leather from the Twelfth Dynasty relates the remodeling of the temple of Ra at Heliopolis following the prescriptions from a “divine book.” This manuscript describes the great council held by the king for this occasion and the ritual words pronounced; then, crowned with the royal headband, the king leaves the temple and completes the foundation ritual, whose most often represented essential gesture is of “stretching the cord” and planting a stake in the earth.

The two hypostyle rooms of the temple of Edfu show several operations that we must give here in no specific order, as some of them are found there several times in various sequences:

- The departure of the king preceded by the instructions and by Iunmutef.
- The king and Seshat, mistress of the divine books, each with a mallet with which they strike a stake into the earth. This scene is called “stretching the cord between two stakes.”
- The king hollows a furrow with a pickax.
- The king pours out the contents of a barrel.
- The king grinds up a brick.
- The king offers a row of small bricks on a platter.
- The king encircles the temple with grains of incense.
- The king “gives the house to its master.”

⁴ Literally, “nourished at the breast.”

⁵ From an unpublished translation by Alexandre Varille.

⁶ From Alexandre Moret, *Du Caractère religieux de la royauté pharaonique*, Annales du Musée Guimet 15 (Paris: Leroux 1902), pp. 130–31.

⁷ Ibid., p. 131. The servants of Horus relate to the mythic, prehistoric period.

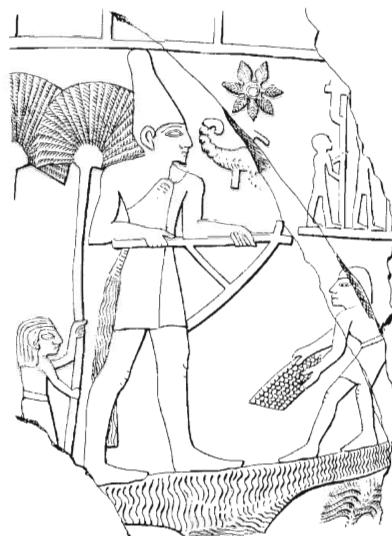


Fig. 235. King "Scorpion"

Fragment from the head of a limestone club. Cf. J. E. Quibell, *Hierakonpolis* (London: Egyptian Research Account, 1900), part 1, plate 26c.

To this is added certain purifications and ablutions as well as the "ritual run." At Soleb (Nubia), in a temple of Amenhotep III, the king knocks on the door of the sanctuary twelve times, then brings a fire into the temple and purifies the naos "by illuminating it four times with a lamp lit by the sacred fire."⁸

The oldest representation of an inauguration scene, which goes back to the Predynastic Period, has been found at Hierakonpolis. King "Scorpion,"⁹ wearing a white crown, holds the plow in his two hands, while a smaller figure in front of him holds a kind of basket (fig. 235). Beyond them, another figure holds a bundle of wheat stalks. The ground upon which the king's feet are placed shows undulations, signifying that it is flooded soil.

By itself this simple scene summarizes one of the essential phases of the foundation ceremony that the latest excavations at North Karnak have allowed us to observe.¹⁰ The foundations were made by cutting trenches over the entire ground. In the lower part of these trenches, traces of a hoe have been observed, which suggests the image of Ra "digging with a hoe" and confirms the texts. On an architrave of the Ramesses court in the temple of Luxor can be read: "a great foundation trench [*mdwt*] has been hollowed by Seshat, lady of the master builders."¹¹ Moreover, at Edfu it is specified that the king digs with a hoe down to the water level for the perfect temple.¹²

⁸ *Ibid.*, p. 139.

⁹ It is conceivable that by means of King Scorpion a date of the year was specified, the month ruled by Scorpio, October 21–November 21, the eighth month after spring. It is also the eighth month of human gestation, the time of renewal in preparation for birth at nine months, November 21–December 21, Christmas, and the Khoïak festivals in Egypt.

¹⁰ Cf. Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, p. 9 et sqq., concerning the excavation of a Ptolemaic portico containing four rows of columns resting on four bases whose foundations have been carefully studied, measured, and drawn.

¹¹ Legrain, *Le Logement et le transfert des barques sacrées*, p. 60.

¹² This scene is located on the exterior of the surrounding wall, and in the two hypostyle rooms. Cf. Emile Chassinat, *Le Temple d'Edfou*, 15 vols. (Cairo: I.F.A.O., 1897–1985), 2:60; 3:106, 166; 7:45.

The last assertion specifies that the trench must reach the level of the underground water; now, in this instance it can only be the infiltration water corresponding to the high-water level of the Nile. The excavation mentioned above actually proved that the foundation trenches had contained a small quantity of water.

The footprints of those who walked in this mud have been noted and plaster molds taken. They are particularly clear in foundation A, where several people, one of whom was a child, were moving about, some with bare feet, some in sandals. One of them bent down and his pleated loinloth impressed its mark in the ground. The presence of people wearing sandals seems to indicate that some of those present were more important than simple workers. A block from the red chapel of Queen Hatshepsut, for that matter, shows priests proceeding with their feet sunk below ground level, which is marked by an incised straight line.

All around the partitions of the trenches, about 40 centimeters above the bottom and parallel to the water level contained in the various foundation basins, lines have been drawn that are by definition perfectly level. . . .¹³

Above these lines, some reference points painted in red were also found. Thus the water served as the reference level for the construction of the temple. This explains the surprising levelness of certain monuments, as, for example, the base of the first pylon at Karnak, which through its length of about 112 meters is rigorously horizontal. It is not off by even a centimeter (a fact that can be verified only with the help of our modern instruments).

After this first operation, represented on the monuments by the king holding the pickax or hoe in his hand, the bottom of the trench was re-covered with sand. The excavation at North Karnak even allows us to determine that this sand must have been poured starting from a particular place. The bed of sand is about 30 centimeters thick, and contained various small bricks, the arrangement of which was different for each of the foundations: "In one there are three small bricks of white material covered in gold leaf. These bricks determine the three apexes of a large right triangle. There is also a fourth brick of green material. . . ."¹⁴

On the depictions we indeed see the king grinding a brick or bringing some small bricks of earth or metal¹⁵ "to establish the four corners of the temple." The earthen bricks symbolize the union of earth and water; the small bricks covered in gold and those of the green material found at North Karnak symbolize accomplishment and plant growth.

Excavations made in the buildings from all periods reveal that foundation deposits were a standard rite, but that each deposit was in accordance with the symbolism of its particular place. Thus, we can see that the temple of Mentu at Medamud, dedicated to the bull at the period corresponding to the sign of Taurus, contained, among other foundation deposits, four long-horned cattle heads.¹⁶ In other places one observes the presence of such things as charcoal, fragments of stones, various sacrifices, and so on. For example, at Karnak, at the temple of Mentu, a deposit with the

¹³ Cf. Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, p. 11. After more than twenty centuries, it is extremely moving to be able to relive this foundation scene through the imprints left in muddy earth, thanks to the minute care brought to the excavation by Clément Robichon, to whom belongs the credit for uncovering an entire temple of unbaked bricks, in the same earth used to form the bricks. It is a unique work of excavation in the annals of archaeology and a fine example to follow.

¹⁴ Ibid., p. 12.

¹⁵ Also at North Karnak a foundation deposit has been found that contains, along with a gold brick, gold in all forms, fashioned into wires, plates, strips, etc.

¹⁶ Cf. legends of plates 50 and 51.

name of Taharka (from the period that corresponds to the last decan of Aries) contained, among other objects, "a head of a herbivore (length 0.25 m, width 0.10 m, approximately) with the crown of the skull cut off, the muzzle turned toward the east, and south of the head a leg of the same animal, a shoulder blade to the west, and bones folded up in a right angle with respect to each other."¹⁷

Finally, one of the essential operations, summarized under the title of "stretching the cord," consisted of determining the orientation of the temple. At Edfu, the king speaks thus in the presence of Seshat: "I have taken the stake and the mallet by the handle, I have grasped the (measuring) rope with the goddess Sefekht; my gaze has followed the course of the stars; my eye has turned toward the Great Bear; I have measured time and counted (the hour) with the clepsydra, then I established the four corners that define the temple."¹⁸

The precision of this text is very important because it specifies that the king looks at the movement of the stars and the Great Bear, an allusion to the circumpolar stars that the Ancients called "the Indestructibles." By taking a sighting on one star of the Great Bear at a determined hour of a determined day, one specifies this day of the year, because the circumpolar stars make a complete turn around the Pole Star in a year. The further the star is from the center, the easier it is to specify the date. The seven-starred constellation of the Great Bear is an obvious choice for a sighting star.



Fig. 236. Seshat and the king stretching the cord between two stakes

¹⁷ Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, p. 38. It is undoubtedly a bovine head.

¹⁸ From Brugsch, cited by Moret, *Du Caractère religieux*, p. 132.

At the temple of Seti at Abydos, Seshat expresses herself thus:

I have grounded it with Sokaris; I have stretched the cord for the placement of the walls; while my mouth recited the great incantations, Thoth was there with his books . . . to establish the enclosure of its walls, Ptah-Tatanen measured the ground and Tum was there. . . .

The mallet in my hand was of gold; with it I struck the stake, and thou, thou wast with me in the form of Hunu, thy two arms held the hoe. Thus the four corners were established as solidly as the four pillars of the sky. It was Neith who pronounced the charms [sa] and the protective formulas for the temple, and Selkit placed her hand on these works made for eternity.¹⁹

The text inscribed on the second register of the east wall of the hypostyle room of Luxor is far from being very explicit, because only the first sentences are directly related to the ritual scenes that we have just described.

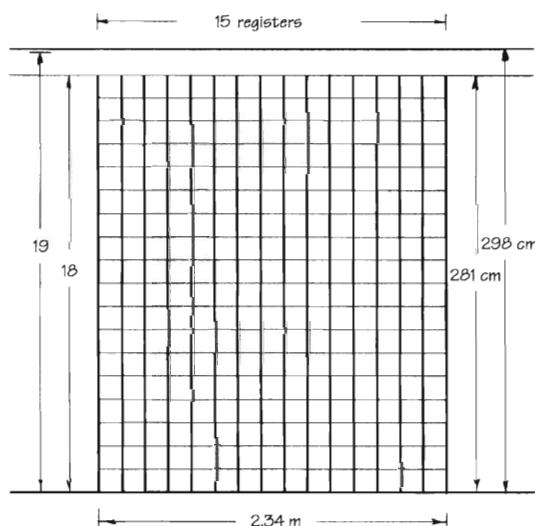


Fig. 237. Proportions of the surface bearing the text of "Giving the House to Its Master," second register of the east partition of the hypostyle room of the temple of Luxor.

This text is written on fifteen columns. Each has an average width that can be taken eighteen times in the height of the inscription. The text is bounded on its upper edge by a joint of horizontal stones. The bottom of the sky defining the tableau is 19.1 units from the baseline.

$$\text{Width of one column: } \frac{2.34 \text{ meters}}{15} = 15.6 \text{ centimeters}$$

$$\text{height of text: } 15.6 \text{ centimeters} \times 18 = 280.8 \text{ centimeters}$$

$$\text{height of sky: } 15.6 \text{ centimeters} \times 19.1 = 298.0 \text{ centimeters.}$$

Here, the function evoked is: $\frac{298 \text{ centimeters}}{234 \text{ centimeters}} = 1.2735\dots$, comparable to the coefficient of $4/\pi = 1.2732\dots$.

¹⁹ Ibid., pp. 132–33. In the first place, the ritual of the cord includes the *mystical definitives of the enclosure* on which the temple will be built, thus that which will keep this place at the center of the Two Lands. This process recalls the magic circle drawn to make an area taboo.

After having asked for the keeping of silence before Buto, then for listening and holding still, it is prescribed that King Nebmaātre pronounce the eulogy to the dwelling without equal four times for his father Amun. Then the word is given to the *neters* themselves: “‘Read thy formula!’ say the gods of the marshes and of the papyrus thickets. ‘That thy string bends the two stakes!’ says Seshat, mistress of incantations, who has carried the two lords.”²⁰

As previously said, there is an allusion here to the “scene of the cord,” in the course of which, by the sighting of the stars of the Great Bear, the orientation of the temple is determined. This gives true north as the reference. Now, the fact that the temple of Luxor represents Man justifies the inscription in the part corresponding to the *haty*—that is, the lungs and the heart—of this very rare Hermetic text that is replicated in the Eighteenth Dynasty temple at Medinet Habu. According to the Theban tradition, it is related to the primordial gods buried in this place.

Moreover, the concise phrase “read thy formula” is to be understood as the formulas recited by Thoth or Sia at the time of the construction of a temple.²¹ Thoth, *neter* of the Moon, Thoth, who is found “in his nome” on the royal cubits, the master of all measures, Thoth, the lunar principle (Mercurial), cannot be absent from this work. He brings measure, that is to say, the “materiality” that determines or makes the abstract gifts of the evoked *neters* tangible.



At the height of the Man of the Temple’s breasts, the columns in the hypostyle room in the covered temple of Luxor have socles for bases that, through a very particular characteristic in the cut of the stone, allow the understone to form a crescent-shaped border (plate 44). The bases of these columns, like the rest of the superstructure, rest directly on the pavestones of the platform, while the crescents are embedded in it. The lower disks were not very thick and neither was the ledge very large. The bases at Luxor, which unfortunately have been cemented over in the modern era, no longer allow the ledges to show. We can see only the crescent-shaped cavities roughly outlined in the pavement; they are about 7 centimeters high.²²

The detail of a base of a similar column found intact at the temple of Mentu at North Karnak allows us to affirm that these crescents were intentional and therefore have a symbolic purpose. The cylindrical socle shows an offset flat disk at its lower base, *cut out of a single block of stone* along with the socle proper (plate 44A, the socle of the columns at Mentu seen from different angles).

The sizes of the crescents of the four rows of columns increase going from south to north. Related to this intentional use of the lunar qualities of the nourishing breast—that is, lymphatic, white, Thotian—we notice the folds marked under the breasts on the statue of the queen that touches the calf of the south colossus in the funeral temple of Amenhotep III (colossus of Memnon, Thebes, plate 45). The bases of the columns in the hypostyle room at Luxor represent the occultation of one disk by another.

²⁰ Cf. Barguet, “Le Rêve archaïque de fondation,” p. 8 and note 3: “We understand that the cord bends the two stakes in the manner of a bow; the classical formula is ‘to stretch the cord between the two stakes’” (Chassinat, *Edfou*, 2:31). The word translated here by “the two stakes” is written in the texts of both Luxor and Medinet Habu with the sign of a necklace, which can also signify gold. The two lords are Seth and Horus.

²¹ Ibid., note 1, suggests the kinship between the word here translated by “formula” and the word that begins all the cases of the Surgical Papyrus: “Instructions concerning . . .” A word formed from the same root “is used in speaking of the formulas recited by Thoth, or Sia, at the time of the construction of the temple.”

²² This had led to the belief that these columns had moved.

There is evidently a relationship between the nourishing breast and milk and the celestial, nourishing cow. Now, "to nourish" means to cause growth and corporification.

The *haty* is the place of respiration and of the heartbeat, the diastolic and systolic movements that symbolize volume. This movement of the chest of the *haty*, which nourishes with air and blood and is associated with maternal nourishment and with the Thotian symbol of celestial nourishment, perfectly accounts for the choice of this place for the text of "Giving the House to Its Master." Furthermore, the room in which this text is inscribed has a geometrical relationship to the function of the growth of volumes,²³ becoming thus a true masterpiece of symbolism.

The text of the consecration of the temple of which we have just spoken is carved on the second register of the east partition of this room. The orientation of this wall with respect to north is about $32^{\circ}12'$, an orientation very particular to this partition, which is not parallel to any of the three axes inscribed in the floor. If we consider the hypostyle room as a rectangle whose sides are parallel and perpendicular to this wall in their orientation, the width of the resulting rectangle is the distance between the north face of the platform and the threshold of room VIII; the length is the distance between the two interior ledges of the east and west walls.

This rectangle is characterized by the fact that one of its diagonals is oriented exactly east-west. Thus, in dropping a north-south perpendicular from one of its corners, we obtain a cross with four unequal arms that are in a proportional relationship and that grow from 1 to 4, the values of its extremes. Interposed between 1 and 4 are two geometric means that by definition are its $1/3$ and $2/3$ powers (fig. 238).

The centers of the two circumferences, necessary to prove this growth of volume, are found on the axis of the room, perpendicular to the text of the consecration of the temple. Starting from this text, the extension of this axis crosses the Nile and passes through the temple of Medinet Habu located on the west bank, where the only example of an identical text is found. Now, the text of Luxor is retrograde and in some way plays the role of a reflection, as if each column of the text were turned around.²⁴

The synthesis of the numbers, measurements, and texts gathered in this place, the *haty*, evoke the phrase of the Surgical Papyrus: "To measure [to examine, *kha*] . . . as one counts [*ip*] with a barrel [*ipt*] . . . as one measures [*kha*] a sick man in order to know the pace of his *haty*."

Since the text of the consecration of the temple is carved on the east partition of the hypostyle room of Luxor, and leads us to Medinet Habu by the perpendicular of its orientation, it is interesting to note that at Medinet Habu, in the sanctuary of the temple of Tuthmosis III in which the same text is carved, there is a curious irregularity through the arrangement of the tiles of its roof. Instead of being placed all in the same direction and held up by architraves as everywhere else, these tiles are *perpendicular to each partition*. Through this turning movement we are reminded of the oscillating squares.²⁵

²³ Cf. chapter 9. Notice that the number of columns in the hypostyle rooms increases according to the geometric progression of 2. There are four columns in the offering room, eight in the second hypostyle room, two groups of sixteen, or thirty-two, in the *haty*, and finally 64 columns in the peristyle court (the number of the subdivision of the *beket*).

²⁴ There are two examples on this wall of "right hands holding the *sekhem* scepter," which are shown in plate 93, 6 and 7.

²⁵ Cf. chapter 9.

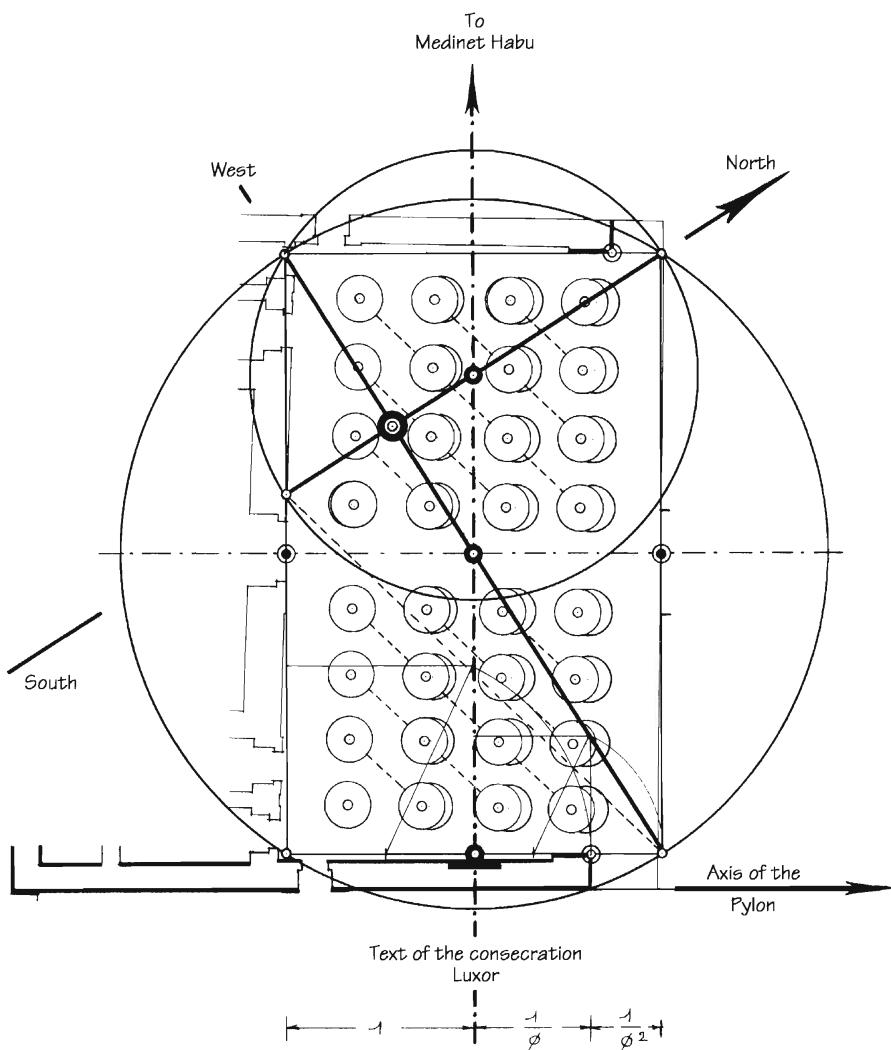


Fig. 238. Plan of the hypostyle room of the temple of Luxor.

The extension of the east wall toward the south ends at the level of the wall marking the clavicles; its extension toward the north ends at the axis of the pylon.

The rectangle defined by the parallel and perpendicular lines to this wall is as 1 to 1.5874, or the cube root of 4. The diagonal of this rectangle is oriented east-west. The north-south perpendicular defines the cross whose branches are to each other as $1 : \sqrt[3]{4} : \sqrt[3]{16} : 4$. The columns are parallel to the hypotenuse of the 1 to 4 triangle (*dashes*).

This arrangement determines toward each corner, by changing the direction of the tiles, four points that are common to three tiles, and without support. Four columns dating from the period of Achoris were made of older column drums, many of which are in the name of Tuthmosis III. These possibly replace columns of an earlier period and prop up the ceiling under these four points (fig. 239a).

Finally, notice that the orientation of the axis of the *haty* following the west bank of the Nile is also the one that leads to the temple of Amenhotep, son of Hapu—the wise master builder of Amenhotep III—because the axis of this temple is parallel to it, that is, it has the same angular relationship to north.

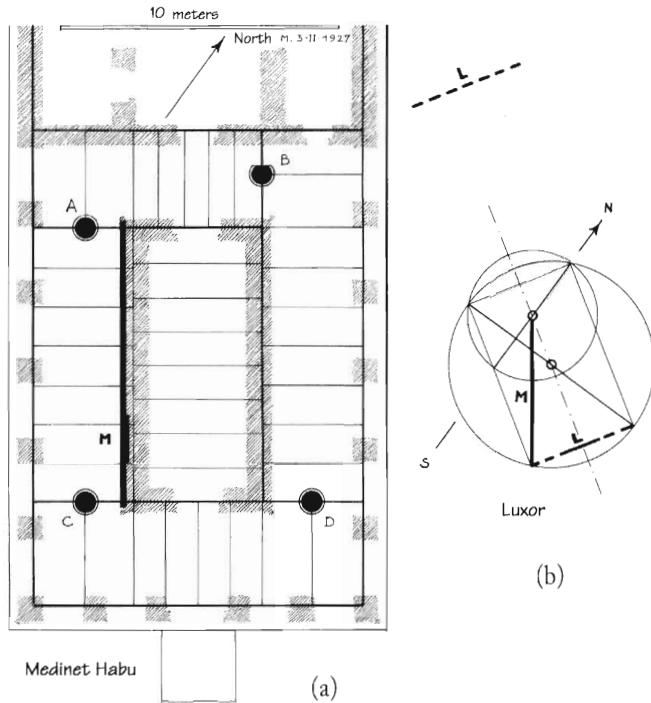


Fig. 239. (a) Diagram of the roofing of the temple of Tuthmosis III at Medinet Habu; (b) diagram of the directional rectangle of the hypostyle room of Luxor.

The semidiagonal of this rectangle serves as the radius of the circumscribing circle. Half of the (N-S) perpendicular to this diagonal is the radius of the small circle.

L is the position of the consecration text at Luxor; M is the orientation of this same text at Medinet Habu.

The right triangle formed by the hypotenuse M and the half-base L is $2.5448\dots$ on its perpendicular, when the base is 1.

It is curious how close this number is to the two functions of ϕ and π . If we call this new relationship a :

$$\sqrt{\phi} = 1.272\dots \text{ and } 2\sqrt{\phi} = 2.544\dots$$

$$\frac{1}{2}a = 1.2724\dots \text{ and } a = 2.5448\dots$$

$$\frac{4}{\pi} = 1.2732\dots \text{ and } \frac{8}{\pi} = 2.5464\dots$$



The geometry that we have just presented for the room of the *haty* at Luxor provides the key that allows us to draw the value of the volumes directly on a surface.

By being extended several kilometers, the axis of the room of the *haty* gives the axis of the temples on the other bank of the river, demonstrating that it is not a question of a geometry pertaining to one monument or to one detail of a partition, but a geometry that radiates throughout the whole country, linking together the essential points of the sanctuaries.²⁶

²⁶ We will discuss this again in a future work on "mystical geography." [Never completed.]



Chapter 34

THE KNEES

Plate 46



. . . all initiatory temples are founded on the principle of Anthropocosmos, that is, “man as Universe,” the anthropomorphization of divine thought, whether in its totality or in one of the cosmic functions innate in man, the ultimate product of Nature.

(Chapter 3)



PLATE 46A

East Seated Colossus, Court of Ramesses

From the moment that a measure lays claim to having a cosmic character, it must be based on a general function in order to be established, and on experimental, and therefore verifiable, data in order to be defined. We present here the exoteric elements of the question.

(Chapter 10)

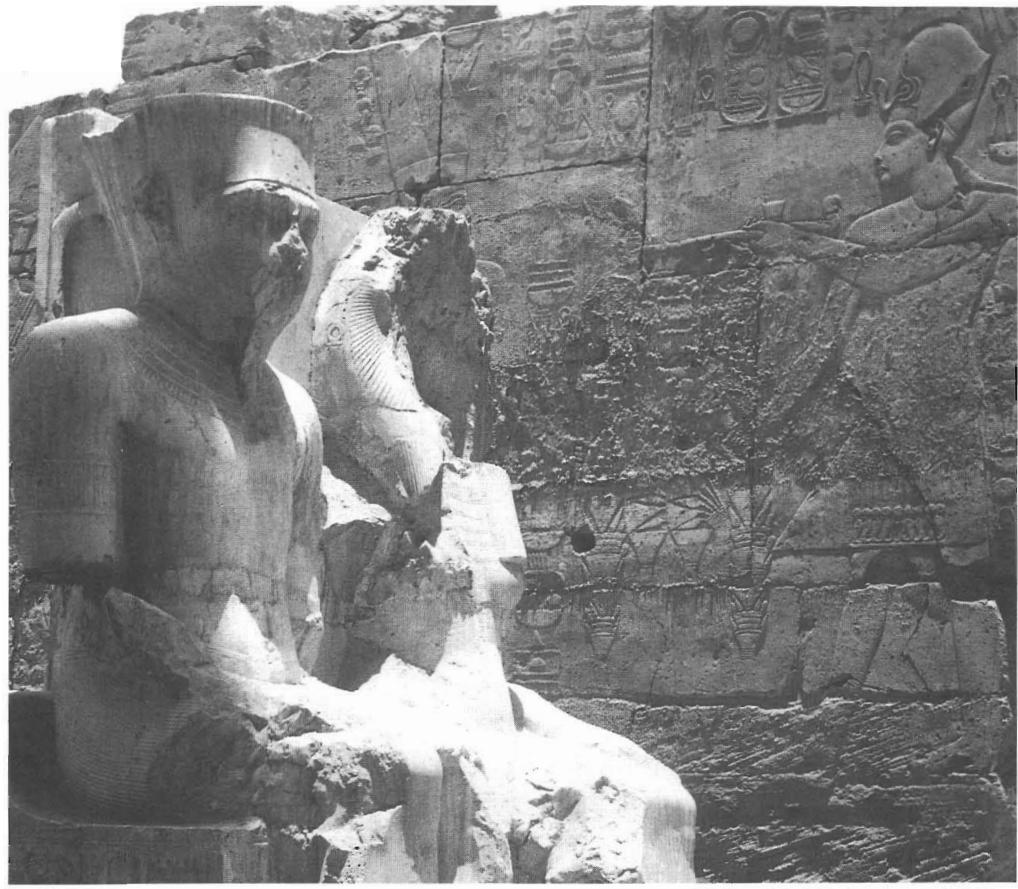


PLATE 46B

Statue of Amun and Mut

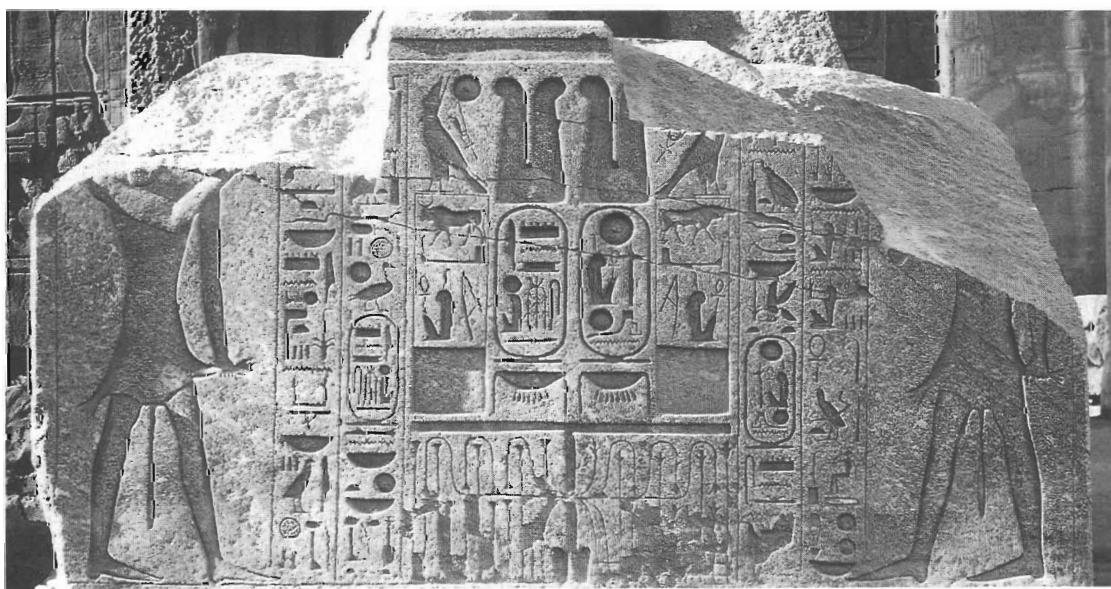
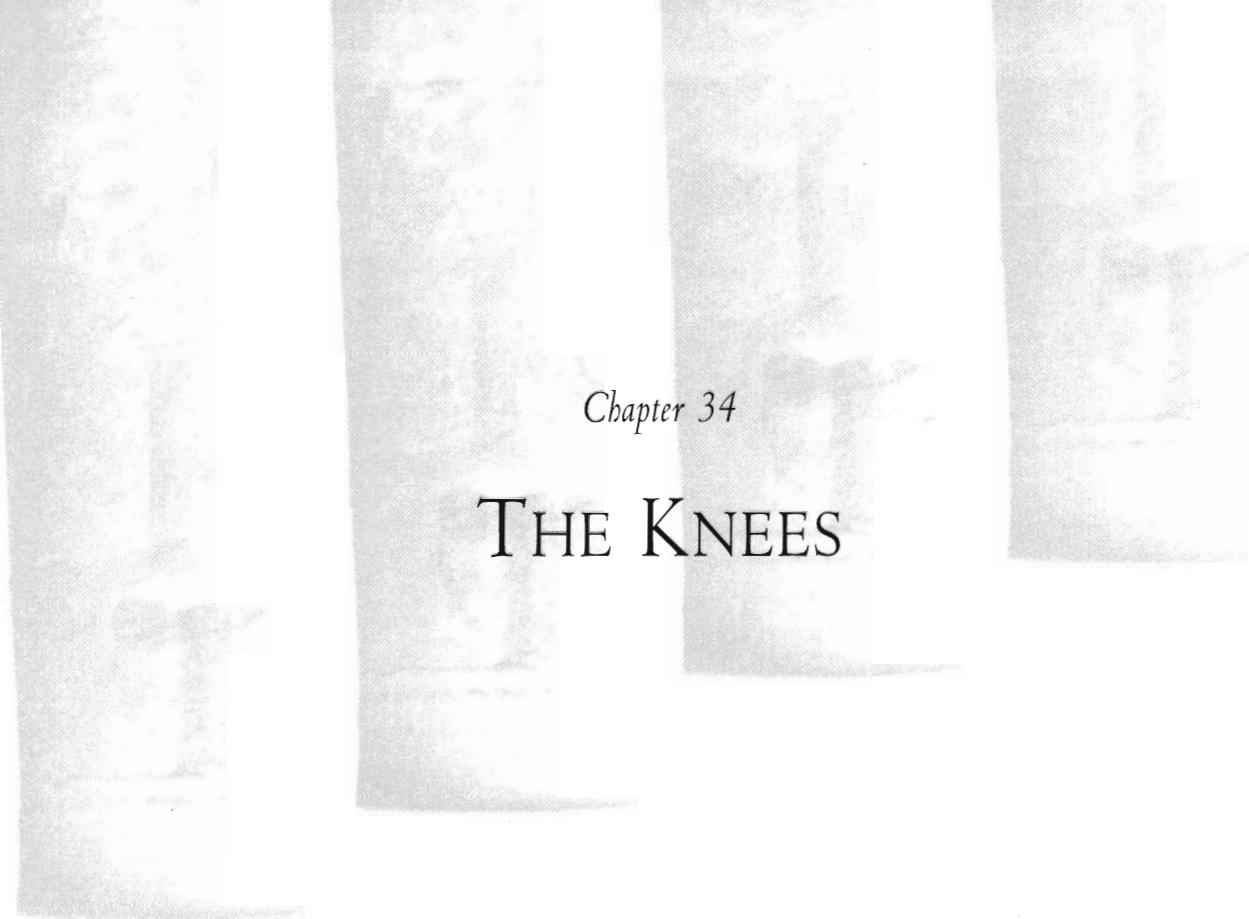


PLATE 46C

Facade of the Pedestal of the East Seated Colossus, Court of Ramesses



Chapter 34

THE KNEES

The pharaonic *symbolique* shows a particular interest in the knees, and this is confirmed by the Temple of Man at Luxor. The doctrine of the Anthropocosmos, seeing in man a complex, final being of the terrestrial genesis, prompts us to study the character, life, and gestures of each part of the body: if the elbow, for example, is stopped in its backward flexion by the shape of the heads of the bones of the forearm and the humerus,¹ the knee is stopped in its forward flexion by a free patella bathed in synovial fluid. Rationally, following our reasoned way of thinking, the same system would be able mechanically—in a robot, for instance—to serve the same purpose for both the elbows and the knees. Creative Nature therefore has vital reasons for acting differently in the two cases.

In the tomb of Ukhoptep at Meir, consecrated to the binding of the spirit expressed in numbers, the bent arms and knees serve to bring a mental trigonometry back to a vital trigonometry. This intention is indicated by the figure of a man, nearly skeletal, resembling a plant with leaves growing from his bones (fig. 250). This is a beautiful example of hieroglyphic symbolism. Elbows and knees are represented as moments in which genesis, by dualizing, has created a new orientation whose relationship is precisely what we conceive of mentally as an angle. In the forearm, the humerus divides into radius and ulna; the femur divides into the tibia and fibula, both requiring an articulation that becomes what in music and arithmetic we can call the mean term between One and Two.

In all of nature the function of vegetal growth is an effect of dividing in two, provoking a narrowing in the original cell that will create the separation. The relationship between the first cell and the two new cells thus generated is that which we perceive as harmony and as the “geometric and harmonic mean terms,” that is, between the first unity and the multiple that results from it. This is the universal function that the human body reveals to us through the elbows and the knees, the

¹ The humeroulnar joint is characterized by the olecranon of the ulna, which blocks the inferior part of the humerus like a pair of pliers.

cause and the nature, and this through the vital relation between the parts of the body and the essential vital centers. We need to pay attention to what the Ancients urge us to observe in their figurative language.

A kneeling statue holding two *nw* vases in its hands, which are placed on its strengthened knees,² is to be considered as an example of esoteric writing. We need to contemplate the relation between the *nw* vase—symbolizing the primordial water, substance without form, the waters of the origin without specification—and the force of the knees. In biblical Genesis, as in the Heliopolitan Mystery, is this not the environment where the *black* earth separates from the spirit that floats on the waters? In this symbol, it is the containing vase that symbolizes the earth, therefore the knee is placed here.



At the temple of Luxor, the pylon terminating the monument under Amenhotep III marks the age of the royal child who is seven or eight years old,³ and therefore corresponds to the place of the soles of the feet of this child. At the end of the construction by Ramesses, this same pylon will be the place where the knees of the adult king are found. Thus it appears that there is a connection between the soles of the feet and the knees.⁴

On the north side of this pylon of Amenhotep III, the *black* colossi—fixed because they are seated—mark the knees (plate 46A). On the south side, corresponding to the location of the patella, is found the seated group of lunar Amun and Mut in white limestone (plate 46B).⁵ The articulation is then located in the door in the middle of the pylon, thus splitting it in two.⁶

The group in white (Amunian) limestone relates the part played by the “waters above” of Genesis to the other aspect of the *nw* waters found in the Amunian waters (the cerebrospinal fluid) of the head. The *nw* waters are the milieu of the primordial scission. It is necessary then to read in them the principle of the scission at the same time as its effect. This effect relates the cerebrospinal fluid to the soles of the feet and to the articulating part of the knee, the fixed corporeal power.⁷

The “waters” are evoked on the lateral surfaces of the throne of the colossus by the two Niles that form the joining of the waters from above and below (the two crowns) through the breath that is symbolized by the ligatures on the trachea that terminate with the *haty* (heart and lungs). As always, these two Niles are androgynous, with two natures—male and female, fixed and volatile.

The black granite colossus is composed of three blocks out of which are cut, respectively, the pedestal, the seated colossus on his throne, and the double crown that now lies on the ground. These three blocks define two horizontal joints, one of which passes under the feet of the king and the other at his vertex. No other joint could have traversed the carved figures on the throne yet there is one cut in the stone marking the two Niles at the level of the knees. There, a prism-shaped stone was inserted in the throne to insist on the importance of the knees at their location in the temple (fig. 240). Thus there is the desire to relate this point to the feet and vertex.

² Cf. Robichon, Barguet, and Leclant, *Karnak-Nord IV*, fasc. 1, pp. 32, 34.

³ Cf. fig. 214.

⁴ We direct our attention to the word designating the knee, which at the same time can designate the bow, or more particularly in cabala, the tension of the bowstring. Now, the bows are engraved under the feet.

⁵ Presently, in front of this group, there are two other limestone statues, one of which is double.

⁶ Cf. plate 15.

⁷ Cf. below, appendix.

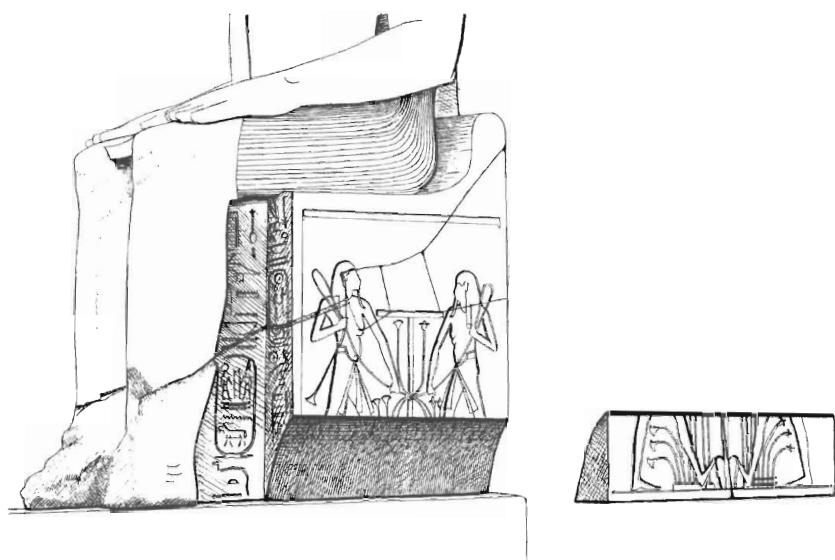


Fig. 240. West facade of the throne of the east seated colossus located in front of the east post of the north door of the nave

The separation of the colossus and its pedestal under the soles of the feet plays the role of a joint. The prism-shaped piece inserted in the monolith constitutes a joint of stones cutting the knees of the two Niles.

It is obviously surprising to see the black colossi of the knees accented and related to the waters of the Nile, and the kneeling statue related to the waters of the spherical *nw* vase. It is no less surprising to see this articulation thus surrounded with synovial fluid.⁸ There is a vital connection between the knees, the soles of the feet, and the meninges. Let us recall in this regard that in cases of head injury that have caused a hematoma or edema with pressure on the meninges, there are, among other observable symptoms, the nervous reactions of the soles of the feet (Babinski's reflex), the Achilles tendons, and the knees (Kernig's sign), and the reaction to the shock.

The Black Cubit of the Colossus (Plate 46C)

On the front of the pedestal of the colossus, two figures wearing the dauphin's braid and clothed in the panther's skin relating to the inheritor are face to face, framing a representation of the *sm3* sign. This sign, uniting the plants of the North and the South, is surmounted by a horizontal band in sunk relief that measures 54 centimeters. This length corresponds to a cubit of 28 digits, a little larger than those used for the royal cubits discovered in the temples and tombs. We are dealing here with the "black cubit," the ancient measure probably handed down through the Copts to the Arabs, who used it as the unit of measure for the demarcations of the nilometer at Rodah. Its origin, until now considered to be fabled, is undeniably pharaonic. This cubit is only found on black stones or those that correspond to their symbol, such as the black silt brought by the inundation that is the reason for the name of Egypt—Kemît, "the black"—from which comes the designation of the science of "al-Kemît."

⁸ "All the articulations of the body allow for a fluid sac. The characteristic of the knee is to have a patella surrounded by synovial bursae, of which several could develop abnormally through frequent kneeling." Cf. Testut and Jacob's, *Traité d'anatomie*, 2:976–83.



Fig. 241. Cube statue from the Twenty-sixth Dynasty (Louvre)

The cubical statue gives the five essential measures of the canon: the height of the head and the leg, and the length of the arm, cubit, and foot.

This black cubit is carved on the pedestal of the colossus so that it is located at the height of the knees of the figures that frame it, again emphasizing this point and attracting attention to its location at precisely this spot.

Let us recall that the natural human cubit is 24 digits, that is, one-fourth of the arm span or fathom of 96 digits. The cubit of 54 centimeters bears proof of the existence of a hieratic measure of 28/96 fathom.⁹ The temple is measured in fathoms.

Moreover, the cubit that measures 28 digits of a fathom is the length of the circumference of a man's diadem. This black cubit shown at the knee gives us, therefore, two principles of measure: the hieratic measure relative to the fathom that is applied to the temple and to the royal cosmic principle, and the principle of the specific measure of man.

APPENDIX

With regard to the femur and what I said about it¹⁰ concerning the fixed part of the physical human being that serves as the element of personal reincarnation, I will cite here what Professor G. Lefebvre has said, in order to emphasize the differences of interpretation among Egyptologists of a single word when the esoteric meaning is unknown, which is, however, very understandable.

A word that deeply puzzles the curiosity of Egyptologists, and rightfully so, is *iwā*. It is used in speaking of people, and especially of animals. Concerning the latter, it is not inconceivable that the word might, as Loret supposed, refer to the flesh surrounding the femur, prepared by a butcher for

⁹ A mean fathom at 45° measures 1.852 m. One digit of a fathom is equal to 1.852 m divided by 96, which equals 1.9293 cm. The length of the black cubit corresponds to 28 of these digits determined in this way, which equals 54.0204 cm.

¹⁰ "In man the absolute fixed salt of his being is formed in the femur, the foundation and support of the physical body (the Egyptian *men.t*). Cf. vol. 1, p. 35.

placement in a tomb at the disposal of the dead. This definition obviously cannot be applied as such to the human *iwā*. Is it then a word that designates the femur, the human thigh? In truth, we have too few examples of its use to be able to decide. One rare, valuable text is drawn from the funerary papyrus of Nebseni (BD 172). After citing and describing the shoulders, the arms, the heart of the dead, and before referring to his stomach and his navel, this papyrus (1, 24) mentions the word *iwā*, which Naville, the first publisher of the papyrus, translates and comments upon as follows: "The lower portion of the body or trunk, to which, as in French, the word *entraînes* is applied; *iwā* also refers to posterity and descendants." Moret, improving on this idea, suggests for *iwā* the translation "generative organ." Lacau did the same in a recent publication, thinking that "*iwā*, femur, must have designated the sexual organs as a euphemism, from which comes the name of inheritor."

Nothing, however, proves that *iwā*, "inheritor," is derived from the anatomical *iwā*. The two words may be homophonic and nothing more, the sign [of flesh encircling the femur] being in the case of the femur an ideogram preceded by the reading elements; in the other case it is an improper determinative. In addition, I repeat that it does not seem the Egyptians ever used euphemisms of this sort, as did the Hebrews. They always used the word itself, the technical word, without concern for modesty. We all agree that the word "thigh" as such is used in expressions in paragraphs 54, 60, and 61 with no euphemistic intent. It describes bluntly rather than veils how a child is taken from the maternal breast.

It would not be difficult for me to agree with the opinion of Möller concerning the meaning of *iwā*. In his edition of the Rhind Papyrus, 1.10.4 (p. 45), he translates *iwā* as *Muskeln* and the word *awa* of the parallel demotic text as *Glieder*.^{*} We could therefore definitely place it in the category of general terms, along with *haw*, *iwf*, *mt*, in which case its ideogram would allude not to the bone but to the flesh and muscle surrounding the bone.¹¹

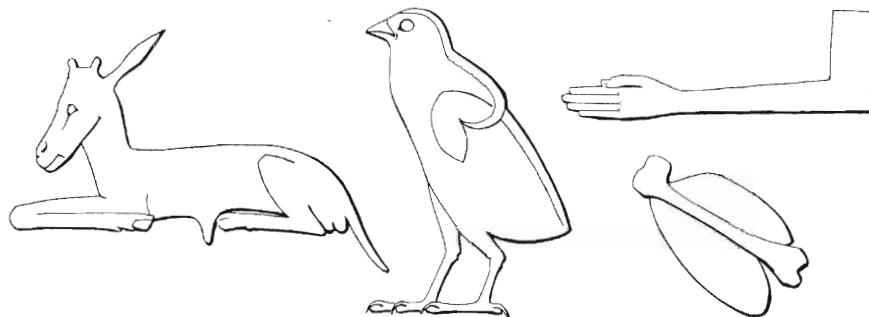


Fig. 242. Group hieroglyph *iwā* designating the inheritor, determined by the femur

In conclusion, the analysis of Lacau, whose idea is to see not only the designation of the femur in this word but also the sexual organs of generation, would seem justified, in that it is actually supported by the use of this word in texts, giving it the character of *inheritor*.

Because of the teaching given in the traditional knowledge of the fixation of the indestructible nucleus in the bone of the femur, it is obvious that the idea expressed by the "bone of the femur" necessarily includes that of inheritor and regeneration. This is to be understood in the sense of a "personal reincarnation," carrying over the acquisition of a particular existence. We are not dealing here with children conceived during the lifetime of the deceased through his seed.

¹¹ Lefebvre, *Parties du corps humain*, pp. 56–57.

**Muskeln*, "muscles"; *Glieder*, "limbs," "joints."

Chapter 35

THE BOWS

Plates 47–49

*. . . the importance of considering the vital cause
of enumeration in the Universe . . . consists in
revealing the knowledge of the powers that create
the genesis. Numbers are then no longer merely
notations that designate quantities, but the
expression of living functions.*

(Chapter 5)

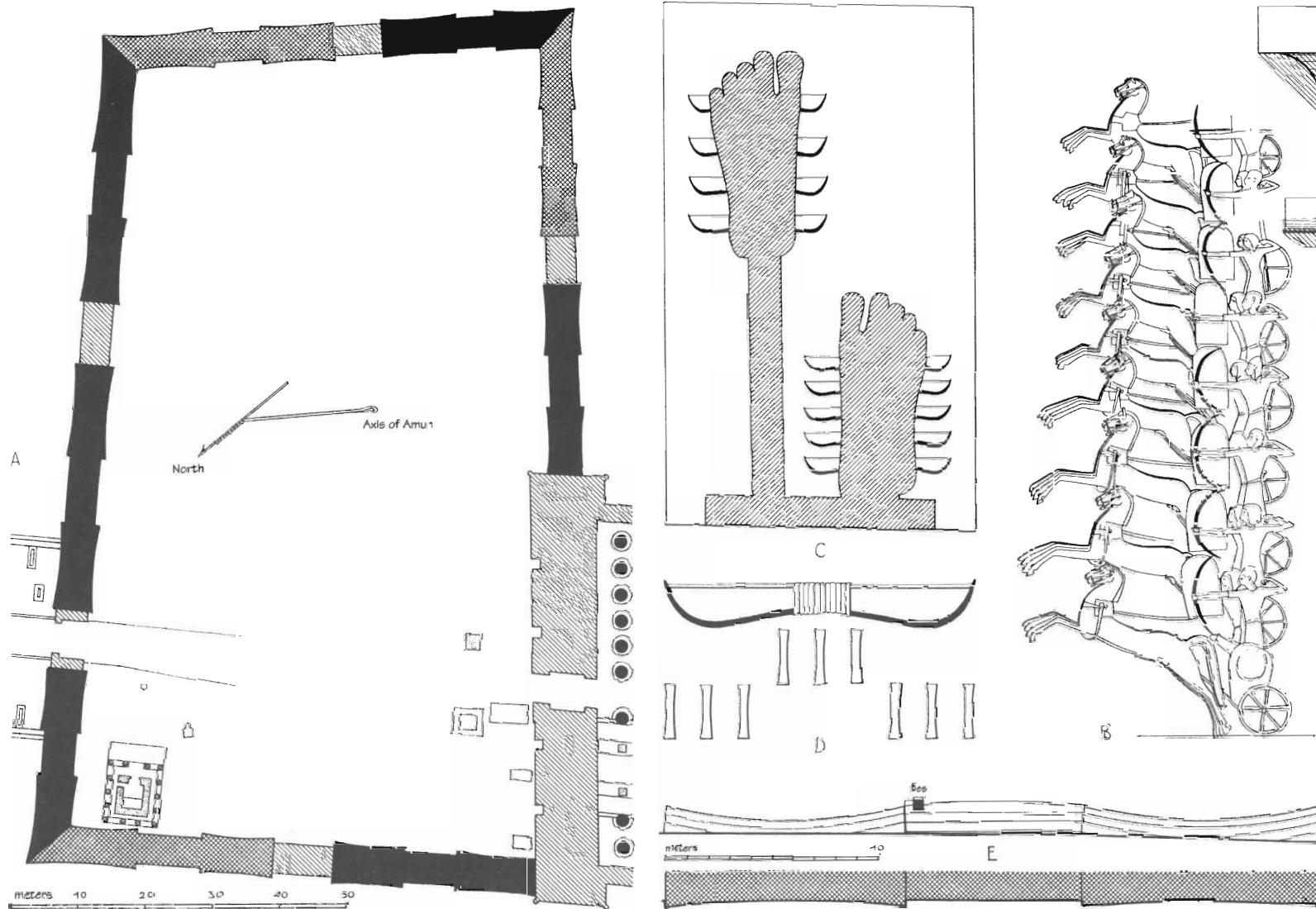


PLATE 47

A. *Plan of the Courtyard of Nectanebo at Luxor*
 B. *The Nine Archers of the East Wing of the Pylon at Luxor*

C. *The Nine Bows under the Feet of the King*

D. *The Nine Bows*
 E. *The Arch of Nectanebo at Philae, Land of the Arch*



It is not without reason that the Ancients placed the harmonic relation at the origin of their mathematics. But rather than seeing a . . . proportion as a foundation for calculating, we must see instead the . . . expression of a vital function.

(Chapter 5)



PLATE 48A
The Arch of Nectanebo at Philae, Land of the Arch

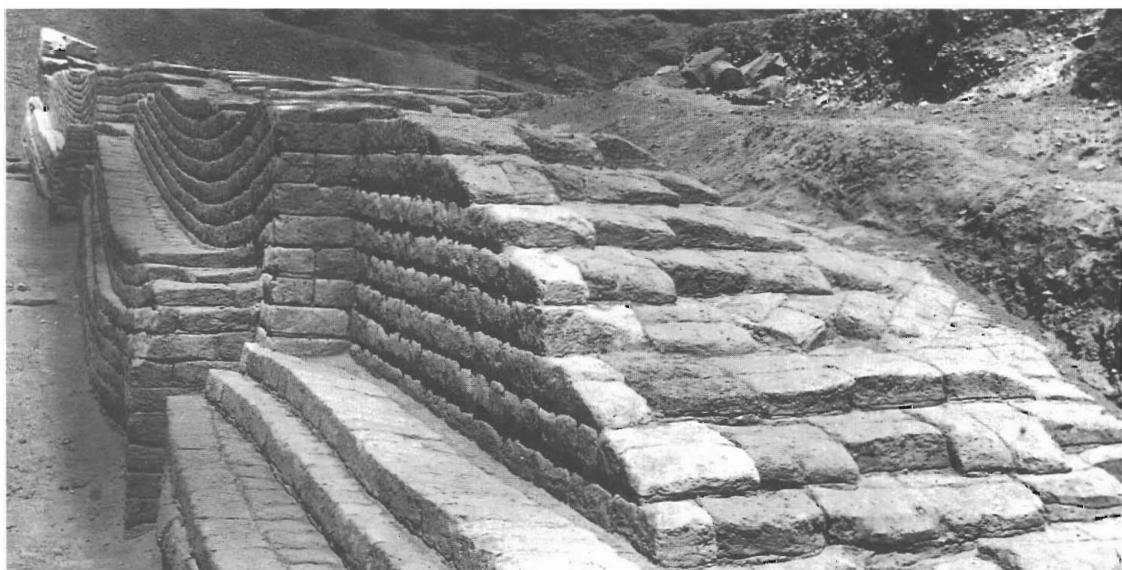


PLATE 48B
The Arches of Nectanebo at Luxor

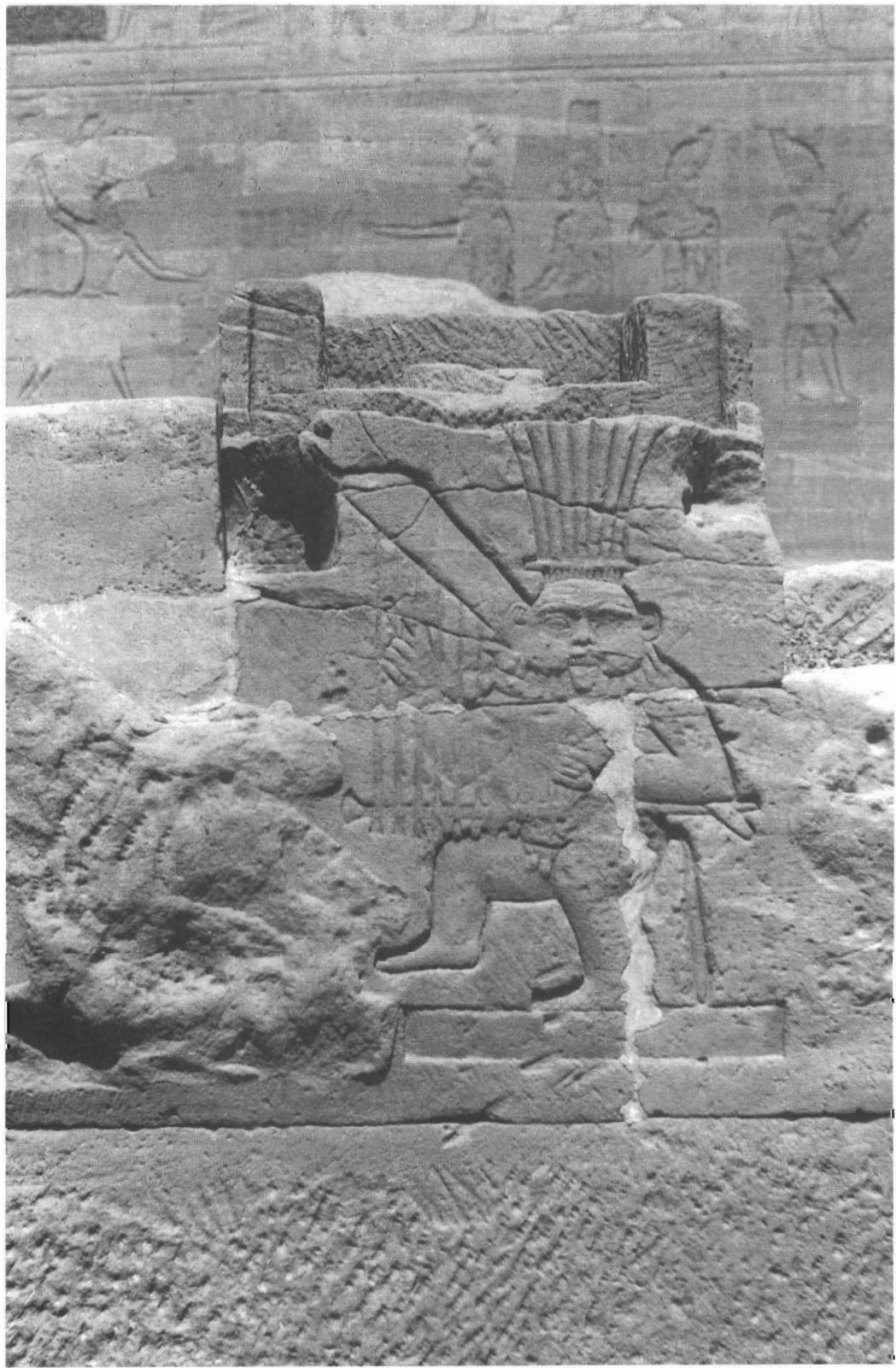


PLATE 48C

Bes Playing the Harp (Arch at Philae)

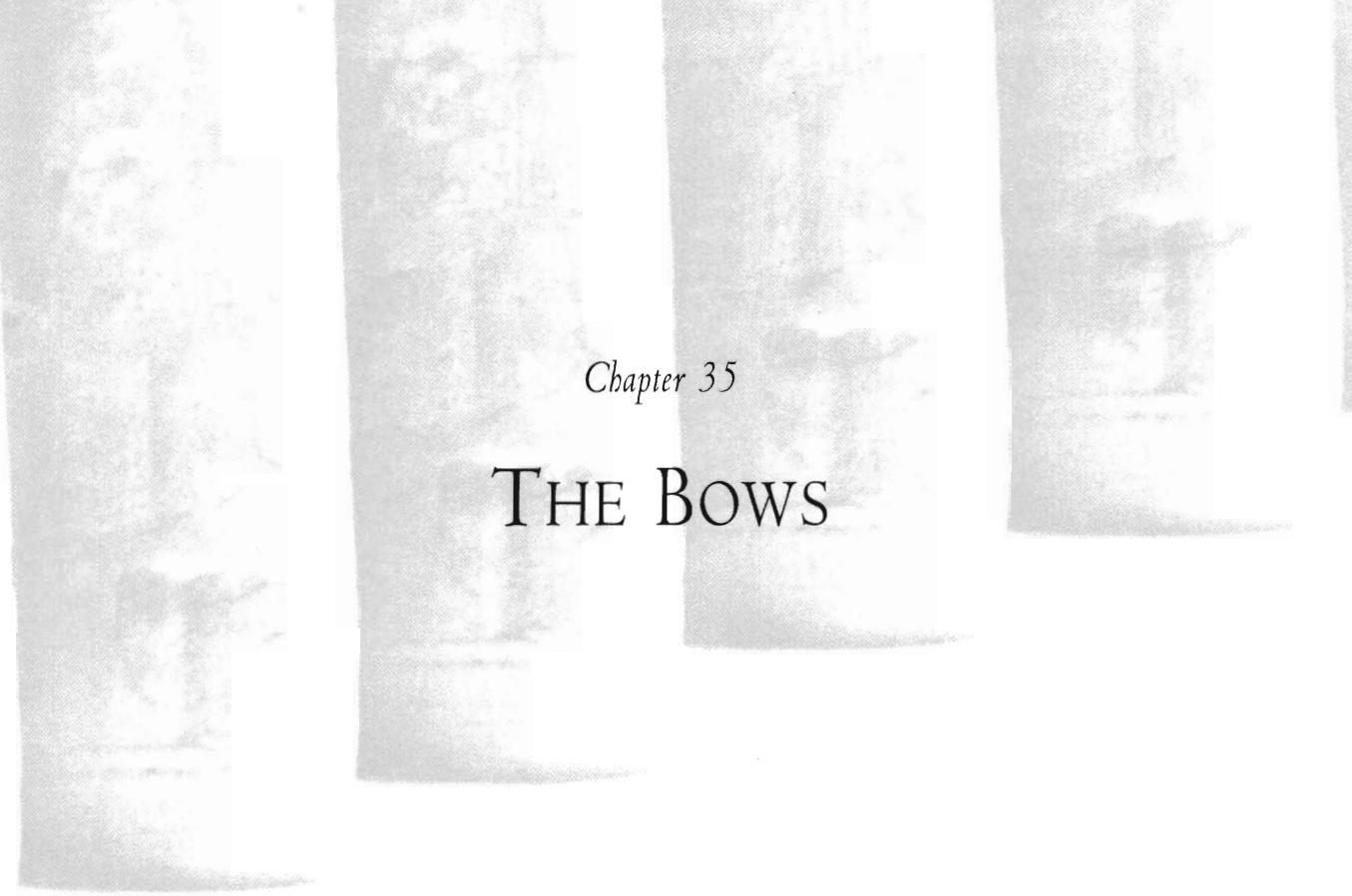
*... the Egyptian technique and their symbolique
attest to a realistic sensibility and to faculties of
reasoning, contradicting the view held of an age
that is “primitive and mystical.”*

(Chapter 2)



PLATE 49

End of One of the Arches at Luxor



Chapter 35

THE BOWS

The presentation of a fact always includes at least two principal aspects: the positive fact as it strikes our mental observation, and its symbolic significance. The latter has two aspects: one is knowledge, that is, that which relates to magical science or genesis; the other is what teaches the universal spiritual meaning of the expansion of consciousness. Expansion of consciousness always signifies a movement toward identifying specified being with cosmic Being.

Above all, the facts revealed by the figurations, by the architecture and numbers, and then by their *symbolique* of knowledge are what we have to look at here. We can, however, with regard to the bows and the test of the "drawing of the bow," evoke their psychospiritual objective in Egypt through what is said about them in China.

If a function is designated by a particular word, as in European languages, the connection between the instances in which this function occurs—that is, its universal character—is no longer directly expressible in words. But if the function is designated by an image that encapsulates it, we can introduce this glyph into all the descriptions in which the specificity of this function occurs, thus creating a vital link for the reader between apparently diverse facts. Thus we observe the scenes of the "drawing of the bow" by the king; nine bows are traced on the soles of the royal ceremonial sandals, on the pedestal bearing the statue (plate 47C), and on the footstools. We find these nine bows again on the pylon in the form of archers carried in horse-drawn chariots.¹ Moreover, we have seen these harnessed chariots, without archers, designating the thoracic vertebrae,² which indicates a relationship between the vertebrae, the marrow, and the soles of the feet. Now, in addition to this relationship, the Man of the Temple evokes a principle of knowledge by means of the nine bows and the submission of the vanquished: the bearded, yellow-skinned people of the east, the red-skinned people of the west crowned in feathers, and the black-skinned people of the south, prostrate.

¹ Cf. plates 10, 47B, and fig. 244.

² Cf. plate 6 and chapter 27.

The king, in the traditional Kabbalah, has always implied a particle of eternity hidden in the black earth³ at the heart of the seed. This is the invincible power in the seed that projects germ and root and draws the animating spirit of all things toward the earth. But it is the Spirit that must conquer the power, still Sethian, that creates what is "below"; and this will be the victory of the king, of the king of nature, of the king in us, the turning of Seth into Horus, the two brothers or two aspects of a single unity, enemies fighting each other, antithetical symbols of noble combat. In Kemit, copper is the symbol of that which is impure and heavy and which falls to the bottom, but which is colored like the sun, red like gold, the imitation of perfection. The arrows of the victorious king must penetrate a "brick" of copper, cut through it in order to make the heavy earth light, to create out of the impure and leprous the purity that cures the leper (fig. 243).

These are not meaningless words. They designate a positive fact; they are also symbolic and have a mystical meaning. The trial of the drawing of the bow is found in Japan, in the doctrine of Zen, as well as in China.

During the long winter nights, a royal festival is indeed celebrated. On this occasion the chief undergoes a great test. He demonstrates that he has been chosen by Heaven to be in command.

To become the Son of Heaven, Yao, this sovereign who "appeared as the sun" must fire arrows at the sun. He thus succeeds in overcoming his celestial counterpart. As soon as he conquered the emblem of the sun, he was worthy to reign (*Hui-neng tzu*, 13). The drawing of the bow is an inaugural ceremony in which one's virtue can shine forth. But the test will turn against an unworthy chief. By a reflex action that punishes the incapable magician, the arrows drawn toward the sky fall back to earth in the form of lightning. The drawer of the bow will be mortally struck down because, without possessing the required qualifications, he has attempted to awaken and capture the energies of the Fire. . . .

Huang-ti was Thunderbolt. Under the name of Ti-hong, he was also identified with a celestial waterskin. The waterskin Ti-hong is a bird and at the same time a leather sack and drum. There is also an owl (his name is drum of night) who is a sack and upon whom thunderbolt and arrows rebound. There is, finally, a drum that is an owl, producing the wind from his breath; all red with fixed eyes, he represents a forge and its bellows. He is also red as a molten mineral and as high as the Mountain of the Sky, rich in copper; the Celestial Waterskin has a name: Chaos (Huen-tuen). The chaos dies when the lightning pierces it seven times. But this death is a second birth. It is an initiation. . . .⁴

The great test of nobility . . . is the game of the drawing of the bow. . . . It is a musical ceremony, regal as a ballet. . . . All the movements must be made in cadence, and the arrow not sent precisely on the right note can never touch the goal (or at least does not count) (*Li-chi* 100.2.699). The archers, while advancing and withdrawing, while turning and re-turning, must *touch the heart* of the ritual rules. A correct attitude of soul within, a right attitude of body without, this is what is necessary to hold the bows and arrows firmly, carefully. Bows and arrows held firmly and carefully, this is what allows us to say that we have touched the center of the target. And it is thus that virtue is made known. . . .⁵

³ Kemit, one of the names of pharaonic Egypt signifying the "black" land of Havilah (Mosaic Genesis).

⁴ Marcel Granet, *La Civilisation chinoise* (Paris: Renaissance du Livre, 1929), pp. 234-35.

⁵ Ibid., pp. 339-40.

At the archery contests, one is able to demonstrate his skillfulness or his honesty . . . and the quality of his will in letting fly his arrows in a skilled rhythm . . . and straight to the goal. When one lets them fly with force, one proves one's vitality and one's valor, the power of one's genius. Thus does one construct bows, by considering the will and the vitality of the one they are destined for. To evaluate the dignity that this person merits, it is sufficient, through examination, to estimate the *power* of his bow. The strongest bows bend the least. In order to make a perfect circle, it is necessary then to use nine bows, but only if they are the king's bows, but one can make a perfect circle with seven lord's bows, with five grand officer's bows, or with three official's bows (*Chu-li*, 7.2, p. 596).⁶

The chief is a rising sun and victorious. He is also an archer. Each chariot is occupied by a trio of warriors. The place of the driver is in the center, that of the lancer is to the right . . . the archer is then to the left. The left is the place of the chief. *The left is the honorable side and the east is also.*

Holding his bow *in his left hand, his left arm uncovered*, the archer, wherever he goes, carries himself *at the left hand*, the side of the rising and victorious sun (*I-li*, 100, pp. 123, 125, 144).⁷

In the mystical sense, the archer who still dualizes by sighting the target and has not himself become the arrow, does not attain unity, is not yet conscious, but remains only mortally and mentally aware.

The scenes depicting the king drawing the bow are numerous in Egypt. Some describe the king "appearing on his harnessed chariot as Mentu in his power," and most of them specify that the king accomplishes his performances in "the presence of his army . . . in front of the entire earth."

On a block of red granite in the temple of Karnak, Tuthmosis III is shown standing on a chariot (of which only a single wheel can be seen); the reins of the two galloping horses harnessed to the chariot pass behind the small of his back. The king holds the bow with his left hand, his wrist protected by a special brassard that archers wear.⁸ He stretches his bow with his right hand and prepares to shoot a new arrow. The wooden target, vertically placed in front of him, is already pierced with seventeen arrows. Three others, after going all the way through it, have fallen behind it.

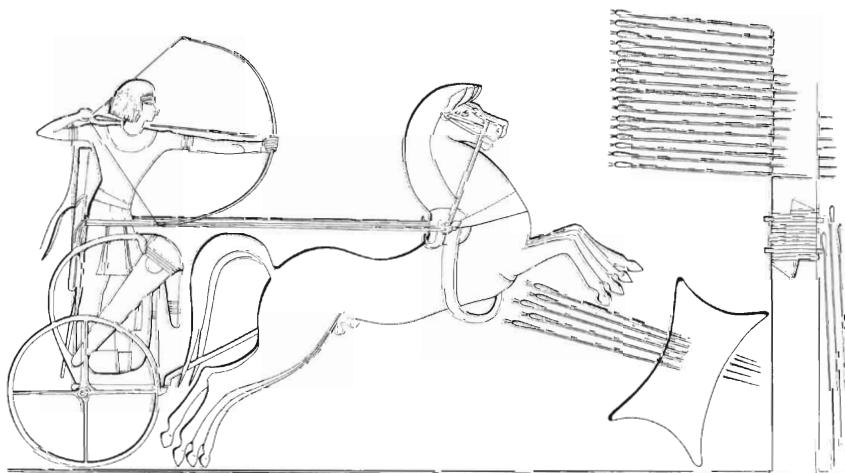


Fig. 243. The king drawing his bow

⁶ Granet, *La Pensée chinoise*, pp. 296–97. Let us note that the total number of bows for "perfecting the circumference" is twenty-four, that is, 9, 7, 5, 3, the first odd numbers except 1, which is the center.

⁷ Ibid., pp. 367–68.

⁸ These brassards, several examples of which have been found in royal tombs of the Eighteenth Dynasty, are of leather. Cf. Jéquier, *Frises d'objets*, p. 217.

According to texts that accompany similar scenes, the upright wooden pole represents the first test in the drawing of the bow. This test, which consists of "splitting all the wooden targets as if they were of papyrus . . ." is then followed by His Majesty attempting the test of piercing with his arrow the copper target placed on the ground.

The text from Karnak makes it clear: "a large target of raw copper⁹ on which His Majesty has drawn. Even though three digits thick, the very strong could penetrate it with numerous arrows. They went through to the other side to a distance of three palms from the target." This is the "king's blow."



The king is said to be "master of the Two Lands," and in affirming his power over "foreign countries" the ritual texts put the "nine bows under his sandals." The royal, seated statues are indeed often represented with the soles of the feet resting on nine bows. In the particular case of the colossus in a walking position, the king places his left, front foot on four bows, while the right foot is supported by five bows inscribed on the pedestal (plate 47C).

The courtyard of Nectanebo (plate 47A) is the pedestal of the royal colossus, giving the elements of the volume of the pedestal by its plan (plate 24 and figs. 210, 211). Now, the encircling wall of this court that forms the parvis of the temple of Luxor is entirely constructed in raw bricks in such a way that both in plan and in appearance the design of concave curves alternating with straight or slightly convex sections is clearly visible (plates 47A and 48B). The concave arches are formed of beds of unbaked bricks placed in curves; at the end of each curve the bricks have been recut to give the vertical. If we observe that one arch contains two curves connected by a straight section, and if we thus analyze the enclosing wall of the court, it becomes obvious that the parvis is enclosed by nine arches [bows].

In order to mark the intention of making the arched shape, the northwest corner was constructed with blocks of sandstone cut in curves on three sides, forming a sort of prow that gives movement and form to the arches. For this purpose there was no hesitation in combining blocks of stone with unbaked bricks (plate 49).

At Philae, called the "land of the arch," the substructure and beginning of an enclosing brick wall of Nectanebo's is an arch in dressed stone. The beds, similar to those at Luxor, are curved and served as a foundation for the brick wall that has now disappeared, having been washed away by the waters of the Aswan dam (plates 47E and 48A). At the junction of one of the two concave curves with the convex curve that connects them, a Bes playing the harp is sculpted in bas-relief. We have spoken of this in regard to the "harp of numbers" (plate 48C).¹⁰

The theme of the nine bows located under the king's feet is indicated at Luxor by a group of archers carved on the north face of the east wing of the pylon, near the entrance door, and consequently at the level of the soles of the feet of the Man of the Temple (plate 10).

At this point there are nine pairs of horses harnessed to eight chariots, each, except for the first chariot represented with only half a wheel. For the missing chariot, the eighth one from the bottom, the half-wheel is symbolized by the torus of the door. These eight chariots for nine harnessed horses carry eight archers drawing their bows (plate 47B). The ninth bow, evoked by the

⁹ Raw copper, that is, as it comes from the mine without planishing or alloying.

¹⁰ Cf. chapter 11, "The Canevas Guide," and fig. 93 (vol. 1).

ninth horse-drawn chariot, is symbolically replaced by the curve of the cornice, which is not only an allusion to the principle of the eight-ninths of a string that gives the fundamental tone in music, but also a figuration of this principle (fig. 244).

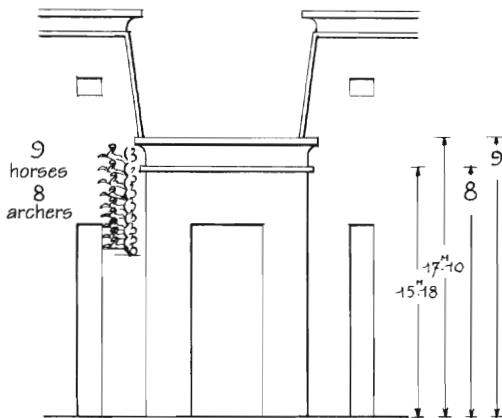


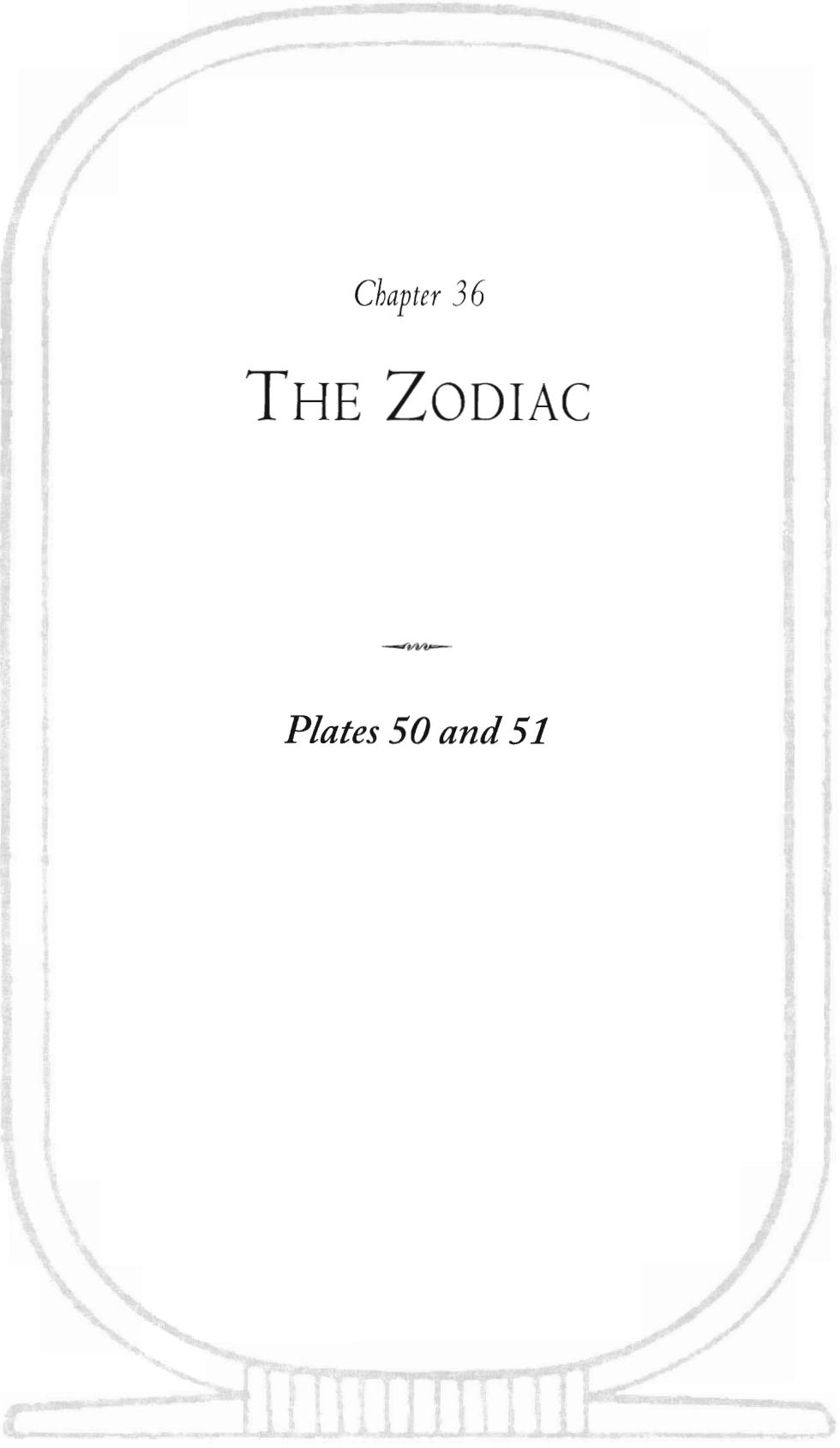
Fig. 244. Door of the pylon of Ramesses II

This ratio of 8 to 9 is confirmed by the door itself. The height from the ground to the torus is eight-ninths of the total height. The Bes playing the harp carved on the arch at Philae calls attention to the relationship between music (harmony) and the arches.

At Luxor, the totality of the architecture (the Man of the Temple) and the bas-reliefs develops a synthesis in which harmony links the vital functions together.¹¹

The bow is the symbol of the “power” that in every case manifests as *tension*. It is this tension in sap that causes germination in the springtime, and in general the thrust toward life. This growth, this renewal, is always made harmoniously under the impulse of the first scission that governs proportion, ϕ .

¹¹ The association of the drawing of the bow with the harnessed chariots, which symbolize the vertebrae, is an image by analogy of form. The vertebra is a wheel, its hub is the marrow, and the “Poseidonian” horses—the symbol-key of Mediterranean initiation (see the Parthenon at Athens)—are related to the cerebrospinal fluid.



Chapter 36

THE ZODIAC

Plates 50 and 51

*. . . the Temple is knowledge, that is, the science of
genesis and cosmic harmony.*

(Chapter 20)

*It is with the arrival of the precessional Age
of Pisces—the tower of Babel that lacks the
triangular foundation stone—that the Temple
ceased to be alive.*

(Chapter 20)

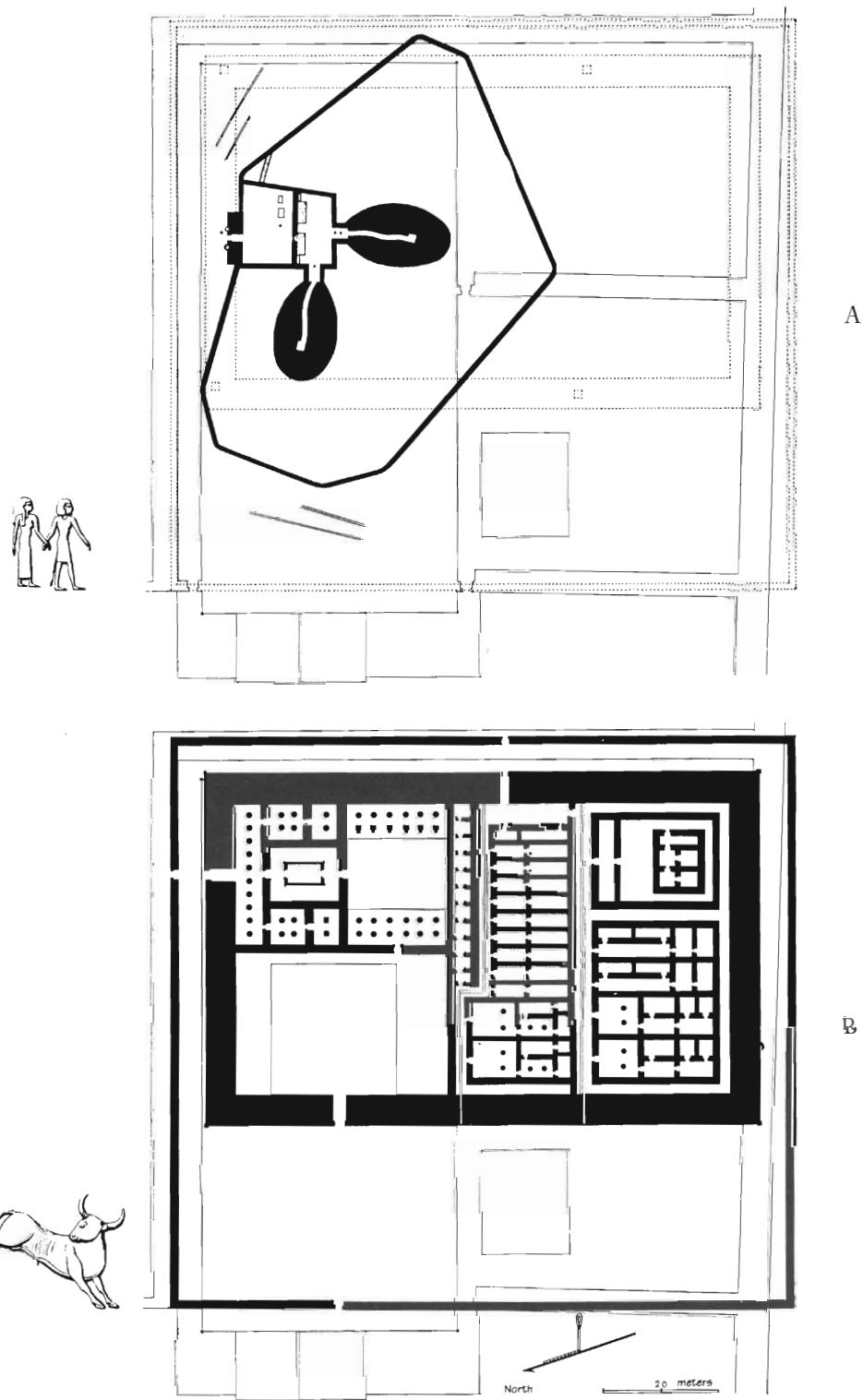
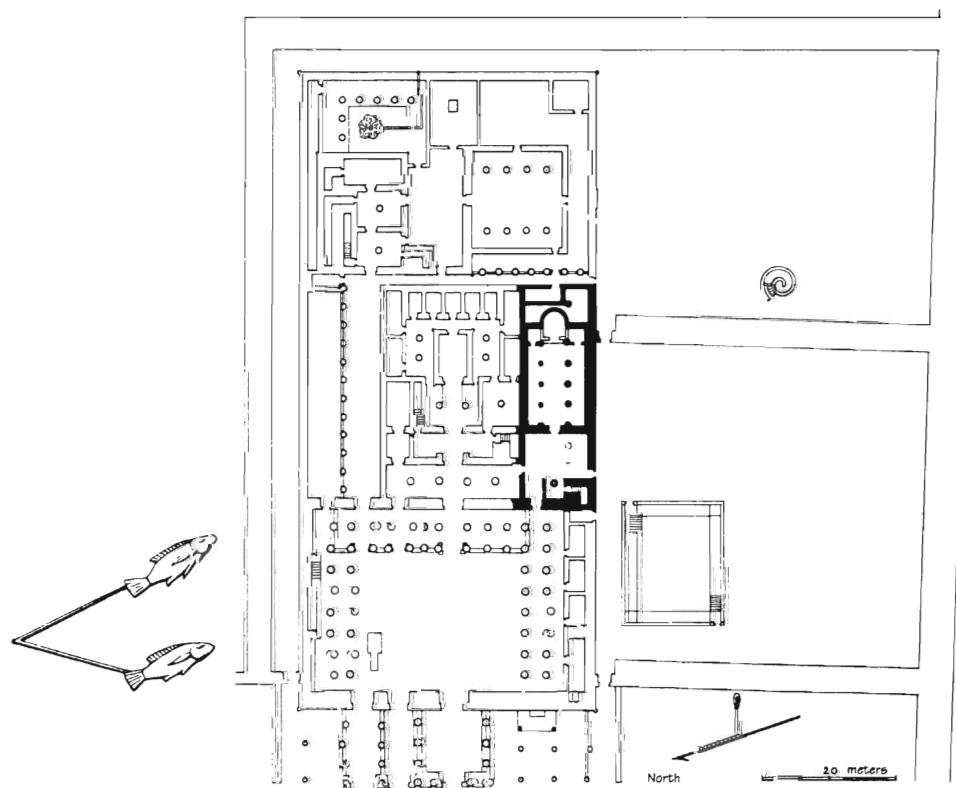
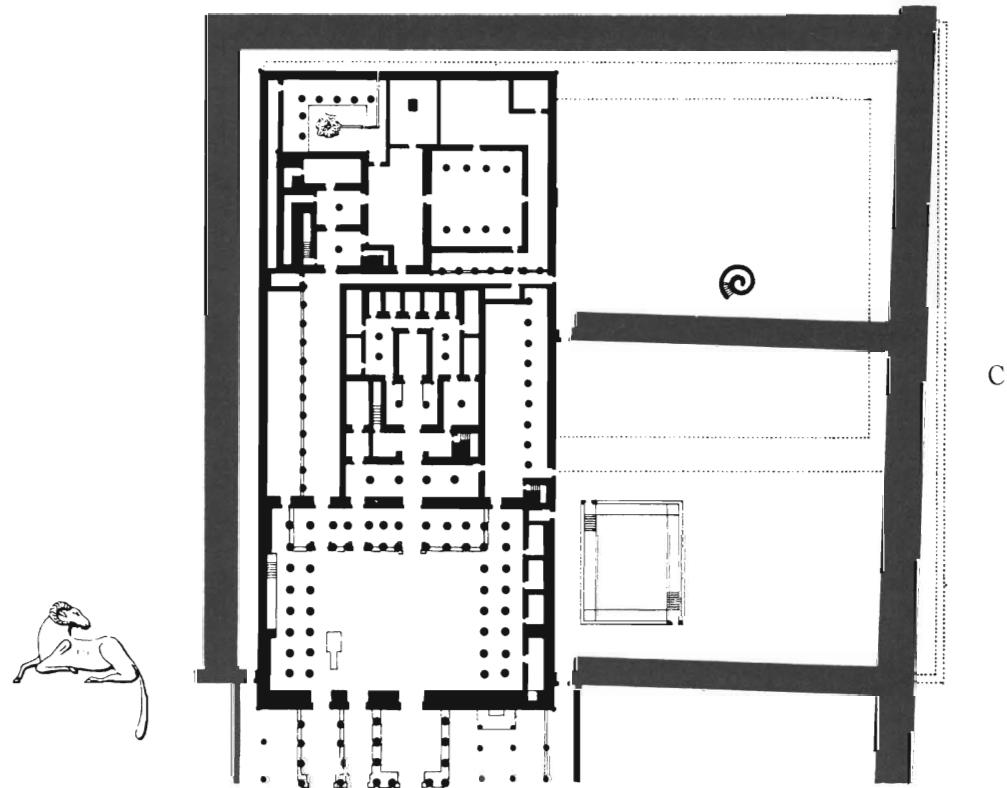


PLATE 50

The Successive Sanctuaries of Medamud

A. *The First Temple*

B. *The Temple of Sesostris II*



C. The Ptolemaic Temple

D. The Christian Church

The signs of the zodiac form a part of the instruction of the Temple in that they are functional symbols. . . .

(Chapter 20)

B. *The Temple of Luxor and the Zodiac*

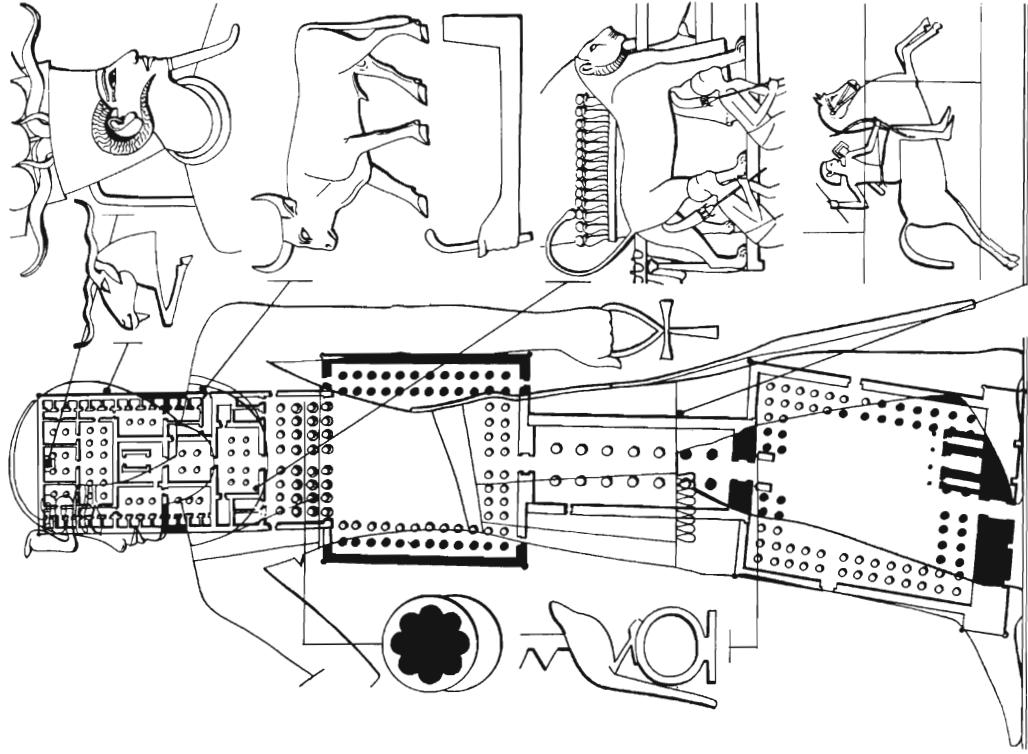
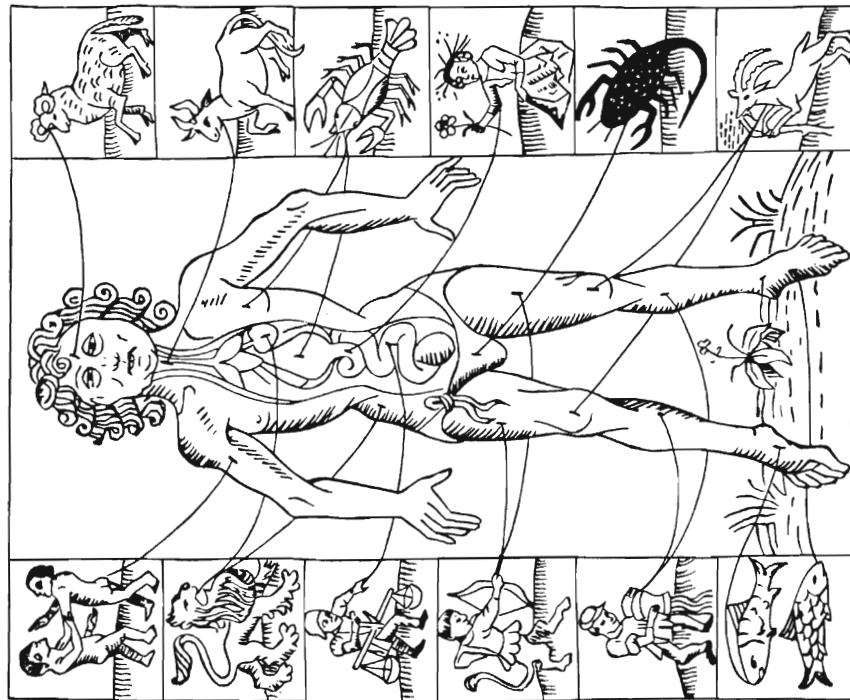
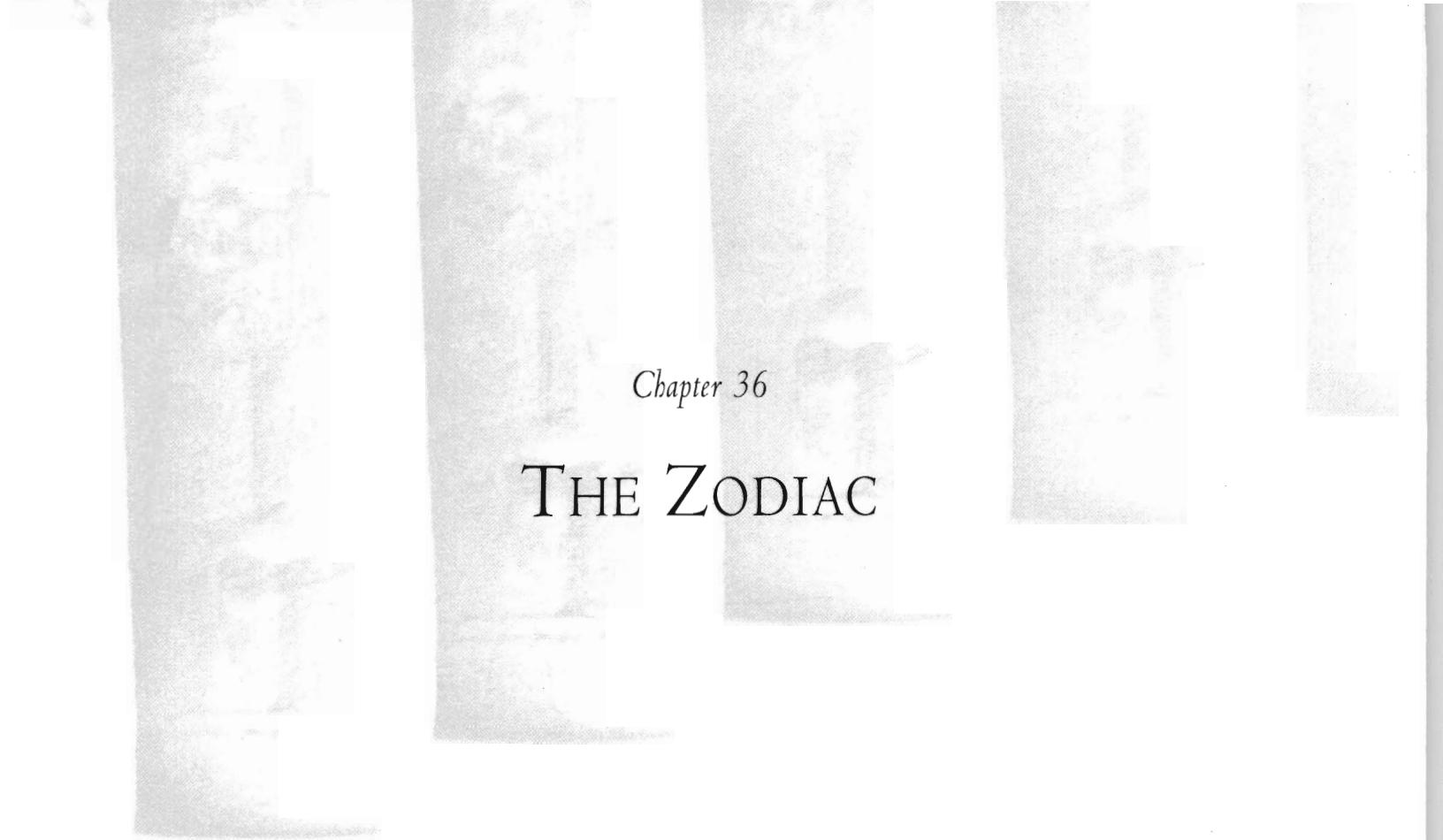


PLATE 51
The Zodiac

A. *Man and the Zodiac in the Middle Ages*



A



Chapter 36

THE ZODIAC

PLATE 50 • THE SUCCESSIVE SANCTUARIES OF MEDAMUD

Medamud is the only excavated site in Egypt in which monuments were built on top of one another from prehistoric times to the Christian era. There are four sanctuaries, and they bear witness to four successive cults: (*a*) the earliest temple, from the Predynastic Period; (*b*) the temple of the Middle Kingdom consecrated to Mentu and his sacred bull; (*c*) the temple of the Ptolemaic period consecrated to Amun, the ram; (*d*) the Christian church.

