

# The Temple in Man 

# Sacred Architecture and the Perfect Man 

R.A. Schwaller de Lubicz

Translated by

Robert \& Deborah Lawlor

Illustrated by Lucie Lamy

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## Translator's Foreword

THE APPEARANCE of this small book in 1949 created an unusually large academic controversy in the renowned Department of Egyptology of the College de France, Paris. An "amateur" Egyptologist (as the scholars must have labeled Schwaller de Lubicz) had presented an entirely new and radical approach for the consideration of Egyptologists, archaeologists, and historians in general, an approach that might have been ignored completely had it not been developed with such a great amount of forceful, detailed research, and had it not won over the complete acceptance and enthusiasm of several of the leading Egyptologists and archaeologists of that time, including Alexandre Varille and C.H. Robichon. We shall not go into the intriguing way in which the academic establishment circumvented a confrontation with the challenge posed by Le Temple dans l'Homme; nor shall we examine how they attempted to dismiss this work through the well-known academic tactic of intentional silence. Instead, let us use these few pages to introduce this relatively little known author, then to see what might be some of the major themes contained in the "New Egyptology" that Schwaller de Lubicz's work opens before us.

It is true that Schwaller de Lubicz was not a qualified Egyptologist by academic standards. Instead of first spending years in the Egyptological libraries of Europe, he, upon his first visit to Egypt, took up residence together with his family ${ }^{1}$ in a small hotel

[^0]very near the Temple of Luxor, and there he remained For more than fifteen years of intense, uninterrupted study of this great monument of the Eighteenth Dynasty of pharaonic Egypt. Schwaller de Lubicz was already a mature man by the time he arrived in Egypt. Let us therefore review briefly his earlier years. ${ }^{2}$

At about eighteen years of age. Rene Schwaller left his home in Alsace, after having completed an apprenticeship with his father in pharmaceutical chemistry, and went to Paris with the clearly formulated intention of "learning the true nature of substance." In addition to studying modern chemistry and physics, at this young age he began reading every alchemical text he could find, those of the thirteenth and fourteenth centuries as well as sixteenth-century Rosicrucian texts and the more familiar works of Paracelsus and Raymond Lull. For a period he became interested in painting and was a student of Matisse, but his main role among his contemporaries was that of a philosopher of nature; thus, he influenced many artists in Paris at that time, such as Arp, Leger, and especially Prince O.V. de Lubicz Milosz, the Lithuanian mystic poet and statesman, who in 1919 conferred his family title on Schwaller as a means of expressing his admiration and gratitude.

He served in the armed forces as a chemist during the First World War, and at the close of the war he published a journal, L'Affranchi, followed by Le Veilleur, both dedicated to social reform in the difficult task of implementing peace.

During the course of his personal development, he received the name of "Aor," signifying "Light of the Higher Mind." He is said to have continued his alchemical research during this period, and later, while living among and guiding a contemplative community of students, scholars, artists, and craftsmen who had gathered around him at. St. Moritz in the Swiss Alps, he produced alchemical glass with reds and blues thought to compare with the stained glass of Chartres Cathedral, a feat no other chemist has been able to accomplish in the six hundred years since the cathedrals were constructed. It was during the years at St. Moritz that his philosophic and scientific vision coalesced around an understanding of the universal laws of harmony.

[^1]Thus, it might be said that Schwaller de Lubicz's preparation for Egypt was that of a philosopher, in the sense that his entire life constituted an intense philosophical inquiry. His unique and intuitive way of seeing, in combination with a technical and scientific education, gave him his extraordinary insight into the values and objectives motivating ancient science and theology.

In Schwaller de Lubicz's scrupulous examination of the an and architecture of the Temple of Luxor, at least two concurrent levels are being developed at any given point. One is the study of Egypt as a civilization that existed in a factual geographic place and time (including its people, mythology, social forms, its chronological unfolding, its monuments and artifacts), but this level is only a backdrop, or support, for another Egypt which might be defined as a "quality of intelligence." This is Egypt as an evocation of a particular utilization and expression of a universal power of higher intellection. This Egypt is outside of chronological considerations; it is, rather, both an ever present and a recurring possibility of consciousness. In his approach to Egypt, Schwaller de Lubicz stresses the view that in order to comprehend the significance of a heightened phase among man's varied historical expressions, we need to impose on ourselves the discipline of attempting to enter into the mentality of the people and the spirit of the time. To do so would mean more than just learning the language and symbols of the period under study; we must also awaken in ourselves a living inner rapport with the material being researched and identify with it in a potentially self-transforming manner. Of course, this ideal can never be fully attained, as our present consciousness is inevitably with us, but, on the other hand, by continuing to sift all of history through our present rationalized, individualized psychological mentality, we distort beyond recognition the content and meaning of the past. This distortion often occurs when we try to interpret the great mythological cultures of Egypt or Vedic India in particular; we tend to lose sight of the fact that these cultures were expressing a different mentality, and values, from ours and that they had a completely different understanding of the goal and purpose of life. As a result, in all of their science, art, and knowledge these cultures used distinct modes and methods of symbolization. Schwaller de Lubicz found it necessary to inquire into the nature of
symbolization itself in order even to arrive at an understanding of what a heiroglyph is. This he carried out in two small books, Propos sur Esoterisme el Symbole (Esotericism and Symbol) and Symbole et Symbolique (The Symbol and the Symbolic), English translations of which are forthcoming from Autumn Press.

That these ancient peoples thought differently than we do-and that we must understand this difference if we are to study them properly-seems obvious, but an example will show how difficult it is to put this idea into practice. Schwaller de Lubicz explains in Le Temple de l'Homme (Caracteres, 1957) that in the ancient temple civilization of Egypt, numbers, our most ancient form of symbol, did not simply designate quantities but instead were considered to be concrete definitions of energetic formative principles of nature. The Egyptians called these energetic principles Neters, a word which is conventionally rendered as "gods."
"In considering the esoteric meaning of Number, we must avoid the following mistake: Two is not One and One; it is not a composite. It is the multiplying Work; it is the notion of the plus in relation to the minus; it is a new Unity; it is sexuality; it is the origin of Nature. Physis, the Neter Two. It is the Culmination (the separating moment of the full moon, for example); it is the line, the stick, movement, the way, Wotan, Odin, the Meter Thoth, Mercury, Spirit."
Also, when the ancients considered the process of mathematical multiplication, their mode of calculation had a direct relationship with natural life processes as well as metaphysical ones. Schwaller de Lubicz called this mode the "principle of the crossing" (interestingly, we today continue to symbolize multiplication with the sign of a cross: X). This crossing was not a sterile, mental, numerical manipulation but a symbol for the process by which things enter into corporeal existence. All birth into nature requires a crossing of opposites. It can be the crossing of vertical and horizontal lines, which give birth to the square, the first measurable surface; or male and female, giving birth to a new individual; or warp and weft, creating a fabric; or light, and darkness, giving birth to tangible forms; or matter and spirit, giving birth to life itself. Thus the vital linking up of the mental abstraction of calculation with its counterpart in natural phenomena gave the ancient mathematician a living and philosophic basis for his science.

Similarly, these ancienl peoples did not use words as we do, that is, as symbols or sounds linked together, which have fixed, memorized associations and which we compose in sequential patterns within the mind. For them words were of a musical nature; or, more precisely, speaking was a process of generating sonar fields establishing an immediate vibratory identity with the essential principle that underlies any object or form. The pharaonic intelligence that Schwaller de Lubicz reveals to us was not the visualizing, analytical mentality we know but a sonar-intuitional mode. In the Egyptian temple, wrote Caspar Maspero, the human voice is the instrument par excellence of the priest and the enchanter. It is the voice which seeks afar the Invisibles summoned and makes the necessary objects into a reality. . . . But as every one (of the tones) has its particular force, great care must be taken not to change their order or to substitute one for the other. ${ }^{3}$ Clearly, this approach to Egyptology demands a qualitative change on our part if we are to enter into the pharaonic spirit. And this change in our thinking may offer us perspective not only on the vastly different intelligence of the past but on the limitations and excesses of our present intellect as well.

This meticulous meditation on the stones and statuary of Luxor also raises far-reaching questions on the function and nature of history itself. In particular we begin to see that Egypt may have left us some essential keys to help us find our way toward an integration of things metaphysical (spirit), mathematical (mental, scientific), musical (vibrational, living) and physiological (physical or material). As a civilization, Egypt certainly holds up to us a model of this reintegrated expression of the various planes and parts of our individual natures and of the cosmic life of our universe, and thus may prove of greater value in the spiritual crisis now confronting us than the religions of transcendence adapted from various ancient Eastern cultures. Egypt was not of the lineage that advocates transcendence and denial of material existence; it taught, rather, transformation. The ancient name for Egypt was "Kemi," meaning "Black Earth," the field of vital transformation; the Arabs, Schwaller de Lubicz points out, called Egypt "Al-Kemi."

[^2]Thus we find in its very name that age-old, universal doctrine so often disguised in symbols and parables. This doctrine encompasses a vision of the principle of matter as a field of existence responsive to and capable of being transformed by spiritual influences brought about through the evolution of embodied and individualized consciousness. The West today could benefit from a philosophy of spiritual depth that does not suppress, diminish, or deny our intellectual and material nature but rather fulfills our commitment, to the meaningfulness of human life and this material expression of the universe.

This lost alchemy, the pursuit, of which extends back to its flowering in ancient Egypt, can be seen as the hidden esoteric roots of both civilization and individuals throughout recorded time. It is this same alchemy which is at the core of the vision of the anthropocosm-of Man as being and containing within himself the entire universe. This vision, which is introduced by Schwaller de Lubicz in these pages and expanded and brought to life in his major work, The Temple of Man, leaves us with a single, enduring message: the inevitable resurrection of the spiritual essence which has involved itself in matter in the form of organic creative energy. This resurrection depends upon the transformation of the material universe-or to express the idea more as Egypt left it imprinted in the stones of Luxor: the birth of divine man (symbolized by the pharaoh) depends upon the transformation of the universal mother (materia prima). This transformation was considered the sole cosmic goal. Every human birth participates in this alchemy, either in an awakened manner through the intentional perfecting and expression of one's higher nature, or unawakened, through the tumult and suffering of karmic experience leading eventually to a spiritual self-awareness, the temple in man. The intensification and heightening of human consciousness was believed to cause biological and even cellular changes in the physical body of the initiate. This divinization of the individual body, on the microcosmic level, comprised the goal and purpose of the evolution of human consciousness in general.

Within the Temple of Egypt, psycho-spiritual growth was wedded to precise intellectual and physiological disciplines which acted to accelerate the influence and transformative effects of spirit
over matter. With Egyptian alchemy we arc considering, then, a science in the highest sense of the word, and one very different from our own. It was science directed toward the embodiment of spiritual knowledge, toward the internalization and corporeal expression of intellectual and spiritual powers, rather than the mechanistic utilization of knowledge-power for the exploitation and manipulation of the earthly environment.

The Temple was the pinnacle of the collective life, ever guiding the energy of the long-lived civilization of the Nile Valley toward the gestation of a divine humanity out of the transitory human form.