To grasp better the exceptional importance of this site, we must understand the spirit of the myth.

The Spirit of the Myth Related to Medamud

“A plurality of names does not make a plurality of things,” is an old adage of Hermetic philosophy. This means that a single original thing evolves toward its predestined end, and its name changes progressively with the phases through which it passes.

We must distinguish two phases in the philosophy of causes. The transcendent cause produces the natural cause. The first *is* and *is not*, which is to say that relative to nature, it is nonexistent, while nevertheless still being the totality as universal cause. In pharaonic Egypt, this transcendental cause is Tum.

Natural cause consequently will then be this same Tum, “fallen to earth,” that is, the first thing, Ptah.¹ This already necessarily contains in itself two natures, still joined as twins, which can consequently become either complements or opposites. As definitions of inert natural states they are complementary, but become opposites if there is a separative action through generation.² For example, homogenized milk, left to itself at a moderate temperature, will enter into an acidic fermentation that forms coagulated milk (curd) and watery milk (whey). From this moment on, these

¹ The Greek Hephaestus or Roman Vulcan.

² See the myth of Seth and Horus.

twin brothers, water and fat, will be irreconcilable. Grain placed in a humid and temperate environment will be separated, by fermenting, into germ and root, twin brothers that once separated are irreconcilable, although of the same nature and indispensable to one another. These are the principles, universal in their function, described by myth and constituting the cosmological history that is applied in all cases, which, in spite of their variety, are reunited in those anthropomorphized principles that are the *neters*. This, however, is but an overall view. Pharaonic myth goes into detail of such complexity that without the Ariadne's thread of the general thought, it is impossible to rediscover therein the universal principles that comprise the knowledge.

The principal phases are clearly marked by what are called the cults: of Tum at Heliopolis (Innu of the North); of Ptah, the Fire fallen to earth, that is, solidified and fixed, at Memphis; of Thoth at Hermopolis (the Hermetic transition); then at Thebes, the realization of the reuniting of what had been separated. These are definitely not opposed cults or political struggles of a theological character, as Egyptology has supposed, but an expression of the phases of genesis, therefore also of the genesis of the empire of the pharaohs.

Now, all that is natural, that is, that belongs to the created Universe, is maintained in existence by virtue of two poles, the two complements that make up the appearance, the phenomenon. This duality was always respected by the sages. It is thus that Tum of Heliopolis, the Innu of the North, finds his complement in Mentu at Armant, the Innu of the South. This complementation is not only an equilibration of principle, but is, above all, an analysis of the character of Tum. That which makes up the (solar) force of Tum, the self-created power, then becomes the fixed point of all that exists in the Universe, the indestructible being issued from the Unity, thanks to which a reunification of opposites can be accomplished. This is the final goal, without which the genesis would have no meaning. This moment of fixation, occurring below, is Mentu, the bull; it is of the nature of the *ka* and gives to Innu (Armant) the bull Buchis, which is white with a black head. This is the fixed point—this “salt of the earth” of the Gospels, this corporeal solidity that attracts, repulses, or retains the Spirit, this foundation, this heart of the metal, this salt in the femur in man and in the left front hoof of the four-footed animal, this black bull, origin of the white bull, Mentu, represented as a human figure with the head of a falcon, crowned by the sun and surmounted by two feathers, issued from the original twins contained in Tum—it is this fixed point that must be understood in order to glimpse the profound meaning that the four superimposed sanctuaries of Medamud reveal to us.

The successive building of three pharaonic temples confirms for us the conscious gesture of aligning the cults with the cosmic dates of the precession of the equinoxes. On the other hand, the sequence of the cults—Gemini, Taurus, and Aries (Shu-Tefnut, Mentu, Amun)—teaches us the true meaning of the zodiacal “representation,” its “esoteric” reading (which will gladden some hearts) that, beginning with the solar Lion in the direction of precession, allows us to read the exact progression of the genesis of a cosmic work.

The twin tendencies will split into the terrestrial Mentu (the black bull) and the aquatic, spiritual fire, Amun. It is Mentu that retains the solar fire (Ra) through the fixed salt.

When one reads this strange history through the names and activities of the *neters*, it is difficult to see clearly the actual meaning contained there, that is, as long as one regards these *neters* only in a literary fashion, as allegorical symbols, and does not give them an objective reality.

The study of Alexandre Varille concerning the origin and meaning of the earliest temple at Medamud,³ formed of two mounds, forced him to put forward hypotheses that he found unsatisfactory until the time I was able to demonstrate to him the coincidence of these cults with the

³ C. Robichon and A. Varille, *Description sommaire du temple primitif de Médamoud*, Recherches d'archéologie, de philologie et d'histoire 11 (Cairo: I.F.A.O., 1940).

characteristics of the phases of the zodiac read in the “backward,” precessional direction. The sense of dualism insisted on in the texts then became evident to him. This was the point of departure for a reconsideration of the pharaonic chronology, and a new justification for understanding the variations and geographical locations of the cults, a perspective that has nothing in common with theories of politico-theological disputes.

Mentu is affirmed through four eras,⁴ which accounts for the four places consecrated to the bull of Mentu: Innu of the South (Armant), Djerty (Tod), Madu (Medamud), and Uast (Karnak). But at the Serapeum of Memphis (Saqqara) the sarcophagi of the twenty-four bulls of the day are found, Saqqara being the place where the Fire of heaven fell to earth, where Tum took form.

Historical Survey

Mentu is depicted in the form of a man with the head of a falcon whose headdress consists of the solar disk with two tall plumes coming out of it. This is Mentu-Ra. In the Late Period the falcon’s head is sometimes replaced by a bull’s head. In the temple of Luxor, after the purifications and the placing of the crowns, the king, flanked by Tum and Mentu, who take him by the hands, accomplishes the “royal ascent” toward the sanctuary of Amun.⁵ Tum follows him; Mentu precedes him but with his head turned toward him.

The relation between these two *neters* is obvious from the names of the essential places of their cults. At Innu of the North (Heliopolis), Tum is venerated as the *neter* of the origin; at Innu of the South (Hermonthis), Mentu was the supreme divinity at the end of the Middle Kingdom. But while Tum always remains the intangible abstraction,⁶ the Unique, the cult of Mentu undergoes, in the course of time, variations that only the astronomical periods can justify.

Tum, through his name, symbolizes at the same time All and Nothing, both the totality of possibilities and perfections, and the Nothingness, the negation. He is the Divine Verb “emitted,” the self-polarizing energy, “he who existed before being himself created,” the creator of all the *neters*. He is known by only one figural representation: in human form, wearing the two crowns, and, at Luxor, always without a navel.

Tum becomes Ptah at Memphis, where he is represented in the triad of Ptah-Sekhmet-Nefertum. Ptah is called Ptah-Tatanen, creator of the earth, to whom one day would be assimilated the sacred bull of Heliopolis of the South, the bull Buchis of Armant.

The cult of the sacred bull goes back to the most ancient dynasties. At Heliopolis the black bull Mnevis was venerated, whose whole body must have been covered with tufts. One of his names, “the herald of Ra [of the sun], he who causes the truth to ascend to Atum,”⁷ intimately connects him to the cult of Atum-Ra, master of Heliopolis of the North. At Memphis, the bull Apis was venerated, the black bull that has certain characteristic markings: a white triangle on his forehead, a white spot in the form of a crescent on his flank, and an eagle on his neck. His title was “living Apis, herald of Ptah, he who causes the truth to ascend to the god with the beautiful face.”⁸

In the South, the white bull of Min was venerated as well as the four bulls of Mentu. The characteristic signs of these are little known today except for the bull of Heliopolis of the South

⁴ The first four months of embryonic gestation, the forty days of the biblical Exodus, Jesus’ forty days in the desert, the forty traditional days of natural philosophy . . .

⁵ Cf. plate 99.

⁶ The depictions and legends of Tum were never effaced in the bas-reliefs at Luxor.

⁷ From J. Vandier, *La Religion égyptienne* (Paris: Presses Universitaires, 1949), p. 236.

⁸ Ibid., p. 235.

(Armant), which was white with a black head and was called Buchis. These four bulls were attached to the four temples built at Karnak, Medamud, Tod, and Armant, and dedicated to Mentu-Ra. Of these four sanctuaries, Medamud (Madu) is the only one that at the present time offers the complete history of the monument and brings an important confirmation of the relationship of astronomical epochs to the myth.

It is customarily acknowledged that in the Eleventh Dynasty (2200 B.C.) the kings named Mentuhotep chose Mentu for the supreme god of the Theban nome, and that the Twelfth Dynasty is marked by the ascension of Amun to the highest rank with the reign of Amenemhet, founder of the Twelfth Dynasty (2000 B.C.).⁹ Now, it was in about 2200 B.C. that the precessional signs changed: the vernal point left Taurus and entered Aries.

At Medamud we see the signature of the end-times of the cycles, except for the Christian church, which marks the beginning of Pisces.

Plate 50A • The First Temple

The first temple, built on a natural hillock, has undergone a transformation since the time of its origin. In its first state it was composed of a polygonal, enclosing wall of unbaked bricks covered with a white coating that surrounded a sacred wood in which the so-called cult edifice itself was found; a court preceded by a pylon gives access to two winding corridors that penetrate into two earthen mounds sheltering two sanctuaries (fig. 245).

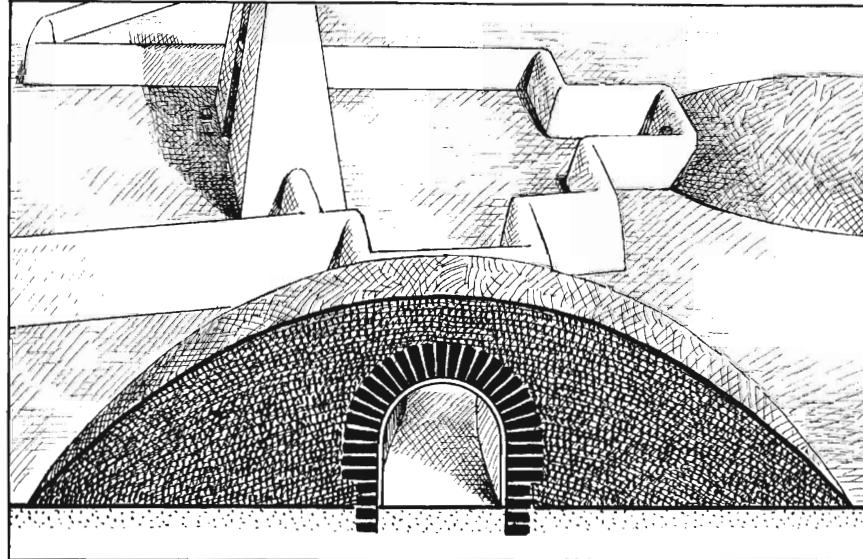


Fig. 245. Mounds of the original temple at Medamud

One of the corridors is oriented north-south. It has a double meander and two altars at the entrance. The other is oriented east-west, and has only one meander and a single altar. If we judge by the height of the enclosing wall, which was terminated by a hogbacked crown at 1.75 meters, the height of the corridors could not have been over 1.50 meters. These galleries did not have doors

⁹ Ibid., pp. 147, 160–61.

and their winding character made it impossible to see into the sanctuaries from the exterior. The floors of the corridors were covered with fine sand. At the entrance of the south gallery two cylindrical, earthen pillars were able to support an offering plate or a brazier; a single pillar of the same type was found at the entrance to the east gallery.

There was no construction under this edifice, but only a thin bed of black earth in which two prehistoric objects were found.¹⁰

The original temple of Medamud underwent several important modifications. A second court was added to it preceded by a pylon with masts. The circular pedestal of one of these masts, carefully cut in a block of sandstone, has been found in place to the right of the entrance door.

The axis of the new pylon is not the same as the first. At the time of this change, the structure had to be modified and the entrance to the original pylon displaced.

The connection of the new pylon with the enclosing wall and the wall of the court produced a sort of triangular alcove with a soft surface that was used as a storage place for cult objects.

On the right side of this new court there are two rectangular, brick benches covered in ash. They were used to heat the crucibles found in the surrounding area.¹¹

Intact or in ruins, it is this enlarged building that Sesostris III found at Medamud when he wanted to construct his great fortified temple. He completely razed the walls and mounds of the monument and burned the trees of the sacred grove to assure a solid foundation on cinders for his buildings, which were established exactly on the place of the original temple.¹²

The later constructions would respect the orientations of the two original mounds and would always retain the double character, the opposition at right angles, north-south and east-west.

Plate 50B • The Temple of Sesostris III (Middle Kingdom)

The temple of Sesostris III appears as a great enclosing wall that surrounds two distinctly separate groups of monuments, separated by an east-west wall without any opening. The buildings to the south have their principal entrances toward the east. The north part is divided in two by a north-south wall, established exactly on the axis of the original mound with the double meander and the two altars. The sanctuary itself, consecrated to Mentu and his sacred bull, is thus located in the northeast corner of the enclosing wall.

This sanctuary is oriented north-south and has a double entryway. The north entry crosses a long room with a single longitudinal colonnade before penetrating the sanctuary; the west entry crosses the court, then the wall built on the ancient mound, and heads toward a court lined with double porticos that have Osirian columns, before entering into the covered sanctuary to the south. The monument as a whole appears as a fortress, and its principle door is named "Sesostris drives off the evil from the lord of the Theban nome who resides at the heart of Medamud."

Sesostris III made six foundation deposits in cubic form. Four are arranged in a square to the northeast and northwest corners of the enclosing wall and on all sides of the corridor that divides the southern structures. The two others are located at each end of the original north-south mound. The four exterior deposits contained three bull's heads and a cow's head. The two interior deposits contained no bones and marked the axis of orientation of the west enclosing wall of the sanctuary.

¹⁰ Cf. plate 94A, the original temple founded on virgin ground.

¹¹ Hundreds of elongated crucibles have been found in the interior of the enclosing wall.

¹² Robichon and Varille, *Description sommaire du temple primitif de Médamoud*, pp. 1-4.

Sesostris III left the court located in the northwest corner of the yard empty, under which was found the second original mound. In this court, above the east-west mound, Tuthmosis III later established a square foundation platform that provides the exact demarcation and the orientation axis of the constructions of the future Ptolemaic sanctuary dedicated to Amun, the ram. The center of this square (the crossing of the diagonals) would become the exact center of the naos of the barque of Amun. Thus, twelve centuries later, the plan defined by Tuthmosis was realized. This pharaoh placed nine foundation deposits around the platform in cylindrical holes. Now, in the temple of the Bull, oriented north-south, the holes containing the foundation deposits were square (north-south is axial) and in the temple of the Ram, which would be oriented east-west, the holes are round (east-west is cyclic). Among other objects, one of these round holes contained an offering cup in the form of a spherical skullcap on the edge of which six bulls alternate with six shallow, gold cups. This confirms the emphasis on the cyclic character of these deposits.

Plate 50C • The Ptolemaic Temple

The present temple of Medamud was built in the Greco-Roman Period by Ptolemy VI on the site of the previous temples. This great temple, surrounded by an enclosing wall of bricks constructed by Tiberius, has before it a sphinx-lined road leading to a loading dock. The entrance in the surrounding wall goes through a monumental sandstone gate, also erected by Tiberius.

The temple itself has the form of a long rectangle oriented east-west. It faces west and has the appearance of a sort of pylon in front of which three curious kiosks are placed, one at the center and the other two toward the north, each in front of a door.

The temple as a whole is divided into three parts: First, the large peristyle court, which is lined on three sides by a portico with a double colonnade. Second, the temple of Amun itself, which is oriented east-west with two doors that open to the west and that are on the axis of the central kiosk and its neighboring kiosk to the side. Third, the temple consecrated to Mentu, which is oriented north-south and is totally separate from the temple of Amun. It can be accessed in two ways: through a door on the west located on the axis of the third side kiosk, or through a door on the south that one approaches after encircling the entire temple on the outside.

The naos of the barque of Amun, constructed on the place of the original mound with the single meander, is encircled by several rooms that occupy the platform built by Tuthmosis III.

Built on the preceding sanctuary constructed by Sesostris III, the temple consecrated to Mentu is surrounded on three sides by an enclosing wall on which the Niles bringing their offerings are depicted. These figures are facing toward a tableau, carved on the southern exterior facade of the temple of Mentu and in its axis, that depicts a Roman emperor before the bull of Medamud. Thus, it is the north-south mound, the one with the double meander, that is and remains connected to the bull-Mentu principle. It is the east-west mound with a single meander that would return to Amun.¹³

In the central kiosk, fragments of bas-reliefs and inscriptions describe a local festival that goes back to the Thirteenth Dynasty. "One of these inscriptions is particularly interesting because it brings us face to face with one of these *saltatores mimici*, according to Lucian. In Egypt, these people expressed in their dances the most mysterious elements of religion. . . . These are dancers 'of words,' that is, mimes."¹⁴

¹³ At Luxor the east-west walls of the covered temple are governed by the axis of Amun.

¹⁴ Etienne Drioton, "Médamoud, les inscriptions," *Rapports sur les fouilles de Médamoud 1925–*, Fouilles de l'I.F.A.O., rapports préliminaires, vol. 4 (Cairo, 1927), fasc. 2, pp. 14–15.

The miming gestures are the expression of the feeling conveyed in music, as Hickmann has well understood through his investigations of the sacred traditional songs of the Copts.¹⁵

The dances and gestures that accompany music and song are found in all the initiatic temples of antiquity.

Gesture animates the word; without it, the word is a purely cerebral communication, conventional and "cold."

The word without gesture is particular; it is addressed only to those who are instructed in its significance, who know its language.

The gesture speaks to everyone; it is thought in action, it is hieroglyph.

A feeling requires the gesture in order to be communicated in kind. Gesture is the speech of emotion, of the most profound sentiments.

The mime and the dancer address themselves to the most immediate and most subtle aspects of human intellection.

Thus, sacred dance is a part of the Temple, a commentary on the music and a realization of the rhythm. But sacred dance is even more than that: it knows the functional, cosmic meaning of each part of the human body. The gestures of each part—fingers, hands, arms, legs, feet, stomach, chest, spinal column, head, eyes, and so forth—are the active script that puts the human being in a living, emotional communication with the Universe. This same intention must be seen in the depictions of often eccentric dances found in the figurations in pharaonic tombs, for example.

In the tombs of the Fifth Dynasty, Professor Montet notes several dancing scenes,¹⁶ and the texts that accompany them, which cannot be transcribed into common language, show an incontestable symbolic meaning.



The northern kiosk that gives access to the door leading to the temple of Mentu also preserves fragments of texts among which there is a hymn that lets us know the qualities and powers attributed to him:

Spirit of sperms, as many as there are in the whole world! . . .

It is he who has placed Ptah as chief of the artists to create all the works of his heart.

It is he to whom we call in the hour of sickness: he arrives immediately near to him who calls his name.

Speaking with his mouth, acting with his hands; there is no one to oppose what he has undertaken. . . .

Hearts are his bread, and blood is his water; he is pleased with their smell. . . .

Valiant bull whose horns are of iron to kill all who approach . . .

His venom instantly shines; he cuts with the sword; his commandment destroys the flesh.

There is no antidote against him in recorded texts; there is no conjuration against him in the hieroglyphs.¹⁷

¹⁵ Hans Hickmann, *Observations sur les survivances de la chironomie égyptienne dans le chant liturgique copte*, Annales du Service des Antiquités de l'Egypte 49 (Cairo: I.F.A.O., 1949), fasc. 2, p. 418 et sqq.

¹⁶ Pierre Montet, *Les Scènes de la vie privée dans les tombeaux égyptiens de l'Ancien Empire* (Strasbourg: Imprimerie Alsacienne, 1925), p. 367.

¹⁷ Drioton, "Médamoud, les inscriptions," pp. 38–40.

A fragment of text on the inside of the door of this kiosk mentions the ancient origins: "Those who are under the belly of Nut, those who are on the back of Geb . . .,"¹⁸ that is, Shu and Tefnut, Gemini.

Plate 50D • The Christian Church

The first Christian church was established on the south side of the Amunian temple. Its east-west axis is parallel to the direction of this temple. The apse of the church was supported on the old stable of the ram of Amun, and its entrance is to the west.



This succession of constructions coincides chronologically with the *end* of the phases of the zodiacal precessional months, from Gemini to the beginning of Pisces. The cult of Aries ceases with the beginning of Pisces, the Christian symbol, around the year 60 B.C., just as approximately 2200 B.C. was the end of the cult of Taurus, which had begun around 4300 B.C., at the end of the cult of Gemini. These dates correspond to known dates in pharaonic chronology.

Let us note that Sesostris III (Senusret) founded the temple of the Bull at the end of the precessional passage through this sign. This fact is symbolized by the existence of several statues of this pharaoh at Medamud that represent him with the characteristics of an old man.

PLATE 51 • THE ZODIAC

Plate 51A • Man and the Zodiac in the Middle Ages

Plate 51B • The Temple of Luxor and the Zodiac

The doctrine of the Anthropocosmos has in all times related the human body to the starry sky through zodiacal symbols. It was therefore necessary to look for the existence of these figurations in the temple; some zodiacal signs are indicated there through their symbols or by their characteristic functions.

Aries is assigned to the head and Taurus to the nape of the neck. The dedication carved on the periphery of the pedestal of the covered temple begins uncharacteristically at the height of the nape (fig. 199, no. 9) with the formula "Long live the golden Horus, powerful bull . . .," leaving the whole part of the socle north of this point marked by its lack of an inscription.

This same dedication continues toward the south to the point corresponding to the west door of room XII (fig. 199, no. 10), and mentions the "statue of Amun in gold, with the head of a ram . . .," which should be found in the central sanctuary I. Finally, graffiti above this same west door of room XII shows a ram's head placed on a pedestal. The accent placed on the ram at this point in the temple, corresponding to the head, incontestably alludes to the astrological rulership of this sign over this part of the human body.

Leo is depicted at the level of the chest (the *haty*, fig. 246a) in room VIII, on the eastern part of the north wall, where the king is seated on a throne with a lion (the sun and heart) sculpted on it.

In room XVI, the bases of the columns draw lunar crescents by hiding part of one disk with another (plate 44), symbolizing Cancer (the moon, breasts, stomach). We find here an example of the frequent transposing of Leo and Cancer, which is also found in the zodiac of Dendera. This can be compared to the transposition of Leo and Cancer in the two groups of signs of the zodiac sculpted at the base of the central porch of Notre Dame in Paris.

¹⁸ Ibid., p. 33.

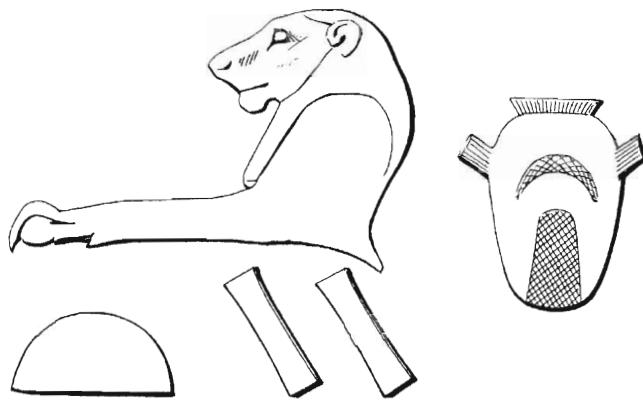


Fig. 246a. Haty is written with a lion protome followed by the determinative for the heart

The sign of Virgo rules the belly at the level of the navel. We find the inscription that confirms the meaning of the temple as “gestating the Royal Man” at this level on the west face of the architraves of the east colonnade of the peristyle court (fig. 199, no. 15). This gestation is made in the “androgynous” or Adamic body, as indicated in the *kamutef* mentioned in this same text.¹⁹

The importance of the role played by the zodiacal sign of Scorpio regarding sex is known through the Metternich Papyrus where Isis struggles with a scorpion in front of her and another one behind, both of which want to sting her son Horus to death.²⁰

Sagittarius rules the thighs. In the temple, the thighs correspond to the great colonnade of the nave, on the inside east and west walls of which is depicted the procession of the barques on the water, the flux that emerges from the calves and ends at the top of the femur. (Here we hit upon an important problem about which we will speak in another work regarding “mystical geography.”)*

On the exterior face of the west wall of the nave we find in the center (Sagittarius) a very rare figuration of a warrior seated sidesaddle and brandishing a bow.

In front of the door of the nave, at the knees, the mythic Capricorn is replaced on the dorsal stele of the seated colossi by the tadpole, who is shown with his aquatic tail and his back feet bent, holding a fixed point on land. This tadpole signifies duration. One could object that it is always found on these same colossi, but that would be forgetting that the temple of Luxor specifically reveals to us that the seated black colossus signifies what the knees are for man: the principle of the angle,²¹ of strength and foundation, related to the pituitary gland, connected with seminal power, and therefore with continuity.²²

¹⁹ In the zodiac of Dendera, beneath the sign of the Virgin holding a wheat stalk, there is another figure of the Virgin holding a child.

²⁰ This part of the temple of Luxor corresponding to the lower belly is badly ruined and no longer allows us to investigate the symbols that relate to Libra and Scorpio.

²¹ Cf. chapter 7, “Fundamentals of the Trigonometry.”

²² The influence of the knees and the femur on the production of seed is almost unknown in present medicine. This relates to the formation of a “fixed point” that inscribes innate consciousness and transmits the heredity of this acquisition, and is concerned with reincarnation. Cf. chapter 34, appendix.

Let us recall with regard to the thigh (femur) the Greek myth of Dionysus, conceived by Jupiter with Semele. Jupiter keeps the infant conceived with the dying Semele in his thigh. Now, this is Amun, who would be called Jupiter-Amun by the Romans.

*Never completed.

Aquarius, often symbolized by libations, corresponds to the calf, and it is at this place in the court of Ramesses, at the height of the "door of the princes," where the avenue lined with columns leading to the Nile converges, that the end of the axis of the nave is marked by a key-piece (fig. 281), from which a small canal leads in the direction of the river.

Now, a myth relates that in the island of Biggeh, a little south of Aswan, there was a tomb of Osiris whose reputation surpassed that of all the others. The left leg of Osiris was buried there and the priests thought that this leg was the seat of one of the two sources of the Nile, and they showed how the water came out of it in jets. From this source sprang the fertilizing water of the Nile, and in this place Osiris was identified with the Nile. "It was the great Nile that created wheat with the water that is in it, and that caused the trees and flowers to shoot up," said the priests. "And it is reborn in its season and its limbs renew themselves each year."²³

This tomb of Osiris was called the Abaton. The bas-reliefs represent it as a cavern in which Osiris, in the form of a "Nile," holds a vase in each hand from which a jet of water springs: this is the symbol of Aquarius.

The Origin of the Symbol of Capricorn

Capricorn, like Sagittarius, is one of the composite figures of the zodiac. It governs the winter solstice at the moment when the sun, at the festivals of Khoïak (Christmas), begins its reascent from the depths of the setting "waters," that is, the night. The west is the sunset, with the autumnal equinox in Libra, for the complete *day* that the year represents. The sun reappears on about the twenty-first of March with Aries, rising in the east.

This is the reason why Capricorn is aquatic in the hindquarters and terrestrial in the front. As such, its horns do not have a direct meaning, but they take on significance if we understand this figure as an inheritance of the symbol placed, in Egypt, at the knees, ruled by Capricorn.

The tadpole first develops its back feet, which it puts on land as if they were front feet, while its aquatic tail still exists. Placed on its head is the double palm, which counts the years, because the palm is the natural symbol of the measure of the lunar months of the year: the phoenix palm gives forth a palm leaf plus a fraction of the next one every month so that at the end of a year there are twelve palm leaves and a fraction.²⁴ Thus, there are as many palm leaves as there are lunar months in the solar year of $365\frac{1}{4}$ days.

Under the sign of the tadpole (the future Capricorn) is placed the *chen* (fig. 246b, b), which signifies the event determined on the string of continuity. When two tadpoles are each carrying a palm and placed in opposition, the moment of past time separated from the time that is beginning is indicated, that is, a continuous duration.

Faultfinders will object that this sign is also found elsewhere than at the knees of the Man of the Temple of Luxor, but the lion, the moon, the ram, and so on, are also found elsewhere. *The determination of the meaning of a symbol is one of the great discoveries that the temple of Luxor brings, for this as well as for the ritual and other signs*, which is precisely what allows us to decipher their significance when they are used in other places.

²³ Cf. Erman, *Religion des Egyptiens*, pp. 431–35.

²⁴ This symbol of the measured time of the year is common in pharaonic Egypt. It signifies duration, which is why it is used as a traditional symbol in the Gospels and for Palm Sunday, etc.

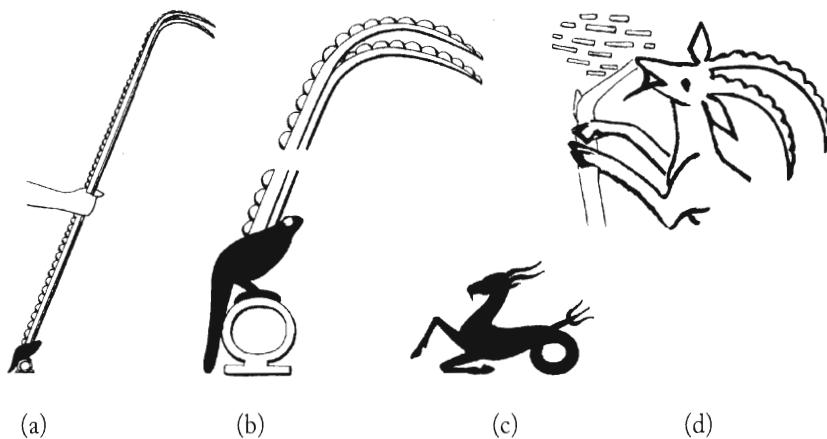


Fig. 246b. (a, b) Pharaonic signs; (c, d) signs from the Middle Ages

(*a, b*) The double palm placed on the back of the tadpole, the back feet of which rest on the *chen* sign; (*c*) the sign of Capricorn with a fish tail ending with a trident, after forming a loop; (*d*) detail of the sign of Capricorn showing his two scalloped horns (cf. plate 51).

The sign of the tadpole-Capricorn surmounted by a palm is found in several places in the temple of Luxor, among others: to the right and left of the doors of the repository of Amun's barque, and at the east and west entrances of the court of Ramesses; on the dorsal steles of the seated black colossi, located at the knees, before the door leading from the narthex to the nave; under the Osirian curve of the naos of Alexander; and, held by two female *neters*, both at the east entrance of room XII, where the king is born at midnight (Christmas) in order to be introduced, pubescent, to the rising of the sun (six o'clock in the morning), corresponding to the spring equinox,²⁵ and in the room of the birth, on the west partition, at the time of the presentation of the newborn child to Amun (the royal birth).

In other words, we find this sign at the entrances of the temple and at the entry into life. This is an example of a play of correspondences through symbols, just as with the joints of the stones.²⁶

²⁵ The title of this scene is "Royal Ascent toward the Sanctuary." In transparency the king has the red crown and offers incense in the vase of fire.

²⁶ Cf. plates 26–28 and chapter 30.

Chapter 37

THE MASTER BUILDERS' GRID

Plates 52–67

*Scrupulously observed theological prescriptions
explain the character of pharaonic thought,
as much in mathematics for calculation as in
geometry and for trigonometric notation, and
this reveals to us the meaning, unknown until the
present, of the process of “putting into squares”
that we call the canevas.*

(Cf. chapter 11)

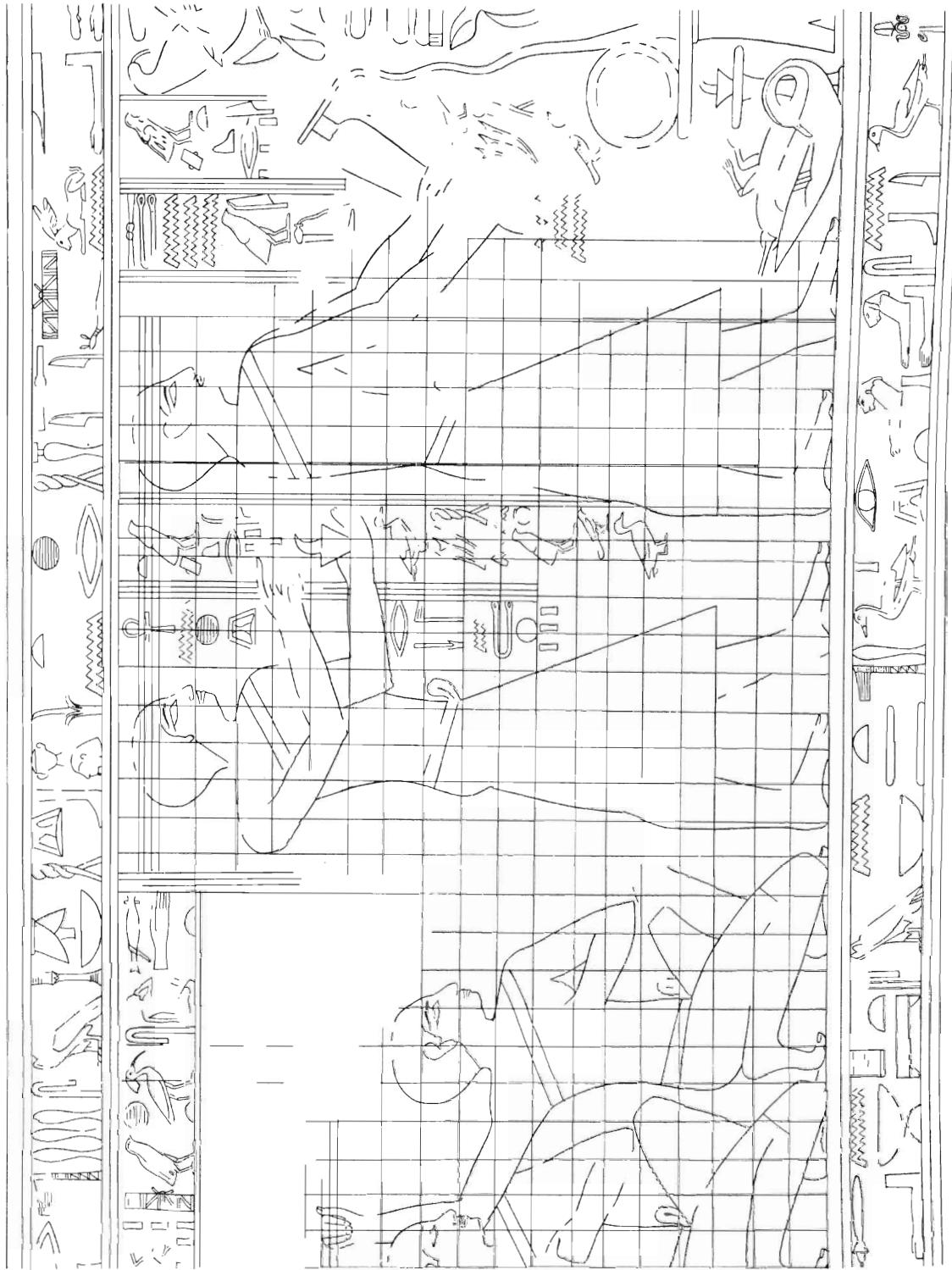


PLATE 52

Tomb of Ukhhotep (Meir), West Partition, North Part

The canevas serves as a stable foundation, formed of whole numbers belonging to the functional lineages that, by oscillation, tend toward the repose of the pendulum. This alternation is the characteristic of all growth and of the maintenance of life in its present form.

(Chapter 11)

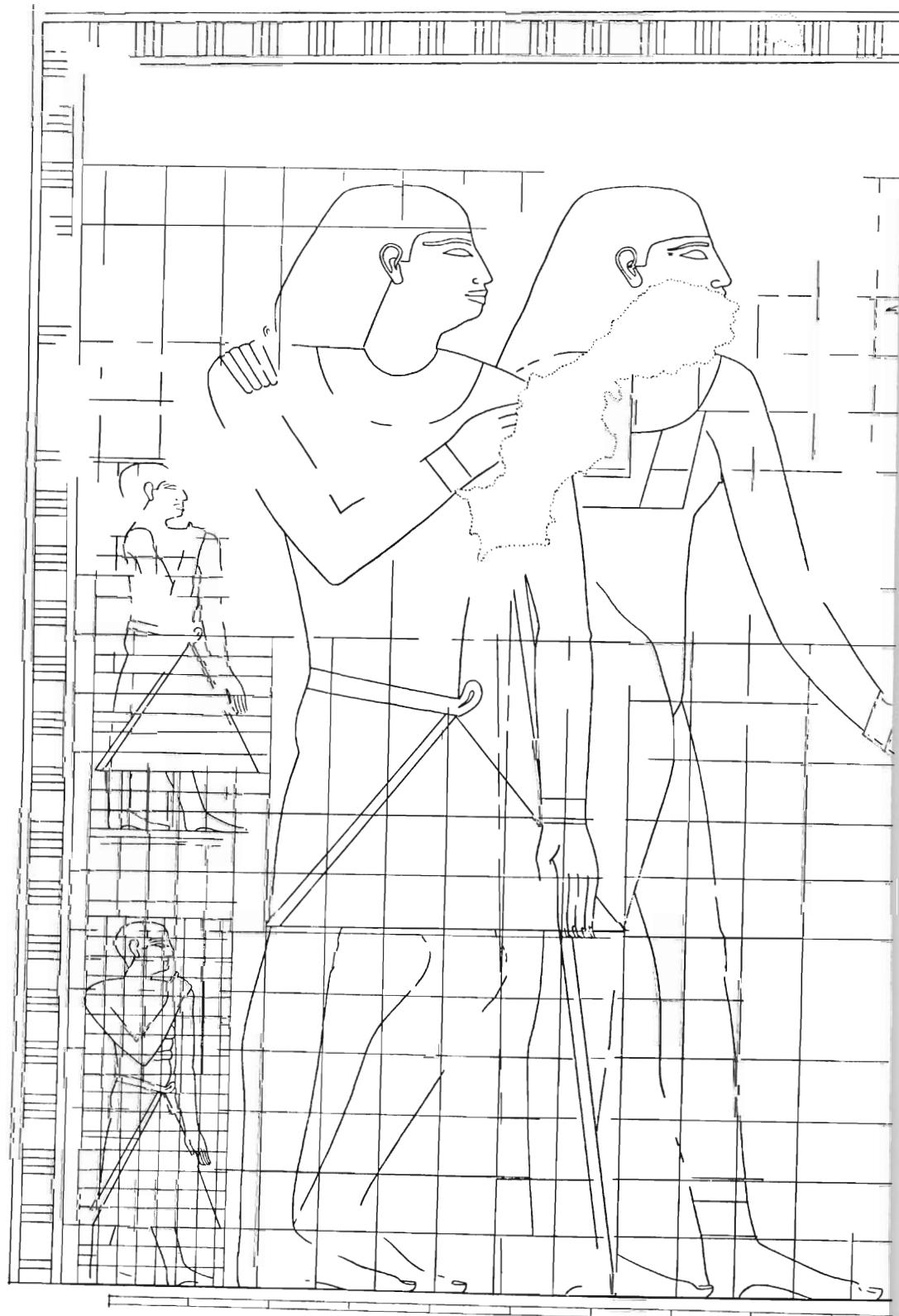


PLATE 53

Tomb of Ukhhotep (Meir), West Partition, North Part

*... the dividing into two,
the scission, is not made
into two equal parts, and
the articulation is the func-
tion of the scission. This is
the philosophy of the mysti-
cal function ϕ viewed in
its trigonometric aspect,
as it may be in all aspects
of Nature.*

(Chapter 7)





1 meter

PLATE 54
Tomb of Ukhhotep (Meir), North Partition, West Part

*Through musical harmony,
and therefore only through
our sensation of music, and
not by reasoning, can we
know absolute ϕ . This fact
indicates the way of the
pharaonic mentality and
of the true Pythagoreanism
developed from it.*

(Chapter 8)

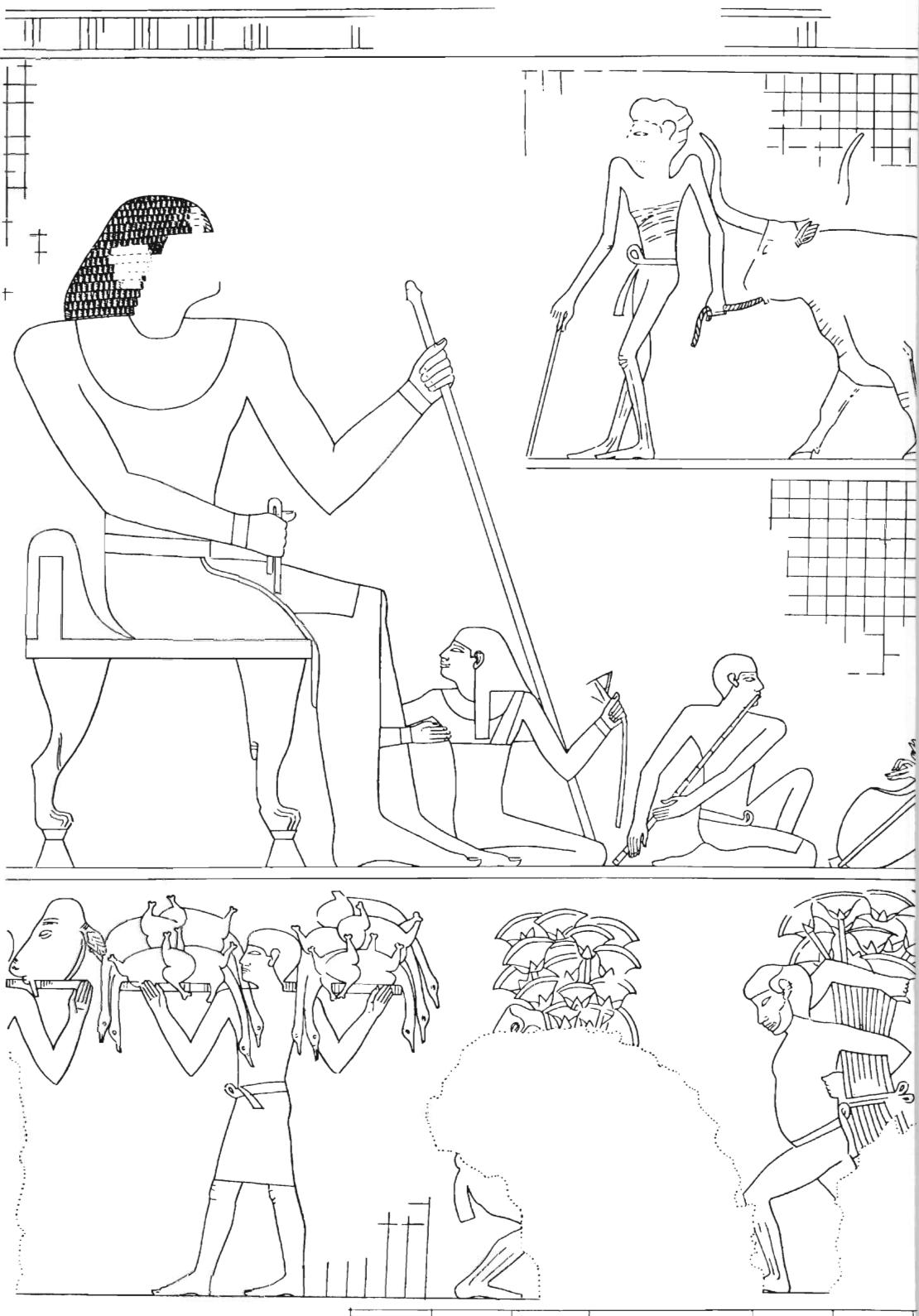
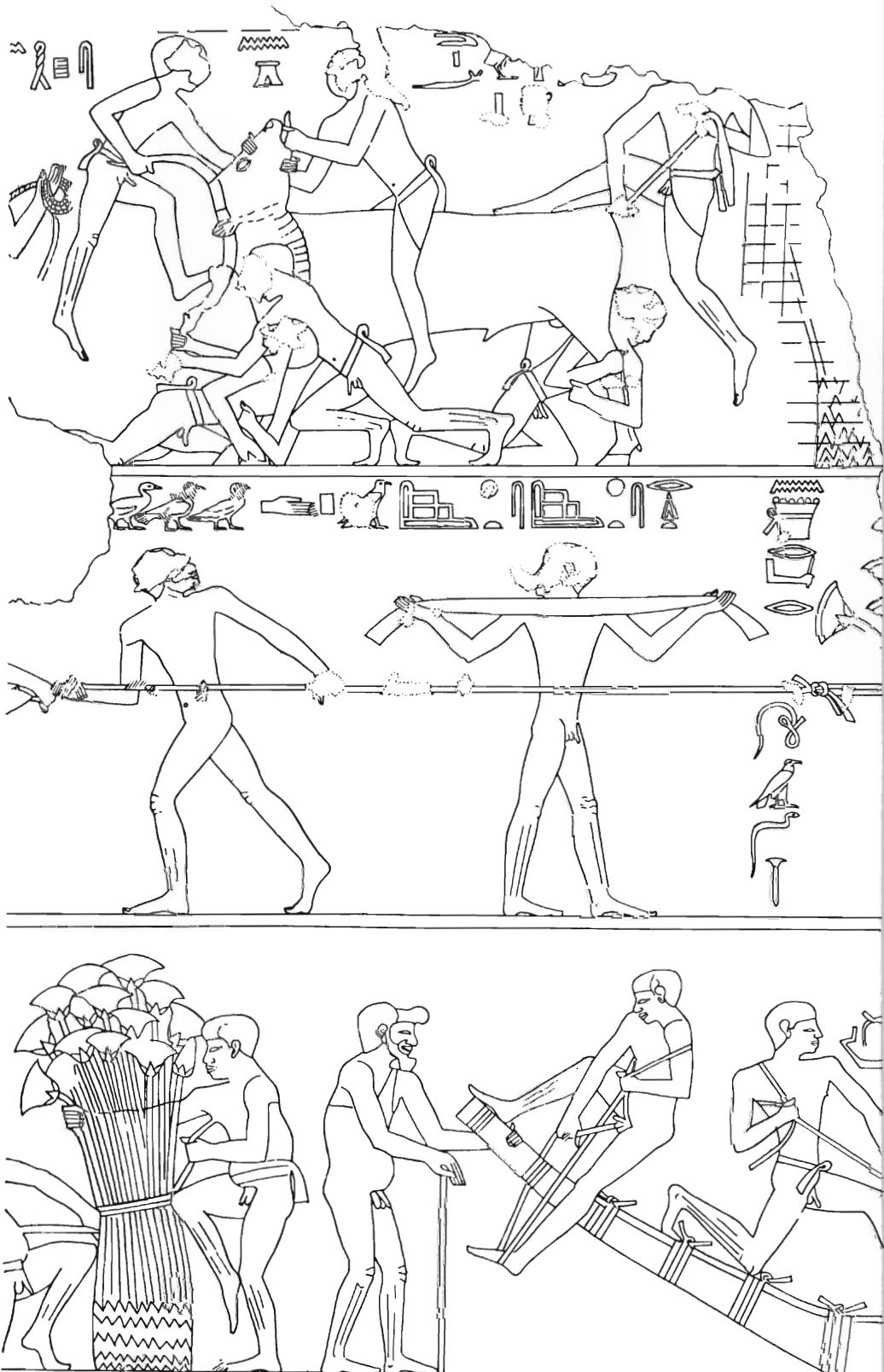




PLATE 55
Tomb of Ukhhotep (Meir), North Partition, Center

... there is a kinship between the cause of branching out in the plant ... and the articulation of the elbow and knee in the human being. There will be an inequality between the two lines thus engendered. One is "Heaven" and the other is "Earth." One is unitary, the other divisible. . .

(Chapter 7)



50 cm

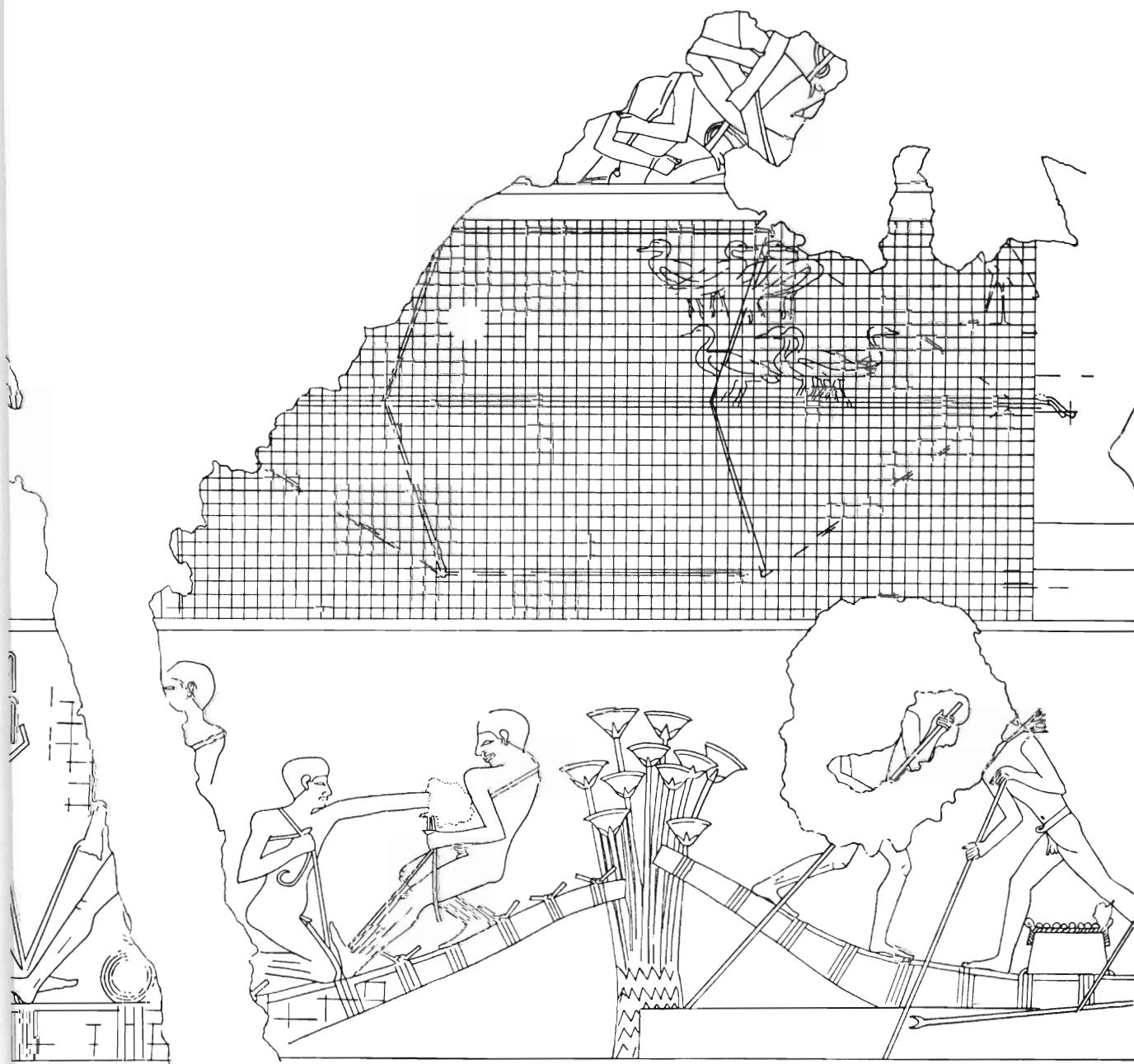
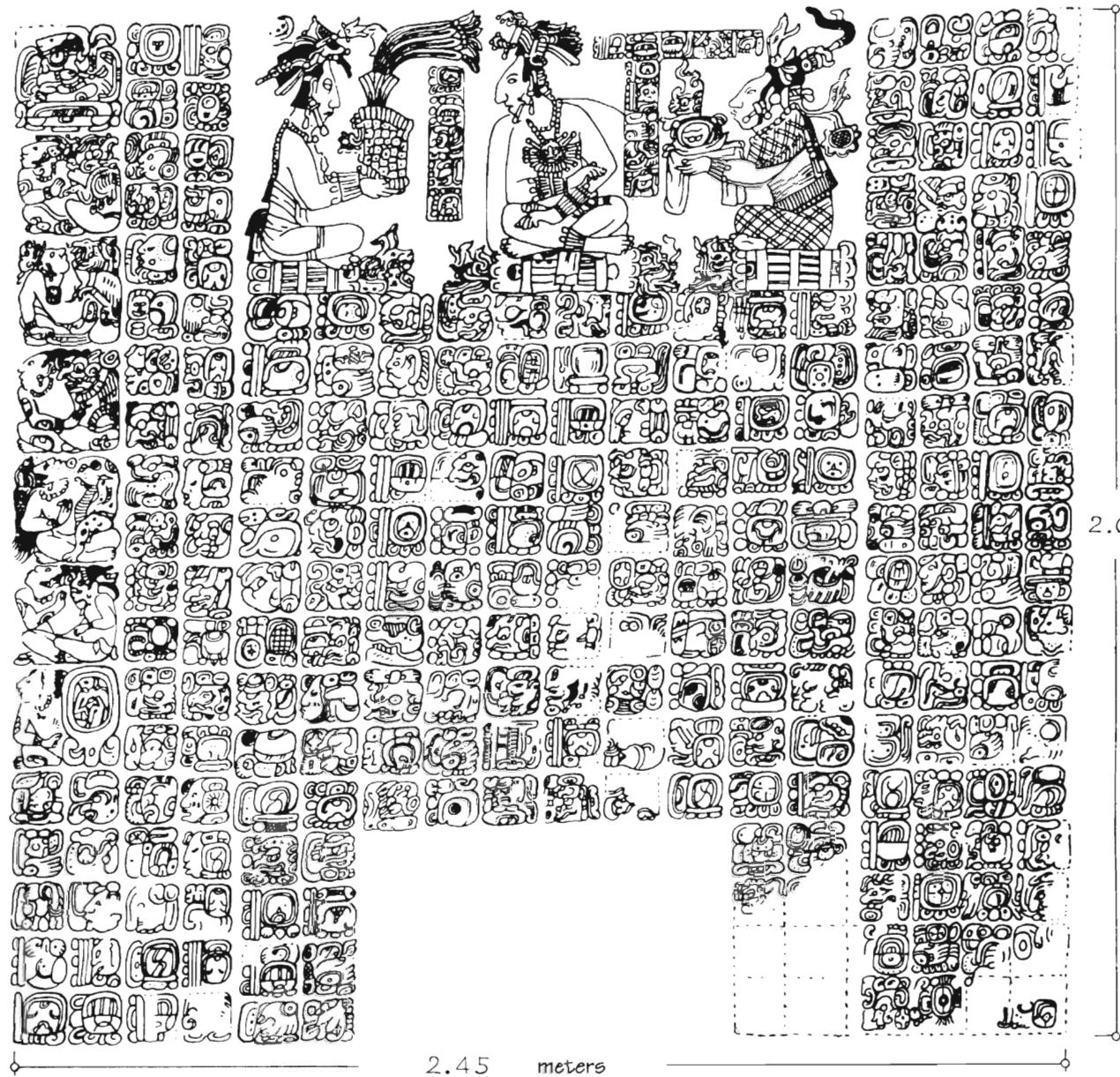


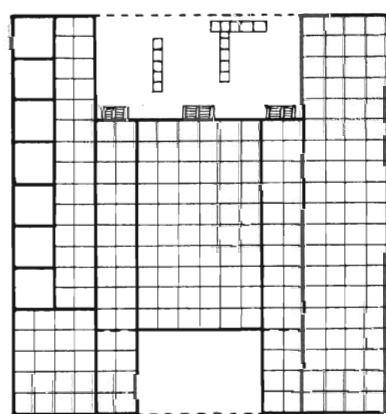
PLATE 56
Tomb of Ukhhotep (Meir), North Partition, East Part

If I prefer Ancient Egypt to the Maya, to India, China, Babylonia, or Greece, it is because . . . its entire “culture” is founded on a symbolic form of writing. This attests to an unsurpassable wisdom, which dared found an empire on the purely symbolic expression of its writing. Any writing formed from an arbitrary, conventionally alphabetical system may in time be lost and become incomprehensible.

(Chapter 2)



2.63



B

A

1	2	10	5	4
5	5	$\frac{1}{2}$	5	
7	$\frac{1}{7}$	2	6	2
$\frac{1}{7}$		$\frac{1}{7}$	$\frac{3}{5}$	$\frac{4}{19}$
5			6	
			4	2
			$\frac{2}{3}$	4
			6	
			2	4

C

18

PLATE 57

A Mayan Grid

It is thus that the golden number . . . is to be regarded as a creative or separating power; it is the power that provokes the scission, and consequently is not derived arithmetically from the root of 5, because the power five is not a cause but a result of this function ϕ .

(Chapter 5)



PLATE 58

The Kamutef of the Northeast Corner of the Transept

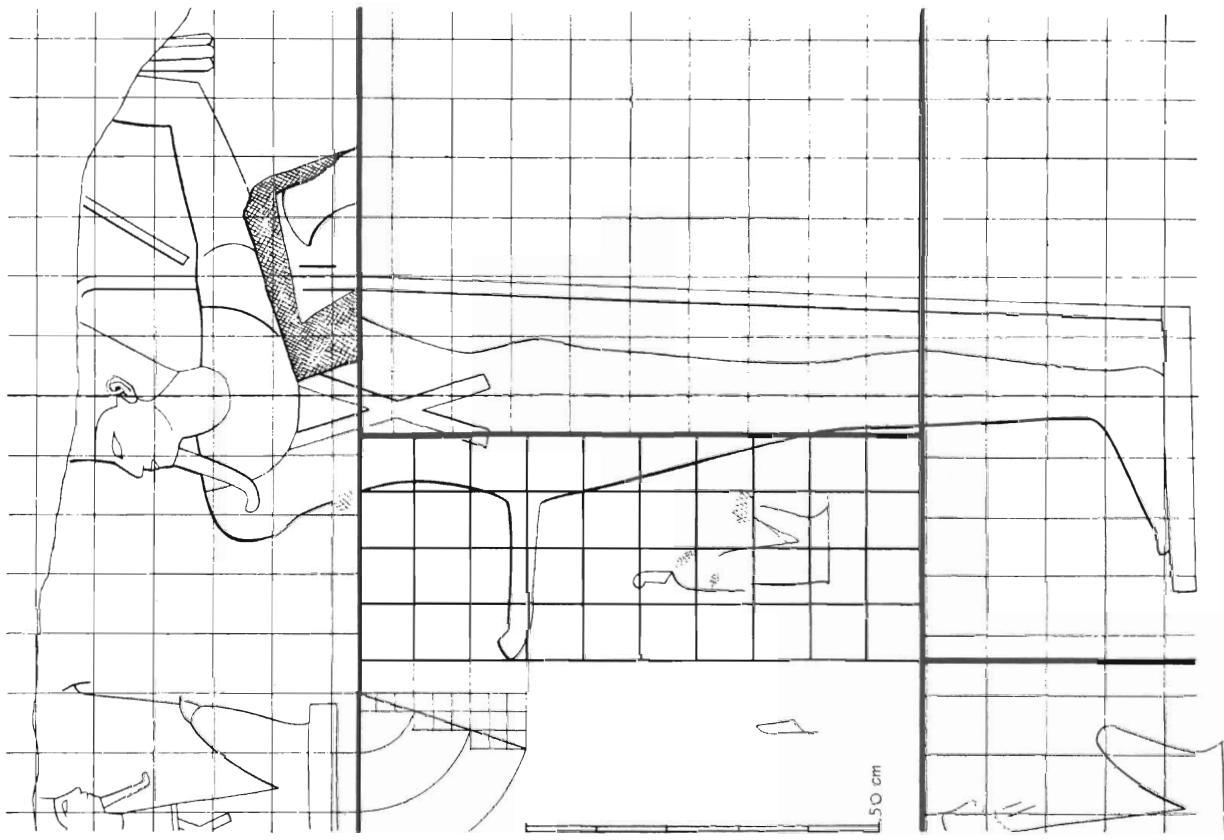
Any figuration is a “mental” transposition of a function, a symbol. In the same way a numeral is a mental transposition of a number, that is, of the definition of a function.

(Chapter 5)

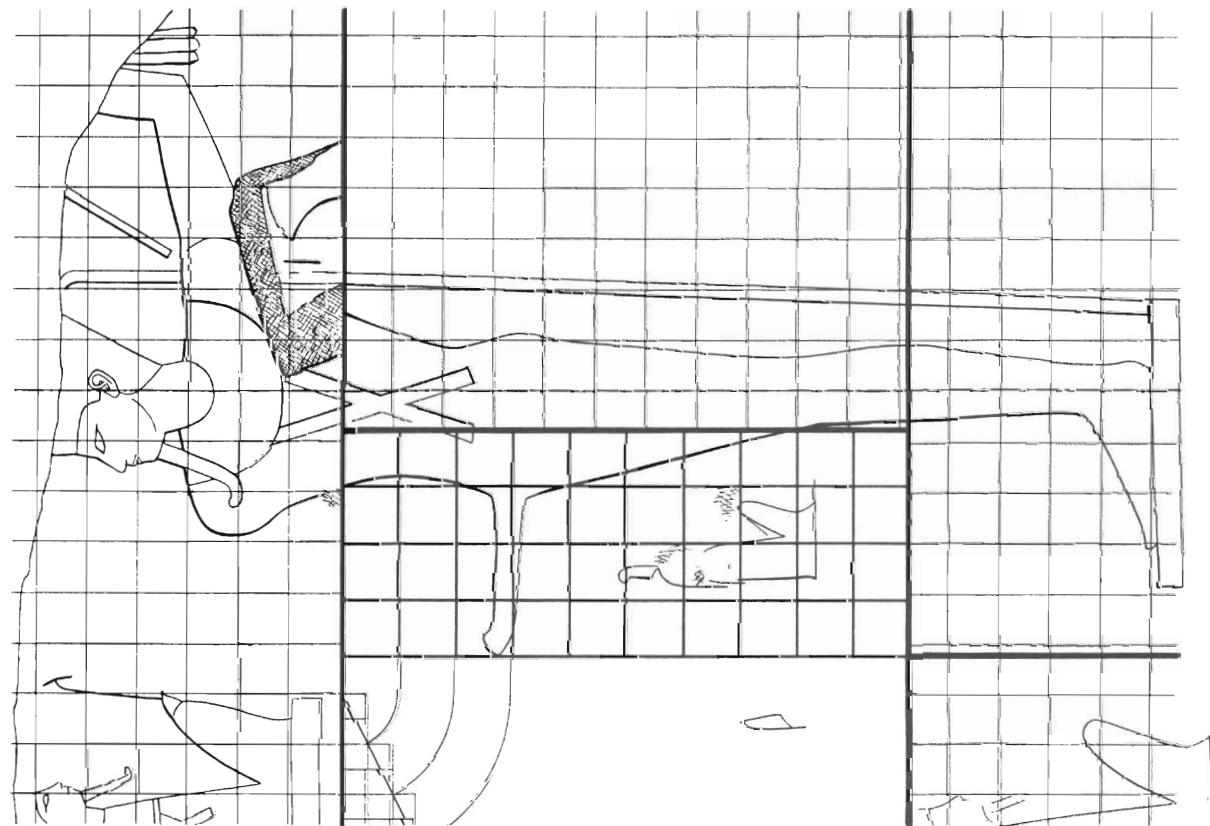
The Two Geometric Functions of the Kamutef

PLATE 59

B



A



*. . . to penetrate the thought of the Ancients, we
rely on the architecture and the geometry that
guides it, rather than on descriptive texts.*

It is the gesture that speaks and unveils.

(Elements)

PLATE 60

Thoth, Master of the Net, Karnak



Thoth is “master of . . .”; he is not the thing itself. He is not that which “comes and goes,” but that which “causes to come and then to go back to its source.” He is the creator of the cycles of that which renders apparent, but he is not writing, Seshat. Thoth is that which creates alternation, but he is not the weaving, Neith, who makes things tangible; Thoth can nevertheless become visible and perceptible—Thoth-mes—which is to say that he can be revealed: Her-mes, the secret . . .

(Chapter 11)

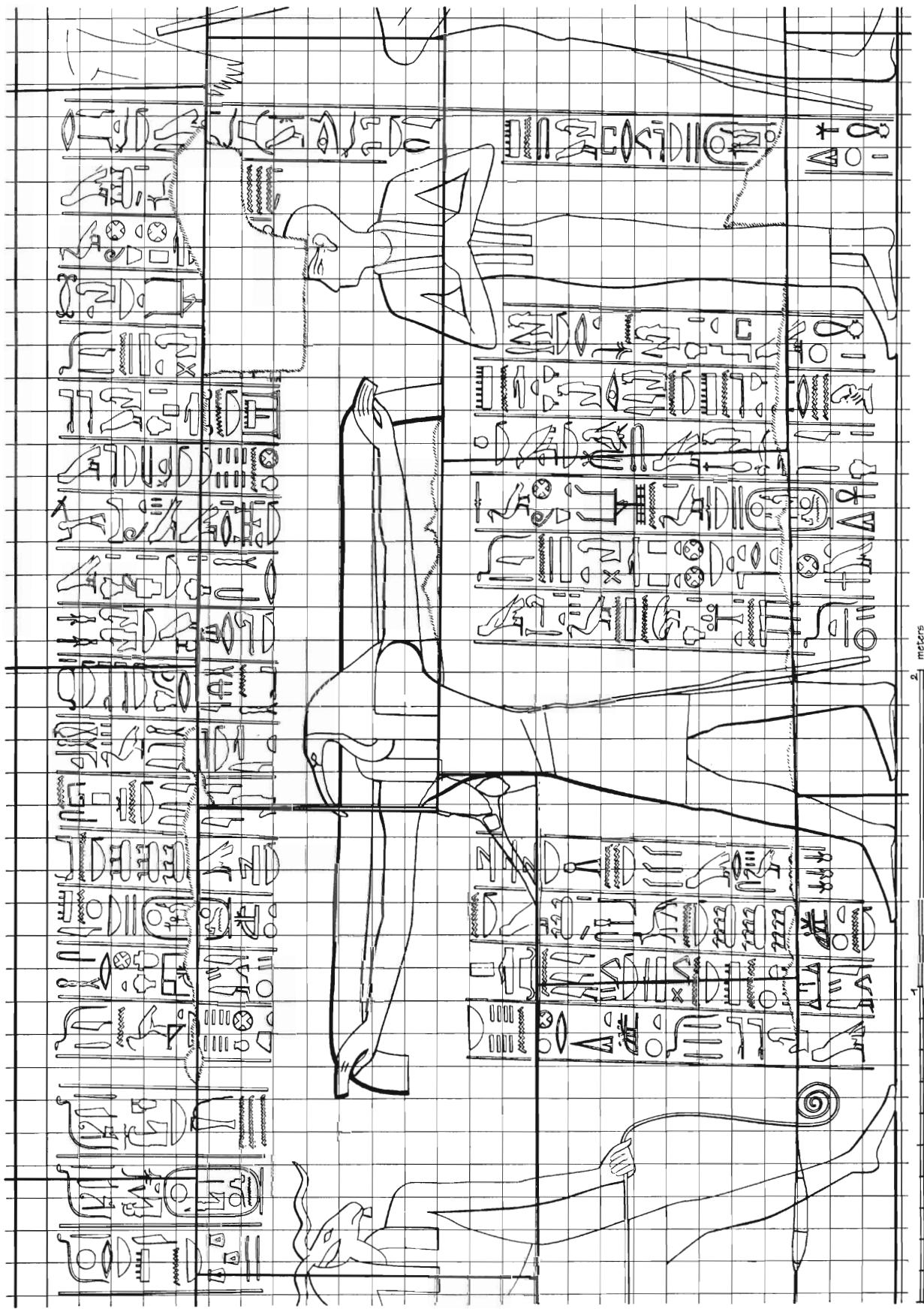


PLATE 61

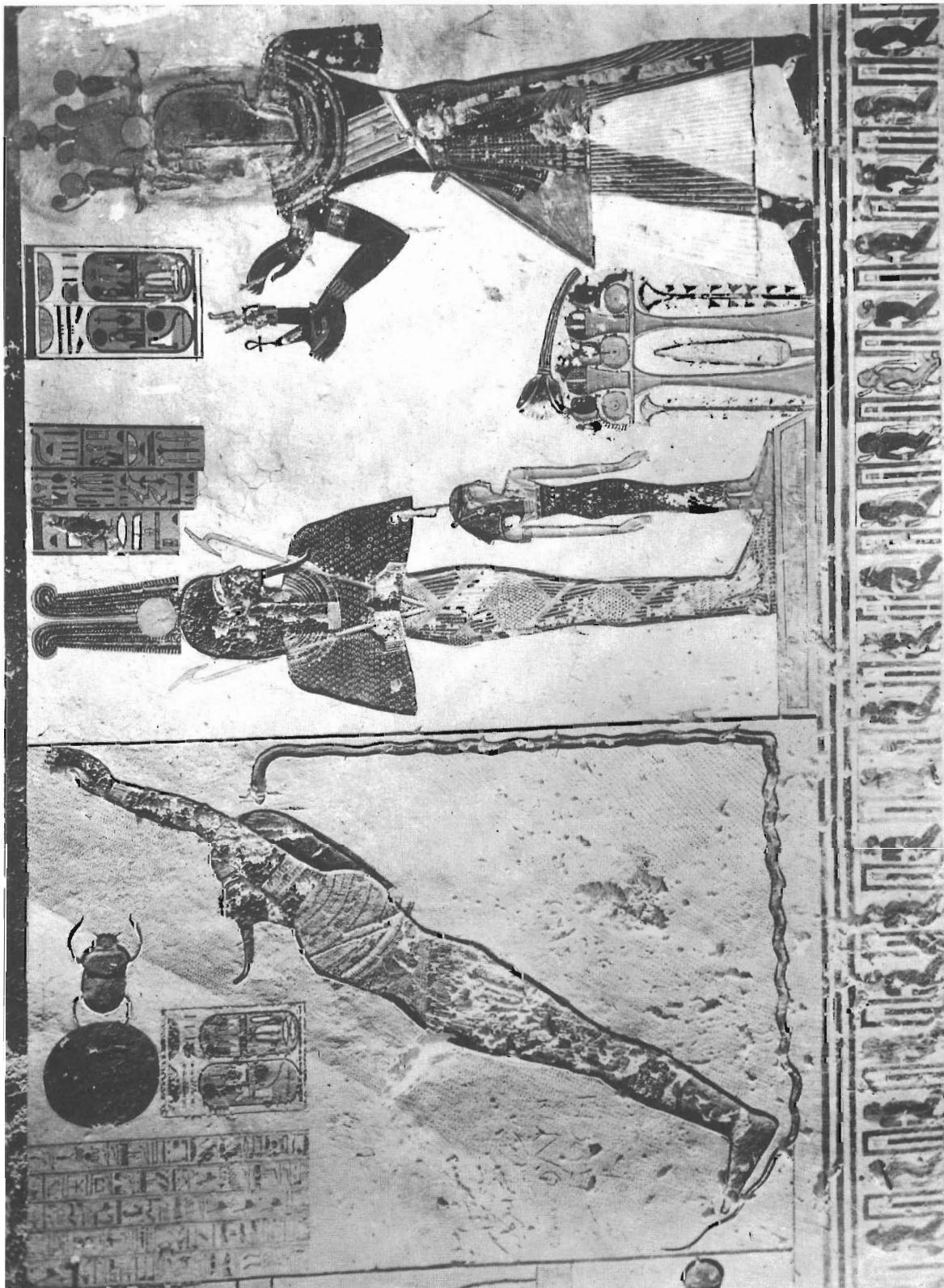
Thoth, Master of Numbers, Karnak

Present man thinks and can only think insomuch as he is child and inheritor of his heaven. He should seek the elements for his science within himself, whether it is a question of knowledge of the becoming of things, or of the objective world he perceives. Hermes said: "The Work is within you . . . , " and pharaonic Egypt would say with respect to measures: "Man measures the world."

(Chapter 10)

PLATE 62

Tomb of Ramesses IX, the Measure of the Cycle



*No curve in the Universe is an absolute circle; it is
always a question of cycles.*

(Chapter 10)

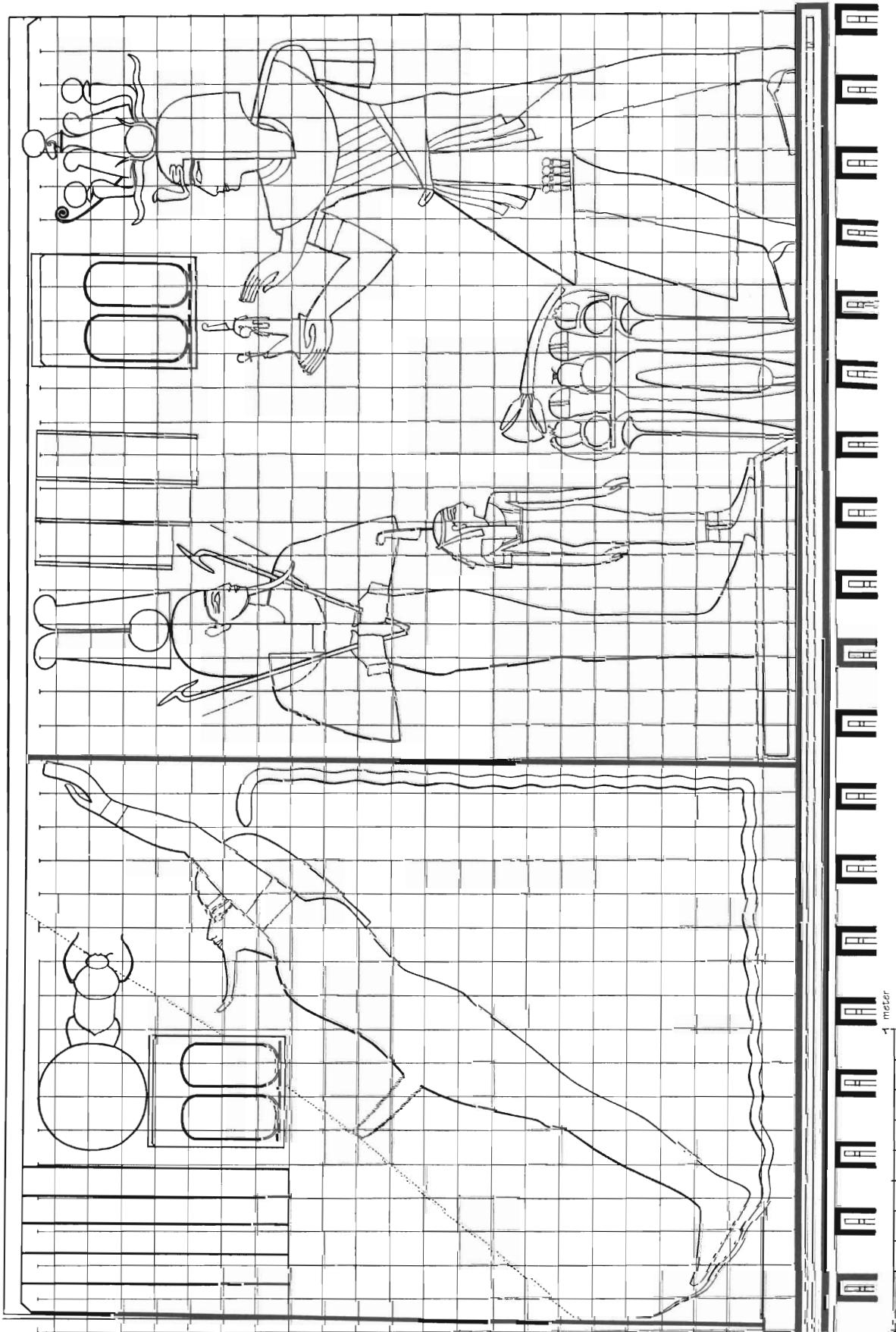
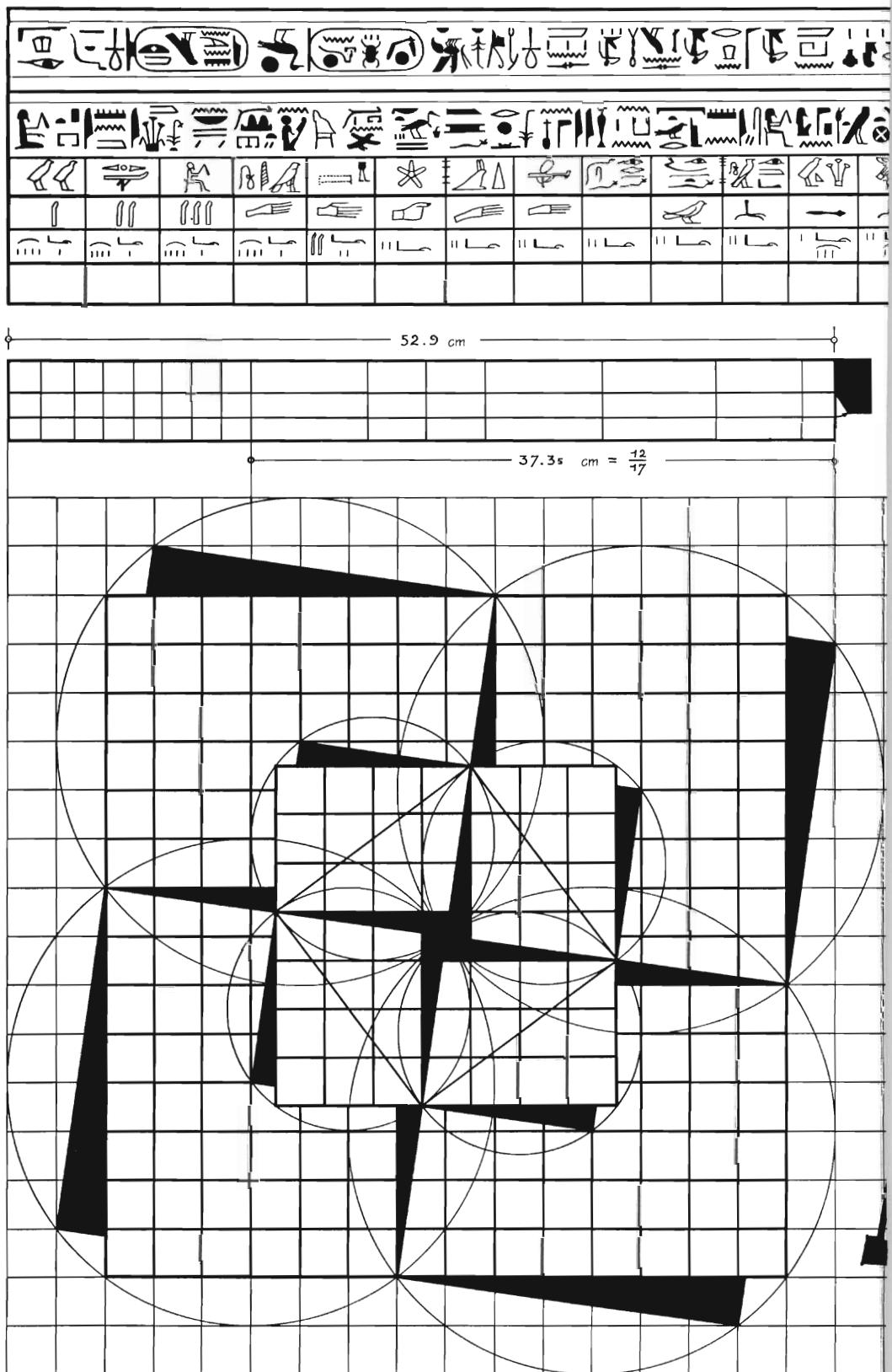


PLATE 63

Tomb of Ramesses IX, Study of Measures

The pharaonic system of measures addresses itself to life, the life whose essential functions are governed by triads of meters.

(Chapter 10)



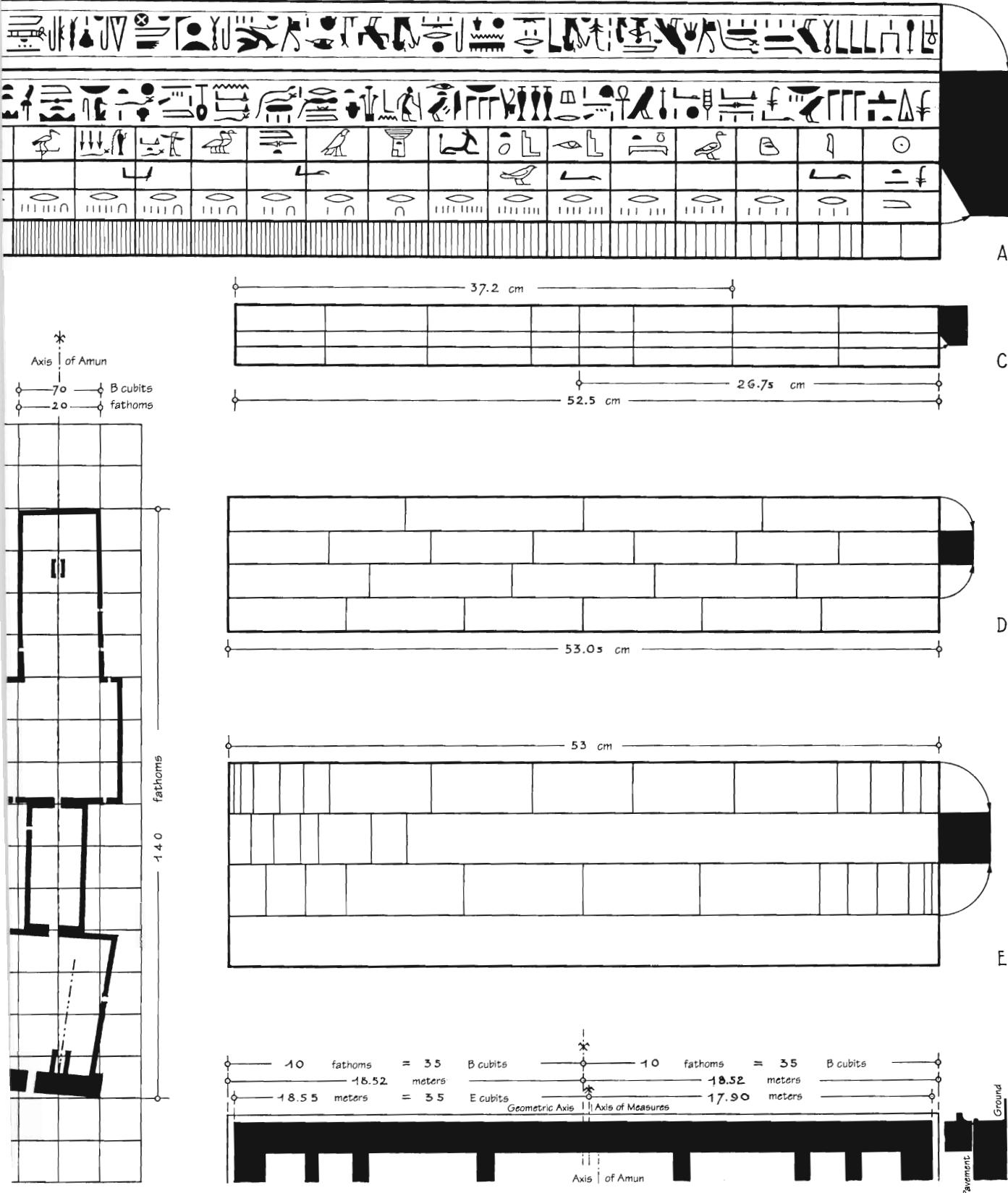
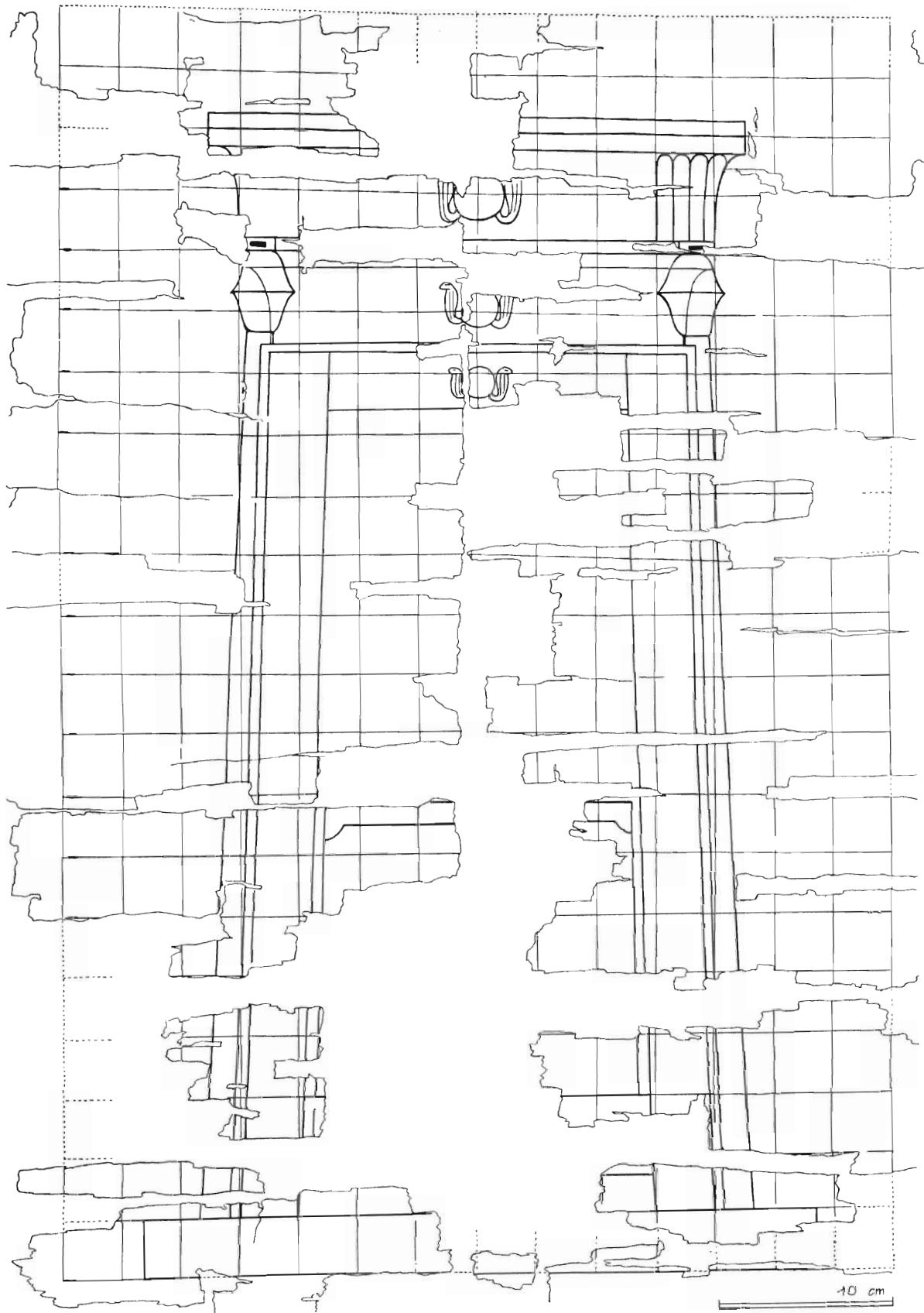


PLATE 64
The Cubits and the Temple

Any building, no matter how simple, has a soul because it is a volume. Volume is necessarily indefinable spirit-substance arrested in space. It is living, it is specified, it is number, and therefore music.

(Chapter 25)

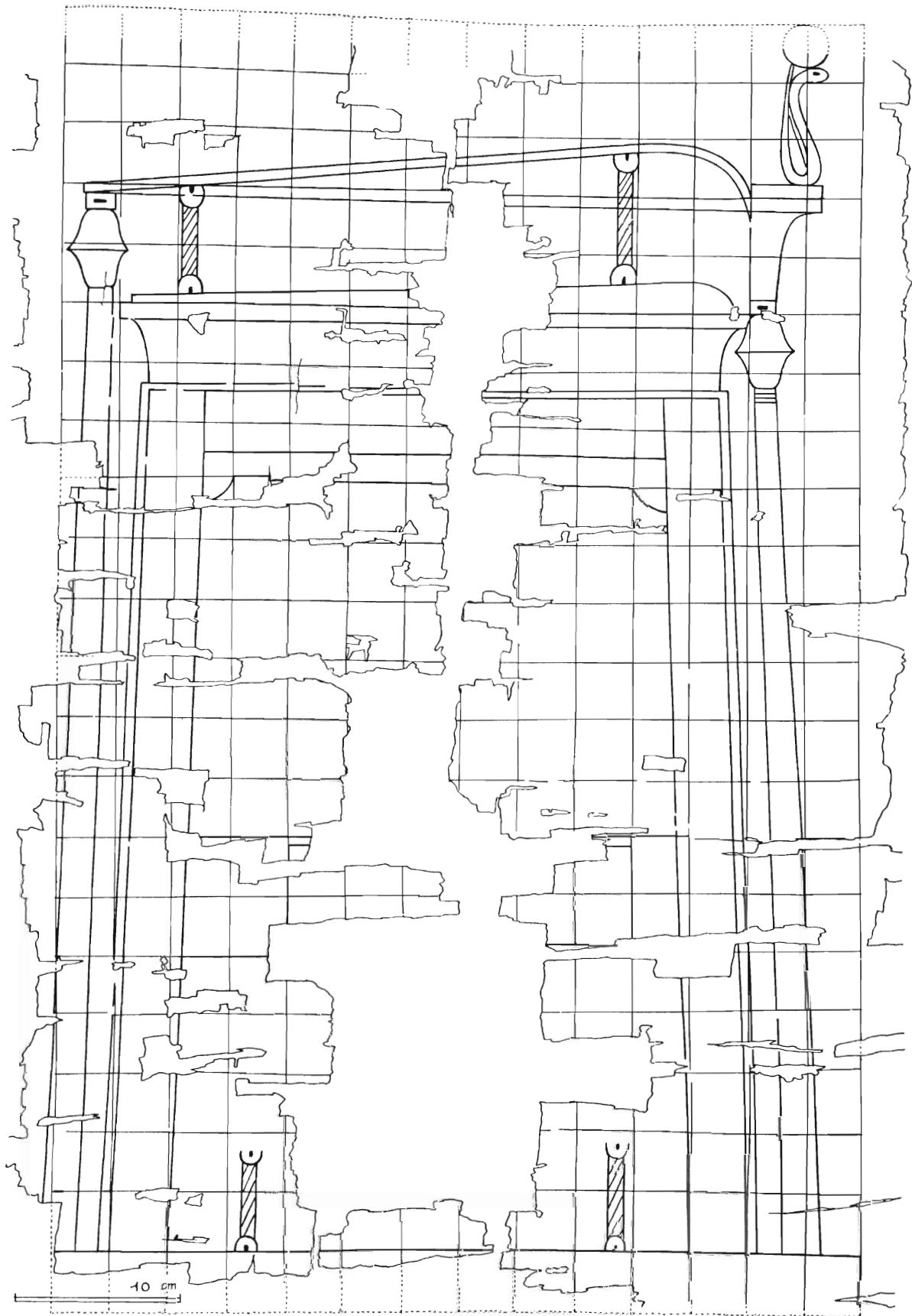
PLATE 65
A Naos in a Grid Drawn on Papyrus (Front View)



The impulse to all movement and to all form is given by ϕ Phi is the impulse for the whole number 5, but . . . ϕ cannot be defined in rational numbers. It can only be defined through the harmony that it engenders.

(Chapter 8)

PLATE 66
A Nasus on a Grid Drawn on Papyrus (Side View)



*The cubit is a masterpiece because it creates a link
between number and its function, and measure.*

(Chapter 10)

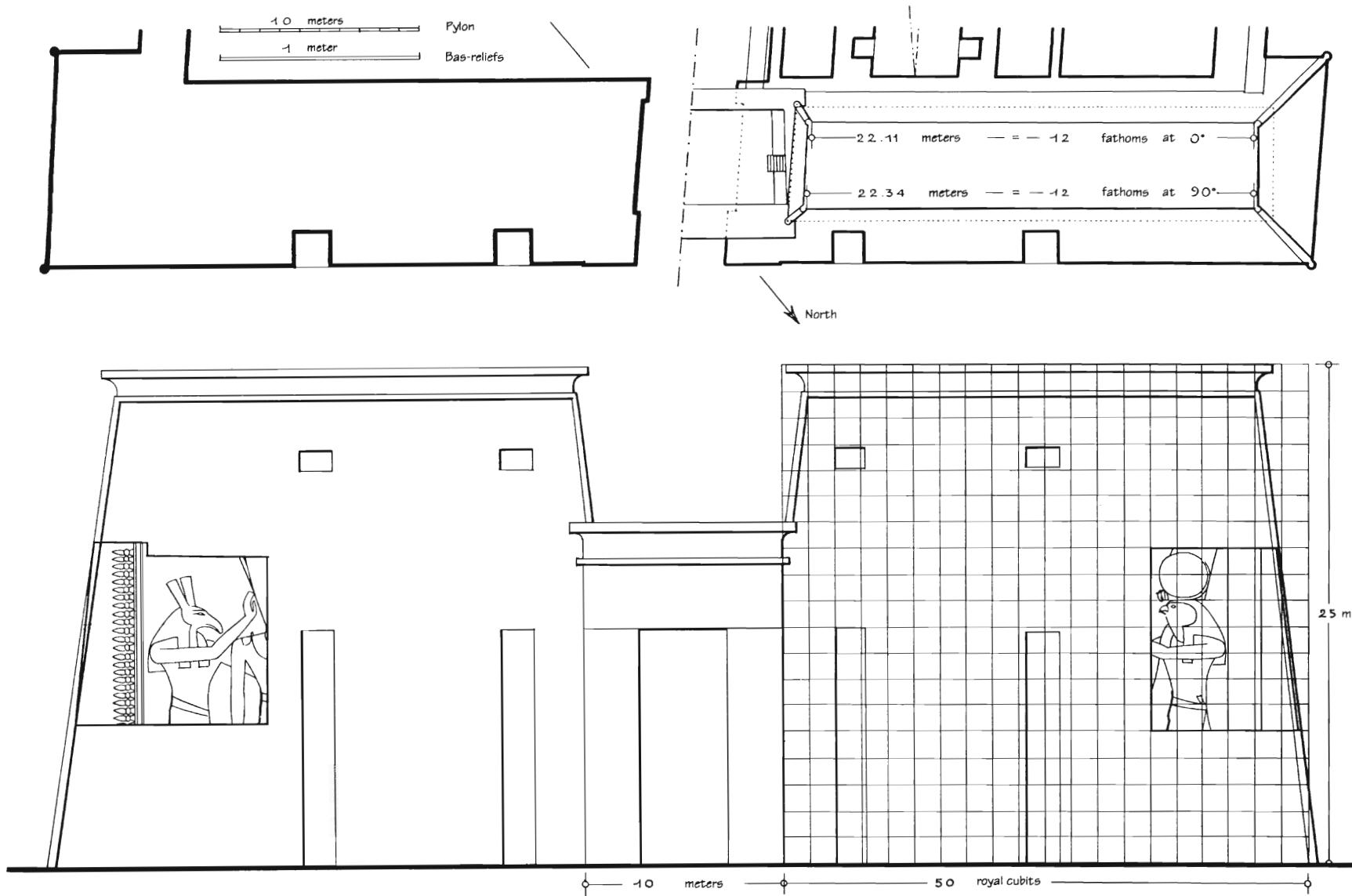
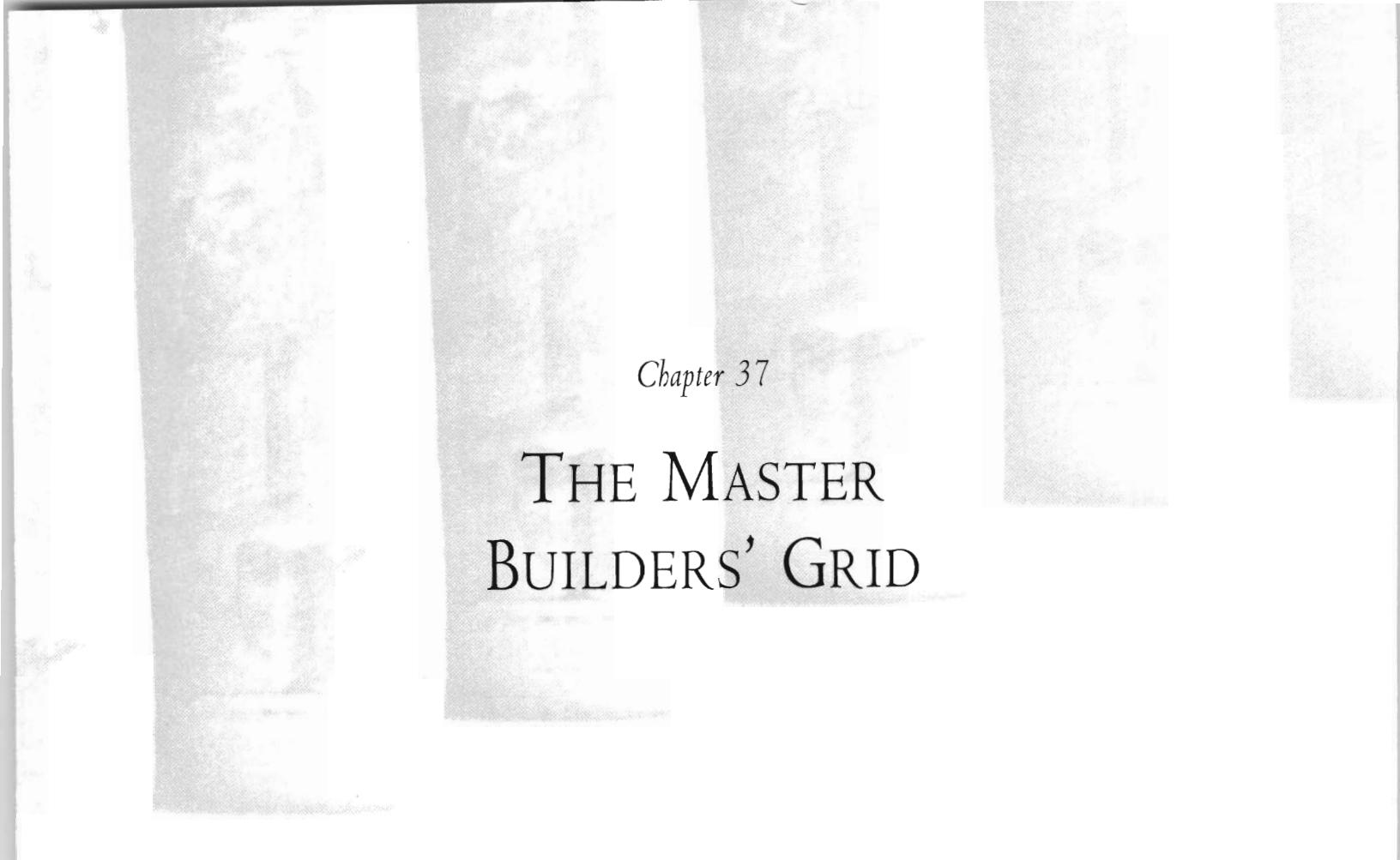


PLATE 67

The Grid and the Measurements of the Pylon of Luxor



Chapter 37

THE MASTER BUILDERS' GRID

THE PROBLEM OF ESTABLISHING A HUMAN CANON

Research into what constitutes the normal proportions of the human body has been a preoccupation of artists and physicians of all times, the former for aesthetic, the latter for medical reasons.

From the Renaissance until the last century, artists were especially preoccupied with establishing a canon that answered to the sense of the beautiful in the human body. No general canon was agreed upon, however, because the criteria were subjective and conditioned by the many abstract elements that result from racial variations and from personal predispositions in the understanding of harmony.

This kind of incoherence in the different definitions of human beauty, perfectly justified by environmental conditions such as climate, country, and the evolution of consciousness, has prompted our scientists, since the last century, to try to find common ground on which to establish a frame of reference. Anthropologists have given a scientific character to this study, which has aroused numerous controversies between two opposing camps: One side proposes the definition of the ideal human type, whereas the other looks for a system of classification that allows the various morphologies to be arranged into several essential groups.

Anthropometrics is the method of investigation common to the two opposite camps. Both sides have accumulated very important material that would allow the study of human proportions to begin, if agreement were possible about the system to be employed.

It will be interesting to summarize briefly here the position of present researchers so we can compare it with the pharaonic point of view.

The Ideal Human Type

Quetelet, basing his position on the fact that the variations in anthropometric characteristics obey Gauss's law, has called the "average man" (1835) the type that would be obtained by taking the average value of the dimension of each segment of the body on a great number of individuals. . . .

The doctrine of the average man has had considerable influence on anthropologists and statisticians. It is particularly on this idea that Viola, from 1903 to 1905, based the Italian constitutionist method. . . .

Although it is accepted by most modern authors, the "average man" has aroused objections. One of the most well known of these comes from the French mathematician Cournot. "Let us suppose," he says, "a triangle, the sides of which are related to each other in a determined proportion. Let us now make a random variation in the length of each side a certain number of times and then calculate the three arithmetic means of these variations. These three averages will no longer correspond to the lengths of the sides of the original triangle, and it would be impossible to reconstitute this triangle. In the same way, the ideal proportions of man being given, if we make a random variation in the dimensions of each characteristic, the calculation of the average values of these characteristics will not give the original proportions. A doctrine that attempts to find ideal proportions using these methods is therefore false."

Viola refuted this objection in 1905. "It rests," he said, "on an equivocation." Cournot supposes a "free" or accidental variation for the three sides of the triangle, one that would be independent of all law, as would be the case, for example, with the height of the houses of a city. But this is not the case for the average human because the different characteristics vary according to the Gauss curve and not freely as is supposed by Cournot.¹

The Classification of Actual Types

Everyday experience teaches us that a very great diversity of forms and proportions exists among adult subjects. Apart from the differences in height, which are the most striking, a great number of other differences are found, in particular regarding the length and volume of the various body segments, and as a result, we never meet two people who are absolutely the same.

For a long time people have attempted to bring order to this diversity and to group the infinite variety of individual types into clusters with a more or less large number of points in common.

This concern became particularly interesting when it was perceived that the subjects who could be grouped under the same type of body structure often present striking resemblances with one another in other areas as well. Among these we can mention physiological behavior, psychology, tastes, aptitudes, and morbid tendencies. The observation of such relationships suggests extremely old notions of "constitution" and "temperament," which today are again respected by the followers of neo-Hippocratic medicine.²

The objection of the mathematician Cournot regarding the average person is basically true, though excessive in its expression. For example, if we measure 100 hands, 100 forearms, and 100 arms from 100 individuals, and then establish an average for each of these segments, it would be impossible to discover the particular rhythm that links each of these parts in order to reconstitute the whole arm of any particular individual. At the very most, we would be able to approach an average proportion, but with the feeling that we would brush past a function without ever being able to reach it. A comparative study of several skeletons, on the contrary, permits us to observe several coefficients that

¹ Vandervael, *Biométrie humaine*, pp. 101–2.

² Ibid., p. 104.

govern all individuals. It is in this way, moreover, that Hambidge proceeded, which allowed him to discover that

in each skeleton measured from the front and in profile, there is a harmonic rhythm of rectangles that is always akin to those of the module $\sqrt{5}$ and ϕ . But with the exception of certain nearly unalterable proportions, normal human skeletons do not fluctuate and deviate around an ideal or average type as we would suppose. Rather there is a characteristic, dynamic "symphony" based on a very rigorous (to 1/10 mm) pattern for each individual, the patterns for different individuals, moreover, being quite varied. . . .³

As we can see, this "symphonic" conception of human proportions is very different from the theory of the "ideal canon" generally accepted as furnishing a unique scale (or at least one for each sex). However, the two concepts are not absolutely contradictory. First, nothing prevents us from selecting one out of a great number of dynamic themes and adopting it as the common type or ideal subtype. This is probably what the Greek sculptors did (canon of Polyclitus). Second, in operating on a number of normal (healthy) skeletons of the same sex, and as much as possible from the same race, we nevertheless find certain stable averages. . . .⁴

The golden section is not a product of mathematical imagination, but the natural principle of the laws of equilibrium.

Since all generation calls for a growth in volume, and since all growth can only be made in a harmonious rhythm, that is, a rhythm proportional to a particular coefficient, and since this rhythm is undeniably governed by ϕ , it is enough to know the module (coefficient) particular to the species or to an individual of that species, or of the *neter* principle, in order to create a living, harmonious, magically correct form, developing an architecture or an image on this module with ϕ .

The pharaonic sages envisioned the problem of a canon of proportions taken from the human body from a different point of view than our present anthropologists, and this point of view demonstrates the true orientation of their thinking.

Humanity regarded as Anthropocosmos, or human cosmos, carries in itself all the elements of the measures of the world and of harmony, expressed organically and through numbers. There is therefore a perfect man who is the king; in other words, the sacred royal type is the representative of Cosmic Man. In his figuration, he summarizes all the fundamental proportions, each part of the body corresponding respectively to one of the essential functions of the genetic work of the Universe. The relation of all these parts constitutes harmony, which represents perfected Man.

In this schema, true because it corresponds to all the possibilities expressed in a living being, the characteristic variants of terrestrial man are projected, thus offering the possibility of knowing—at the same time as the types and deformations—their causes, their source, as well as their relationships with cosmic influences (zodiacal dates), local influences (dryness, humidity, and so on), racial and geological influences, and the nature of occupational deformations.

³ Ghyka, *Esthétique des proportions*, p. 260.

⁴ Ibid., p. 274.

Astrology explains the humors, temperaments, and characters . . . , which is only possible by referring to the royal type, invariable because it is free from all influence. We are speaking here of the hieratic king of the bas-reliefs, not of the reigning kings who themselves represent the perfect type for the astrological time and the genetic phase of the empire: the guide (Manu) bearing the symbolic marks of these dates.

It must never be forgotten that if in pharaonic Egypt writing is made of images, then the figurations are in their turn a form of writing, and the human body—applied, for example, to the *neters*—becomes the support of a thinking that speaks in a universal sense of causes, precisely because the human body represents all functional possibilities.

STUDY OF AN APPLIED CANEVAS: THE TOMB OF UKHOTEP AT MEIR

The cross-ruled bas-reliefs in plates 52 to 56 come to us from the tomb of Ukhotep, nomarch of Cusae (Kas), capital of the fourteenth nome of Upper Egypt, located slightly south of the nome of Thoth (fifteenth nome). Ukhotep, son of Senbi, had a son named Senbi and a wife, Thothotep. As the grand vizier under Sesostris I,⁵ he had the highest titles that can be accorded to a dignitary—unique (confidential) friend, treasurer, great chief of the priests of Hathor (mistress of Cusae), scribe of the divine books, master of all the scepters and costumes, “unique of his kind and without rival,” “he who dominates the secrets that one sees alone. . . .”⁶

The entrance to the tomb, hollowed out of the rock, is to the east, and the scenes covering the north and south partitions are directed toward the west, where a niche containing a statue of the nomarch is hollowed out of the center of the west partition. Thus, it divides the bas-reliefs into two groups: those of the south, which are entirely sculpted and do not contain any trace of a grid pattern apart from one exception, located in the southwest corner (fig. 247); and those of the north that preserve, in numerous places, the lines of a grid.

In their totality, these partitions are divided into three registers occupied by small figures turned toward the nomarch, who is represented as much taller, and by himself takes up several registers.

The entire north part of the tomb is particularly interesting for our study, not only because of the lines of the grids but also because of the different positions of the figures and their unequal dimensions, which necessitated in the various *canevas* that each square unit vary according to the scene represented, following a definite system. Therefore, we will successively study, first, the different *positions*; second, the detail of the *proportions* analyzed by the subdivision of the initial square; and third, the functions that determine the *relationships* of the squares to one another.

The Different Positions

The theoretical canon establishes the total height of the standing man as equal to nineteen squares. The two essential and invariable lines are then 18 and 16, marking the forehead and the beginning of the shoulders. This interval of two squares is the only characteristic common to three positions, standing, seated, and kneeling (plates 52 and 53), and in the three cases, the number of squares counted from the ground is, respectively,

⁵ Twelfth Dynasty, 2000–1788 B.C.

⁶ Cf. A. M. Blackman, *The Rock Tombs of Meir*, 6 vols. (London: Egypt Exploration Society, 1914–53), 2:3, and plate 15.

standing: 16 to the shoulders, 18 to the forehead, 19 to the vertex;
 seated: 12 to the shoulders, 14 to the forehead, 15 to the vertex;
 kneeling: 9 to the shoulders, 11 to the forehead, 12 to the vertex.

These three positions provide three groups of numbers that are worthy of notice.

The three heights to the shoulders are to one another as 9, 12, and 16. They constitute a perfect geometric proportion in which the mean term, 12, is the square root of the product of the extremes.

The three heights to the forehead, 11, 14, and 18, constitute a near geometric proportion established with the numbers of the *canevas*. The perfect geometric proportion is 1 to $\sqrt{\phi}$ to ϕ . The ratio 18 to 11 is as ϕ to 1, and the ratio 14 to 11 is as $\sqrt{\phi}$ to 1.⁷

The three heights to the vertex, 12, 15, and 19, are very near the function that rules the growth of volumes. These three numbers also form an imperfect geometric proportion, which is completed and corrected through a second proportion 15, 19, and 24. The number 12 plays here the role of the unit for the number 24, which equals 2. The perfect proportion interposes between 1 and 2 the two geometric mean terms that are the cube roots of 2 and of 4, represented here by 15 and 19. The proof of the use of these numbers as an elementary base for the duplication of the cube is given in the southern corner of the west partition in the second register through the only background grid pattern drawn in this part of the tomb. This grid pattern is composed of a rectangle nineteen squares high and twenty-four squares long, and has no drawing on it. This rectangle is set up in such a way that the perpendicular drawn to its diagonal gives the geometric proof that we are clearly dealing with the irrational ratio of the cube root of 2.

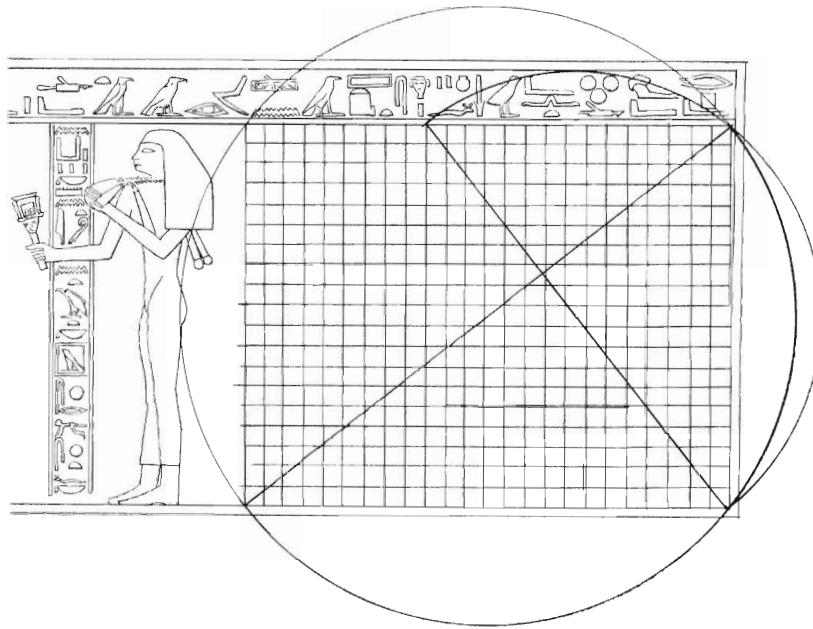


Fig. 247. Tomb of Ukhhotep, grid pattern for the west partition, south corner, register 2

⁷ The product of $11 \times 18 = 198$, whereas $14^2 = 196$.

It is above this rectangle demonstrating the function of the growth of volume and giving the whole numbers that enable the drawing of it⁸ that the text is found that qualifies the nomarch as “noble chief without equal, ruling the secrets . . .” (fig. 247). The sistrum and *menat* players that follow this rectangle, as well as the harpist sculpted in the third register, confirm the relationship between the growth of volume and musical harmony.

In conclusion, the choice of the numbers governing the canon reveals a true teaching, and the inequalities of the squares are explained by the correction that is imposed by an irrational geometric function transcribed into whole numbers. Finally, in the three groups of numbers studied, *the seated man is the geometric mean term between the kneeling man and the standing man.*

Some Proportional Details Analyzed by Means of Subdividing the Initial Square (Plate 53)

Seated on a chair, Ukhoteb is located on the third register at the north corner of the west wall. Through his location he should provide the functional “principles.” He is drawn in black on a red grid. The rectangle in which he is inscribed is eleven large squares wide and fifteen high. These squares are subdivided vertically and horizontally into five, except for those that constitute the stool, of which 4×5 remain white and 3×5 are subdivided only vertically. Without taking into account their actual measurements, we will call the value of each small division “1 digit.” The essential proportions indicated are:

- the height of the stool equals five squares, or 25 digits
- the height of the upper body equals ten squares, theoretically 50 digits, but actually 2 digits are subtracted, leaving 48 digits
- the forearm and the extended hand equals 24 digits, which equals a small cubit
- the forearm and the closed fist equals 20 digits, which equals a *remen* cubit
- the femorotibial connecting point equals 28 digits, which equals a royal cubit
- height of lower leg and knee equals 30 digits.

In numbers of digits, this figure gives the three values inscribed on the pharaonic measuring cubits,⁹ and by comparing these indications with present-day biometric data, we observe the following proportional constants:

Taking the general average, the ratio between the height of a standing man and his upper body (head, neck, trunk) when seated is 100 to 52.36. Now, knowing that the ratio between the height of a person and his arm span is 100 to 104.72...,¹⁰ it follows that the height of the upper body is half of the arm span. In choosing for the “canon” the ratio of 19/10, which equals the standing height to the height of the upper body, the Ancients evoked with a simple method the “ideal”

⁸ The product of $12 \times 19 = 228$, whereas $15^2 = 225$. The product of $15 \times 24 = 360$, whereas $19^2 = 361$. Cf. the genesis of these numbers in chapter 9, figs. 107a and 107b. Cf. problem 32 of the Rhind Papyrus in which the requirement is to divide 2 by 19/12. The answer is 24/19 expressed in the form of unit fractions. The canon gives the second term of the proportion interposed between 12 and 19, that is, 15.

⁹ Cf. chapter 10.

¹⁰ The ratio between the fathom and the height of a man most often encountered is 1.045.... For the study of the proportions of the human body, besides the works already cited, we must mention the excellent tables of Decourt and Doumic, “Le Morphotype masculin” [see chapter 11, note 24].

function that gives the upper body the value of half the arm span. This is considered as $\pi/3$ for the height of a person with the value of 1. This comes to the following. If

$$\frac{\text{total height}}{\text{upper body height}} = \frac{100}{52.36} = 1.9098...,$$

then

$$\frac{\text{upper body height}}{\text{total height}} = \frac{10}{19.098} = 0.5236...,$$

which is the principle of the royal cycle cubit. It can also relate to the connection between the volume of the sphere equal to 10 and the cube in which it is inscribed, which is 19.0983..., starting from the function ϕ^2 for π .

Moreover, anthropometrics confirms the principle whereby the “human cubit” is contained four times in the length of the arm span. The figuration of the seated Ukhoteb teaches, thanks to its small subdivisions, its relationship with the pharaonic measuring cubits and the number of digits adopted for them: the small cubit has 24 digits and corresponds in number to that of the vizier, and consequently, the arm span must be 4 small cubits of 24 digits, or 96 digits. The height of the upper body being, as we have seen, half the arm span, it must be 48 digits and not 50, as is specified by the vertex of the figure coming 2 digits short of the top of the fifteenth square (plate 53).

Subdivided in this way in accordance with the *canevas* principle, the superimposition of this figure thus summarizes the ratios that rigorously conform to anthropometric data and in no way contradicts the functional principle of the canon on which the figure is inscribed, but rather confirms it.

In the chapter on the cubits, we have shown the geometric function from which the numbers applied here to the human canon are derived. These numbers confirm that the cubit of 24 digits, marked on the royal cubits as the “small cubit,” is actually the human cubit. *Thus man, as the Anthropocosmos, summarizes the measures of his Universe.*

The only divergence between the actual human canon and the canon of the *canevas* drawn here is the height of the femorotibial line. In the normal person, this is about one human cubit and consequently ought to measure 24 digits and not 28, here the value of the royal cubit. We are thus dealing with something we have noticed with regard to the royal canon. The proportions of the body of Ukhoteb absolutely conform to the canon, except for the height of the lower leg. This measures a royal cubit instead of a small cubit. The accent is thus placed on the part of the leg governed by the zodiacal sign of Aquarius, the essential character of everything described in this tomb.

The Relationships of the Different Squares to One Another (Plates 52 and 53)

Two small figures, a superintendent and the “bearer of the sandal bag,” stand behind the seated Ukhoteb (plate 53). In front of the nomarch, on the other side of a table of offerings, is the embalmer Henu, the young son of Ikeru, pouring pure water. He is followed by his son Ankh, who presents the vase of fire and offers incense (plate 52). The two kneeling figures make the *hotep* gesture and are followed by a figure named Khnum. This group has necessitated three grids with different dimensions, the largest of which is that of the vizier.

The superintendent and the bearer of the sandal bag are drawn on a square base for which *nineteen squares read in height coincide with eleven of Ukhoteb's squares read in width* (fig. 248). The rabattement of the nineteen small squares onto the eleven large ones establishes a ratio between them of 19 to 11, which is part of the series of numbers generating the square root of 3 by successive

additions of a ratio and its inverse.¹¹ The chair provides the base numbers that are the point of departure through the squares that remain white and those ruled vertically. The first denominators after unity are 3, 4, and 11, and the first numerators after 1 and 2 are 5 and 7.

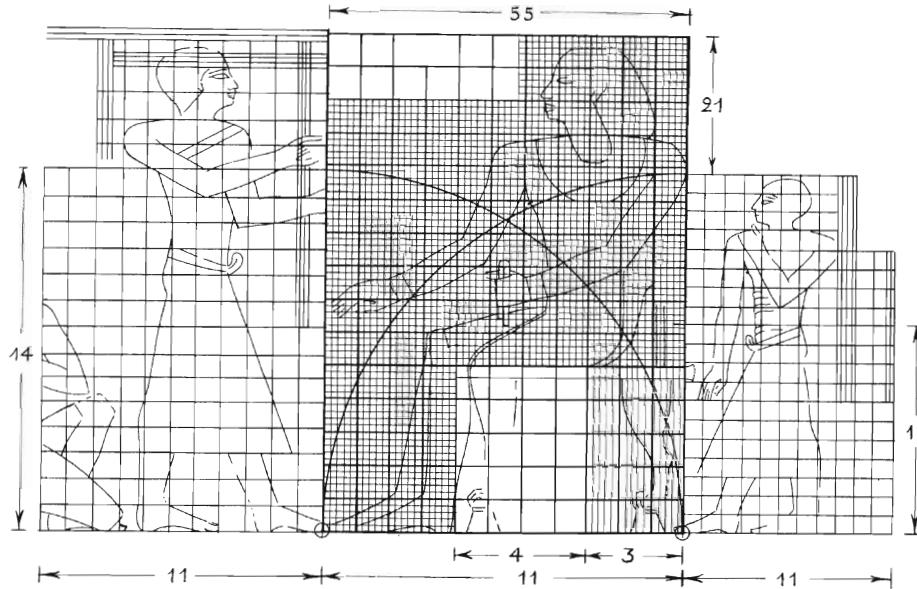


Fig. 248. Synoptic table of the different squares and the functions that connect them, west partition, north corner, register 2

Center, Ukhoteb, seated; right, the sandal bearer (plate 53); left, Ankh, son of Henu, approaching the seated nomarch (omitting the offering table and the figure of Henu from plate 52).

The rectangle in which Ukhoteb is drawn is proportioned according to the genetic function of this series of ratios, expressed by 15 : 11. One of the primary ratios, 7 to 4, is stated by the fact that the fourteen squares of the sandal bearer coincide with eight squares, read in height, of the vizier.

The eleventh line of the sandal bearer is the only one that extends into the large grid pattern (read vertically). This number is the chosen unity here, which confirms the width of the tableau that has eleven squares.

In summary, the large grid pattern of Ukhoteb is to that of the sandal bearer as the square root of 3 is to 1, and it teaches us the numbers by means of which the *canevas* oscillates around the irrational.

The two embalmers, Henu and his son Ankh, are drawn on a grid whose nineteen squares should correspond to fifteen squares of the vizier, but this ratio is modified by a deviation of the upper border so that *fourteen squares of Henu, read in height, correspond to eleven squares of the nomarch, read in width*. In this ratio of 14 to 11 we recognize 4 : π , derived from $\pi = 1.2 \times \phi^2$ of the F series.¹²

Two questions arise: First, what is the connection between the square root of 3 and π , the functions that frame the vizier? Second, why, in the subdivision of the large squares of the vizier, are fifty-five small squares in width equal to fifty-four in height?

¹¹ Cf. chapter 8, "The *Canevas* and $\sqrt{3}$: A Syncopated Series" in the section "The Three Functions of the *Canevas*." See the list of these ratios and their genetic function.

¹² Cf. ibid., "The *Canevas* and $\sqrt{5}$," and the Fibonacci series.

This anomaly can be explained by a brief calculation. The total height of the rectangle that frames the nomarch is 5×15 , which equals 75. After subtracting 54 from 75, 21 remains, which determines, at the level of the nomarch's head, the rectangle that has a ratio of 21 to 55. If we give 21 the value of unity, the number 55 corresponds to ϕ^2 and consequently $1.2 \times \phi^2 = 66$, or π .

In conclusion, Ukhhotep, through his proportions transcribed into digits, provides the relationship between the measuring cubits and man; through the ratios between the three *canevas* he gives the functions of the hexagon and the circle; and through his irregularities, he draws attention to the base numbers. Finally, he is the connection between the straight line and the curve through the function ϕ^2 .

PLATES 54–56 • TOMB OF UKHOTEP, NORTH PARTITION

The principles are expressed at the north: Ukhhotep and his wife, Thothotep, are portrayed at the western end and contain in potentiality the totality of the themes and functions developed in their presence. These are the largest figures in the tomb and consequently they contain all the others. Furthermore, the irregularities of how they are drawn reveal their functional character and their “particular coefficient”: the tableau in which they are drawn provides all the movements, angles, and deviations of the rest of the partition, corresponding to the two natures, male and female, because duality is emphasized in all the figurations in this tomb. That which is first raised is then lowered, that which is fluid becomes fixed; that which is spiritual is corporified.

The whole of the wall is divided into three registers in which the direction of the scenes is from east to west, toward the standing vizier and his wife, and the themes should therefore be read from right to left, the direction in which the small figures are moving.

The uninterrupted lower register contains scenes of boats in the papyrus thickets of the swamps (plate 56). By observing the positions of the figures one can determine the angular play indicated by the position of the poles and by the articulations of the knees and the arms, which are the hinges of the human body and are here related to what vegetates and grows. Now, the triangle, determined by the angle, is growth through the seminal power.¹³ *The angle is the ligature point of two principles*; the figures bind the reeds in bunches, and by making a boat out of them, these reeds will float. The rushes, the original plant of the marshlands, are tied together in order to float, and the raftsmen are standing on the ground. It is necessary to read these things as animated drawings. We next notice the age of these raftsmen, or a sign of their aging given by the old man who supports himself on a cane by the end of the boat. He indicates that the goal of the operation is attained, which is confirmed by the fact that the bunches of tied rushes are carried by several men on whom these burdens become heavier and heavier, until they are put down again on the ground (plate 55). The winged creatures are placed upside down and carried as an offering along with a calf's head, some bones surrounded by flesh, a *khepesh* thigh, and squashes, which are a fruit rich in water (plate 54). All these scenes lead to our two great figures, who are principles because they are not pictured with navels. These principles are designated by their names, one of which is the feminine of the other, but both are *hotep* (*htp*), that is, the reverse of the name Ptah (*ptḥ*), the Fire fallen to earth. One gets the impression here of reading a text by a Hermetic master from the Middle Ages.

The middle and upper registers are interrupted by a seated Ukhhotep (plate 55) accompanied by his wife, who is sitting on her heels and is much smaller than he. The greater part of the middle

¹³ In this regard, see the hieroglyph designating the number 3 written in the middle of the phallus. Note also the exposure of the genitals on this partition.

register is occupied by the scene of "hunting birds with the net," drawn on a grid (plate 56). This net contains some winged creatures and is fixed by a knot at each end: the one on the right to a stake that is not drawn; the one on the left to a rope pulled by the men. This rope is in turn fixed to the ground by a stake, and it can be seen that in spite of the tension the four men exert on it toward the left (which ought to release the end attached to the stake), the rope remains taut. Immediately following the net, the three musicians—singer, harpist, and flutist—teach that the laws of harmony revealed by the numbers of the net and the laws of musical harmony are one and the same. As for the singer, he holds one hand in front of himself and the other beneath his ear, as is still done today by the singers of *zhikr* in order to make the sounds of certain letters vibrate, in a way similar to the magical effect of the Hindu *Aum*.

On the upper register, the bulls, after being tied with great effort, are caught in a lasso, then walk very docilely, preceded by a skeletal man and followed by a heavyset man, who direct the bulls toward the seated nomarch. Clearly, the nomarch plays the role of a divider, separating the images of the upper and middle registers, and allowing the lower register to continue uninterrupted. This separating role is clearly indicated by the fact that the scenes behind the nomarch are nothing more than functional in relation to the idea described in front of him: that which the horned cattle represented is now explained by the wrestling men as being only a reversal; as for the middle register, the scenes of the net and the musicians are transformed behind the nomarch into offerings, some of which are held up and others lowered.



Fig. 249

Taken together, we see everywhere in these figurations the idea of linking, of knotting. The knot is the juncture, the fixation, but it should be noted that in every case both ends of the tie can be seen. The actual symbol of the *ukh* is a strap encircling the *wadj* scepter surmounted by two feathers: vegetal growth, knotting, aeration (fig. 249).

What is it in nature that binds? Or rather, through what means does nature bind? Through air. The most subtle must necessarily be bound in order to become the most material.¹⁴ Each detail of the tomb analyzes this theme, and we see, for example, on the south (realization) wall, among the scenes of the hunt in the desert, a man who leads three bulls tied by three ropes that he holds in his hand. This man is *a tree*, his arms are branches, his hair and his face are leaves, and the stick on which he supports himself marks the appearance of a bud at each place of its branching (fig. 250). The three ropes by which he holds the bulls subsequently become only *two*.

¹⁴ Air is the subtle nourishment essential to life.

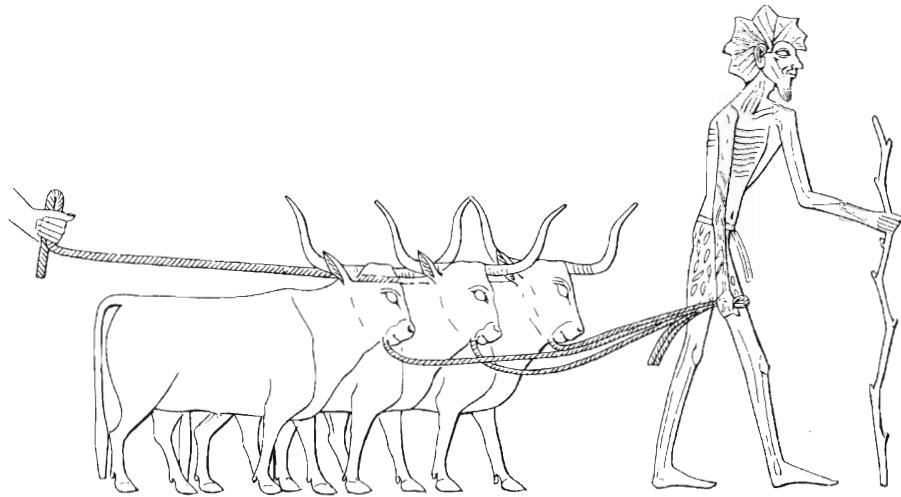


Fig. 250. Detail of the south partition

Figure leading three bulls by three ropes that unite in his hand, and of which only two ends are seen when they leave his hand, which evokes the relationship 2 to 3.

The three bulls have their horns tied by a single rope whose end is folded to form the *s* sign in the hand of a figure who guides and restrains the bulls from behind. This same sign is held in the right hand of the seated Ukhotep, plate 55.

Now, Ukhotep is master of Cusae (Kas), whose symbol is the joining of two long-necked felines (fig. 251). This strange figure has already been related to the sign *sma-ta*, the joining of the Two Lands around the trachea. Finally, the name Kas can be related to the word signifying “to bind,” “to attach,” “to knot,” and it has been interpreted as “meaning that the enemies of Osiris have been tied up at this place by his son Horus.”

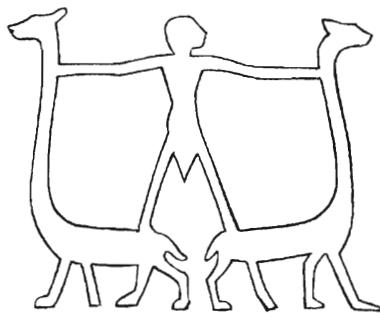


Fig. 251. Symbol of the city of Cusae (Kas), capital of the fourteenth nome of Upper Egypt

This symbol recalls the Narmer Palette, which I take to represent the ancestor of the Emerald Tablet.

Brief Analysis of the Geometric Functions of the North Partition

If we use the axis of equilibrium of Ukhotep as the vertical, the *canevas* on which the standing nomarch and his wife are drawn (plate 54) shows certain irregularities.

- All the verticals of the large *canevas* are parallel to the axis of equilibrium of the vizier.
- The horizontals are exactly perpendicular only at the shin level of the nomarch, five squares high to four wide. The horizontal lines stop when they touch the back leg of Thothotep; the second and third lines include two strokes, one above the other, one of which stays horizontal while the other is slightly angled.
- Between the axis of equilibrium of Thothotep and the stick on which Ukhotep is supported there is a complete break in the horizontal lines. They begin again on a slightly higher level.
- Still another sloping line can be noticed that crosses the vertical tangent to the bent knee of the vizier. This line, drawn in several sections, is perpendicular to the deviations in the upper border of the tableau and to the registers of the small figures, and thus indicates their movement.
- A slight slope makes the tableau somewhat wider at its upper edge than at its base.

These two heights and these two widths impose a double proportion. The ratio between the maximum height and the smaller width determines the angle γ (fig. 252), which defines the function of the pentagon. The ratio between the largest width and the smallest height is 3 to 4 and defines the sacred triangle. The junction of these two proportions determines the slope of the upper and left side borders.

Ukhotep is standing in the 3 to 4 triangle, and his personal coefficient as well as the angle of his stick corresponds to the geometric functions derived from the sacred triangle.

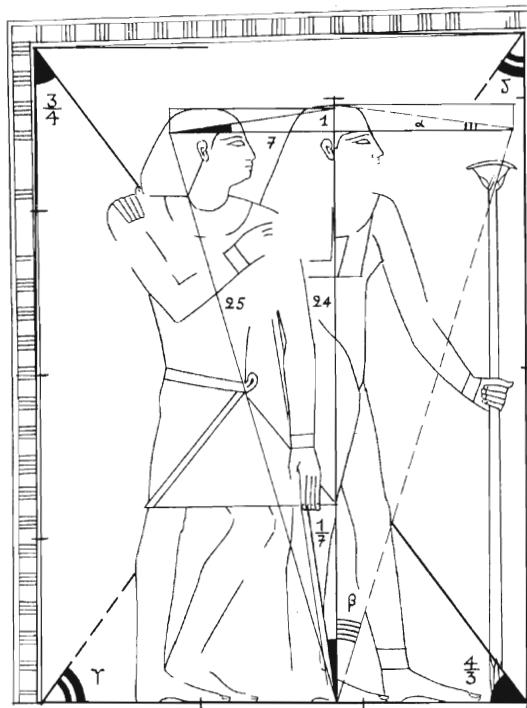
His height to the vertex is $18\frac{3}{4}$ instead of 19, and by taking the fraction that extends beyond the line of the forehead as 1, it can be placed twenty-four times in his height to the forehead and twenty-five times in his height to the vertex. The angle thus determined has a ratio of 7 to 24, double the angle 1 to 7, defined by the angle of his stick. The inverse, 24 to 7, is double 3 to 4, the generating angle of the preceding two.¹⁵

The axis of equilibrium of Thothotep gives the vertical and becomes the large side of the right triangle 1 to 7 for which the vizier's stick is the hypotenuse. Thus, it is this that specifies her particular coefficient. Conversely, it is he who, through the 1 to 7 triangle, will give the metric nuances between the units of their squares, some larger and some smaller, causing the breaks and certain slight slopes in their *canevas*. All of this is the principle of the passage from the square root of 49 to the square root of 50, which governs the *remen* and royal cubits that we see evoked here.¹⁶

Thothotep comes out of the governing triangle of the pentagon, and her personal coefficient is the function ϕ . She holds the *wadj* scepter in her hand; the height of the scepter is 17 with respect to the height of 19 of the *canevas*, and corresponds to $\sqrt{5}/2$ (plate 54). The crown of her skull is slightly higher than her husband's, and it is contained twenty-two times in her total height and twenty-one times in her height to the forehead. Here the function of the cycle $\pi/3$ that governs the royal cubit is evoked.

¹⁵ Cf. chapter 7, "Addition and Subtraction of Angles in Proportional Notation."

¹⁶ Cf. chapter 10; chapter 15, "Diadem, I Assume Thee."

Fig. 252. *North partition, west corner*

Relation between the particular coefficient of Ukhhotep, the angle of his stick, and the 3 to 4 triangle in which he is inscribed. The triangle that governs the functions of Thothotep is related to ϕ and to the functions of the pentagon.

In conclusion, the geometric functions expressed in the figure of Ukhhotep are those of the sacred triangle, and connect to the passage from surface 1 to surface 2 by means of the angle 1 to 7. The functions governing Thothotep are irrational; they are connected to the pentagon and rule the ratio π .

The gesture of the embrace of the male principle, Ukhhotep, by the female principle, Thothotep, demonstrates a ligature that is manifested geometrically by the association of the two functions governing the cubits. The slopes, angles, and other irregularities are the methods employed to coordinate them.

It is particularly important for us to see the confirmation here of what we have observed elsewhere. The sacred triangle (Ramesses IX) or the hexagon (Thoth of Karnak) is attributed to the male and solar character, whereas the feminine aspect is connected to the functions of the vegetative pentagon (Seshat and Thothotep). We will continue to find a similar distinction between the axis of Amun with its return (the angle 1 to 7) and the axis of Mut that defines the pentagon in the Temple of Man at Luxor.¹⁷

¹⁷ Cf. chapter 20; commentaries on plates 80–90.

The "Net for Capturing Birds" in the Tomb of Ukhoptep,
North Partition, East Part (Plate 56)

The very great importance given to the net, which is revealed upon a close study of it, prompts us to provide here, in detail, its principal elements. As always, the Ancients have chosen from among practical tools, whose functions are invariable, the image that best represented the intimate meaning of the thought they wanted to express. The "hunting of birds" with the net signifies the capture of the spirit or of the abstraction, in other words, that which is not otherwise graspable save through the means that the net symbolizes.

With the image of the net, allusion is made to a primordial action—that of making spirit concrete (giving form). This is confirmed by the play of the numbers in the tomb of Ukhoptep and by the intervention of the *neters*, particularly of Thoth (Hermes) at Karnak.¹⁸

The capturing of wild birds by means of a net is frequently represented in the tombs of dignitaries. The most complete description known is in the tomb of Ti at Saqqara (Fifth Dynasty), in three tableaux that describe three distinct operations: (1) the placing of the net; (2) the net remaining open while the birds come to rest on the pond, with the men silently waiting for the signal to close the snare; (3) the closing of the trap and the capture of the birds.

In all scenes of this type these three operations are summarized in one or two images at most, and in every case the interpretation is rather difficult for anyone who has never seen traps of this sort, because the bas-reliefs are drawn according to a synthesis-scheme that represents the open net, the net in the process of being closed, and the closed net all at the same time. But even allowing for the portrayal of three moments in one, in all the cases some irregularities persist that have especially held our attention, and that the net at Meir helps to clarify, thanks to the *canevas* on which it is drawn.

The functional principle of these bird traps—which are still used in central and southern France—is the following: two rectangular nets are arranged on both sides of a pond, each fixed by two stakes at the corners of the pond (*a, b, c, d* fig. 253). These two rectangles are made rigid by mooring stakes from one side to the four corners of the pond and from the other to the four exterior corners of the net (*e, f, g, h*). Ropes are fixed to these four corners and the corners are tied two by two, from one side to a stake driven into the ground (*A*), and from the other to the single rope pulled by the men (*P'*). The two rectangular nets are supposed to lie on the ground awaiting the arrival of the birds. During the wait, silence is recommended to the hunters, who are hidden in the reeds and who keep themselves ready to act on the signal of the head of the team. When the number of birds resting on the pond is sufficient, the leader unfurls a long scarf. At this signal the men suddenly pull on the rope, causing the two flaps to rise upright and then close down on the pond.¹⁹

This is the practical explanation suggested by the use of a similar device by poachers in our day. But the drawings of the bas-reliefs do not conform to this description. The two rectangles on each side of the pond are never drawn. In the first stage, the image ought to represent a hexagon, and the length of the ropes should be *hAf* and *eP'g* (fig. 253).

Now, all the depictions of snares, open or closed, show the hexagonal form of *dLbaKc*. From this we can assume that the flaps of the net are held up vertically on each side of the pond.

¹⁸ Cf. plate 60.

¹⁹ From Montet, *Scènes de la vie privée*, pp. 47–48.

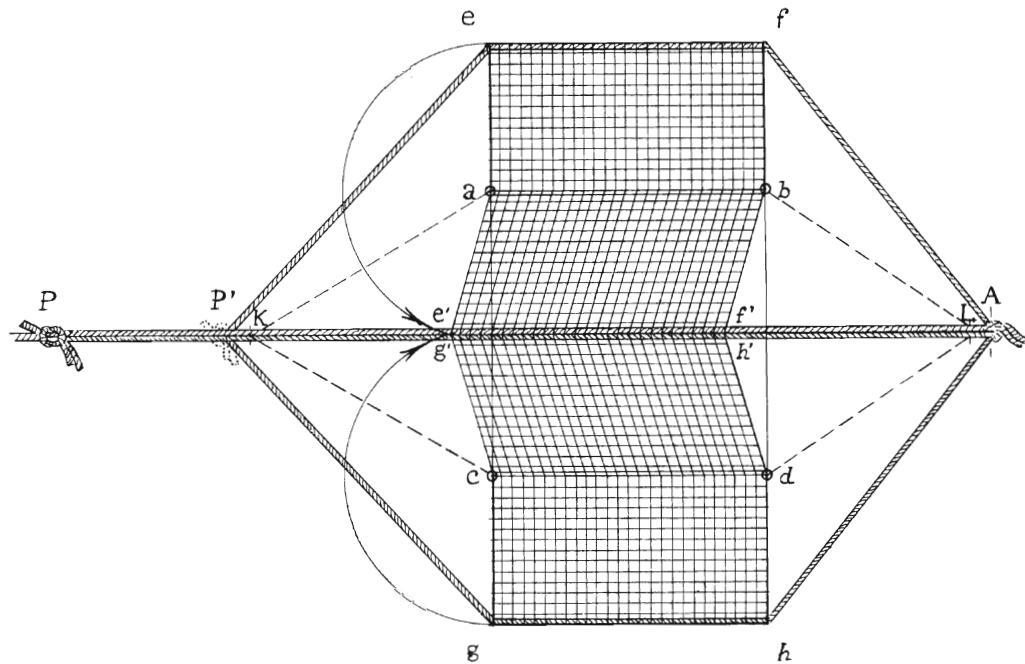


Fig. 253. Superposition of the open and closed net, suggested by its practical use, upon the pharaonic design

Open net: $hAfeP'g$. Closed net: the tightened rope from P to A and the square $abcd$. The pharaonic design: $dkbaKc$.

When the net is closed shut, the image should no longer show the pond covered by two rectangles held at the center by the double rope, and it should no longer be drawn as a hexagon, which, however, is how it is represented. Further, the ropes from the side of stake A should be loosened, whereas they are still taut, at least if there are only two ropes attached to stake A and sliding in the eyes of the knots on the outer sides ef and gh of the nets. An experiment demonstrates that by pulling on the rope tied to the two preceding at P' , the flaps would close and the knot would arrive at P ; the ropes would form only a double line from A to P . But in the drawing of the image, which should show its practical application, the lengths of the ropes before and after the closing of the trap do not correspond to the reality. Thus, the net was used as a symbol, and the grid pattern leads us to see in this figure the intention of exhibiting the geometric functions and numbers that we can read on the *canevas* (fig. 254).

The pond is a square of 26, half of which is 13 and corresponds to QB . All the action unfolds between the two knots, P and A . The distance measured between these knots (taking the average of the other squares for the unsquared part) corresponds to eighty-nine divisions. The distance QA between the edge of the pond bd and the stake A driven into the ground that marks the end of the *canevas* is twenty-one squares (figs. 254, 255). The half-width of the pond is 13, so the distance AB is equal to $21 + 13$, or 34; this measurement is also the height of the register with the upper border. We recognize here a series of numbers that constitute the additive series 13, 21, 34, ..., 89, completed by the number 55, which corresponds to the distance between knot P and the center B of the pond. This is the F series in which each term is to the following one as 1 is to ϕ . These numbers result from the harmonic decomposition of the total PA , or 89 (fig. 255).

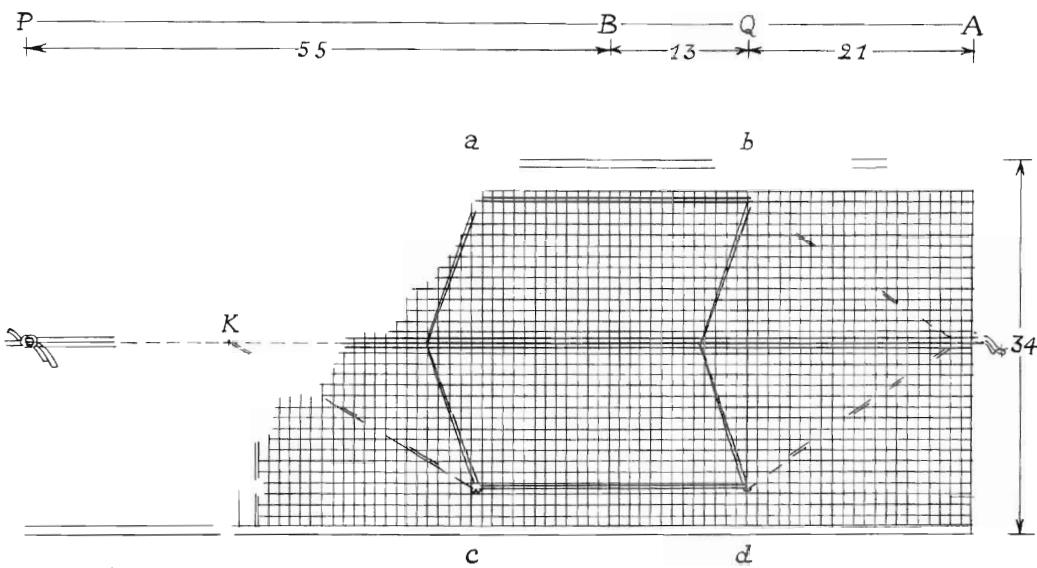


Fig. 254. Design of the net on the north partition of the tomb of Ukhhotep with the principal numbers that it reveals

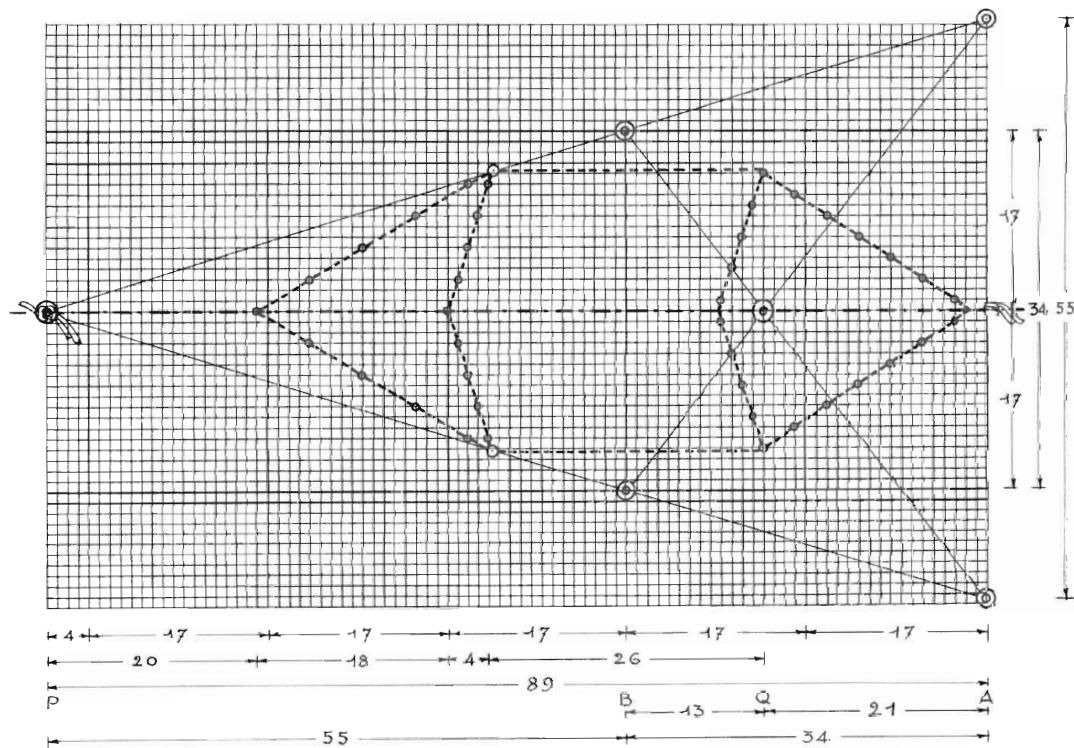


Fig. 255. Harmonic decomposition

The width 55 is equal to the length b of the open net of figure 253.

To make this construction, it is necessary to draw a perpendicular line from the center rope to point *A* and then complete the grid by taking the breadth of the pond plus the two open flaps placed on the ground at each side for the width (figs. 253–255). This gives a complete grid and will allow us to understand the numbers indicated by the representation of the net in the tomb of Ukhotep. These numbers make clear that it is unnecessary to add the actual lengths of the ropes before and after the closing of the net.

The presence of musicians near this net, the harmonic division of which reveals the numerical series of the golden section, is a great and deep teaching, which demonstrates through an image the origin of the Pythagorean assertions according to which the mathematical link is unique and consists in proportion. “Every figure, every harmonic grouping, every astronomical revolution, manifests the unity of proportion to him who would learn according to the true method; now, this unity will be apparent to he who correctly understands what we teach; he will recognize that a single link naturally unites all things.”²⁰

This is the teaching of this tomb: one cannot dissociate musical harmony from the geometrical functions of the golden section that govern growth and vegetation. Also, the grid patterns of the net and of the men who are pulling it are in the relationship of the fifth. Growth and vegetation cannot be dissociated from the cycles of time that govern them; also, the ratios between the *canevas* of the pullers of the net and those of the bearers of offerings are to each other as 3 is to π ,²¹ the function governing the cycle cubit already indicated by the “particular coefficient” of Thothotep. (Keep in mind that Thoth is master of time and rules lunar time.)

Harmonic proportion is this “link that naturally unites all things,” and it is in this also that we must look for the function that connects all the very diverse *canevas* of this wall of the tomb of Ukhotep, whose name is written with the symbol of the *link* (fig. 249). Thus the gestures of the scenes, the “particular coefficients,” the numbers of the *canevas*, the proportions of the tableaux, are all harmoniously connected by one and the same function and all the possibilities that it implies.

The person who is conscious of his being, by saying “*I live, I die, I move, I walk . . .*,” knows how to distinguish the continuous Being (the *I*) from the provisional, terrestrial form that this *I* animates; there is also an intimate, “esoteric,” functional sense that animates the perceptible thing. It is therefore appropriate that this person should inscribe on his “eternal dwelling”—which we call a tomb—the intimate, living, immortal meaning of the knowledge acquired in the field of his earthly activity, in conformity with the gifts that belong to his being that survives.

Thus, these small “eternal dwellings” open an infinitely large domain to the spirit and become the “lodges of initiation” for the intelligence of the heart.

This is only possible if the speaking symbol (the hieroglyph) is given a root that designates the functional notion animating the various applications that can be given to the figured object, creating thus a cabalistic writing.

²⁰ Cf. Theon of Smyrna, *Le Nombre de Platon*, part 2, §31, p. 137.

²¹ See the numerical demonstration in fig. 256.

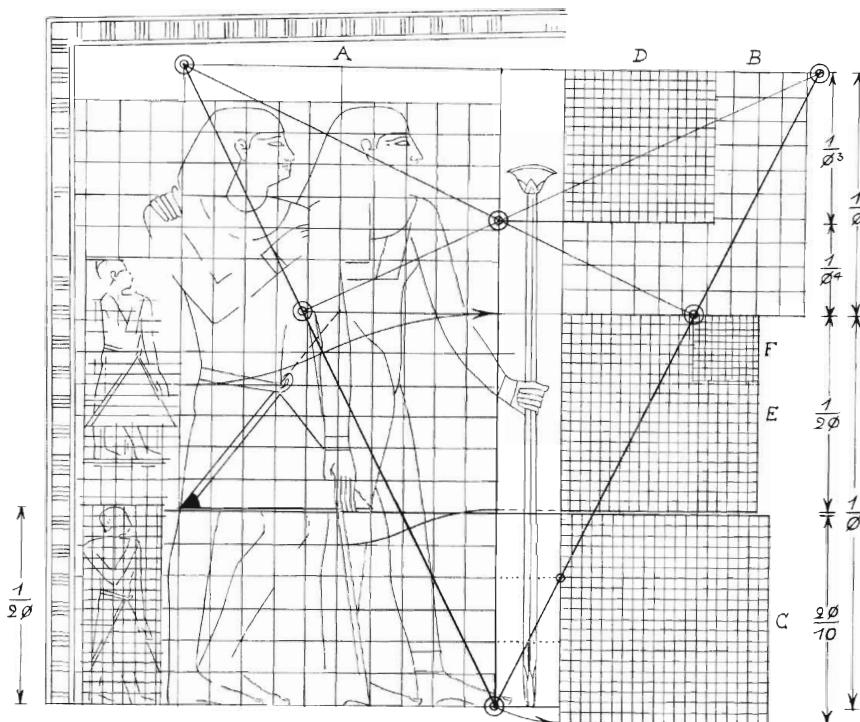


Fig. 256

A synoptic table of the functions that govern all the *canevas* of the north wall, on the basis of harmonic decomposition. This decomposition, established on twenty squares, determines the height from the base of the apron to $1/(2\phi)$ with the back angle of this loincloth in the relationship of 1 to $2/\phi$.

$$A = \text{square of the standing nomarch} = \text{unity} = 1$$

$$B = \text{square of the seated nomarch} = \frac{2}{\phi^2}$$

$$C = \text{square of the offering bearers} = \frac{2\phi}{10}$$

$$D = \text{square of the wrestlers (third register)} = \frac{1.25}{\phi^3}$$

$$E = \text{square of the pullers of the net} = \frac{1}{2\phi}$$

$$F = \text{square of the net} = \frac{1}{3\phi}$$

The offering bearers and the pullers of the net are in the same register, so that twenty-one C squares are equal to twenty-two E squares in height; and twenty-three D squares are equal to twenty-two E squares, numbers approximating irrational functions:

$$\frac{C}{E} = \frac{2\phi}{10} : \frac{1}{2\phi} = \frac{4\phi^2}{10} = \frac{\pi}{3} \quad \text{and} \quad \frac{E}{D} = \frac{1}{2\phi} : \frac{1.25}{\phi^3} = \frac{\phi^3}{2.5\phi} = \frac{\pi}{3}.$$

This study was made after the publication of the tracings at one-sixth scale that were done very carefully by Blackman [*The Rock Tombs of Meir*], who has kindly allowed us to use his plates. We have reconfirmed the precision of his work. The accuracy of these scale drawings is confirmed by the fact that certain irregularities cannot be accidental because they correspond exactly to the complexity of the functions that are also found at Luxor.

The word *skht*,²² used in the tomb of Ukhoptep at Meir to designate the “the bird hunt” and the “marshy terrain,” has numerous uses, the general sense of which seems to be “to seize” with the added meaning of “to stop” or “to give form.”

The phrase written above the men pulling the net in the tomb at Meir provides two of the essential uses of this word:

- “Placing the snare [*skht*], taking the birds into the snare [*skht* plate 56] by the best men of the marshlands [*skht*, plate 55].” The latter word, determined by a straight horizontal band topped by three bundles of rushes, designates the wetland, which, after the retreat of the floodwaters, is ready to be seeded.
- A feminine *neter* named Sekhet was the divinity of the land left wet after the withdrawal of the waters. Determined by a female figure holding a duck in one hand and a fish in the other, her son was Heb, the “net” *neter*, and she was the protective divinity of all those who took birds and fish with nets in the flooded lands.²³
- Thoth, master of the city of the Eight, is also “master of *skht*” in the sense of weaving and of the bird hunt, as we will see later on (plates 60 and 61).
- *Skht* also signifies “to weave” and designates the land, the district, and the place of weaving.
- In mathematics, regarding a decreasing arithmetic progression: “. . . until taking into the net [*skht*] he who is under the last.”²⁴
- In medicine, regarding an incantation, the eighth incantation against a sickness or an epidemic: “. . . the tension [?] [*skht*] of thy net avoid me . . . I am one of thy escaped birds.”²⁵
- In the ritual of the foundation of the temple: “Grinding, to form [*skht*] the first brick . . .” in the sense of “uniting water to earth,” that is, “earth seizing the water.”
- A case in which the royal loincloth that encircles the small of the back is called *skht wat* (*wat* means “one,” or “unique,” or “particular”) and is translated by “loincloth with a tail.”

Thus, this word *sekht* is the cabala at the heart of the reading.

We can now see how the tableaux in the tomb of Ukhoptep are an example of the application, through the human canon, of the living functions of the “master builder’s grid.”

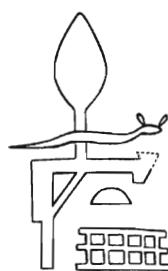


Fig. 257. Expressive emblem: the symbol of the fourteenth nome of Upper Egypt, the “nome of the tree”

²² The *kh* is pronounced as the German *ch* in *nacht*. One can read it as *sekht*; not writing the vowel is conventional.

²³ Cf. Montet, *Scènes de la vie privée*, pp. 4–7.

²⁴ Cf. chapter 6, problem no. 64. For the symbol *skht*, see chapter 10, fig. 120 (vol. 1).

²⁵ Cf. Breasted, *Smith Papyrus*, “Eighth Magical Incantation,” 1.8.20.10.

This relationship between the names of the nomarch, the nome, and the city (to which are connected the functions of the bearer of this name, along with the play of numbers and the vital symbolism expressed in the genetic meaning revealed in this succinct analysis of a single wall of the tomb of Ukhhotep at Meir) should put Egyptologists on their guard against a too simplistic, so-called historical explanation.

An extraordinary refinement of thought and an uncommon science are expressed here in a writing that our rationalistic training no longer understands at first glance, but that allows us to glimpse a mode of thinking that must lead toward knowledge of a vital character that is lacking in our time.

THE USE OF A GRID BY THE MAYA

PLATE 57 • A MAYAN GRID

This hieroglyphic panel comes from the temple of El Palacio, located at the center of the Palenque site.²⁶ It is

a hieroglyphic panel 2.45m wide and 2.63m long. It is remarkably well preserved and of a still unequalled execution with 262 signs, of which only 7 are illegible.

The most remarkable idiosyncrasy of this ensemble is that the initial series of seven glyphs, which correspond to the year 672, is represented not by simplified signs, but by figurations of complete gods or animals.²⁷

For the study of their writing, Mayan monuments include painted or engraved inscriptions that decorate the walls or steles of their religious buildings, as well as carved inscriptions that are more numerous and the best preserved.

It is upon this group of documents that the wisdom of a remarkable group of researchers has been exercised. Their study has led them to decipher the hieroglyphs and the Mayan signs and, by this path, to the knowledge of their mathematical and astronomical science.

To write numbers, the Maya utilized points and horizontal bars. The point was equivalent to one unit, the bar to five units. For example, three superimposed bars surmounted by four aligned points represented the number 19.

Their system of numbering was vigesimal,²⁸ whereas ours is decimal. . . .

The Maya knew the zero as we do, which they represented by a stylized conch shell. . . .

Besides the system of transcribing numbers by bars and points, the Maya represented the numbers from 0 to 19 by glyphs, all of which include a head.

Their writing counted, moreover, 20 glyphs to designate each of the days of their religious calendar, 19 glyphs to designate each of the months and the supplementary period of 5 days of the solar calendar, and 9 glyphs to designate each of the periods of time: *kin*, *uinal*, *tun*, *katun*, *baktun*, *piktun*, *kalabtun*, *kinchiltun*, *alautun*. There is one glyph for the moon, one for the planet Venus, four glyphs for the cardinal points and their corresponding colors, and nine glyphs for the divinities of the lower world. The principle gods of the Mayan pantheon also had their glyphs. At the present time, 150 hieroglyphs have been deciphered, being close to one-third of the signs catalogued until now. The task of archaeologists is further complicated by the fact that each glyph has several variants.

²⁶ Cf. P. Rivet, *Cités Maya* (Paris: Albert Guillot, 1954), fig. 71.

²⁷ Ibid., p. 92.

²⁸ The Celtic system of calculation.

Mayan writing was undoubtedly essentially ideographic, but it seems that it allowed for certain syllabic elements. Its use was only completely abandoned at the beginning of the eighteenth century after the destruction by the Spanish of the last independent Mayan city, Tayacal, in 1697. We can be absolutely sure that the Mayan hieroglyphic system had nothing in common with the Egyptian hieroglyphic system.²⁹

Beneath the reproduction in plate 57 of the hieroglyphic panel and to the left, in *B*, we give a diagram with only the squares; in *C* the numbers of the squares are included to facilitate the reading. They have been classified in this way to allow reading of the glyph numbers in lengths, surfaces, and ratios at a single glance.

Note that the numbers that generate this figure are found constantly in Egypt:

The seven large squares to the left. The neighboring column gives the same relationship, 1 to 7, but each unit is divided into four and provides the number 28. This fact recalls the number of digits on the royal pharaonic cubit.

The general height of this tableau is nineteen glyphs, for a width of 18, the identical ratio to that of the pharaonic human canon.

The eighteen squares at the bottom are divided into three groups of six each.

The rectangle in which three figures are inscribed that are ten glyphs wide and five high evokes the 1 to 2 rectangle and gives fifty squares as the surface. These three figures, which represent the three celestial principles of the origin, are seated on three straw mats recalling the sign *pe*, which is taken to mean a mat but is identical with the “barrel” that is used for measuring grains and that is part of the word *pt*, the sky.

The tableau measures 2.63 meters in height, which corresponds within a centimeter to 5 pharaonic royal cubits.

We discover here the fundamental relationship of 1 to 7 by means of which passage is made from the surface 49 to the surface 50, in which are inscribed the three figures on a square with a surface of 100, therefore the double.

Very certainly there is a kinship in the expression of the knowledge of the old traditions among the Maya with the same pharaonic tradition, but presented in an ideogrammatic fashion that is more difficult to decipher than the always pure hieroglyphic writing.

INVESTIGATION OF THE CANEVAS IMPOSED BY THE REPRESENTATIONS AND PROPORTIONS OF THE FIGURES

PLATES 58 AND 59 • THE *KAMUTEF* OF THE NORTHEAST CORNER OF THE TRANSEPT: A STUDY OF ITS GEOMETRIC FUNCTIONS

The bas-relief in plate 58 is sculpted on the outer face of the north wall of the “court of the belly,” or transept, of the temple of Luxor (fig. 199, no. 16), and its placement therefore corresponds to the level of the sex organs of the Man of the Temple. Let us recall that the whole exterior east facade of the transept, as well as the northeast corner, is of rough-hewn stone. Extending out from the mass of unhewn blocks, the north facade is smooth, but no bas-reliefs were carved there under the reign of Amenhotep III. Only some graffiti from a later era—of which this *kamutef* is a part—are found, in no apparent order, on this wall.

²⁹ Rivet, *Cités Maya*, pp. 51–54.

We are dealing with a *kamutef* (the literal meaning of which is “bull-his-mother”) that signifies the primordial seed acting in itself, or self-conception, that is, the “Adamic creation” (Adam Kadmon).³⁰ In the myth, *kamutef* is actually associated with the origin of the creation as well as with the Hermopolitan revelation.

The first lands surged up from the primordial waters, “the marvelous hill of primordial times.” On this hill the first manifestations of life appeared, the frogs and serpents that formed the first four divine couples. From this comes the name “the city of the Eight,” which designates Hermopolis, capital of the nome of Thoth. These eight primordials had names that mean the primordial waters, the obscurity, the secret, the eternal.³¹

But before the creation of these first four divine couples, there was “He whose name is hidden” (Amun). He appeared first in the form of a serpent Kamutef, and then became Irt, that which is made into earth.

In the *kamutef* represented here, the chest and the calf are traversed by two horizontal joints linked by a vertical joint that separates out the whole front part of the figure. A second vertical joint under the joint cutting the calf defines a measurement that allows us to draw a rectangle with the proportion 4 to 10 between these first three joints (fig. 258).

Nineteen times the height of each unit thus defined by the joints is the height between the soles of the feet and the line that separates the forehead from the figure’s headdress. The study of the different pharaonic canons teaches us that there are only two possible *canevas*: eighteen squares to the forehead for nineteen to the vertex in the earlier era, and twenty-one to the forehead for twenty-two and a fraction to the vertex in the Late Period. It is therefore necessary to modify the unit indicated by the joints. It should either be a little larger to obtain the unit of the older *canevas*, or a little smaller to obtain the unit of the *canevas* of the Late Period, and this research leads to a curious result:

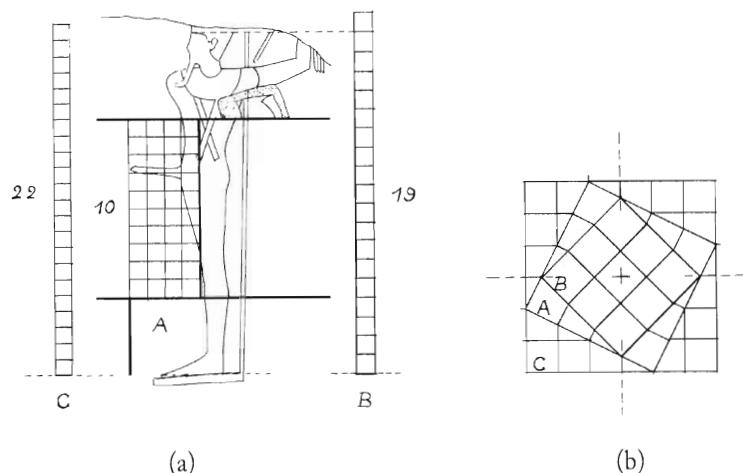


Fig. 258. Study of the *kamutef* of the northeast corner of the transept

(a) The rectangle in the proportion 4 to 10 is defined by the joints of the stones and the extension of the interior joint, and defines side *A* of four squares. (b) Side *A* is the hypotenuse of a triangle with a base of 4 and a side of 2. Each unit *C* is $2/\sqrt{5} = 0.8944\dots$. Side *B* is the hypotenuse of a triangle with a base of 3 and a side of 1. Each unit *B* is $\sqrt{10}/3 = 1.0541\dots$.

³⁰ Already noted in *The Temple in Man*.

³¹ Cf. I. Schwaller de Lubicz, *Her-Bak, Egyptian Initiate*, p. 135.

Let us call A the unit square of the small side of the rectangle defined by the joints of the stones. First, four A units make up the *hypotenuse* of a triangle in the proportion 1 to 2, the base and perpendicular of which are measured in the smaller C units, which allows us to establish the *canevas* of the Late Period, twenty-two squares and a fraction to the vertex.

Second, three A units serve as the *base* of a triangle in the proportion of 1 to 3. The subdivision of its diagonal into three defines the value of side B , which allows us to divide the height of the *kamutef* to the forehead by 18 and 19 to the vertex, following the older canon.

The sum of the angular ratios 1 to 2 and 1 to 3 equals 1 to 1 so that square B is at 45° in square C (fig. 258b).

Here the joints have led us to establish an originating grid that in turn is in some way the mathematical “androgynous” for the two canons.

Plate 59A shows, moreover, the application of the ϕ dividing formula for the *kamutef*: the phallus, instead of being at the halfway point of the height of the body, is at the navel. The *canevas* of twenty-two squares demonstrates this by the relationship between the numbers 13, from the soles of the feet to the phallus, and 21, to the forehead between the eye and the headdress, where the twenty-first square occurs in the Late Period, the time in which the demonstration we have just made enables us to place this bas-relief.

Also, we should note that in the *canevas* of nineteen squares, the sixteenth line always crosses the base of the neck, a proportion that is not precisely applied in this figure (plate 59B). On the contrary, the level of the shoulders corresponds to the nineteenth line of the canon of the Late Period and conforms with it. This allows us to date this figuration to after the Twenty-sixth Dynasty.

This image of the *kamutef* thus becomes the description of the passage from one canon to another by starting from the original functions 1 to 2 and 1 to 3. This is a very beautiful numerical illustration of the mysterious Heliopolitan principle of the self-creation of Tum manifested at Heliopolis. Heliopolis, Memphis, and Hermopolis³² are the places consecrated to the three principles in the creative Unity.

MYTH AND SYMBOLISM

The fortress built on the shifting sands of rational materialism is now in the process of collapsing. Rational evolutionary theory is no longer a sturdy railing for the biologist, but a thread that threatens to snap at any time. The opinions forged in this time of great pride remain standard principles, and as for religious themes and the origins of the great systems of religious metaphysics, there is the conviction that they are superstitions born of human egoism and the fears of primitive peoples when faced with the forces of nature.

And thus, even today, it is assumed that pharaonic religion began in this way, in spite of the certainty we now have of the existence, since the First Dynasty, of a sound metaphysics, a complete writing, and a symbolism that serves as the basis of the whole history spread out over four thousand years.

The incoherence of meaning in the texts on stone and papyrus is attributed to the need for ambiguity when speaking of the “gods” and their activities in order to impress the people and to leave them to fill in the gaps with their imaginations and superstitions. The clergy is seen as a band of profiteers preying on the fears of an uncultivated people, with politico-religious struggles for the supremacy of various bogus “gods” attributed to them.

³² Hermopolis became el-Ashmunein in Arabic times, the Jewish Aeschmain, the mercurial spirit of the Hermeticists.

So certain Egyptologists believed they could fill the gaps in the “logical meaning” they desired by an imaginary “historicism.” This is understandable, in a pinch; what is inexcusable is when these authors do not distinguish an authentic text from their own fabrications.

A mythic legend, or anthropomorphization of metaphysical principles, is already a “historical” form put at the disposal of the people so they will be able to remember and spread this teaching; it is not a ruse to deceive them. Certain children’s tales and many customs still have the goal of the *preservation*, in our time, of certain teachings of a Hermetic character.

How can we make people understand that it is one and the same principle, the names of which change according to the phases of genesis, unless we represent these phases by different figurations? Symbolism distinguishes Isis from Maāt, Hathor from Mut. There is only a single femininity, but it acts differently in different environments. When a *primordial serpent* is shown that becomes Kamutef, then Irita, the principle of dividing in half, of androgyny is evoked, and through this a realization of the tangible with earth for its image, the process of birth. Then these phases are synthesized in Amun. And this Amun is both lunar and solar, the two essential lineages in the Universe, which symbolize the two crowns of the Two Lands of the kingdom (the Cosmos). Certainly, the ultimate stage of perfection will be the *reuniting* of these two crowns, the complements, the antagonisms, the powers that order the transitory, mortal aspects of the Universe.

When these things are written with images and not with letters or conventional signs, it is in the *functional* meaning of that which the image represents that one must look for the significance that a *grammatically incoherent* (but vitally logical) composition will impart.³³

When one uses the letter *n*, represented by an undulating line, a wave in general, which can signify what we call “energy,” in order to speak of the primordial milieu, and therefore of the energetic but not yet polarized milieu, then one will write *Nun*, the primordial *ocean*, with two *n*’s, the waves separated by a space, as Moses said: the waters above and the waters below. The *waters above* appear in *darkness*, in *night*, in *shadows*, as long as they are not thrown down to become the *mound* of earth, the coagulation of spirit, also the prison of the fire Ptah, the Sethian aspect that has been, like Prometheus, chained to a rock for stealing fire from heaven. It is therefore a question of the principle of scission, primordial but also universal, and at the origin of all life. All this happens simultaneously. In order to explain it (because we are the slaves of time and space), we must split that which is a singular phenomenon, what we will call karyokinesis, conception, and so on, and in general, the *Fiat lux*.

How can one speak of the disputes of idiotic clergymen who are hungry for power when the issue concerns the organization of an empire of wisdom, the knowledge of whose secrets alone gives the human being all the power that he or she can receive in this life? We are dealing with the sacred aspect of Hermeticism. This has nothing to do with the transmutation of the atom through mathematical formulas and cyclotrons. Saint John the Evangelist cannot be confused with some “catch as catch can”* wrestler.

When one wishes to indicate the phase that follows the emergence from the primal ocean of the land, the separating of earth from water, one writes *nw, nu*, symbolized by undulating lines accompanied by three vases and the sky; this is the Water, the contained energy, now having form. There

³³ R. Abellio, in his work *La Bible, document chiffré, essai sur la restitution des clefs de la science numerale secrète* (Paris: Gallimard, 1950), believed himself able to rediscover this secret meaning based on the fact that the Hebraic letters have a numerical meaning. Now, this transcription into numbers is a new enigma. Nevertheless, this attempt is in honor of the spirit of this author who presented the esoteric significance that, evidently, the Prophet wished to transmit under the pretext of a story that was not to be taken literally.

*In English in the original.

are then the two elementary oppositional principles: Fire and Water. Would you prefer our medieval symbols \triangle and ∇ ? The Egyptian image speaks more explicitly than our conventional symbols, since the three vases are also a trinity, and Ptah, wrapped as a mummy, then represented as ithyphallic Min, is a seminal fire and causes the mounting flux symbolized by the *nekhakha*, the stick from which a triple stream comes out in droplets,³⁴ held above the right arm of this Min.

Frogs—living amphibious beings—symbolize, along with serpents, the passage from aquatic life to terrestrial life, to living on air. We should look in the organic constitution and in the metabolisms of these animals for the vital transformations that allow them to live either in the air or in the water. The functions of life could certainly never be better symbolized than by means of an animal whose organism is specified for a particular environment.

Moreover, every function has its active aspect and its complementary passivity. A principle-element, such as Fire, Air, Water, or Earth, has a masculine, active character or a feminine, passive character, passivity being shown by the addition of the letter *t* at the end of a name. The symbol of this letter is the crown of the skull that represents the lunar nature, passive and reflective. Thus, the four elements become the principal Ogdoad.

Through the symbolism of objects and imaged gestures, one can, without long phrases, establish a writing that links all living functions together and thus expresses an essential metaphysics through the tangible manifestations of life.



Here is what has been transcribed by A. Erman regarding the definition of Thoth (Djehuty, also signifying lead):³⁵

One day, while Ra was in the sky, he said: "Have Thoth come to me." And he was led to him at once. The majesty of this god said to Thoth, "Be in the sky in my place, while I shine for the blessed in the lower regions. . . . Thou art in my place, my replacement, and thou shalt be thus named, Thoth, the replacer of Ra." Then all sorts of things came into view because of Ra's play with words. He said to Thoth "*I shall cause thee to embrace [inh] the two heavens by the beauty of thy rays*"—then *the moon [iah] was born*. Further on, alluding to the fact that Thoth as the replacer of Ra occupies a level only slightly subordinate to him, "*I shall cause that thou sendest [hab] greater than thee*"—then *the Ibis [hb] was born*, the bird of Thoth.³⁶

This certainly parallels the fourth day of biblical Genesis, which is concerned with the creation of the luminaries of the day and the night. The moon is presented as a *replacement*, shining in the night as a reflector, but also at certain times communicating with the sun, the day.

The translation of the last phrase: "*I shall cause that thou sendest [hab] greater than thee*" is certainly not correct, because the lunar effect will be attributed to Mercury, Hermes, in the form of water, which is not "greater than Thoth," but the manifestation of his power containing the Elements, the Ogdoad. Furthermore, his living representative will be symbolized by the ibis (*hb*), the white bird of the swamps, who searches in them with his beak for the worms (a primitive form of life) that constitute his food.

³⁴ Cf. vol 1, fig. 1.

³⁵ Lead is here understood as the original mercurial metal.

³⁶ Erman, *Religion des Egyptiens*, pp. 90–91. This author honestly distinguishes the authentic texts from his personal reflections.

Another curiosity to be noted here is the fact of the appearance of “all sorts of things . . . because of Ra’s play on words.” “And God led Adam through the Garden of Eden in order to name all the things living there. . . .”³⁷

To learn the true name of a thing is to know it. Certainly, it is not just a matter of words, but of the vital location of a thing in “Eden.” This Verb is a “weaving” that creates the thing (Neith, the weaving; Seshat, the signature, the name).

PLATES 60 AND 61 • THOTH, MASTER OF THE NET, KARNAK

This bas-relief is located on the third register of the west part of the south wall of the hypostyle room at Karnak and makes up part of the scene called “the bird hunt.” Thoth and Seshat, as with all the figures on this wall, were first sculpted in relief by Seti I, then recarved in sunk relief under Ramesses II. A line remains around the figure, giving the contour of the original reliefs. On the upper part of Thoth’s head and under the soles of his feet, the old line merges with the edge of the new carving.³⁸

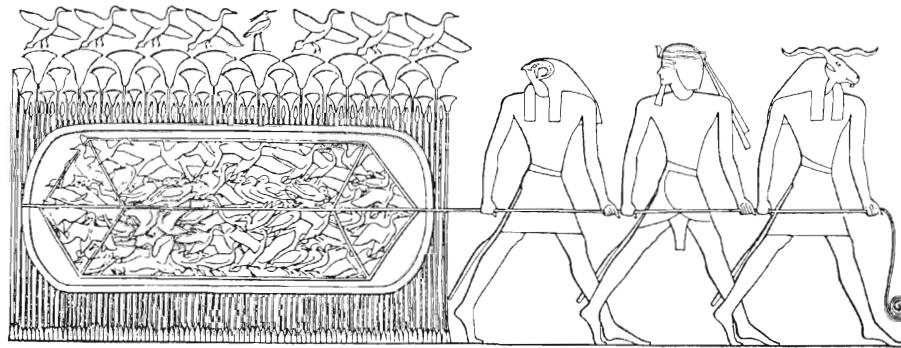


Fig. 259. Scene of hunting with the net (Karnak, temple of Amun)

The net is pulled by Horus, the king, and Khnum.

The entire scene includes, on the left, a net filled with winged creatures (caught in the net) sculpted in relief in a pond with rounded edges, located in the middle of a papyrus thicket surmounted by seven birds in full flight. These birds, three on one side and four on the other, who have “escaped from fixation by the net,” are divided by the *benu* bird, the phoenix. The rope that longitudinally crosses the net is pulled by the falcon-headed Horus and by the king, who both look toward the net, and by the ram-headed Khnum, who holds the end of the rope that is unrolling in a spiral and who looks at Thoth (figs. 259, 260).

Thoth faces them, his arms extended in front of a long scarf with curved-down ends. Notice that he does not hold this band of cloth in his hands; his hands are pressed against it. Through this gesture Thoth evokes the measure of the arm span, or fathom.

³⁷ Genesis 2:19–20.

³⁸ Relief, what stands out; intaglio or sunk relief, what is carved in, penetrating. Here, as elsewhere in this period, an alternation between the two is noted.

Seshat, at the right, holds in her two closed, opposed hands a band of cloth that passes behind her neck and marks the significance of Thoth. Thoth is named “master of the city of the Eight” and of the “temple of the net.”

Plate 61 • Thoth, Master of Numbers

Without preoccupying ourselves with the thousand metrical nuances that occur in any pharaonic use of the grid, correcting the approximate ratios read in whole numbers into absolute functions by means of the irregular squares, we draw a *canevas* on this bas-relief, based on the height of Thoth. This *neter* does not have a skullcap, so consequently, his height must be divided by 18.

All the registers are carved on a very pronounced slope; thus in order to establish a regular grid pattern, we take the lines of the earth and sky as horizontals and their perpendiculars for verticals. The vertical axis that serves as the point of departure is the one passing through the edge of Thoth’s headdress, the point corresponding to the axis of equilibrium passing in front of the ear on the human-headed figures.

Measured between the interior edges of the bas-relief, from the soles of the feet to the top of the head, Thoth is 1 mean fathom in height (1.85 m). The unit that results from the division of 1 fathom by 18 represents the side of a one-unit square.

It is enough to count the number of squares that mark the essential points:

- The full arm span of Thoth is twenty-two squares, that is, eleven squares on each side of his axis of equilibrium.
- The height of the edge of the register above Thoth’s head is nineteen squares and thus corresponds to the height of a man with the crown of the skull.
- The distance between Thoth’s axis of equilibrium and Seshat’s is fifteen squares.
- The distance between Thoth’s axis of equilibrium and the line that marks the end of the vertical text inscribed behind Seshat is nineteen squares.
- The total height of the register under the sky is twenty-six squares, and twenty-seven squares with the sky.

We find here some fundamental numbers and ratios: Thoth is inscribed in a double rectangle in the proportion of 19 to 11, that is, one of the approximate ratios for the square root of 3. This function is confirmed by the rectangle determined by the distance 15 between the axis of Thoth and Seshat and the total height, 26, under the sky. These two ratios come one after the other in the *canevas*.³⁹ Now, the square root of 3 defines the hexagon.

Seshat is inscribed in a rectangle of 8 to 19. The diagonal of the square with 19 for its side that starts from the axis of equilibrium of Thoth crosses the vertical at a height of 11, and in the rectangle of Seshat, determines the 8 to 11 rectangle. This coefficient is that of the regular pentagon, which is found in the plan of the naos drawn on papyrus (plates 65 and 66 and fig. 266) and which governs the naos of Luxor (fig. 284).

Thoth, master of numbers and measures, organizer of the cycle of time, located at the heart of the measuring cubits, patron of scribes and of all writers, by his height gives the fundamental measure, the fathom. He teaches the essential numbers through his proportions, relative to the

³⁹ Cf. chapter 8. Each ratio requires its “reciprocal” to form the following one. The growth of 11 to 15, as well as that of 19 to 26, results from the generating function already encountered in the tomb of Ukhhotep at Meir, fig. 248.

hexagon and the division of the cycle into six. But it is Seshat who gives form and makes possible the passage from the straight line to the curve, through the function evoked by her "particular coefficient," which is the same as that of Thothotep in the tomb at Meir. From the ground to her forehead, Seshat measures 1.84 meters, and from the ground to her vertex, she measures 1.93 meters. By taking the exact dimension of a fathom at 0° for her height to the forehead, her height to the vertex will be defined as $1.843 \text{ meters} \times 1.0472 = 1.93$ meters.

Moreover, the extended arms of Thoth represent the arm span, or fathom. Let us not forget that "fathom" in hieroglyphic language also means "to embrace," that is, "to surround," and that the arm span is thus inevitably a curve, here transcribed into a straight line, like the royal cubit.⁴⁰ Thus, Thoth and Seshat give the functional principles that govern the cubits and allow the transformation of the curved line into the straight line (and vice versa), which is further verified by the measurements found on the monument itself.

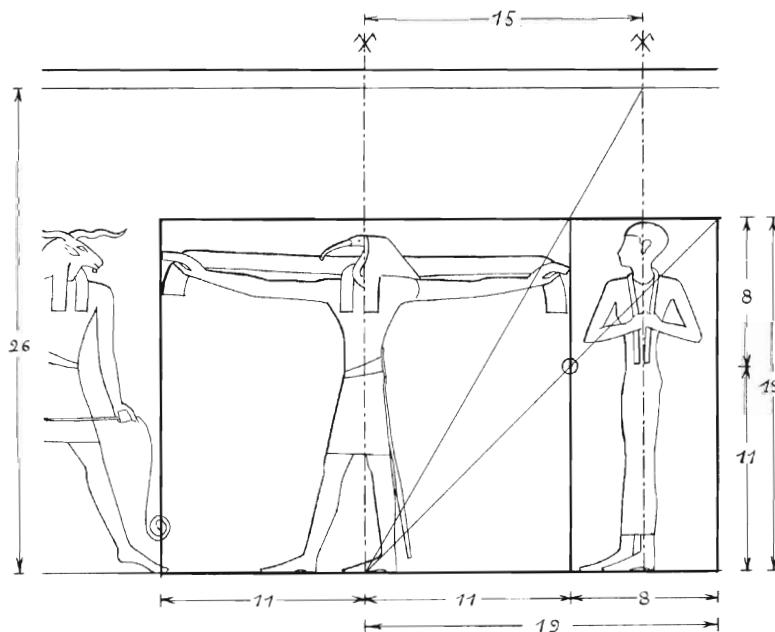


Fig. 260. Geometric study of a scene from hunting with the net

Thoth, master of the city of the Eight, indicates the numbers relating to the hexagon, and Seshat, those relating to the pentagon.

One might have been tempted to see these representations of "capturing with a snare" in the tombs of the nobles as "scenes from private life," particularly as the master of the tomb is shown hunting the birds himself with a boomerang, fishing with a harpoon, and so on. But when this figuration is found *in a temple* with the king flanked by two *neters* as actors, themselves pulling the net under the orders of Thoth, accompanied by Seshat, we can no longer see this as a simple scene from ordinary life, and it is obvious that this image has a symbolic purpose and is related to myth.

The texts accompanying Thoth designate him as "master of the city of the Eight who presides

⁴⁰ The entire arm span measures twenty-two squares; the interval between the thumbs of the *neter* measures twenty-one, coinciding with the cross formed by the scarf. This allows us to consider the arm span as an arc of 60° for the length of the rope indicated by the thumbs. Cf. vol. 1, fig. 132.

[*hesert*] in the heart of the ‘temple of the net.’” The reference here is to the sanctuary of Hermopolis, capital of the fifteenth nome, consecrated to Thoth. It is thought that the name of this temple should be attributed to the legend according to which Seth had been taken into the net by Horus at this place.⁴¹

Here Thoth directs the operation of “capturing with a snare” by giving the signal to close the net. It is said that he extends his arms like a bow in order to release the scarf. He has crossed the swamp full of birds and fixed the snare so that these waterbirds, destined to serve as an offering to the *neters*, particularly to Amun, master of Karnak, could be captured. Behind him is Seshat, characterized by an absence of attributes—neither crown, nor scepter, nor jewelry—only the strip of cloth around her neck, the two ends of which she holds in her fists, which oppose each other.

Seshat is here assimilated to Neith, mistress of the fifth nome in Lower Egypt, regent of Dep, mistress of Sais (double cities). The Saitic nome was placed under the protection of Neith, to whom the invention of weaving and cloth was attributed. Her city was famous for the manufacture of cloth, and its Serapeum bore the name of “house of fabrics”; preserved there as a relic was the ear of Osiris.⁴² Normally determined by two crossed arrows, the emblem of the region, or nome, attributed to Neith is written here with two fingers (?).⁴³ Seshat is then described as that which conceives and nourishes the royal infant from her breast, the infant who will appear on the throne of Horus, as Ra. . . .

This very complete depiction of Thoth, accompanied by Seshat, confirms that the theme of the net constitutes a cabala that in fact signifies the capturing of what is abstract.

With this clarification of the significance of the “bird hunt,” it is obvious that we must study each net in this spirit. The net serves as an image that adapts itself to various possibilities.

PLATES 62 AND 63 • TOMB OF RAMESSES IX

This painted bas-relief is on the south wall of the third part of the access corridor to the tomb of Ramesses IX. The whole of this wall is divided into two clearly distinct parts, the left one containing three registers and the right one (plate 62) allowing for only a single register divided vertically into two tableaux.

The tableau on the right shows the king wearing the *atef* crown surmounted by a ram’s head and including, with the uraeus, four solar disks, all placed on the horizontal horns of Khnum. The king offers a small Maāt seated on a basket to Ptah—in one of the aspects of Osiris—and to Maāt, both of whom stand on a wedge-shaped pedestal, a symbol of Maāt. This mummified Osiris holds two *was* scepters in his hands, which are opposed to each other. Maāt, *neter* of justice and of the scales, who separates the pure from the impure, here brings about the passage of the whole number (the line) into the cycle through the function ϕ .⁴⁴

The tableau at the left shows the king in the form of the ithyphallic and mummified Osiris, one arm raised above his head, resting on an inclined plane on a mountain and forming the hypotenuse of a triangle, the side and base of which are represented by an undulating serpent. In

⁴¹ Cf. H. Gauthier, *Dictionnaire des noms géographiques contenus dans les textes hiéroglyphiques*, 5 vols. (Cairo: I.F.A.O., 1925), 1:66, 4:48. The name of this sanctuary is *b.t ibty*, “temple of the net” (?).

⁴² The ear, being “to hear,” “to understand,” the “weaving of the Verb,” etc.

⁴³ Cf. Gauthier, *Dictionnaire des noms géographiques*, 1:158. This emblem is read *aq* or *djebauy*?

⁴⁴ Cf. below, fig. 262.

front of the mummified king, above the cartouches of the name of Ramesses IX, the scarab rolls his solar ball out of the mountain with his hind legs.

This scene is rare, as only two other examples of it are known, both on papyri. One, in the name of Her-uben, songstress of Amun-Ra, king of the gods, has the dedicatory inscription, "Book of What Is in the Dwat."⁴⁵ This papyrus has only three scenes, the last of which is similar to that of Ramesses IX: the dead person is in front of the door leading to the tomb of Osiris, and behind this door, guarded by a lion-headed figure holding a whip in his hand, is a long serpent holding four upright mummified sons of Horus in its coils. The body of the serpent extends under the mountain and forms the base and perpendicular of a triangle of which Osiris, with his arm raised above his head, forms the hypotenuse.⁴⁶ The text accompanying this Osiris is translated as follows: "Osiris, he who awakens in health, he who is at the head of the west, great *neter*, residing in the Dwat, this sacred earth, this mound of Khepri"⁴⁷ (the mound of Khepri, that is, the hill of transformations). In the tomb of Ramesses IX, the text inscribed to the left of the scarab rolling its ball with its hind legs is quite enigmatic:

This *neter* is thus: his two arms are in the gesture of exultation above him, his two legs are in the place of the destruction, the living scarab, birth of this great *neter*, is in the *gererf*⁴⁸ of this *neter*. He calls Osiris and Osiris calls him. This *neter* is in the Dwat (plunged) in thick shadows, the serpent Nehep is his guardian, it encircles his form at the moment of the birth of Ra. May Horus, who appears at Thebes, be with thee and protect thee!⁴⁹



It was during my first visit to the Valley of the Kings at Luxor in 1937, at a time when I was already interested in pharaonic measures, that I was struck by this curious figure in the tomb of Ramesses IX.

Without then having the time to take the measurements, I took note of the drawing, because the fact of depicting a mummified royal figure forming the hypotenuse of a triangle that appeared to me to have sides of 3 to 4, and raising its arm to 1 cubit above its head, would suggest seeing there a relationship of 5 + 1, with the king, as the hypotenuse of the sacred triangle, having the value of 5, plus the raised arm.⁵⁰

Since the height of a man represents ϕ^2 through his proportions, the intention could be to indicate six-fifths of his height, which gives the value 3.1416... for π .

In order to establish the meaning of this figuration it was necessary to do a precise study correlating it with other known facts. It is a question here of much more than the simple revelation of a number. It must be justified by, and must result from, a philosophy related to theological principles, and, in the customary mode of pharaonic thinking, it must necessarily have a universal character.

⁴⁵ The second papyrus is also in the name of a chanteuse of Amun. Cf. Alexandre Piankoff, *Les Deux Papyrus "mythologiques" de Her-Ouben au Musée du Caire*, Annales du Service des Antiquités de l'Egypte 49 (Cairo: I.F.A.O., 1949), fasc. 2, pp. 7–10.

⁴⁶ In this papyrus, the hypotenuse is generated by the mummy with its arm raised, in contrast to the figure in the Ramesses IX tomb in which the arm is above the serpent's head.

⁴⁷ Piankoff, *Les Deux Papyrus "mythologiques" de Her-Ouben*, p. 10.

⁴⁸ *gererf* = "cavern."

⁴⁹ Piankoff, *Les Deux Papyrus "mythologiques" de Her-Ouben*, p. 11. In these two citations we have replaced the word *god* with *neter*.

⁵⁰ Cf. vol. 1, fig. 108.

The mummy, as the chrysalis that is about to hatch, is drawn within the mountain from which the scarab, rolling his ball, the symbol of the solar emergence, is leaving. This is the end of the genesis in the Dwat (the world of the night of terrestrial life, the time of the migration of the soul), which will cause the appearance of the visible solar cycle. This is the reason for the measurements in *meters* of the frame surrounding the figuration, the meter being exclusively reserved for diameters and the radii of circles, because cycles are always measured in cubits for time and in fathoms for distance. Thus the measures reveal the vital conditions, that is, the phases in life; at the same time the teaching of this tomb is that of the passage from the straight line to the curve, the abstract distance from one point to another, which governs the apparent movement of a cyclic genesis. That which separates one thing from another is vitally not a distance but a duration, a difference in phases of becoming.

Some essential measures, nearly all of which are exact, enable us to analyze the principal functions of this figuration in the form of numbers and proportions.

Certain very particular points of reference found on this bas-relief consist of black lines and red lines painted on the stucco *after* the sculpture was made—therefore useless for the execution of this work—that emphasize the essential units of measure governing the geometry of the whole bas-relief: red lines give the measurement in meters, black lines indicate the “movements” of the figure.