ROBERT LAWLOR

## Preface

THE PURPOSE of this book is to present indisputable evidence that a symbolic directive was operative in the architecture of the Temple of Luxor.

I will examine esoteric symbolism and its significance in ancient Egypt in greater depth in a future book, the outline for which can already be established on the basis of a wealth of. documentation. This material now allows us to affirm that what is true for the Temple of Luxor is also true for other monuments from all the Egyptian dynasties, the symbolism evidently having been adapted to the particular consecration of an edifice and to the nature of the place where it was erected.

The findings presented here are the fruit of eight years of uninterrupted work carried out by Lucie Lamy, consisting of very precise surveys of the present layout and the bas-reliefs of the Temple of Luxor, and the notation of the measurements. Clement Robichon, architect and head of field work operations of the French Institute of Oriental Archaeology, was responsible for triangulation and for checking all the plans.
Triangulation was carried out by means of a Saharan-type Morin Tacheometer with a 14-centimeter base plate. Understandably, I feel moved, at the beginning of this work, to thank Egypt warmly for the hospitality it has shown me. In addition, the Department of Antiquities has been very helpful and understanding throughout.

For a history of the excavations of the Temple of Luxor, the reader is referred to G. Daressy's "Notice Explicative des Ruines du Temple de Luxor" published in 1893.

A study of detail is required almost uniformly. For this reason,
we have established a new method of surveying by means of making precise drawings, with an exact notation of the outlines of the tableaux (the various "registers" or strata of images found on the walls of Egyptian monuments) the figures, and their main accessories. All these data are included in the drawings in their correct proportions; complete records of their measurements are also provided.

Each drawing of an entire section, once recorded on microfilm, can be projected, thus enabling the exact correlation of separately drawn or carefully photographed texts or figure details with the whole.

Applying this method, a trained team of five or six people, guided by the principles I shall set forth in this book, could survey the architecture and decoration of a temple such as that of Euxor in six months-a task that took us eight years.

## Introduction

EXCAVATIONS and philological studies supply the Egyptologist with abundant material for a knowledge of (he life, beliefs, and theology of ancient Egypt. An encyclopaedic amount of work is available to the researcher. Nevertheless, Pharaonic Egypt remains unknown in terms of its true science, its contingent psycho-spiritual knowledge, and its philosophical mentality.

The funerary texts develop the myth transcribed into images, but it has not been possible to translate the deeper meaning of these images into comprehensible language. The philosophical connection of the accumulated data is lacking. One tends to seek in ancient Egypt, as well as in Babylon and other traditions of the past, what might be called a rational expression of esotericism. This is an error that arises from the prejudice that there is no esotericism, or that there exists an intent to conceal a certain knowledge.

However, simple reasoning shows us that, for example, if the Gospels were written to teach the way of Truth and to show us what this Truth consists of. then the form of parables and enigmatic phrases chosen for this revelation would be nonsensical if its purpose were to conceal this Truth. The purpose of these parables and enigmatical phrases is not to hide anything from "he who has eyes to see and ears to hear," according to the evangelical formula. The purpose is to select those who developed the necessary understanding and who are for this reason worthy of these "secrets" (that is to say. they will not misuse them for selfish motives). There was never any intent to conceal, from those thus prepared, any of the wisdom transmitted by texts, traditions, or monuments. The enigma does not lie in the thing itself but is the result of our understanding, our faculties, and our intelligence, which arc not attuned
to the mentality according to which the idea was expressed, and it is just this that our present education prevents us from admitting.

However, there is a type of education that-using the vital organs in which the nervous flux is transformed as well as the centers (or "nodes") of this flux-can awaken "consciousness" of states that precede and transcend material forms. The West has no terminology for this science, and thus we must have recourse to the oriental languages. But the words alone are useless without the concepts. Ancient Egypt is in fact one of the major sources of these sciences: however, a true vocabulary of the Pharaonic language-or even a provisional one-will never be possible unless attention is given to those questions which we define as psycho-spiritual. The Egyptian symbolism can guide us in this regard and show us meanings other than the common meanings currently accepted for a great many words. In this way. the meaning of many texts will become clear.

Rationalism is based on the data provided by the senses, and the senses perceive only a meager part of what is. Thus, through rationalism alone we can know only what is encountered through the senses, what is ponderable, quantitative. Yet mathematics have demonstrated the existence of elements that fall outside the physical; we must take this into account, and if rationalism brings us up against an impenetrable wall, in so doing it in fact teaches us that it has its limits and that we should seek another means of knowledge.

We express ourselves in a conventional language, and the dictionary defines and limits the meaning of each word. Therefore, we can understand nothing beyond what the dictionary knows. We write with conventional alphabetic signs that in themselves express only sounds; thus our alphabet is merely a mechanical means for composing the words in the dictionary and transmitting the thoughts they encompass. It may be said that the combinations of these letters are almost infinite: true, but the number of words is limited by notions already acquired. Thought can also examine observed phenomena and seek the causes. . . . Certainly it can, but as soon as it approaches the metaphysical, it can no longer find in our languages and forms of writing the means of expressing itself: abstract ideas, formulated in words for which we lack the concepts, are objectified and lose their significance.

It follows from these observations that either there exists only a concrete world perceptible to the senses, or we lack a faculty that would enable us to grasp the abstract, without having to concretize through the imagination. The process is ingrained in us, in accordance with a mode that always leads toward the quantitative definition. This is the inverse of the Egyptian mentality.