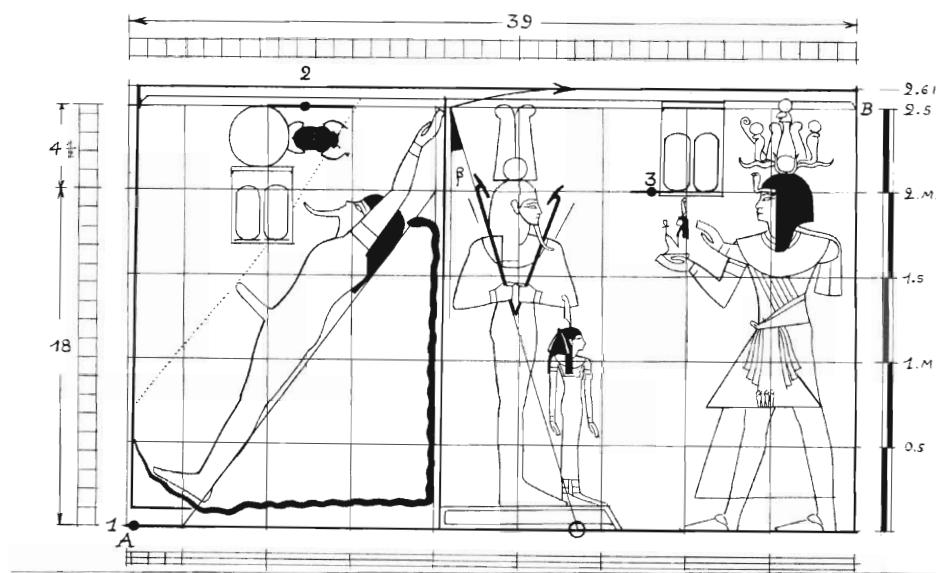


Fig. 261. Tomb of Ramesses IX, Valley of the Kings (Thebes)

Relation of the meter to π and the royal cubit

At point 1, a horizontal red line is painted *over* the black baseline that constitutes the horizontal of the tableau.

At point 2, a red line is drawn tangent to the upper part of the solar disk; it is 2.50 meters from the baseline, that is, from the extension of the red line at point 1.

At point 3, a red horizontal line coincides with the base of the royal cartouches and is 2 meters from the baseline.

These three red lines define the half-meter as unity, which is recalled in several other places in the design.

The height of 2 meters, divided by 18, determines the square unit used to measure the totality of the two scenes (plate 63). The standing king actually measures nineteen of these squares to the vertex, sixteen to the shoulders, and eighteen to above the eyebrows, that is, to the lower line of the band of the headdress.

If we use the half-meter for unity, being the distance between the horizontals at points 2 and 3, a grid demonstrates that the mummified king inclined on the mountain is actually the hypotenuse of a 3 to 4 triangle suggested by the serpent (fig. 261). If the base of the triangle is 3, or 1.50 meters, its height is 4, or 2 meters, and its hypotenuse is 5, or 2.50 meters.

The vertical axis of Osiris-Ptah standing on the pedestal is exactly 2 meters from the vertical border on the right; the small Maāt presented as an offering is 1 meter from it. This Osiris-Ptah holds two *was* scepters in his hands that form, with respect to the vertical, two different angles. The scepter in the left hand determines the relationship of 1 to ϕ^2 (angle γ in fig. 262) that gives the function of what the right hand specifies. The scepter in the right hand determines the angle β with the vertical, which allows the transformation of the length of the chord of the angle of 60° into the length of its arc. The extension of this *was* down to the baseline and up to the height of 2.5 meters represents the diagonal that measures 2.618 meters, that is, 5 royal cycle cubits, and its rabattement onto the line of the vertical coincides with the upper line of the sky (fig. 261).

The angle β found here is demonstrated in the sanctuary of the barque of the temple of Luxor.⁵¹

The subdivision of 2 meters into eighteen squares gives the value of 6 digits for the side of each square. Each digit represents 1/100 mean fathom. The height of 2.50 meters is twenty-two and one-half squares, and the total length of the two scenes is thirty-nine squares (fig. 261). The result of these numbers is the proportion 78 to 45, whose reciprocal is 45 to 26, in which we can recognize a ratio coming from the *canevas* for the square root of 3. The measurements confirm the precision of this function. The length 4.33 meters is measured between the lines of the vertical borders. Divided by the height between points 1 and 2, it gives the correct proportion, or

$$\frac{4.33 \text{ meters}}{2.50 \text{ meters}} = 1.732 = \sqrt{3}.$$

Thus the rectangle that frames this double scene is the controlling rectangle of the hexagon that governs the division of time. Its large diagonal *AB* (fig. 261) is 5 meters and enables us to draw a circumscribing circle with a radius of 2.50 meters, of which each arc of 60° measures 5 royal cubits, or 2.618 meters, indicated by the height of the tableau with the sky.



We have thus functionally, metrically, and geometrically verified that the meter measures the diameter and that the royal cycle cubit measures the arc of 60° .

In conclusion, the figure of the royal mummy as the hypotenuse, with his arm raised, actually evokes the functions made precise in the whole of the tableau. As the hypotenuse, the king has the numerical value of 5; this fact leads to the principal function of $6/5 \times \phi^2$, defining the coefficient π .

⁵¹ Cf. fig. 284.

This bas-relief once again applies the transformation of the straight line, or radius, into the cycle curve, or royal cubit. As for the precise value of π , this is given by the scepter held in the right hand of the standing Osiris-Ptah.

The mathematical key of this tableau, in which the mummified king in his mountain is only a functional symbol, is given by the central figure that establishes a relationship between the heights of Maāt and of Ptah; these heights are to each other as the radius of a circle (Maāt) and the height of the pentagon (Ptah) inscribed in the circle (fig. 262).

The side of the pentagon is the width of a rectangle whose length is two times the radius of the inscribed circle (in dotted lines, fig. 262). This rectangle being crossed at a right angle (as in the sanctuary of the barque of Amun at Luxor)⁵² determines the displacement angle of a second pentagon superposed on the first, and through which are given all the angles and all the geometry of this figure and its consequences: the vertical axis of Ptah coincides with the height of the first pentagon; the vertical axis of Maāt coincides with the diagonal of the second pentagon.

By means of this geometric play (fig. 262) we see that shifting the rectangle formed from the elements of a pentagon at a right angle determines a new pentagon that pivots 18° on the first, and this play allows the geometric determination of a perfect π , and thus the mathematically precise squaring of the circle.⁵³

This whole scene, including the two tableaux, is inscribed in a rectangle that on a circumscribing circle cuts out the hexagon, which applies the functions defined by the pentagon. Here

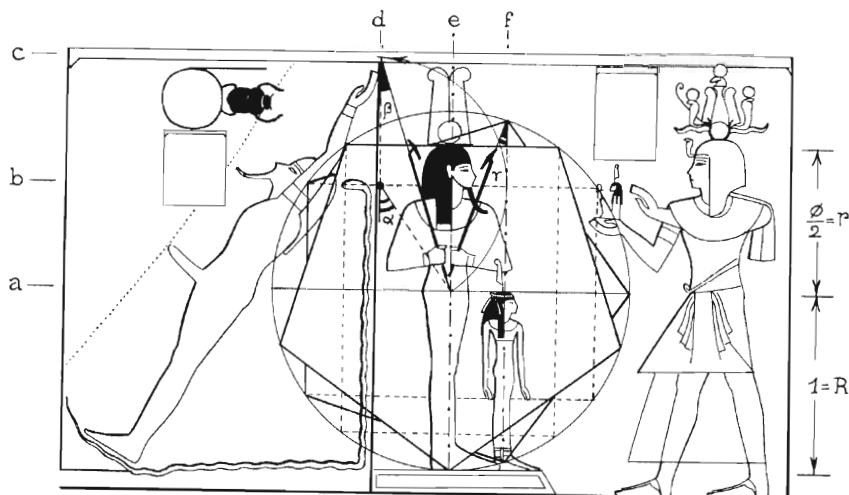


Fig. 262. Definition of the pentagon by the height of Maāt and Osiris-Ptah

The rectangle with half (ab) of the side of the pentagon for its length, and half (de) of the radius r of the inscribed circle for its width, is cut by its diagonal. The acute angle measures 34°32'. Half of this angle is obtained by adding the height ab to the diagonal, which gives the length ac . The triangle formed by de and ac has a hypotenuse with a length of 3.14159... for the length ac considered as 3.

⁵² Cf. ibid. and vol. 1, fig. 157b.

⁵³ Cf. chapter 40, "Discussion Concerning a Perfect π " and fig. 284.

once again we find this pentagon-hexagon relationship that is at the foundation of the vital functions described through Apet of the South.

Maāt is a principle and not some thing; she is what we can translate as justice, the scales, and in this scene, it is she who makes the scission of Ptah from which comes the quintessence that is translated by the pentagon.

CUBITS AND TEMPLE

PLATE 64 • THE CUBITS AND THE TEMPLE

Plate 64A

This cubit represents the typical standard cubit.⁵⁴ Carved of wood, it is divided into 28 digits, and on its sloping face there is an enumeration of the different divisions: digits, palms, hand, fist, small span, large span, *djezer* cubit, *remen* cubit, small cubit, and royal cubit, reading from left to right.

On the top face, twenty-eight *neters* can be seen, each attributed to a digit. Ra, the first of the Ennead, corresponds to the last digit; the *neters* are therefore enumerated from right to left. Also from right to left, the fractions of the digit can be read on the vertical face; the values are written above.

The dedication occupies the back face and half of the top. This cubit was published by R. Lepsius in *Alte Ägyptische Elle* as number 1, from a rubbing of the original, which is preserved at the Turin Museum. It was placed in a case in 1939 during the war and has remained there ever since, for which reason we have not been able to get either a photograph of it or any other verification of its measurements. Lepsius gives it a total length of 52.5 centimeters. This would make it the cycle cubit, which is one-sixth of a circle with a radius of 0.5 meter.

Plate 64B (No. 61316, Cairo Museum)

This cubit, found in the tomb of Tutankhamun, is made of wood and has the cartouche of the king on its back face. Its total length is 52.9 centimeters ± 0.5 millimeter, maximum. It is divided into 7 palms, the first two of which on the left are subdivided into 8 digits and the last on the right makes reference to 1 digit. It is further divided into two half-cubits. The following characteristics can be noted with regard to these measures:

1. The total length, 52.9 centimeters, is close to the radius cubit at Dendera (plate 64, D and E). This measurement derives from the function applied in the sanctuary of the barque in the temple of Luxor,⁵⁵ which establishes the relationship between 6 mean fathoms measuring the arc of 60° for which 20 radius cubits serve as the chord.
2. It is divided into two unequal parts that represent, on the left, a half-cubit of 53.5 centimeters,⁵⁶ and on the right, a half-cubit of 52.3 centimeters or 1 cycle cubit.
3. Read on the 5 palms to the right, it contains a *remen* cubit of 20 digits. This cubit corresponds to the division of the length of the entire cubit by the square root of 2.

⁵⁴ Cf. vol. 1, fig. 112.

⁵⁵ Cf. ibid., fig. 113.

⁵⁶ Cf. ibid., fig. 117, cubit no. 45932.

In contrast, the *remen* cubit, read on the 5 palms on the left, measures exactly 20 digits of the division by 28 of this cubit, which is 37.8 centimeters.

Plate 64C (No. 61320, Cairo Museum)

This cubit, like the preceding one, was found in the tomb of Tutankhamun and bears his cartouche. It is made of wood and is covered with blue paint. Its total length of 52.5 centimeters classifies it among the cycle cubits. It is divided into 7 palms. The central palm, divided in two, divides the cubit into two unequal parts.

1. The part on the right measures 26.75 centimeters, that is, half of 53.5 centimeters, the half-cubit already encountered on cubit B and noted in the same way.

2. This cubit has two different values for the *remen* cubit according to whether it is read in one direction or the other:

3. The 5 palms on the right measure 38.2 centimeters, that is, 20 digits of a cubit of 53.5 centimeters and therefore the same value as the half-cubit that it refers to on the same side.

4. The 5 palms on the left measure 37.2 centimeters, that is, 20 shorter digits that result from the division of the total length of this cubit by the square root of 2. These 5 palms constitute therefore its particular *remen*.

The intention of indicating two different measures for the *remen* is made clear by the two ways of reading, in one direction or the other, and since we are dealing here with a centimeter of difference, this cannot be regarded as the result of negligence. In practice, the small *remen* can be the side of a square, the diagonal of which is equal to the entire cubit.

Plate 64D (No. 45933, Cairo Museum)

This is a basalt cubit, square in cross section, found in the temple of Hathor at Dendera. Its length varies from 53.05 centimeters to 53.1 centimeters. It is a radius cubit of the same nature as the previously studied cubit B, and it obeys the same functions. Its cross section is equal to $1/21$ of its length. One surface is divided into four parts, the next one into seven, and the two remaining into five and six successively.⁵⁷

The subdivisions of the cubit into fourths, sevenths, fifths, and sixths impose their common multiples on two consecutive faces and define the subdivision of the total length into 28 digits, then into 35 digits and 30 digits, and finally into 24 digits. Now, these units of measure are actually found both on the cubits themselves and on the monuments. For example, certain "shorter" digits correspond to $1/30$ cubit, whereas on certain cubits the first digit, noticeably longer than the others, corresponds to $1/24$ cubit.

We should note the arrangement of these divisions because in its development, the division into fourths and fifths frames the division by 7, which evokes the fundamental relationships for the square roots of 3 and of 2. These are the original ratios that are recalled here, since in order to balance the measurements it is necessary to make use of "reciprocals."

Plate 64E (No. 45931, Cairo Museum)

This cubit, also found at Dendera, is of basalt and is square in cross section. It is also called the "benediction cubit" because of the dedication carved on one of its faces. Dedicated to Hathor at Dendera by the strategist Panas,⁵⁸ this cubit is thus dated about 200 B.C. Its length of 53

⁵⁷ Cf. *Ibid.*, fig. 118. From this we can understand the reason why these subdivisions are marked on the cubits of the temple and the sacred character that was accorded to the cubits.

⁵⁸ Translators of this dedication have not been able to agree on the exact meaning of the whole text.

centimeters classifies it among the radius cubits. It is used in the temple of Luxor to measure the width of the sanctuary of the barque and the room of offerings.⁵⁹

The subdivision of its sides is similar to that of the preceding cubit, although it presents a variation. We shall call the four sides a , b , c , and d so that, as read from top to bottom in plate 64, we can see the details as follows:

(a) Division into 7 palms. The first palm on the left is in turn divided by 2, 4, 8, and 16. The first palm on the right is successively divided by 3 and by 6.

(b) The next side is divided into 4 and 5 and their multiples, and carries the dedication.

(c) The third side is divided into 6. The first division on the left is again subdivided by 3, and the first on the right by 2, 4, 8, and 16.

(d) The fourth side is bare.

It should be noted that the law of crossing and inversion was observed here: the division of the palms by 3 is on the right, whereas the division of the sixths by 3 is on the left.

The essential characteristic of this cubit is not only that of bringing together on two sides the relationships 7 to 4 and 7 to 5 relative to the square roots of 3 (hexagonal function) and of 2 (function of the square), but also of giving the measurement correcting these original relationships through the unequal divisions on the side divided into palms.

First, on the left, two smaller palms allow the construction of a square whose half-diagonal exactly corresponds to one-fifth of the total length of the cubit (fig. 263, sides a and b).

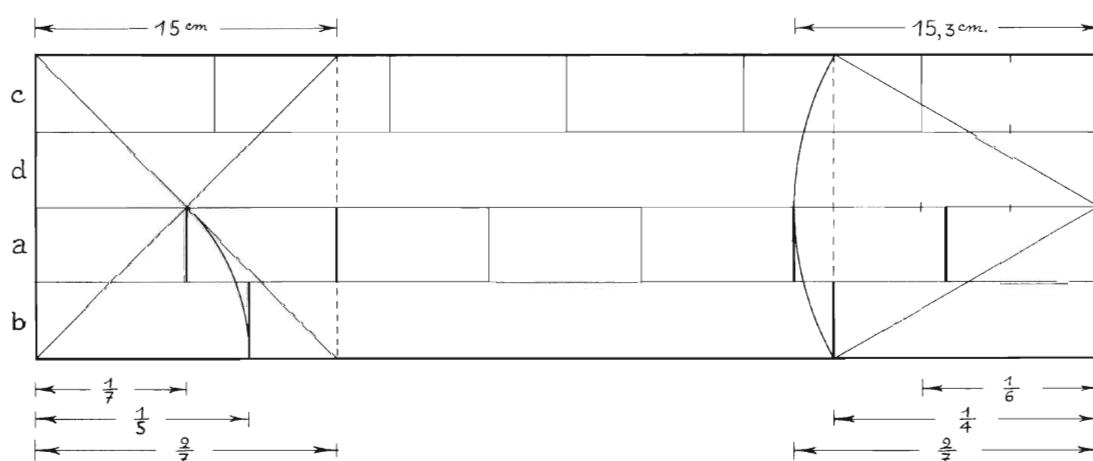


Fig. 263. Diagram of the development of the benediction cubit of the temple of Dendera

Each side is 2 digits in height, or 1 half-palm, so that developed, the cubit measures 2 palms in width for 7 in length. *Left*, on side a , two shorter palms at 7.5 centimeters each. Thus $7.5 \text{ centimeters} \times \sqrt{2} = 10.60 \text{ centimeters}$, which is $1/5$ of 53 centimeters noted in b . *Right*, on side a , there are two larger palms that measure 15.3 centimeters. Thus $15.3 \text{ centimeters} \times \sqrt{3}/2 = 13.25 \text{ centimeters}$, exactly $1/4$ of the total length marked on surface b . Side c is divided in sixths, each of which, multiplied by $\sqrt{3}$, corresponds to two larger palms, $8.833\dots \text{ centimeters} \times \sqrt{3} = 15.3 \text{ centimeters}$.

⁵⁹ Cf. vol. 1, fig. 113.

Second, on the right, two larger palms allow a similar play for the square root of 3. If we multiply the length of these two palms by half of the square root of 3, we get exactly one-fourth of the total cubit (fig. 263, *a* and *b*).

Third, the three central palms give the average division of the cubit into exactly seven.

Finally, let us recall that the benediction cubit E and cubit D measure 53 centimeters and 53.1 centimeters, respectively, and they are two of a group of three cubits found at the temple of Hathor at Dendera. The third cubit measures 53.5 centimeters.

If cubits E or D are the base of a 1 to 7 right triangle, the third cubit of 53.5 centimeters will be its hypotenuse, exactly as the larger palm of cubit E is the hypotenuse of this same triangle with the mean palm as base, which becomes in its turn the hypotenuse for the shortest palm.⁶⁰

These inequalities observed on the full lengths of the cubits and in their subdivisions confirm the conscious use of *shorter* and *longer* measures that justify their irrational geometric ratios, while at the same time preserving the simple ratios of the natural divisions imposed by the harmonic division following the genesis starting with 1 to 1 and 1 to 3.⁶¹

The South Wall of the Temple of Luxor

The total length of the south wall of the temple with the cornices is 37.05 meters, or 20 fathoms of 1.852... meters at 45°. The south wall is located at the level of the royal headband, which measures a cubit of 28 digits on a man. It therefore evokes multiples of 7 as a “royal cubit,” and, moreover, it can be divided into two equal or unequal parts in the likeness of the cubits. Now, the temple summarizes the entire group of these functions: the *geometric axis* divides the length of the south wall with the cornice into two equal parts, each measuring 10 mean fathoms and coinciding with thirty-five B cubits from plate 64.⁶² Next, the *axis of measures* divides the length of the south wall without the cornice into two unequal parts: 18.55 meters to the east, which is thirty-five E cubits, and 17.9 meters to the west, which is 100/30 of the black cubit carved on the pedestal of the black colossus located at the knees.

The *ankh* sculpted on the dedication of the stylobate of the covered temple divides the length of the south wall *inversely* by giving the greatest width to the west side, 18.75 meters or thirty-five royal cubits (C in plate 64).

The Temple of Luxor

The side of each square of the grid pattern on which the plan of the temple is projected is 10 fathoms. The figure on the left summarizes the functions of the 3, 4, 5 right triangle that determines the pivot on the angle 1 to 7, thus geometrically correcting the square root of 49 into the square root of 50.⁶³

The growth of the temple in length represents, for the different phases and considering only the exterior mass of the building, the values, in fathoms, of 40, 70, 100, and 140, numbers that recall the function-bases of the cubits relative to the approximate values and their inverses for the square roots of 3 and 2.

⁶⁰ Cf. ibid., fig. 117.

⁶¹ Cf. ibid., fig. 118.

⁶² A coincidence, if we recall that cubit B is itself derived from the fathom. It must be exactly 10.026 fathoms to equal the corresponding cubits.

⁶³ Cf. vol. 1, fig. 145.

The total length of the temple of Luxor is 258 meters, or 140 fathoms at 0° latitude. If we consider this length as representing a cubit of 28 digits, the temple summarizes the functions we have just studied in the cubits themselves. This comparison is not an assumption on our part because the measurements of the temple prove it. Moreover, the standing colossus in front of the west wing of the pylon is 9.215 meters in height from the soles of the feet to the top of the white crown, that is, his height is contained twenty-eight times in the length of the temple, for which he plays the digit in relation to the temple as the cubit. Now the length of 9.215 meters actually represents 5 fathoms at 0° , which becomes the unit of measure of the temple.

Just like the developed harmonic decomposition with the starting point of 1 to 3, the temple summarizes the following essential functions: the division by 7 that connects the royal cubit to geodetic functions, and the division by 19, which links it to the human canon.⁶⁴

Technical Demonstration of the Table of $2/n$ by Means of the Cubit

The D and E cubits immediately suggest the relationship between the different divisions of two consecutive sides. Let us recall that the divisions of 4 and 7 define $1/28$. This is quite obviously the principle of the vernier. Now, in applying a vernier of this type, it is easy to determine the reduction of $2/n$ into fractions with a numerator of 1.

For example, to transform $2/3$ into its unit fractions, we look for the arithmetic mean term between 1 and 3, which provides the first denominator of 2. Let us slide the digit divided in half under that divided in thirds by taking two cubits carved inversely to each other: $2/3$ is then $1/2$ plus a fraction that is equal to $1/(2 \times 3)$, or $1/6$.

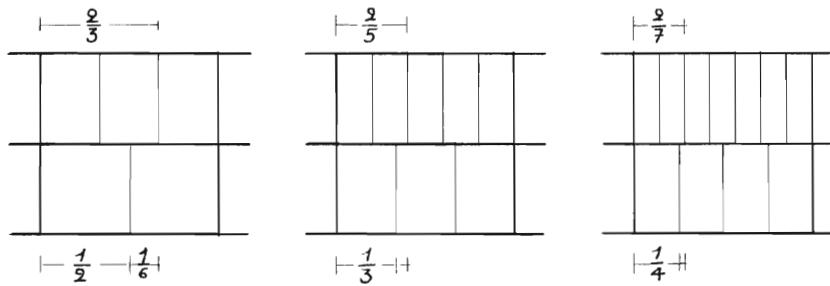


Fig 264. Principle of the vernier applied to the cubits

To find $2/5$ we use $(5+1)/2$ as the denominator, that is, 3, and by sliding the digit divided into 3 under the one divided into 5, we can read directly that

$$\frac{2}{5} = \frac{1}{3} + \frac{1}{3 \times 5} = \frac{1}{3} + \frac{1}{15}.$$

Finally, to find $2/7$ we proceed in exactly the same way; the denominator is 4 and the result is

$$\frac{2}{7} = \frac{1}{4} + \frac{1}{4 \times 7} = \frac{1}{4} + \frac{1}{28}.$$

With these three models, we can then decompose all the multiples of 3, 5, and 7.

⁶⁴ Cf. plate 88.

Furthermore, in reading the smallest divisions marked on the digits, all denominators can obviously be obtained up to $1/(15 \times 16)$, or $1/240$ of a digit, that is, $1/6720$ of the total cubit, which defines hundredths of millimeters. We get a glimpse here of a disconcertingly simple and practical knowledge that can be applied not only to calculation but also to all techniques.

THE GRID AND ARCHITECTURE

PLATES 65 AND 66 • A NAOS (TABERNACLE) IN A GRID DRAWN ON PAPYRUS

These plates reproduce a drawing executed on papyrus, probably in the Eighteenth Dynasty. According to the description of F. Petrie, who acquired it,⁶⁵ this papyrus was found at Gurob, rolled up and torn in the middle. Putting the pieces together allows us to reconstruct it almost to the original dimensions, which he estimates to be approximately 60 English inches long (1.524 m) and 21.7 inches wide (0.55118 m).

This papyrus is divided into squares by red lines; the drawing of the plan itself is in black. It depicts the facade and the profile of a wooden naos “suspended in a canopy.” It should be noted that the cornice of the naos seen from the front should be hidden by the capitals of the columns of the canopy that are in front and that, nevertheless, this cornice is drawn in very fine black lines over the drawing in heavy black lines of the columns. There is formal intent here to mark all the essential points of the naos without omitting anything. The naos is placed on a pedestal that measures one square in height. Above the door of the facade of this naos is a disk flanked by two uraei that marks the median axis. Similar disks are found on the cornice of the naos and on that of the canopy. The extreme right side of this cornice is subdivided into four parts, one of which is smaller than the others, by the four palm leaves that generally ornament this architectural part of the monument.

In the drawing of the side view, one can clearly distinguish the naos with its cornice above and its roof curved to the front, encircled by the canopy, the roof of which also curves down, its forward extremity supported by the cornice and two small columns. These small columns have papyrus flowers for capitals topped by the shape of the space defined between two of these flowers (fig. 265).

These complementary shapes are significant in pharaonic thinking, which intentionally affirms by means of negation in the same way that it evokes abstraction (spirit) through tangible forms.

A uraeus rises up the cornice of the canopy, surmounted by the solar disk. The form of the naos of Tutankhamun can be found in this drawing.⁶⁶ Four braided ropes are presumed to have held the naos in its canopy. Here are the numbers of squares that can be read on the *canevas* that associates the front and the side.

Interior naos:

height without base, with cornices	= 16 squares
width of facade at base	= 8 squares
width of facade at level of the torus	= 7 squares
length of the naos at the base, side view	= 11 squares
length of naos between tori under the cornice	= 10 squares.

⁶⁵ Cf. Sir Flinders Petrie, *Ancient Egypt* (London: Macmillan, 1932), p. 24.

⁶⁶ Cf. Carter, *The Tomb of Tut-ankh-Amen*, vol. 1, plates 68 and 39.

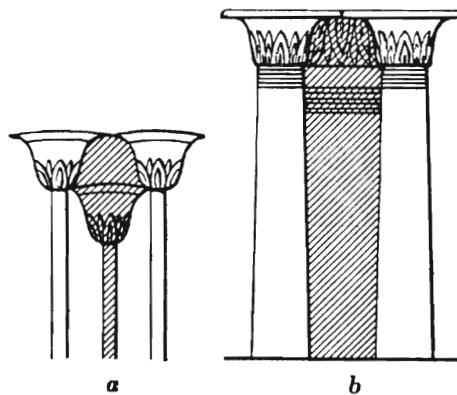


Fig. 265. Shapes defined by empty space

(a) Small columns of the naos; (b) *sed* festival column from the room of Tuthmosis III at Karnak, defined by the two columns with capitals in front of a blooming papyrus, given here as an example.

This group of numbers allows us to verify that the facade of the naos is inscribed in a rectangle of 8 to 16, or 1 to 2.

The projection in plan of the proportions at the base and indicated by the number of squares constitutes a rectangle eleven squares long and eight wide (fig. 266). The 8 to 11 rectangle defines the pentagon; 8 is the side of the pentagon and 11 is the diameter of the inscribed circle. The circumscribing circle defines the position of the small columns of the canopy that do not correspond, in the side view, to an exact number of squares, but to thirteen squares plus a fraction on each side.

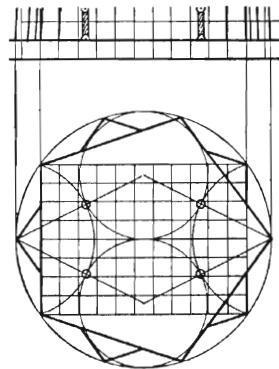


Fig. 266. Plan of the naos drawn on papyrus

Projection in plan of the length of eleven squares and the width of eight squares of the interior naos, which defines the governing rectangle of the pentagon.

The ratio of the side view is 11 to 16, in which we find another essential function of the pentagon.⁶⁷ The interior naos summarizes the proportions of the initial 1 to 2 rectangle, as well as the ϕ and pentagonal functions.

⁶⁷ Cf. vol. 1, figs. 154 to 157.

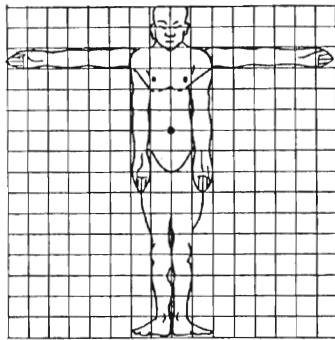


Fig. 267. Human canon by Hokusai

Drawing taken from one of Hokusai's sketchbooks

The construction of the pentagon is governed by the function ϕ evoked here by the relationship 10 to 16. This original ratio for the value of ϕ is found in a drawing of Hokusai (fig. 267) in which the height of man "without skullcap" is equal to sixteen squares and is divided by ϕ by the position of the navel at the tenth square.

Canopy:

height without base, with cornice	= 18 squares
height with curved roof	= 19 squares
height under the head of the uraeus	= 20 squares
height of the solar disk	= 21 squares
total height with pedestal and disk	= 22 squares
width of facade at the level of the abaci	= 8 squares
width of facade at the upper level of the cornice	= 9 squares.

The principal proportions evoked by these numbers are the following: the facade of the canopy is inscribed in the 9 to 18 (or 1 to 2) rectangle, and if the curvature of the roof is considered as equivalent to the human skullcap, we again find here the eighteenth line defining the fixed line of the upper part of the cornice. The nineteenth line is the upper limit of the curvature, as we have observed in the human *canevas*.

Let us recall finally that in China, the Royal Man has the value of 8 or 9. Here we find an analogous evocation through the two unequal columns that mark the two heights of the two nesting naoi, 16 and 18, corresponding in the human canon to the two fixed lines, those of the shoulders and the forehead. This naos appears to have been conceived on the human canon because it summarizes the essential harmonic functions and numbers of the *canevas*.

The function ϕ is confirmed by several details of the drawing. The width of the sky is eight squares, its height thirteen in profile, and the height of the disk is twenty-one, giving the sequence 8, 13, 21 of the F series. The complementary R series, 7, 11, 18, ... is found here as well, as it is in the human canon.

It is again necessary to note that the total width of the drawn squares is 14 and the height is 22; thus, each drawing is inscribed in a rectangle with the proportion of 22 to 14. The two drawings being originally put end to end, the papyrus must have been forty-four squares long, so that

the overall proportion of the grid pattern was 44 to 14, in which we see 22 to 7, or π derived from the F series.⁶⁸



A word must be added with regard to the dimensions of this papyrus, which justly intrigued Flinders Petrie, because they can only be explained by means of the fathom and the *remen* digit.

As the drawing shows, the papyrus is badly damaged, and to establish the dimensions of the square unit it was necessary to choose from among the best pieces. According to Petrie, the dimension that results from the average of the best squares is 1.3614 English inches, with certain squares reaching 1.373 inches maximum.⁶⁹ Actually, this metrical unit does not derive from the commonly known royal cubit, but from 30 *remen* digits divided by 16, or in other words, the width of the papyrus (0.555 meter) is equal to 30/100 fathom and represents the value of sixteen average squares.

The height of the interior naos is sixteen squares and thus gives the metric unit of 30 *remen* digits. The accepted length of the papyrus of forty-four squares, each equaling 3.4687 centimeters, is 152.6 centimeters, conforming to the restoration indicated and to the value of the square unit established on the basis of the *remen* digit.

AN APPLICATION OF THE CANEVAS TO THE ARCHITECTURE OF THE TEMPLE OF LUXOR

PLATE 67 • THE GRID AND THE MEASUREMENTS OF THE PYLON OF LUXOR

The whole pylon consists of two towers (or wings) separated by a door. An interior staircase gave access to the upper platform; it started from the east side of the east wing and ascended to the level of the lintel of the central door, the ceiling of which formed a landing. From there, a second staircase crossed the west wing and ended at its upper part. Except for the blocks that connect one side of the exterior walls of the pylon to the other at this double staircase, the two wings are hollow, which poses a very interesting technical problem.

In its present state, the west wing is completely exposed and still has a large part of its crown, which has allowed us, thanks to the numerous triangulations and measurements verified on each accessible part, to be sure of the precision of the dimensions (allowing for the movements caused by water infiltration). The east wing is partly buried in the ground, and its middle part has been severely dislocated, which makes it difficult to give the exact slope and dimensions. Nevertheless, by extending the measured and triangulated slope on its east face, it is possible to restore the total length of the monument with an estimated error of about 10 centimeters in either direction.⁷⁰ The essential dimensions resulting from this are as follows:

⁶⁸ Cf. chapter 8.

⁶⁹ 1.3614 English inches = 3.458 cm and 1.373 English inches = 3.4874 cm.

70 Length between restored tori under cornice	= 22.94 m
batter calculated on east face	= 3.35 m
distance between door and vertical corner of west torus	= 0.87 m
Total	= 27.16 m.

With an excess of 10 cm, there remains 27.06 m.

- The length of the mass of the west wing of the pylon equals 26.60 meters.
- The width of the door with its posts equals 10 meters.
- The restored length of the east wing at its base equals 27.06 meters, ± 10 centimeters.
- The total length of the pylon equals 63.66 meters, ± 10 centimeters.
- The length of the west wing at its base from the doorpost up to, but not including, the torus is 26.20 meters, or 50 royal cubits.
- The length of the west wing between the tori at its upper part, under the torus of the cornice, is 22.34 meters, or 12 northern fathoms on the north facade, and 22.11 meters or 12 southern fathoms on its south side.⁷¹ The average length thus represents 12 meridian fathoms at 45° .
- The height of the west wing from the base to the top of the cornice is exactly 25 meters at the northeast corner and corresponds to 13.5 mean fathoms at 45° .

In these few measurements the pylon summarizes the fathom, the meter (which derives from it and is confirmed by the width of 10 meters for the central door), and the royal cubit. Finally, the total length of the two wings and the door is 63.66 meters, corresponding to 120 radius cubits (cubit of 0.5305 meter), which we have already seen, along with the fathoms they define, in the room of Amun's barque.⁷²

This pylon is the base, the foundation of the Man of the Temple, as its measurements verify. Through its 12 fathoms between tori under the cornice it is connected to room XII (the eye), and through the ratio between the fathoms and the radius cubits, the function of $\pi/3$, it is connected to the room of Amun's barque (the mouth, the Verb). Finally, it proves the application of the different cubits to various lengths so that the nuances we have read on the cubits are no longer questionable.

If the height of the cornice of the pylon's west wing is taken as representing one unit, the height of the pylon without the cornice is equal to eighteen, and its total height equals nineteen. Thus, the cornice is comparable to the crown of the skull of Man, which is confirmed by the representation of the pylon on the south partition of the court of Ramesses; the ascent of the princes toward the temple is carved in such a way that the cornice of the pylon corresponds to the crown of the skull of the royal princes (fig. 268).

The dimensions, in numbers of squares, are thus: a total height of nineteen for a height without the cornice of eighteen, and a length at the base without torus equal to twenty, for an upper length between the tori equal to seventeen.⁷³ These are the fundamental numbers of the "human canon," applied to the monument. The metrical relation between the height of 25 meters and the length at the base of 26.18 meters (or 50 royal cycle cubits) imposes the functional correction for the approximating ratio of 19 to 20, which must be 19.0983 to 20. Thus, the height represents a radius measured in meters, and the length represents the arc of 60° defined by this radius and measured in royal cycle cubits.

⁷¹ We call a "northern fathom" the fathom that measures the arc of meridian at 90° of latitude, and a "southern fathom" that which measures the arc of meridian at 0° , the latitude of the equator.

⁷² The radius of the earth, for a sphere with the same meridian, is 6,367,654 m, compared with 63.66 m (± 10 cm) for the length of the base of the pylon.

⁷³ The ratio between the fathom and seventeen squares suggests the ratio 17/12 found in the *canevas* for the root of 2.

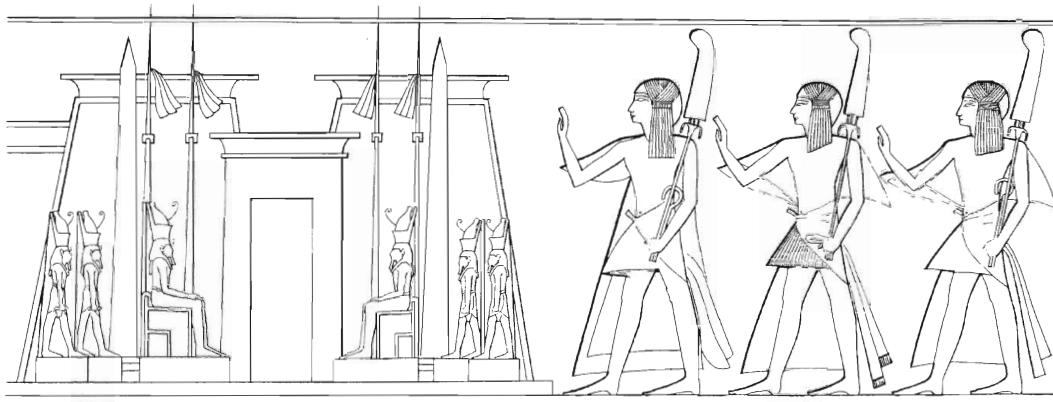


Fig. 268. Ascent of the princes toward the temple Luxor, court of Ramesses

We have omitted the joints of the stones in this illustration.

While taking the dimensions of each stone of the covered temple of Luxor, our attention was attracted by certain blocks inserted into the walls. These blocks were perfectly polished and cut according to a certain characteristic slope that immediately recalled the batter of the pylon. The side cut at an angle was set into the thickness of the wall, but in following the joint we were able to measure the angle with respect to the true horizontal with the aid of a level. Moreover, with vertical strings stretched on the walls we were able to verify the angular reading by measuring and calculating the batter.

Now, many of these sloped stones were used elsewhere before being used in the covered temple of Luxor, particularly in the doors or in certain partitions on which the idea of "passage" is evoked.

Their most characteristic use is found in the wall that separates the room of Amun's barque from the room of the "coronation" (rooms VI and II). This whole wall has only three blocks "in transparency," that is, blocks that traverse the full thickness of the wall and thus connect the two rooms. Two of these blocks are cut following a carefully measured angle and are found at a distance that was also very precisely measured; finally, by extending the angled joints far enough we could simply and directly verify the angles and the measurements defined by these stones.

It was then that we undertook the task of determining the dimensions and the batter of the pylon of Luxor in order to compare them with those of the reused stones. Different batters were taken on each side at different places, taking into account the play of the blocks at certain points that have more or less settled because of the construction of the "hollow" pylon.

As the plan (plate 67) makes clear, the west face of the west wing is necessarily "veiled," because the edge of its lower plane is not parallel to the edge of its upper plane. The extreme sizes of the angles at the junction of the vertical edges of the north and south faces are perceived to be equal to the batters of these facades.

The north facade has an average batter of $83^{\circ}17'$ to $83^{\circ}20'$ ($\cot 2/17$); the posts of the north door are at a batter of $83^{\circ}33'$; the south facade has an average batter of $81^{\circ}52'$ ($\cot 1/7$).

The angular measurements indicated by the slanted stones traversing the wall that separates rooms II and VI are as follows:

Southern block:

surface of room II $83^{\circ}33'$ to $83^{\circ}40'$
surface of room VI $83^{\circ}33'$ to $83^{\circ}43'$

Northern block:

surface of room II $83^{\circ}15'$ }
surface of room VI $83^{\circ}16'$ } $\pm 5'$

Comparatively, the reused blocks indeed give the two essential batters of the north face of the pylon, the mass of the west wing, and the slope of the door. The batter of the south side of the pylon corresponds to the ratio of 1 to 7, which places it in relation to the angle of return of Amun that is "reflected" beginning at this wall.⁷⁴

The angular analogy between the two reused stones and the pylon gives a basis for assuming that these stones belonged to an analogous pylon, before Amenhotep III, and their placement in the walls facing each other at a definite distance apart suggests extending the line of their batters. In room II the extension of the batter indicated by these two blocks up to the baseline that passes under the soles of the feet of the figures in the first register defines a length that is, on a one-to-ten scale, that of the Ramesside pylon. We can therefore see, on the wall of room II, the projection on the scale of one to ten of the pylon constructed much later by Ramesses. Its base is at the level of the soles of the feet of the figures, since the pylon itself is located at the soles of the feet of the Man represented by the temple.

It is in fact in room II that the purified, crowned king performed the "royal ascent toward the temple" by passing through the door that leads to the sanctuary.⁷⁵

Seth is carved on the northern sloped stone, and Seth is "master of the South." On the southern sloped stone we find the falcon crowned with the solar disk,⁷⁶ Horus, "master of the North." Their positions are reversed on this wall on which the *neters*, who are said "to come from the North," are coming from the South. If we project these two stones onto the pylon of Ramesses, considering the orientation indicated in this place by the crowns of the figures represented on the central door, then Seth, master of the white crown of the South, will take his place at the east, and Horus, master of the red crown of the North, will take his place at the west, which arrangement is correct with regard to their respective significance.

The stone cut on a slope, corresponding to the west side of the pylon—Horus—gives the exact angle of the batter of the north and the west faces that are joined at this place by the torus.

The stone on the left side—Seth—corresponding to the eastern end of the pylon, has a slope that indeed corresponds to the north facade, but is not exactly that of the east facade. Nevertheless, by extending these indicated slopes to the horizontal at ground level and then measuring on the wall of room II, we find the exact length of the pylon in the proportion of one to ten.

Thus we are dealing once more with this typically pharaonic method of simultaneously presenting the various aspects of an object with a single image, as we have seen in the figure of the gestating Mut, the vulture, one of whose wings is shown from the inside and the other from the outside, the body being in profile and the tail being seen in plan.

⁷⁴ Cf. plate 86. The repository of Amun's barque leans against the south facade of the west wing of the pylon.

⁷⁵ The word for door is *art*, and *arty* signifies "jaw." These rooms II and VI are at the place of the jaw, *arty*. Cf. plate 38 and chapter 31, fig. 226, and chapter 14, fig. 167, no. 17.

⁷⁶ The two feathers that define him as Menty are removed from the reused block.

In transparency, the north stone links Seth in room II with the animals of the desert represented in room VI that are being offered in sacrifice by the king who is crowned with the white crown and holds the white club in his hand. Now, is not Seth, in the ritual, assimilated to the animals of the desert? The southern stone, through its upper joint, removes the plumes of Mentu and shows only Horus and his solar disk. In transparency the disk is projected into the naos of the sacred barque represented in room VI (fig. 269).

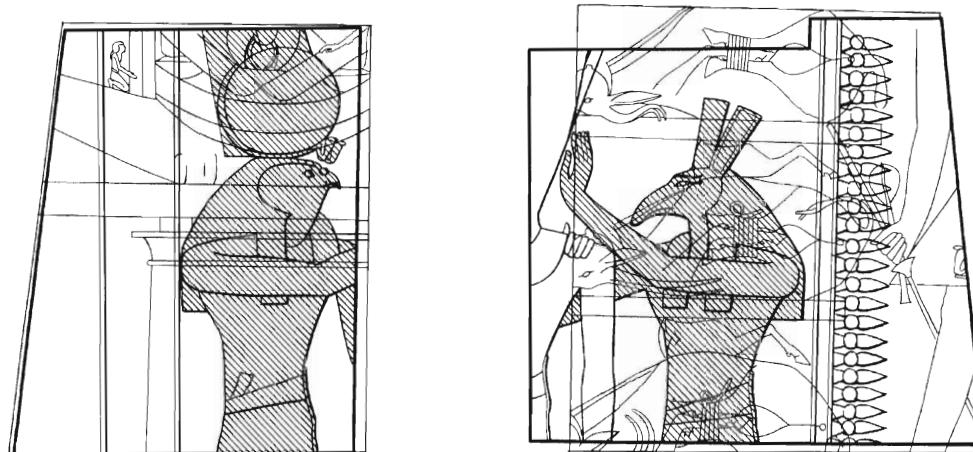


Fig. 269. The two reused stones that link room II (hachured) and VI (in white)

On the pylon of Ramesses, the projection of these two stones from room II, enlarged ten times, reveals the metrical relationship between the *canevas* drawn on the pylon and that of the figures in room II. The unit square of the west wing of the pylon on its north face corresponds to 25 meters divided by 19, or 1.315 meters, the measurement equal to the height under the headband of the figures in room II.⁷⁷ The projection of the pylon onto the wall of room II places the double baptism with the ankh exactly in the door.⁷⁸

The pylon includes the principal door that leads to the interior of the temple. Through the measures, the master builder inscribed the proportions of the human body there; he adapted the measurements and the batters of the walls to the directions of the orientations; meters, cubits, and fathoms are inscribed there, and through the figures on the walls of rooms II and VI, he related the front door of the temple to the gesture of purification, the preparation required in order to have access to the Holy of Holies.

It is the character of pharaonic thinking always to summarize in a single, symbolic image all the aspects of an entire subject. North creates south. South creates north. East creates west. West creates east.

Thus we understand nature, but we forget that it is not a question of a simple complementation or polarization of notions, but of an activity: a thing actually creates its own opposite, so it is the white crown that creates the red crown and vice versa. In this, there is a lesson for how to read natural functions that our scholarly thought, our mentalized thinking, no longer respects.

⁷⁷ Cf. vol. 1, fig. 140, and analysis of the measurements.

⁷⁸ Cf. plate 99.

The spirit of synthesis predominates in every case. This is what makes our task so difficult and often so thankless, for in describing these things we must of necessity repeat the same instructions, the same numbers, the same gestures, which are actually repeated but with variations that we must learn how to read.

CONCLUSION

The importance of the *canevas*, which I call the “master builder’s grid,” is only understood through a technical and geometric way of thinking. Scholarly thinking, that is, working with abstract and imaginary elements, must be distinguished from this directive that is offered by the *canevas*. The *canevas* is a true architecture of number that allows us to read numbers in both planes and volumes. We look at this grid as a plane, but the Ancients conceived it in space as well, which they demonstrate through the principle of the *s’km* in which a length is conceived simultaneously as a band and as a series of prisms, square in section. Indeed, if it is a question of a surface, this length is itself a band-surface, and if it is a matter of a volume, it must also be a volume. The unit of reference of this measure always has the value of a square unit for the surface, or a cubic unit for a volume.

If we remember that for the pharaonic sage nothing in the created universe is absolute, we can understand that all of his logic is based on alternation, the constant balancing of the poles of every phenomenon. In mathematics this always leads to a search for the closest possible degree of precision located between a plus and a minus. Rather than starting from an extreme balancing, which results in an absurd consequence, this thinker knows that by reducing the amplitude little by little he can attain all the precision desired; he also knows that the absolute is not the middle between the two extremes, that it cannot be situated between them. Its name is the “*Neter* of *neters*,” what we call the One God.

This principle brings an extreme suppleness into the rigid application of the canon-base. One needn’t bother making a grid of rectangular units in place of square units. One obeys the numbers, not the form. In order to clarify these things we have presented the tomb of Ukhhotep at Meir, a tomb exceptionally rich in applications of the *canevas*, or more accurately, consecrated to the use of the *canevas*. We find there the data of the human canon in the three positions of standing, seated, and kneeling, where the seated man is the “geometric mean term” between the extremes.

We also see there the net for the “bird hunt” giving a harmonic decomposition according to the golden number, and next to it the musicians and singers that express in music the law of harmony already expressed by numbers.

This tomb shows us also the suppleness of the applied symbolism when we look for the exaggerations that accent a gesture or a vital state, reaching the point of a characterizing deformation but never becoming grotesque. Thus, the skeletal man who leads the bulls, and who is followed by a heavyset man, expresses the mineral character (the bones) and at the same time the “residual part,” which, after death, will be the magnet for reincarnation. The gesture of the bent knee of Ukhhotep entails a shift in the grid, which is then adapted to its feminine principle, Thothotep. The genesis from one state to another is shown in “animated image,” a representation that can be either simultaneous or kinetic. To read this symbolism requires close attention because a vast knowledge is developed in very few images, the particular fact evoking a universal function.

The principle of the grid is not exclusively pharaonic; it is found in the Mayan civilization as well as in China and Japan, that is, in each epoch in which a wiser humanity has refused to allow itself to be dragged toward an intellectualized way of thinking—something Babylon, for example, was not able to resist. Our West, distant inheritor of this deviation, intentionally treats as primitive

(in a pejorative sense) peoples who have not followed this "scholarly" path. We cannot judge otherwise because our mentality, formed by this directive, has separated us from nature by replacing its teaching with the imagination to the extent that today we must conceive of adapting the human organism to the requirements of machines. But Nature is and remains the stronger power; it is she that in the end will dominate. Were a single cog in the wheels of our civilization to miss, the whole thing would collapse.

The power that dominates in nature is, in Apet of the South, symbolized by the *kamutef*. It is said, "From nothing God created the world." "God," an abstraction, "nothing," a negation; this is making much out of *absences* in order to create the world. We purposefully content ourselves with abstract words and this tempts us to attribute to them a concrete meaning. The Ancients are symbolists and draw upon natural and living facts in order to evoke the function of the inexpressible. The *kamutef* is an example of this. The phallus is placed at the location of the navel, the maternal attachment. A natural birth is denied, but receptive femininity is replaced by active, seminal masculinity. This is the Adamic hermaphrodite, the first living being who must necessarily contain in itself two natures: yes and no, good and bad, high and low. . . . The archangel in falling brings a ray of the Light, of the fire, of the divine—that is, supernatural—power. Now, our *kamutef* is represented as Min. Min is the effect of Ptah, the celestial power fallen, that is, coagulated, in earth. This Ptah (Vulcan or Hephaestus) is fixed in earth. He can no longer move by himself (this is symbolized by his bound legs), but he becomes the bow that launches the arrows, this activating force that provokes the separation of the waters of the earth from the waters above, different from the waters below; and this *separative action* will be called *the expanse*, which has a double nature, Shu-Tefnut. With what appears to be above his raised left arm, improperly called the "whip," the *kamutef* becomes this space, this separative force, still necessarily androgynous; the *nekhakha* scepter, which floats above his hand held up toward the sky, is the staff; and I mean precisely *the staff*, as in the wand of Wotan, the rod of Moses, the staff of the pilgrim, and the royal scepters. From the end of this staff flows a triple stream, in the form of droplets, which constitutes the waters above, now having a triple nature in two. We shall speak later of this third principle. Each new activity of the genesis assumes a new name in myth along with a new figurative gesture, which has been wrongly interpreted as a new person whose significance is not understood. It is necessary to incorporate into a real order each principle of the unique fact that is the genesis.

It is in the disproportions of the *kamutef*, as in those of Thoth at Karnak, that the meaning of these figures, explained by the numbers, is revealed. It is never necessary to look for an aesthetic significance in pharaonic figures: they are a writing. The above-mentioned tableau from the tomb of Ramesses IX is another example; it teaches the evolution of the straight line (the meter) into a curve that defines the royal cubit, it is the passage from the square to the disk, that is, the internal function that provokes the curved path of movement. This teaching is connected with that of the *kamutef*; it is the going forth of Ra from the terrestrial mountain toward the light; it is the Horian reappearance of Osiris that creates vital and cyclic movement.

It is always by virtue of the *canevas* that these numbers become tangible and speak.

Now, all these demonstrations—Ukhotep at Meir, the Maya, Thoth of Karnak, the tomb of Ramesses IX—are again applied in Apet of the South, the temple of Luxor. The naos of the papyrus confirms the geometric play of the naos of Luxor. The Temple is a synthesis of everything these *canevas* can teach us through the principle of unequal division, through the selection of different cubits and their adaptation to the orientations, and, finally, through the projection of the pylon onto the wall of the *sanctuary* of the barque. The two profiles of Seth and Horus, in complementing each other at the rising and at the setting, evoke one another: the white (*hdj*) through

the red (*dsbr*), the nocturnal moon through the diurnal sun. Their meaning is identical to the teaching of the tomb at Meir.

If on the one hand, it is life that links all functions to each other, on the other, it is the grid of the master builder that links the geometric and numerical expressions, and it is Man who is the mean term between numbers and life through his measurement of the world transcribed by the cubits.

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Chapter 38

TRANSFORMATIONS AND MUTATIONS

Plates 68-74

Movement is the symbol that carries the gesture, but since movement (the mechanical movement of the arm, for example) can only affect the corporeal, and the question here concerns a “vital movement,” the Ancients could only evoke a “genesis” by the symbol of movement. This genesis is considered, then, as a movement of becoming . . .

(Chapter 4)

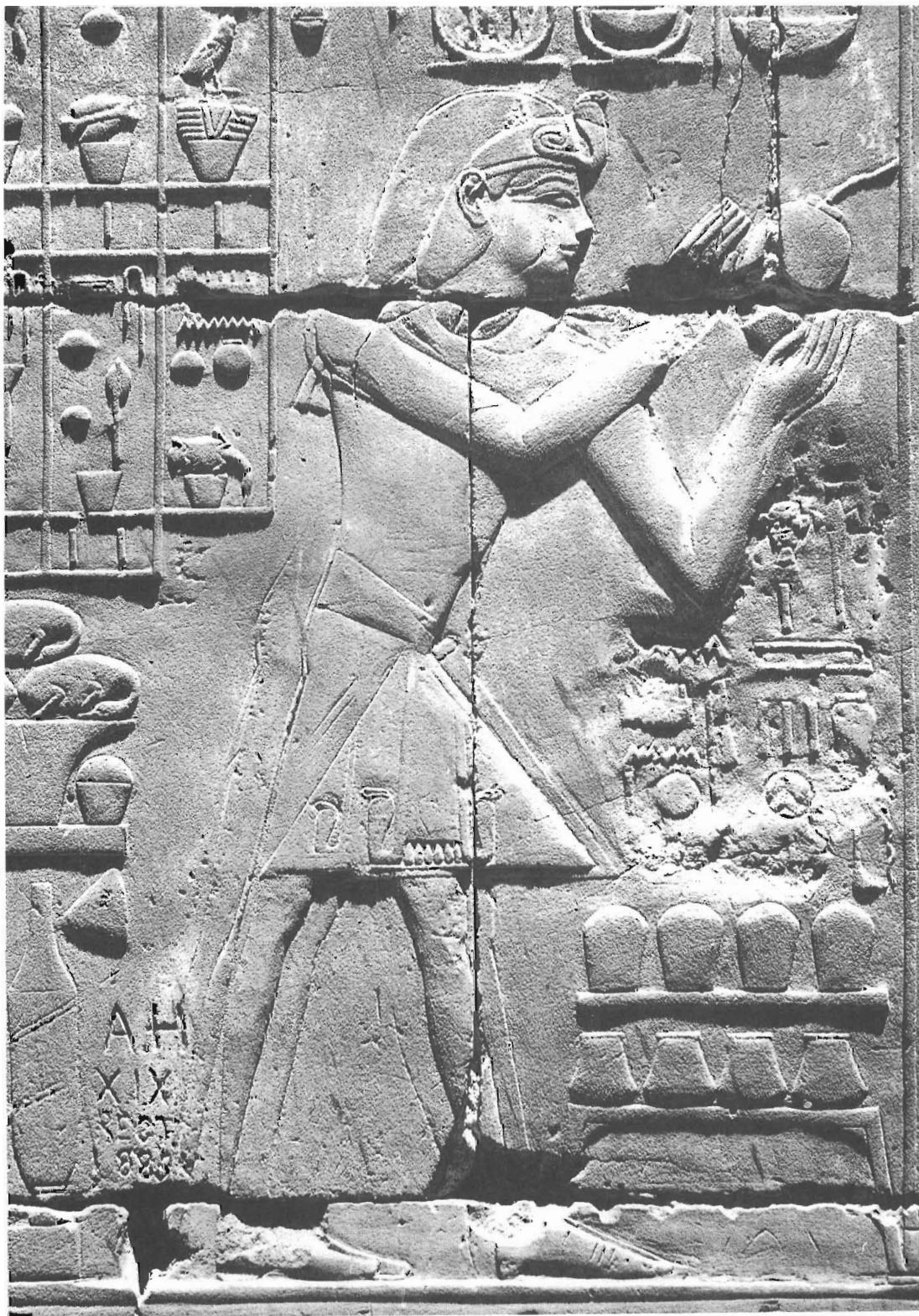


PLATE 68

Movement

Our objective, rational, Euclidean thought holds that two straight lines meeting at a point make an angle. But what intrigues the Ancient Egyptian is the point of intersection and the two straight lines. He sees an articulation, therefore a cause of the dividing into two.

(Chapter 7)

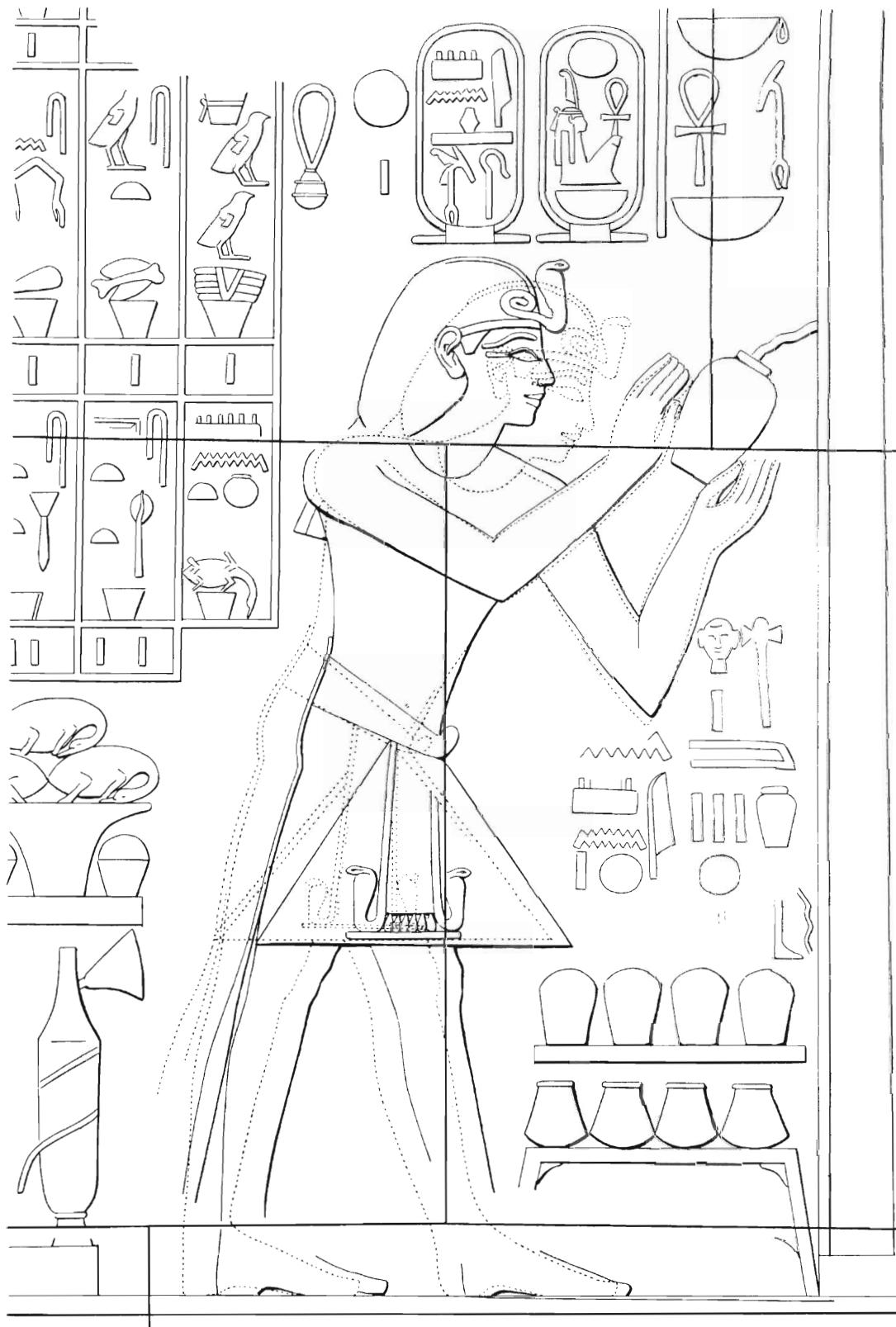


PLATE 69
Dividing in Two

*The living gesture speaks and says what can never
be transcribed into words in an equally vital way.*

(Chapter 15)



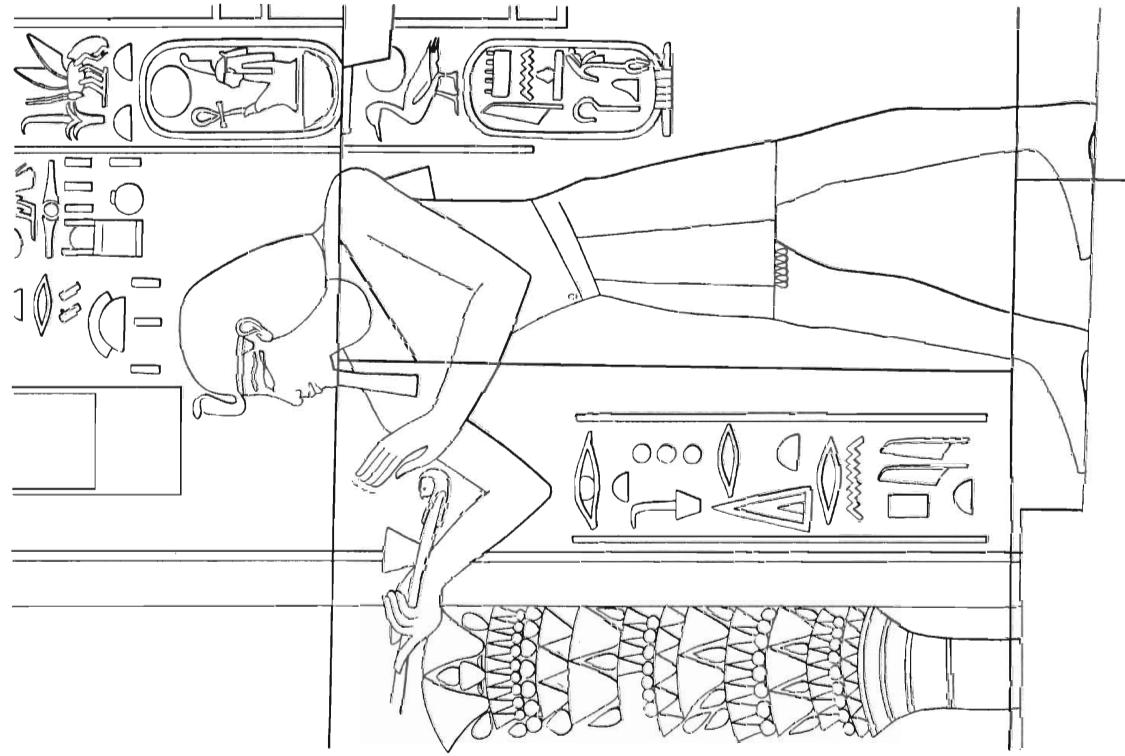
PLATE 70
Transformation of the Elements

It is necessary to see the canon thus as a principle of proportions for constructing a figure. This allows one to take note of all the variations and symbolic deformations in the figure in order to understand the idea it was intended to express.

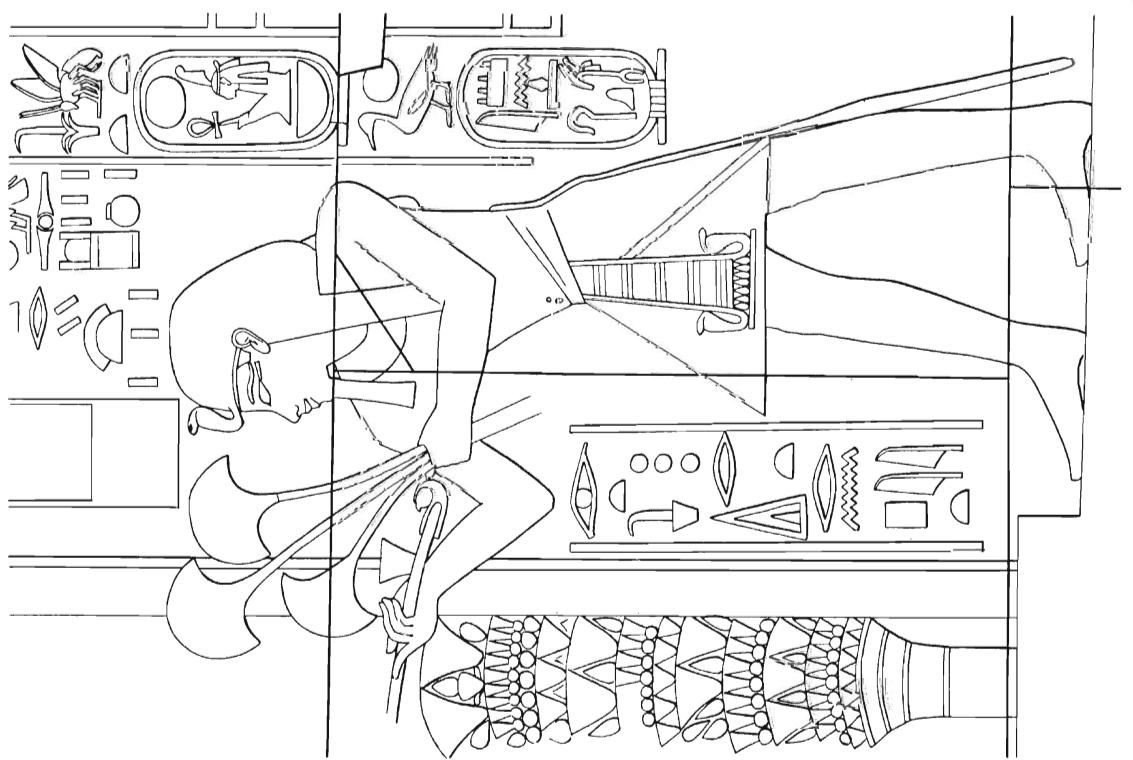
(Chapter 11)

PLATE 71
Transformation of the Elements

B



A



The royal apron is a magnificent illustration that helps us to understand what our word symbol, so imperfect, wishes to express. This is not in any way related to the fantasies of certain symbolists in the West.

(Chapter 12)

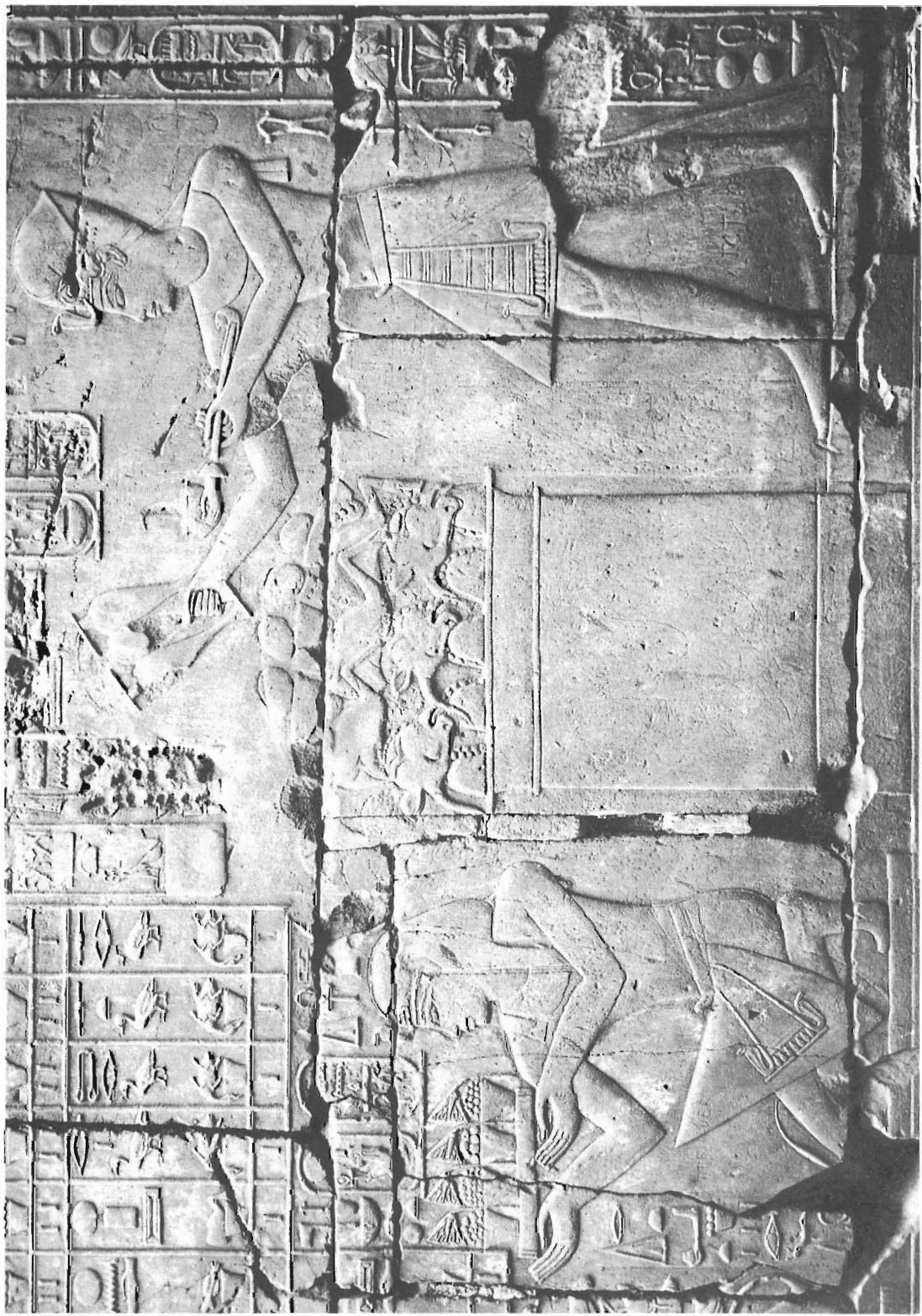


PLATE 72

Movement of the Kingdoms

. . . the geometry of the royal apron . . . represents a living, moving geometry. Its shifting on the coordinates modifies . . . the values of the numbers by connecting these different values to each other.

(Chapter 12)

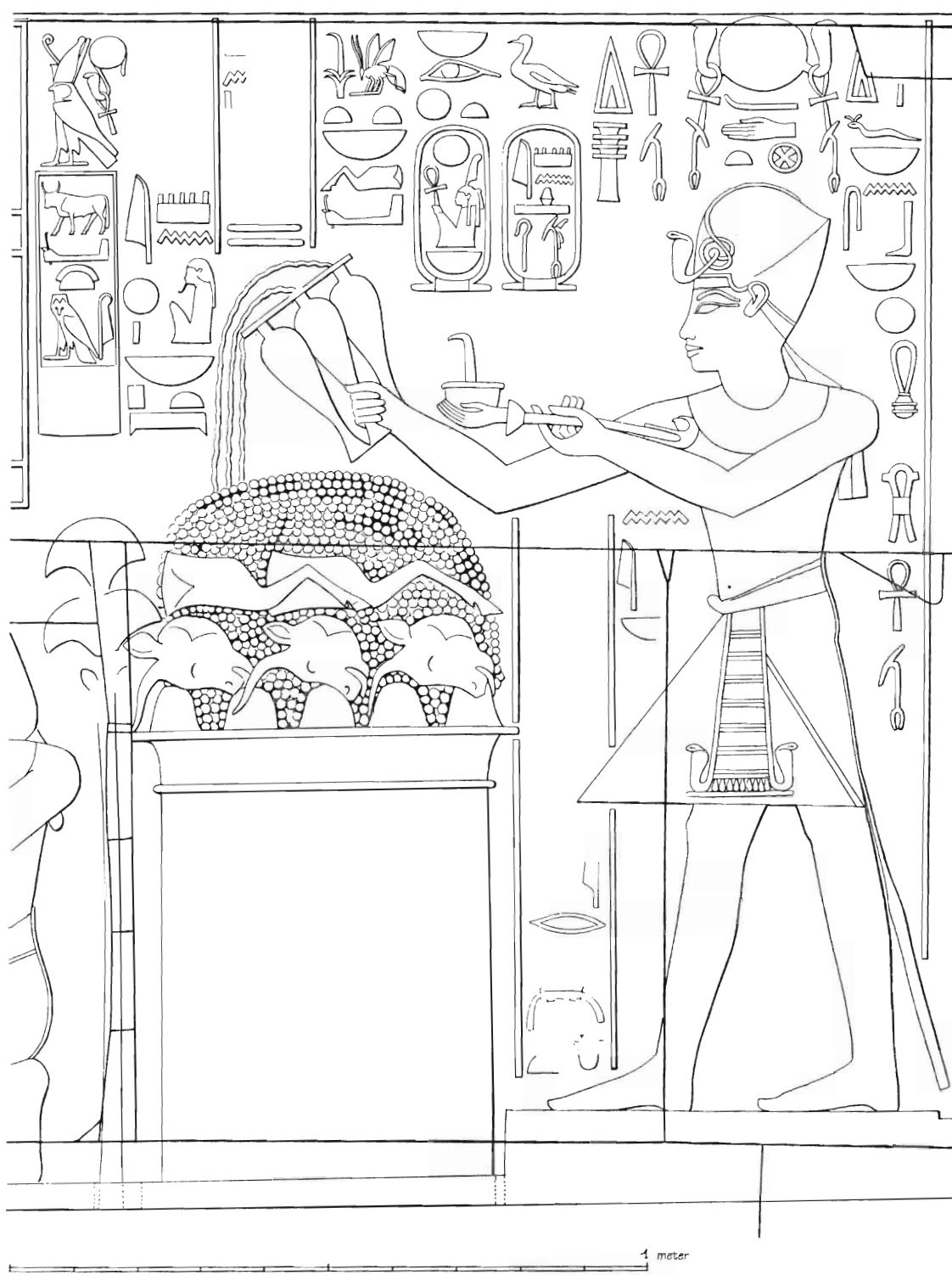


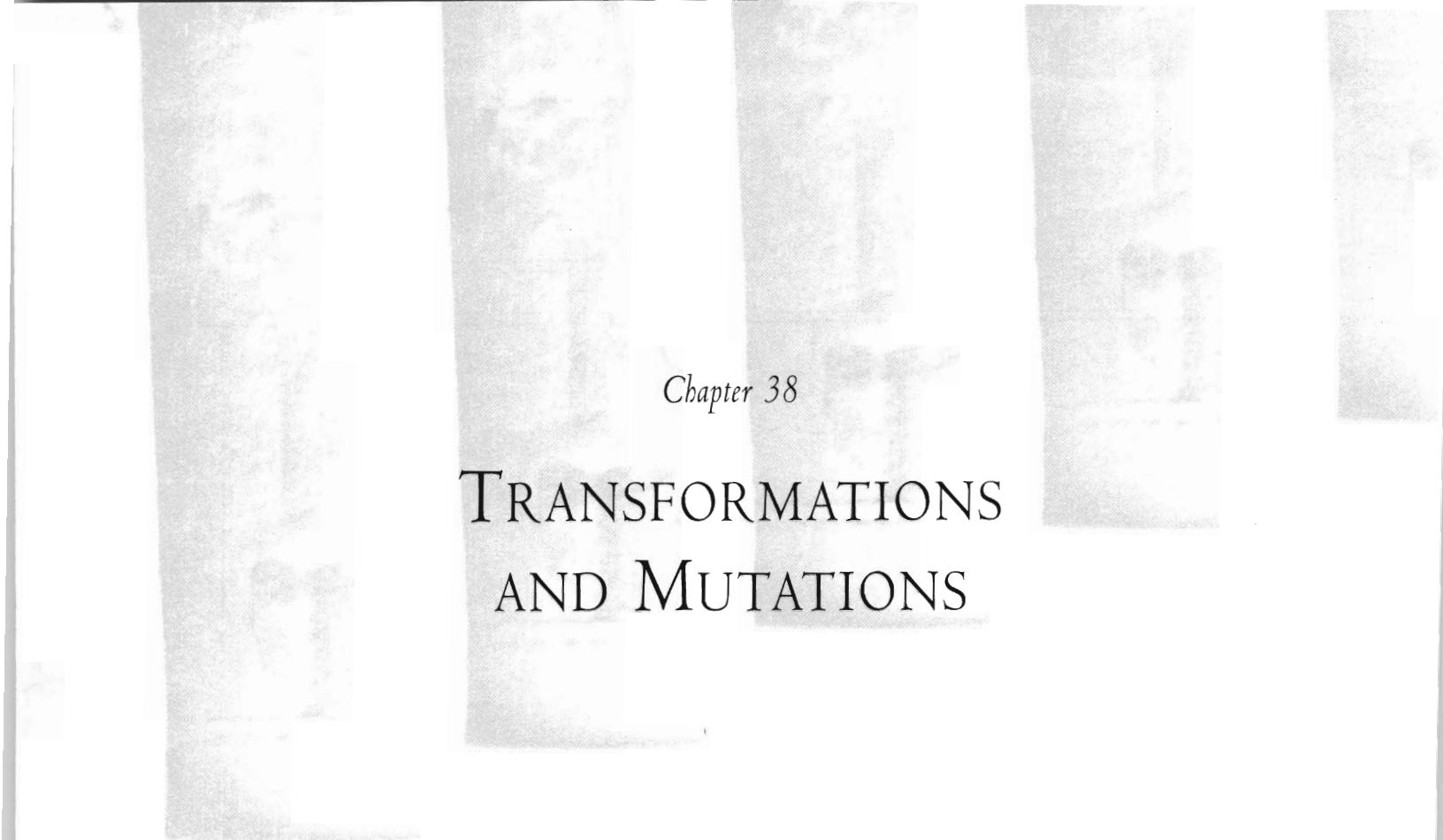
PLATE 73
Movement of the Kingdoms

. . . here, as elsewhere, the pharaonic sages wished to record their thought on the invariable base of numbers, and for this purpose took the liberty of slightly modifying the mental scheme. In no case would the pharaonic expression be fixed in crystal; it was always vitally in keeping with the mobility of what is living.

(Chapter 11)



PLATE 74
Movement of the Kingdoms



Chapter 38

TRANSFORMATIONS AND MUTATIONS

PLATES 68 AND 69 • MOVEMENT AND DIVIDING IN TWO

The bas-relief pictured in these plates is found in room VI on the first register of the east partition (plate 100), in front of the representation of the barque of Amun in its naos.

Between the king and this naos, on a table of offerings, the four red *desher* vases are placed, and above them are four white *nem wt* vases placed on a shelf with no support. The royal figure is in motion and pours water from the white vase he holds in his two *right* hands. It is said that he must make this purification four times, once toward each of the four cardinal points.

Movement is marked in this figure by modifications in the sculpture that indicate two stages, but the king does not change attributes, costume, gesture, or offerings in passing from the first to the second stage. The essential transformation is in the shift of the center of equilibrium. The *sense* of the perception of equilibrium located in the ear becomes superimposed on the motor center for balancing located in the cerebellum.

The joint of the vertical stones goes from the left ankle to the middle of the neck at the level of the shoulders (sixteenth line of the canon) and cuts the necklace in two. This joint isolates the shoulder and the left arm, the right forearm, and the front corner of the apron, as well as the cardiac region. Its extension would pass through the ear, thus indicating the axis of stability of the figure as he straightens up again.

In the first stage, this vertical line was directed toward the back part of the head (cerebellum) without, however, ending there. We can thus definitely discover in the intent of the text a relationship between the cerebellum and the intelligence of equilibrium in its vital expression. This figure clearly represents a separating movement indicated by the nature and the symbol of the vases.

We have often commented on the importance the Ancients gave to this axis of equilibrium. One representation, which goes back to the Old Kingdom (fig. 270),¹ shows a royal figure holding

¹ Cf. Jéquier, *Frises d'objets*, fig. 211, from Auguste Mariette, *Les Mastabas de l'Ancien Empire* (Paris: F. Vieweg, 1884).



*Fig. 270. Royal figure holding the *aba* scepter in his hand, crossing over the staff (Old Kingdom)*

his staff exactly on the equilibrium axis passing in front of his ear and dividing the body in two. This symbol is completed by the crossing of a double baldric of pearls, and, in the guise of a breast-plate, the symbol of Hathor (here the symbol of harmony) on the stomach. The vertical staff is held in the left hand, while the *aba* scepter in the right hand² is crossed horizontally over the staff.

One could read this as "to cross on the axis of equilibrium," that is, to stabilize the equilibrium.

PLATES 70 AND 71 • TRANSFORMATION OF THE ELEMENTS

This figuration, also altered, is found on the west wall of room VI in front of the moving figure who offers the four vases to the sacred barque, east wall (plates 68 and 69).³

The sanctuary of the barque of Amun originally included four columns framing a ramp that rose toward a wooden naos (tabernacle) containing the sacred barque. This barque is depicted on both the east and west walls of room VI, the two representations facing each other as if reflected. Only the symbols that accompany the two figures change, adapting themselves to the eastern and western orientations. Twelve holes remain in the white limestone pavement that were for placing the stakes supporting the veil that surrounded this sacred place.

At the time of Alexander (300 B.C.), a sandstone naos was constructed on the site of the ancient columns; these were not lifted out, but cut above the ground in such a way that their pedestals and a small part of the columns themselves remained. A part of the pedestal of the ancient column is embedded in the pedestal of the new naos, and the remaining fraction of the column has been included in the construction.

Now, at the time of the first sanctuary, the axes were already drawn on the ground on the sandstone pavement and covered by the limestone pavement. The key for the crossing of the axes on the threshold of the door of this room also existed at that time. Through this we can see that all the geometric and trigonometric elements were noted; it is, however, only with the construction of the naos of Alexander that the key pentagonal function was explained by the proportions of this naos (plate 83 and fig. 284). Before this date, the essential elements of the pentagon were inscribed in the king's apron in its first stage (fig. 271).

² Cf. plate 93, *aba* scepter, nos. 1, 2, 6, and 7, and fig. 292.

³ Because of the lack of space and very bad lighting, the photograph makes the outline of the first stage difficult to see.

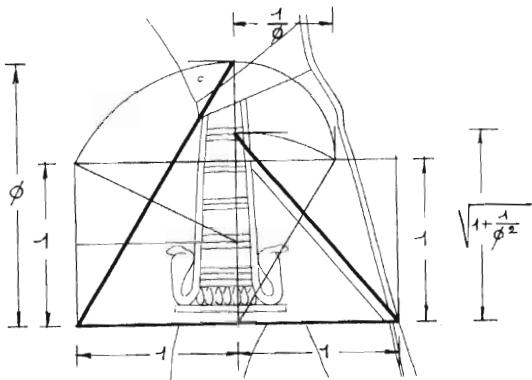


Fig. 271. Geometric study of a royal apron, room VI, west wall

The front angle determines the relationship 1 to ϕ . The rear angle determines the relationship 1 to $\sqrt{1 + 1/\phi^2}$, which defines the side of the pentagon for which the radius of the circumscribing circle is 1. The rear angle gives the application, through the pentagon, of the function ϕ indicated by the front angle.

This bas-relief offers us an example of a numerical alteration with regard to changes in the offering, the headdress, the loincloth, and the gesture. Only the presentation of the offering of the "cubit with incense," separated from the rest of the figure by a vertical joint, does not vary.

In the first stage the king wore the *nemes* headdress and held the cubit with incense in his right hand⁴ and three blooming papyrus flowers in his left hand; he was also wearing the triangular apron with a tail. He is said to be offering incense and the gift of the first vegetation of the season (plate 71A).

In the second stage, he wears the close-fitting headdress and is belted with a simple loincloth *without tail*, which is very rare. This removal of the triangular apron and of the tail coincides with the changing of the ritual gesture and of the offering: the left hand is now open and becomes a right hand, thus active; it *has given* the first fruits, the plant kingdom has played the passive role. This king is now separated from the plant kingdom, and yet the reference to this kingdom has not been removed in the column of text. As the extension of the spinal column, the ritual tail is the symbol of animation by the terrestrial fire, which is the cause of vegetation. In the second stage this figure no longer has this relationship with the terrestrial fire and no longer has the plants to offer; but the presence of two navels indicates a second birth. Thus a change is made to coincide with a vital function, geometrically expressed.

Thus, in the first stage, the king offered plants and wore the triangular loincloth indicating, through its angles, the ϕ and pentagonal functions that rule vegetation.

Moreover, already under Amenhotep III the intercolumnar spaces of this sanctuary were in the proportion, with respect to each other, of the radii of the circles that inscribe and circumscribe the pentagon, and the orientation of the principal axes of the temple also applied this function.

There would, therefore, be good reason to think that this figure was changed at the time of the construction of the naos applying these functions, an assumption that is acceptable if we recall that

⁴The cubit with incense is a wooden shaft with a hand carrying the vase of fire at one end and a falcon's head at the other, in front of which is the jar containing the incense.

Alexander completely altered the upper part of the north wall of this room, as well as its door, and replaced the cartouches of Amenhotep III that were there with his own.

PLATES 72–74 • MOVEMENT OF THE KINGDOMS

This bas-relief is found on the first register of the west wall of the room of the barque of Amun (room VI). It is separated from the king of the preceding plate by the tableau of forty offerings. In the photograph of plate 72 one can verify lines from the first stage on the royal figure as well as on the offerings. The two stages are reconstituted in plates 73 and 74, except for the destroyed parts that have not been restored.

The first stage (plate 73) includes animal offerings buried under a pile of grain, with three papyrus flowers set up in front of the table of offerings. The second stage (plate 74) removes the grain as well as the papyrus, and the animal offering is augmented by a *khepesh* thigh, three ribs, and four hearts. In both cases the king makes the same gesture of offering the fire with his left hand while he holds three gold or silver vases in his right hand pouring three streams of purifying water. This transformation or “animalization” is expressed by the modifications in the proportions of the apron.

In this case there are two possible readings for the angles of the same apron at each stage: first, with respect to the horizontal of the base of the apron, which does not coincide with the horizontal of the *canevas* of the figure; second, with respect to the line of the base of the apron's front panel, which is parallel to the horizontal of the general *canevas* and thus shows two possible readings.

We are therefore going to study the geometric functions of this royal apron in its first stage (fig. 272) and its second stage (fig. 273).

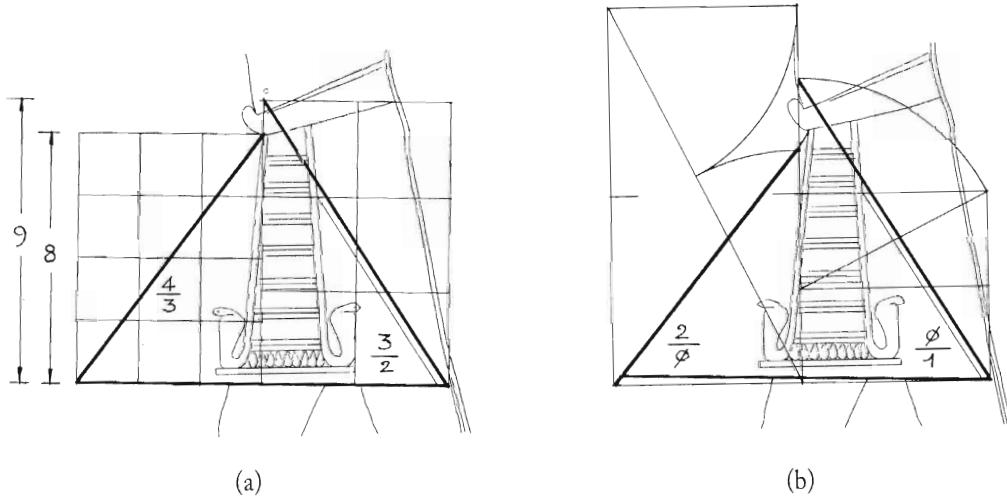


Fig. 272. Geometric study of a royal apron, first stage, room VI, west partition

The angles of the apron read (a) with respect to the base of the apron; (b) with respect to the horizontal of the tableau.

In the first stage of the bas-relief, figure 272a shows that the angles of the apron with respect to its own base define the two mean terms, arithmetic and harmonic, between 1 and 2, constituting musical proportion: at the rear is the fifth and at the front, the fourth; the difference between

them determines the tone, and their product equals 2, the octave. In figure 272b, the apron, in relation to the general *canevas* of the figure, thus with respect to the true horizontal, expresses the double function of ϕ through growth and through scission. At the rear, the half-base of the apron represents the unit that grows in order to define the height ϕ ; it is the act of growth. In the front, the half-base of the apron is also unity, and the height of the triangle becomes $2/\phi$ by scission. It is a question here of the function ϕ and its inversion.

The two readings have the same outcome:

$$a) \frac{3}{2} \times \frac{4}{3} = 2$$

$$b) \frac{\phi}{1} \times \frac{2}{\phi} = 2.$$

The same result is obtained with whole numbers and the irrational function ϕ .

In these two readings, the angles at the base are modified, whereas the sum of the two angles at the apex remains virtually identical. It is indeed remarkable that the transformation of the triangle formed of whole numbers into another triangle formed of irrational values gives an apex angle of the same value to within the practically imperceptible difference of $0^{\circ}7'$.

Through this demonstration, in which the product in the two cases equals 2, and in spite of the changes in the ratios, musical harmony (whole numbers) is brought into relationship with the principle of harmony based on the function ϕ . Now, these numbers and ratios correspond to the first stage of the figuration comprising the plants (papyrus) and the vegetal character of the offerings.

The second stage of the drawing of the apron (figs. 273a and 273b) leaves the rear angle unchanged, with the two preceding angular readings still there. By contrast, the front angle is modified. The play of the inverse and the mean terms between 1 and 2 are removed as well as the dividing function $2 : \phi$. The reading on the general *canevas*, that is, with respect to the horizontal of the tableau (*b*), or with respect to the base of the apron (*a*), presents an inversion of the functions.

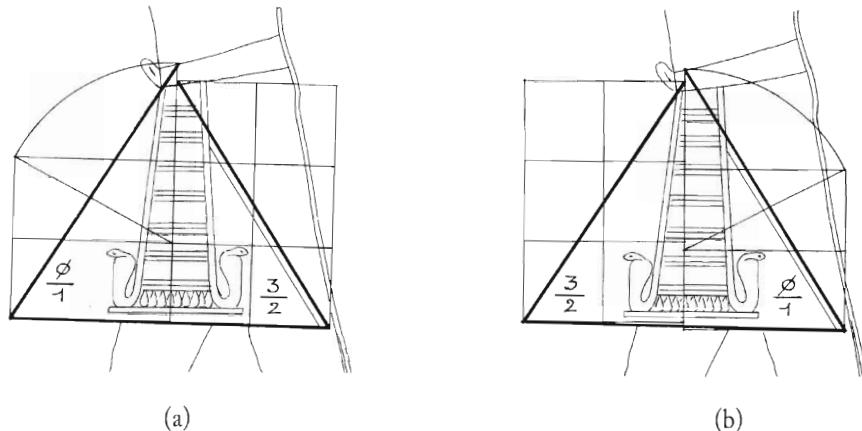


Fig. 273. Geometric study of a royal apron, second stage; room VI, west partition

Angles of the apron read (*a*) with respect to the base of the apron; (*b*) with respect to the horizontal of the tableau.

The second stage establishes an oscillating equilibrium between rational harmony and its irrational cause ϕ . There is a cessation of growth by division, that is, fixation.

At this moment, the change from the plant offering into the animal organism animated by the hearts is shown. This puts cold trigonometry into a vital relationship with life, symbolized by the offerings, and is yet another magnificent demonstration of the pharaonic mentality.

Harmony commands, reason demonstrates, and it is a superior synthesizing intelligence proper to man that makes the link.

This justifies our use of the term “magical science” to describe the science of the Ancients, founded on the intelligence of the heart, which is what conveys the feeling and vision at the heart of the object.⁵

The trigonometric character of the loincloths is always indicated by radial lines that start from the front angle and very often extend to the sloping back line, passing under the front, designed panel. Because the front and rear angles are different in most cases, one can wonder why only one set of radial lines is drawn for the two indicated angles.

The loincloth studied here gives the ratios that belong to musical harmony. This suggests that we draw the harmonic decomposition evoked by this apron (fig. 274a).

The development of the harmonic decomposition, starting from this first base, defines a series of ratios through the drawing of radial lines that begin at the front angle and actually end at the sloping back line. The horizontals in this layout, moreover, define the location of the groups of horizontal lines on the front panel of the apron. In the present case, the distance between each group of horizontal lines corresponds to $1/9$ of the total height (fig. 274a).

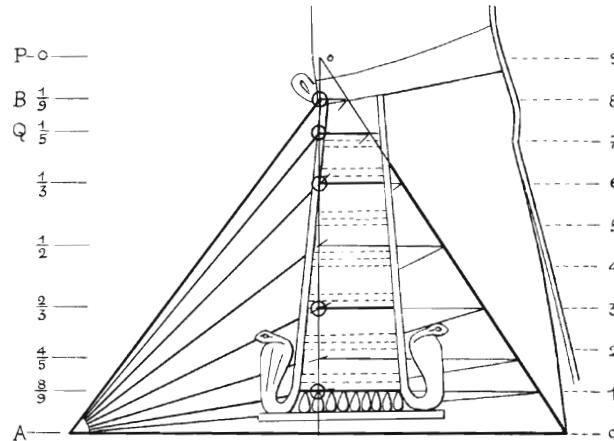


Fig. 274a. Drawing of the harmonic decomposition evoked by the numerical functions of the apron

The height PA , perpendicular to the base of the loincloth, is 9, the segment PB is 1. The mean term PQ resulting from the harmonic division is $\frac{1}{5}PA$, and the mathematical formula that allows the mean term to be established is intimately linked to the function connected to the subtraction of angular relationships notated by $1/n$, thus:

$$\frac{\hat{1}}{1} - \frac{\hat{1}}{9} = \frac{9-1}{9+1} = \frac{\hat{8}}{10} = \frac{\hat{4}}{5} = AQ, \text{ or } PA - PQ.$$

⁵ Let us recall that the aprons are pyramids.

This discovery recalls that the aprons, having a trigonometric rationale, are connected with harmony, the function evoked here by the horizontal lines of the apron's front panel.

Always and everywhere, at the base of pharaonic geometric and mathematical expressions, we find the harmonic law. The apron described here is to be considered a revelation of these functions, and we should regard it as a symbol, because all aprons do not demonstrate the link that unites trigonometry to harmony so explicitly.

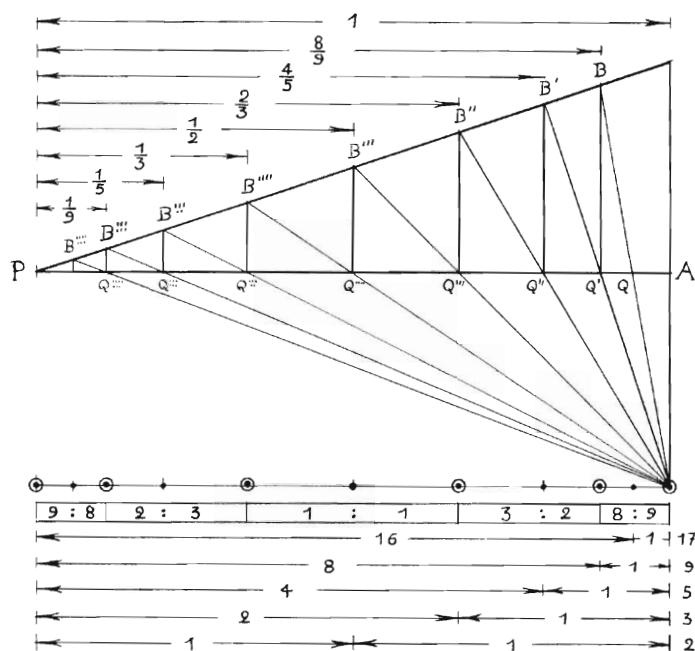


Fig. 274b. Synthesis 1

Fig. 46 from vol. 1, chapter 6; compare with fig. 274a.