If an unknown phenomenon appears, it is already the concretization of a cause that was abstract for us. Instead of searching out the nature of this cause, we obey our reductionist tendency and restrict both cause and phenomenon to the realm of the mechanical mentality. We investigate nothing deeply; we pull everything down to our own limits. However, a simple image proves to us that there is a way we can express ourselves without limiting a notion to a defined form, and transcribe our thought without imposing our own mentality on those who will read this image. We have gotten into the habit of reducing everything in Time and Space: this is the rational habit. An image, on the other hand, gives access to a world of qualities and functions. For instance, if we say "a man walks," we see a man walking, but we sec him in a limited way: we imagine only the fact of moving or walking. We can then place that fact in the past, present, or future and all the gradations of these tenses: we situate this movement in Time and Space. If, on the other hand, we see an image that represents a man walking (or simply lines depicting a man) we no longer imagine him, we no longer situate him; he is there, it is the function that interests us, and the quality of that function. We can then paint this man green: it will no longer be solely the function of walking with one's legs that is evoked-this movement could also signify vegetation or growth. But to our reason, walking and growing are two different functions, while in reality there is an abstract connection between them: it is movement outside consideration of Time, or pathway, or specific direction.

If we wish to define this movement, we immediately reduce it in Time and Space, whereas there is no further need to define the feeling of motion (whether walking or growing); the image-the symbol-acts as definition, and we can in fact experience this condition (unconsciously become one with it, without any reasoning) just as any child would looking at pictures.

Thus, the representation-the symbol-is our only true means of transmitting an esoteric meaning, which, in alphabetic writing, we have to seek in parable, or, possibly metaphor or allegory. The Chinese mentality is characteristic of this transcribed symbolic mentality: the idea is circumscribed but not named. Something of this mentality, which we encounter in the Egypt of the pharaohs, has remained among the peoples of the Middle East: the indirect question and answer.

Symbolic representation and imagistic writing are the pure hieratic forms of esoteric expression. Through symbolism, and through it alone can we read the thought of the Ancients. It is only through the symbolical that we will be able to coordinate the known elements of this great civilization and that the writing may take on its true meaning.

With regard to this mode of expression, I shall quote Ampere, Essai sur la Philosophic des Sciences (vol. 2, pp. 103-104):
"These rites, these dogmas, often conceal ideas once reserved for a small number of initiates: and the secret of these ideas, though buried with them, can be rediscovered by those who study in depth all the types of teachings remaining of the ancient beliefs and the ceremonies they prescribed. Hence, a science, given the name of 'the Symbolic' (the name I shall retain for it), proposes to uncover what was hidden behind such diverse emblems."
I shall explain more precisely what I mean by the word symbol in the chapter on "Definitions" and in the "Summary of Principles."

We also see in the symbol the only means of making a connection between the "oriental" mentality and the "occidental" mentality, according to the basic distinction currently accepted. But pharaonic Egypt-which is, in my opinion, the main source of Mediterranean civilization-is in some ways closer to us than is the Orient. Its mentality is positive, and its expression is symbolic, to convey a form of esotericism that does not differ from the others, since Wisdom cannot vary if it is real.

This symbolic aspect has been completely neglected in Egyptology. It is the proof of its existence, and of the directive stemming from it in the pharaonic expression, that I find and present with the Temple of Luxor.

The strangely irregular plan of this temple prompted me to investigate the causes of these irregularities. Since this architectural conception was executed in several phases along the temple's longitudinal axis, hitherto the simple explanation of attributing utilitarian purposes to successive builders has been adopted. In my opinion, only more profound reasons could have inspired these extraordinary constructions, which certainly, on account of the very effort required, could not have been consecrated to inconsequential ideas. Many positive proofs and experiments now confirm the correctness of this way of thinking.

Obviously, no one would build such monuments, and in such great numbers, over thousands of years, for uncultivated peasants. This work is of necessity that of an elite, and, even more remarkably, an elite that never ceased to renew itself, an elite that seems to have been uniquely endowed with a wealth of scientific knowledge, including an understanding of the laws of Life.

What, then, was this inexhaustible source, and what means so powerful and so stable assured such continuity?

We are dealing here, not with an evolution of science, but rather, on the contrary, with an immutable basis: for the existence of a language and a form of writing that were already complete from the time of the earliest dynasties of the historical period seems to confirm this. What we sec is not the beginnings of research, but the application of a Knowledge already possessed.

First of all, our team set out to survey the general plan of the temple, then all its details with the greatest precision possible without concerning ourselves with an explanation of the 1,001 irregularities observed. I shall explain the outcome of this work in the following pages.

The first important thing, affording the true explanation of all the idiosyncrasies, was the discovery of axes drawn on the platform of the covered temple. Aside from the axes drawn on the ground in the sanctuary of the barque, it was of course indispensable to have an original median axis, on which an initial general plan could be
based. This axis is marked under the platform, and at any rate it is obvious.

The study of these axes shows that each correspond to a purpose: each axis is a theme that rules the direction of the constructions related to it. In fact, each wall was built in relation to one or another of these three axes, with no regard for the obvious disorder that could ensue. Thus we have here a discovery that is extremely important for studying the architecture of the temples and for deciphering the meaning of the pictures and texts traced on their walls. We are dealing here with an orientation that is spatial as well as ideological.

This concerns the architectural basis, which happens to be indissolubly linked with the governing idea expressed in the dedication of this temple. We then looked for what could be the characteristic symbol of this consecration, a symbol that should conform to the dedication.

We began by finding it in the strange paving of the covered temple. This paving in fact makes no sense if it does not have a purpose. The paving stones-none of which is cut in a curve-are sometimes placed to give the effect of curves: their apparent disorder curiously resembles a Byzantine mosaic from which the colors have been removed. They contain several shapes that attract the attention: for instance, the curve of an eye outlined by large blocks; the shape of an ear, as well as the channel of the trachea, outlined by a series of juxtaposed slabs. We find in room 20 a bas-relief representing the same face as that formed by the elements of the paving. Obviously, this would not afford a definite conclusion; but the canon proportions of the profile and the head, and of the head in relation to the body, are present. Here the Golden Number comes to our aid. It controls all vegetable and animal growth. The following pages arc based on these explanations.

The outline of a human skeleton-traced according to anthropometrical methods and very carefully constructed, bone by bonewas superimposed on the general plan of the temple. The head (full face for the skeleton) is located exactly in the sanctuaries of the covered temple; the sanctuary of the barque of Amun is in the oral cavity; the clavicles are marked by walls; the chest is located in the first hypostyle of the covered temple and ends with the temple's


Fig. 1. General plan of the Temple of Luxor; survey completed in 1948.


Fig. 2. Projection of the plan of the Temple of Luxor on a human skeleton.
platform. The abdomen is represented by the peristyle court, and the pubis is located exactly at the door separating this peristyle from the colonnade of Amun. This marvelous colonnade is, in fact, dedicated to the femurs, the thighs; the knees are at the site of the gate in front of which sit the two colossi, marking the entrance to this colonnade. The tibias are in the court of Ramses, framed by the colossi, whose legs (tibias) are particularly pronounced. The little toe of our skeleton falls exactly at the northwest angle of the pylon. One might be tempted to think this skeleton had been constructed to be superimposed on the temple. But any skeleton, as long as it is harmonious (like the one represented here) can be projected thus on the plan of the temple and will coincide with it. Moreover, all the proportions of the skeleton may be checked against the actual measurements of the temple.

For my report, it was necessary to have recourse to the Egyptian canon; I have in this regard devoted a chapter to a subject that has never been dealt with until now-the importance the Ancients accorded the crown of the skull (cava).

This crown of the skull, marked off in Egyptian figuration by a headband, a diadem, a headdress or crown-is a veritable revelation with regard to psycho-spiritual knowledge of the Ancients. This is made clear by the placement of the principal organs of the Intellect and of all the control mechanisms of life in the various sanctuaries, whose figurations, texts, and architecture specify their purpose.

The Temple of Luxor is indisputably devoted to the Human Microcosm. This consecration is not merely a simple attribution: the entire temple becomes a book explaining the secret functions of the organs and nerve centers. I have had to limit myself here solely to demonstrating the symbolism that directs the temple's architecture, without entering into a study of this magnificent, book: my aim is to draw the attention of those who are interested and to place archaeologists on the alert. If it were to adopt this point of view, Egyptology would no longer be a sterile science.

I have inserted a chapter giving the general ideas of a philosophy of Measures-not that they enter in as a proof of symbolism, but because it is Measure that enabled me to discover the method of applying the symbolic. It is also the purpose of this explanation to
indicate the mentality of the Master Builders and the ancient Egyptians in general. This study of Measures has also shown us evidence of their astronomical science (I have numerous proofs of this and shall have occasion to discuss it at greater length elsewhere) as well as their undeniable knowledge of geodesy.

If, in my report, each chapter is presented as an island connected to the others only by a governing line of thought, this too corresponds to the pharaonic mentality.

The subject under discussion is so vast that I had the choice of writing a lengthy book-which would have greatly delayed publication-or a very concise outline rendered intelligible by complementary figures and diagrams.

All the data relating to my thesis have been checked rigorously and may be verified at the site.

The mentality that directs me-that I attempt to convey-will of course be opposed by the rationalism that dominates modern thought. I am concerned with discovering the thought of the ancients, and I feel that in the investigation of Causes there are three possible ways: rationalism, framed and limited by matter; pure faith, which is a perfect way. as long as this faith is absolute and all philosophical speculation is eliminated; and third, the philosophical way, but this leads nowhere unless the means employed are adapted to the goal. These are the means that ancient Egypt teaches us through its mentality and symbolism.

To conclude, I shall again draw Egyptologists attention to the two methods of inscription that. I call transposition and transparency. These constitute a new and very important key for the study of texts and figurations. It is necessary to note that there is, in transposition and transparency, no intent to conceal a teaching; on the contrary, their purpose is to explain vital functions symbolically. Thus a naos (a proportional and decorated shrine intended to hold a sacred object), a barque (a god's ceremonial boat), a linen chest are not simply cult items or objects for daily use; they also represent organs and functions of life, man being taken as the summation of all the possibilities immanent in the Universe, However, the Egyptians apparently considered the organs of the human bodyimages of the divine universal organism-too sacred to be used directly as symbols; for the types most specifically representative of
the development of the organs were chosen from among the animal and vegetable kingdoms. In fact, an animal or a plant, as the type of a given organism or a given function, is fully characteristic, in its entire way of life, of the rhythm of this organ or this function.

Moreover, this opens to us the possibility of a vital classification of fauna and flora, each species or type becoming a stage of the genesis of which man, as supreme creature, is the summation, the Temple of Universal Life.

## Definitions

In ORDER that no confusion remain in the determination of my concepts, I shall begin by defining some of the words used in this work.

The terms "cerebral consciousness" and "'cerebral intelligence" plus the adjective "vital"-defining vital function, vital logic, etc.are used in a special new sense.
*

CONSCIOUSNESS-If a Cause-Origin of the Universe is admitted, it is of necessity unique. However, if reason imposes on us the idea of an indivisible, i.e.. quantity-less, unity, the idea of this unity eludes our point of view as creatures forming part of this Universe, a consequence of the unique Cause.