APPENDIX: THE PHARAONIC PROCEDURE FOR MODIFYING THE ANGLES OF THE APRON BY INCLINING THE BASE

The problem is to diminish the height of the triangle from ϕ to $1\frac{1}{2}$. We would proceed by diminishing this height. The Ancients, by modifying the slope of the base of the triangle, reduced its height as well, but without touching the apex. This is easily accomplished through the proportional notation of angles, and conforms to pharaonic thought, which is the opposite of our methods.

We draw a grid on the apron parallel to the horizontal of the tableau, the unity of which is equal to half of the digit that measures the figure. We then extend the two hypotenuses to the point where they meet, which gives a total height of 34 common to the two triangles; the width of the right side of the base of the apron is 21, which makes one of the ϕ to 1 ratios taken from the F series. For the front triangle, the height remains the same and equals 1. By extending the hypotenuse to the true horizontal, the proportion 34 to $22\frac{2}{3}$ is obtained, that is, 1 to $2/3$.

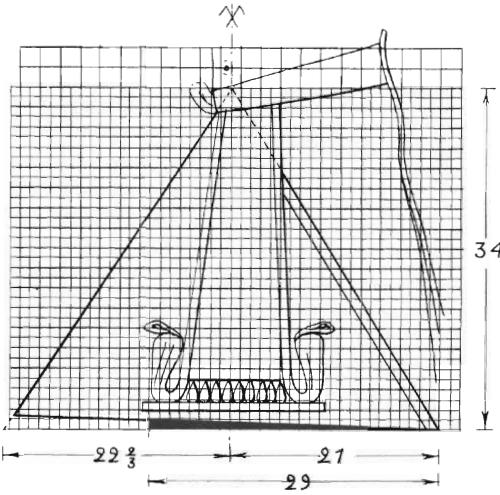


Fig. 275. Study of a royal apron; room VI, west wall

Modification of the angles of the apron through the slope of the base

With respect to the horizontal of the tableau, the rear angle defines ϕ and the front angle defines the ratio of the fifth. To invert these functions, it is necessary to subtract the front angle from the rear angle through the procedure of proportional notation:

$$\frac{\hat{34}}{21} - \frac{\hat{3}}{2} = \frac{68 - 63}{42 + 102} = \frac{\hat{5}}{144} = \frac{1}{28.8}.$$

The difference obtained, reduced to $1/n$, is very close to $1 : 29$, and is actually the simplest and most perfect angle for establishing the sought-for difference. Here is the proof:

$$\frac{\hat{3}}{2} + \frac{\hat{1}}{29} = \frac{87 + 2}{58 - 3} = \frac{\hat{89}}{55}.$$

The angle 1 to 29 is the difference between the ratio $3 : 2$ and the pair from the F series that follows the ratio $34 : 21$, read in digits on the *canevas*.

It is necessary then to raise the base of the apron one band, with 1 for height and 29 for length (by taking the half-digit for the unit). This is the simplest method for showing in practical terms the modification of these angles.



As proof of refinement of thought and harmony in expression, let us look at the ratio between the measures of the place in which this figuration is found and its own proportions.

The east and west walls of room VI where this figure is carved measure 6 fathoms. The north and south measure $6 \text{ fathoms} \div \pi/3 = 20$ radius cubits.⁶ Each of the 28 digits of this radius cubit is 1.895 centimeters. Now the height of this king to the forehead is exactly 128.9 centimeters, measured on the spot, which corresponds to 68 digits of the radius cubit, 68 digits being equal to 128.86... centimeters obtained by calculation. These are exactly the same digits that served for drawing the grid placed on the apron studied in fig. 275.

⁶ Cf. vol. 1, fig. 113.



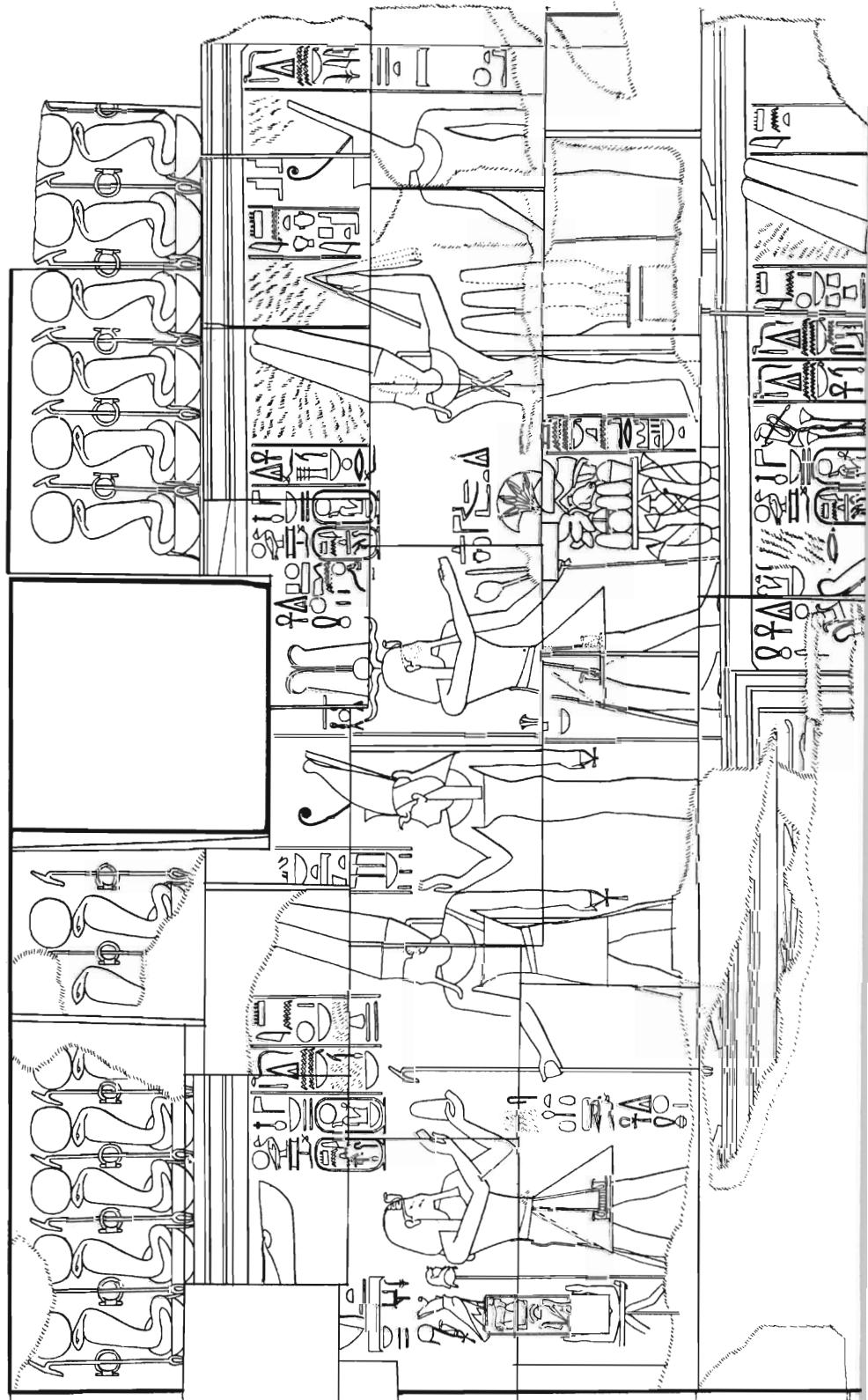
Chapter 39

A SECRET SANCTUARY

Plates 75–78

It should never be forgotten that the theological directive is always piously respected, and that, above all, the play of thought that has no geometric confirmation is excluded. Nevertheless, it is not to this directive only that mathematical thought is confined. There is another mental disposition that is very difficult for us to understand today; it consists of a kind of alliance between a very practical, realistic sense, and the "feeling" I call "spatial vision."

(Chapter 6)



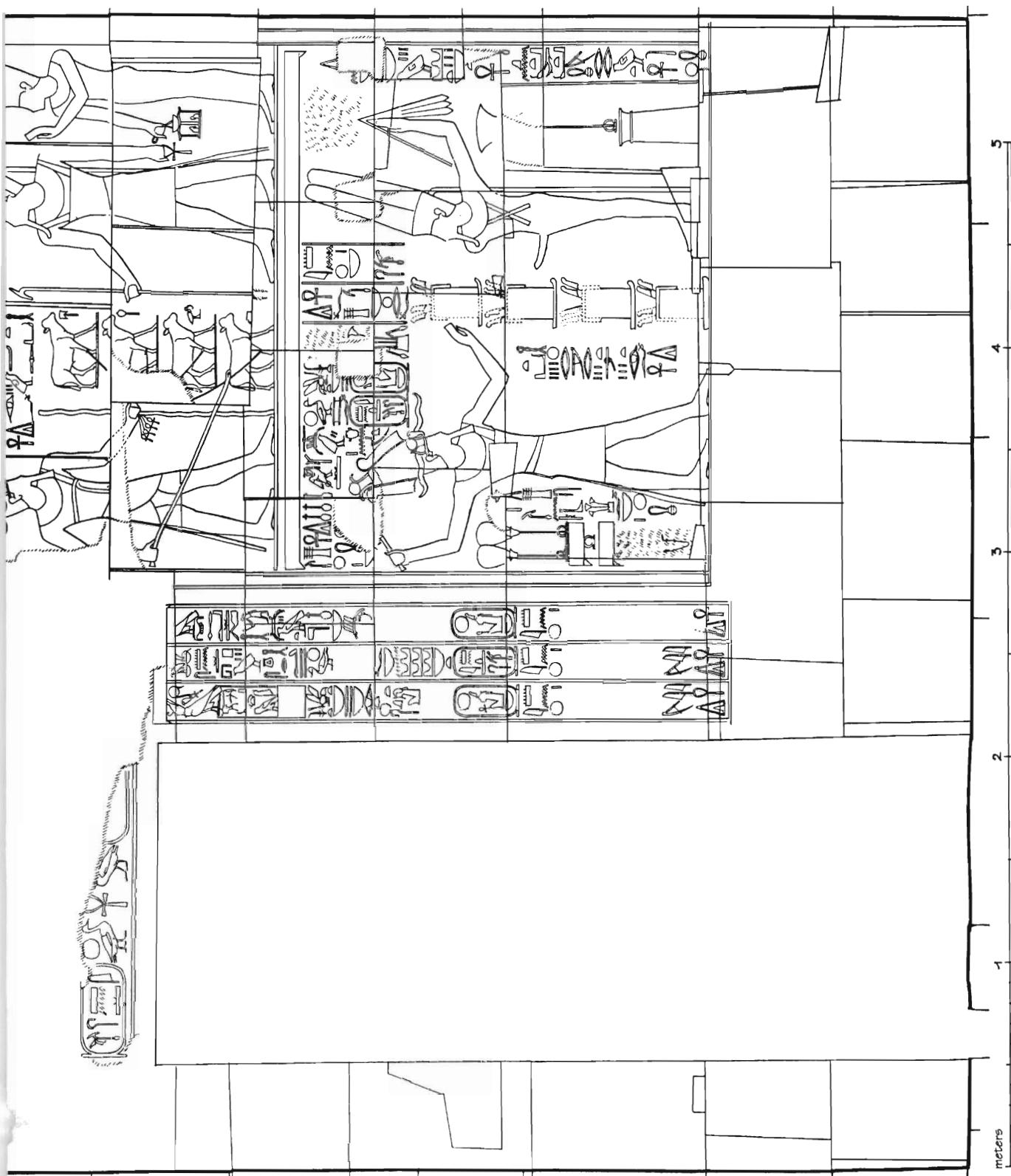
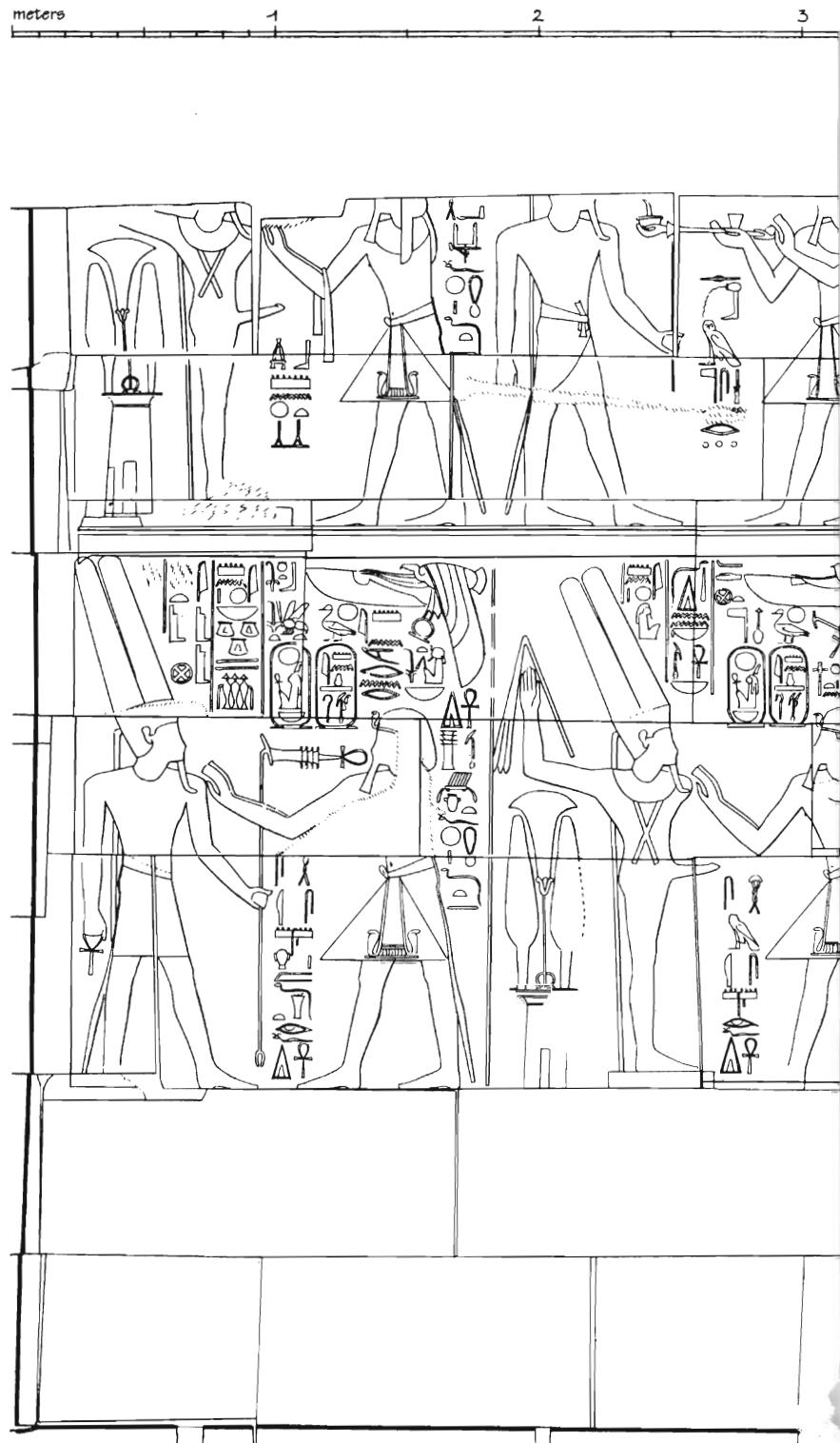


PLATE 75
Sanctuary V, North Partition

It is the selective function, discerning, or rather dividing in two, that is represented by the olfactory center as a living, secret sanctuary of this temple, whose essential and abstract aspect is noted by number.

(Chapter 18)



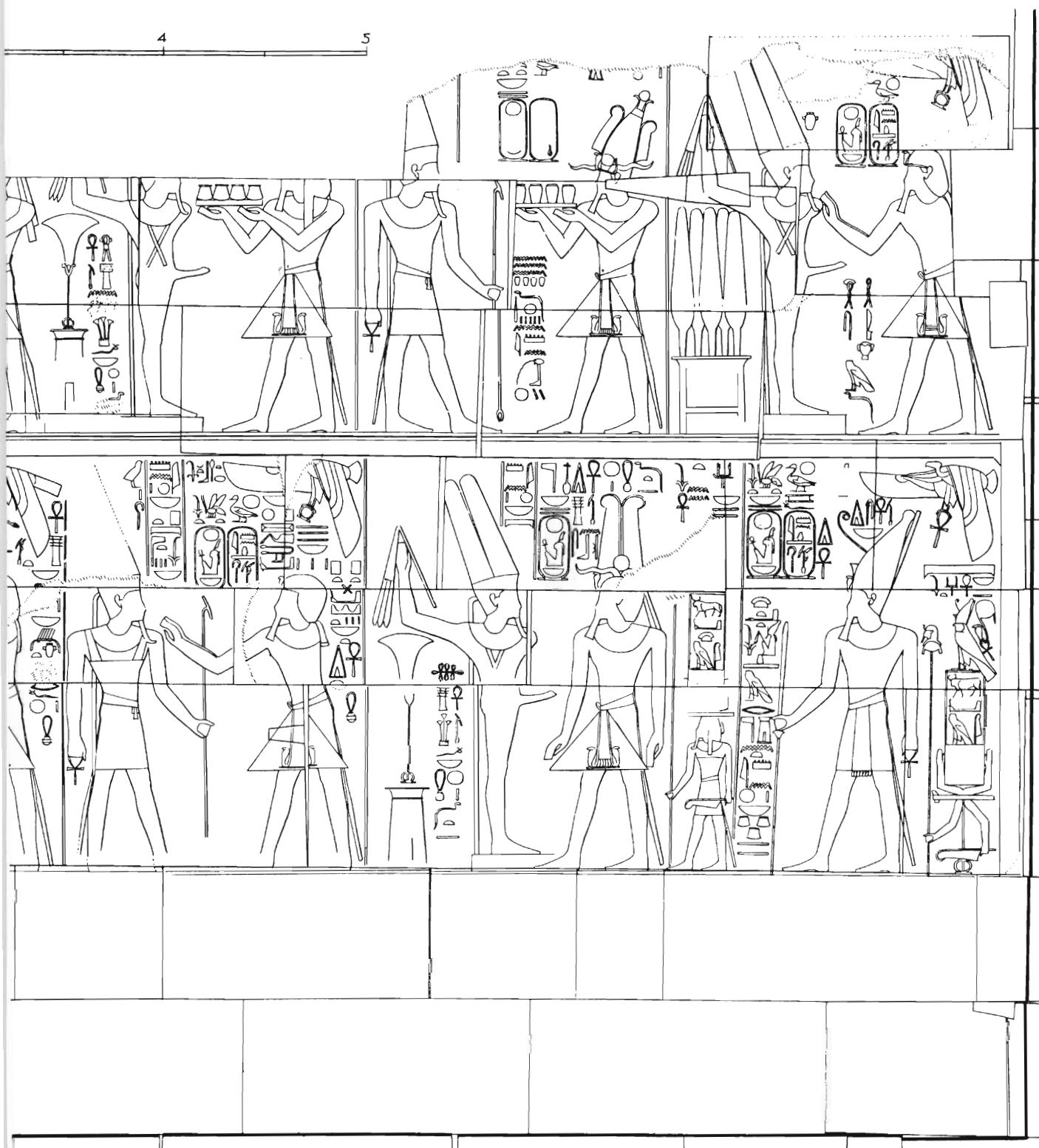
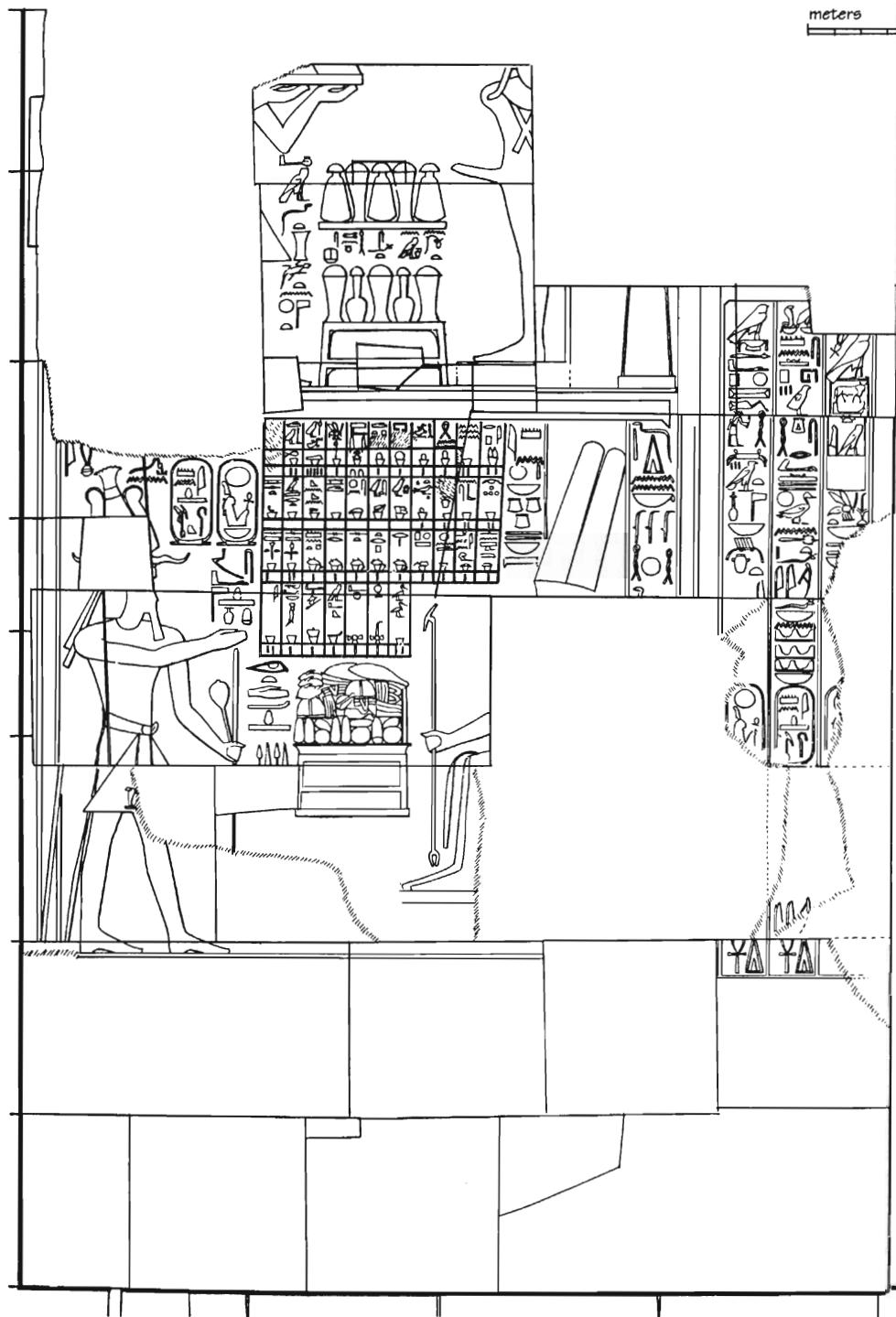


PLATE 76
Sanctuary V, West Partition

*It is . . . upon the knowledge
of functional identity—
the philosophy of the Unity—
that the magic of religious
rituals, the liturgy, and
the perfect architecture of
the temples are established.*

(Chapter 1)



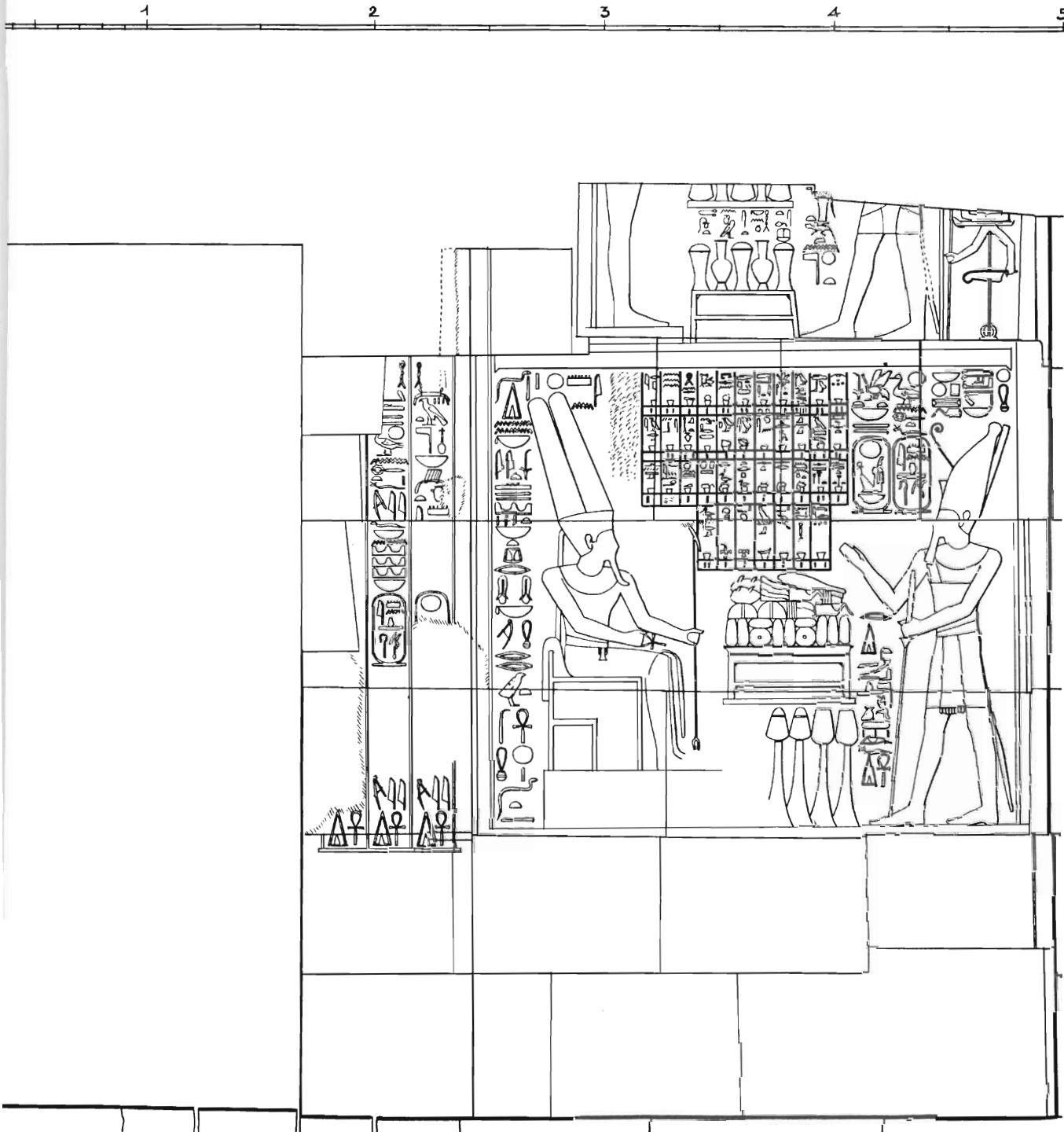
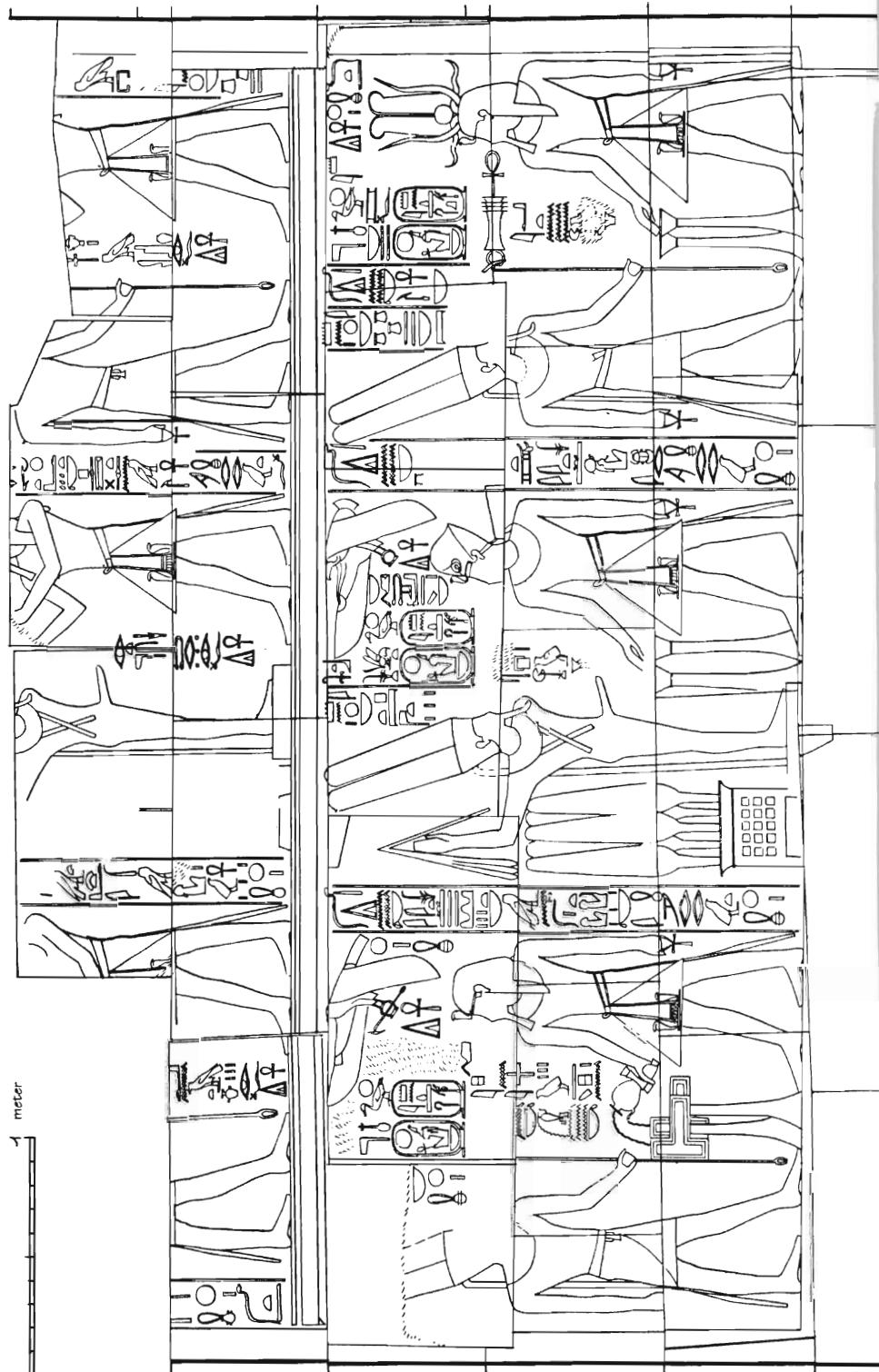


PLATE 77
Sanctuary V, East Partition

Number is the definition
of the functions, and it is
in this sense only that the
Universe is number.

(Chapter 5)



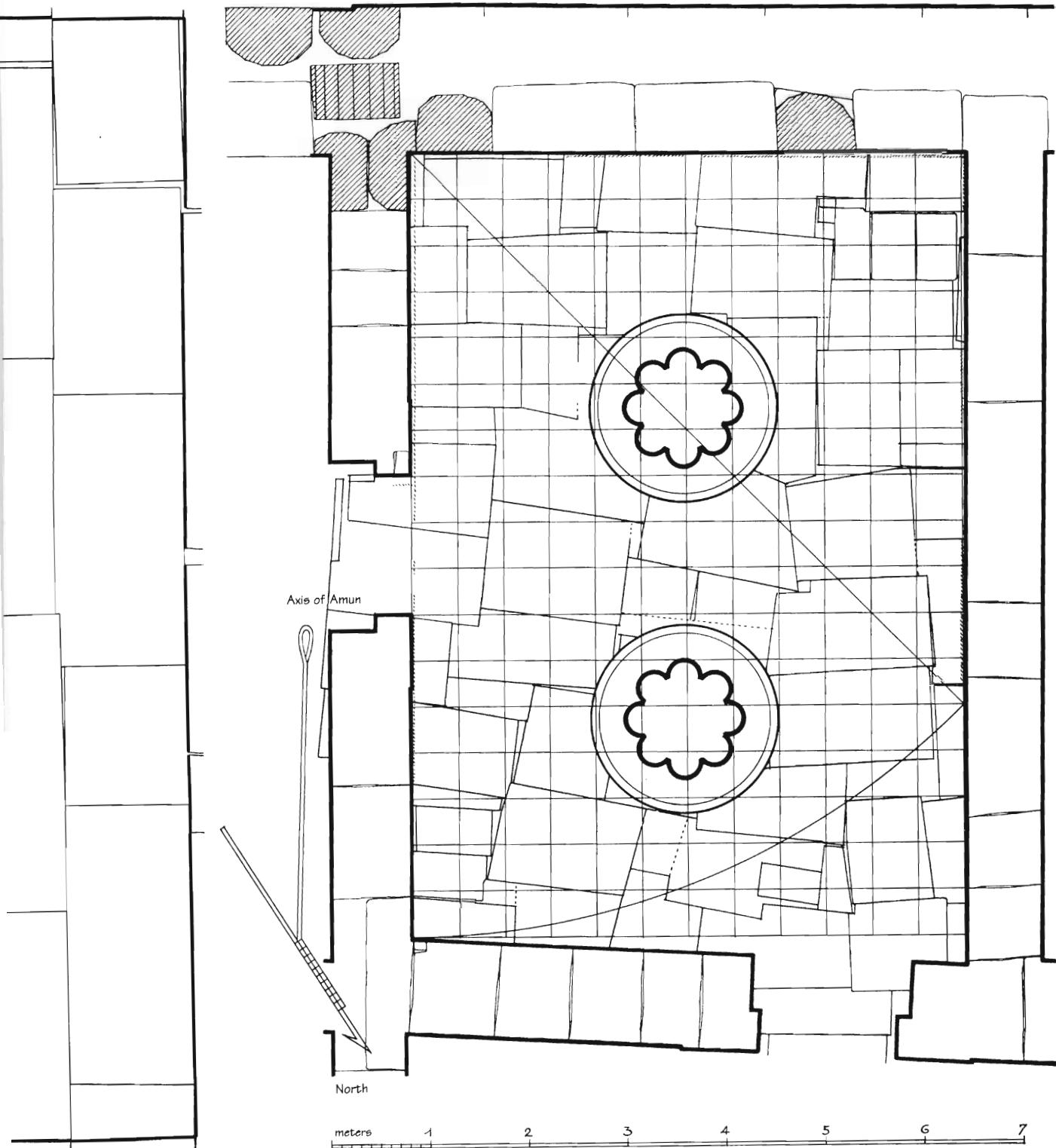
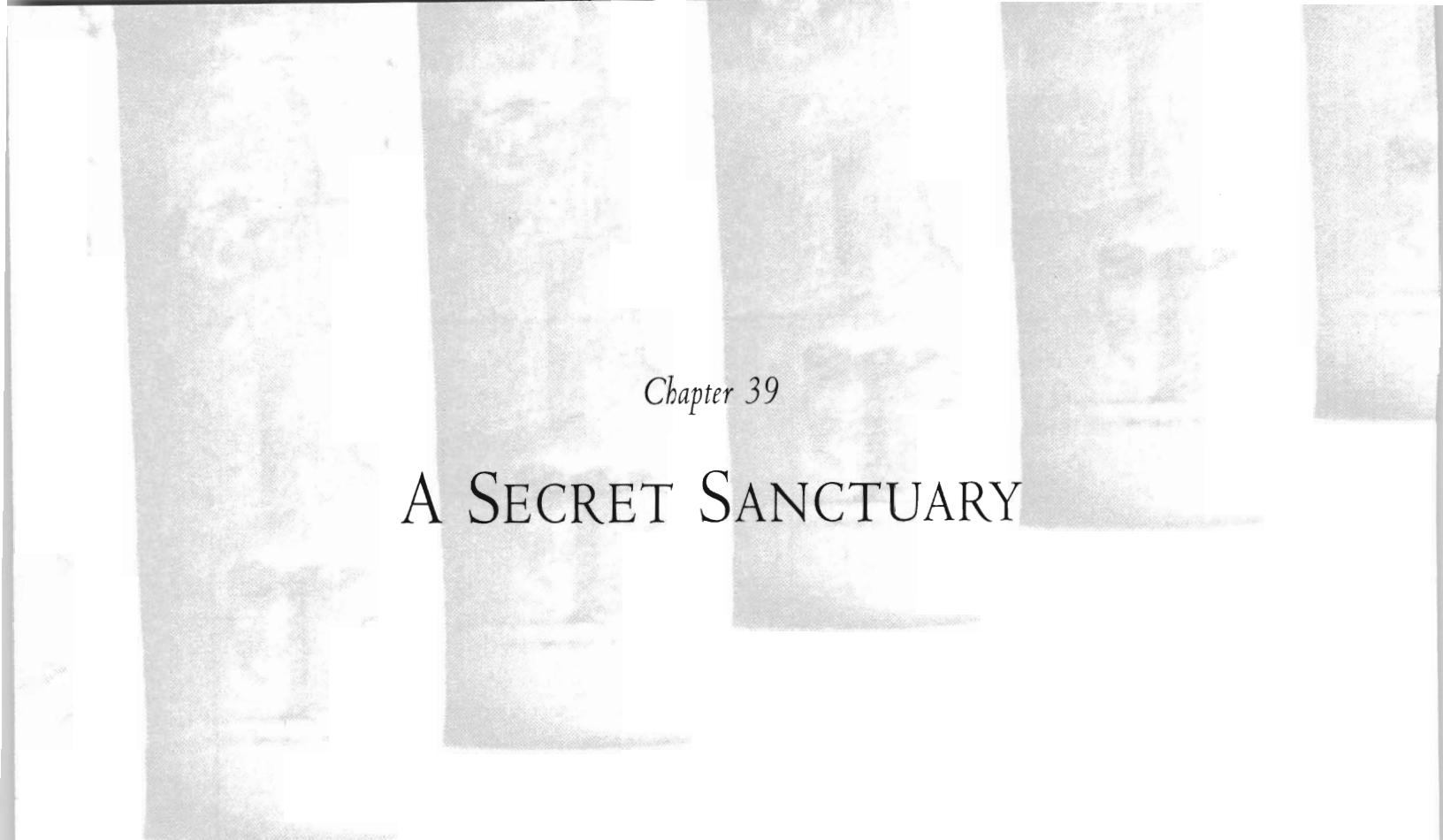


PLATE 78
Sanctuary V, South Partition and Plan



Chapter 39

A SECRET SANCTUARY

The three secret sanctuaries of the covered temple are located at the base of the headband encircling the head of the Man of the Temple; sanctuary V is the eastern one. It opens to the north on the room of twelve columns and presents a typical case of transparency, which I noted in *The Temple in Man*,¹ and which was truly a revelation of how to read architectural writing.² I noted then the choice of this place—consecrated to the uraeus, the serpent on the forehead—is related to the olfactory sense and its “dualizing” significance. A thorough study of this sanctuary shows that it is entirely dedicated to the *dualizing* principle of understanding, which itself creates the moral intelligence through the oppositions of good and evil, and the oppositions of affirmation and negation that form the faculty of reasoning, psychological consciousness, and discernment. This fact is marked by the principles of the dualization of number, that is, the root of 2, and through the serpent, a typically dual being, as well as by the representations in this room that have a dual quality.

PLATE 75 • NORTH PARTITION

The north partition—the only intact one in this room—allows us to get a general idea of the arrangement of the tableaux that covered the walls of the sanctuaries: above a base without any decoration, the tableaux are drawn on three registers, each with a double underline representing the earth and topped by a long band symbolizing the sky. The entire group of tableaux is for the most part framed by a border resembling the one that surrounds the cubic thrones,³ which, in general, is made of a wide band of gold inlaid with semiprecious stones (lapis lazuli, turquoise, and carnelian) or red, green, or blue glass paste. The whole is crowned by a frieze of uraei in woven baskets.

¹ Cf. *The Temple in Man*, pp. 102–5.

² Since that time, young archaeologists have often wisely taken into account the possibilities of transparency, but are still afraid to acknowledge it.

³ Cf. fig. 295.

Each tableau represents the king performing certain gestures or ritual offerings in the presence of the *neter* of the place. The several columns of texts above these scenes, however, repeat untiringly, throughout the temple, the same benediction formulas that have no apparent connection with the subject depicted. Only one short inscription in front of the king specifies the nature of the particular scene. These laconic texts are indeed only the title of one of the phases of ritual of the daily worship, including not only the gestures represented, but also the "words to speak" while executing them.

These words are known thanks to certain papyri. The Berlin Papyrus⁴ gives sixty-six chapters that each contain a title and a more or less long text. The comparison of the manuscript with the figures in the temples led to the discovery in the temple at Abydos that twenty-nine of the Berlin Papyrus chapters were written in the seven chapels of that temple, whose reliefs specify the ritual gestures relating to each text.

The number of chapters and their order varies in the different sanctuaries,⁵ whereas the ritual of the Berlin Papyrus is arranged in a logical sequence of ceremonies only some of which are developed in a particular part of the temple.

According to the texts, the formulas were spoken and the ritual gestures executed by the "priest on duty that day"; however, it was always the king, or royal principle, who was represented as performing the divine worship. Depicted in room II of the temple of Luxor⁶ are particular scenes showing the purifications of the king and his "royal ascent" toward the sanctuary before performing the divine rites, after his having received power over the Two Lands and their two crowns from the hands of Seth and Horus.

From there, one can follow the progress of the king toward room XII, which serves as a sort of hypostyle for the three sacred sanctuaries (rooms V, I, and VII).⁷ First, he passes through the narrow corridor (room X) where he performs the purification with incense, then, on the exterior doorposts of the eastern doorway of room XII, in the lower register, the king "goes toward the sanctuary, purified," wearing at the south (on the left) the white crown and at the north (on the right) the red crown, according to the correct orientation of each crown.⁸

In the interior of room XII, starting from the east entrance (sunrise), the procession of the king goes in two opposite directions: one toward the west, passing by the north and returning toward the south in order to enter sanctuary VII, then sanctuary I; the other goes directly toward the south in order to enter sanctuary V, then sanctuary I.

Sanctuary I thus receives the king under two aspects, the one of day (through the east and south), and the other of night (by the north and west), which are united here, whereas sanctuary V receives only the king of the day, and sanctuary VII only the king of the night.⁹

The ritual is addressed to the statue of the *neter* contained in the gilded wooden or stone naos. The doors to it were closed each night at the setting of Ra, the sun, by a bolt whose bond was

⁴ Cf. Moret, *Rituel du culte divin journalier*.

⁵ At Abydos, the sanctuary of Isis includes thirty-six tableaux, that of Harmachis thirty-five, that of Amun thirty-four, that of Ptah twenty-six, and the sanctuary of Osiris nineteen. At Luxor there are twenty-four tableaux remaining in room V, and there must have been around thirty-six of them originally.

⁶ Cf. plate 100.

⁷ See the location of these rooms in fig. 226b.

⁸ The title "Going in toward the Sanctuary" is found in chapters 22 and 24 of the ritual.

⁹ For the orientation of the crowns and the procession of the king, cf. fig. 287.

sealed. These words of the ritual allow us to understand that each night the *neter* undergoes the Osirian "passion" by recalling the myth in which the body of Osiris is dismembered by Seth. The largest part of the ritual consists of reuniting scattered pieces of the divine body thrown in the waters, of repulsing the enemies, and of recovering and restoring—"counting"—to the *neter* the eye of Horus, through which he is united with his soul.

On the north wall of room XII, one of the scenes refers to the part of the ritual in the course of which the priest-king, at daybreak, breaks the bond, snaps the sigillated earthen seal, slides open the bolt, and opens the two doors of the naos, which are compared to the doors of the sky and the earth.

To the south, the officiant, taking in hand the white club and the *mākes* staff, "appears as king," preceded by Upuat, the "opener of the way"; he is then purified again by Thoth and Horus, who pour two crossed streams of the ankh of life over his head. On the south partition of room XII in the lower register, the king offers the "four cloths."¹⁰ In the upper register he performs the purifications four times with four red vases and four white vases (fig. 276 below).

Next to the scene of the presentation of cloth is the entryway that leads from room XII to room V. On the *left* doorpost, the royal officiant wears the white crown of the South, whereas on the lintel, it is the king making the "great stride" and located on the *right* who wears the white crown;¹¹ there is a crossing here, characteristic of the principle of weaving that makes manifest what is invisible.

Let us recall that here we are in the *shyt*,¹² the "sanctuary," of the sixth *cakra* (secret center), and the wall that separates room XII from room V is situated at the level of the "cribriform plate of the ethmoid" of the Man of the Temple; olfactory sensation is perceived in the upper part of the nose by the olfactory filaments that traverse the cribriform plate and transmit it to the olfactory bulb. From there the olfactory bundles divide in two and lead toward four centers.

Now, the wall separating room XII from room V, most of whose stones extend the full thickness of the wall to its opposite side, presents one of the typical cases of scenes and texts begun on one side and completed on the other side of the partition. It is on this wall, in transparency, that the offering of the "four cloths" is found on the side of room XII, and on the same wall in room V, the four "boxes" destined to contain the cloths.¹³

In room 12, the king presents the four strips of cloth, followed by a female *neter* who holds two strips of cloth.¹⁴ The text concerning this offering is written above the female divinity, who is quite probably Renenutet. Her name, partly defaced, has only the *ut.t* remaining and the determinative of the serpent placed on a basket. Now at the time of the Pyramids, Renenutet, serpent-divinity and protectress of the harvests, was assimilated to the divinity of weaving and of cloth itself. This "divine cloth" was the eye of Horus that is in Tayt,¹⁵ as is Renenutet herself.

¹⁰ Cf. plate 97.

¹¹ Cf. fig. 290.

¹² Cf. fig. 168, no. 43.

¹³ Cf. plate 75, north partition of room V, and chapter 43.

¹⁴ Cf. plate 97, south partition of room XII, offering of the four cloths.

¹⁵ Cf. Pyramid Texts, 1755–94, partially cited in chapter 43.

The text of room XII is very difficult to transcribe. The sentences contain repetitions, transformations of the same word, homonyms untranslatable into our language, and a sonority that must have had an amazing effect when they were pronounced with a full knowledge of their significance. In order to bring back this magic it would be necessary to have a Kara, like the musician-poet I knew in Athens, who succeeded, using his monotone song alone, in making the frogs gather on Lake Marathon during a presentation of dances, and who made an eagle descend onto the chained Prometheus (who was rather frightened!) during a performance of the *Prometheus* of Aeschylus at Delphi.

Thus the text of the offering of the cloths, which can be seen in parallel with chapter 49 of the ritual in the Berlin Papyrus, mentions the offering of cloth (*mār*), of the strip of cloth (*mnkht*), of the eye of Horus coming from Nekhebet, through which it is perfect (*mnkh*), through which it appears (*akh*) in this its own name for the four strips of cloth (*mnkht*) that are united (*dmi*) to him in this his own name for cloth (*idmi*). . . .¹⁶

It is a question here, in a single tableau, of the offering of four cloths: the white, the green, the red, and the *idmi* cloth. The ritual further includes a fifth chapter entitled “Offering the Strip of Cloth.”¹⁷

In transparency on the opposite side of this wall, in the first register of the north partition of room V, are the four “boxes for cloths” consecrated by the king, and in the second register, the four calves—black, red, white, and spotted.¹⁸ Through their colors these recall the four herds of bulls of the sun, “of the colors white, black, red, and spotted” that state a problem of undetermined analysis that Archimedes, in a letter to Eratosthenes, would have proposed to the Alexandrian geometers, a problem considered unsolvable.¹⁹

The third register of the north wall of room V (plate 75) includes two tableaux. In the left one, the king offers white bread to Amun followed by Mut, regent of the sky, who makes the gesture of influx with her left hand toward the nape of the neck of this *neter*. In the tableau to the right the king makes the gift of divine offerings, consisting of various kinds of food surmounted by lotus flowers, in the presence of ithyphallic Amun followed by Amunet, the feminine (passive) aspect of Amun.

On the other side of the wall in room XII and at the same level are the two tableaux that show the quadruple purification by the king with the red and white vases. Each of these libations is made four times “by turning around the *neter*,” and by pronouncing the incantation that affirms that his eye, his head, his bones, are reunited, healed, and purified (of all impurity) by Thoth.²⁰

¹⁶ See chapter 43 for the current translation of this passage of the ritual. We are certainly dealing in these texts with a poetic form and a litany-like character, which Moret, struck by the phonetic cabala, had already foreseen.

¹⁷ Cf. the ritual in the Berlin Papyrus, chapters 48 to 53, which follow the two chapters 46 and 47 on the four white and four red vases.

¹⁸ In relation to the four calves, here is a passage concerning the vision of Zechariah (6:1–5): “Again I raised my eyes, and this is what I saw: four chariots coming out between the two mountains, and the mountains were mountains of bronze. The first chariot had red horses, the second chariot had black horses, the third chariot had white horses and the fourth chariot had (vigorous) piebald horses. I asked the angel who was talking to me, I said, ‘What is the meaning of these, my lord?’ The angel answered, ‘These are going out to the four winds of heaven after standing before the Lord of the whole world.’”

¹⁹ Cf. Tannery, *Mémoires scientifiques*, 1:118, on the problem of the bulls of Archimedes. The conclusion of the author is that a volume of 744 pages of 2500 numbers each would be necessary to print the numbers asked for by the epigram.

²⁰ Cf. chapters 46 and 47 of the ritual.

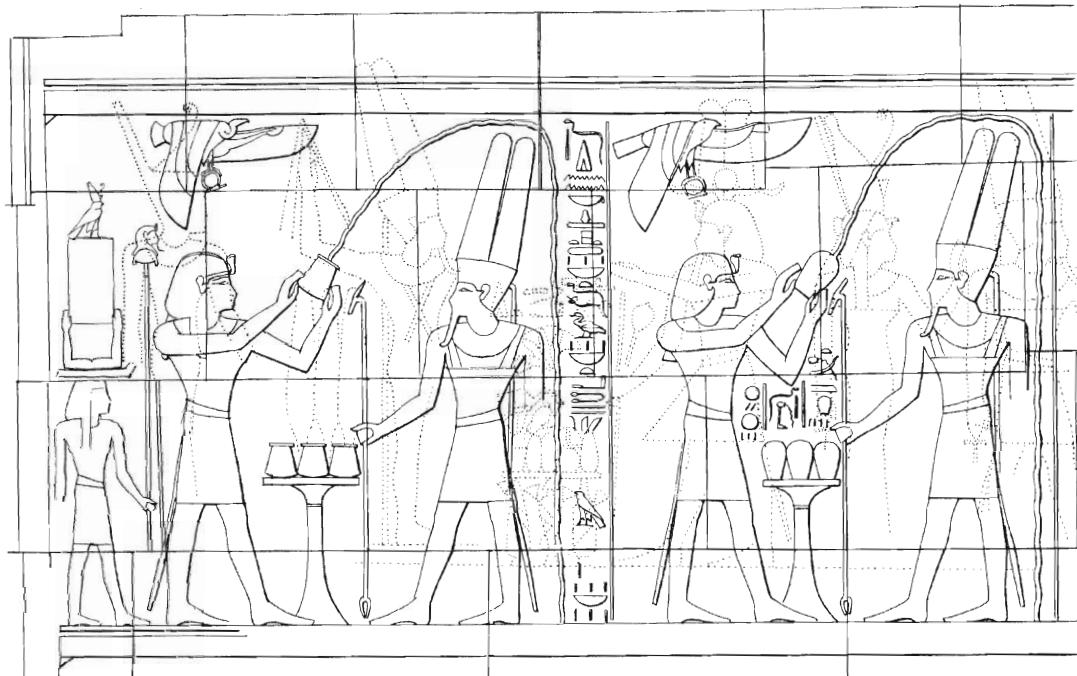


Fig. 276. Transposition between room XII (solid lines)
and room V (dotted lines)

Now, the symbolism of these scenes represented in room XII is completed in transposition by the scenes depicted in room V (fig. 276).

On the left, the king pouring the libation over Amun with the red vase is in transparency with Amunet wearing the red crown (fig. 276). On the right, the king pouring the libation over Amun with the white vase is also in transparency with Mut, who wears the white crown hiding the red. The gesture of influx of Mut's left hand is in transparency with the ear of Amun in room XII.

At the center, the column of text inscribed in room XII mentions the offerings of "food" that are not shown on this wall but are in transparency on the other side in room V where the title "divine offerings," *maā*, can be seen above the table of offerings and crosses in transparency with the vertical text of room XII, which mentions them.

The king offering the white vase is projected in transparency onto the king walking in the opposite direction, crowned with the two feathers of Shu supported by the horns of Khnum; he is ready to consecrate the offerings and holds the *mākes* staff and the white club in his left hand.

This is an example of transposition completing a teaching. This teaching will only be understood if one gives to each figure and each of the gestures the significance of the substances evoked and the functions symbolized.

Let us finally point out here that again there is a crossing. The Mut bird, generally Nekhebet the white, oversees the tableau of the ablution with the red vase, while the ablution with the white vase is supervised by the Horus bird. The two birds hold the *chen*, symbol of a ligature.

PLATE 76 • WEST PARTITION

The west partition of room V includes three registers, only two of which are still there. We see the king five times on this wall; each time his single arm divides into two forearms, and the legend specifies that he offers the cloths four times: the *nemes* veil three times and the *mnkht* strip of cloth once. Here are five chapters of the ritual relating to the offering of four strips of cloth and to the covering of the *neter* with the *nemes* veil, associated in the Book of Funerals with the white crown of the South originating from el-Kab (temple of the white vulture, Nekhebet), when this *nemes* veil covers the head of the *neter*.²¹

On this partition the four white vases and the four red vases are again offered, as well as incense. Finally, the *medjet* oil is joined once to the offering of the *nemes* cloth. This aromatic oil is used each day for the ritual unction of the forehead. The detail concerning these “holy oils” or fats is given on the east wall of this room.



PLATE 77 • EAST PARTITION

The east partition of room V is divided in two by the door opening on three chapels preceded by a straight corridor (room XI). In the first register two tableaux face each other and frame the door. The one on the right (south) shows the king making the forty offerings. The one on the left (north) shows the king as he prepares to consecrate them.

In the second register five unguents or perfumes are presented. The ritual speaks of the royal unction transferred to the *neter* of the place that daily receives this homage with the liturgical variation of the day. Nine oils are used: a canonical oil—the *medjet* unguent—used daily, and, depending on the festival days, eight other oils.

Room V gives only the names of the five sacred unguents with which it is specifically concerned; these holy oils (the chrism) were used to anoint the forehead of the *neter* (as with the king) in order to burn away all malefic influences that are obedient to Seth and to give the *neter* all power and all royalty (the crown). On the other hand, the ritual associates these “oils” with the eye of Horus, or considers them as “what comes out of” the eye of Horus.



PLATE 78 • SOUTH PARTITION

Like the other walls, the south partition of room V had three registers (of which only two are still intact), each containing three tableaux.

In the middle register the king, walking from west to east, first offers the white *nemst* vase, then waves incense with the *snter* resin, and finally offers the *anti* resin,²² in liquid form since the word is determined by a vase.

²¹ Cf. Moret, *Rituel du culte divin journalier*, p. 238. Recall the Gospel of St. John (20:7): “... and also the cloth that had been over his head; this was not with the linen cloths but rolled up in a place by itself.”

²² According to Lieblein, the word *anti* designated “incense” and not myrrh, and according to Loret, the word *snter* designated a resin taken from turpentine, both cited in Jéquier, *Frises d'objets*, p. 319. We cite the names of the resins as they are presently translated by Egyptologists, but it is obvious that incense, mastic, bitumen of Judea, myrrh, etc., are only symbols for substances that have their equivalents in physiological substances. Let us note that there is a simple and natural method to make liquid myrrh without any addition . . .

On the lower register, walking from west to east, the king washes the double support of the vases in the presence of a blue Amun; in the center he makes the same gesture before an ithyphallic Amun. To the east the king pours water out of a vase in the shape of an ankh, which falls in a double stream into a double basin and in front of Amun, whose body is red (which is very rare).

The head and the crown of the red Amun to the east and of the blue Amun to the west are sculpted on two column drums of Tuthmosis that are reused in this wall.²³ The accent is placed here on duality, the double aspect that sums up the theme of this room.

In the southeast corner of this sanctuary two other column drums of Tuthmosis are reused, and the double crown of the king is carved here (east wall).

On the exterior side of the south wall are again two drums of this same type of column put into the thickness of the wall. Exactly below these two reused blocks, the dedication text carved on the socle mentions the "columns" in the form of *columns* of the temple. Now, these reused column drums were invisible before the wall was damaged. We mention this fact because there is a direct relation between the Thotian (Mercurial and Amunian) character of Tuthmosis and the brain.

The south wall corresponds to the band that encircles the head. Let us recall that in the head the entire brain can be considered as a gestating fetus: it is enveloped by the cerebrospinal fluid,²⁴ of a typically Amunian character (amnion), and the choroid plexus (chorion) brings the nourishing blood, which itself will be spiritualized.



In speaking of the waters above,²⁵ symbolized by the triple stream of the *nekhakha* scepter, I mentioned the *third* state that is joined to the *two* natures. Here we are dealing with what is called the "eye of Horus." The fact of speaking of an eye shows that it is a question of an appearance, and the fact of attributing all power to it gives it the aspect of a Fire (or active energy).

The "evolutionary" theories of our philosophers, paleontologists, anthropologists, and biologists give the impression of a sort of very learned childishness: to wish to judge the history of life by the light of terrestrial life alone is impossible. Our earth is part of the sun, and life begins at the extreme limit of the solar sphere of which we see only the dense center, from animating warmth to burning heat, luminous to our eyes. Heat is thus from light, still too subtle to be perceived by our optic nerve, but perceptible to our pineal eye, of which only the pineal gland remains. The conditions of life on other planets are different from ours, but it is absurd to infer the possibility or the impossibility of life there in our same human form. It is well known that anaerobic and microbial as well as other forms of life exist in an environment of carbonic gas. Ants and other insects are not averse to swimming in sulfuric acid but die in a more or less corrosive alkaline environment. There are all kinds of adaptations.

The appearance of human being occurs at the extreme limit of the solar sphere (the solar system), and this being divides itself into all the other forms of life. In its purgatorial passage on earth it is the cerebral, mental phase that develops. Meanwhile the human heart continues to beat the seconds of its life through its innate consciousness, without cerebral consciousness.

Forms are transitory, and to wish to construct a schematized science on present forms is per-

²³ Cf. plate 78B, the ground plan of room V.

²⁴ Cf. case 6 of the Surgical Papyrus in which the brain, its membranes, and the liquid they contain are mentioned.

²⁵ Cf. chapter 37, conclusion.

haps useful, but presents nothing certain or stable. This is why the sacred teaching is based only on realities that do not vary with time and the phases of gestation. The knowledge is the knowledge of the essence-phenomenon that is the reference for all accidental phenomena. "Man is created in God's image," says the biblical text, and procreation is "in the image" of the creation. In the image, but not in identity.

It is said that men are born from the tears of the eye of Ra, that is, from the salty waters of Nun, the primordial chaos. The Heliopolitan Mystery shows us Tum who, creating himself, comes out of these waters as the first earth, the *kamutef* of the temple, and in him is the fixed point that contains all, but in terrestrial form. This fixed point is nourished by Spirit, that is, by the single substance still without form. This substance will take form thanks to the fixed terrestrial point that will "weave" spirit into tangible substance. These waters then bring with them that which animates the first earth in that they are ejected (*htp*) by the burning fire called Ptah, the fire fallen to earth. This ejection, or ejaculatory function, is called Min, and through its aquatic and spiritual character, Min-Amun. Carrying thus in the waters above that which universally animates or specifies the first earth, these waters make perceptible and, above all, visible, that which was invisible, "the odor" of earth. Now, the specificity by itself—which is soul—has neither body nor appearance before nourishment has rendered it material, and it is this first appearance (*her*) that will be called the "eye of Ra." In order then to be corporified and become the All-Powerful, it must itself be that which is fixed and gives itself body—the royal body in the white crown—which can only become such when the spirit (Thoth) rules over the first fixity, having itself become fixed: Thot-mes (Tuthmosis). Then the eye of Ra will animate this perfect body and appear, Her-mes, the rebirth of the face, *her*.

As for specificity, that is, the coloring or animating particularity, when it is carried in the waters above, it is called Hat-hor, the house of Hor or Her (Horus), and its appearance is that of the eye of Ra (the visible sun). It is an unguent, triple in nature, issued from the fourth that remains below. This aspect is represented by the "boxes for cloths" and the "four calves," those who suckle milk, the first of which is black, the second white, the third red, and the fourth spotted. These are the four "elements" as well as the four phases, because the elements of this philosophy are in reality phases of the becoming.

It is thus in the sanctuary of olfaction that we must find the story of the odor or soul, as well as its separation (or division outside of the chaos), then the nature of the unguents that will animate the forehead of the crowned king. This is a great and mysterious story that, under the royal symbol, is applied to all of nature, in the image of the reality. This story is no more metaphysical than the "creation of Adam," since it is actually a matter of the cosmic becoming.

APPENDIX: TECHNICAL PROCEDURE FOR SURVEYING THE WALLS AND GROUND PLANS

The walls of the temple of Luxor have been surveyed using the following method:

1. On all the walls of the covered temple and on the columns, a horizontal line was marked as a reference level for all measurements of height.
2. Strings were tightly stretched on each wall, at regular distances to mark the verticals.
3. The dimensions of each wall were established with regard to the horizontal and vertical reference lines.

These measurements thus taken include, with respect to the horizontal, the line of the ground, the different heights of the registers, the line of the ceiling, if existing (the tiles of the ceiling were measured as well, when possible), and all the heights of the foundation stones taken at each corner

of each block; and with respect to the verticals, the height to each stone joint and to the base of all the vertical lines separating the different tableaux and the registers containing hieroglyphs, and all the essential points of the figures, thus allowing them to be drawn afterward in outline.

4. All the vertical dimensions for each figure (knees, belt, navel, shoulder, neck, mouth, nose, eyes, headband, and so on) and of the tableau on which it is represented have been recorded on specially printed cards, and the essential points of supplementary measurements—such as certain details of the hands, of the headdress, or the offerings—have been noted on location sketches.

5. Partial verifications of the spaces between the joints of each stone have been made that take into account the redressing of certain of them by Akhenaten's effacings and the subsequent restorations that have exposed the plaster contained in the interior of the walls. All the blocks not dressed were cut as dry joints and leave no space between their joints. All the rejoined blocks contained plaster, so it was necessary to calculate the distance between the plaster and the joint of the neighboring stone in order to determine the possible play of the blocks.

6. Other partial verifications have also been made, thanks to the vertical lines of the registers and the tableaux; certain blocks being disjoint so that these lines were no longer in alignment, the measurements then of each disjunction allowed the reestablishment of the original positions of these blocks. The partial verifications of the spaces and the joints have enabled the length of each wall at each foundation to be determined.

7. In order to be able to see the whole of the walls—which average nearly 11 meters long and 8 meters to 9 meters high—plates were drawn to the scale of 1/20 for each of them. On each plate, a first drawing of the blocks and the tableaux was made, and only according to the data taken with regard to the vertical and horizontal lines.

Next we drew the figures and the tableaux according to the measurements recorded on the cards, any error being immediately verifiable since the essential measurements had been taken twice, once with respect to the lines of reference and again with respect to the tableau. The drawings have been executed in accordance with the *current state* of the walls.

Finally, the hieroglyphs were drawn on the plates after having been measured one by one in relation to the essential lines of the tableau and those of the joints of the stones, which has, in drawing them, allowed for a third verification.

There are considerable advantages to this method of surveying. Because of the general line indicating the level plane, it is possible not only to know the different pavement levels but also to know all the damage caused by movement of the ground, and finally to be able to see the absolute coincidence between the two partitions of the same wall. The drawings of the blocks of stone enable us to see which ones are identical to one part or another of this wall. In certain cases, probing the thickness of the wall itself allowed us to verify which blocks "traverse" it and which do not, and to note dovetails when they exist in the joints.

Because there is rarely enough space to stand a sufficient distance from a tableau, the average height of which is 2 meters, with the distance in front of it generally only 2 meters because of the columns, photographs are extremely difficult to make geometrically perfect in a temple such as that of Luxor, even when using a wide-angle lens, which inevitably deforms the image. All the photographs taken in these conditions, however, can be adjusted or rectified by being projected onto a *canevas* established for each tableau.



The plans of the pavement of the covered temple have been made by surveying the stones one at a time, following a principle similar to that applied to the walls, that is, by drawing a general grid pat-

tern established on a single reference axis for the entire length of the temple and extended into the court of Ramesses and the courtyard of Nectanebo. We could therefore easily calculate each deviation of a wall. The only difficulty was in the considerable play of certain parts of the pavement in the covered temple, play caused by infiltrating water that has sometimes caused bulges in this pavement and consequently disjoined certain walls whose present orientation is no longer what it was originally. The restoration of each wall has allowed the verification of the plans and the reestablishment of the dimensions and true orientation of the walls.

There has not been any shifting in the heart of the monument; rooms IV and VI have hardly even budged and their measurements are exact. The dividing walls between rooms IX, II, and III are also exact. In room XII, however, it was necessary to make all sorts of cross-checks to establish its precise dimensions and only have barely a centimeter of hesitation over a length of about 22.20 meters; this precision could be attained thanks to surveying and measuring the architraves on both sides, which confirmed the measurements used in this place. Room I, the central sanctuary, has shifted slightly, but the walls of the two sanctuaries, V and VII, have shifted considerably and their measurements are difficult to make exactly. Nevertheless, it is possible to indicate here the dimensions within 1 or 2 centimeters and the orientations within $\pm 0^\circ 5'$ for each partition of room V.

North partition: 5.56–5.57 meters
 South partition: 5.59–5.61 meters
 East partition: 7.87–7.89 meters
 West partition: 8.14–8.16 meters

The lengths of the east and west partitions are very different (27 cm) because of the orientations of the south and north walls, each of which follow a particular angular relationship. The lengths of the south and north walls are more or less equal to within several centimeters; the difference is also due to nuances in the orientation.

The south wall is at $32^\circ 30'$ of east-west orientation, $\pm 0^\circ 5'$, and the east wall is practically perpendicular to it. On the pavement, the line on the ground for the plan of the east wall does not exactly coincide with this wall. The line is based on the geometric axis, which proves that the deviation of approximately $0^\circ 30'$ from the east wall is intentional.

The north wall is at $35^\circ 18'$, $\pm 5'$, and is thus parallel and perpendicular to the east and north walls of the hypostyle court, the angular ratios of which can be transcribed into whole numbers, by 12 : 17 and 17 : 24 ($35^\circ 13'$ and $35^\circ 18' 40''$, respectively).

These two ratios are $\sqrt{2}/1$ and its reciprocal, $2/\sqrt{2}$, and correspond to the function of the plan of room V. This duality evoked in the north through the orientation is symbolically marked in the south by the dual character of the figurations. The proportions of the plan are as follows:

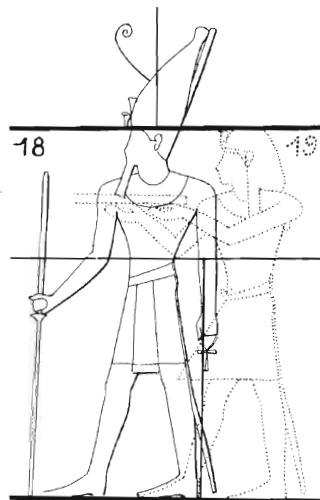
$$\frac{\text{length of the east partition}}{\text{length of the north wall}} = \frac{4.25 \text{ fathoms}}{3 \text{ fathoms}} = \frac{7.8766... \text{ meters}}{5.56 \text{ meters}} = 1.41666... = \frac{17}{12}.$$

The west partition, the particular orientation of which is $32^\circ 40' \pm 5'$ with respect to north, suggests a coefficient related to the “skullcap” of the earth,²⁶ and accentuates, through the joints of the stones, the skullcaps of the figures depicted in its first register. Starting from the north, the upper joint passes through the level of the forehead of the king entering the sanctuary, that is, at the level

²⁶ Cf. chapter 15, “Diadem, I Assume Thee.” The east and west walls give the two functional angles for the polar cap (skullcap) of the earth.

of the eighteenth square, then “rises” a little at each figure in order to cut, on the last king located at the south, only the part that would be covered by the royal headband (plate 76).

Finally, let us recall that the west wall of room V is in transposition with the east wall of room I. In room V, the joint of the stones that passes at the level of the eighteenth square passes in room I above the crown of the skull of the figures in transposition, establishing the fundamental ratio of 19 : 18 between the two partitions (fig. 277).



*Fig. 277. Transposition between room V, west partition (solid lines)
and room I, east partition (dotted lines)*

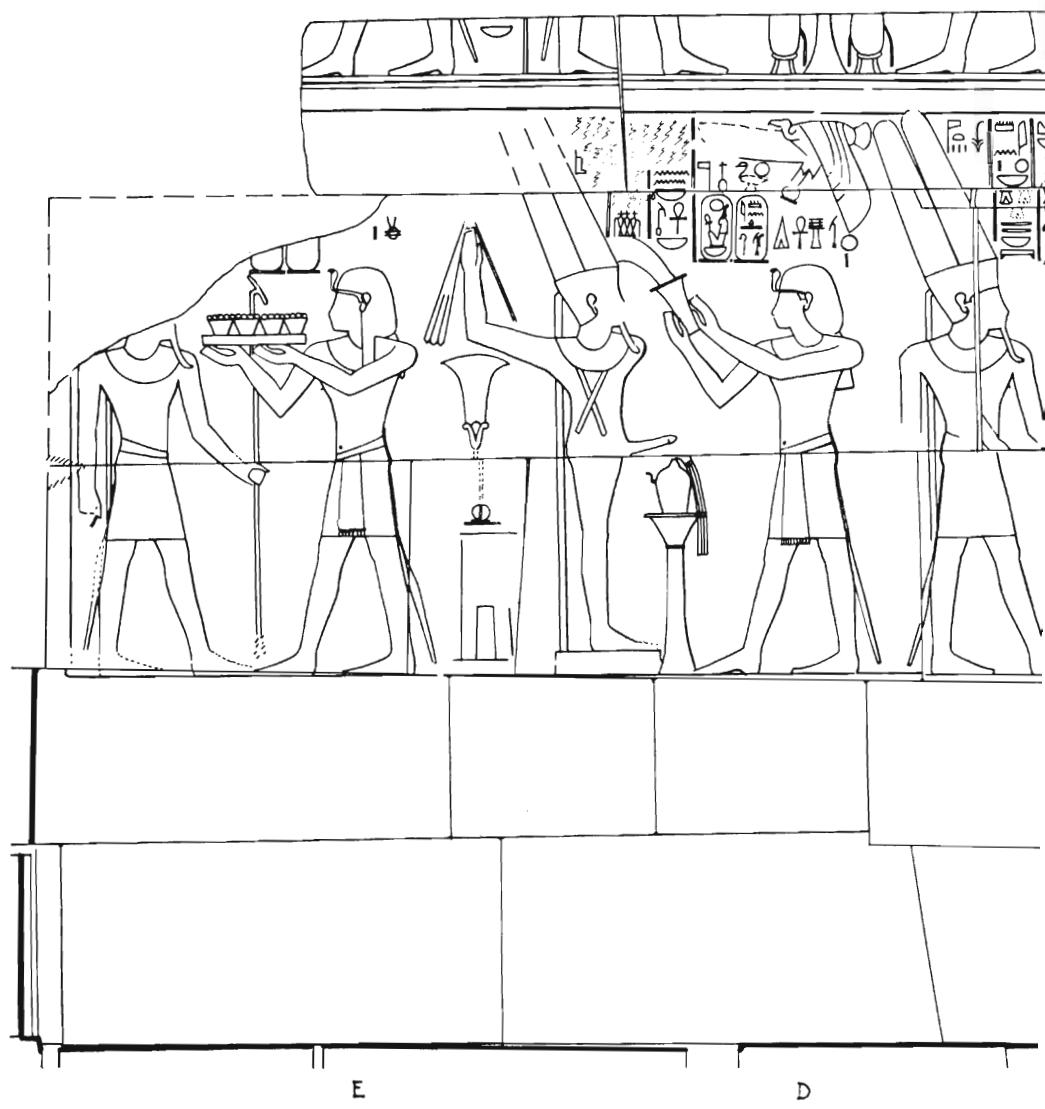
Chapter 40

THE AXES OF THE TEMPLE

Plates 79–90

*The head is the container of
the spiritual being, where
the blood, elaborated
throughout the body, is
spiritualized in order to
nourish the nervous flux
and prepare the "ferments"
of the blood and the "seed."*

(Chapter 17)



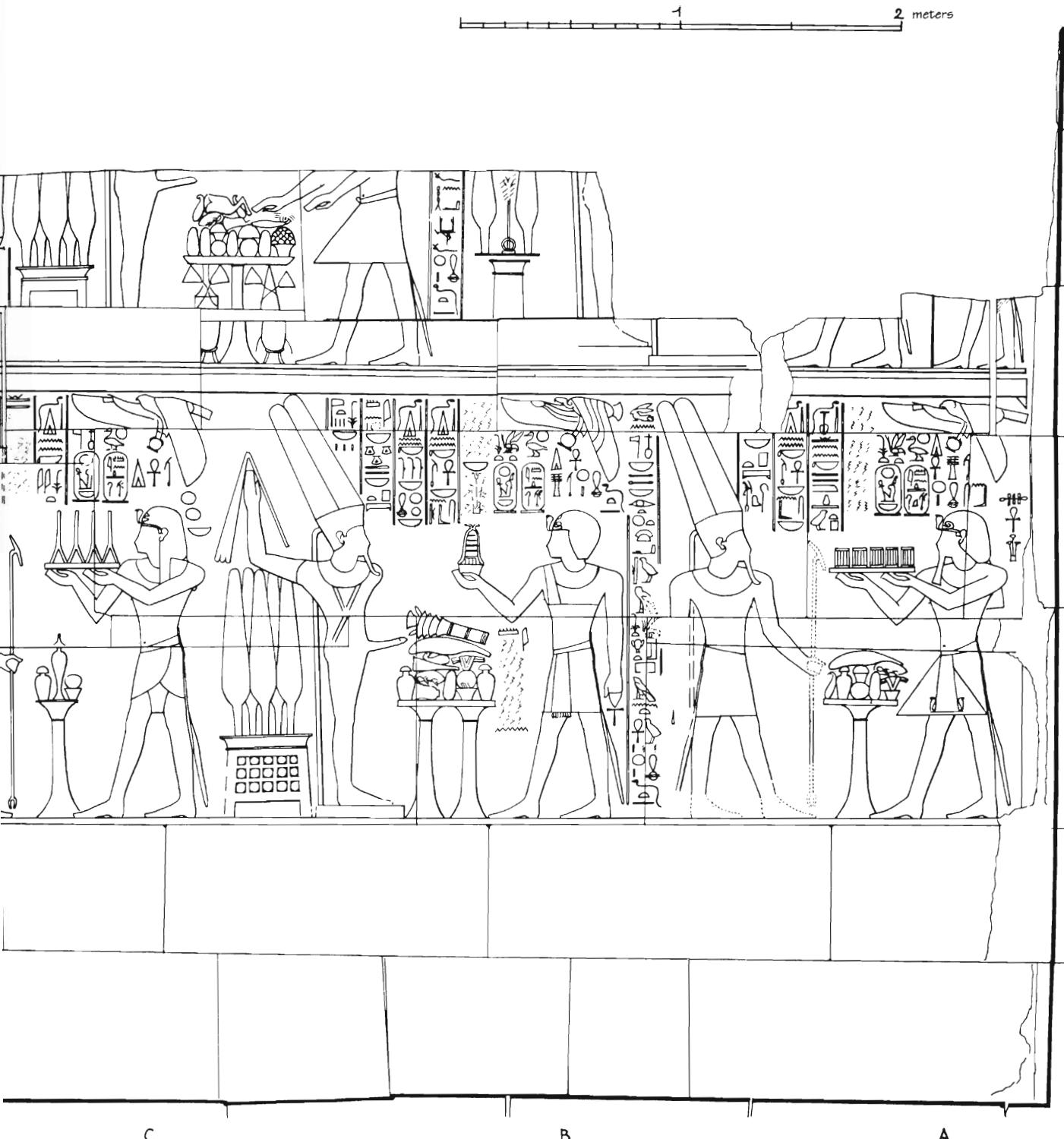


PLATE 79
The Holy of Holies, West Wall

The “Holy of Holies” expresses the function-keys from which the living phenomenon results. This is said in “numbers” at the places on the human body where the glands of the encephalon, the centers of life, are located.

(Chapter 5)



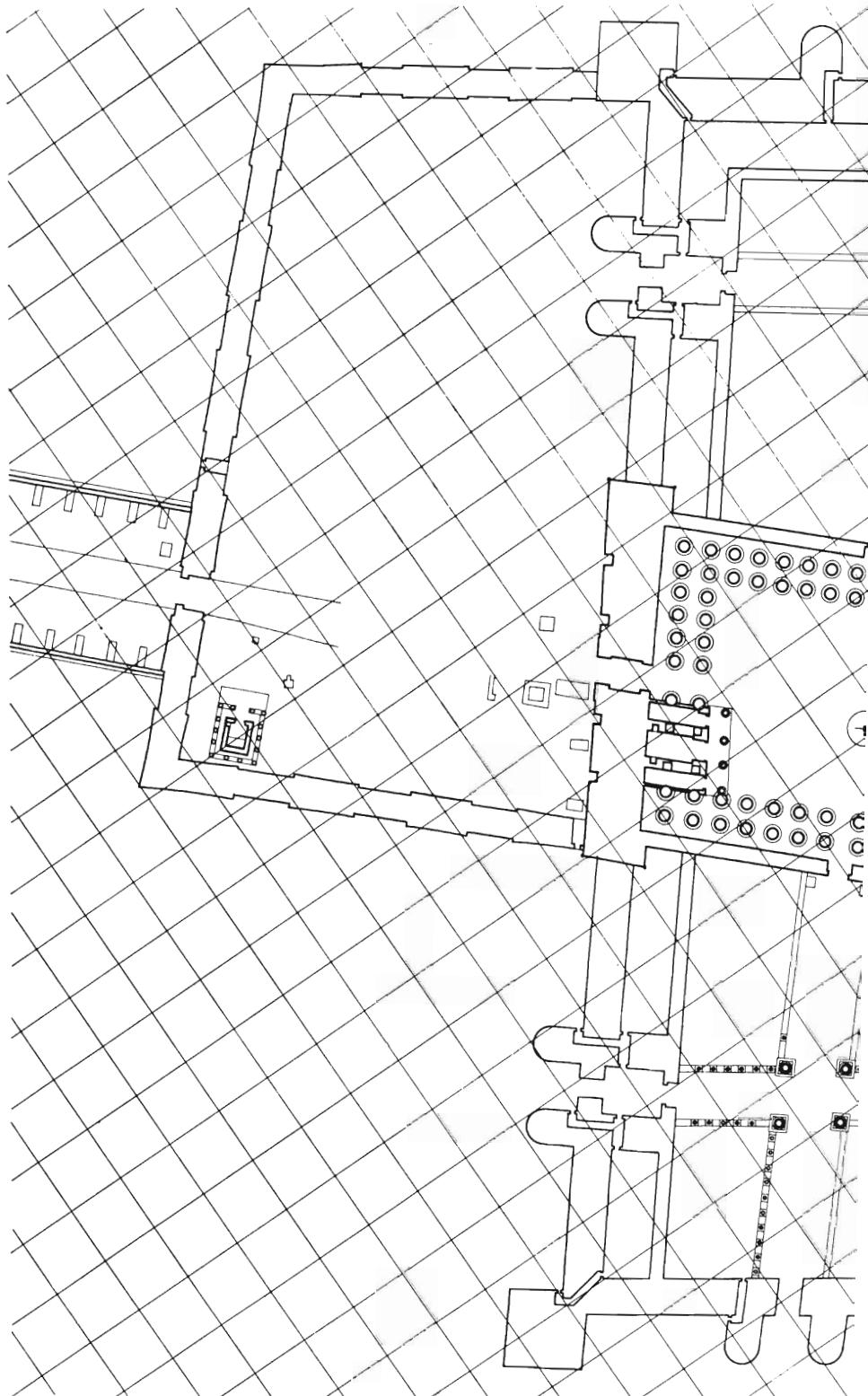
PLATE 80

The Holy of Holies, West Wall, Two Ages of the Temple

The orientations depend upon the cycle and include east for rising, midday for maturity, west for retiring and conception, then midnight for the mystic birth.

The temple of Luxor has its entrance at the north, that is, toward midnight of the cycle, and the essential sanctuaries, as well as the apse, are located toward the south, at midday, the formal realization.

(Chapter 25)



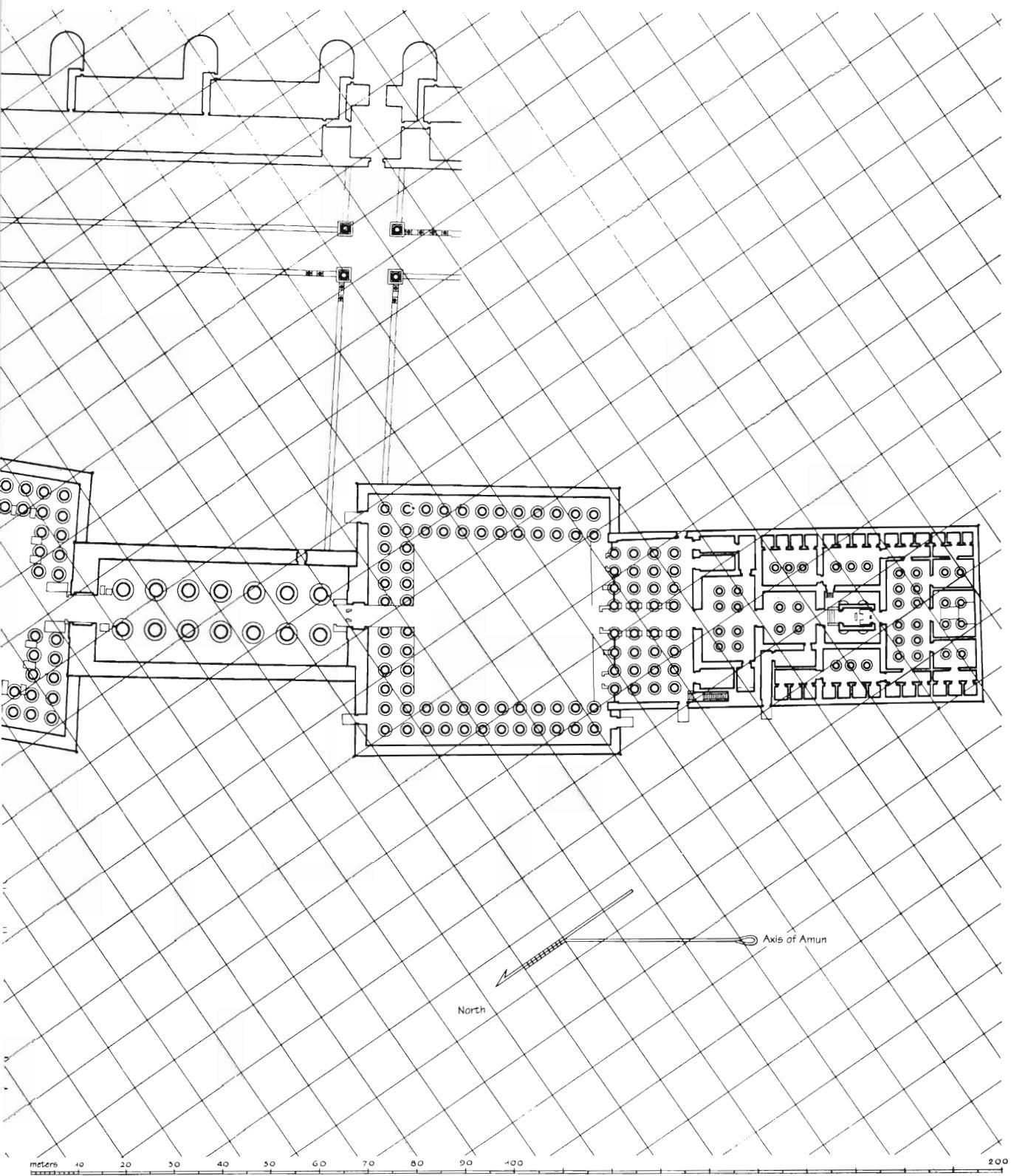


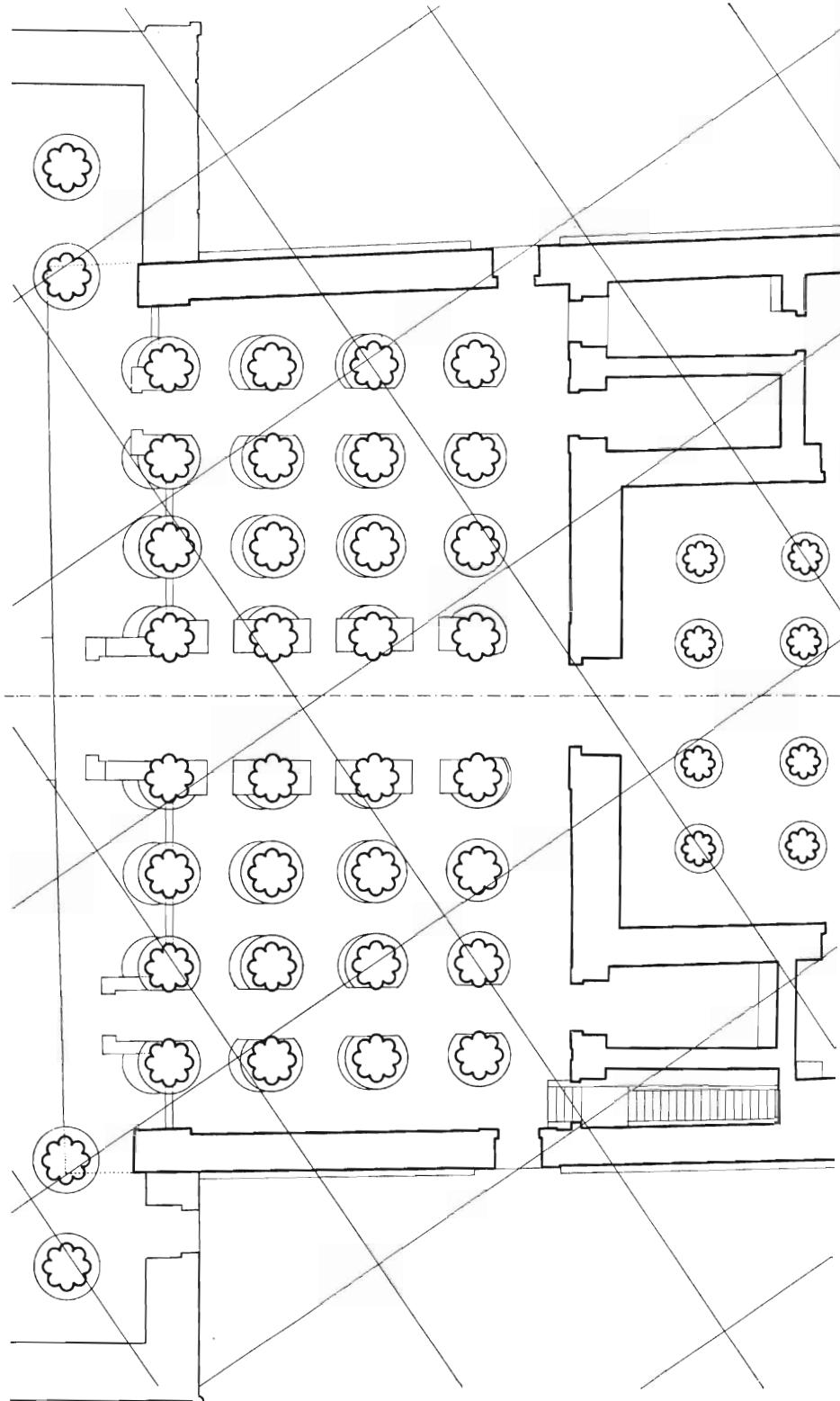
PLATE 81
The Temple of Luxor on the Orientation Grid, General Plan

Man crucified in space is
the Anthropocosmos.

The cross is the equatorial plane of a body in revolution around itself. It is the four directions that define the abstract center.

The cross is the symbol of life because for us life is simply the ability "to react."

(Chapter 19)



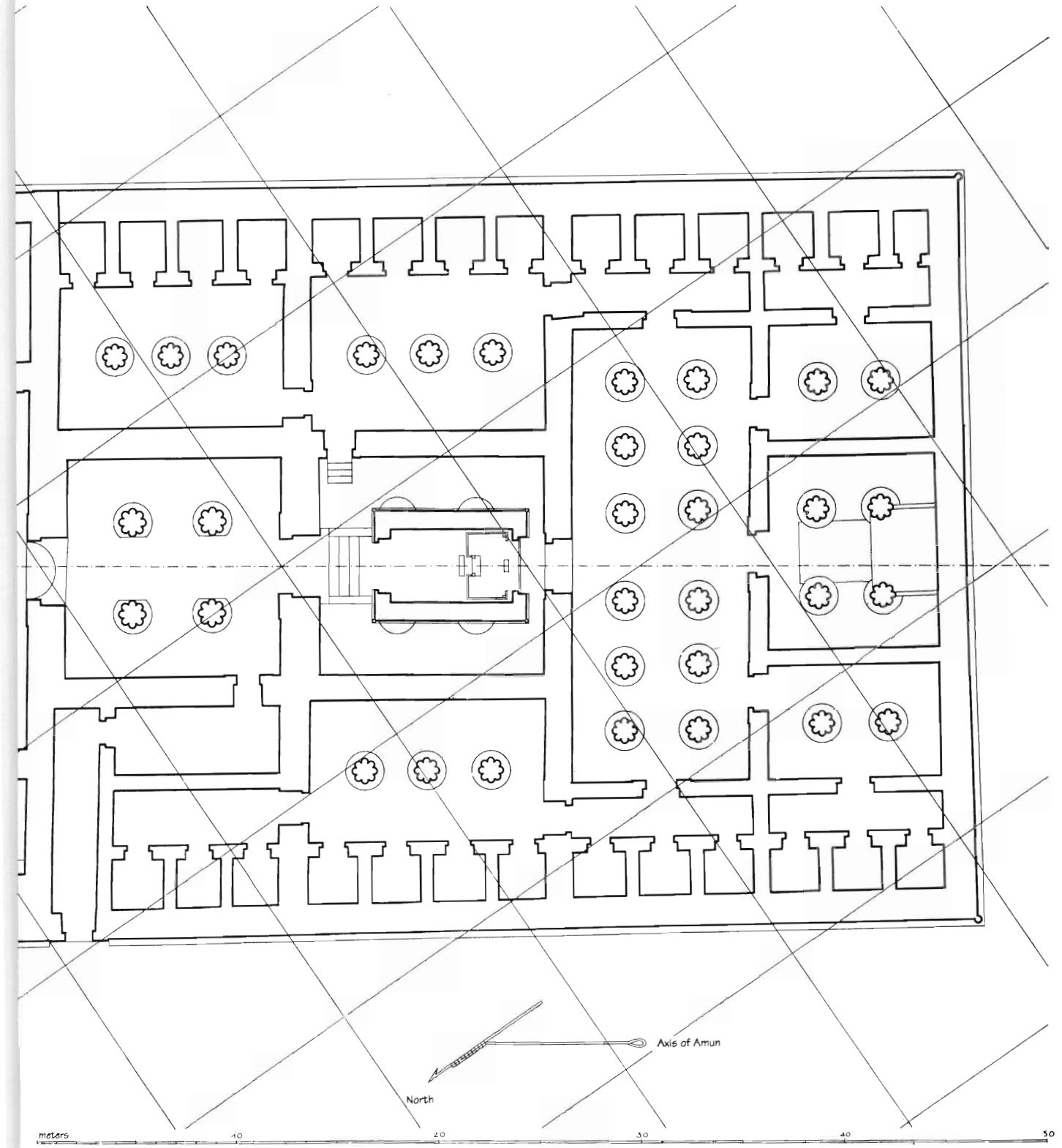
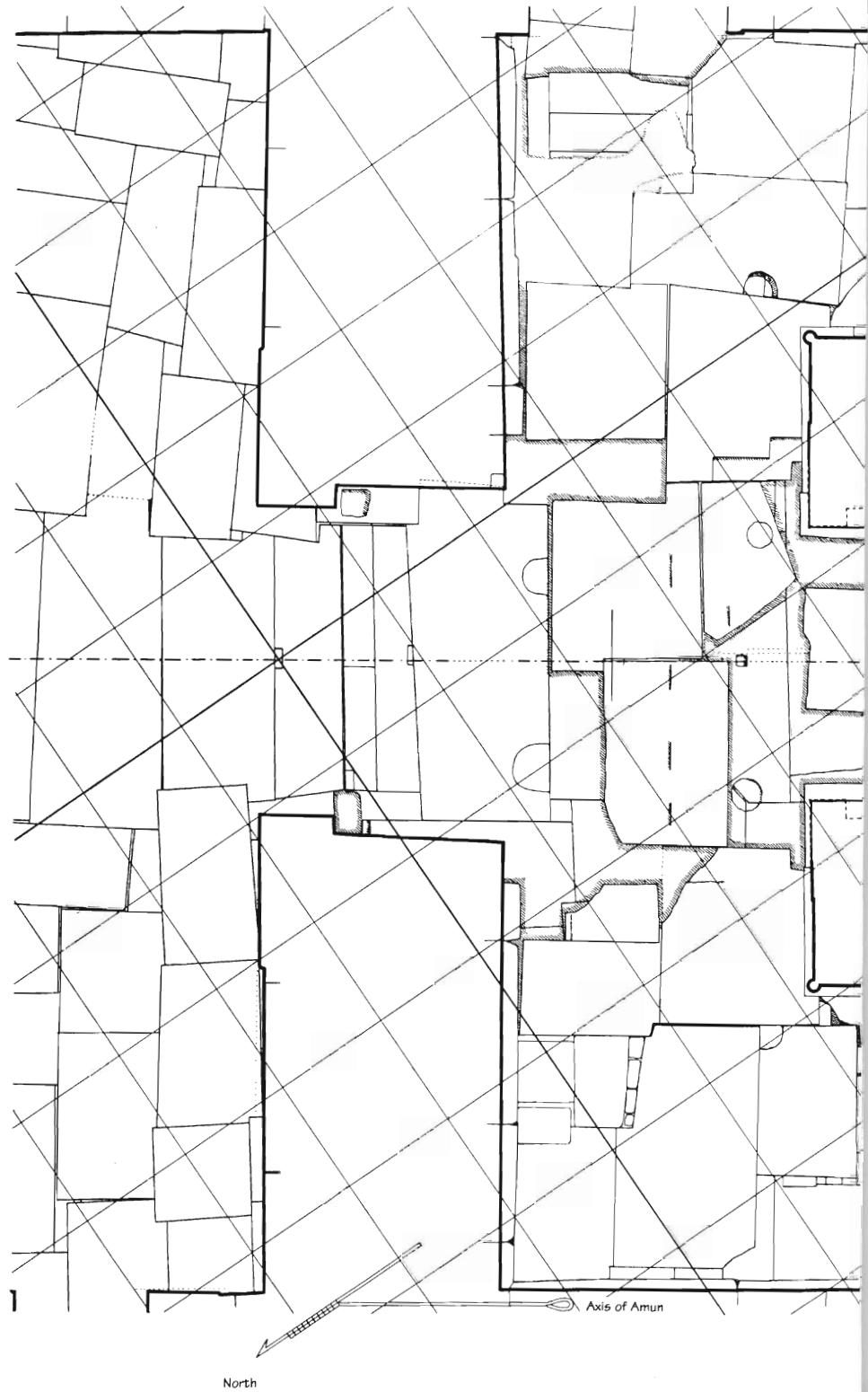


PLATE 82
The Covered Temple on the Orientation Grid

In order to remain in vital conformity with natural law, the axes of the temple are always moving, oscillating around the essential numbers of their origin so as to maintain harmonic spatial growth.