This unity exists for us only if comparison is possible; but comparison signifies consciousness and duality. Thus, creation is accomplished entirely between the numbers One and Two; and duality is the basic characteristic of the created Universe. This duality is the principle of sexuality. Duality implies comparison with a series of phenomena which produce cerebral consciousness. Unity creates by "looking at itself"; it is the fallen angel of the Judeo-Christian tradition and also the Adamic error in the Genesis of Moses. We may call this Unity God or Unpolarized Energy, in that this Unity is indivisible, and God, the Creator or Polarized Energy, insofar as it is Unity conscious of itself.

Therefore, the Universe is only consciousness and presents only an evolution of consciousness, from beginning to end, which is the return way that leads to this the ultimate merging.

Cerebral consciousness, which is peculiar to the animal kingdom and the human animal, requires the faculty of registering notions that are only acts of comparison, and this faculty is located in the cerebral cortex and the double cerebral lobes.

On the other hand, understanding-Intellect or Reason ${ }^{2}$-is the faculty of synthesis in the coordination of ideas and is functionallycentered in the pituitary and pineal bodies (hypophysis and epiphysis). This is what the ancients called the "intelligence of the heart," because its impulse is manifested through the solar plexus (the sympathetic nerve), the emotive center, and its direct physical reactions upon the heart.

LIFE-Various definitions have been given for the term "life," the best of which seems to me to be "the faculty of assimilating a food and transmuting it in the nature of the living being." Any germinating seed-or any seed capable of germinating-is a cause or impulse of life; and gestation is life. But when the living being, whether vegetable or animal, achieves its aim, which is a new seed, its organism deteriorates in that it is a complex generating the seed (male) or gestating the being (female); but death does not extinguish all life in the component parts of this individual. Putrefaction makes from them new lives, animal or vegetable. To be sure, it is always a matter of assimilation, but to another rhythm, with another character.

This definition is philosophically true; but I propose another one, which-applied to everything, including minerals-is more correct because it is more general: "Life is the faculty of reaction." Everything in the Universe tends toward inertia, or absence of reaction. The proof of this inertia, which thermodynamics seeks in "absolute zero," has never been given, nor will it ever be, because absolute inertia can only be attained through the cessation of the formed

[^3]${ }^{2}$ Higher reason and Saint Thomas's Intellectus.
matter or "thing." This would be the moment the thing ceased to exist.
Everything "existing" is capable of reaction, insofar as it has

## "weight," that is, fixed or specific energy.

The vital phenomenon is the faculty of reacting, and to manifest itself this reaction requires a resistance of the same nature as the action.

Thus, the living stomach produces the juices necessary for digestion, because of the signal (or resistance) of the thing to be digested, in exactly the same way the anvil (resistance) produces reaction, or suppression of weight (elasticity), in the hammer (activity) that strikes it. Whether in the field of chemistry, biology, or mechanics, the Law remains the same: there has to be an action, a resistance of the same nature, and the reaction or effect. The whole is the vital phenomenon.

I draw a parallel with "vital logic" and "cerebral" or "equa-tional"-that is to say, syllogistic-"logic." The latter is simple mechanical logic, quantitative logic; the comparison of two elements defines a third, which is a quantitative equation.

On the other hand, vital logic is purely functional and quantitatively unforeseeable, because of the multitude of elements that can enter into the elaboration of the result, since here it is a question of gestation. Vital logic applies to the reactive or vital function. It has its exact law, which is the law of genesis, the supreme natural expression of which is given by the phases of the embryonic and fetal genesis of man. ${ }^{3}$
${ }^{3}$ A few medical quotations-from La Medecine Morphologique by A. Thooris (Paris:
G. Doin, 1937), p.72-73-will explain my point of view. They relate also to the basis of the subject treated in the following pages.
"Geoffroy Saint Hilaire was the first to show that human skulls have, at a given moment in their development, a number of points of ossification equal to the number of pieces shown by the skulls of fish. . . . Before achieving its complete development, the fetus passes through a scries of forms that recall final forms of less perfect animals. "Serres generalizes the analogy: 'The transitory aspects of a higher animal, in the course of its development, reproduce the permanent aspects of the organ among adults deemed lower.'
"Algassiz goes further still . . . 'Primitive animals are prophetic images of present embryos, which are like miniatures of them . . .
And, later: "If I find in an embryo, at a certain stage in its develop-

SYMBOL AND SYMBOLISM—The meaning currently accepted for the word symbol always implies a conventional nature. A figure or a sign represents, by analogy or convention, a given idea.

To conform with the true meaning of the symbol in ancient Egypt, we ought to use the Egyptian term Medu-Neteru, the Greek translation of which, "heiroglyphs," distorts the Egyptian meaning. Medu-Neteru are the Neters, or the principles conveyed by a sign.

To me, the word symbol signifies the thing itself or the materialized idea that it evokes; it does not represent the idea by analogy alone.

There is a reality (that is to say, a cause with an ineluctable effect) in the Medu-Neters or symbols-as in the Christian image of the Cross, the statue of the Holy Virgin, the gestures and words of the Sacrament of the Mass, in the life or legend of the Saint from whom the religion takes its name.

Every image, however primitive it may be, leaves its mark. It evokes a memory, and only that which one has known or lived can be remembered. One puts into the image this "something" of oneself. The image then no longer represents this memory; it is the memory that is transplanted in the image.

In this sense, even the conventional symbol becomes "real"-like an officer's badge of rank, a "symbolic" sword, the robes of high office.