(Chapter 13)



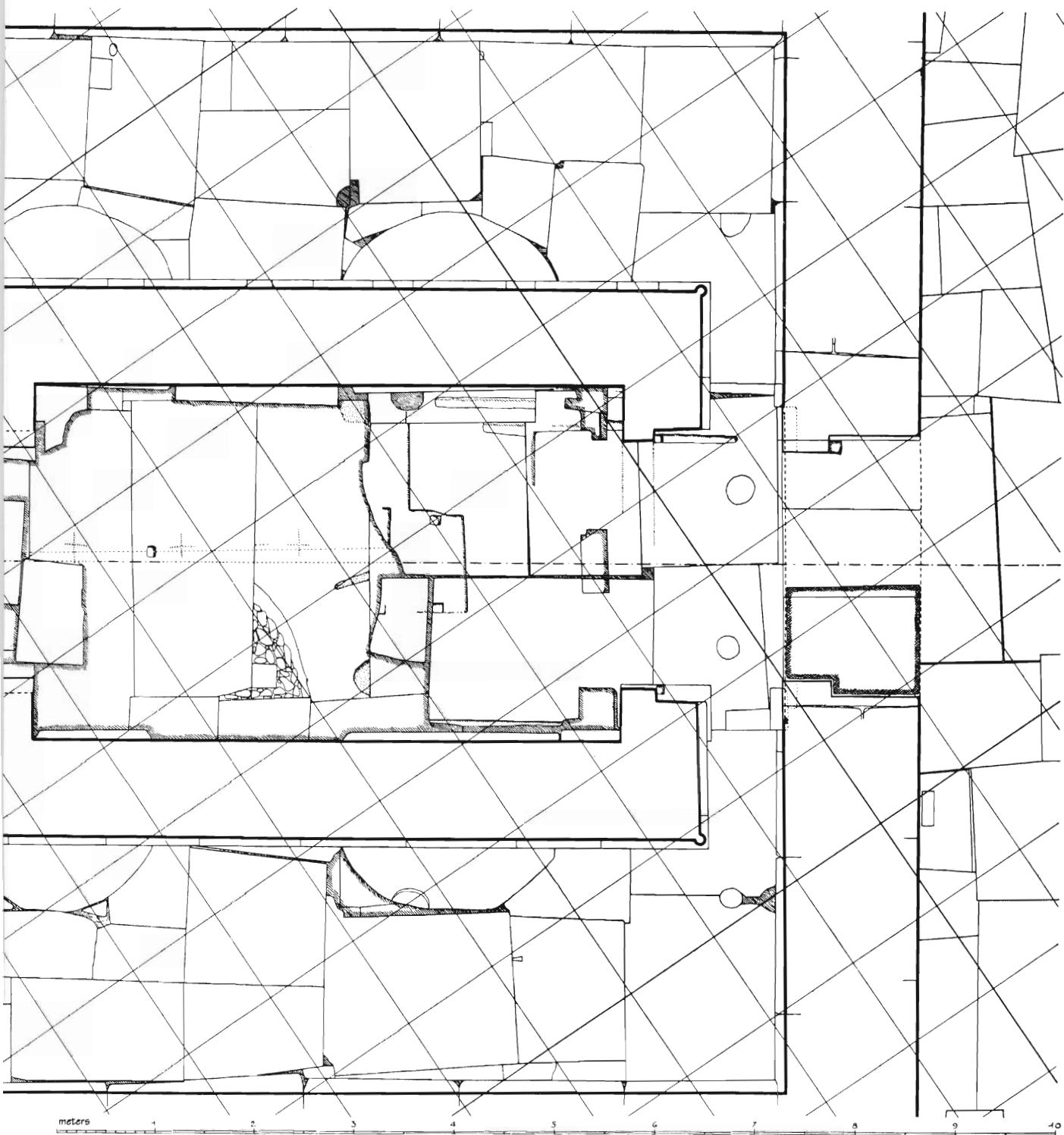


PLATE 83

The Sanctuary of the Altar of Amun's Barque on the Orientation Grid

*It is in the secret sanctuary, in the subfloor, that
the irrational median axis is marked, the present
moment between past and future, between before
and after.*



PLATE 84

The Secret Sanctuary of Amun

Indication in the subfloor of the geometric axis of Mut (*left*) and termination of the axis of Khonsu (axis of measures) (*right*) on the wall, marked by a key-piece.

When our concern is to see “the Temple in the image of Heaven,” the temptation to erect a monument on these rigid precepts is like wanting to try to make a celestial globe turn round a fixed axis, which would be its annihilation.

(Chapter 13)

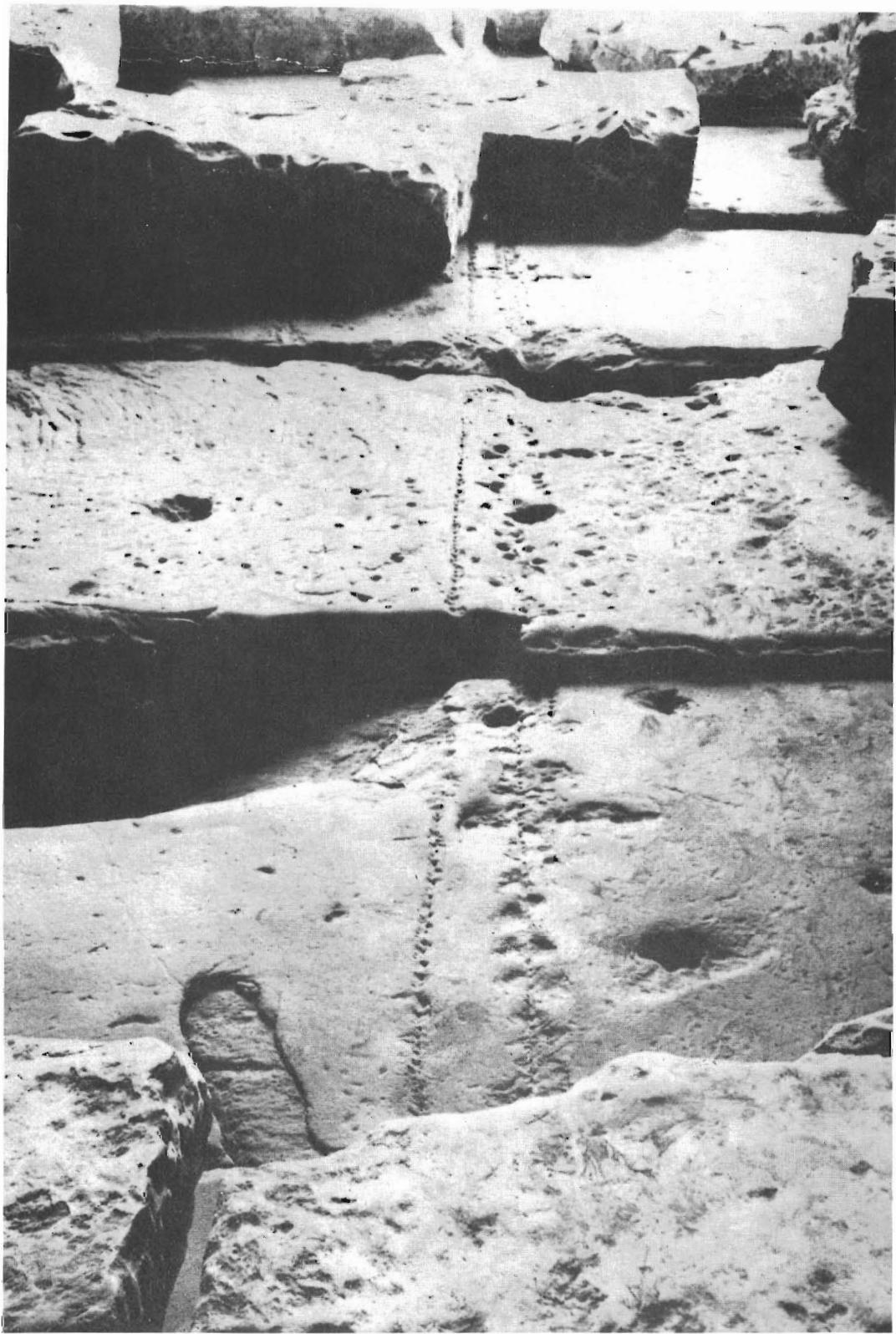
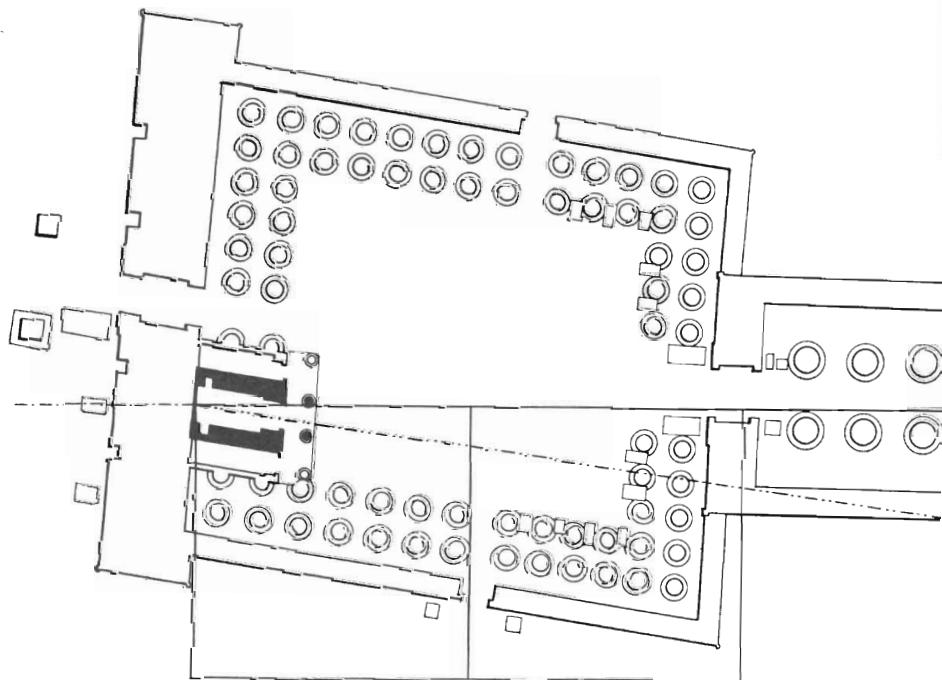
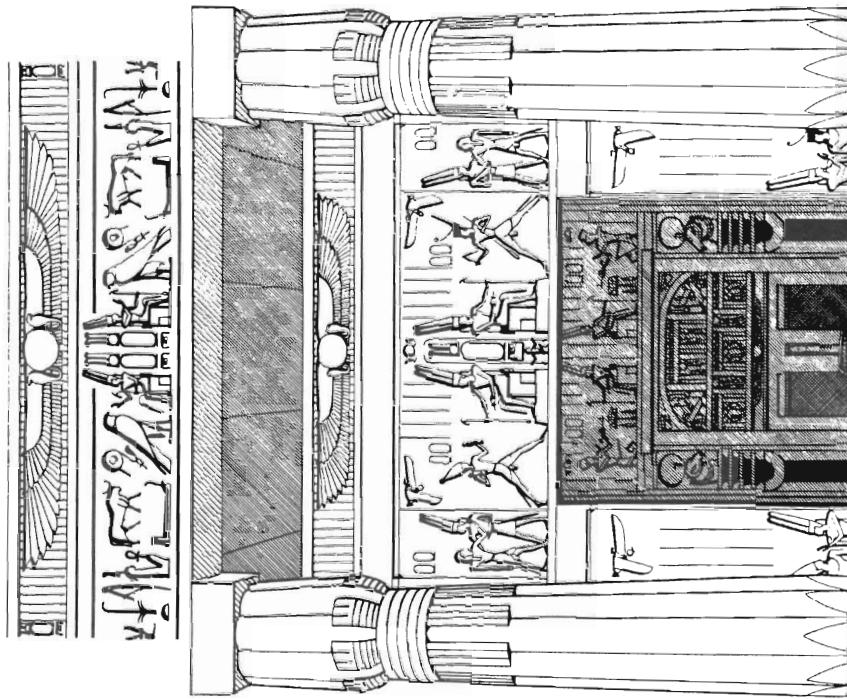


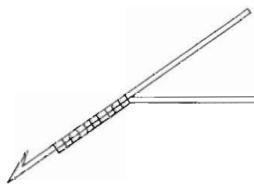
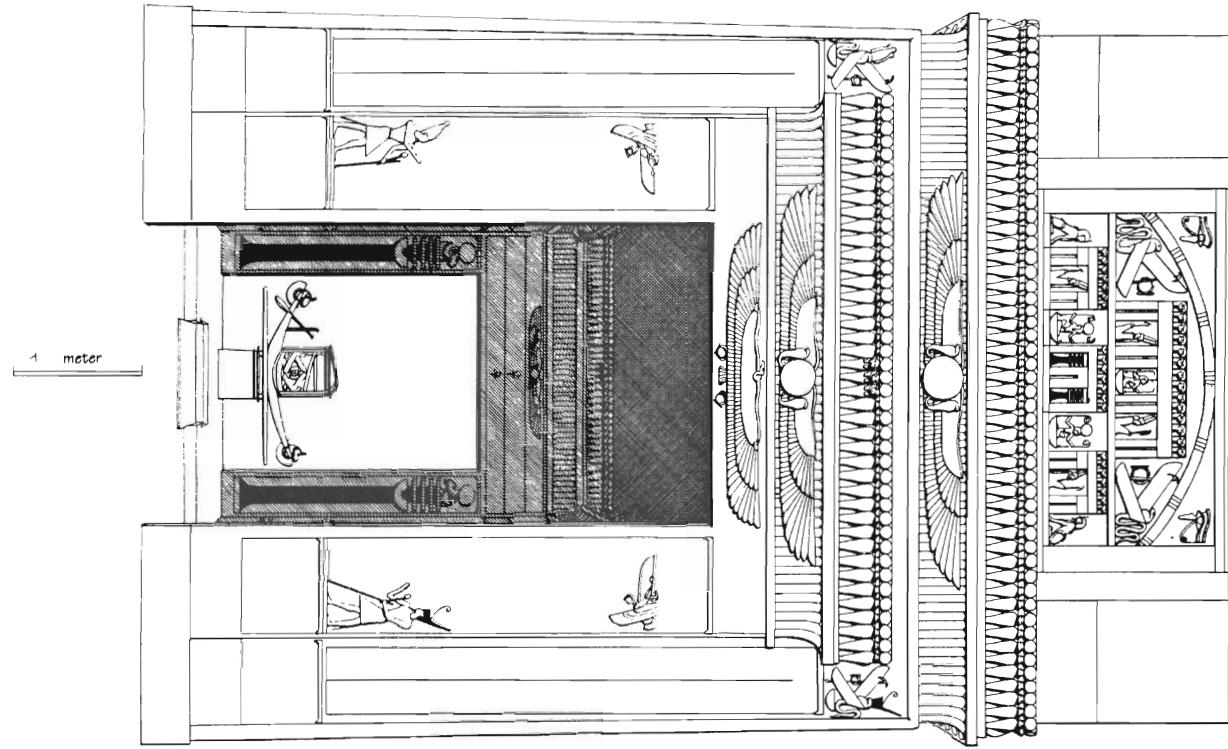
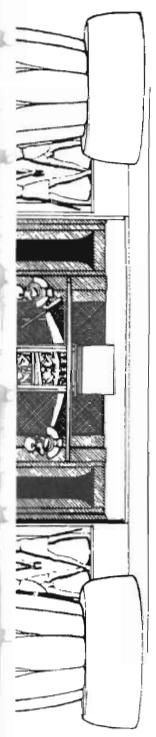
PLATE 85

The Axes of the Temple Inscribed in the Sanctuary of the Altar of Amun's Barque (View from the South)

*It is this mysterious mirror
that, vertically, reverses
right and left, then, hori-
zontally, reverses top and
bottom, that pharaonic
Egypt, in a state of superior
consciousness, manipulates
in all its works, making
them so difficult for us to
describe.*

(Chapter 19)





Axis of Amun

North

meters 10 20 30 40 50

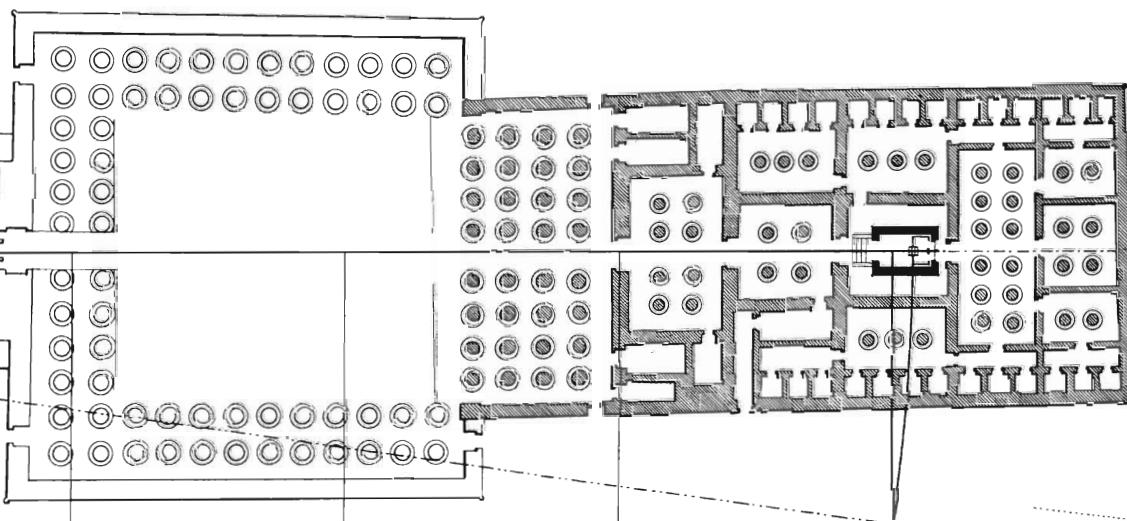


PLATE 86

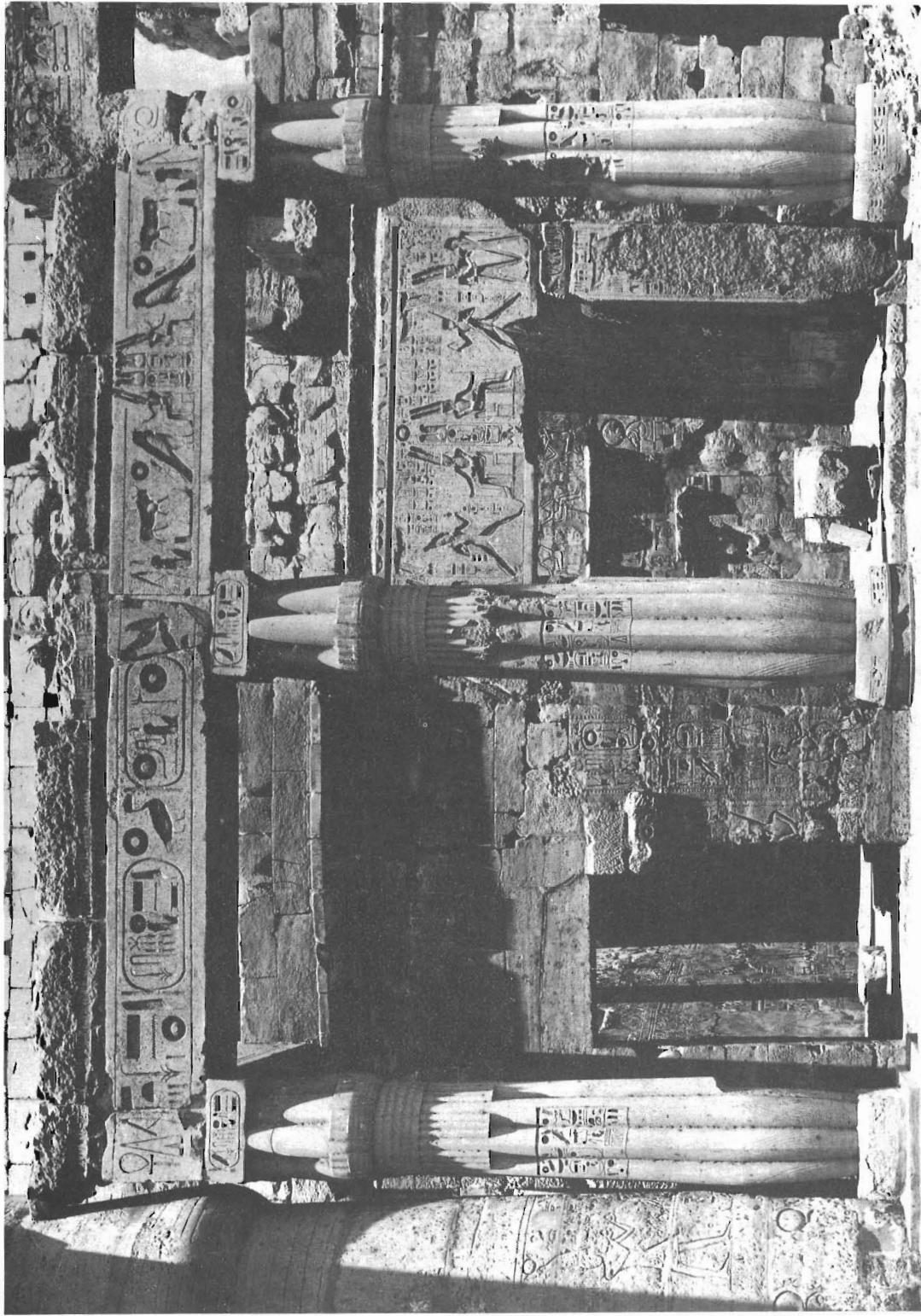
The Axis of Amun and Its Reflection

Reaction is the reversal of the direction of the action, provoked by the resistance immanent in the nature of the activity, or “action in function.”

(Chapter 4)

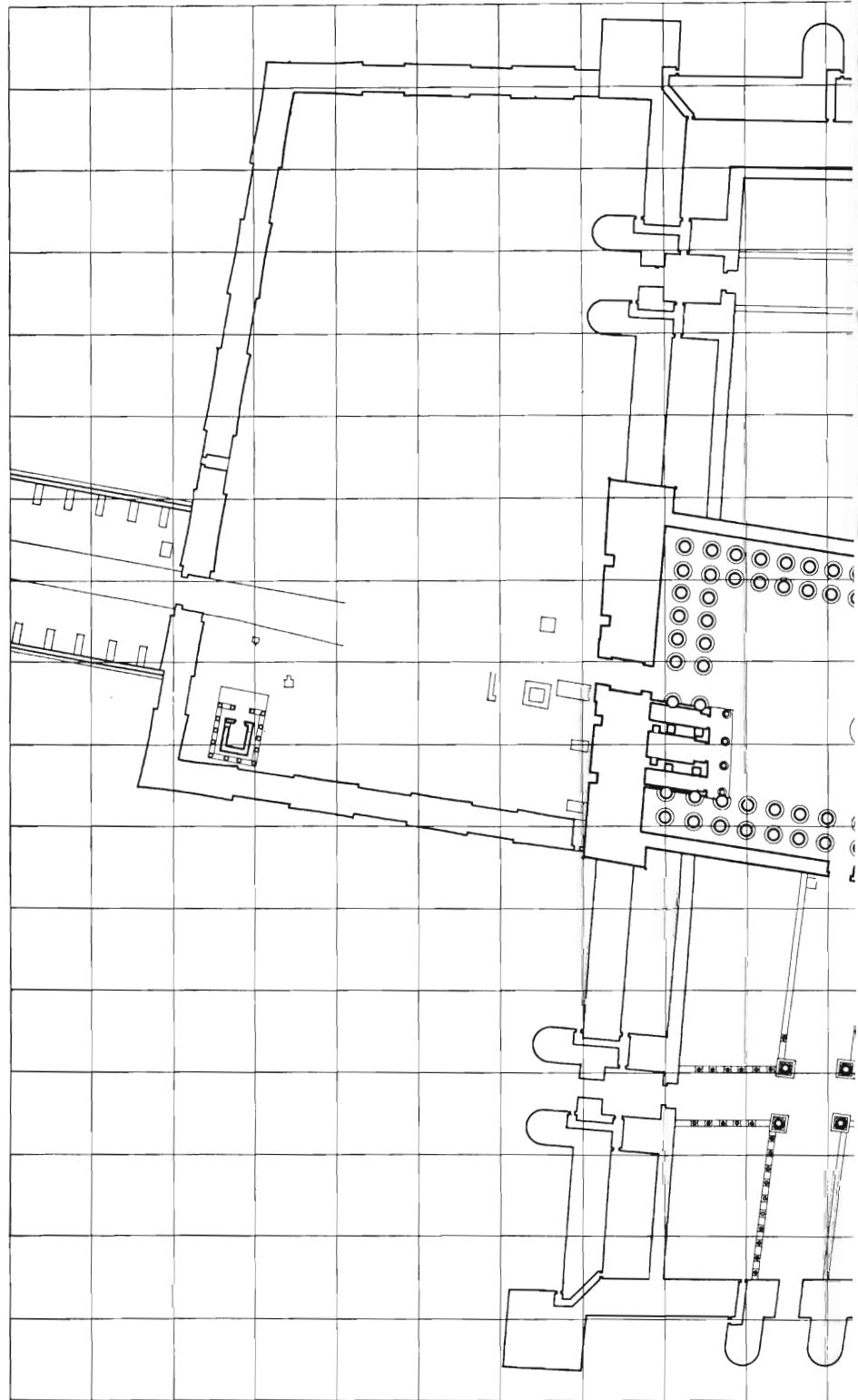
PLATE 87

The Mirror of the Axis of Amun



*For the architecture of
the temple, whether it be,
among others, pharaonic,
Hellenic, or Hindu, or a
Christian cathedral, the
axis is the spinal column,
filled with living marrow
and carrying sheaths of
nerves.*

(Chapter 13)



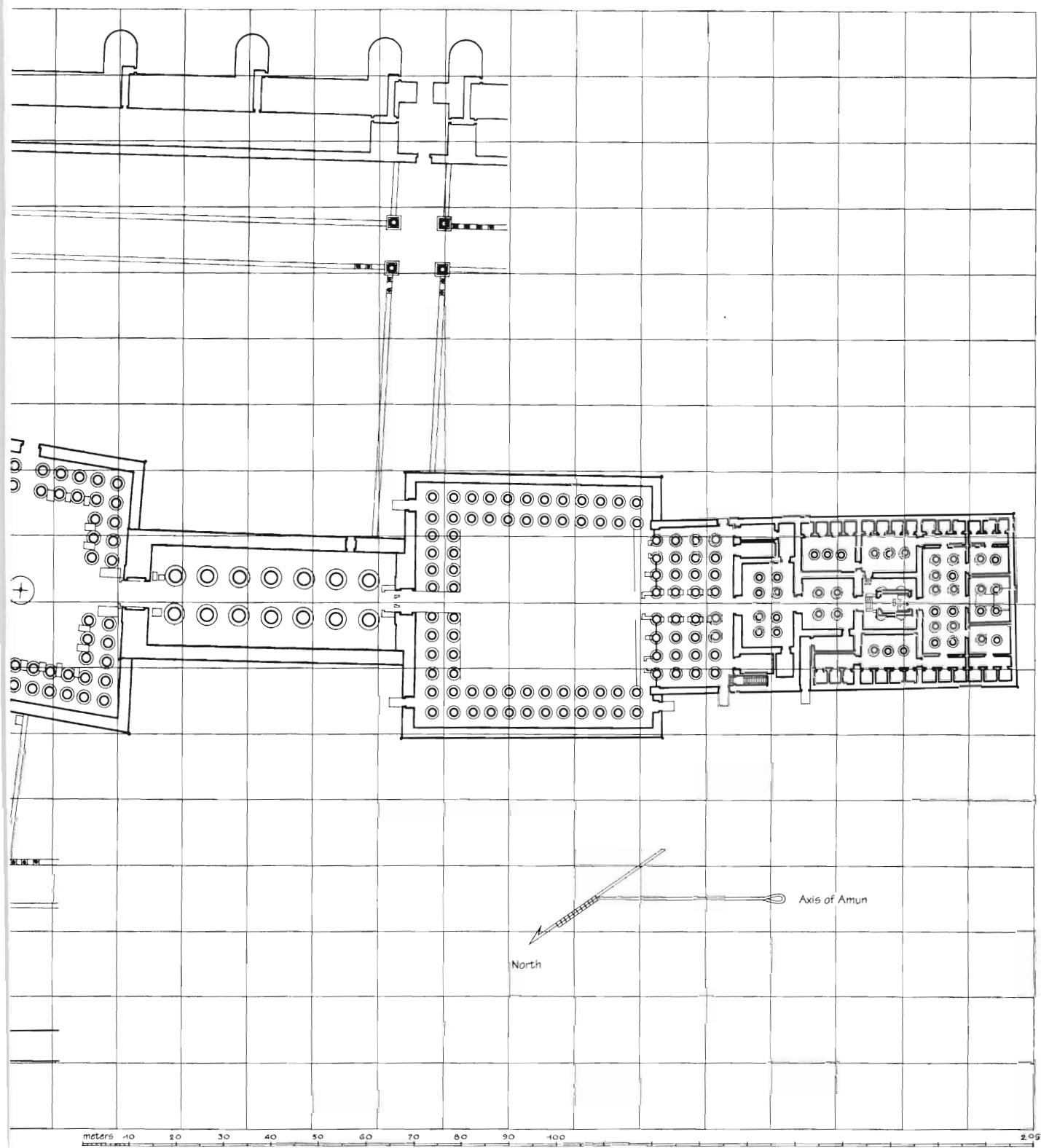
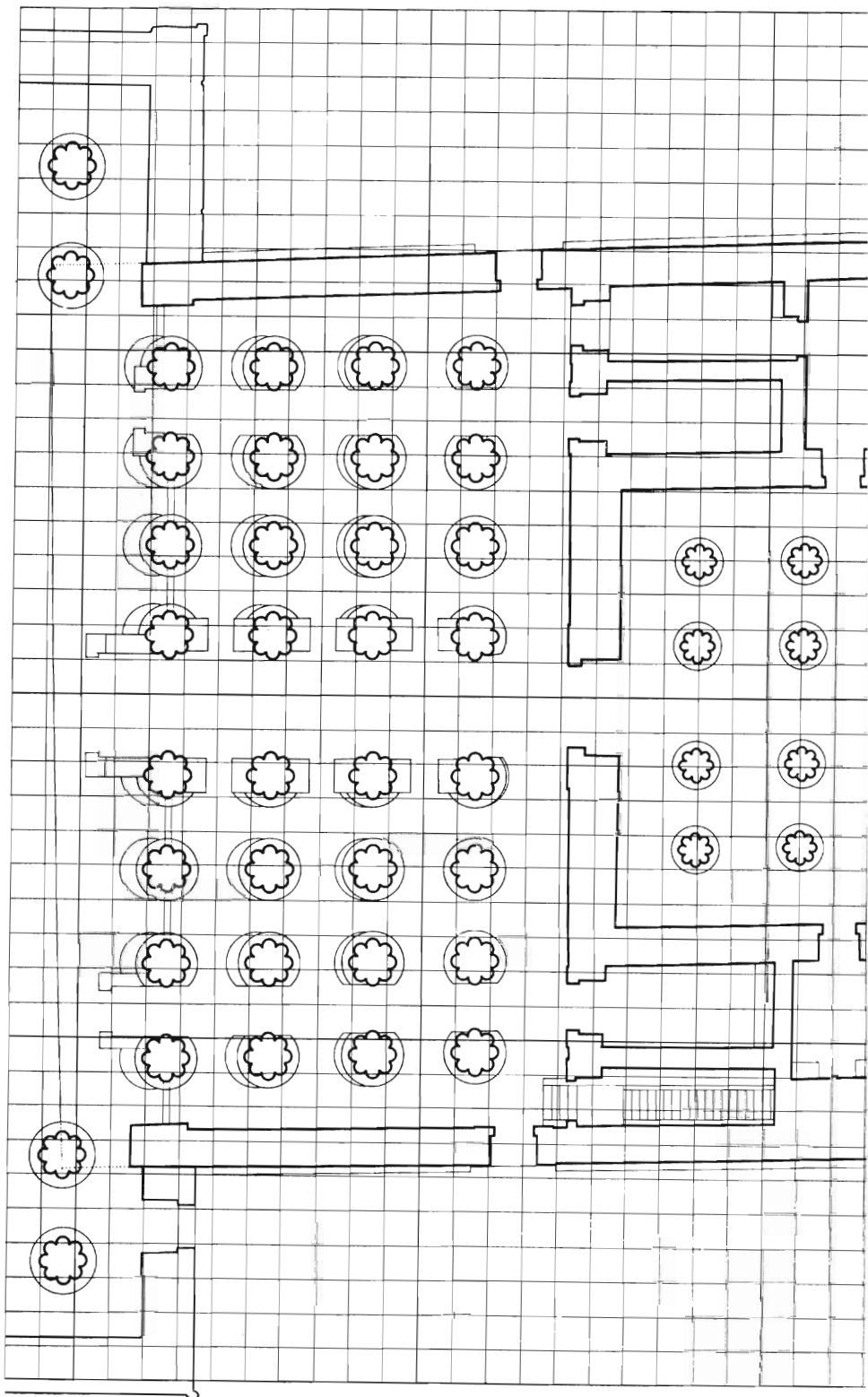


PLATE 88

The Temple of Luxor on the Grid of Amun

Vitally, the axis is then the fixed point, the unalterable nucleus, the indestructible center, the Absolute, the present moment, ungraspable by the cerebral intelligence.

(Chapter 13)



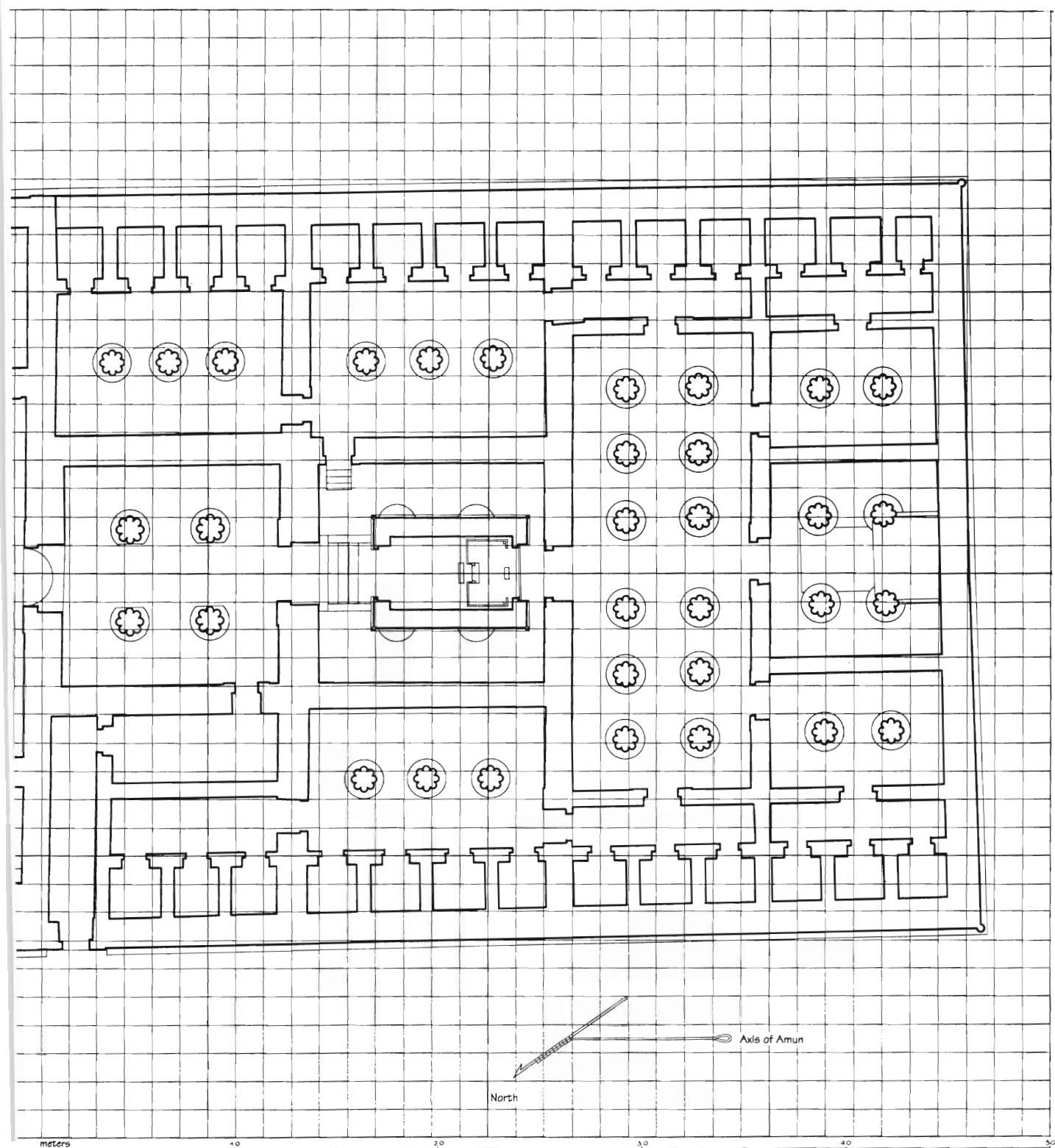


PLATE 89
The Covered Temple on the Grid of Amun

*The axes . . . are but channels
for influences that play their
animating role in this living
architecture, however firmly
anchored to the ground they
may be.*

*Let the faithful then come
into this building; they will
be subject to the effect of this
occult influence, as vegetation
is subject to the influences of
telluric magnetism.*

(Chapter 13)



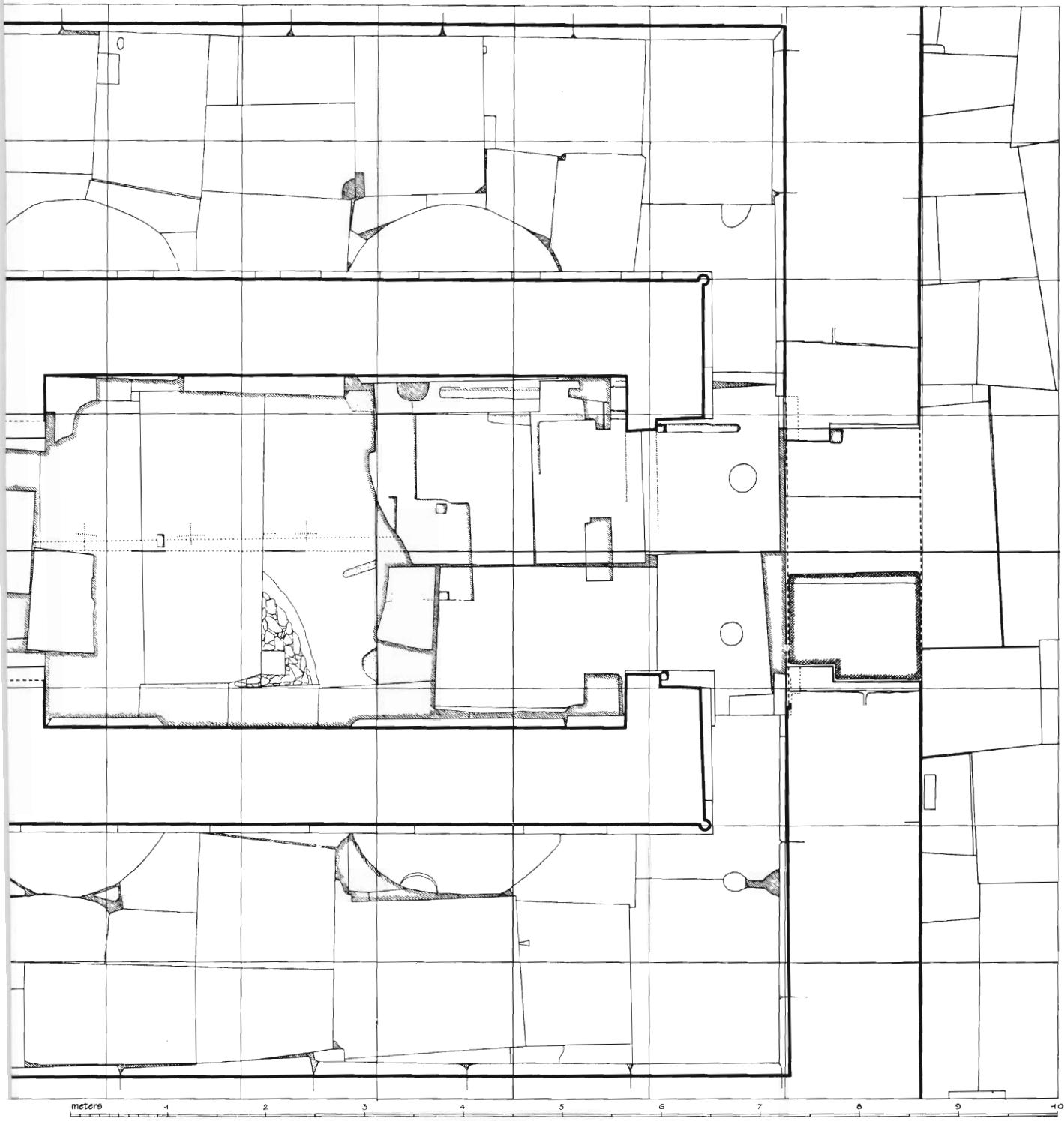


PLATE 90

The Sanctuary of the Altar of Amun's Barque on the Grid of Amun

Chapter 40

THE AXES OF THE TEMPLE

It is the axes of the temple of Luxor that cast the greatest light on the architectural principle of the pharaonic temple. They are marked on the floor, and this fact can be verified.¹

The temple is constructed on three essential axes: (1) *the axis of Amun*, cut into the sandstone pavement of the sanctuary of the barque, and which we have called the occult axis of the temple; (2) *the axis of Mut*, or geometric axis, which plays the role of the median axis and undergoes several essential deviations in the course of the different stages of evolution of the temple; and (3) *the axis of Khonsu*, or axis of measures, also inscribed on the floor under the naos of the barque.

We are dealing with a living temple, and nothing in it could or should have a cadaverous rigidity. The axes are, because of this fact, precise as to orientation on the terrestrial globe with respect to their aspects with the heavens, but they also always have a complement that fixes an oscillation, in the same way that the walls follow the axes while maintaining, through nuances, their own numbers.

These are not to be seen as inaccuracies, because all movement, all vibration, is justified, as we see in room V.²

It is this construction on three axes that gives movement to the entire architecture, thus creating this "living state" of which we have spoken. Each of these axes has, in addition to its mystical significance, a concrete significance related to it.

Each wall of the covered temple is constructed on one or another of the three axes. Thus, each wall and its inscription must be studied according to the axis that governs it.

There is neither defect nor incoherence in the architecture of the temple, as the rooms at acute and obtuse angles or the colonnades that are not quite parallel would lead one to believe. And even if one does not want to believe the reasons given here for those who wish to understand them, the concrete fact nevertheless remains that in the temple of Luxor the walls obey a law proper to each of the three easily verifiable axes inscribed in the platform.

¹ Cf. vol. 1, figs. 151, 152, and 153.

² Cf. chapter 39, appendix, on the surveying of room V. At its base the east wall preserves the line on the ground established on the geometric axis, and it is constructed forming an angle of about 0°30' with this drawing.

THE HOLY OF HOLIES

PLATES 79 AND 80 • THE WEST WALL

The Holy of Holies, which can be accessed through room XII, is a room whose roof was supported by four columns. The dedication carved around the subfoundation of the covered temple says that this sanctuary contained a gold statue of Amun with a ram's head. This statue was located in a tabernacle that rested on the cornice of a ledge made partly in the south wall and partly in the drums of the southern columns. The south face of these columns also has a ledge for the attachment points of this naos, the outline of which is drawn on the south wall against which it leaned. Thus the monument still preserves sufficient vestiges to make this reconstruction (plate 84).

The whole central part of this room no longer has its pavestones, and a sounding has allowed us to observe the nature of the contents of the foundation tank.³ Exactly under the naos containing the statue of Amun, a small block of reused limestone bears the inscription "the house of the *neter*"⁴ and by its presence confirms the consecration of this place.

The Holy of Holies measures 18 royal cubits wide by 16 cubits long by 16 cubits high. Its plan is thus established on the simple ratio of 8 to 9, the musical tone, which also recalls the numbers used for the approximate calculation of the surface of the disk in relation to the square.⁵ The same proportion is used for the frieze of uraei above the registers, the height of which equals one-ninth of the total height of the north partition. This wall, the only one that remains completely intact in this sanctuary of Amun, is its entrance wall. It contains a base and three registers of equal height. The height of each register is ϕ with respect to the foundation, whose value is 1.⁶ Thus the three registers plus the base represent $3\phi + 1$, and their total height is seven-eighths of the total partition, that is, 14 royal cubits. Between the last line of the upper register and the frieze of uraei there is an interval corresponding to the difference between one-eighth and one-ninth, or one seventy-second occupied by the standard border that constitutes the frame of the tableaux.⁷ This arrangement is particular to this room;⁸ the north wall makes the principles clear, and the remains of the other walls confirm the uniform use of the ratio of 1 to ϕ between the base and the height of the register, with very small nuances that are closely dictated by metrical variations.

From the north entrance, the registers rise slightly in the direction of the king's walk toward the altar of Amun. This ascent, visible on the right and left sides of the door, continues on the east and west walls, causing the metrical variations to which we have just referred.

This movement of broadening toward the sanctuary is a characteristic one that is applied not only in the registers but to the whole architecture of the temple; thus, certain colonnades widen slightly in the direction of the holy place.⁹ This movement imparted by the architecture is

³ Cf. fig. 222.

⁴ Cf. fig. 293.

⁵ Cf. chapter 5, "Pharaonic Volumes."

⁶ This arrangement recalls the division of the Rhind Papyrus into six bands, the first of which is 1 for the five others each equaling ϕ .

⁷ It is said that Thoth gained one seventy-second of each day of the year, in order to constitute the five extra days of the year that are the days of the birth of the principal *neters*. Seventy-two is the mean number of heartbeats per minute of the healthy man. It is also related to the numbers of time.

⁸ The height of the uraeus frieze varies in each room. The relationship to the geometric theme developed in each of them must be sought in it.

⁹ For example, the widening of the nave and of the colonnade of room XII from east to west following the progression of the solar barque (cf. figs. 282 and 287).

comparable to certain irregularities found in the walls that frame, for example, an entryway. The most striking example is the wall separating rooms VI and IV. When seen in plan, the two sides of the door that provides access to the sanctuary give the impression of opening and closing;¹⁰ there is a double movement, as there actually is in this place with the entrance and exit of the sacred barque (plates 83 and 90).

These nuances, more or less perceptible throughout the whole of the temple, impart a sort of vibration that is imperceptible to the eye, but which the faithful inevitably experience when they enter into it. On the west wall of sanctuary I (plate 79), the accent on the movement of ascent is given by the joint of the stones that, in the north, passes under the line of the register, accentuating it somewhat, before crossing and uniting with it in order to extend beyond it to the south under king E. This first register of the west partition gives some important measurements:

- The height of the register from the baseline to the lower boundary of the sky is 100 fathom digits. The figures carved below it measure 72 of these same digits.
- The height of the register that represents the sky is 2 meters plus or minus the difference caused by the variation in growth.
- The height of the register with the line of its upper edge is 2.025 meters to 2.045 meters, that is, plus or minus this same variation.

The division by ϕ of the largest height of the register determines the height of the base, and the division of 2 meters by ϕ fixes the height of the joints of the stones under king A. There is here the indication of a double play confirmed by the enlargement of the kings toward the south, an enlargement that corresponds, between kings B and E, to the two extreme values of the digits of the fathom at 0° and at 90° . As we have already said, this variation corresponds to the difference between the large side and the diagonal of the angle of 1 to 7, the angle of the reflection of Amun; it is a variation already observed in the pharaonic cubits and justifying their variants.

Having established that the mean between the two extreme values of the fathom enables us to define the meter, and that the meter is related to the royal cubit through the function ϕ , the Holy of Holies does indeed summarize the essential measures governing the temple and the cubits and the law that unites them.

The meter is imposed as a reference measure, and reference to it in different essential points of the temple confirms its use:

- The height of 2 meters for the register on which the five kings of the west partition are carved is not an exception, it is the constant height of all the registers in this room, the first including the sky but not the baseline, the two others with the sky and the baseline. Taking into account this nuance of application, the height of 2 meters is the dimension most often encountered throughout the covered temple for the height of a register.¹¹

¹⁰ In this regard we should point out that in many tombs, in the same door, the entrance and the exit are marked, respectively, by intaglio sculpture and relief sculpture (surveys made by A. Stoppelaere).

¹¹ In room V, north wall, for the first register, the height between the baseline and the lower line of the sky is 2 m. This measurement applies also to the other walls of this same room, with the width of the uraeus frieze diminished.

- The interior length of the west partition of the peristyle court is 50 meters, which is 27 mean fathoms.
- The vertical height of the west wing of the pylon is 25 meters measured from the ground to the summit of the cornice at the northeast corner (± 1 cm).
- The east wall of the *haty* that supports the ritual foundation text of the temple would have an exact length of 200 meters if extended to its crossing with the axis of the door of the pylon of Ramesses II on the south side. The foundation texts specify the sighting of a star in the Great Bear in order to establish an hour for a day of the year, but also in order to locate true north by two sightings made an equal amount of time before and after midnight. This is a further reason for taking the meter as the basic measure and true north as the reference orientation.
- Finally, the door of this pylon with its doorposts is 10 meters wide. Thus the “orientation grid,” following a number of directives given by the temple, is established on a north-south grid pattern, each square of which has a side of 10 meters. The point of departure of this *canevas* is given by the key placed at the crossing of the axes of Amun and Khonsu at the door of the sanctuary of the barque of Amun (plates 81, 82, and 83).

Through this “*canevas*-guide” it is possible to read the orientations of each wall of the temple in the form of whole-number ratios.

The five kings of the west wall give five very slightly different measurements by their respective heights. The two extreme measurements can be related to the double rhythm observed in the course of the study of the pavestone mosaic¹² corresponding to the principle phases of growth: that of about twelve years of age, which is the beginning of puberty, and that of eighteen to nineteen years, which is the final term of growth for the Man of the Temple. Recalling that the proportion of the height of the head to the total height varies with the age of the figure, if one wishes to indicate a particular age, one should take this nuance into account.

Thus, the first king (A) to the north is the smallest, and his head is contained 7.1 times in his total height measured from the soles of the feet to the vertex (1.379 m). He therefore marks the age of eighteen to nineteen years, and his height, multiplied by 10 and carried over 19 times, corresponds to the size of the adult Man of the Temple, which is 261.80 meters or 500 royal cubits.¹³

The last king (E) to the south is the largest, but his head is only contained 6.5 times in his total height (1.397 m). He thus marks the age of twelve years, and his height multiplied by 19×10 determines the largest measure of the Man of the Temple, which is 265.40 meters or 144 fathoms at 0° of latitude.¹⁴

The three other kings are located between these two extreme measurements.

King B has two very clearly marked height measurements: one is from the ground to the vertex, and the other is from the ground to the head of the uraeus. Traces can also be seen of two superimposed faces: the first has been corrected in such a way that the old profile remains as a testimony and point of comparison with the new profile (fig. 278a).

¹² Cf. plates 34–37 and chapter 31.

¹³ Cf. plate 15.

¹⁴ Cf. plate 24.



Fig. 278a. The profile of king B

Note the double line of the necklace, the lower part of the face, the eye, the upper forehead and the uraeus, and the break in the serpent's body, which give the king a double face.

Indeed, if one wants to change the age of a figure on a bas-relief, one need only modify the size of the head, not that of the limbs, which are limited by the baseline. This is exactly the problem of the proportional modification of the head in the course of growth that we find applied to king B.

The first profile gives the head a size of two-thirteenths of the total height, thereby indicating the proportion of a child of twelve years. The corrected profile reduces the height of the head, which is then contained 7.1 times in the height specified by the uraeus, and the proportion becomes that of an adult at eighteen to nineteen years. This rectified face also indicates two ages of the temple. Now, this bas-relief is found at the place that physiologically corresponds to the profound transformations at the age of puberty. The east wall of room I is indeed in transposition with room VII, (corresponding to the pineal gland), the only place in the whole temple where the child king is shown being presented (offered) by his mother.

King B in the Holy of Holies has no navel and is thus an Adamic creation and not a procreation through woman, which makes him a principle, like the *kamutef*.

The only joint that crosses horizontally passes at the base of his chest, dividing him in such a way that the part between the height of his head and this joint corresponds to the height at birth (covered temple) with respect to the total height (entire temple).



Man breathes and his heart beats. These movements are the manifestations of his life; their cessation is death. Now, the temple is conceived in the image of living man. A "common measure" applied to each part of the temple could correspond only to a mental scheme, too systematic to be true. Thus, the projection on the temple of a *canevas* with ten times the height of king A for a unit (plates 88, 89, and 90) represents but one aspect of the temple, a "moment" in its genesis. The five kings formally teach that there are five different measurement values, each relating to a particular place in the whole of the monument. The *canevas* observed in the tomb of Ukhoptep at Meir demonstrates that the Ancients did not hesitate to employ two slightly different values for squares

in the same scene, a fact confirmed by the break and the resumption of the lines in the grid pattern.¹⁵ The variation applied at Meir is also that given by the base and the hypotenuse of the angle 1 to 7, the same difference obtaining between kings B and E of the sanctuary. It would be possible to conceive of the true *canevas* governing the building of the temple as composed of squares of varying sizes whose placement is already indicated by their relation to the principal axes.¹⁶

Thus, the five kings of the sanctuary of Amun show the Man of the Temple as conceived with the nuances that give him life. Each essential point is animated by the ritual placements of incense and certain other materials; the walls open and close as in inhaling and exhaling; the right differs from the left as west from east. The harmonic play of numbers, proportions, measures, and orientations are the secret of its life. In this regard, the dedication carved on the pedestal is not just the expression of human vanity when it declares that this monument is a "monument of eternity."

THE LINES ON THE FLOOR

PLATES 83, 85, AND 90

Excavations of the temple of Mentu at Karnak have demonstrated that certain lines marked on the stones of the temple facade correspond to the lines of the axis marked in the subfoundations of the monument.

The examination at Karnak of a pylon on the so-called incomplete facade, the stones of which were left unfinished, has shown that each cornerstone of each course bears the line of the angle of the monument and the axis of the torus on its upper face; on their lateral surfaces the line of the batter was also carved.

At Luxor, the tank upon which the covered temple rests (plate 94C) is itself a construction, and the lines that can be seen on the pavement and that govern the superstructure are in all likelihood replicated in the understructure, as is shown by certain filling stones that are aligned according to one of the essential axes (plate 84).

The three axes of Amun, Mut, and Khonsu are carved in the sanctuary of Amun's barque on the sandstone pavement of the platform. This sandstone pavement was again covered by a limestone pavement that preserved these axis lines and has kept them intact since the time of Amenhotep III (plate 85).

In surveying the pavement of the covered temple, it was observed that some of the limestone pavestones were missing and had been replaced by earth. The removal of this earth revealed the sandstone pavement, and the three inscribed axes were discovered.

On the large sandstone pavestones, two lines, still visible (plate 85), separate slightly from each other while generally going from north to south. If one stands at the south end of the sanctuary and looks toward room IV to the north, one can distinguish the axis of Amun, oriented at $34^{\circ}27'$ with respect to the true north-south, at the left. The hammered-out axis of Khonsu (axis of measures) oriented at $33^{\circ}34'$ is on the right. In front of the threshold of the naos, a third line, the axis of Mut (geometric axis), is oriented at $33^{\circ}\pm 5'$.

The extensions of the axes of Amun and Khonsu toward room IV cross at the small key-piece embedded in the sandstone pavement on the threshold of the door between rooms IV and VI.

¹⁵ Cf. plate 54.

¹⁶ Cf. vol. 1, fig. 164.

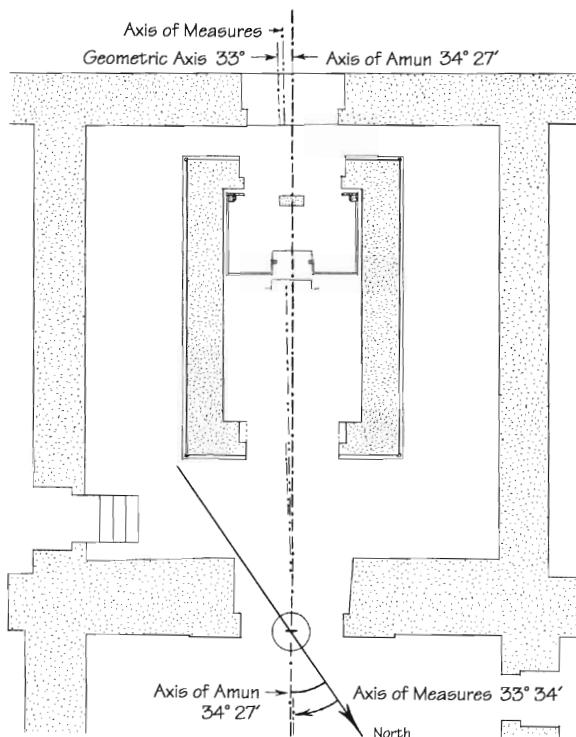


Fig. 278b (vol. 1, fig. 151)

Diagram of the three axes inscribed in the sanctuary of Amun's barque and their point of crossing on the threshold of the door from room IV to room VI (cf. plates 83 and 90, and the description of the key-piece, p. 690).

The axis of Mut governs the construction of the south part of the covered temple. Its extension into sanctuary I coincides with the edge of one of the filling stones of the tank (plate 84), which determines the median axis of the south part of the temple, of sanctuary I, and of the naos that contained the golden statue of Amun. In the south wall, the edge of a characteristic rectangular key-piece corresponds exactly to the extension of the axis of Khonsu.

At the base of each wall of the covered temple there remain (when the pavestones are in good condition) lines laying out the plan of the monument, including the doors. We have been able to reconstruct some of the destroyed walls on our plans thanks to these lines on the floor that preserve the original plan. All these lines in the covered temple are parallel or perpendicular to one of the three axes incised in the sanctuary floor. This fact allows us to affirm whether they are related to Amun, Mut, or Khonsu, their son.

For example, in room XII the north wall is rigorously parallel to its line on the floor, which is exactly perpendicular to the axis of Amun. The east wall makes an angle of $0^{\circ}30'$ to its line on the floor. The line is parallel to the geometric axis (Mut), and the wall follows the axis of Khonsu (fig. 279). This is the wall on which the barque of the rising sun is depicted (fig. 288).

Still visible on the floor is the axis line of the center of the column, and from the side of the east wall, three lines define the center and the diameter of this column. These indications at the beginning of the north colonnade, and the colonnade itself, exactly follow the axis of Amun.

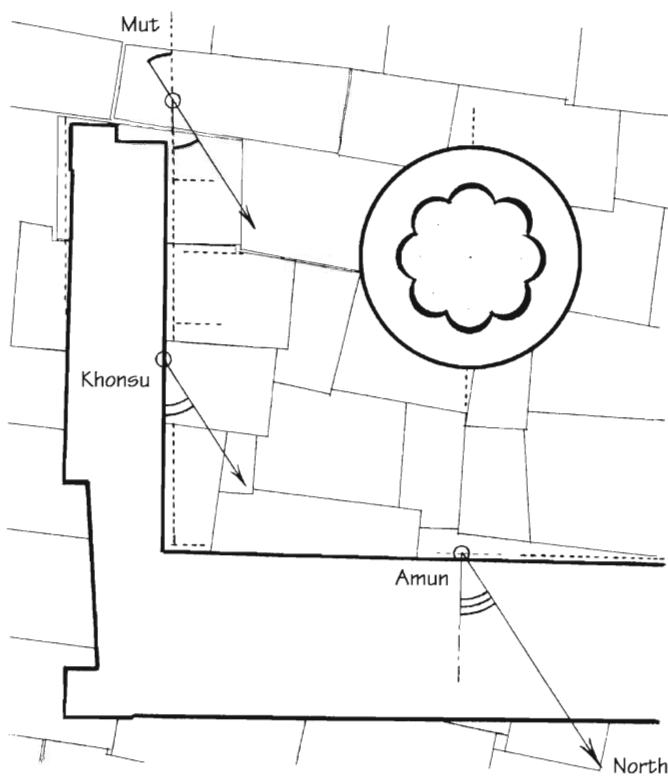


Fig. 279. Northeast corner of room XII, showing the lines on the floor and the intentional deviations of the construction of the wall with respect to these lines

THE THREE AXES

PLATES 81–90

The Axis of Amun

The axis of Amun governs the construction of the room of Amun's barque (room VI) as well as that of the naos of Alexander. The walls and the east-west colonnades of the covered temple are raised perpendicular to this axis in obedience to its "pulsation," indicated by certain lines on the ground that make an angle with it of about $0^{\circ}20'$. In room XII, for example, the wall and the row of six columns to the north are constructed on a line exactly perpendicular to the axis of Amun (fig. 280a). Between certain columns the south colonnade preserves vestiges of a line that deviates approximately $0^{\circ}20'$ with respect to the axis of Amun, in such a way that the double colonnade in the east-west direction broadens toward the west. It follows the direction of the path of the sun indicated on the east and west walls by the barques of the rising and setting sun.

The hypostyle room contains four rows of east-west columns: the two northern rows follow the axis of Amun, and the two southern rows follow the same slight deviation carried over from room XII. The columns of the central north-south corridor of the hypostyle room are also parallel to this axis (fig. 280a).

In the transept, the double colonnade on the north side is placed exactly like that of room XII. The double colonnade of the west side is parallel to the west wall and exactly perpendicular to the

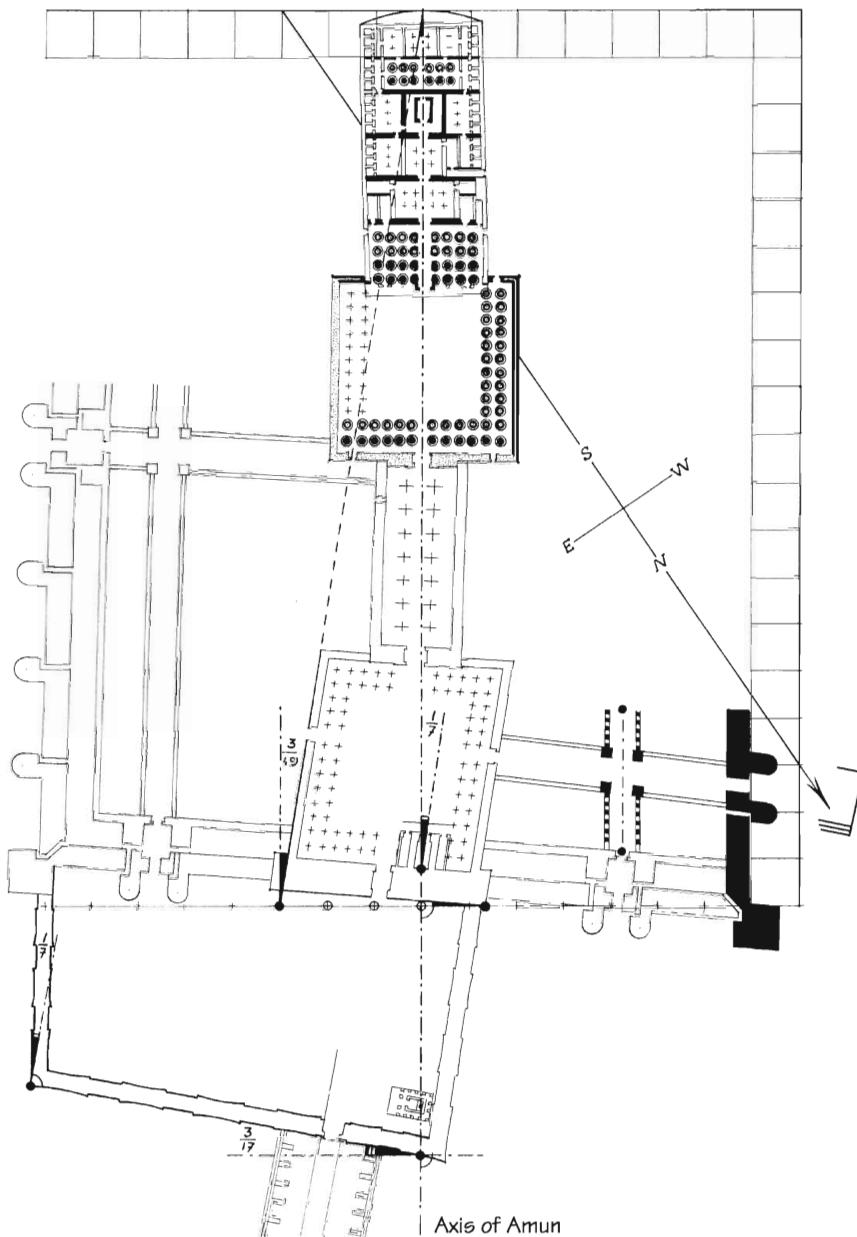


Fig. 280a. General plan of the temple and the axis of Amun

In black, the walls and columns governed by the axis of Amun; crossed lines, the walls and columns constructed on the deviation of the axis of Amun.

south colonnade of room XII. There is a similarity of orientation here that relates the colonnades and the walls of room XII to the west and north colonnades of the peristyle. As with the joints, it is a question of a system of correspondences, but here governed by the axes.¹⁷

¹⁷ The complete plan of the temple with the Roman constructions constitutes a rectangle of 16 to 19, corresponding to the harmonic proportions of the temple. This is shown in fig. 138 (vol. 1). The governing function is harmonic proportion.

The similarity of orientation leads us from room XII—in which the medulla oblongata and the pons are found, the beginning of the spinal cord—to the coccyx, where the spinal column terminates at the level of the sex organs. Thus, the axis of Amun, starting from the pituitary center, ends its role as an axis when it gets to the sex organs and connects these two vital centers. The axis continues and culminates at the foot of the Man of the Temple, from which it again reflects toward the medulla oblongata.

All this would be only a geometric exercise indicative of a mathematical turn of mind if one did not take into account the vital—and esoteric—meaning that the principles joined in this ternary of Amun (male), Mut (female), and Khonsu (the product) represent.

This ternary, male or odd, female or even, and neuter or rectangular, is found throughout nature, which survives only through procreation by means of the complements (dualization) that characterize it. But following the stages of life these principles take on a different aspect and their *names* change. Those who are originally Ptah, Sekhmet, and Nefertum become Amun, Mut, and Khonsu in the human genesis. That which would have been Ptah, a pure fire, will be with Amun a water of lunar or solar fire; that which would have been with Sekhmet a Venusian water will be with Mut a lunar water, the one warm, the other cold. That which would have been with Nefertum a heavy and red earth will be with Khonsu a subtilized and black earth that will be characterized by the bringing together of all the scepters, except the flowering *wadj*.

It is necessary then to see in Amun a coagulating liquid substance like male sperm, and in Mut a substance that is also liquid, but susceptible of being coagulated by Amun, and everything that is said in the temple, from the locations in the body of the man through the symbols and texts, is to be studied in the context of a vital consideration of these characters.

The axis of Amun, to which, starting from the peristyle, no wall or colonnade any longer conforms, nevertheless secretly continues toward the north: its extension to the pylon culminates at the center of the north wall of the repository of Amun's barque built by Ramesses II, and ends at the south face of the west wing of the pylon. The same symbols that frame this axis at its beginning in the sanctuary of the barque (room VI), where it is drawn on the floor, are found, identically, in the repository where it ends (plates 86 and 87).

In room VI two ram-headed *djed* pillars frame the open door of the south interior facade of the naos; an Osirian curve surmounts the exterior north facade of the naos, and two *djed* pillars frame its median axis; to the right and left of the door of the naos, the king wears the red crown of the North at the west, and the white crown of the South at the east;¹⁸ the barques drawn on the east and west walls of room VI are directed toward the north, which confirms the equality indicated in this place by the two crowns: north is equivalent to west.

At the pylon two ram-headed *djed* pillars frame the *closed* door carved on the interior north facade of the repository. Another Osirian curve, here located on the north interior facade, crowns the door drawn between the two *djed* pillars; the two kings represented on the doorposts of the entryway and on the lintel now wear the red crown in the east and the white crown in the west—there has been a crossing of the orientations, as testified by the crowns. The barque represented on the west wall of this chapel is directed toward the south. Here, contrary to the indication given in room VI, south is equivalent to west.¹⁹

¹⁸ Cf. fig. 287.

¹⁹ Let us remember that north is inspiration and south is realization, therefore causing east and west, successively, to play the same roles.

On the architrave of the portico preceding the door of the repository of Ramesses II, the axis is marked by two vertical cartouches with the name of this king. On either side of these cartouches, two Amuns seated back-to-back each present the ankh to the falcon who makes up part of the standard titulary of Ramesses II (plate 87).

These two Amuns rarely meet each other in the titulary. We know of only two other examples in the area of Thebes: one is at the temple of Seti I at Gurnah, and the other, carrying an identical theme, is on an architrave, reused but upside-down, in the ceiling of the naos of Alexander.

Two facts are to be noted in this reemployment: first, the anomaly of the figuration of Amun in the title of Ramesses II and its reuse precisely in the sanctuary of the barque of Amun. Second, the *inversion* of the architrave at the extremities of the axis of Amun.

In spite of the reversal of the orientations given by the crowns, the sacred barque preserves the east-west direction in the two sanctuaries, there being simply a reflection as in a vertical mirror: right becomes left, but without changing the orientation. The two barques are distinguished, however, by their design; the naos of the barque of the sanctuary of Amenhotep III is surrounded by a veil, whereas the repository of Ramesses II leaves Amun and Ra visible.²⁰

The axis of Amun goes from south to north when governing the constructions of the sanctuary of Amenhotep III up to the north wall of the peristyle, and it returns from north to south when governing the building of Ramesses II. It is then “reflected” on an angle of 1 to 7 ($8^{\circ}8'$) by the north wall of the repository of Ramesses, which forms an angle of half of 1 to 7 with this axis.²¹

The measured distance between the end of the repository of Ramesses II and the central cross carved on the sandstone pavement of Amenhotep III is 420 royal cubits (7×60), in a straight line on the axis of Amun. The hypotenuse of the 1 to 7 triangle determines the length of 120 mean fathoms, and its rabattement coincides with the “procession of the odor” that preceded the wooden naos containing the sacred barque. Under this walk can still be seen the hammered-out lines of an ithyphallic Min (plate 85) who *will be made manifest* by Ramesses II in his repository, where Min is depicted on the east partition in front of the barque.

The ideal extension of the axis of Amun into the courtyard of Nectanebo passes through the sanctuary of Isis at the point where the statue of Isis was found during the excavations of 1950–51.²² This axis defines the orientation of the north wall of this parvis through its perpendicular lessened by 10° (the angle 3 to 17). The east wall of the parvis is oriented according to the perpendicular of the north wall plus the reflection angle of Amun, $8^{\circ}8'$ (the angle 1 to 7, fig. 280a).

In the last Roman constructions the west enclosing wall of the fortress and the north-south pathway bordered with columns were both constructed parallel to the axis of Amun, which crosses the path leading toward the Nile, thus affirming the continuity of observance of the laws of the Temple in the Roman era. There was no religious conflict.

The angle of the axis of Amun with respect to north corresponds to an orientation of the temple at a certain determined hour (through the sighting of a star of the Great Bear, the “thigh” of the heavens). It is useful in this regard to consult the list of “solar hours” of the temple of Edfu.

²⁰ Cf. plate 101 and fig. 300.

²¹ The north wall of the repository of Amun leans against the pylon and is not exactly parallel with it; it forms an angle of $38^{\circ}36'$ with the east-west line, which is $34^{\circ}32' + 4^{\circ}4'$.

²² Cf. Leclant, “Fouilles et travaux en Egypte 1950–51.”

Amun governs the number Seven, the number of nature, that is to say, the "constituting elements" of the phenomena of our world. We encounter this number in music in the seven notes of the scale that resonate harmoniously for our ear, in the seven spectral colors of white light, in the physiological cycle of the ages seven, fourteen, twenty-one, and 6×7 , or forty-two years, characteristic of certain changes, and in the up to seven electron shells in the atom.

At the specific stage of human consciousness of our earth (as a planetary globe in the solar system), nature is septuple.²³ In reality, this sevenfold structure is the result of nine stages, because the third and the sixth of the seven appearances are divided in two. Thus, in the colors of the spectrum there are two yellows and two blues; the yellow and the blue are both the end and beginning of a series:

Red	Orange	Yellow (warm)	
	Yellow	Green	Blue (cool)
	Blue	Indigo	Violet (moderate)

The Axis of Mut

The axis of Mut, indicated by the third line of sanctuary VI, is called "geometric" because it is the median, longitudinal axis of each of the successive parts of the temple; it governs materially (fig. 281). It begins at point *A*, at the end of sanctuary I (plate 84), where it divides the tabernacle, the sanctuary, and the south wall of the covered temple into two equal parts. It culminates at *B*, where it divides the south face of the platform into two equal parts. In the covered temple this axis governs all the lines on the floor for the north-south walls of the three secret sanctuaries, as well as the south and west walls and the north edge of the platform. It also governs the west wall of the chamber of Mut's barque (room XX) and the two north-south walls of room VIII (in black in fig. 281).

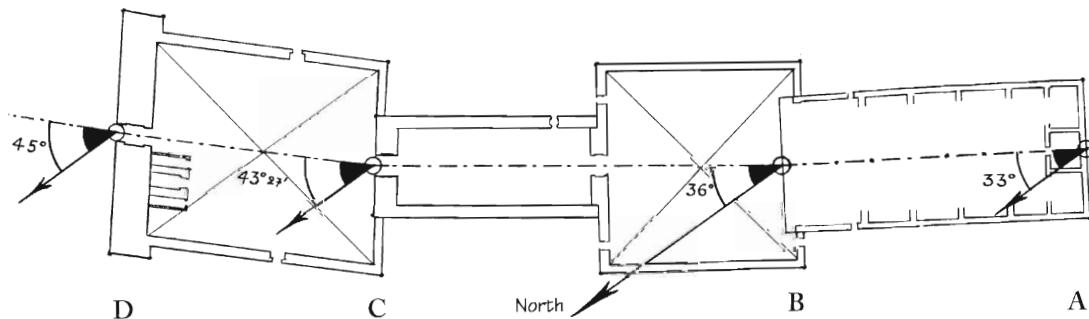


Fig. 280b (fig. 153, vol. 1)

The axis of Mut (covered temple) is oriented at $33^\circ \pm 5'$ with respect to north-south for its whole length, *AB*.²⁴ From point *B* this axis deviates by 3° and through its orientation (36° in relation to north-south) determines the pentagonal function. It crosses the peristyle court (the belly) and governs the construction of the nave by passing through the center of its doors. It culminates

²³ It appears that the number 7 has a specifically terrestrial nature. This characteristic opens the door to an eventual study that would harmonize the various globes of the planetary system.

²⁴ Cf. vol. 1, fig. 159.

at point *C*, but a piece embedded in the pavement of the Ramesses court, emphasized by a difference in height, marks its extension to *C'*. Between *B* and *C*, the geometric axis governs the east colonnade of the transept, the nave, and also the enclosing wall and the east colonnades of the Roman constructions (in black in fig. 281).

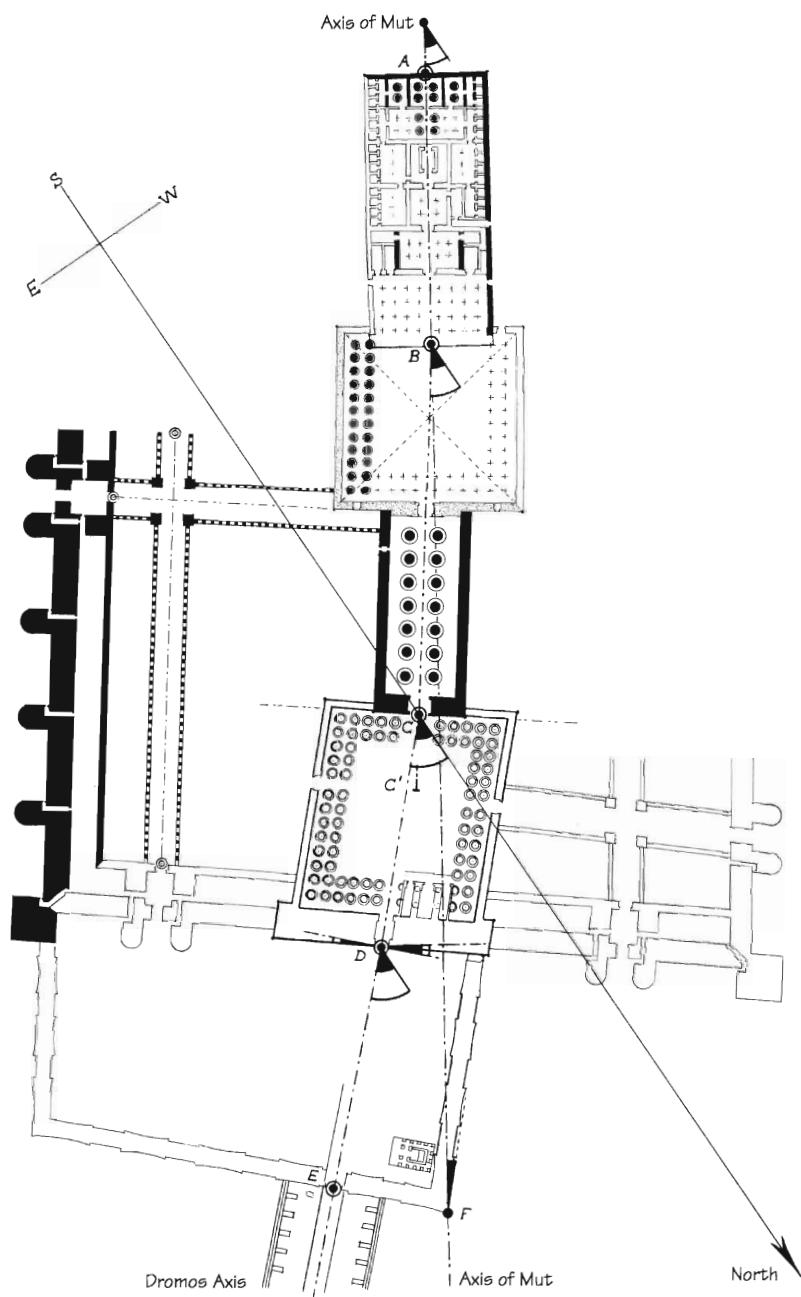


Fig. 281. General plan of the temple and the axis of Mut

The axis of Mut, the geometric axis, undergoes three deviations: *AB* governs the walls and columns of the covered temple (*in black*); *BC* governs the wall and colonnades of the transept, the nave, and the eastern part of the Roman enclosing wall (also *in black*); *CD* governs the narthex; *DE* governs the dromos.

The geometric axis of the nave, BC , makes an angle of 3° (about 1 to 19) with the geometric axis of the covered temple, AB . The north facade of the nave makes an angle that is one-half of 3° to the perpendicular of BC . This facade is therefore oriented at $37^\circ 30'$ with respect to the east-west line (45° less $7^\circ 30'$). The Roman colonnade that goes from the crossroads on the east to the *kamutef* is parallel to it (fig. 281).

From point C the geometric axis, in a new orientation, governs the Ramesses court and ends at D at the north facade of the pylon (fig. 281). The angular difference between sections BC and CD is $7^\circ 30'$, which corresponds to the hexagonal function, or more exactly, to the division of the cycle into 4×6 , which corresponds to the twenty-four hours of the day.

From point D the geometric axis conforms to an angle of 45° (1 to 1) with respect to true north. It crosses the Nectanebo courtyard (the pedestal) at DE and continues north, dividing the avenue of the sphinxes into two equal parts, which leads in a straight line to Karnak, where it ends at the ninth pylon. The axis of the dromos, DE , corresponds to the orientation CD of the court of Ramesses plus $1^\circ 30'$. This difference, $\pm 0^\circ 5'$, recalls the difference between the axis of Amun and the geometric axis of Mut in the covered temple.

Finally, the axis of Mut in the covered temple (AB) seems to play an analogous role to that of the axis of Amun. Its extension northward culminates, against the pylon, in the repository for Mut's barque constructed by Ramesses II. The mass of the pylon forms an angle of 6° with the perpendicular to the axis of Mut, DE , and an identical angle with the perpendicular to the axis of Mut, AB . Thus, the "reflection" of the axis of Mut forms an angle of 12° . This angle results from the division of the cycle by 30, and this construction is one consequence of the combination of the pentagon and the hexagon that divides the circle into 5 and 6. Thus 33° , the axis of Mut, AB , of the covered temple, increased by 12° , equals the ratio of 1 to 1 or 45° . This is the axis of the dromos toward Karnak, the final (or original?) orientation, because north-south is the reference, and the angle 1 to 1 is the first possible ratio.

Just like the extension of the axis of Amun in the parvis, which determined the north and east walls, the extension of the axis of Mut, AB , in the courtyard of Nectanebo, culminates at the northwest corner in the shape of the prow of a boat, at F (fig. 281).²⁵ The west wall of this courtyard is oriented following this axis increased by 10° with respect to north.

In summary, the successive deviations of the geometric axis alternate the functions of the pentagon and the hexagon. It is thus that Amun-Mut give *form* and *measure* to the narthex as their offspring, Khonsu.



Just as we can observe an oscillation in the axis of Amun in room XII, in the hypostyle room, and in the north portico of the transept, there is a pulsation around the axis of Mut (nave): the rows of columns on the east side of the nave and the east portico of the transept are parallel to the west wall of the nave, and conversely, the rows of columns on the west side are parallel to the east wall (fig. 282). It follows that these two colonnades would open out toward the south, while the walls of the nave widen toward the north.²⁶ There are two directions, as indicated by the bas-reliefs: on the west wall the procession of the barques is coming from Karnak toward the temple of Luxor,

²⁵ Cf. plate 49. The cornerstone shaped like a prow is an example of a *pierre croche* (curved stone), known to ancient "journeymen" [*"compasnions"*].

²⁶ Interior width of the north nave = 20.55 m, ± 5 cm; south nave = 20.17 m, ± 5 cm.

and on the east wall the return to Karnak is carved. The small piece marked in the pavement of the court of Ramesses (*C'*) as the end of the median axis of the nave corresponds to the place in which the sacred barques branch off in order to head toward the Nile, to the loading dock.

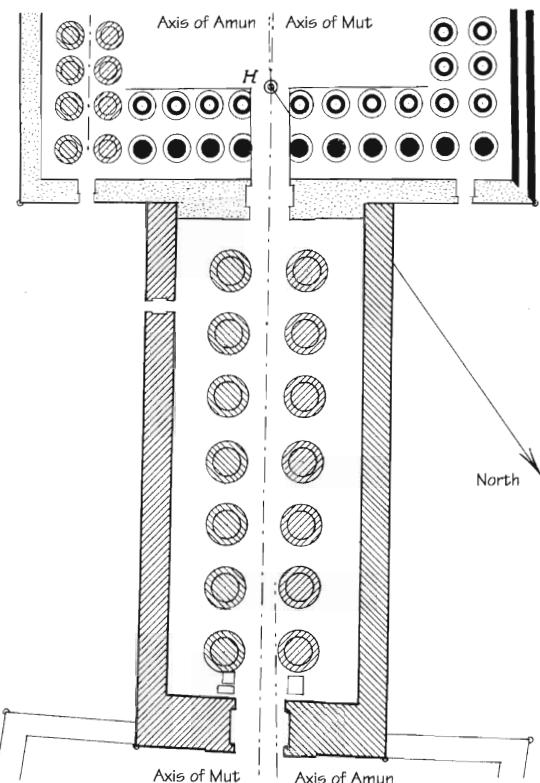


Fig. 282. Detail of the oscillation of the construction around the axis of the nave

Hachured (both directions), the east and west walls of the nave and its colonnade. The same orientation exists for the east colonnade of the transept. The direction of the hachures indicates the movement of widening. *Solid black circles*, north colonnade of the transept, constructed perpendicular to the axis of Amun. *Black-and-white circles*, the west wall, west colonnade and south row of the north colonnade of the transept, which conform to the deviation of the axis of Amun. The axes of Mut and Amun cross each other in the transept at point *H*.

The Axis of Khonsu

The axis of Khonsu, or axis of measures ($33^{\circ}34'$), carved in the sanctuary of the barque and then hammered out, crosses the axis of Amun at the key-piece, already mentioned, on the threshold of room VI. This axis divides the north and south facades of the covered temple into two unequal parts in the same way the "votive" cubits are divided. This inequality relates not only to time but, above all, to the principle of the variation of the solar influence before and after noon. It would indeed be an error to want to apply the formula of the "Temple in the image of Heaven" in a purely schematic relationship.²⁷

²⁷ The hour between noon and one o'clock is the hour consecrated to Khonsu.

In the covered temple, the axis of measures governs part of the north-south walls (in rooms XII and IV), as well as the facades of small side chapels that still exist. The east exterior wall is parallel to it in the part between the south facade and the large wall corresponding to the clavicles. Beginning from this point, the east wall makes a major deviation and is oriented at $32^{\circ}15'$ with respect to north-south. The chapel of the barque of Khonsu,²⁸ located to the east of the room of the barque of Mut, has its west wall oriented according to the axis of Khonsu ($33^{\circ}34'$) and the east wall oriented according to the deviation mentioned above.

The axis of Khonsu passes between the axes of Amun and Mut and divides the angle they make into two parts, one of which is one-third and the other two-thirds. It therefore plays the role of the dividing element of the “nucleus” that presides over the transition of the progression from the powers of $1/2$ to the powers of $1/3$, these latter governing the development of volumes (the product).²⁹

Apart from the few north-south walls that it governs in the covered temple, the axis of Khonsu—which, moreover, is effaced—no longer plays an architectural role, the axes of Amun and Mut having already defined the essential orientations of the entire temple including the parvis. There is only one orientation that they do not rule: the axis that passes through the east-west doors of the court of Ramesses, extended by the Romans with a colonnade that goes to the western entry-way of the surrounding wall leading toward the Nile. This “axis of the east-west doors,” marked in the court of Ramesses by a change of height in the pavement and by the piece that indicates the end of the axis of the nave at C' , is, however, important enough for us to investigate the cause of its particular orientation. It is through the door on the side of the Nile that the royal princes, the dauphins (Khonsu), enter. The orientation of this east-west axis is $41^{\circ}44' \pm 5'$ in relation to north. The axis of Khonsu being $33^{\circ}34'$, their difference is $8^{\circ}10'$, and here we find again the angle 1 to 7 ($8^{\circ}8'$) equal to the reflection angle of the axis of Amun, but perpendicular to it.

Of course, no direct link exists between the master builders of the cathedral in Paris and the master builder of the temple of Luxor. It is therefore interesting to note the coincidence of the proportional sizes and the *overall* variations of the axes of these two sanctuaries, a coincidence that could not be fortuitous, but must correspond to a common, living, geometric directive.

The superposition of the plans of the two monuments (fig. 283) excludes the court of Ramesses—replaced by the narthex under the towers of the cathedral—that Luxor develops with its significance. The crown of the skull, corresponding to that of the Man of the Temple, cut off at Luxor, is added to the cathedral.

Notre Dame in Paris is characterized by its calm equilibrium and its sobriety. In its facade and in its plan we find the same observances and nuances of a living movement as those of the temple of Luxor: the vertical central axis does not divide the facade into two equal parts; and the right is not identical to the left.

Each of the three doors obeys a different geometric function in establishing the ogives; the center door gives the general law.

²⁸ This chapel, the unfinished bas-reliefs of which depict Khonsu, is generally considered as that of the royal barque; however, the lintel of its door formally portrays Khonsu.

²⁹ Cf. chapter 9.

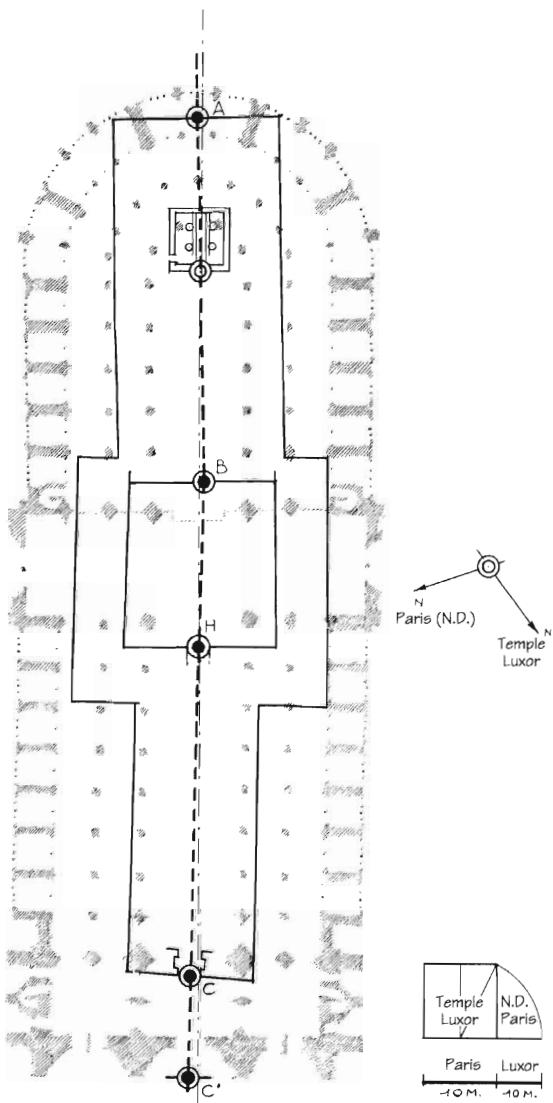


Fig. 283. Superposition of the plan of the temple of Amenhotep III at Luxor and the outline of the plan of Notre Dame in Paris

Comparison of the two scales and the two orientations. The letters *A*, *B*, *C*, *C'*, and *H* correspond to the letters on figures 281 and 282.

In the whole of the facade, the left side (north, inspiration) tends toward the romanesque curve and the right side (south, accomplishment) is clearly pointed (gothic). This corresponds to the same indications of orientation as those in the pylon and in room XII of the temple of Luxor, where north is assimilated to east and south to west (romanesque and gothic). This asymmetry is found again in the inequality of the width of the two towers of Notre Dame. The row of twenty-eight kings above the three doors, through the inequality of their distribution (seven, nine, and eight), give the essential numbers that govern their geometry and allude to the two essential numbers of the cubit, 24 and 28, through the four kings projecting out on the four pillars.

As in Egypt in its great period, we find in Notre Dame in Paris a very beautiful example of harmony created from an asymmetry that at first glance appears to be "perfectly symmetrical."

THE NAOS OF ALEXANDER AND THE GEOMETRIC π

In our study of the tomb of Ramesses IX (figs. 261 and 262), we noted the angle β . We found this same angle in the study of the proportions of the "particular coefficient" of Thothotep at Meir (fig. 252). While noting this angle β on these occasions, we promised to speak of it again. This angle is of the utmost importance, which is emphasized by the fact that it is defined and applied in the sanctuary of Amun's barque at Luxor.

The proportions of the plan of the naos of Alexander are established on the governing rectangle of the pentagon so that the small side of the naos corresponds to the side of the pentagon, the length to the diameter of the inscribed circle, and the diagonal to the diameter of the circumscribed circle. In perpendicularly crossing the rectangle of the plan of the naos, the diagonal AB , carried over to the axis of Amun toward the south at C , defines the length AC (fig. 284).

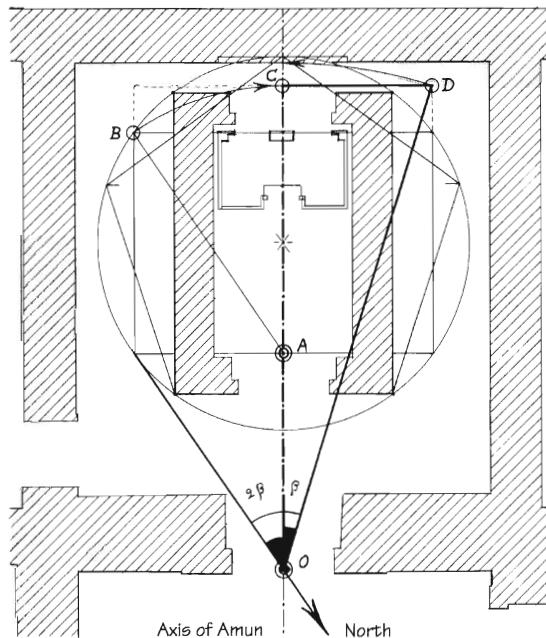


Fig. 284. Sanctuary of Amun's barque and proportions of the naos of Alexander

The axis of Amun, OC , forms an angle with true north that is double the angle formed by the axis of Amun and the hypotenuse OD . This angle COD is equal to the angle β , which we noted in the angle of the scepter of Osiris-Ptah in the tomb of Ramesses IX. This determines the triangle COD of which CD is an irrational length with respect to OC when given the value of 3. Then OD is, in relation to 3, an already very perfect π of 3.141595, compared with π as it is presently calculated, 3.1415927....

We thus have a method of drawing an almost exact π in a straight line, which makes a geometric squaring of the circle possible.

The proportions of the room containing this naos apply this function: the length of the east-west walls is equal to 3 for the length of the north-south walls equal to π .³⁰

The arrangement of the four columns originally built by Amenhotep III in the place of the present naos of Alexander determine, by the distance between their axes, the proportion 1 to 1.236..., which corresponds to the ratio of the radii of the inscribed and circumscribing circles of the pentagon. These four columns therefore imply the function of the pentagon, the governing rectangle of which was only realized by Alexander.

In establishing the human canon on 18 and 19 for the height of man to the forehead and to the vertex, respectively, the Ancients chose the nearest whole numbers to the ratio between the height and the diagonal of the pentagon.³¹ Traditionally, the pentagon has been associated with the representation of man. Now, the pentagon allows us to establish geometrically the values of the square and cube roots of π .

The pharaonic people were great geometers.

DISCUSSION CONCERNING A PERFECT π

The figure of Ramesses IX, like the sanctuary of the barque of the temple of Luxor, accentuates the relation between the 3, 4, 5 triangle, the pentagon, and the hexagon.

It seems that the Ancients did not have to draw the pentagon to establish this geometric understanding, the pentagon being for them a sacred figure, implied and respected. The crossing of the two 8 to 11 rectangles was sufficient to obtain the same “practical” demonstrations of the functions instanced, as much in the case of the figuration of Ramesses IX as in the sanctuary of the barque at the temple of Luxor.

The knowledge of the ϕ functions by pharaonic geometers simply cannot be doubted, but one could reasonably object: with regard to the definition of the coefficient π that results from this geometric play, how were they able to draw the conclusion that they were dealing there with the value of π , and particularly with a more precise π than that obtained by $1.2 \times \phi^2$?

Our present knowledge of a π calculated by polygons allows us to observe and to judge, but the Ancients did not have this criterion at their disposal. So is it not a fantasized pretension on our part to conclude that it was a conscious geometric activity on the part of the Ancients, especially their knowledge of the fact that this angle β is that of a triangle that establishes a relation of 3 to π between the large side and the hypotenuse?

We can observe these disconcerting coincidences:

1. The angle made by the axis of Amun with north represents double the angle β (fig. 284).
2. The rectangle formed by room VI of the barque of Amun is established on the proportion of 1 to $\pi/3$, but this can be related to a π that equals $1.2 \times \phi^2$.
3. The beautiful monument of the naos of Alexander, constructed in room VI, has a plan established on the governing rectangle of the pentagon.
4. The columns of Amenhotep III, on the bases of which the naos of Alexander is constructed, form a rectangle of 1 to 1.236... (from center to center of the columns), which is the relationship between the radii of the inscribed and circumscribing circles of the pentagon ($\sqrt{5} - 1$).

³⁰ Cf. vol. 1, fig. 113, the proportions of room VI. We note that all the measurements given were taken on the spot with the greatest care, and the geometric lines were studied on large-scale plans with measurements always checked.

³¹ Cf. vol. 1, fig. 132.

5. The tomb at Meir, the *canevas* of which we have analyzed, shows us that the 3, 4, 5 triangle is intentionally displaced in order to obtain the proportion of the governing rectangle of the pentagon, 1 to 1.376.... The registers indicate, by the number of squares, the ratio 22 to 21, or approximately $\pi/3$ (in whole numbers).

6. The tableau of Thoth at Karnak gives the numbers of the hexagon to Thoth and those of the pentagon to Seshat.

7. The drawing of the naos on papyrus has the proportion 1 to 2 in elevation and the rectangle of the pentagon in plan, which also evokes the ratio 22 to 21, therefore the function $\pi/3$.

8. The ratio of the length of the royal cubit, 0.5236 meter, to the radius of the circle is the function of π , which implies the knowledge of the meter with regard to π equaling $1.2 \times \phi^2$.

Above all, it is evident that the coefficient π is used intentionally. Now, it was as obvious to the Ancients as it is to us that the elements for establishing the value of this coefficient—like $1.2 \times \phi^2$ —are irrational; they could not therefore have doubted the relativity of their π with respect to a more precise coefficient.

The search for a more precise number (in proportional notation and not as we write here in figures and decimals) must have necessarily oriented them toward the pentagon, which is entirely irrational through its construction based on ϕ . But this still does not explain the knowledge of a more perfect π through the angle β , which corresponds to 3.14159....

Nevertheless, in order to establish the royal cubit, the coefficient π must already have been known. The knowledge of an approximate π through 22 : 21 appears in the constructions, then, functionally, through $12 \times \phi^2 = 10\pi$, the π of the cycle of time, fully adequate to establish the π of the royal cubit, as a practical measure, at 3.14164....

It is also easy to establish the coefficient π empirically by measuring the relationship between the diameter and the circumference of a circle of any dimension. Moreover, the ratio of the areas of the disk and the square used in the Rhind Papyrus, $8^2 : 9^2$, implies an already excellent π of 3.16049....

There is therefore a reference for finding a more precise number than that imposed by logic. Now, the certainty of approaching a more perfect π can only be given by a function that, originally, gives an approximate π . This function must then be a ratio that develops naturally, revealing a number that becomes more exact, as the ratios of the F and R series do for the value ϕ . Rationally, this condition is offered by the inscribed and circumscribed polygons, but this is not “pharaonic.”

The tableau of Ramesses IX can be instructive in resolving this problem. Indeed, everything here is oriented, first, toward the meter, that is, the diameter or radius of the circle; second, toward the law of the right triangle through the sacred 3, 4, 5 triangle; third, toward the pentagon and the construction of the angle β that results from it, this angle being half of the original angle given in the temple of Luxor by the angle made by the axis of Amun with respect to north; and fourth, toward the coefficient π in general.

If we apply the indicated geometric construction that comes from the pentagon to the 3, 4, 5 triangle we have, first, the triangle 3 to $(4 + 5)$, which is proportionally 3 : 9, and second, the new hypotenuse will be $\sqrt{90}$, which equals 9.4868..., and its ratio to 9 will be 1.0541..., or $\pi/3$ for a π that equals 3.1623..., which gives to π the value of $\sqrt{10}$, very close to the ratio 256 : 81, or 3.16049..., observed in the Rhind Papyrus with regard to volumes.

It then becomes evident that this procedure, applied to the irrational values of the pentagon, and thus to the values derived from ϕ , will give a more perfect result. We only have to find the *transition function* between 3, 4, 5, or, the right triangle in general, and the relationship between the small radius, the side of the pentagon, and their hypotenuse.

Now, the curve of the circle or cycle is the effect of movement, and the movement defines the limits of a surface cutting and measuring the volume. The regular volumes show us the origin and what results from movement: the octahedron defines the tetrahedron by pivoting, the tetrahedron gives the cube and the cube gives the dodecahedron formed from twelve pentagonal surfaces.

The projection of the icosahedron, engendered by the dodecahedron, produces a hexagon and a pentagon, and the dodecahedron is a *construction* starting from a planar surface formed of hexagons that cannot constitute the surface of a volume *without contracting from six to five sides*.

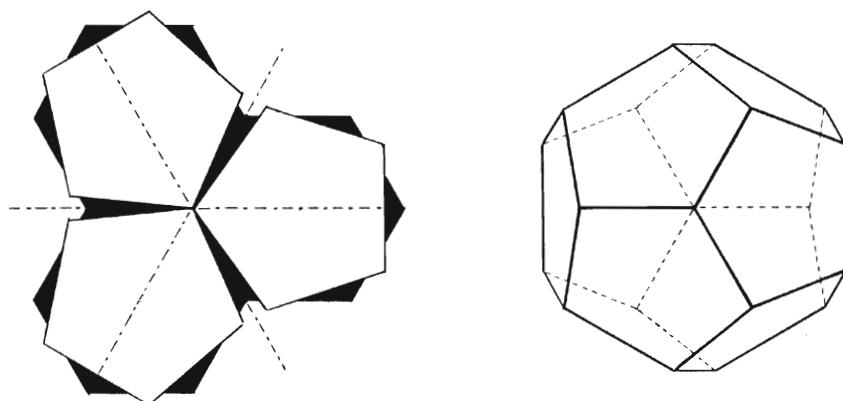


Fig. 285. Contraction of hexagons that fill the plane into pentagons, which join to form the dodecahedron

Starting from the dodecahedron, only the icosahedron, formed of twenty equilateral triangles, can result from its movement. The next volume, but then only semiregular, that can be formed on the icosahedron is the triacontagon composed of twelve pentagonal faces and twenty equilateral triangles. But the idea of wanting to create a curved surface by multiplying flat surfaces will always be contrary to the pharaonic mentality.

The contraction from six to five through the ratio of the hexagon to the pentagon is constantly evoked where the pharaonic tradition speaks of π . We find it in the tableau of Thoth at Karnak, in the tomb of Ramesses IX, in the sanctuary of the barque of the temple of Luxor, and then in the passage from the work of Amenhotep III to that of Ramesses II in the *growth* of the temple.

The figuration of Ramesses IX is oriented toward *function* by relating Maāt and Ptah (fig. 262). Now, Ptah is the contracting, earth-forming fire of the Heliopolitan Mystery, the Tum become corporeal, and Maāt is the milieu having a separating function (the pure from the impure, the high from the low); it is the balance from which comes the principle of justice and the first manifestation of consciousness and conscience.

The metaphysical theme is thus: a contracting, styptic force coagulating an undifferentiated milieu into a form that can only be a “formless” sphere containing all forms. In other words, the regular solids result from the sphere and end in the octahedron and not the other way around, as logic might suggest. The passage is from the curved surface to a surface composed of equilateral triangles, and from these, which are the elements of the hexagonal planar area, to the pentagons forming surfaces of volume.

There is a contraction toward rational elements from an irrational given that cannot be separated into isolated elements. This progress toward the Becoming is clearly marked by the geometry of the figuration of Ramesses IX, which calls for *the principle of harmonic division* (fig. 286), just as it prescribes, moreover, the philosophy of the Becoming.

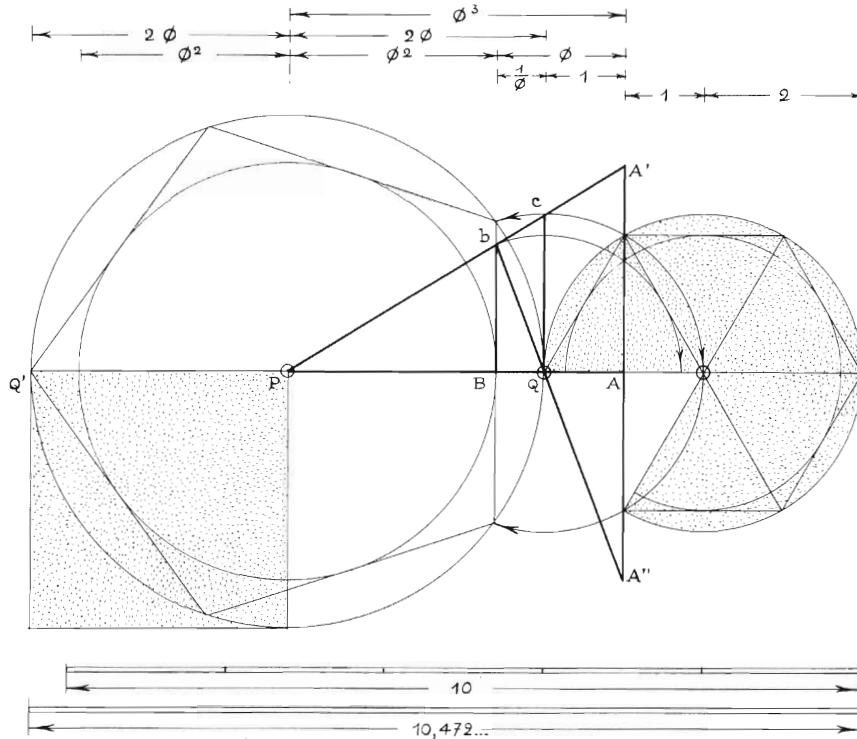


Fig. 286. Demonstration of the hexagon-pentagon relationship
and the contraction of six triangles into five

$$\begin{aligned} \text{If } \frac{PA}{PB} &= \frac{a}{b} = \frac{\phi}{1} \text{ and if } AA' = AA'' = PB, \\ PA &= a^2 + ab = \phi^2 + \phi = \phi^3, \\ PB &= b^2 + ab = 1 + \phi = \phi^2, \\ PQ &= 2ab = 2\phi. \end{aligned}$$

The ratio between PQ and PB is as 2ϕ is to ϕ^2 , which is 2 to ϕ and corresponds to the ratio between the radius of the circumscribed circle and the radius of the inscribed circle of the pentagon. The height Bb is equal to ϕ and Qc equals 2. The diagonal Qb is then $\sqrt{3}$, so that Qc and Qb are to each other as the radii of the circumscribed and inscribed circles of the hexagon for which each side equals $2QA$.

The total length $Q'D$ is equal to $4 \times \phi^2$ or 10.472.... This length is equal to five-sixths of the curve that circumscribes the hexagon with a radius of 2. In surface, $4 \times \phi^2$ or 10.472 represents the square of the radius of the circumscribing circle of the pentagon, and this surface equals five-sixths of the surface of the disk formed by the circle circumscribing the hexagon. Because of the harmonic proportion applied to the geometry of the hexagon and the pentagon, we are dealing here with the inversion of the ratio $(\phi^2/5) \times 6$.

One can calculate by various procedures a sufficient mathematical π that will always be only an approximation between a straight line and curve, whether with right triangles, by cutting into bands (the Chinese and Japanese procedure), or by using polygons. By these paths π will necessarily be an indefinable number.

If one were able to give a numerical value to the circle through the different curved elements—therefore through movement—and not through straight lines, we would arrive at an absolute π , but it would be untranslatable into numbers. Therefore the true and absolute π must be considered as a *function*, and not a number, and this function is a *contraction* by a center—presumably acting equally in all directions—on a “spatial substance.”

This *fact* exists, geometry can demonstrate it, but cerebral intelligence cannot grasp it. In principle, it is a question of the gravitational phenomenon conditioned by an energetic “density,” but of a nonpolarized energy and not a kinetic energy. This is the obstacle to the definition of the gravitational force starting from the circuit-formula, $E = mc^2$, because first it is necessary that *energy* become *mass*.

We always come back to the Heliopolitan Mystery, experimentally demonstrable, but which no reasoning can explain.

Demonstrating geometrically the relationship and the passage from the pentagon to the hexagon is typically pharaonic.

It is the generative function that matters in their mentality and not the element of a mechanical ratio like π as a coefficient in the calculation of cosmic mechanics. In this case the function ϕ , which is the original power of the scission, would be more valid in their eyes than a π translated adequately into numbers precise enough for technical work.

We always have a tendency to investigate the invariable—what I call the cadaverous—in the study of phenomena, without taking movement into account, the alternation that is the character of every living thing, of everything that makes up our universe. We seek the value of the great circle of the earth to within a few minutes of arc when in fact we know that the earth breathes, expanding and contracting; we want to know the circuit of the planets and other astronomical movements to within meters when we know and observe that these paths and durations are constantly varying.

These are seductive supporting points to conclude that there are laws, but for the Ancients there is only one law, that of genesis; it is philosophical, but its principles apply to everything in practice. It is a “functional science,” whereas our science is concerned with momentary finalities.

CONCLUSION: MOVEMENT, SYMBOL OF LIFE

Through their orientations and their slight oscillations, the axes of the temple relate the building to certain areas of the sky and to the characteristics of the planetary movements relative to the movement of the earth as it travels in space. I do not have the competence necessary to provide precise details of these relationships; this would be work for an astronomer. After having noted the principle incidences of these orientations and oscillations with the lines of the walls and of the rows of columns, all that remains to speak of is the impression one receives when one has had the privilege of passing hours in meditation in the midst of what remains of this temple.

Only with difficulty does the eye notice variations in the construction; while what remains is only an impression of equilibrium and serenity, all is vibrating as a sound would that resonates and continues to vibrate within us when the ear can no longer hear it. In this state then everything seems possible. But when, in the return to our agitated world, vibrating for nothing, drowned in its singular utilitarian preoccupations, and unfortunately growing more and more amoral, one considers improbable all the subtleties displayed in this sacred architecture. And we have had to measure and check completely to prove that these things are true and not imagined. We can only prove that these movements have a logical sense, and by doing so bring life to a rigid, cadaverous notion, whereas the goal of the Temple is to raise our being toward the Being that animates all.

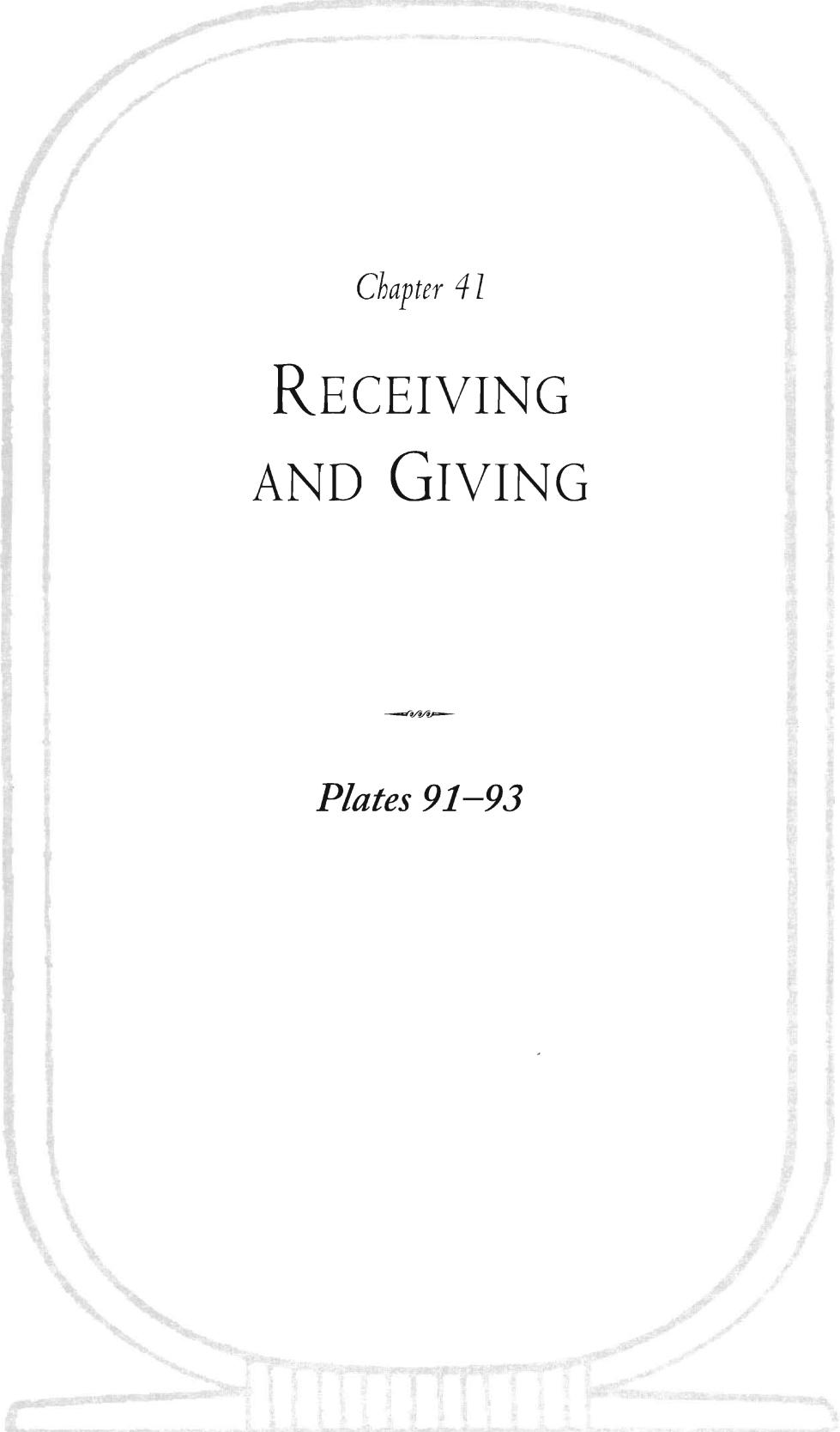
Ancient visitors to Egypt could say that these people were the most religious in the world, which must be true when we ourselves, today, in the midst of these ruins (of that which is perishable) are still deeply moved by the atmosphere that reigns there. The walls and columns, however, are without the glowing colors that illuminated them, devoid of the strips of silver and gold repoussé that ornamented certain bas-reliefs; the ground of the sanctuary of the barque is bare of the virgin silver plating that covered it, the doorways no longer carry the swinging doors of rare wood encased in bronze, gold, and silver and the precious stones that decorated them; the sanctuary of Amun is missing its statue of "new gold," the space is devoid of the perfume of secret resins that expand the heart. . . .

But beyond the ear, in those who know how to listen, the mantric litanies whose magic has impregnated the stones still vibrate, and will remain there until their decomposition into dust. And we can no longer believe that this once was real. . . .

Thus Asclepiades, the pseudo-Apuleius, long ago prophesied,

A time will come when it will appear that it was in vain that the Egyptians have served the divinity with piety and zeal . . . because the divinity will return from the earth to heaven and Egypt will be delivered to abandonment; the country that was the seat of religion will no longer be the abode of the gods. . . . O Egypt, Egypt, only fables will remain of your beliefs, which will seem incredible to future generations, and only words on stones will remain to recount your acts of piety!³²

³² Erman, in *Religion des Egyptiens*, cites this quote to close his book, a book so precious and precise that we can both deplore its derivative attitude toward ancient Egypt and be surprised at the choice of the prophesy of Asclepiades to conclude it. Asclepiades lived between the fourth and fifth centuries A.D.



Chapter 41

RECEIVING AND GIVING

Plates 91–93

*The true meaning of the crossing is the alternation
of the visible with the invisible, of the abstract
with the concrete, of the actual with the potential.
We see the one, observe it with our senses, but we
do not perceive its complement. It is this relation-
ship that is α and ω , the All.*

(Chapter 19)

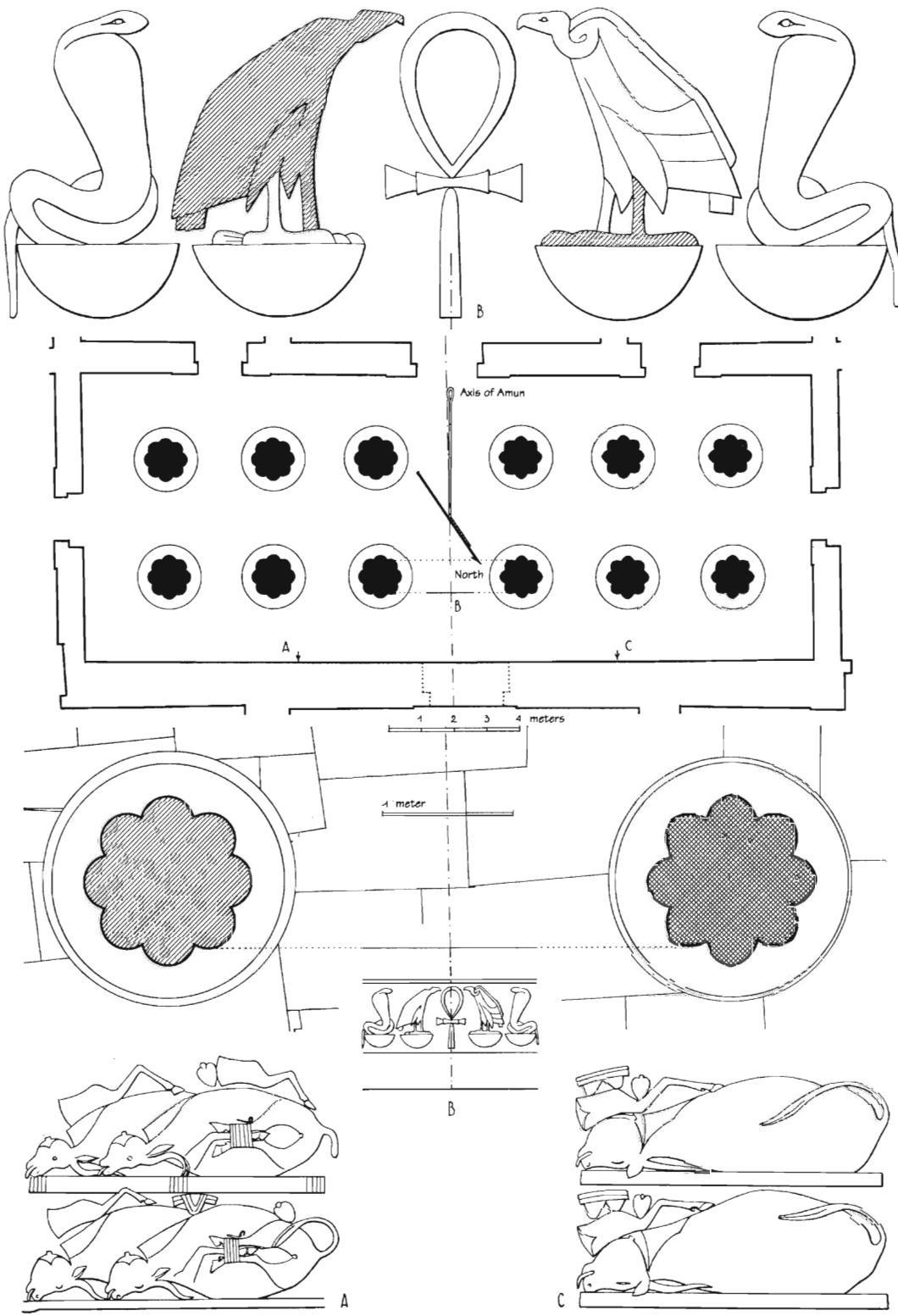


PLATE 91

Orient and Occident

*In the Symbol, that which evokes is the soul that
animates the thing, its life.*

(Introduction)

*Cultivating simplicity of being and seeing
in oneself is the first task of anyone wishing
to approach the sacred symbolique of Ancient
Egypt. This is difficult because the obvious
blinds us.*

(Chapter 2)



PLATE 92
Sunrise and Sunset; the Luxor Pylon

*The universal principle of the crossing (the cross)
is applied throughout pharaonic thought. It is the
vital key to all that appears in the Universe.*

(Chapter 19)

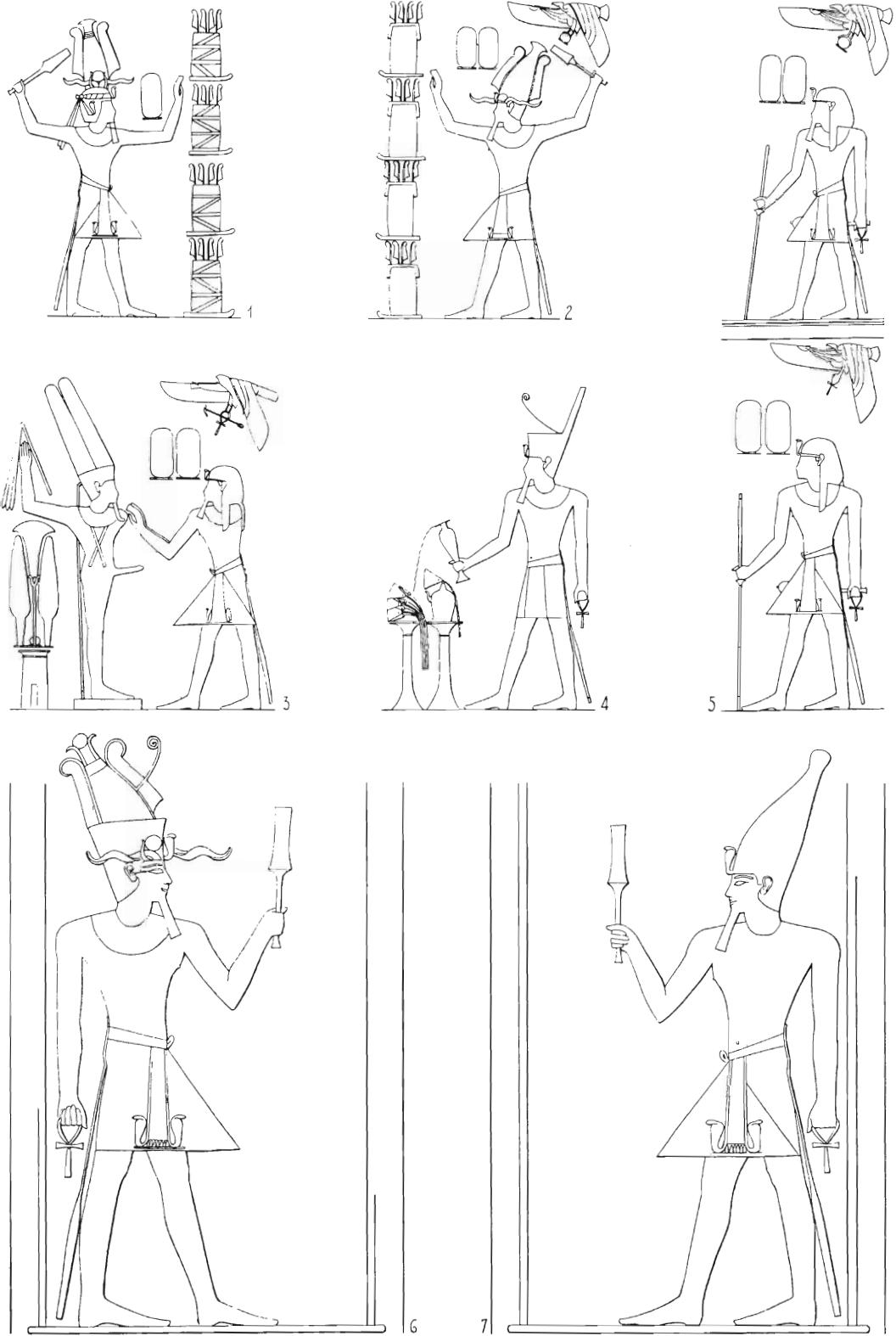
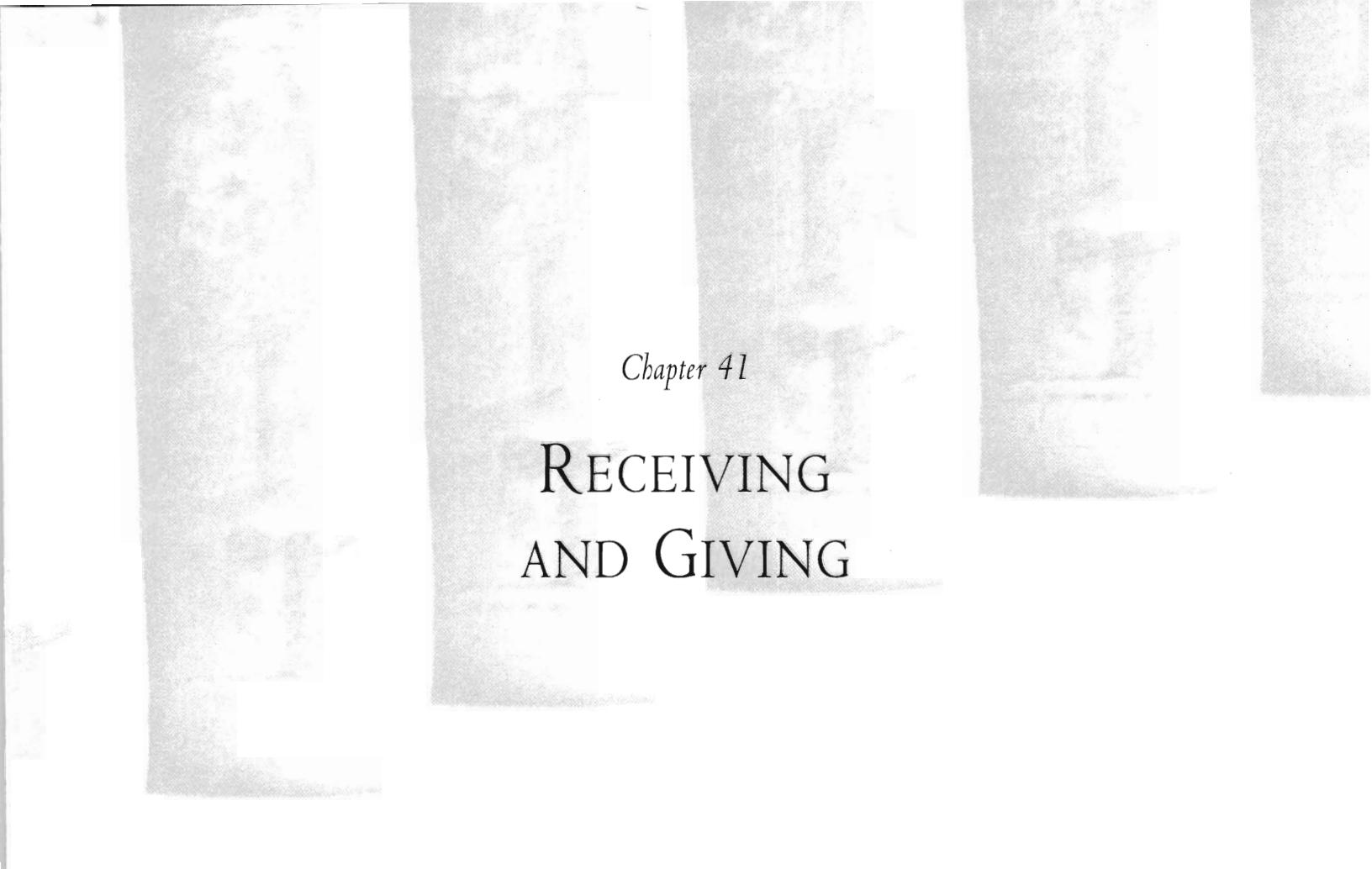


PLATE 93
Right and Left



Chapter 41

RECEIVING AND GIVING

We again insist on affirming that pharaonic science is vital and never schematic. One might say that pharaonic Egypt has a horror of symmetry.

The culminating point of the sun at noon does not divide its course into two equal parts. There are variations in the durations, from sunrise to midday and from midday to sunset; but the most important thing to note is that the sun before noon is vitally not the same as the sun of the afternoon, as any experienced nurseryman knows perfectly well. It is not a matter of an accumulation of heat throughout the day, but of a different radiation that affects all of life, as an emission of ultra-violet or infrared rays might do.

A variation in growth and ripening in every living thing results from this; the numbers and measures applied to these two states are consequently not identical. Let us acknowledge, in terms of the myth, a Sethian and a Horian significance to these relationships; indeed, in the composition of the statues and figurations, the numbers and measures that correspond to the characteristic mythic lineage are used.

PLATE 91 • ORIENT AND OCCIDENT

In its totality, the plan of room XII presents two rectangles added together end to end, each having 1 for its width and $1.272\dots$ or $1.2732\dots$, that is, $\sqrt{\phi}$ or $4/\pi$, for its length.

The embrasures of the east and west doors indicate the direction of entrance and exit, from east to west. This fact is verified by the orientation of the movement of the figurations there and by the widening of the colonnade as it follows this direction. From this widening movement it follows that the north wall and colonnade are exactly perpendicular to the axis of Amun, while the south wall and colonnade undergo a deviation with respect to this axis.

The plan of the colonnade teaches yet another nuance through the direction of the movement of the officiant: the three groups of columns located in front of the doors of the three sanctuaries open out toward the south; from the north side, the interval between the centers of these columns measures 6 royal cubits (3.14 m), and from the south side this intercolumnar space is 6 black cubits (3.24 m) for the east and west groups leading to sanctuaries V and VII.

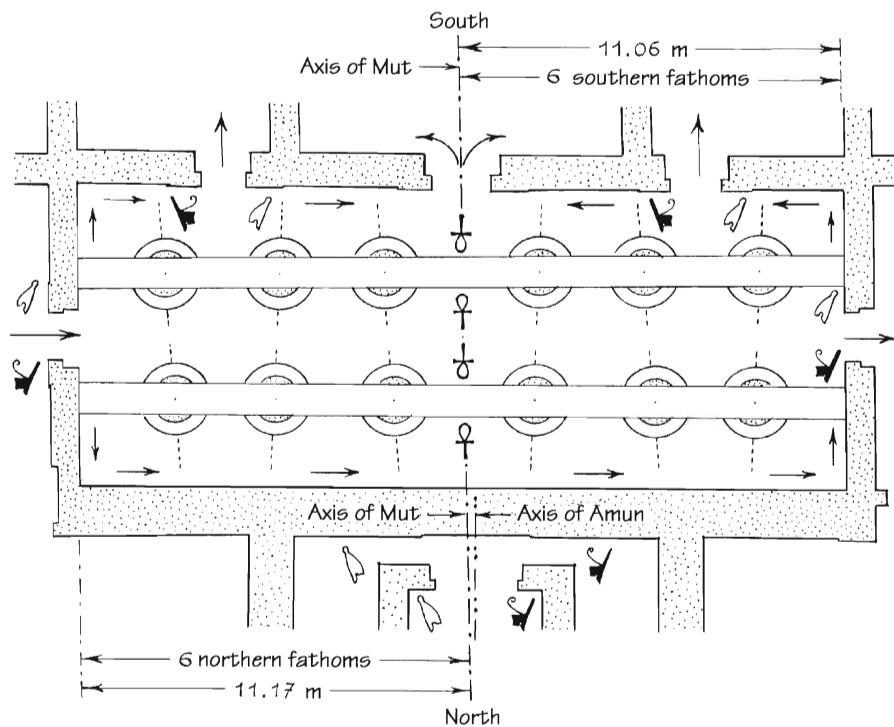


Fig. 287. Diagram of the plan of room XII with architraves

Division of the room into two unequal lengths by the axis of Mut, indicated by the ankhs engraved on the architraves, and the movement of the opening of the columns toward the three sanctuaries from east to west. The arrows indicate the direction of the king's movement in the scenes on the partitions; note the crossing of the orientation of the crowns at the doors of sanctuaries V and VII.

The median axis of the central intercolumnar space conforms to the axis of Mut (or geometric axis), which crosses the perpendicular of the axis of Amun. The whole room is divided into two parts by the axis of Mut, which is confirmed on the two faces of the architraves by the ankhs from which the inscriptions lead out in opposite directions. These ankhs coincide with the median axis of the intercolumniation and, consequently, with the axis of Mut.

The axis of Mut, however, divides the room so that the two east-west lengths are clearly unequal. The east is 6 northern fathoms (at 90°) and the west is 6 southern fathoms (at 0°), which determines the total length of 12 mean fathoms. Room XII, consecrated to the progress of the sun, particularly takes account of the difference between the morning and the afternoon, between the east and the west (sunrise and sunset), in all its architecture and figurations.

On the east partition in the center of the third register the morning barque is depicted in which Horakhty (Horus of the double horizon) appears in his naos (fig. 288). The texts that frame it specify that Ra is "adored in the morning" by the king and that the subjects, his creatures, acclaim him when they see Ra, in the quality of Khepri, go forth (from the horizon) in his infant form.

Under the sky, supporting the sacred barque of the sun, two groups of six baboons raise their hands in a gesture of adoration before Ra, and it is not insignificant to note that the proportions of the tableau in which the solar barque is carved are as 1 to ϕ^2 , the function directing the establishment of the cycle cubit that measures it (fig. 289).

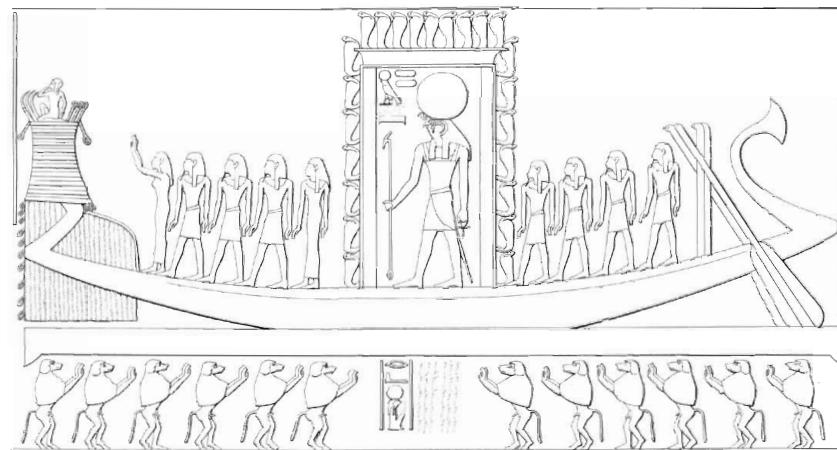


Fig. 288. Appearance of the sun; solar barque of the morning, room XII, east wall, register 3. Tableau restored from the elements that survived effacing and damage to the joints.

The barque, the naos, Ra-Horakhty, and the small Harpocrates located at the front of the barque have remained intact since the time of Amenhotep III. The nine figures on the barque have been hammered out and then recarved, probably by Seti I. The arms of the first female figure located in the bow are presently damaged by a joint, as are the tops of the heads of all the figures.

Of the twelve hammered-out baboons, there remain on the left only six pairs of feet to define their exact location, and the two arms of the first baboon in the gesture of adoration. On the right, a nearly complete baboon has enabled us to reconstruct the others, for which only the upper curves of the heads are still visible. This restoration, done in order to complete our drawing, has a symmetry and a regularity that certainly do not correspond to the original sculpture, but we could not allow ourselves to represent variations according to our judgment.

The naos is framed at the right and left by two times seven uraei and is crowned by five plus four uraei.

On the west partition there are vestiges that, although badly damaged, allow us to observe that men and no longer baboons are worshiping the sacred barque at its setting. In a long hymn of adoration of the sun, the hieroglyph Ra is represented as descending in each column of text, thus showing the progress of the sun setting toward the horizon.

The north partition, in which the figurations all face in the same direction, from east to west, can also be divided by the dimensions of the first register into two distinct parts, in the image of the plan of the room. All the figures on the eastern half are larger than those on the western half, although the register on which they are represented is uniformly 120 digits of 1/100 fathom (2.22 m) for the whole length of the room, that is, exactly one-tenth of the total length of the room (22.20 m).

The average height of the figures of the eastern half is 3 black cubits to the vertex, while those of the western half measure 3 royal cycle cubits.¹

¹ The vertexes of most of the figures in the western part coincide with a joint of stones. Their average dimensions are established by taking the height from the soles of their feet to their shoulders as a base and taking into account that this height represents 16/19 of the height to the vertex and 16/18 of the height to the forehead.

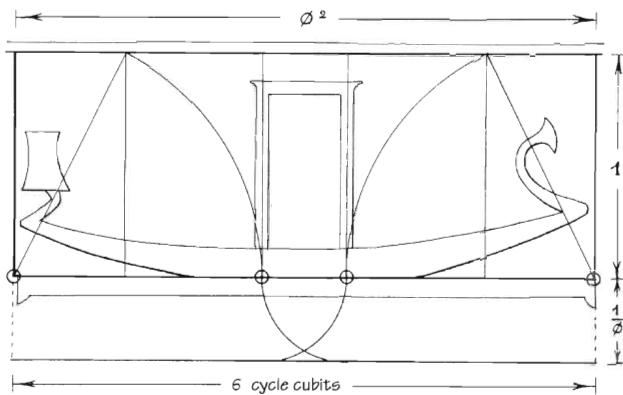


Fig. 289. Proportions and measurements of tableau of Ra's barque

Length between the vertical lines of the edge of the tableau: 3.15 meters = 6 royal cycle cubits = ϕ^2 for the height of 1.205 meters between the two skies under and on which the barque navigates. The height of the frieze of baboons, including the lower sky, represents $1/\phi^2$, the function that determines the position of the naos and its width to the middle of its two vertical posts.

The metrical nuances existing between the figures of the east and the west relate them to the measurements of the colonnades: the largest figures, measured in *black cubits*, are to the east and are related to the widest spread of the columns on the south side, whereas the smallest figures, measured in *royal cubits*, are to the west and are related to the intervals of the columns on the north side. The relationships between the orientations correspond to those of the crowns before their crossing, which takes place only at the door of the three sanctuaries (fig. 287).

The offerings also obey the distinction between east and west governing this location. At the places marked *A* and *C* (plate 91) on the north wall one sees on the morning side two pairs of desert animals presented as a sacrifice, and shown belly side up; on the evening side, there are only two animals, which are shown from the back.²

The detail of the hieroglyphs on the architraves further confirms the intention of attributing renewal to the sunrise and realization to the sunset, as we have already observed in the chamber of Mut, which particularly expresses this difference: on the east side many details of the figurations are unfinished, whereas on the west side they are completely finished.

In room XII, on the architrave of the north colonnade (plate 91 at *B*), on both sides of the geometric axis marked by the ankh, the dedication reads toward the right and toward the left. On the side of the sunrise, the sculpture of the Mut bird (the vulture) remains in a rough state, except for the right leg and claw, which are perfectly finished; now, it is the claw that takes and fixes. The proof that this figure is intentionally unfinished is that the curve of the lower part of the neck has been cut, which prohibits the figure from being finished. On the side of the sunset, the design and the sculpting of the Mut bird are completely finished except for the left leg and claw; they are no longer part of the body of the winged creature, which represents the embodiment of the volatile. The drawing of the uraei is complete, but the two serpents are not absolutely identical.

² We know of only a single exception to this presentation of animal sacrifices in the whole covered temple where the front is presented in the east and the back is presented in the west. This exception is found on the south wall of room III, that is, on the back of the north wall of room XII, west side. This anomaly indicates that a "crossing" exists in this place. Physiologically, this place is at the base of the medulla where there is a decussation (crossing) of the pyramid fibers.

In room XII, the group of six columns to the east does not have the same character as that of the six columns to the west: the cross section of the eight lobes of the columns of the rising sun are semicircular arches; and the cross section of the eight lobes of the setting sun show them as pointed arches.

Thus, the regular, romanesque curve (based on one center) belongs to the Orient, and the ogive, gothic, or double curve (based on two centers) belongs to the Occident. We find the same treatment of east and west through rounded and pointed curves in the great monuments of the Middle Ages, when such knowledge still existed.³

In room XII there is always a play of crossing: the columns with foils that have one center are to the east, where two animal sacrifices are offered two times. The columns with two centers are to the west, where a single animal sacrifice is presented two times.

This crossing is again characterized by the orientations of the crowns in this place: the king wearing the white crown, who was found on the left and on the exterior of the entrance doors of the covered temple, as well as on the exterior of the east entrance of this room, is now on the right on the lintels of the doors that lead to sanctuaries V and VII (fig. 290).

At the entrance of the central sanctuary of Amun, the two kings depicted on the lintel wear the blue helmet, but the one on the right offers the white bread while the one on the left presents the vase of fire.⁴ In this case the red crown and the white crown are symbolized by the offerings. The whole *symbolique*, including certain blocks of white limestone and red granite that were reused in the pavement, confirms this intention of indicating the two lineages, one white, the other red, and their crossing in this place.

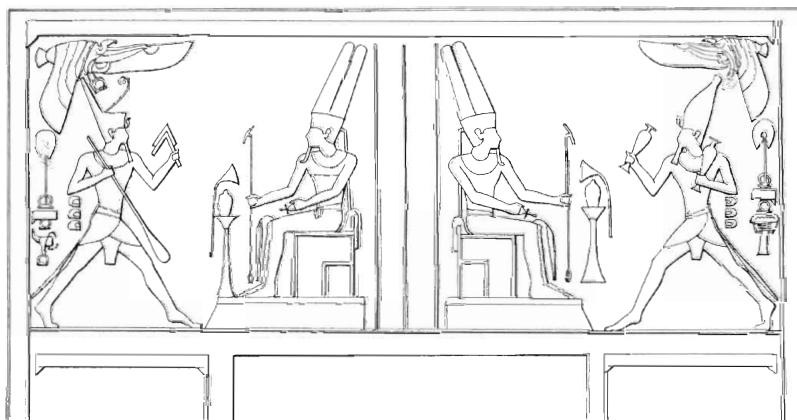


Fig. 290. Scene of the "long stride," room XII, south wall, lintel of the door leading to room V

Left, the king wearing the red crown holds the *hpt* oar (?) in one hand and the *hpt* rudder (?) in the other; behind the king, under the half-sky, is the sign of the scorpion. *Right*, the king wearing the white crown holds two *hs* vases in his hands; behind him, under the half-sky, is the sign of the *ka*.

Notice on the left the table of offerings on the pedestal of the throne of Amun; on the right the table appears to rest on nothing. On the left, the line that frames the scene touches the lower point of the sky; on the right a similar line passes outside the end of the sky. On the left, the loin cloth is crossed toward the front; and on the right it crosses toward the back.

³ Cf. chapter 40, "The Three Axes," remarks regarding Notre Dame in Paris.

⁴ Cf. vol. 1, fig. 183.

In the part of the brain corresponding to this place all perceptions cross, a fact thus very explicitly affirmed by the figurations (the reversal of the flows of nature and of consciousness). This reversal is an essential function of nature, which we also find indicated in the zodiacal medallions of the central portal of Notre Dame de Paris.

PLATE 92 • SUNRISE AND SUNSET; THE LUXOR PYLON

An entire tableau representing one of the phases of the battle of Kadesh, located on the west wing of the pylon, was first carved by Ramesses II and then underwent some important alterations. The lines of the first bas-reliefs are still visible under its present form.⁵

The first design included two principal scenes: on the left, the king was seated on his throne, and on the right the king was standing in his chariot, drawing his bow toward the west. Both figures were looking west (fig. 291).

The alteration of the bas-reliefs shows the following two essential facts: First, the king drawing the bow has been effaced and replaced by the camp of the Egyptians, outlined by the shields raised upright next to one another and forming a fortress wall in a great rectangle, in the middle of which the royal tent is erected. Thus what was mobile, the camp, is fixed. Second, the seated king, turned west, is replaced by the king who is now seen seated on a throne, said to be of gold, looking east, while under his feet two spies receive a flogging (plate 92).

The king is looking at his two cartouches. One bears his mystic name, Amun-Ra-mes-s (birth, or realization of Ra), the other, User-Maāt-Ra stp-n-Ra (appearance of the energy of Ra).

The character of crossing, more exactly, of meeting and inversion, is typical of the whole bas-relief. Over the sky above the king, in the frieze of horses drawing war chariots, each with an archer and a driver, the horses can be seen crossing just above the king's head. Behind the king, servants cross their flabella. Above the head of the king drawing the bow, we observe from the first stage of the bas-reliefs an analogous crossing. From the east door of the camp, a file of six horse-drawn chariots cross the camp at an angle and rise toward the upper register where they encounter the horses coming from the west (fig. 291).

Under the palisade of shields outlining the camp along its length, the harnessed chariots galloping from west to east meet a stopped chariot whose drivers, on foot, hold the horses back while bending toward the opposite side in front of an empty chariot whose driver, standing next to it, also leans toward the back. This chariot is sheltered by a parasol, the only one represented, which leads us to suppose that this is the royal chariot.

The character of the crossing, typical in the bas-reliefs of this west wing, is remarkable if we remember that it is from the south side, at the end of the chapel of Amun's barque, that the axis of Amun is reflected, the extension of which, going through the pylon, would end at the king seated on his throne.

The reversal of the orientation is in direct relation to "the axis of the return of Amun," which is reflected at an angle of 1 to 7 and lets us assume that the chapel where this axis ends was constructed at the same time that the modifications to the bas-reliefs were made.⁶

On the north face of the east wing of the pylon, representing the great battle of Kadesh near the Orontes, there is no inversion, which confirms the intention of a crossing for the west wing only.



⁵ Cf. plate 9 and commentary.

⁶ Cf. plates 86 and 87.

This magnificent and colossal tableau sculpted on the western part of the pylon of the temple of Luxor, through the perfection of its composition and finish, once again compels us to reject any thought of unskillfulness or bad workmanship on the part of the pharaonic artists. Consequently, we must honestly accept the idea that any deformation or so-called unskillfulness has a reason behind it whose meaning we must investigate. I hope this fact has been sufficiently demonstrated in this book through the different meanings—geometric, functional, physiological, and, in general, vital—that have been brought to light.

With the pylon we are at the exterior of the temple. More exactly, with this north face, we are before what is *under the feet* of the Man of the Temple, but also before the first act of the drama of the creation. The *symbolique* of this imposing composition will prove this fact.

Figure 291 is the central part of the tableau that faces the sunrise, which we have reproduced here stripped of the tangle of innumerable lines intentionally left from the preceding tableau showing the action, the battle, oriented toward the sunset.⁷

The figuration of the combat was as perfectly composed and finished as that of the royal camp oriented toward the rising of Ra. Now, these two sculptures are Ramesside. There was no hesitation to destroy such a work of art and carve a second bas-relief on the first, some parts of which are preserved, and these already demonstrate a symbolic reason motivating this work, since nothing would have prevented the complete effacing of the first composition.

To this symbolic reason are joined many others, such as, first of all, the titulary of the . . . king? Is not this king the symbol, as Anthropocosmos, of the eye of Ra, the luminous golden center, animator of our world? First, he is called “birth of Ra,” next, “appearance of the energy of Ra”: the historical foundation of the legend serves to symbolize the esoteric gesture of the myth.

The ensemble represented here is called the “battle of Kadesh” (Qdch).⁸ Now, the geographical as well as the historical location of this battle is the subject of considerable uncertainty. There is general agreement that it occurred at the time of Ramesses II in the country of the Hittites, present-day Syria, northeast of Egypt, which is, for Egypt, the place of the sunrise between spring and summer.

In the first tableau, the figurations look toward the sunset; in the second tableau, which shows the camp, the battle being “finished,” they await the rising of the sun.⁹ Therefore, the entire action took place in the darkness of night, the sun being under or in the earth. This fact is typical of all of the Ramesses, whose bas-reliefs are characterized by intaglio carving, in contrast to those of the Amenhoteps, which are etched more superficially, another symbol. This sunk-relief carving is accentuated with the first four Ramesses and, starting at a depth of 2 digits, reaches 8 and 10 digits—real caverns—with Ramesses IV. What are called arbitrary styles in the bas-reliefs are in fact functional symbols that correlate with phases of the genesis, the Becoming of the cosmic work.

This battle of Kadesh is that of light against darkness, but it is also the *fixation* (in the form of earth) of this light. It represents the first great victory of knowledge over ignorance, the Becoming of Tum of the Heliopolitan Mystery. Without it there is no possible entry into the Temple. Tum, or Atum (*Adam*), is the product of this battle, which is described by the tableaux on the pylon.

⁷ When the second theme of this tableau was sculpted, certain parts of the first were effaced, others covered over in thin layers of plaster, and the deepest sculptures filled with stucco, except, of course, for the royal figures. Today, long after, the plaster has fallen off, allowing the older sculptures to appear.

⁸ Cf. Gauthier, *Dictionnaire des noms géographiques*, 5:182.

⁹ The east wing of the pylon shows, on the north face, the whole entanglement of the battle itself and the victory of the king—looking east—near the Orontes (the subterranean Nile). In the second depiction of the west wing, in which everything is reversed, both the beginning and the end of this combat are shown.

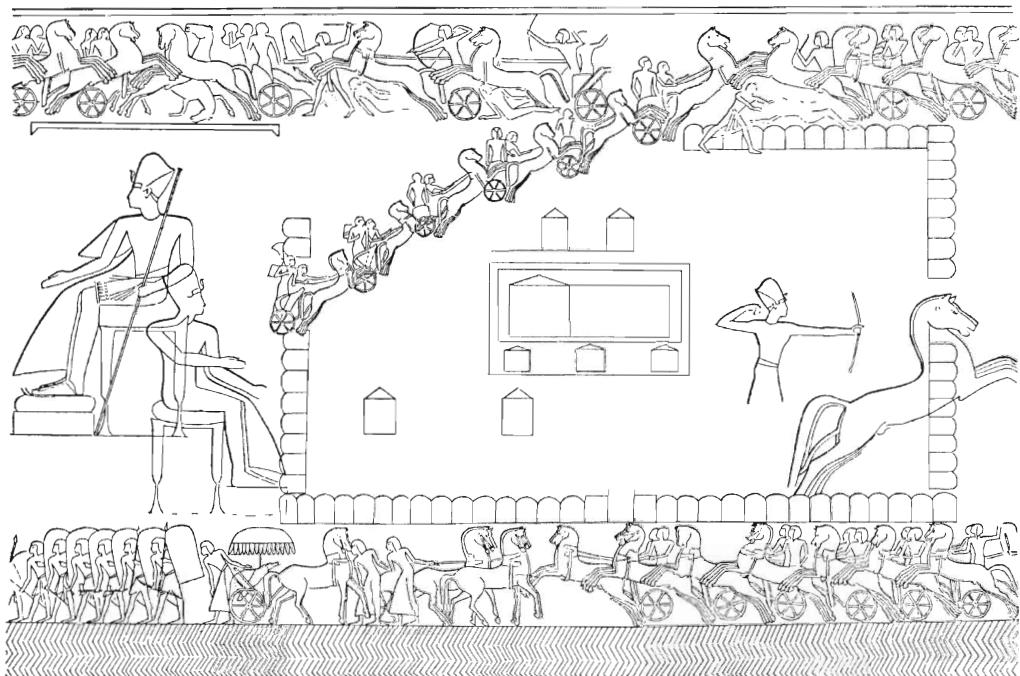


Fig. 291. Pylon of Ramesses, west wing, north face, central part

This figure shows only the two royal figures of the first stage, and the camp and the royal figure of the second stage, as well as the essential gestures revealed by the movements of the horses and chariots.

The story of the battle¹⁰ is symbolic as well, in relating how Ramesses, the sun-king, all alone hunted and vanquished with one gesture all the veils of night.

The battle scenes and those of the camp, with the great king seated on his golden throne, are framed above and below by the armies on horseback and on foot that meet but do not interpenetrate.

The Poseidonian quality is clearly marked here by the fact that the horses in the lower frieze are galloping on the water. There are the waters above (the heavens) and the waters below (the water of the earth). The question here is of the living waters symbolized by the animal and man.

But the march and countermarch of these movements is incomprehensible if the principle of this symbol remains unknown. To get our bearings in this imbroglio, we will call the pharaonic people the "Occidentals" or Amunians, and the enemies the "Orientals" or Sethians. Now, the text as well as the titulary of the king presents him as Ra, the solar principle.

The (solar) attack is made by the Amunians, the pharaonic people, coming from the sunset against the Sethians, the people of the sunrise. There is thus a reversal of the natural path of the sun, exactly what happens during the night, where apparently, from a particular perspective, the sun, which has set in the west, travels under the earth from west to east. It is therefore *followed* and preceded by the night.

This is clearly a nocturnal war. First the Sethians seem victorious over the Amunians at sunset. Then, the sun-king finally defeats the dark Orientals at dawn, the phase that is symbolized by the Oriental army on the left of the lower frieze in which everyone is looking east and no longer

¹⁰ Cf. chapter 27, commentary on plate 9, the story of the battle of Kadesh according to standard texts.

cares about the arrival of the Occidental army on the right. The chariot with an umbrella signals the Oriental chariot; its guard is obsessed by the announced arrival of the rising sun.

It is above the great king looking east that the encounter of the two armies is represented. This is therefore truly the dawn, because the solar king, who is still under the earth, looks east where he will soon appear.¹¹

The first tableau represents the attack of the sun, the evening and the night, against the eastern shadows that come now from the west. The file of six rising chariots cuts this night into two sections at midnight. Everything is reversed in the frieze at the bottom: the Sethian troops that, above, came from the east now, below, go toward the east.

The camp represents the night and, at the center, the royal encampment is closed, without doors, in the middle of the night. The interior of the camp teems with men who are at ease and who care for the animals, dress the wounded, repair the chariots, prepare the provisions—all of which can follow or precede a battle.

This is the ever renewed combat of light against darkness. Now, this combat is also the symbol of the beginning of things or, more exactly, it is the primordial combat that, by its constant renewal, causes the series of regenerations whose final goal is the return to the original Unity. The solar king is crowned with a war helmet, blue in color, which seems to signify that it is iron, the same nature as the iron symbolizing the sky.

Resting on a more or less historical basis is a teaching of natural fact symbolizing a cosmic, and at the same time, a vital function, and, probably, a secret of knowledge that is the door opening into the Temple.¹²

PLATE 93 • RIGHT AND LEFT

In the representation of the sacred theme (the principles) through the bas-reliefs, the parts of the body that are symmetrical are represented in profile; the parts of the body with asymmetric (left and right) organs are represented from the front. But when measures are given, or functions and states symbolized, all variations (positions, deformations, and so on) are acceptable. For example, the legs can be joined or taken as a single mass, as with a mummy, in order to express the idea of fixation, of death or inertia, as in the ithyphallic Amun (plate 93, no. 3), or they can be placed in front of one another to mark a state of movement, and in that case the left leg is in front. Thus, the striding figure (fig. 290) has a particular significance that must be interpreted along with his gestures, his attributes, his costume, and his color.

It is very important to note that the figures created by the Divine Verb and not procreated through woman *do not have navels*. For example, Tum, who comes forth from the primordial ocean and who is said to have been self-created, has no navel,¹³ and the *kamutef* not only does not have a navel, but the phallus often occupies its place.¹⁴

¹¹ The king under the earth is related to the *am-dwat*, the subterranean world. See also the theme of Ramesses IX, chapter 37.

¹² The entire story is completed by the combat theme on the east wing of the pylon. My succinct interpretation will raise objections on the part of Egyptologists. I ask them to look at these things by relating them to the myth of the *am-dwat* of the Book of the Doors, etc., which will clarify, so to speak, the meaning of the dark battle of Kadesh. As for the designation of the Orientals as "Sethians," the philosophical reason for my characterizing them thus is confirmed by the word *Setiu*, used in the texts of the myth to designate the Asiatics or Orientals, and in the royal titles "the king vanquished the Setiu . . .," etc. Regarding the harnessed chariots, cf. plate 6 and chapter 27.

¹³ Cf. plate 101, representation of Tum, and chapter 32, legend for plate 40, the Heliopolitan myth.

¹⁴ Cf. plates 58 and 59 and chapter 40, the myth relating to the serpent Irt, primordial *neter* assimilated to the ithyphallic Amun of Luxor.

A single arm can be divided into two forearms, signifying a dualization (no. 3, from the west wall of room V). The example given here is part of a group of scenes that relate to the offering of the four cloths, which themselves are determined by a band that is divided in two. This characteristic gesture is particularly prominent in room V, where the theme of dualization is developed as much in the whole group of figurations as in the plan of the room itself, and corresponds to the symbolism of the place.¹⁵

The left and right arms are sometimes intentionally represented with two left hands or two right hands; the left receives, the right gives. Thus the king with the red crown represented in room XII on the west partition (no. 4) has two right hands, one to hold the ankh, the other to pour the libation on the three lotus flowers. In other cases the left arm terminates with a right hand, or vice versa, as can be seen in two registers on the north wall of room XII in two superimposed scenes that represent the entrance of the king.

On the second register (no. 5, above), the king, preceded by Iunmutef, is said to "enter" and to "make the offerings." He is active and holds the *mākes* staff in his right hand; the left hand holds the ankh and the white, horizontal (therefore inactive) club that passes behind his loincloth. Here the *mākes* staff is in action, whereas the power of the white club associated with the ankh is there, but remains passive.

On the first register (no. 5, below) the king is *passive* (summoned), although he makes the same gesture of entering and wears the same insignia. Here he holds the *mākes* staff in *the left hand on his right arm*, and the ankh along with the white club (always inactive and hidden) in *the right hand on his left arm*. The fact of holding the ankh and the white club in the right hand in this case confers on them an active character because of the ankh, the symbol of life. It is a question of an influence and not a formal action. The action of the *mākes* staff is stopped and the nonapplied power of the white club is activated. The reversal of the hands is not only motivated by the orientation of the gestures: there can be combinations of giving and receiving, or receiving and giving.

A *scepter of action*, such as that of the prefect (nos. 6 and 7), can only be carried by the right hand, which is the acting hand. If, however, the person invested with this power is seated, therefore arrested in his activity, and if he is not in a state of exercising his function, he can carry this scepter in his left hand. The intention of marking action by the right hand is emphasized by the two kings represented on the north and south doorposts of the east door of the hypostyle room. Each of them wears the crown that corresponds to his actual orientation: the king crowned in white (no. 7) holds the prefectorial scepter in his right hand and the ankh in the left, whereas the king facing him (no. 6) wears the *atef* crown in the red crown and holds the scepter of the prefect in a right hand at the end of his left arm, and the ankh in a left hand on his right arm.

The *scepter of the prefect* is held by the high dignitaries depicted in the tombs of all dynasties. Further, it is often part of the "friezes of objects" represented in the tombs, but since a scepter of this nature had never been found during excavations, it was difficult to know what material it was made of, and even its exact shape.

From its depictions, everything leads us to believe that this scepter was composed of a more or less long stem that opened out into a lotus or a blossoming papyrus, at the end of which was a piece that could be assumed to be cylindrical or curved slightly inward. The color is nearly always yellow, which causes us to imagine it as metal or perhaps as stuccoed-and-painted wood.

¹⁵ Cf. chapters 18 and 39.

The friezes of objects usually contain only one of these scepters, and in the very rare cases in which several are found, they have different names. Its form and its names have led to the belief that this object was originally some sort of club that later became an insignia of nobility and had, moreover, a great importance in ritual.

The king actually carries this scepter in his right hand (plate 93, nos. 1 and 2)¹⁶ when consecrating the "boxes for cloths." The arm raised above his head makes the gesture of striking. Now, the best known name of this insignia is *āb* or *āba*, from the Pyramid Texts, and this same root forms the verbs *āb*, "to offer," "to consecrate," and *āba*, "to command." This object is also qualified by the word *hwa*, the meaning of which is "to strike," which is understood through one of the Pyramid Texts that specifies, "he strikes with the *āba*."¹⁷ It also bears the name of *kherp*, which signifies commandment, authority, supremacy. Finally, under the name of *sekhem*, it is part of the ritual objects of the temple and is particularly consecrated to Thoth and to Anubis.

The discovery of an *āba* scepter (fig. 292) in the tomb of Tutankhamun¹⁸ is exceptionally important because it tells us about the precise form of this object. It is a wooden club, not cylindrical but flattened. It is covered with gold plating, which eliminates the idea of seeing it as a war club. From its name to its decoration and also its location in the tomb, this object is purely symbolic. Destined to "consecrate" by the ritual gesture of "striking" the offerings, and particularly the desert animals, it was found among the ritual offerings and vestments and carries carved on one of its sides precisely the animals it consecrates.

This is a marvelous example of the thinking of the Ancients, which is tangible throughout the ritual: the identification between the one who gives and the one who receives, between the object that strikes and what is struck, between the name of the thing and its activity.¹⁹

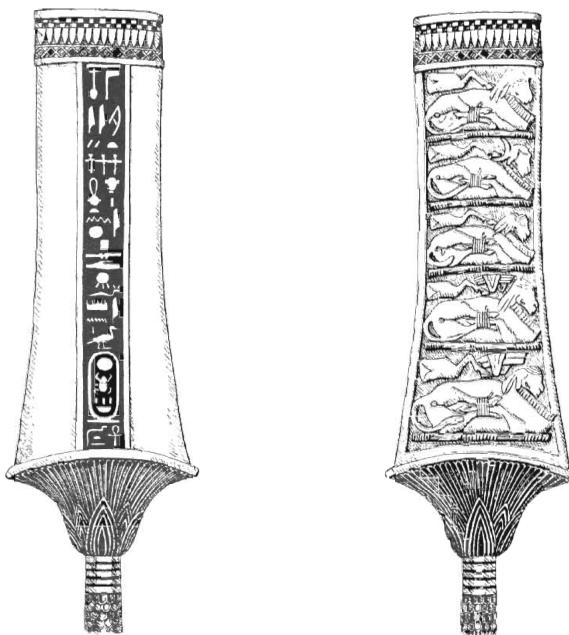


Fig. 292. The *āba* scepter from the tomb of Tutankhamun

¹⁶ No. 1 comes from the east partition of room IV (cf. plate 31); no. 2 comes from room XII, south partition, register 3.

¹⁷ For this summary concerning the *āba* scepters, cf. Jéquier, *Frises d'objets*, p. 181 et sqq.

¹⁸ Cf. appendix, below.

¹⁹ Cf. chapter 6, note 50, regarding the statement of problem 35.

GIVING AND RECEIVING, RECEIVING AND GIVING

The fact of giving a functional meaning to each hand goes back to designating the orientations in the human body as parallel to those of the earth. The gesture thus takes on a significance that goes beyond the apparent action, and this is confirmed by which bas-reliefs are finished or unfinished. An orientation can be related to a figured symbol and the character of a function that will be either passive or active.

The position of a man with his back to the north and looking south (toward the equator) serves as a reference to the orientations. The spinal column belongs to the terrestrial axis. The North Pole, being the energetic inspiration, is that toward which the top of the spinal column should be turned, leaving materiality, the assimilative organs of the standing man, to the south. Then, the left is east and the right is west; the north, the head, will be the zenith; the feet, the south, will be the nadir. But in the head (the crown of the skull) the brain is the mirror that reverses consciousness, and in it everything is upside down: the homunculus of the fissure of Rolando has his head at the bottom, and the dominance of the hemispheres will be crossed with the corporeal effects.

The planet Earth, home of present humanity, serves as a reference for mankind through its movement as a body in the sky, and the vital functions in man are symbols for the vital functions of the planetary body that is the earth.

Reasonably, the orientations serve to designate sunrise and sunset, while the North and South Poles are the fixed points that belong to the terrestrial globe revolving around its axis. Seen from the North Pole, the earth turns from right to left, which makes the stars appear to rise from the left side. At first, there is no reason to conclude from this fact a difference in nature between left and right, since the diurnal rotation creates successive risings and settings of the stars for each part of the globe. The sun, for example, does not change; the terrestrial surface does not change, but, contrary to all reason, *the solar influence is not identical at the rising and the setting of the sun*. All of living nature experiences these differences, which are not only a rejoicing in the morning for animals and humans, and a sadness or a melancholy, a calm, at the hour of sunset. Certain animals, such as baboons, are particularly sensitive to these two moments. The life of insects is more revealing still and, even more than insects, plants instruct us about the fact that the light of the morning has nothing in common with that of the afternoon. The blue morning glory strongly desires the sun in the morning, as do the pink, white, or blue lotuses, and after one or two o'clock in the afternoon, the morning glories fade and the lotuses close. "Scientifically," however, it is difficult to notice a difference between the sun of ten o'clock and that of two o'clock. The temperature plays no role in these examples; the morning can be hot and the afternoon cool, animal and plant obey their rhythms. The different influence is therefore a functional effect (sunrise and sunset), not a quantitative one.

I have experimented in this way with milk drawn in the morning and milk drawn in the evening, as well as with particularly sensitive chemical reactions . . . there is no possible doubt: the morning gives that which the evening reabsorbs, in such a way that the earth and that which lives on it receives in the east and gives back in the west, and man, who is the living being incarnating the earth and its Universe, is the being who has these functions fixed in him. Thus his left hand is the one that receives and his right hand is the one that gives, while his brain acts oppositely to these orientations; it gives (concretizes) on the left, and receives (denies the concrete and spiritualizes) on the right.

Man is a totality, he summarizes in himself that which *gives*, the left side of the brain, and that which *receives*, also the left side of the body. Terrestrial nature has the same relation to the greater

world as corporeal man has to his organ of reflection and thought. *Always there is a crossing; one affirms, the other denies what is affirmed.* This is the phenomenon of Life.

The pharaonic people unite left and east in a single word that designates the east, as the right side is designated by the west. And through a symbolic gesture their sculpture teaches us in a simple way that which would require a long explanation: on the left side the Mut bird has a claw that is sculpted (attached to the earth) and the animal is left without a body, while on the side of the setting sun, only the body exists without any attachment to the earth.

For the same reason, when one or another gesture of consecration is made with the right or left hand, it is prudent to think of the orientation rather than of the image to make this gesture more meaningful. But, in parallel with the diurnal cycle, there is the annual day for which midnight and noon are the winter and summer solstices, and the sunrise and sunset are the spring and autumn equinoxes.

There are still greater cycles, and these larger periods permit the subdivisions and the knowledge of influences hour by hour of one of our simple days, so that they give a certain schedule which, through a spoken symbolism, specifies extremely detailed nuances. As in the teachings of ancient China and India, these hours dominate the organs and functions of the human body. Perhaps now one can understand how this is possible and also understand how east and west, midday and midnight, can influence the part through the whole.

The Universe—I mean to say our Universe, the one to which current humanity has access—is entirely incarnate in man, in each of us, moving toward the Anthropocosmos, the one that has access to all.



He who gives can only take his gift within the Universe. He who receives adds to himself that which was taken elsewhere. That which was taken by the giver causes a disequilibrium. He who has received a surplus becomes the counterbalance for that which was impoverished.

Only the source of all things cannot be impoverished. To this source returns that which was impoverished and that which was enriched.

Disequilibrium is only in created things; equilibrium is only in the creative source. Disequilibrium is the cause of vital phenomena, it is what creates movement, as much in space as in genesis or time.

For forms, giving and receiving is the asymmetry that animates. Thus the soul is this mysterious power between symmetry and asymmetry, between giving and receiving.

The divine potter, Khnum, in forming the symmetrical vase on his wheel, encloses the soul that is between the formed and the unformed, between the gift of being and the body that receives it.

The monument will only be living if it is asymmetrical, in a rhythmic pulsation of increase and diminution, framing the abstraction, the irrational.

The asymptotic is a symbol of vital phenomena.

Royal, Cosmic Man is situated between being and nonbeing.

The canonical observance of the orientations in the gestures, left-right, east-west, north-south, proves that the Ancients identified the human with the earth, child of the sun. Man is the northern semi-axis of this earth, and woman is the southern semi-axis. The equator is the support, it corresponds to the principle of the Tree of Good and Evil of the Bible, the separation between that which receives (the North Pole) and that which gives (the South Pole that realizes, materializes).

Thus, to receive the light of the east (left side of a person) and to give at the end of the day (right side of a person) is intermingled with north and south, which is demonstrated by the

inscriptions in the temple. There is, however, a difference in the nature of the gift. East and west belong to the activity of mankind, north and south are the natural states that all of nature undergoes, not only on earth but also throughout the Universe.

The circular (or comparable) curve, which draws the movement of all natural bodies back to itself, from celestial bodies down to electrons and atoms, is the effect of movement, and at each moment these bodies have a tendency to be projected in the direction of the tangent, from which comes the asymptotic character of the curve in general, the vital effect between that which attracts and that which projects, that which wants to *receive* and that which wants to *give*.

In physics as in metaphysics, the ritual gesture of “giving and receiving” has a cosmic significance giving to the offering and to the sacrifice a value that far surpasses the single moral intention.

APPENDIX:

THE ANNEX OF THE TOMB OF TUTANKHAMUN²⁰

The scepter shown in figure 292 was found in this small chamber cut roughly into the rock, which opened on the antechamber of the tomb and was destined to serve as a storeroom.

The door had been walled up with blocks of limestone and plastered on the exterior. Its upper part carried numerous impressions of the four seals of the king and the royal necropolis, on which we can read, “The King of Upper and Lower Egypt, Neb-khepru-Re, who spent his life making images of the gods, that they might give him incense, libation, and offerings every day. Neb-khepru-Re, who made images of Osiris and built his house as in the beginning; Neb-khepru-Re—Anubis triumphant over the ‘Nine Bows.’ Their Overlord, Anubis, triumphant over the four captive peoples.”²¹

On its lower part, an opening made by thieves has never been refilled. The disorder of the interior of this annex contrasted with the order and harmony that reigned in the interior treasury. It was a considerable and indescribable hodgepodge of the most varied objects, which seemed to have been treated in a most brutal fashion and bore all the marks of plundering. On one of the large curved boxes we can see the footprints of the last intruders.

It seems that the tomb had been violated on two occasions, a few years after the funerals of the king. The first incursion had been made by metal thieves who took all the easily transportable objects. A second theft—the time of which is impossible to specify—was carefully prepared and had for its objective precious oils and unguents contained in alabaster jars too heavy to be carried away. The thieves had brought goatskin bottles and leather bags (several of which were found in the descending entrance passage) in order to pour into them the contents of the jars, now empty, whose corks and lids were thrown onto the ground. The fingerprints of the thieves were still visible on the interior of the vases that had contained the viscous unguents. The oils and unctuous materials were stored in thirty-four alabaster vases that were remarkable for their cut and their various shapes (bowls, lion, ibex, and so on).

The jars and amphorae for wine bore labels in hieratic script that indicated the quality, the source, and the vintage date. In each of these containers there was still a small residue.

One hundred sixteen or more baskets had contained food, principally fruits and grains; in some in which there were bottles, there still remained some raisins.

All these objects were found in a jumble of beds (one of which was a folding camp bed), chairs, stools, cushions, pell-mell with the king’s “ecclesiastical chair” and his footstool, a child’s chair

²⁰ Adapted from Carter, *The Tomb of Tut-anhk-Amen*, vol. 3, chapter 3.

²¹ Ibid., p. 100.

turned upside down, table-chests, ivory bedsteads, decorated cases encrusted with ivory, and a box for holding the king's headdresses.

Three small chests that had contained incense, gum, and antimony were—so say the labels on their covers—"the linen chests of His Majesty when he was a youth."²² There were small jars of stoneware, of gold, and of silver, wrist and ankle bracelets of the child king, gaming boxes; an apparatus for making fire; two dalmatic "festive robes" in linen; a pair of gloves.

Two curious small wooden cases, one of which was in the form of a shrine, had apparently carried a metal cubit—taken by the thieves—which must have been, as far as can be estimated, "a unit something like 52.310 ms, having 7 palms of .07472 ms and 28 digits of .01868 ms [sic]."²³ A boat in alabaster, a vase in silver, gaming boxes with their pawns and dice.

Also present were a great number of offensive weapons, harpoons, bows, arrows, a boomerang; two unique kinds of scimitars in bronze, eight shields (four for actual use and four for ceremonies); a cuirass made of sheets of leather on a background of linen that was very deteriorated.

Of the purely ritual objects, there were sickled knives for grain harvesting in the Elysian Fields; various bronze amulets; a variety of wooden and stone utensils; some stone, earthenware, and gold amulets. Palettes of wood, stone, and glass. A large part of the group of wooden funerary barques and a large quantity of *ushabti* in boxes make up part of the series placed in the treasury.

There were ostrich-feather fans on the flabella and a *kherp* scepter.

Another very interesting and unique specimen discovered in this Annexe, was one of the king's sceptres. It is difficult to comprehend why such a sacred object should be in a store-room of this kind, and not where one would have expected it to be, among similar insignia in the Innermost Treasury. The only explanation that I can suggest is that, either the plunderers cast it there owing to some misgivings in stealing it, or that it belonged to a complete outfit which included the garments pertaining to religious ceremonies, such as the rites in which the King controlled the principle parts, that were originally deposited in one of the ornate caskets found in this chamber. The latter hypothesis is perhaps the most probable, since an adze of bronze inlaid with gold . . . that belonged to ceremonies performed in front of the dead, was also discovered among the objects strewn all over the floor. This kind of sceptre is known under several names, and, I believe, always as a staff or symbol of authority. As a *kherp*-sceptre, it was used in connection with offerings; this is indicated by the embossed decoration on one side of the "blade." It is about 21 inches in length, and is made of a thick sheet-gold, beaten on to a wooden core. It is embossed and inlaid; the tip, "capitulum," and the two ends of the shaft are richly embellished with (Egyptian) cloisonné-work. The gold and blue faience inscription reads: "The beautiful God, beloved, dazzling of face like the Aten when it shines, the Son of Amen, Tut-anhk-Amen," which is of interest, as it suggests a compromise between the Aten and Amen creeds.²⁴

The presence of this scepter in this bewildering storeroom intrigued Howard Carter. The scepter seems to be explained by the fact that it was part of the offerings that it was destined to consecrate. This is the first time that it was found as a ritual object, and we see by the offerings sculpted on one of its faces its identification with the various names given to it.

²² Ibid., p. 119.

²³ Ibid., p. 127.

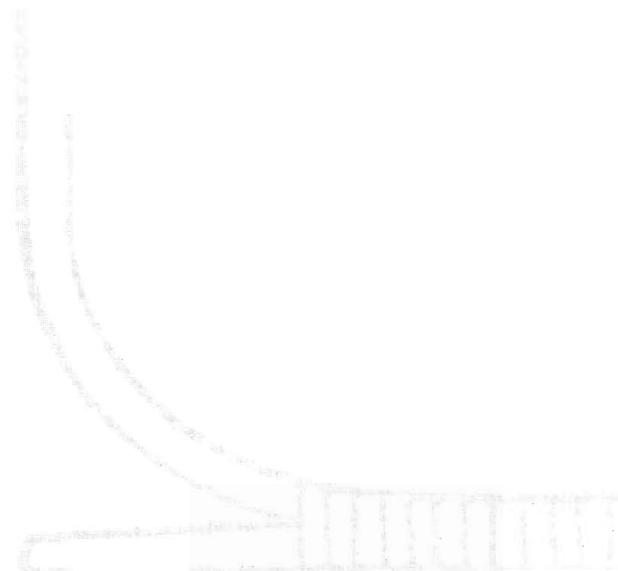
²⁴ Ibid., pp. 133–34.

Chapter 42

THE ARCHITECTURAL STRUCTURE



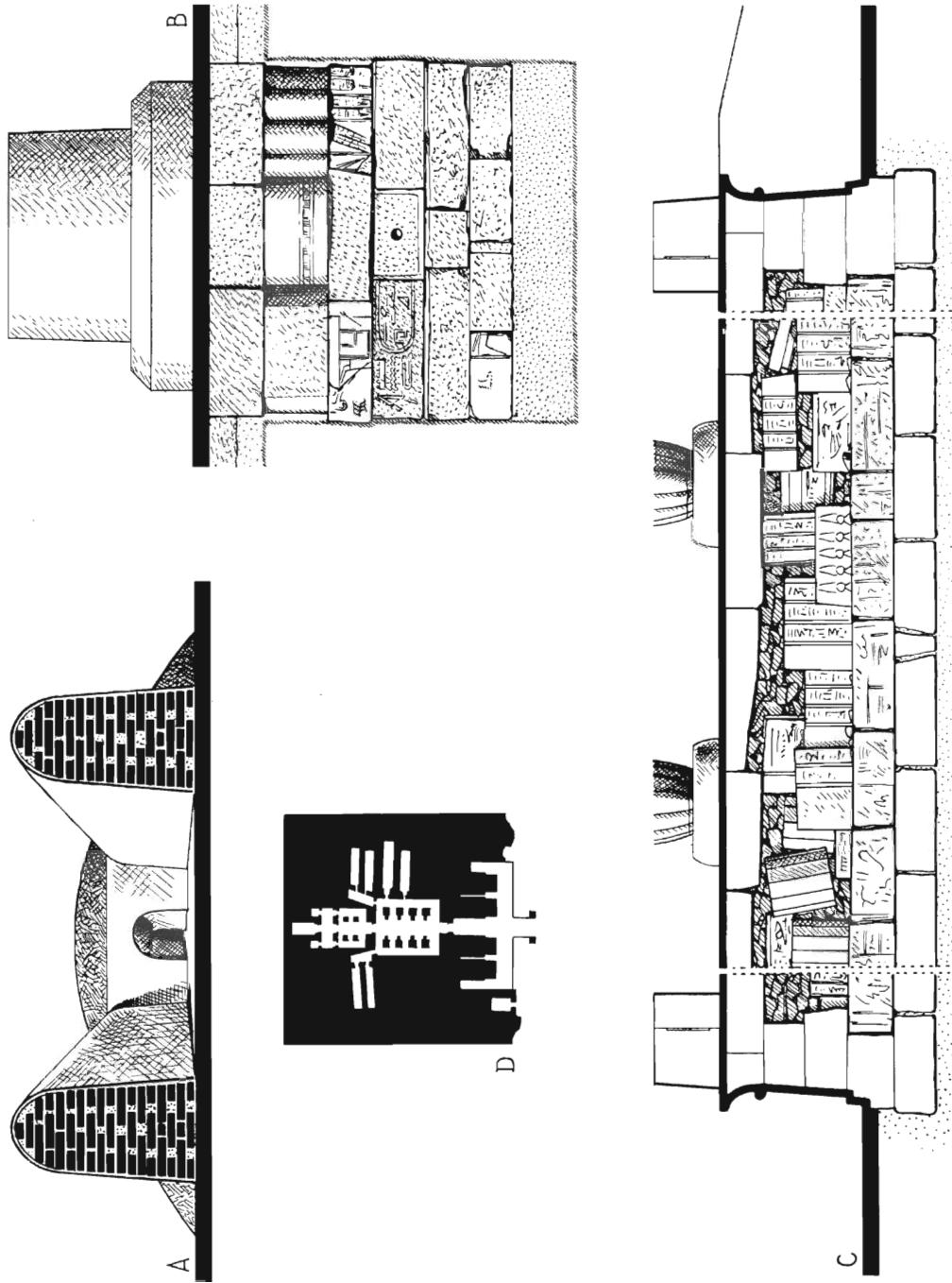
Plates 94–96



. . . the building can speak in all ways, through the material, the foundation, the plan, the elevation, the covering, the lighting, the orientation—not to mention the site. The building speaks the language that only spirit can understand; it is sacred writing.

(Chapter 25)

PLATE 94
The Various Foundations



*In man the absolute fixed salt of his being is
formed in the femur, the foundation and support
of the physical body.*

(Chapter 1)



PLATE 95
East Separating Wall, Nave of Luxor

Above all, it is to the monuments that the archaeologist looks in order to draw near to . . . the history of a past time. But, do we still know how to read the architectural message?

(Chapter 25)



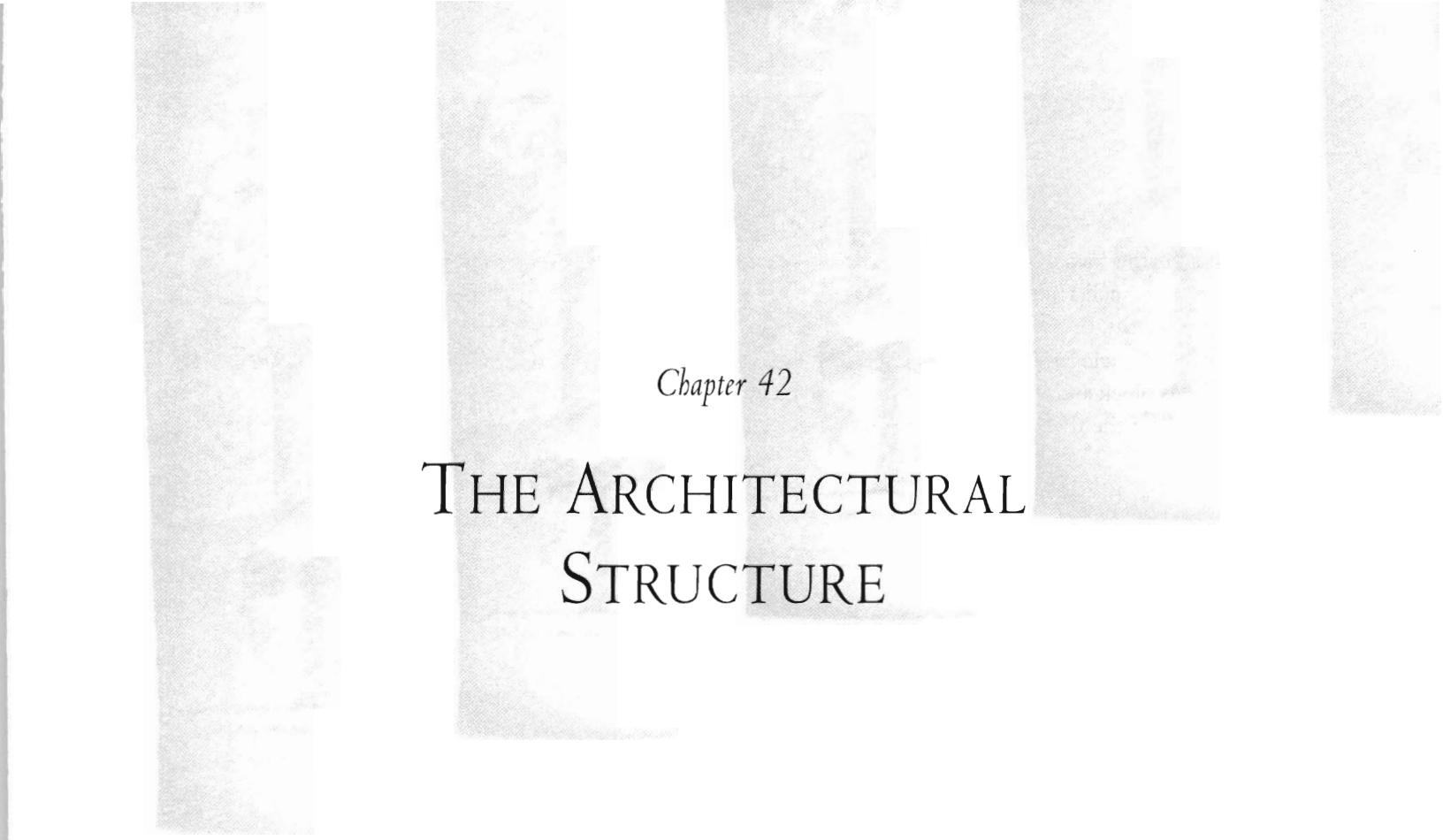
A



B

PLATE 96

The Actual and Symbolic Connections of the Blocks to the Bas-Reliefs



Chapter 42

THE ARCHITECTURAL STRUCTURE

PLATE 94 • THE VARIOUS FOUNDATIONS

Pharaonic temples are constructed on different types of foundations, depending on the cause and purpose of the edifice. We give here several examples.

Plate 94A • Virgin Ground: The Original Temple of Medamud

This temple has been built on virgin ground with no foundation. It is made of two mounds of raw bricks on a natural knoll. The ground of black earth was prepared by the symbolic seeding of various materials, ash, resins, bitumen, natural salts, and other consecrated materials.¹

Plate 94B • Seeding by the Preceding Monuments:

The Temple of Mentu at Karnak

The temple of Mentu was constructed on a platform covered with selected blocks from a "turned-under" temple, like generated seed that returns to earth. The choice of the stone blocks and their placement was made with care, giving, among others, some indications of the meaning of the preceding monument and the orientations of past and future temples. For example, as A. Varille has noted: "The southwest corner of the temple of Amun-Ra-Mentu is marked on the outside by a stone placed so as to support a block half embedded in the pedestal of the foundations. A fragment of a sandstone bas-relief with a cartouche of Amenhotep II was selected to play this role. It was intentionally placed upside down, facing south. It showed a bearded figure with a blue headdress surmounted by the hieroglyphic sign of the South."²

Another example of these seed-stones having been placed at chosen points is given in plate 94B, which shows the end of the foundation of a colonnade added by a Ptolemy to the north of the temple of Mentu and composed of five layers of blocks supporting a pavement and the colonnade.

¹ Cf. chapter 33, the foundation ritual described there; chapter 36, commentary on plate 50A; fig. 245; and chapter 21.

² Cf. Alexandre Varille, *Quelques caractéristiques du temple pharaonique* (Cairo: I.F.A.O., 1946), and *Le Musée vivant*, nos. 1 and 2 (1954), pp. 21-23.

In the lower layer a block has been reused showing only the foot of a figure facedown and another small foot, roughly carved, intentionally added afterward.

"At the third layer marking the northeast corner, there is a reused abacus with the title of 'Taharka, beloved of Mentu' at the north, and 'Taharka, beloved of Rattawi' at the east."³ By means of this block and its inscription, Mentu and his feminine principle Rattawi are recalled in the foundation of the temple that is consecrated to them.

Some buildings are built on the raw brick of the preceding constructions. These bricks symbolize water, that is, the "mud of the waters," or the binding of the earth by water. The temples consecrated to Mentu (sign of Taurus) at both Medamud and Karnak provide several examples of this.

Plate 94C • A Temple Constructed on the Platform of a Tank Containing the Seeds

The temple of Mentu at Karnak has a foundation of the same type as that of the covered temple of Luxor. This tank plays the part of a "vase" that contains the root from which the new temple will "sprout" in a definitive "growth" from the seed deposited in this place.

The temple is built on the platform of a "tank" filled with stones from an earlier temple, placed in an only apparent disorder, for as one can observe, certain inscribed stones are related to the location in the temple constructed above them. These reused inscriptions are connected in such cases with the sacred meaning of this site.

For example, in the central part of sanctuary I of the temple of Luxor, there is a place that has no pavement; was this pavement destroyed? Or was there a ramp or a staircase rising toward the naos between the two end columns? The ritual including the chapter "mounting the staircase" suggests more this second hypothesis.

Desiring to know if the temple of Luxor, like that of Mentu, was constructed on the principle of the tank, C. Robichon made an investigation that allows the following observations:

1. Below the level of the pavement is a series of large blocks that alternate with the "chaos" of mixed sandstone and limestone blocks, all in disorder, as can be seen in the photographs.⁴ There are thus three or four layers of blocks. Finally, below, a perfectly horizontal series of blocks could be seen, which certainly represent the bottom of the tank. The upper level of these blocks has been measured as 2.25 meters, about the upper level of the pavement. (This would represent the height of five courses of blocks each with a mean height of 45 centimeters including the pavestone, which could not be the case, given the large differences in the sizes of the materials used.)

2. A survey of two rectangular blocks located to the west shows that this apparent disorder has been made with great care. The upper stone is inclined to the north at about 9°36'. It has a width of 100.5 centimeters and a sort of procession in relief that is 53 centimeters wide. The gradient angle has been taken at "the largest gradient."

The block in the second course (from top to bottom) has a curved upper side, which makes it impossible to know its real north-south inclination. However, *its lateral edge is exactly on the axis of ankh of room XII, which is also the central axis of the naos that formerly contained the gold statue of Amun. This is between the two columns of sanctuary I (axis of Mut).*⁵

³ Ibid.

⁴ Cf. plate 84.

⁵ Cf. ibid. and chapter 15.

On this block there are three lines drawn north-south to 6 centimeters west of the axis of measures, and to 11.5 centimeters and 14.9 centimeters east of this same axis. The meaning of this east-west line remains to be clarified.

3. Under the east column there is a torus piece of about 18.5 centimeters in diameter laid flat horizontally and right side out. It is almost certainly the torus of a cornice. A little lower and in front of this torus there is a limestone rock stuck between two large blocks. It is placed backward and one of its flat surfaces shows an inscription of a very skilled carver.⁶

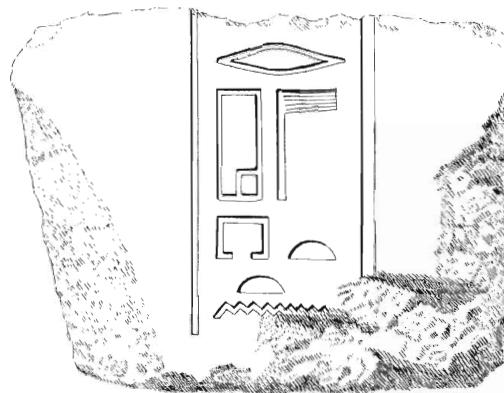


Figure 293. A reused piece of limestone under the naos of the sanctuary

In figure 293, under the sign of the mouth, *r*, which can signify "Verb" as in the fraction, or "emission," or a kind of "affirmation," is the group of signs *ht-ntr*, that is, the sanctuary determined by the symbol of the enclosed place. The group *tn*, which is found below it, specifies that it refers to "this sanctuary." The position of this block, exactly under the naos that contains the statue of the *neter* of this temple, cannot be accidental given its inscription.

The Egyptian temple is said "to be in the image of heaven." One of its names is *per*, written with the sign of the house. The particular name of the sanctuary is *r per*, signifying "that which appears, that which manifests the creative Verb here below." The temple, or sanctuary, is thus called *het neter*, which means "the place that limits, or defines, the principle, the *neter*."

Plate 94D • The Temple of Abu-Simbel, Hollowed out of Rock

The monument can be buried in earth or hollowed out of rock. Here, the earth and the rock are considered the matrix of the temple.

PLATE 95 • EAST SEPARATING WALL, THE NAVE OF LUXOR

This photograph is taken from a southern point looking north in order to show the construction of the east wall of the nave on a length of about 50 meters.⁷

Whereas the west wall of this nave is entirely solid, the east wall is "hollow," that is, composed of two facings of large blocks with an empty space between them. This construction demonstrates that if there were a "filling" of gravel, there would certainly not have been stones in the interior,

⁶ Extract of a report [unpublished] by Lucie Lamy on the probing of sanctuary I of the temple of Luxor, September 1947.

⁷ Compare with plate 4 showing the exterior surface of this wall.

which would make this wall very fragile. This shows that the Ancients, without being concerned with solidity, obeyed the symbolism.

With regard to the axes, we have already observed movement in the opening and closing of the colonnade and of these two walls of the nave. On the interior west partition, the procession of the barques comes from Karnak toward Luxor (solid wall), and to the east the procession returns toward the north to Karnak (hollow wall). The barque coming from Karnak (west partition) arrives therefore at Luxor in the evening to pass the night there (time of conception and of birth) and returns to Karnak (east partition) after the rebirth of the morning.