It is certainly not the habit that makes the monk; but oblige the monk to wear secular clothing and something in his attitude will change, and thereby something in his inner disposition.

In every instance the symbol-even if it be chosen totally arbitrarily—makes its mark, because of necessity it evokes a complex of thoughts that are projected into it; and it is this projection that then confronts us.

This manner of conceiving the symbol opens the door to a theme that would require lengthy development.

When I use the word symbol, for lack of another, more precise word. I am thinking of the natural symbol, and of the figuration that is the Idea projected into the thing represented.

[^4]Inversely, in the pharaonic sense, the natural thing or being is none other than the materialization of the Idea of which it is the symbol. The bird living in the air has an aerial nature; through its habits (life, nourishment, method of hunting, affinities and emnities. character, mode of assimilation, etc.), it becomes the incarnation of a function, of a stage in the universal genesis, and finally, of an Idea. Thus every natural thing is the incarnation of a principle; it is the principle's symbol.

## Summary of Principles

## LIFE is the faculty of reacting.

This formula extends the definition of Life to include minerals. We do not distinguish inorganic bodies from organic bodies so as to accord life only to the latter. We admit that there are organized beings and others which are not yet organized; but the latter bear, in their characteristics, (for example, chemical affinity), the elements that give an impetus for future organization. This, however, will not take place in a continuous fashion, but through the necessary destruction of forms for the purpose of "rebirth"-so to speak -in higher states. It is not the form that is transmitted, but the "permanent" moment of the Substance. This permanent moment (the Egyptian ka) registers the experience of the transitory form. Thus Life is, in all things, a ternary complex formed by an active Cause against a passive resistance that is nonetheless reactive in turn. This reaction is the apparent effect, and the whole is the vital phenomenon.

INTELLIGENCE has a double nature: Intellect, or Reason, is direct Intelligence, beyond all comparison. It is the Intelligence of the human being who, incarnating all the possibilities of the Universe, knows this Universe without having to reason it. On the other hand,
cerebral intelligence requires comparison and constitutes psychological consciousness, which distinguishes man from animal. This cerebral intelligence is that of the "Adamic" human being fallen into relative nature.

THE SYMBOL In our modern languages there is no word that designates the exact meaning of Symbol, as it was conceived by the Ancients. This is why I should like to replace the word symbol with the word Medu-Neter, which conveys the "signs that bear the Neters" ("Neter" signifying the Principle or the Idea in the Platonic sense).

For me, a plant or an animal, for example, is a symbol of a whole collection of vital elements crystallized in that plant or animal, which can be what it is only through the conditions and circumstances causing its birth. Each is the manifestation of an Idea and constitutes a link in the evolution of Consciousness, from the original Verb up to the conscious return into the Cause. Each natural symbol may be considered as a word in a phrase that, in reuniting all words, alone can define that abstraction which is called Cod.

## A Hypothesis and Its Evolution

THE ARCHITECTURE of the Temple of Luxor, is, at first glance, disconcerting, From the southern sanctuary to the north pylons, the axis never ceases to deviate. There is scarcely a regular shape in the plan; what seems square is rhomboidal; the inter-columnal spacing increases occasionally in the direction of the sanctuary, thus compensating for the effect of perspective. Moreover, the entire construction was carried out in several phases. The Temple of Luxor could be called a Parthenon, based on its fundamental kinship with the Parthenon of Athens. Its preferred designation has been that of a "theogamic" temple; but it is in fact, because of the deeper meaning of its consecration, the true Parthenon-that is to say. the temple devoted to the spiritual conception of Man.'

Although they never sacrified anything for aesthetics but conformed solely to the reality of the Symbol, the pharaonic builders always achieved masterpieces of harmony-even in intentional deformities and ugliness-through symbolic and geometrical exactitude.

Nothing is sensual for them; and this shocks our Western sense of aesthetics. Everything is solely didactic, of an esoteric nature; it is a teaching for the Understanding, for pure Intellect, a teaching that cannot be described in explicit terms.

We have too many proofs showing that nothing in their work is the result of negligence, chance, or personal whim, for us not to look for the meaning hidden behind apparent disorder. To avoid this research would be to miss the purpose of archaeology, which is

[^5]to learn what the Past has to teach us and not to impose our own conceptions on the Ancients.

Starting from this premise. I have tried-with neither prejudice nor obstinacy in my hypotheses-to understand little by little what the observed fact might show us.

Allowing myself to be guided by the Gothic tradition (which bases the cathedral on the symbol of the Cross, and even occasionally bends the apse in memory of the bowed head of the crucified Lord), I first pictured, as the plan of the base, the outline of a human figure to explain the strange deformation of the architectural plan of the temple of Luxor. Does the plan of the Basilica of Saint Peter in Rome, completed by Bernini's colonnades, not represent the shape of a key?

Similarly, a recumbent figure such as the reborn Osiris (placing one foot in front of the other) could very well have been placed over the plan of the Temple of Luxor. The feet would have been the pylons, the knees the two colossi seated at the entrance of the colonnade of Amun (the colonnade representing the thighs), the peristyle court being the abdomen and the hypostyle entrance the chest (hati), the head being located in the covered sanctuary. The proportions of a body thus placed over the plan corresponded temptingly.

However, only the proportions indicated by the construction justify such a proposition. I found in my supposition an eminent predecessor in Etienne Drioton. ${ }^{2}$

If his particular hypothesis, which consists of seeing the image of an Oudja eye in the plan of the sanctuaries of Medamud, has not been borne out subsequently (the Egyptian temple is often called the "eye" of God), his intuition was nonetheless remarkable, as we shall see in the case of the Temple of Luxor.