Finally, the exterior face of the west wall carries the representation of the cavalcade of Ramesses including the man riding sidesaddle (Sagittarius),⁸ whereas the hollow wall of the east has retained its rough, that is, unfinished facade and therefore has neither bas-relief nor inscription.⁹ We have already pointed out several times the primitive, unfinished character of the eastern side of this temple (room XII, chamber of Mut, and so on), while the west (Amunian) side shows a finished quality.

PLATE 96 • THE ACTUAL AND SYMBOLIC CONNECTIONS OF THE BLOCKS IN RELATION TO THE BAS-RELIEFS

In pharaonic architecture, as also in a great number of ancient monuments, the blocks of stone are frequently held together by notches intended to receive pieces of wood, stone, or metal called dovetails. In the pharaonic monuments, blocks in the same course can either not be linked by a dovetail (fig. 294A), or can carry only a drawing of the cavity intended to receive it (fig. 294B). In other cases, two blocks are theoretically linked, but the cavity of only half of the dovetail is hollowed and the other half is simply drawn (fig. 294C). Finally, complete cavities are found (fig. 294D) that sometimes still contain wooden dovetails. Here the goal of linking is purely symbolic because these weak connecting pieces would not be able to resist the least movement imposed by these blocks, which each weigh at least half a ton. Probing into the walls of the temple of Luxor have shown that *in the same wall* there are cavities that still contain their dovetails along with cavities that have never contained them, which proves that the Ancients did not grant any utilitarian purpose to these connecting pieces.

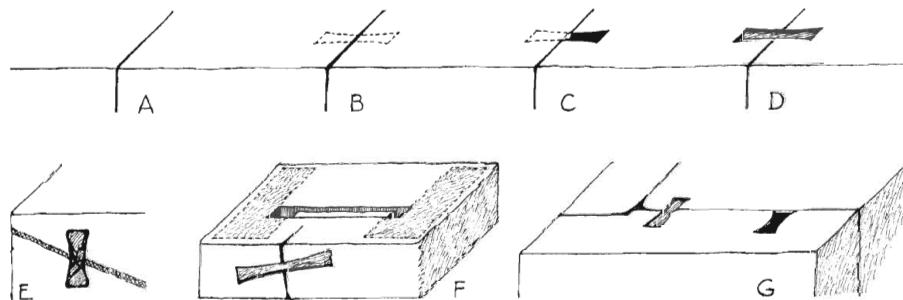


Fig. 294. Sketch of dovetails

⁸ Cf. plate 51 and its legend, chapter 36.

⁹ Cf. fig. 199, no. 14.

On the east face of the throne of the seated colossus in the court of Ramesses, a cavity is hollowed out perpendicular to a vein that crosses the block of granite (figs. 294E and 295). The vein plays the role here of a joint between two stones that the dovetail is supposedly intended to link; for what reason then is the front of the cavity that receives it filled up with pieces of sandstone bound with mortar? These sandstone chips do not come from a later restoration since the decoration of the block of granite continues over these stones. We are certainly then dealing with a symbol!

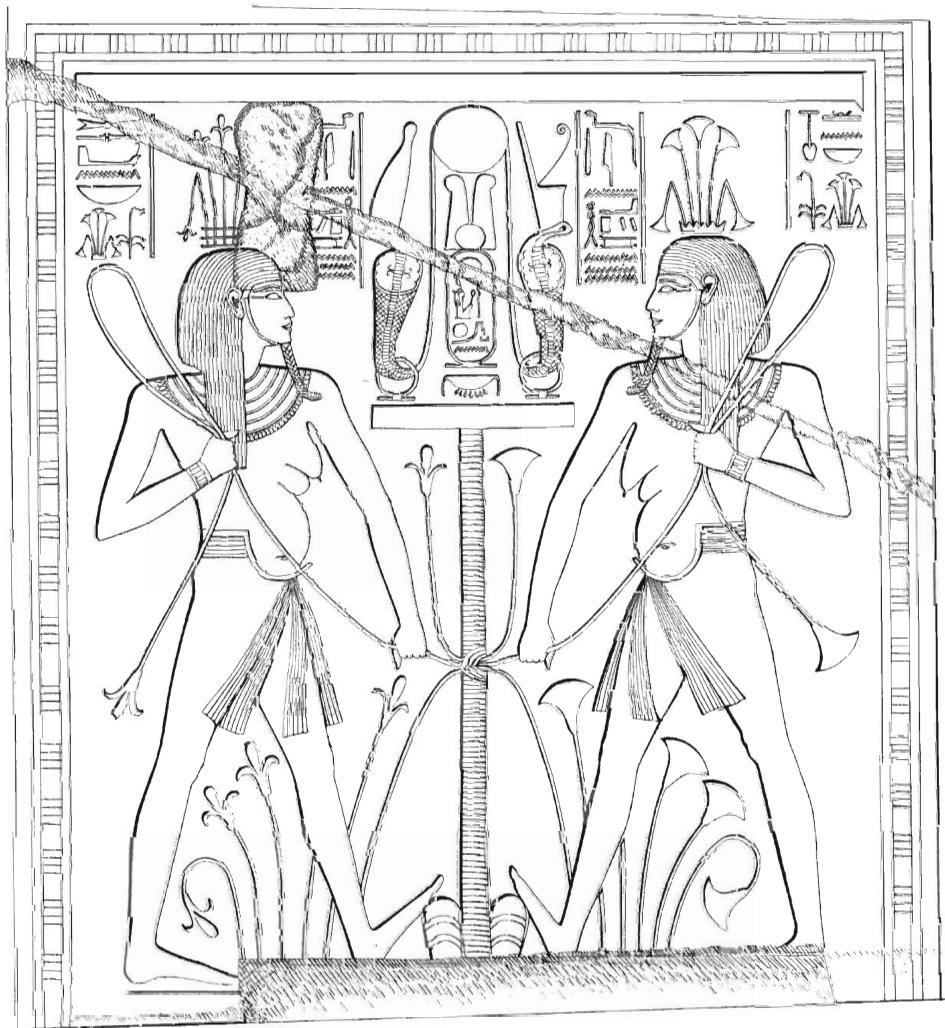


Fig. 295. Eastern side of the throne of the east seated colossus in the court of Ramesses

It also happens that in the middle of one of the sides of a stone monolith there are cavities for dovetails, often of great size. Archaeologists have been able to ascertain that in numerous cases of this type, this dovetail was placed perpendicular to a break in the stone. At Karnak, the stones of the thresholds of the three doors of the court from the Middle Kingdom offer analogous cases: the stone of the second door is broken by a crack on the two sides of which are carved the two half-cavities destined to receive the dovetail (fig. 294F), while under the threshold of the first door, also a monolith, there is no crack; nevertheless, a long cavity characteristic of the dovetail has been carved there, which therefore has no practical utility.

Another case no less strange is met with in the temple of Luxor: the obelisk now in Paris rested on a granite pedestal, which is still in place, that has worshiping baboons on its north and south faces. This granite pedestal is placed on a second pedestal composed of several blocks of quartzite-bearing sandstone. On the north side, on its upper surface, a cavity has been hollowed out so that one of its extremities comes only up to the joint instead of crossing over it (fig. 294G, *right*). A dovetail of black granite is found in this cavity, the only example of this found until now. In contrast, alongside of this anomaly is the cavity for a dovetail that would sit astride both blocks (fig. 294G, *left*). Moreover, blocks have been found cut so that they contain a groove for a rope to fasten them together.¹⁰

It happens, finally, that the foundation courses of a pylon are linked by dovetails to the south, whereas they are not to the north, where they are simply drawn. It can also happen that on the same axis the stones of the last course of a loading dock can be linked in the direction opposite to the courses of the pylon: there is a reversal of orientations.

The upper parts of the cornices of a door, above the lintel, are often linked on one side and not the other, in relation to the orientation of that door.

The dovetail is commonly regarded as a link reinforcing the union of two blocks of stone. Now, given the considerable number of irregularities that they present, these dovetails cannot in any way fulfill this goal. Their significance can only be symbolic: when, for example, the dovetail connects two blocks bearing figurations in which the hands are seen to be joined, or, in other cases, when these cuts are hollowed out on one block and only indicated on the neighboring block, when the symbolism of the figuration suggests a call for unification that is not yet accomplished (plates 96A and 96B).

The bas-relief in plate 96B shows the single scene carved on an undecorated wall at Karnak. A priest, clothed in a panther skin, makes a libation with a ram-headed vase before the seated Amun, who holds the *was* scepter in his left hand along with an open lotus. The horizontal joint cuts the feet of the priest and fixes him in the earth. The vertical joint, crossing Amun's leg, separates the priest making the libation from Amun, who receives it. Now, the feet of Amun rest in the empty space, since the pedestal of the throne is not drawn.

On the upper part of the wall on which this scene is depicted, the dovetail—which in principle should connect the two blocks—is hollowed out on the block representing the terrestrial character of the priest, while the outline of it is simply drawn on the block of the aerial Amun (plate 96A).

¹⁰ Cf. Robichon, Barguet, and Leclant, *Karnak-Nous IV*, fig. 591 and b.

Chapter 43

TRANSPARENCY AND TRANSPOSITION

Plates 97 and 98

... the shape of the stone blocks: their joints, overlappings, “transparencies” and “transpositions” in the walls, comprise a subtle grammar in which the finish of a carving or its rough aspect, the absence of essential parts, ... the reversal of right and left ... play the role of accents, declensions, conjugations, and conjunctions.

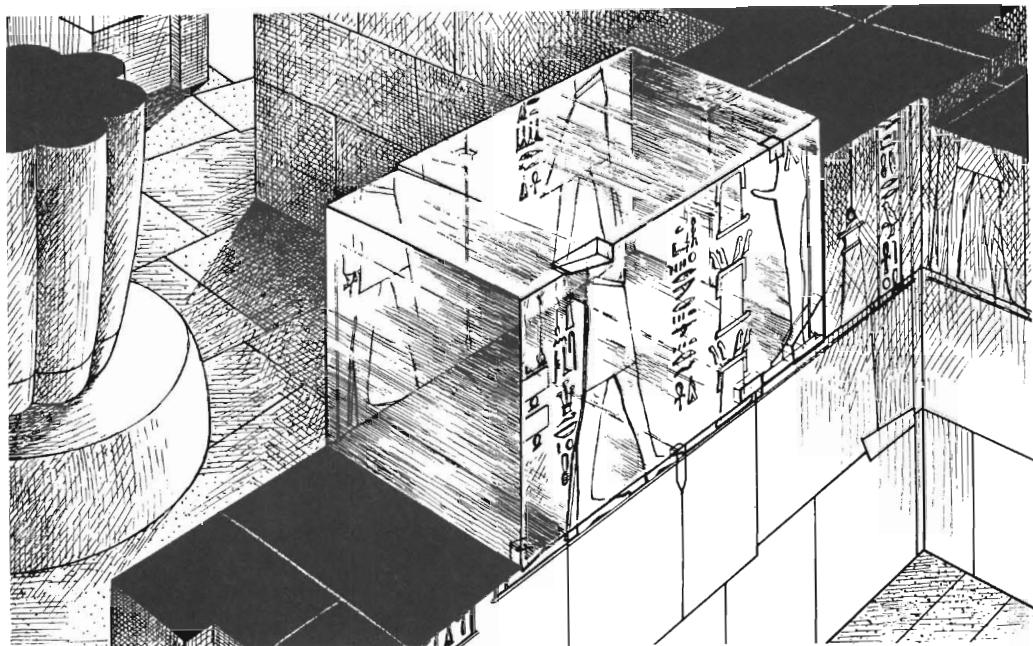
(Chapter 24)



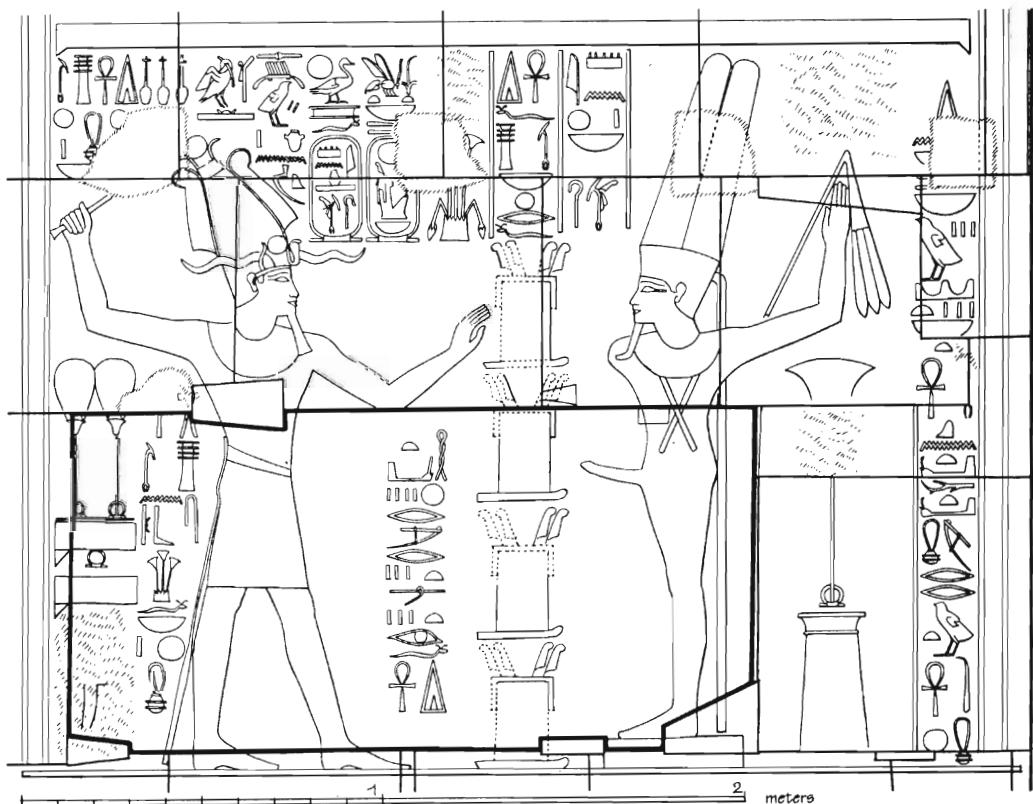
PLATE 97
South Wall of Room XII; the Cloths

In the “transparency,” if the wall were of glass, we would be able to see, for example, a sign or figure drawn on the back side that would fill in a blank space left on the front side.

(Chapter 18)

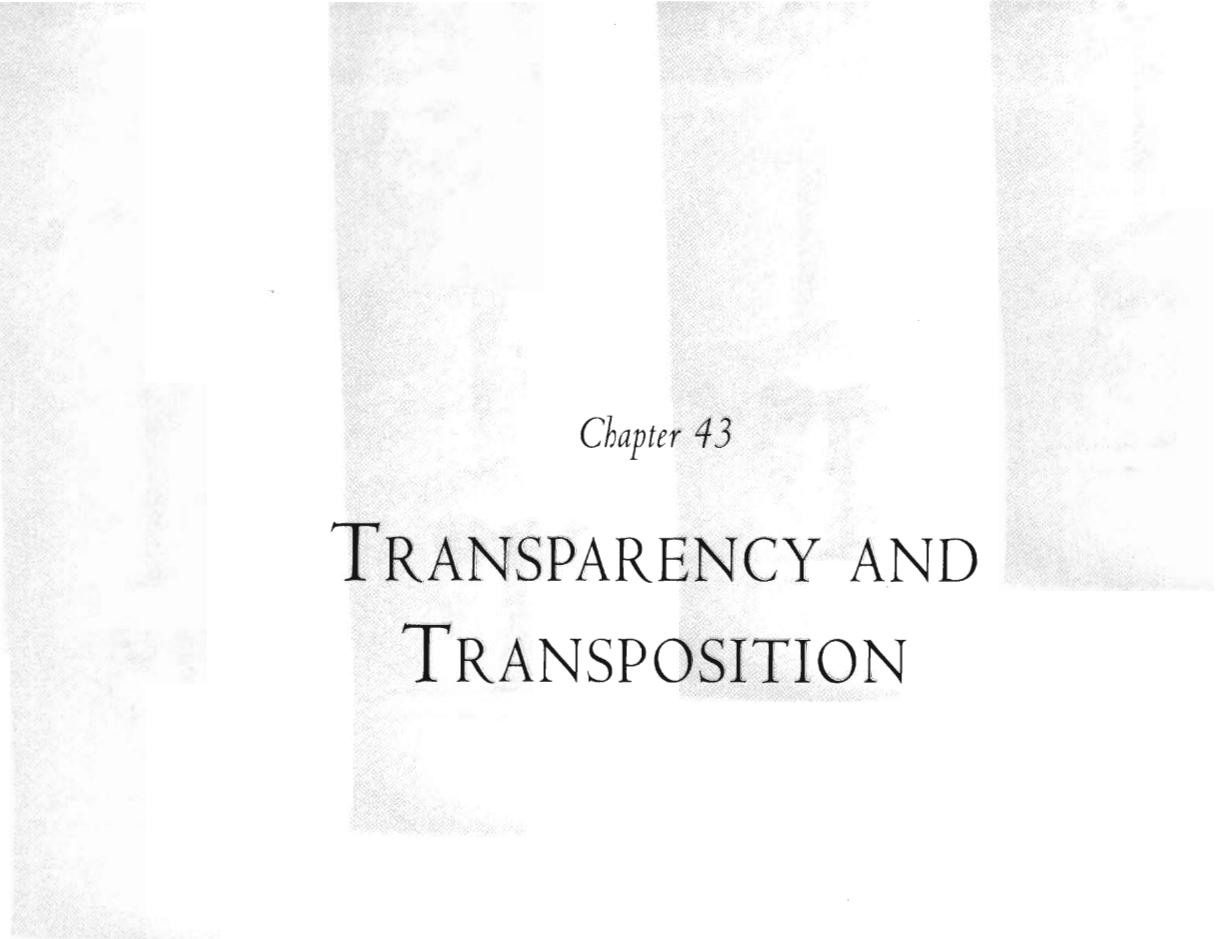


A



B

PLATE 98
North Wall of Room V; the Boxes for Cloths



Chapter 43

TRANSPARENCY AND TRANSPOSITION

The study of the installation of the stones of the wall that separates rooms XII and V allows verification of the fact that most of the scenes and inscriptions represented on one of the sides of this wall are in “transparency” with those of the other side. The study of the north wall of room V must therefore include the entire corresponding part of the south wall of room XII. We have already established two essential “transparencies” related to certain chapters of the “Ritual of Daily Worship.” We will only recall them here.

On the first register, the tableaux are arranged so that the line of the base corresponds exactly with the level of the soles of the feet of the figures represented on both sides of the wall. The cloths represented in room XII are projected in room V into the “boxes for cloths” consecrated by the king.

On the upper register, the purifications with the red vases and the white vases are projected onto Amunet wearing the red crown and onto Mut wearing the white crown, respectively.¹ Finally, the offerings, which are only evoked in room XII, are represented in room V.

The middle register of room V (plate 75) corresponds to the upper part of the inscriptions of room XII. Whereas in room V the height of the lower tableau to just under the sky is exactly 2 meters, that of room XII measures 3.85 meters to under the sky, or 2 meters plus 1 mean fathom. This height of 1 fathom is occupied by the largest part of the inscriptions in room XII, which are thus projected onto the tableau of the presentation of the four calves of room V.

These texts are written in fourteen columns:

The seven columns inscribed from left to right above Amun are projected onto the four calves and the king on the opposite side of the wall; the three columns inscribed from right to left above the king and under the falcon that holds the key of life in its claws are projected in room V

¹ Cf. fig. 276. The offering of the cloths represented in room XII corresponds to chapter 49 of the Berlin Papyrus ritual concerning the white strip of cloth. The consecration of the boxes for cloths in room V corresponds to chapter 45 of this ritual, and the purifications with the red and white vases to chapters 46 and 47. In room V the offering of the cloths is depicted five times, which evokes a connection with chapters 49 to 53 of the ritual; the perfumes then correspond to chapters 54 and 55.

between the *was* and the axis of equilibrium of Amun (fig. 296); the four columns inscribed from right to left above the female *neter* in room XII correspond to Amunet carved on the side opposite (fig. 296).

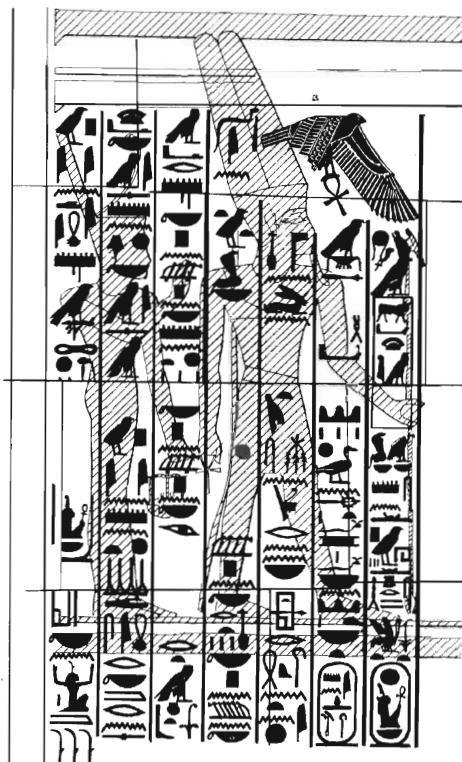


Fig. 296. Transposition between rooms XII and V

In black, room XII, the three columns of text of the king under the falcon, and the four columns of text of Renenutet (from right to left). *Hachures*, room V, second register, Amun and Amunet, who are found in front of the four calves.

The phrase beginning “*Neter nefer . . .*” is projected onto the face and body of Amun. Amunet and her red crown are entirely hidden by the text in transposition: “Thou appear-est in her, thou art perfect in her, in this [her name] of the four cloths . . .” One can again observe that the words “thou receivest,” in the second column of text of Renenutet, are pro-jected into the two hands of Amunet, who holds the sign of the *sed* festival in her right hand. The end of the text mentions the gift of “millions of years.”

The theme developed in room XII concerns the gift of cloths to Amun. To the left, the female *neter* who holds two strips of cloth in her hand is quite probably Renenutet. According to two pas-sages from the Pyramid Texts concerning the offering of the cloths, she is connected to the strips of cloth that she offers, these cloths being themselves connected to the eye of Horus.

“I have clothed thee with the eye of Horus, this Renenutet . . . I have brought thee the eye of Horus which is in Tayt, this Renenutet . . .”² Let us remember that Tayt is also the cloth, the weaving, and

² Pyramid Texts, 1755 and 1794.

the *neter* of weaving,³ and that she is determined by a serpent, as is the half-effaced name of the feminine *neter* represented in room XII. These are the words addressed by Renenutet to Amun:

“[1] Words spoken by Renenutet, mistress of . . . thou receivest this thy beautiful [strip of cloth], thou receivest [2] this thy *mār* cloth, thou receivest this thy *menkhet* cloth, thou receivest [this] eye [of Horus going out] from Nekhebet. [3] Thou appearest in her, thou art perfect in her, in this her name of the four *menkhet* cloths. She unites herself to thee in [4] this her name of *idmi* cloth.”

The sentence inscribed in the third column, “Thou appearest in her [or through her], thou art perfect in her [or through her],” is normally related to the cloths that complete the clothing of the *neter*. These cloths—being both the *neter* who offers them and also the eye of Horus, the ultimate offering—signify more than a simple costume.

This third column of text is projected in room V onto Amunet, the feminine aspect of Amun, who wears the red crown, so that it is actually “in her” and “through her” that Amun appears in his sublime perfection.⁴

The three columns of text of the king consist of variations of his titulary. In transposition the first column corresponds to Amun’s scepter in room V and is typically translated as follows: “The Horus-Ra, victorious bull, appearing in truth,⁵ he of the two goddesses, who establishes the laws, pacifies the Two Lands, king of the South and of the North, Neb-maāt-re.”

In the second column, the destroyed parts can be restored by means of analogous titulary encountered in the temple and generally following the golden Horus name.⁶ “The golden Horus, great in power,⁷ vanquisher of the Setiu,⁸ son of Ra, of his belly, his ‘magnet,’ lord of all foreign countries, Amenhotep, prince of Thebes.”

The third column, partially destroyed, gives an extremely rare variation of the titles beginning with *neter-nefer*. This anomaly makes the restoration of the text difficult. “*Neter-nefer* [realized entity] of existence? . . . who has [created] the white crown of the South, who has brought the red crown of the North into the world, who has raised up the lord⁹ of the great house [*per-aā*] in order to reign¹⁰ over that which the solar disk [Aten] encircles.”

This variation of the royal title beginning with *neter-nefer* is projected on the Amun of room V. It offers a typical case of an apparently incomprehensible text that is explained on the opposite side of the wall.

We have just seen that Amun appears in Amunet (his feminine aspect) and is completed *in her* and *unites with her* “in this her name of the four cloths,” and that she wears the red crown of Neith, the divinity of weaving, regent of the North. Moreover, the king is called “son of Ra, of his belly,” and the incomprehensible text that refers to him as created by the white crown of the South and brought into the world by the red crown is clarified when we observe that actually these two crowns are projected by transposition onto Amun, who is only at this point one with his feminine aspect.

³ Cf. chapters 39 and 18.

⁴ Let us recall that “restoring to wholeness the eye of Horus” is the goal of the work of wisdom. “Weaving” is always meant in the sense of “rendering visible” and of linking the imponderable to a ponderable material.

⁵ Or “appearing with the truth,” that is, Maāt.

⁶ For example, the doorposts of room V, plates 75 and 77.

⁷ Or “strong of arm,” “vigorous,” etc.

⁸ Or “who overthrows the Setiu,” that is, the Asiatics.

⁹ Or “the lady of the great house.”

¹⁰ Classically *bk* is always translated by “prince” or by “to reign.” I have said elsewhere that the *bk* scepter implies the idea of ferment.

The white crown of the South is assimilated to the gestating Mut, regent of the South; the red crown is assimilated to Neith, divinity of weaving, regent of the North. Both are “in Amun,” united with him, as this transposition shows us.

The text that Amun addresses to the king, his son, his creation, will confirm and justify this interpretation through the constant affirmation of not only the double character that governs this whole ensemble but also through the notion of unification, of connection, of “weaving” that is revealed in each phrase, and by the interpenetration of the texts and the figures represented on both sides of this wall.¹¹

The seven columns of text inscribed above Amun in room XII are addressed to the king who makes an offering to him of the four cloths:

[1] Words spoken by [Amun-Ra] king of the *neters*, who is in the heart of his Apet: “My son, of my belly, the magnet, master of the Two Lands, Neb-maāt-re, my heart is in [2] gladness when I see thy realization.¹² I establish for thee thy annals¹³ in millions of years.

[3] O Son . . . of my heart, issue of [myself],¹⁴ I bequeath thee my seat, my throne, my inheritance, my property [that which is my own], [4] in order to perfect my house, my inheritance, and to make that which is glorious to him who put [thee] in the world. I give thee all the reunited [connected] lands¹⁵ in thy fist.

[5] Thou hast seized the nine bows under thy sandals, I cause that they see thy majesty, [6] that thy dread, thy dignity¹⁶ be in their hearts. I cause that the two goddesses scent¹⁷ [7] thy face, that they dispense around thee their protection. I unite myself to thy members as . . .

Above the high plumes of Amun, in transparency, crossing the sky of the tableau of room V, the text leaves off unfinished with the letter *m* (the owl), which calls for something to follow it. But there is no place for the sentence to be finished on this side of the wall, and no “transparency” completes it on the other side of the wall.

The last words spoken by Amun present several particularities that are clearly related to the place in the temple in which they are inscribed. On the Man of the Temple, this wall corresponds to the top of the forehead, the base of the royal headband where the *wadjet* uraeus of the dual character rises up. Now, Amun speaks of the two *wadjet* goddesses determined by two raised cobras in two baskets; he makes them “scent” (*snsn*) the royal face by assuring him of their protection.

Finally, Amun says that he unites himself, joins himself, to the limbs of the king in the capacity of . . . of what? It is in this tableau that we must find the answer and the end of the sentence: it is Amun who must, as Amun-Ra, penetrate the king’s limbs, after having bequeathed him all his

¹¹ Certain words written backward in the text support this constant crossing.

¹² *neferu*, here translated as “realization,” also means “beauty,” “energy,” “perfection.”

¹³ *genwt*, “annals.” The sign used to write this word also designates the bones and is then read *ks*; cf. vol. 1, fig. 167, no. 6.

¹⁴ *per khnt*, “issue of myself,” literally, “exiting from the front.”

¹⁵ This linkage implies a conjunction.

¹⁶ *shfshf*, which some translate by “frag.t.t.”

¹⁷ *snsn*, literally “to scent,” is customarily translated as a metaphor by “to embrace.”

power, so that he might accomplish perfectly what has come from himself and what must return to him.¹⁸

The temple, the house, is the royal body, the manifestation of Amun, his inheritor, his son who, in perfecting himself through the gifts he has received, glorifies his father. . . . The king, after his realization, “returns to his father” after having acquired awareness thanks to the “weaving” of experience.

The principle of transparency, which must be understood as an “association of ideas,” is also used in places other than in architecture, such as in papyri. We must not think of transparencies as only having the posing of an enigma as their goal. First of all, they allow an idea to be completed by developing it partly in the inscription of one room and partly in the neighboring room, each explanation having a point in common with the other. But observing these two images on both sides of a wall (or of a papyrus) also reverses the reading, as an image in a vertical reflection is reversed, and, in the case of architecture, the orientation comes into play.¹⁹

In addition to the development of a theme, there is then a more profound intention, which is to evoke the “turning around” of consciousness, such as occurs in the projection of the innate consciousness on the object of its (objectifying) reaction. This produces psychological and mental consciousness: the function of the object is in us, the (lunar) reflection of this function corporalizes the object for our consciousness (this is the weaving).

We find here again, as always, the care taken never to consider a notion in one sense only, nor to consider a definition in its schematic expression as an arrested function. Life is the effect of alternation. Any given moment must evoke its complementary moment; a science founded on invariable principles can only be speculative, therefore removed from the natural fact and knowledge of the secret of life.

This pharaonic discipline of thinking in the spirit of constant alternations poses the phenomenon as an illusion, and this way of saying it—which is comprehensible—is also more convincing than the simple affirmation of an illusory world justified by abstract reasoning.

Transparency, then, not only has the goal of completing an idea, but above all shows the phenomena of *concretization* of the idea. This is simultaneously the *evocation* and the expression of its becoming.

Now, it is a universal principle that an energy, or activity, can only produce an effect through the resistance of its own nature, the cathodic effect.

Parallel with transparency, we also find in architectural “writing” the “transposition,” which is an evocation. Here the issue is no longer that of container and the contents, the association of ideas, but of a function.

¹⁸ In order to understand these sibylline texts, it would be good to place them in parallel with the Hermetic texts that name that which is designated by “Philosopher’s Stone” as Man or the King, as well as the “Son of the Sun.” Adepts are often given the title of “ordinary doctor of the king” or “extraordinary doctor of the king,” according to their more or less complete knowledge of Hermetic secrets.

¹⁹ Let us recall in this regard that the reading is always made face to face with the sign or image of the figure, that is to say, by going to meet it.

For example: an activity (a gesture) of a royal figure on one side of a wall is explained by a *was* scepter, the symbol-synthesis of this function, sculpted on the other side of this wall on the opposite face of the stone, and placed in such a way as to serve as the axis of stability or of movement of the figure by passing through the auditory center.²⁰

This *was* scepter is also called "key of the Nile." This is true on the condition that it is understood in its actual significance. This staff is determined on the bottom by a small fork and on top by a short slanted branch. It has often been asked where this symbol comes from. I have claimed that it might refer to a growing branch: a stem going out from a trunk or from a larger branch, and dividing itself into two new branches²¹ (fig. 297).

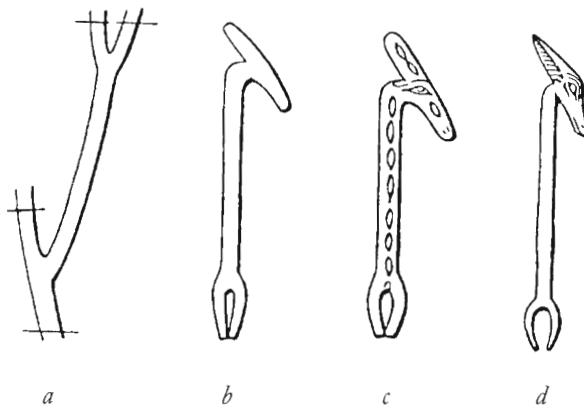


Fig. 297. *Was*

(a) Natural branching; (b and c) hieroglyphs of the Twelfth Dynasty; (d) *was* scepter of Ptolemaic era.

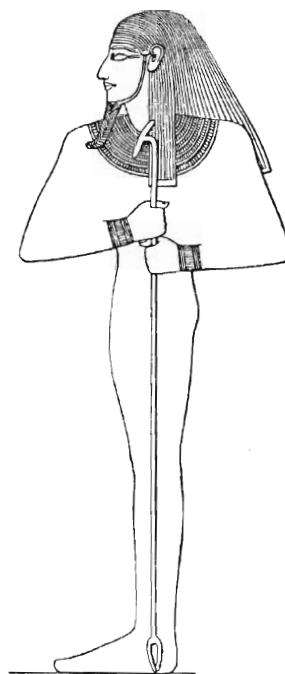
It is thus a matter of the rising of the sap (the primordial waters) undergoing the impulse of division, origin of all vegetation. This explanation was later confirmed by one of the *was* scepters found in the tomb of Tutankhamun, formed of a natural branch, just as it was cut from the tree, and entirely covered in pure gold leaf. We could not better verify the intention of giving a sacred character to this symbol. Moreover, this also confirms the natural origin of many symbolic figures and hieroglyphs, as well as the attributes given to the royal principle.

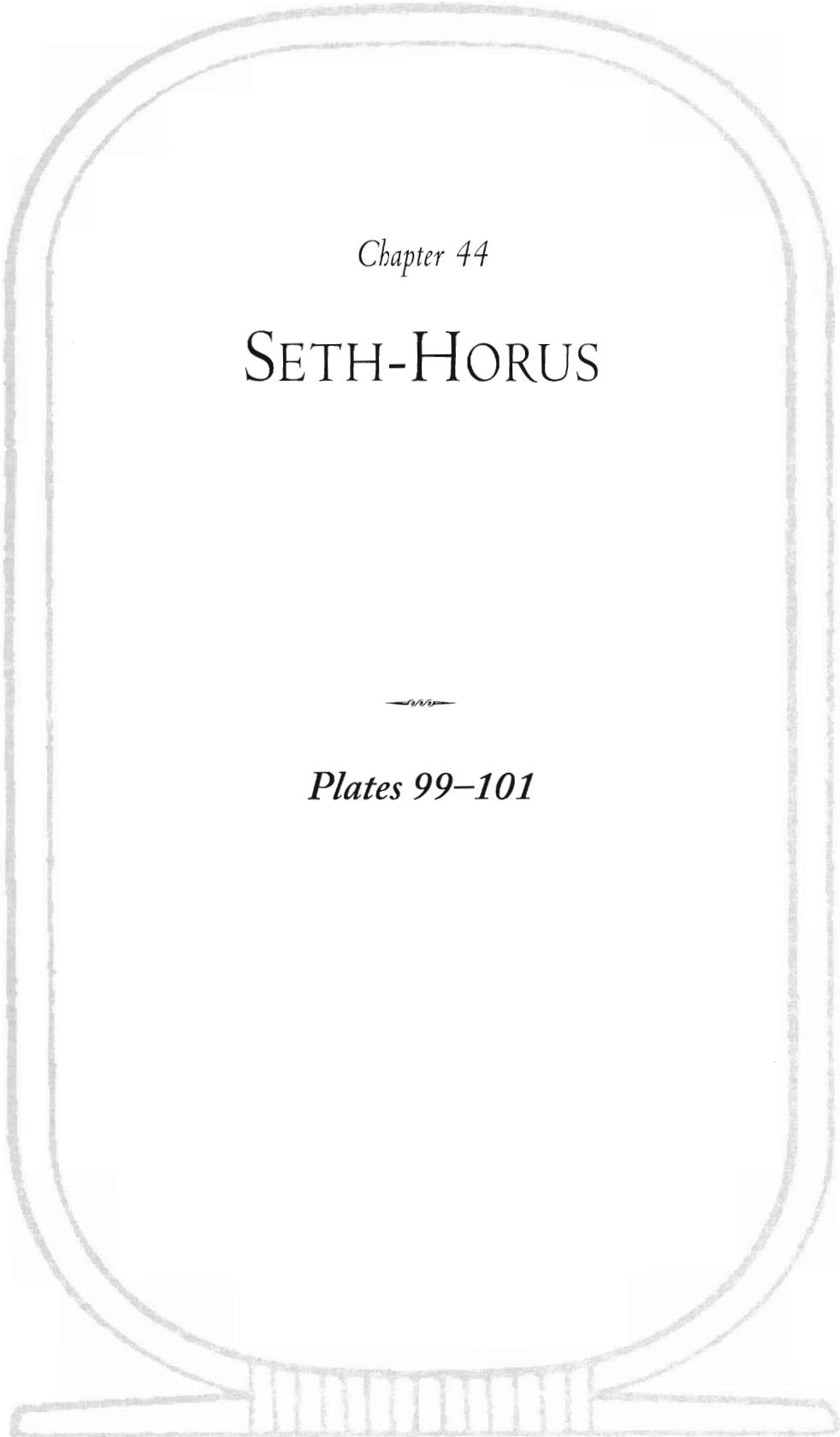
As for the *was* scepter, the vegetative dividing in two of the branch, the channel of the sap, in thus being defined, renders the object serving as the foundation for this symbol more explicit. The original branch from which the long stem comes out has an animal form considered by some to be the head of a donkey because of its long muzzle. In fact it is the eyes and the ears that complete the true meaning of this symbol. The eyes correspond to the small buds that will, for example, become branches. The ears have the same significance in the donkey and in the hare, the old Hermetic symbols. (For us, the symbol of the donkey goes back to the crèche at Bethlehem.)

²⁰ Cf. chapter 17, the transposition between rooms I and V, fig. 181, and between rooms I and VII, fig. 180.

²¹ I have learned that Jéquier has had the same idea. Cf. *Frises d'objets*, p. 177.

Certain transpositions thus give the character of the *was* to a figure, and we then know what role he plays in the totality of the tableau, that is, in that chapter of the ritual. In one of the examples cited (fig. 181, transposition between rooms I and V), the *was* scepter in room V crosses the single arm (which splits into two forearms) of the king offering the cloths; on the other side, this *was* is projected onto the axis of equilibrium of the Amun in room I. In the other example (fig. 180, the transposition between rooms I and VII), there is also a projection of the *was* scepter held by Amun on one side of the wall onto the axis of equilibrium of the Amun represented on the other side. Now this Amun bears the title of *hek-was.t*, which is typically translated as "prince of Thebes." But since Thebes has the sign *was* for its symbol, the symbolic reading is: "Amun, ferment of the *waset*."





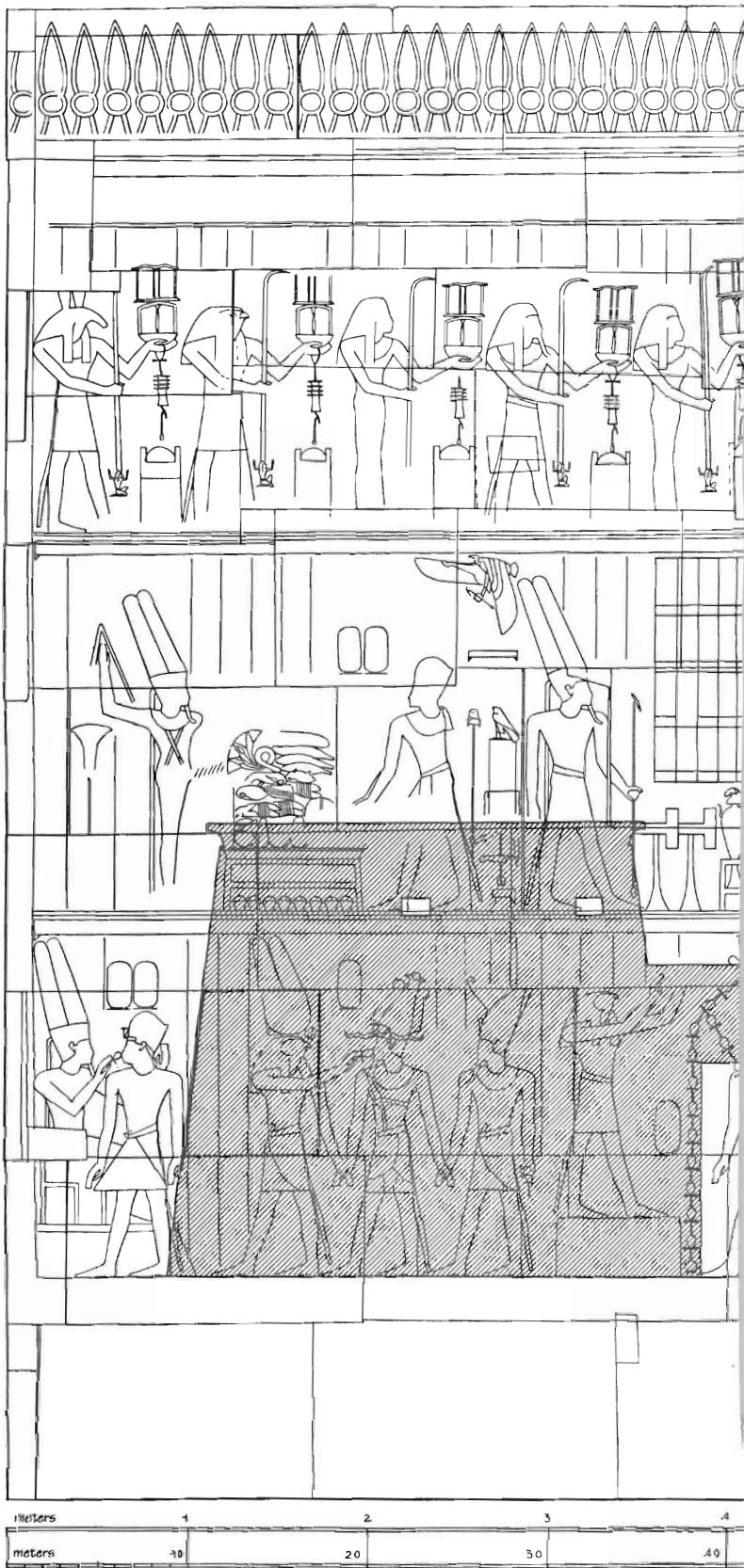
Chapter 44

SETH-HORUS

Plates 99–101

All pharaonic Egypt, from beginning to end and in all its achievements, is but a ritual gesture.

(Chapter 4)



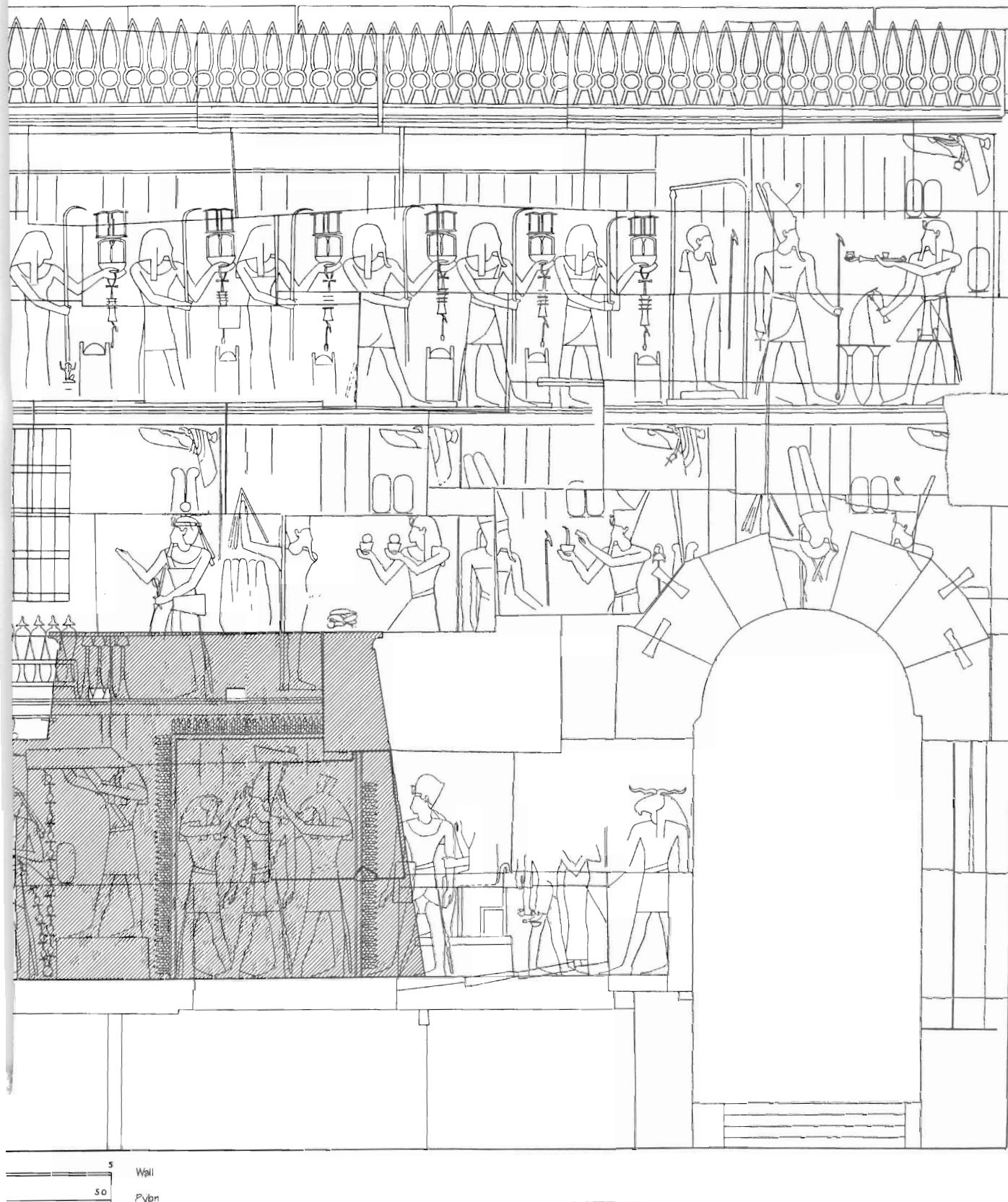


PLATE 99

The Pylon and the West Wall of Room II; Animation

... the Temple becomes sacred when it is built from knowledge that includes all points of view: proportions and numbers, axes and orientations, choice of materials, harmony of figures, colors, light, foundation deposits, and so on. It is this harmonious synthesis that creates the Temple, not a vulgar symbolization of the sky by the roof, of the earth by the floor, and other playthings of a childish symbolism.

(Elements)



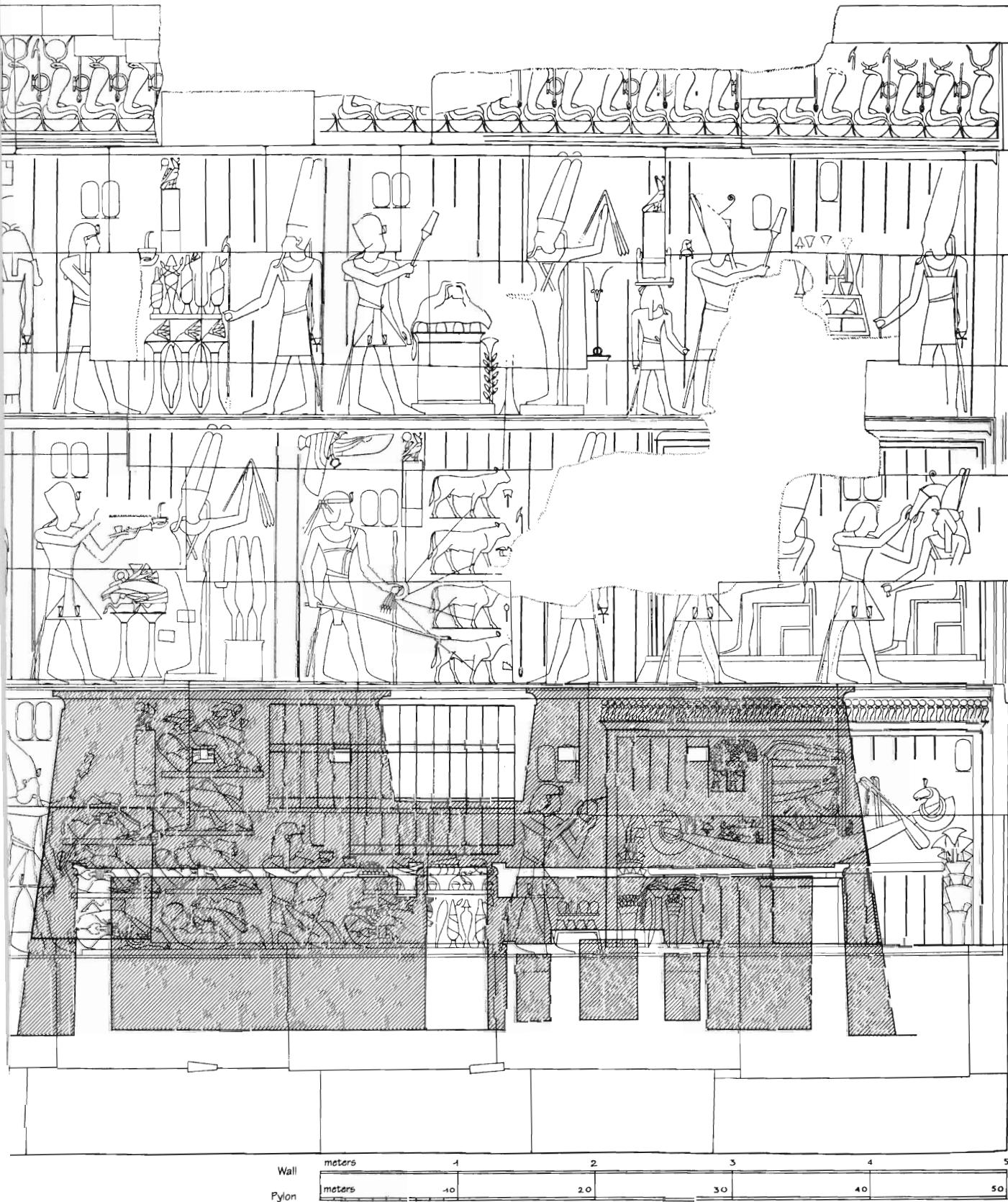


PLATE 100
The Pylon and the East Wall of Room VI; the Barque

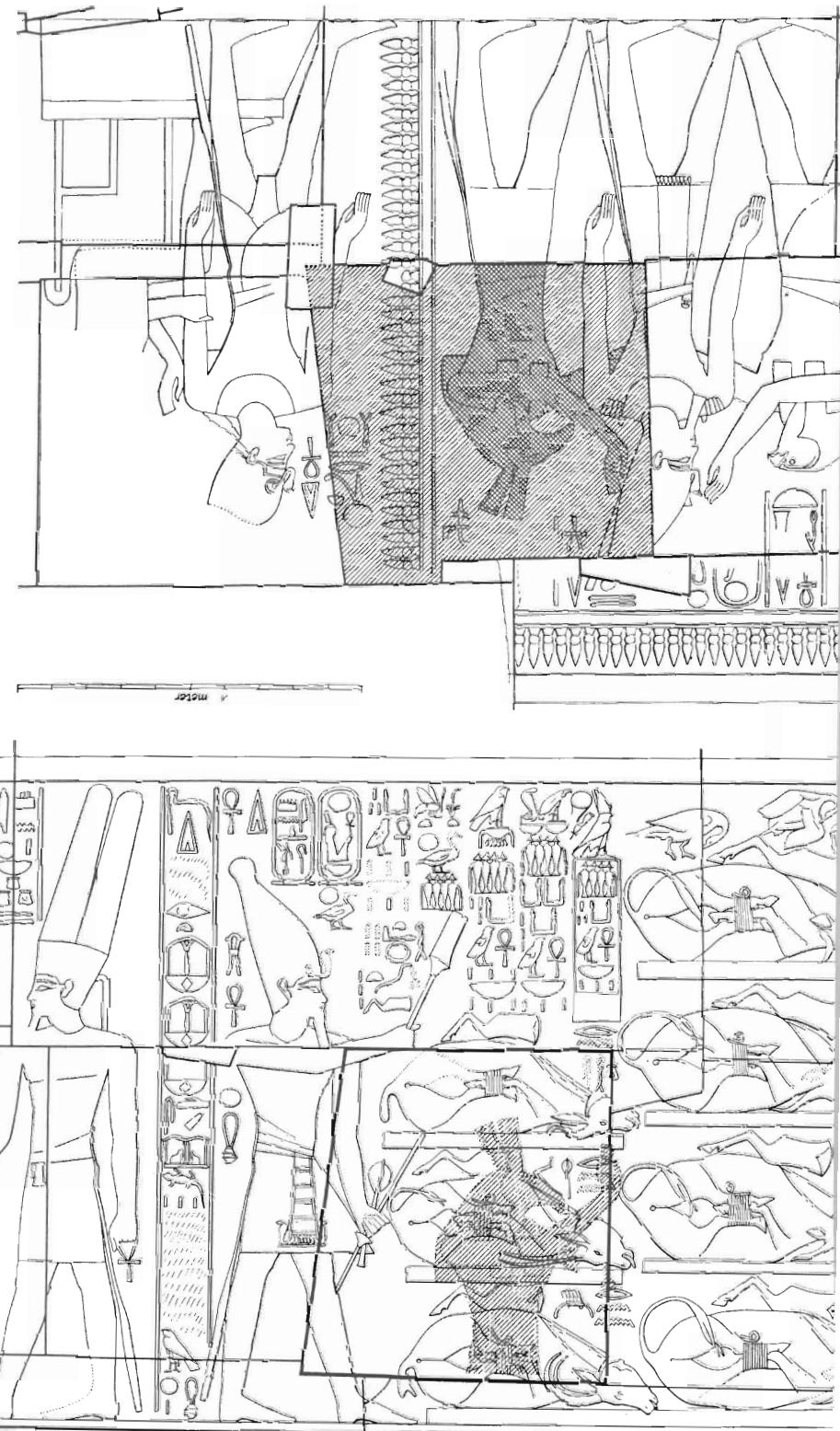
You and I are not two. In the identity of form, in the origin and in the end, we are one.

I am responsible for your evil and your good, for your truth and your falsehood. I can do nothing to change you now, but I can improve you by improving myself.

(Introduction)

The Fire that separates (Seth) also contains the Fire that unifies (Horus)—Satan and Lucifer.

(Chapter 18)



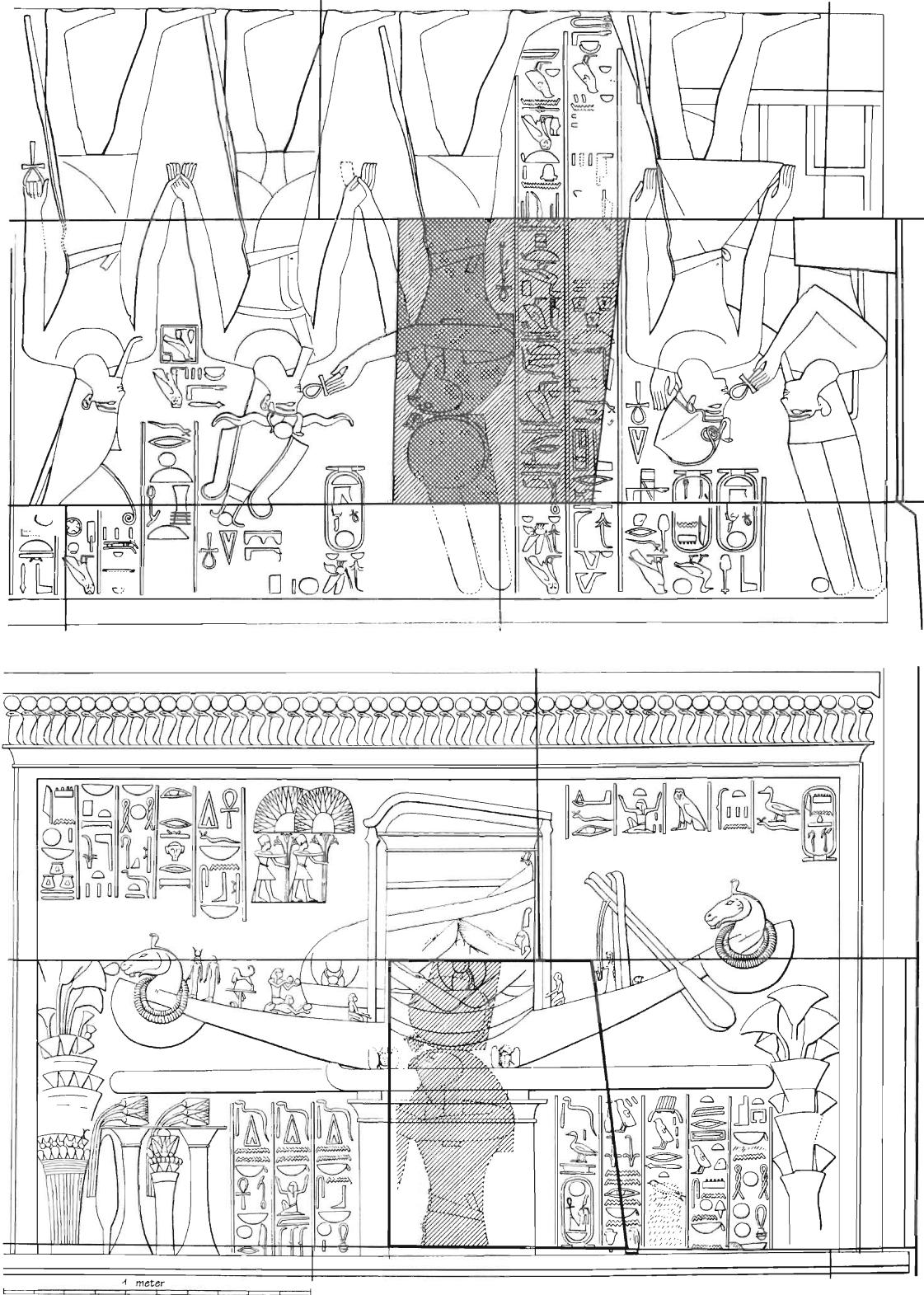
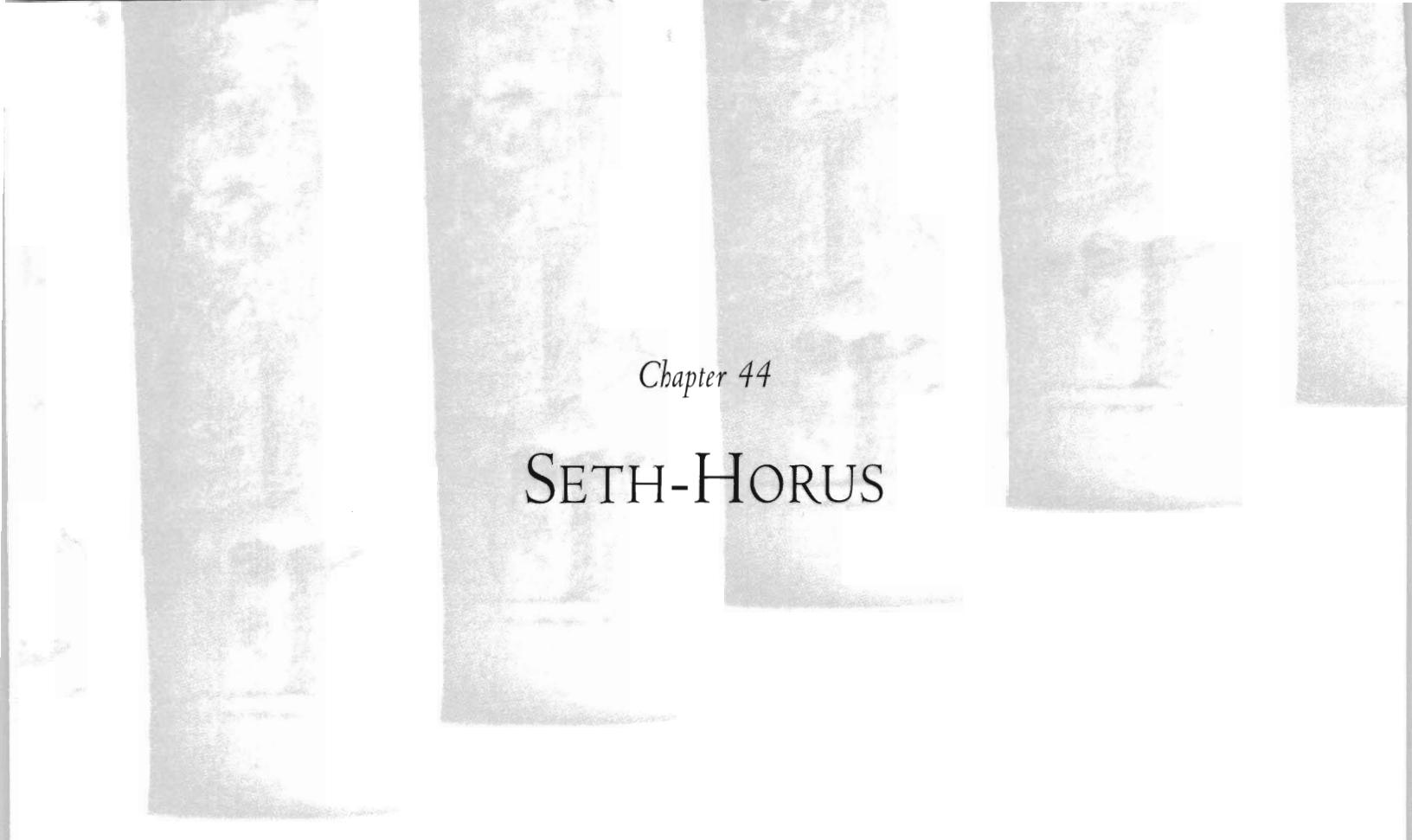


PLATE 101
Horus Born of Seth



Chapter 44

SETH-HORUS

THE REALIZERS OF THE PLAN: SUTI-HOR

Generally speaking, it is the large figurines that provide the theme and the texts that supply the functional details. The essential theme developed on the partitions of the wall separating rooms II and VI is the inversion of the spiritual state of the primary and original function, but in order to grasp it better, we must have a vision of the whole neighboring area of the temple.

Room II follows after room IX, which is called the “theogamy,” or spiritual conception. The royal naming affirms everywhere that the king is the son of Amun, “of his belly.” His spiritual conception is represented in room IX; the texts that accompany it describe how Amun manifests himself to the queen:

Action of the Verb of Amun-Ra, master of the thrones of the Two Lands Khent-apet-f, after he had made his transformations [*kheperu*] in the majesty of this spouse [*hy*] the king of Upper and Lower Egypt Ra-men-kheperu [Tuthmosis IV] gifted with life.

He found her lying in the depths of her palace. She awakened at the odor [*sty*] of the *neter*. She smiled before His Majesty. He came¹ to her at once. He made *hemed* toward her. He caused her to see him in his appearance as *neter* after he had come before her.²

She rejoiced at the sight of his perfections [or of his beauties, *neferu*]. His love extended from one end to the other of his body. The palace overflowed in waves of the odor [*sty*] of the *neter*. All his “perfumes” were those of Punt.³

¹ *chem* = the idea of heat.

² The whole tableau shows a spiritual conception since Amun and Mut are located above the starry sky, and even Selkit and Neith, who support it, do not have their feet on the ground. The word *hemed* is translated as “to possess,” “to copulate.” These interpretations are dictated by the context, which supposes an act of conception. In fact, it is a question of an insemination, which becomes copulation in the anthropomorphized, mythic interpretation of a transcendental, creative gesture. At Deir el-Bahri this word is written *had*.

³ Unpublished French translation by Alexandre Varille, 1949. Let us note that Punt is the “black country.”

Queen Mutemwia cries out in the presence of the majesty of Amun and pronounces words. Then Amun announces to her the name of the future royal child, "since such is the sequence of the words that go out from thy mouth. . . ."

There is an insistence on the fact of creation by means of the Verb. It is the first words that are pronounced by the mother in childbirth that become the name of the child. Here they are cited at the conception, there being no distinction made in time between the conception and the delivery.

Next, in "transposition," Thoth confirms to the queen the future birth of this child in the barque of Mut, which Mutemwia (Mut in the barque) brings into the world in the presence of the *neters*.⁴

Finally, as all the texts affirm, the royal child is held in the arms of Mut, nourished by Neith, and nursed by the celestial cow. He will then be baptized in water by Tum and Mentu and will receive at this baptism his mystical names inscribed by Thoth and Seshat in the presence of Amun and the "souls of the North and of the South."

Also depicted in this room consecrated to the theogamy is the *sed* festival, the festival of renewal during which this ceremony takes place twice: clad in a tight costume, the king is first white in the southern pavilion then red in the northern pavilion. Now, it would seem that everything has been said and that the whole future life of the king has been described here, but in the neighboring chamber (room II) the whole ritual of the crowning is developed again.

This new chamber deals with a very special part of the ritual related to the purification of the king before he enters the sanctuary as priest-king.⁵ In this place the king receives all the gifts of the powers of heaven from the North and from the South, and the two crowns from the hands of Seth and Horus. Presently, the east partition of this room II is partially destroyed, but the remaining elements allow us to suppose that its upper part completed that of the west wall (plate 99), and here is why.

On the upper register of the west wall of room II, the king is portrayed offering incense to the "great cycle of the *neters* of the North and of the South," as say the texts, but the legend that runs above these thirteen *neters* affirms that they come from the North (whereas they come from the South) and bring all their gifts in order to celebrate the festivals of renewal of the year and of the month. It is therefore very probable that on the east wall of this same room the *neters* coming from the South were found. At present there remains only the royal figure who makes exactly the same censing gesture with the same censer terminated by a hand that does not hold the standard vase bearing the flame, but a *chen* sign. Under this censer is inscribed the text that relates to this chapter of the ritual concerning the offering of incense to the "great cycle of the *neters*".⁶

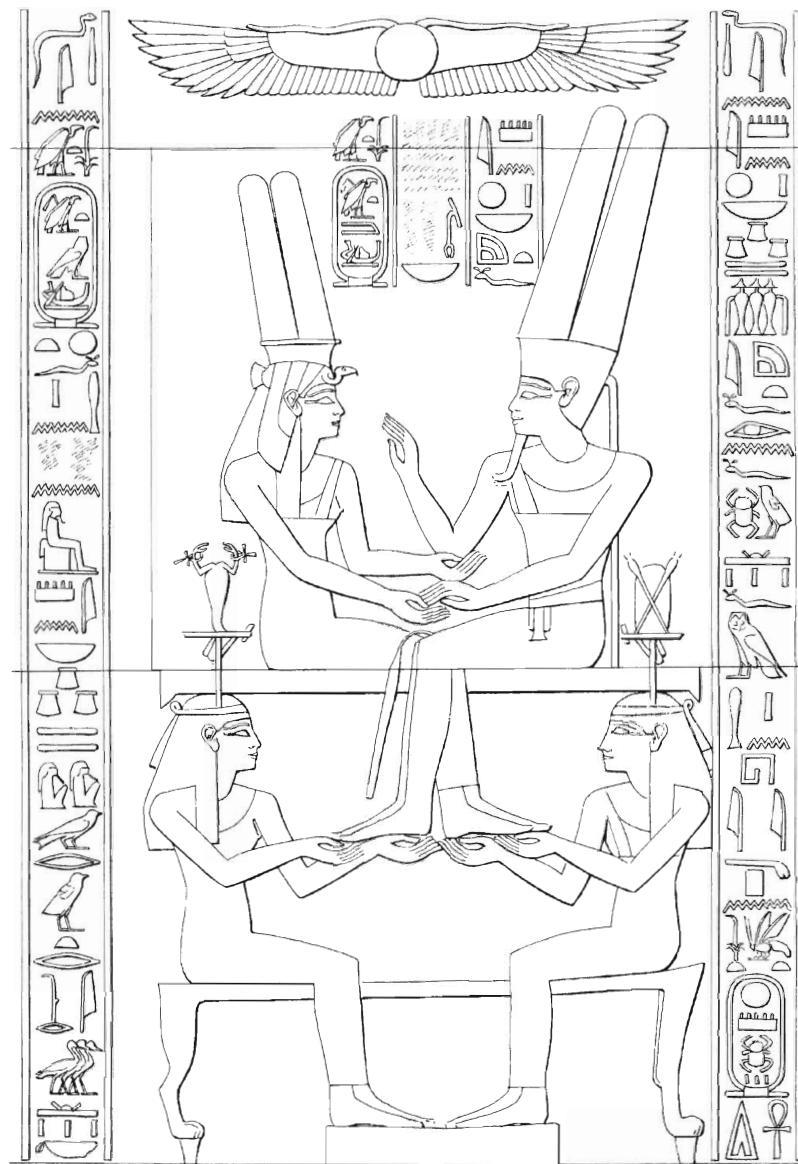
In accepting this restoration, the "*neters* coming from the North" are drawn to the west and those from the South to the east, an orientation conforming to that of the crowns (fig. 287), and the two texts of the kings of the east and of the west complement each other.

To the west, only a single phrase is inscribed above the king: "Purified, the *neters* of the South and of the North who are those who come after [*imyu-khet*] Amun [in] his temple. Ah! . . ."

⁴ Cf. fig. 223, the barque of Mut of room IV, in which the childbirth scene is projected in transposition. See also the black granite barque in which the queen is seated, originally from Luxor and now in the British Museum (ground floor, gallery 43).

⁵ Cf. chapter 39, commentary on plate 75, the description of the daily ritual of divine worship.

⁶ This text corresponds to chapter 43 of the Berlin ritual, for which Luxor gives only the essential phrases.



*Fig. 298. Scene of the theogamy, room IX, west wall, first register, central scene
(restored from the existing elements)*

Amun and Queen Mutemwia seated on the symbol of the sky, supported by Selkit wearing the emblem of the scorpion (*left*) and Neith with the two crossed arrows for her symbol (*right*).

Right, the first of the four columns on which the “words spoken by Amun” are inscribed; *left*, the first of the five columns on which the exclamations of the queen and the answer of Amun are written. A horizontal joint of the stones coincides with the upper line of the sky supporting Amun and Mut.

This sentence requires some thought because the figuration does not at all show the *neters* “coming after” Amun, who is not depicted, but following Tum, master of Heliopolis, and proceed-

ing toward the king, who offers incense. The literal meaning of *imyu-khet*⁷ can be understood as “The *neters* of the South and of the North who come ‘through’ Amun, from whom they are born....” Amun is indeed said to be the king and the father of all the *neters*.

We should not forget that the era of Amenhotep III falls during the precessional zodiacal sign of Aries, symbolized by Amun. It is a matter then of a *particular characteristic of the cosmic influence* that is taken to be the source of natural phenomena. In the same way Mentu symbolized the bull in the era ruled by the sign of Taurus.

To the east, the text inscribed under the censer completes the unfinished phrase of the west: “Purified the *neters* of the South and of the North . . . Amun [in] his temple. Ah! place your two hands on this sweet perfume.⁸ It is the secretion of the *neter*, coming out of him . . . on the great perfume coming from the horizon. His perfume, toward you.”⁹

What then is this “perfume” born of the divine secretion, this perfume that revivifies and purifies the *neters* and that is offered not with the censer but with the *chen* sign? This great perfume that comes from the eye of Horus, which comes out of the horizon? This *sty* perfume by which the queen was penetrated at the time of the royal conception?

The *chen* explains its implied meaning. The word *chen* is written by a hieroglyph representing a buckle attached to a length of string. The royal name is written in a similar loop, then called *ren* (cartouche), the name signifying the definition. The presentation of the *chen* with regard to the *sty* perfume, coming from the eye of Horus and the secretion of the *neter*, signifies the definition of what was, before the conception, abstract or spiritual.

With this perfume (we have seen it in regard to the “procession of the odor” in the sanctuary of the barque) we are dealing with the capture of the Fire. This Fire is an abstract soul that specifies; it is the particular hue seized or captured by Mut become Hathor in order to form the precious unguent that gives life.

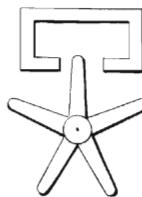
The “*neters* coming from the North” portrayed on the west wall of room II hold in one hand the palm frond of the years, and in the other hold up the symbols of the pavilions of the *sed* festival. Most of these *neters* have had their names hammered out. The first is Tum, first of the Great Ennead of Heliopolis, the second is Ptah, great *neter* of Memphis, wrapped, standing in his naos and holding the *was* scepter in his hand. Among those behind him, one can recognize Horus (hieracocephalic) and Seth, master of the South, with large, cut ears. Here the spiritual aspect of the theme of the rites described in the lower registers is represented.

⁷ *imyu-khet* is formed from two words the first of which means “between,” “among,” “that which is in” (Lefebvre, *Grammaire*, § 504), and the second, *khet*, implies an “idea of penetration” (§ 502). The group *imyu-khet* is sometimes translated by “the posterity,” “the descendants” (§ 524).

⁸ *sty nadjem*, sweet perfume; *sty*, perfume, is a word identical to that used to designate the “odor of the *neter*” that awakens the queen at the time of the royal spiritual conception; *nadjem*, written with the carob fruit, signifies “sweet,” “agreeable.”

⁹ We can compare the Luxor text with chapter 43 of the Berlin ritual: “Words to be spoken: The *neters* of the South and of the North are purified, the great cycle of the *neters*, complete, which comes after Amun in his temple. Ah! Place your two hands on this perfume; it is pleasant; [it is] the secretion of the *neter*, coming out of him. Ah! Put your two hands on the great perfume coming from the eye of Horus, which revivifies the faces of the *neters* of the South and of the North, of the great cycle of the *neters*, complete, which comes after Amun in his temple. Ah! Put your two hands on the beneficent perfume coming from the horizon; its perfume comes toward you, the perfume of the eye of Horus, toward you.” Cf. Moret, *Rituel du culte divin journalier*, pp. 166–67. We note that “the great cycle of the *neters*,” *mi ked sen imyu khet Amun*, literally signifies “the great cycle of the *neters* according to their forms [or quality], which are in and through Amun.”

The middle register confirms that the king receives the power of the “two *neters*,” that is, of Seth and Horus, and that this is accomplished in the *per-dwat*. The *per-dwat* is a special chamber in which, before being able to officiate as priest, the king must be purified and invested with all the powers that are given to him by the two crowns and by the scepters. *Per-dwat* is written with the sign of the enclosure (the house) above a star. Now, if indeed the star is read *dwat*, another of its names is *sba*, which signifies “teaching” and “door” as well.¹⁰



The king must always pass through the *per-dwat* before entering the sanctuary; should not this room II be named “chamber of the teaching”? Moreover, its location in the temple of Luxor corresponds to the jaw, one of the archaic names of which designates both the mandible and the two posts of a door.¹¹ Through its symbols, the west wall then evokes a door, an entrance, and this fact is confirmed by the architecture itself and by the arrangement of the tableaux.

Two blocks cut following the characteristic slope of a pylon¹² define, by the extension of their slopes to the line passing under the feet of the figures of the first register, the silhouette of a pylon ten times larger than the pylon built by Ramesses in the last stage of the construction of the temple.

In the ritual, the first scene of *per-dwat* is the double purification by Thoth and Horus, who pour a double stream onto the king. At Luxor this scene is located in the exact center of the first register; the king crowned with the diadem receives this purification made with ankhs forming a dome around him, and this scene is projected on the door (*sba*) of the ideal pylon defined by the reused stones traversing this wall. The traditional phrase is then pronounced four times by Thoth and by Horus: “Thy purification is my purification and vice versa.”

Though the king looks toward the south, the tableaux that frame this first phase of the ritual must be read alternately in the two opposite directions to be in their proper order.

To the north, the king receives the two crowns from the hands of Seth and Horus in the palace.

To the south, the king accomplishes the “royal ascent toward the sanctuary,” preceded by Mentu (the Innu of the South) and followed by Tum of Heliopolis (the Innu of the North); then he receives the influx of life, in the nape of the neck and by the nose, from the hands of the seated Amun who holds him “between his arms.”

At the northern end, opposite the seated Amun, a bound figure seated on the throne holds the king by the left arm, and it is quite probable that this figure is Tuthmosis IV, the father of the king,¹³ who is always present at the enthronement of his son.

Finally, under the aspect of a naked child holding the phoenix bird in a basket in his right hand, the prince is nourished at the breast by a female *neter*, followed by Khnum.

¹⁰ Cf. I. Schwaller de Lubicz, *Her-Bak, Egyptian Initiate*, p. 107.

¹¹ Cf. vol. 1, fig. 167, no. 17.

¹² Cf. plate 67, and chapter 37.

¹³ Cf. Moret, *Du Caractère religieux*, p. 80, fig. 12.

In front of the prince, held by “his father” (plates 99 and 101), one of the royal titles is *tit-Ra*, “image of Ra” or “emanation of Ra.” The hieroglyphic group used to write this merits attention (fig. 299). In recalling that the pieces of the *wedjat* eye each represent one fraction of the *hekat* volume, the symbol *tit-Ra* forms the number 19 (sixty-fourths), the fundamental number governing the human canon. This play of numbers, which also recalls volume and signifies “in the image of Ra,” evokes for us the formation of Adam “in the image of God” from the Mosaic Genesis.

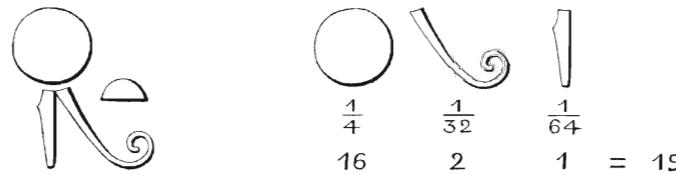


Fig. 299. Hieroglyphic group *tit-Ra* and its decomposition into fractions of volume

This decomposition recalls the destruction of the eye of Horus by Seth.

The development of the theme concerning the entrance into the Temple is given by the transpositions and transparencies of the key-stones that define the pylon in the wall itself, and confirm the idea of a passage through this wall. Actually, the two stones cut on a slope that give the proportions and measurements of the pylon have carved on their two sides, in rooms II and VI, representations that complement each other and conform to the myth.

In room II, these two stones depict Seth to the north and the hieracocephalic *neter* crowned by the solar disk and the plumes of Mentu to the south (plates 99 and 101). Now, in order to establish the correspondence between these two figurations and the pylon of Ramesses, the orientation of the crowns indicated throughout the temple and on the side of the pylon must be taken into account. Seth is master of the South and of the white crown; it is placed to the east (fig. 287), as the king crowned in white carved on the lintel of the door of the pylon (plate 10) also indicates. The red crown is located to the west (plate 9), which causes us to connect these two figurations with Seth and Horus, Suti-Hor, the two realizers of the plan. There is a reversal between right and left, but do not Suti-Hor say on their stele, “The director of Amun’s works in Luxor, Suti [or] Hor [he says:] ‘Whereas I am master in the west, he is master in the east [and vice versa]. We are to direct the great monuments in Apit, to the south of Thebes, city of Amun’”?¹⁴

Thus the ideal pylon evoked on the two partitions of the wall separating rooms II and VI is to be seen in reflection, exactly as the axis of Amun carved in the sanctuary of Amun’s barque (room VI) is reflected in the repository of the interior face of the west wing of the pylon.¹⁵ At this point the position of the crowns is reversed: the crown of the South is to the west, as the southern transposition stone corresponds to the west wing of the pylon (see plate 100, in which the walls of the chapels and the pylon are put together, the walls of the chapels being kept white and the mass of the pylon pictured in gray). The cornice on the pylon corresponds to the sky of the first register.

¹⁴ Cf. chapter 26, the end of the text of the stèle of Suti-Hor.

¹⁵ Cf. plate 86, and chapter 40.

On this southern stone the solar disk of Mentu depicted in room II is projected in transposition into the naos of the barque of Amun-Ra depicted in room VI (plate 101). Now, the barque of Amun portrayed in sanctuary VI is veiled and allows only the winged scarabs to show, framed by two Maāts with their wings extended. It is necessary to go to the pylon, in the repository of Amun's barque, in order to know the content of its naos. There all the details are given: framed by two female deities with wings extended, a *neter* with a ram's head is seated on a lotus placed on the sign *mr* (the basin). Below, a hieracocephalic *neter* crowned with a solar disk is seated on the sign *mn* (checkerboard) framed by two Maāts (fig. 300).

The southern stone, cut following the same slope as the pylon and traversing the wall separating rooms II and VI, therefore reveals, by the transposition of the solar disk in the naos of the barque, the contents of this naos indicated by the pylon itself. In this transposition the winged scarab springs from the solar disk of Mentu, the feathers of which do not "traverse" the wall (plate 101).

On the northern stone, Seth is depicted on the wall on the side of room II, and his transposition on the opposite wall, in room VI, relates to the myth according to which Seth destroyed (decomposed) the eye of Horus. A thousand legends are related to the destruction and reconstitution of this eye, which is evoked by the cabala of numbers that we have just indicated. The fractions of the *hekat* volume are designated by the component parts of the *wedjat* eye, the healthy or reconstituted eye. We shall cite the following two fragments from these legends.

"Seth found Horus sleeping in the mountain of the country of the Oasis and pulled his two eyes out of their sockets. The goddess Hathor, lady of the sycamore of the South, arrived and discovered Horus, who was stretched out helplessly on the mountain crying. She seized a gazelle and began to milk it. She said to Horus: 'Open thy eye so that I can put milk in it.' He opened his eye and she put milk in it; she did it for the right, she did it for the left, and she said to him: 'Open thy eye.' He opened it. She looked at it and observed that it was cured. . . ."

It is important to know that the Egyptian name for the gazelle, given here as *ga-hes*, is a pun and can be understood as the injured sight.¹⁶ There is a name for the antelope, which is *ma-hedj*. The Egyptians did not miss also making a play on the word from a religious text, chapter 112 of the Book of the Dead. It is the "Chapter of Knowing the Mysteries of Buto": "Do you know why the city of Buto has been given to Horus? You do not know it, but me, I know it: It is Ra who has given it to him as a compensation for the injury that he had experienced in his eye."¹⁷ I know it. It is when Ra said to Horus: 'Let me then see thy eye concerning what has happened to it!' He looked at it and said: 'Look then at this line, thy hand covering thy good eye.' Then Horus looked at the line and said: 'I see it white, white.' And thus came the existence of the antelope [*ma-hedj*], which means 'white view.'¹⁸

Tradition attributes to Seth the white crown, the domination of the Land of the South, and all the deserts and the animals of the desert, including the gazelle and the antelope, or more exactly, the oryx. Moreover, it is also said that these Sethian animals have "devoured" the eye of Horus and that is the reason that they are offered in sacrifice.

¹⁶ Cf. Jean Capart, "Les Aventures d'Horus et de Seth," extract from the *Bulletin de la Classe des Lettres*, 5th series, 17 (9 Nov. 1931): 411-27. Cf. *Chronique d'Egypte* 8 (1933): 424-25.

¹⁷ We see here the eye of Horus as being the eye of Ra, that is, the light of the eye, the sun Aten of the solar principle, Ra.

¹⁸ Cf. Capart, "Les Aventures d'Horus et de Seth," p. 425.

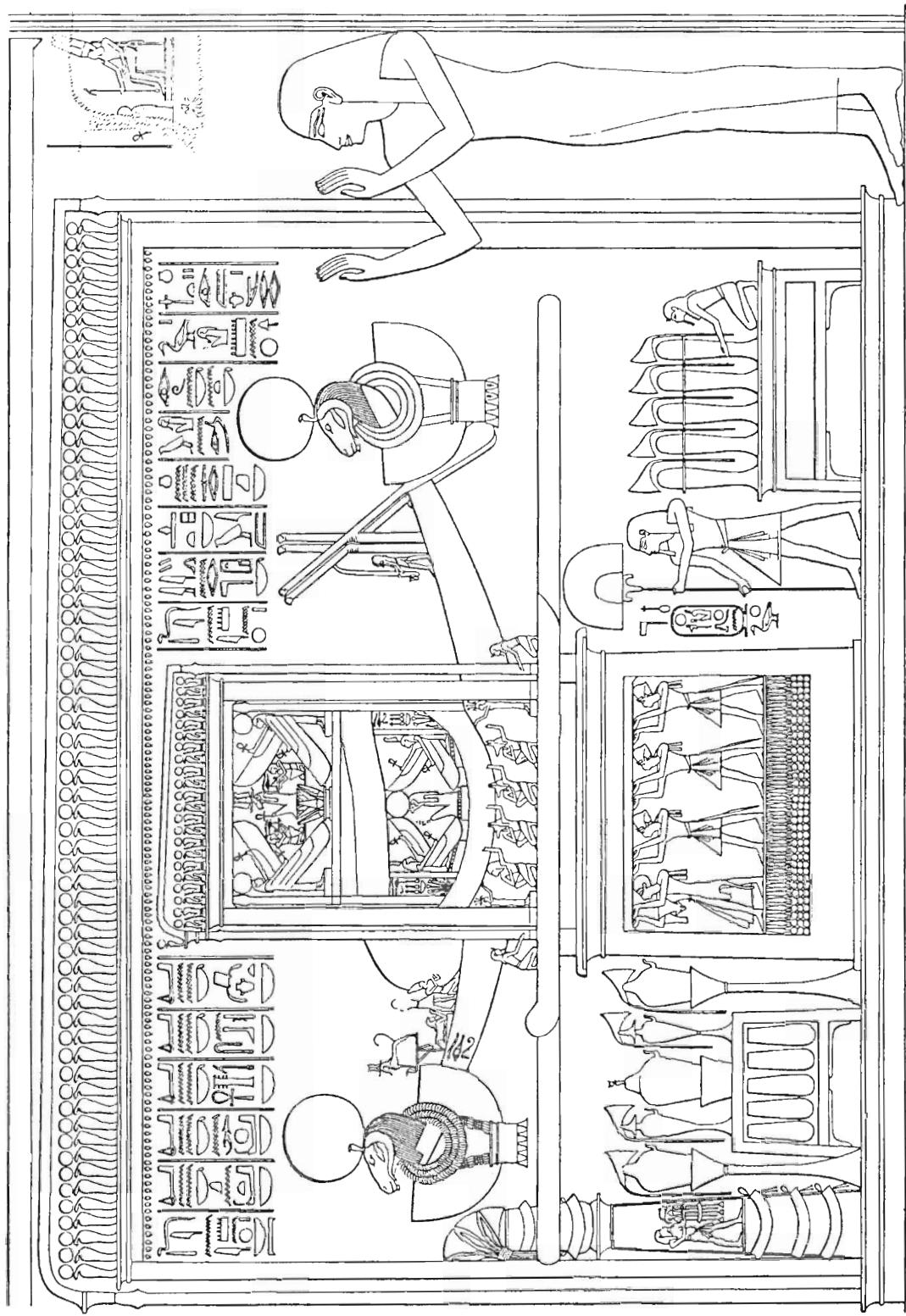


Fig. 300. Amun's Barque (*restored from existing elements*), repository of Ramesses II, west wall

The transposition of the northern stone between rooms II and VI is a synthesis of these variations of the myth and ritual, the goal of which is to reconstitute of the eye of Horus, which must be offered to the *neter* so that he can again be united with his soul each day with the appearance of Ra. Seth, portrayed in room II in the process of giving the king the white crown of the South, is projected by transposition into room VI onto the desert animals that are attributed to him: *ma-hedj*, the antelope-oryx, and *ga-hes*, the gazelle (plate 101).

The king shown in room VI wears the white crown and hold the *mākes* staff and the white *hedj* club in his hand, which he points toward the sacrificed animals, while he waves the *āba* scepter in his right hand to consecrate these offerings¹⁹ (plate 101). Thus, the transposition from one room to another explains the myth.

CONCLUSION

Beyond all speculation and reasoned demonstration, there is the fact, the experience, that we live. Past experience makes us live, and life prepares us for future experience through antagonism contained in the seminal synthesis of the present moment. When it splits apart, we call this antagonism the opposites and give them all the names that designate everything that makes up our Universe: past and future, heaven and earth, good and evil.

In the Temple they are called Seth and Horus, in reference to the immanent possibilities that are, in the end, expressed in the combat of their natures.

They are the builders of the Temple, which is the tangible Universe, model of the temple conceived by man as the image of heaven.

Image of heaven: always Two, but then Two who search for each other, who come near to each other, in order to offer to the Being that animates us their own friendly go-between, so as to recover the Unity.

Eternal conflict in every creature, nameless anxiety in the mortal being who suffers the contradictory attraction of the two powers: the Horian power, immutable light, and the Sethian power of the atavisms and habits tied to the terrestrial form.

The secret vessel containing the two powers floats in the immaterial Waters of the cosmic ocean, Nun. This barque travels from the Fire of the east toward the Water of the west; in separating them by its movement, it also reunites them in the serenity of the culmination.

The naos is the image of that which manifests the opposites, but also the image of that which unifies them: movement, then the serenity of repose. The naos is the tabernacle, the sanctuary, the Ark of the Covenant, where the final death leads to the removal of antagonisms, the serenity of eternal life, there where the One is in the Other.

There is only inessential knowledge as long as the Same and the Other, Horus and Seth, combat each other, and Horus is but the memory of the Light in Seth, "fallen" into matter.

The ordinary definition of good and evil is subjective. Only illuminated beings and Spirit can say of what good consists, that is, of what leads toward deliverance from the mortal, which evil prevents. This is essential knowledge.

Designating Seth and Horus as being evil and good is reducing a universal principle to a personal opinion. The complements polarizing the specificity are the signature of each thing of which our human complex can have knowledge, this complementation being the architect of the Temple that is our world.

¹⁹ Cf. fig. 292, the *āba* scepter covered in gold leaf and having carvings of sacrificial animals on one of its faces.

The essence of things is by this fact ternary because between One and Two lies the harmony that includes the "accords" and "discords" situated between these poles, separated by the harmony they create through their becoming and their affinity.

Now, if an object is only known through its complement, each of these complements evokes the other, and this general activity is the principle of the "inverse," in genetic phenomena as well as in mathematics. In genetics, one takes as extremes the two lineages, solar and lunar, transcribed into the colors red and white; the burning desert, dry and red, will call forth the *animals*, that is to say, that which is *animate*, designated as white, and this silvery white will in turn recall the tempered red.

This complementary activity is applied to all phenomena. The teaching of a law must be seen in these "symbols."

Characteristic of pharaonic teaching is the intermingling of *what makes* and *what is made*, identification of the gift with the one who receives this gift.

The weaving is also the cloth. The action from which an effect results is, potentially, this product. Spirit forms the body, of and through itself, therefore, the body is Spirit. One is abstract, the other concrete; one evokes the other, and in the inmost "esoteric" event, Two become One. Functionally, this is seeing the divinity in all things. This is also, in never opposing the divine to the natural, the absence of all philosophical conflict.

Knowing how to identify all thought and even all technique with theological expression represents the highest science. This makes of religious myth a very complex ensemble, but no more complex than the analysis of the transmutation of our airy, liquid, and solid food into thought. It would be absurd to see in this a physicochemical phenomenon and not a creative reality, a manifestation of the Original Verb, the Spirit, the Light; it is because of this that true science is necessarily theological. It is a serene science, because founded on the knowledge of the causal phenomenon, source of the laws that govern all phenomena.

Alternation is the pendulum of the life of apparent forms; the crossing is the equilibrium of a momentary death of the form, from which results a new polarized state. Its new crossing, or equilibrium, is life without death. This is said simply by the crossed scepters of the royal mummy. This is the law of the return in this Light that fills the absolute void, that reigns in the heavens of all nights, but is perceptible only because of the obstacle that opposes it there. This obstacle is Seth, the same light corporified, because only the Light can be opposed to the Light, can be *perceptible* to the Light. Thus "to corporify" is to make an obstacle to an activity through the same activity, and this occurs in all domains.

Is not wisdom then the law of non-willfulness of the sublime Lao-tzu? But for this it is necessary to know how to enter into the Temple, and also how to go out again.

Is not all of this illustrated by the fact of eating the bread and drinking the wine, these two substances rich in spirit, and by breathing the odor of the god in order to transmute it into the consciousness of the conflict and then into the consciousness of Being? The animal man eats; the human man transmutes; the superhuman man recognizes. This last is the Royal Man.

Let us call Spirit pure energy, but which is known to us only through polarization; let us call God consciousness, but which is known to us only through complementation; let us call Light the first phenomenon, but which is known to us only through shadows.

Let us call original scission the first act of becoming, but which is known to us only as separation. . . .

Let us change the names; we would not, for all that, be changing either the things or the functions.

Now, we cannot accept that the essences of that which we know would not have an absolute aspect: the *neters*, was this only a hypothesis of reference? They are the abstractions evoked by

tangible things by virtue of that which we ourselves are, and that we know through the fact that only similar entities can recognize each other. We—mankind, the human species—are the reference for the knowledge of the world.

As for any observed or experienced phenomenon, let us look for the knowledge of it in ourselves and not outside of us through mechanical reasoning.

Thus, we can find the vital reason for the “function” because *only living humanity can reveal to us the law of a qualitative exaltation.*

Qualitative exaltation, this amplification of quality, is the desired fruit of the Seth-Horus drama, the survival beyond the Sethian body, the liberation of consciousness from physical contingencies; this is the story of all the “spiritual states” of which the traditions speak.

This qualitative exaltation that is the transmutation of nourishment into consciousness and thought can subsequently no longer be recognized by this same thought, which will consider it absurd.

. . . and the shadows no longer recognize the light from which they were born.

Man is the Temple where the mystery of the everyday is accomplished, the place of combat of the essential antagonisms, and, because of this, he is also the place of the revelation of the shadowless Light.

This is the soul of the pharaonic teaching, which believes only in this Irrational, which it never profanes and which it causes us to *hear* by means of harmony, whose laws ordain the Becoming and the Return.

This teaching tells us that proportion splits the elements and makes them appear in four and seven tones of this simultaneity that is the murmuring of the sistra, the Verb of the world.

It tells us that separating the Spirit from the body is the religion of death. To separate and split apart is to descend into transitory matter, is to remove ourselves far from the animating source of all. Not separating is pure love, it is the life of Horian Light, followed by those who have known how to avoid the Western way of the Osirian waters of rebirth.

Their reward is to emerge living from the Temple after having entered there by dying to illusion.

And now that the temple of Luxor has shown us the way to follow, let us begin to explore the deeper meaning of the teaching of the pharaonic sages.

THE UNITY

One sole Truth: Indivisible Unity.

One sole Reality: the Verb and its evolution in consciousness.

One sole universal morality: through Cosmic Man each is bound to all, each is responsible for, or benefits from, the good and evil deeds of all; humanity is a whole united in the individual.

One sole Consciousness: Genesis.

One sole pure science: Numbers.

One sole expression: the Symbol.

One sole means: Harmony, which has its source in disorder where the sundered parts rediscover one another, naturally and of themselves, through affinity. Spirit is at the beginning and the end of all form.

Form is the symbol of a function.

Wisdom is the perfect harmony of all the functions.

Appendix

COMPARISON OF PARTS AND CHAPTERS IN THE ENGLISH AND FRENCH EDITIONS

Note: volume 2 of the English edition combines volume 2 (the plates) with volume 3 (legends and commentaries on the plates) of the French edition.

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Note: Wherever possible, this list substitutes editions in English of sources referred to by the author. Additional works cited in the translation are also included.

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