A recumbent, reborn Osiris was. however, only a pretty image, in keeping with our simplistic western understanding of the symbol. Pharaonic thought, more profound, allows for no fantasy in the expression of the living symbol.

The parallel between an Egyptian temple and our cathedrals was not suggested solely by the search for the same conception in the

[^6]symbolism of the ground plan. H. Schafer believed he had found in the Temple of Luxor the origin of the canon of the plan of the Greek basilica and its derivatives. ${ }^{3}$

But in Christian architecture the basilica must not be confused with the cathedral viewed in the sense of "center of higher teaching." Karnak is the synthelic royal temple: Luxor is the cathedral of "The Great Teaching." Moreover, the layout of this temple is indeed that which we encounter again in the canon of the Gothic cathedral, except that the two pylons replace the two towers.

The general plan of a cathedral corresponds to an exact canon: two towers; a narthex; a nave-triple and with seven windows, as a rule-on the walls of which the stations of the Cross are later drawn. Then comes the transept, and then the entrance proper to the Sanctuary, the remainder being reserved for the faithful.

The choir, separated from the transept by the rood screen, is itself divided according to the importance of the form of worship, the altar being the table for the daily sacrifice, and the repository bearing the Sacred Host in the barque of its silver crescent. In those churches that are privileged to celebrate the papal mass, the bishop's throne is behind the altar, hidden from the public; it is there that he celebrates the Sacrament, as in the Holy of Holies (as is the case in the Orthodox cult).

In the Temple of Luxor we find an identical layout (see fig. 1): two pylons, the court of Ramses as the narthex, the double row of seven high columns with open corollas forming the naves with two subsidiary naves whose lateral walls are decorated with bas-reliefs representing the procession of the barque. After the nave, with its two rows of seven columns, the peristyle extends east and west, forming a cross (the transept); then comes the covered temple, whose parallelism with the cathedral's choir is striking.

The High Altar, represented here by the naos containing the sacred barque (symbolizing the crescent moon), is located in the choir proper, room 6 (fig. 3), rooms 4 and 8 taking the place

[^7]of the front part of the choir. Originally the chamber of the naos was not connected with the rooms to the south. ${ }^{5}$

The lateral rooms $9,2,10$ and $14,3,15,17$, linked by room 12, recall the ambulatory surrounding the choir; the twenty-seven small chapels opening onto the aforementioned rooms would correspond to the "radiating chapels." Finally, the central southern sanctuary 1, where stood the statue of Amun, is located at the site of the apsidal chapel.


Fig. 3. Plan of the covered temple showing the construction along the axis of Amun.

[^8]Ancient tradition demanded that the choir be separated from the transept by a rood screen, and the ambulatory itself might be enclosed by decorative work such as wrought-iron railings, tombs, etc. However, at Luxor, there is no connection-except for the central door leading into room 4-between what I have identified as the choir and the rest of the temple: chapels 19,20 , and 21 are connected only to the great hypostyle hall. Thus, it is these latter rooms, as well as rooms 8,18 , and 22 , that might constitute the "rood screen" of the cathedral.

This rood screen includes stairways to the right and left. In the Temple of Luxor there exists a stairway to the west, and certain signs show that there seems to have been a second stairway to the east originally.

All these elements enable us to connect the Temple of Luxor with the Gothic cathedral.

Having completed the survey, not only of scenes and of each figure but ultimately of every stone in the walls (taking into account rectifications to be made in the case of accidental disjunction of the blocks), I was struck by the strange position shown by certain paving stones, because of the way in which they were cut (figs. 4 and 5).

The survey having been completed, the whole revealed, in a startling manner, the shapes of an eye. an ear, a mouth, and a headband, placed in such a way as to reproduce a face seen in profile, excluding the crown of the skull.

Now, for many years, we had undertaken the study of the proportions of the human body, in the spirit of the ancient Egyptians, and we had examined their way of thus transcribing its cosmic meaning, in the manner later adopted by Delphes. Did not Moses, who was reared in Egypt, affirm that "man is made in God's image"? Man is thus considered as a summation of the Universe.

I revised my earlier hypothesis. If the head revealed by the paving were truly a human profile, and if, denuded of the crown of the


Fig. 4. Survey of the southern part of the covered temple showing the irregularity of the pavement.


Fig. .5. The pavement shown as a mosaic.
head, it had a given size, then the different parts of the temple and
each figure must have absolutely defined proportions and each important point in the body must of necessity be placed at key points of the plan-which was verified.

This becomes proof of the projection in the temple, not of a defined image, but of Microcosmic Man.

Though the sex organ is not represented in the architecture itself (no excavations having been carried out in this area), we find it in a bas-relief located at point N (see fig. 1), around the opening that would represent the urethra of the symbolized man. Here is drawn a Min (the god Amun in the form of a figure bound as a mummy from the chest downwards and with erect phallus indicating the generative function). The $\operatorname{Min}$ is not just found in the place corresponding to it ; it also corresponds to the very principle of the temple (fig. 6).

From averages established from measurements of the human body, it has been proved that the navel divides the total height of the body in the proportion of $\Phi$ to 1 . This formula is applied to classical Greek sculpture, and in Egypt as well, except that here the crown of the head is excluded." In the Min in question, the phallus is not at its natural place, but exactly at the place of the navel, the maternal attachment.

Let us recall, in this regard, the significance of the value $\boldsymbol{\Phi}$ and the geometric structure that defines it.

The value $\Phi$, or the Golden Number, corresponds to the proportion $\frac{b}{b}=\frac{b}{a}$ when $C=a+b$.

There is only one number that corresponds to this proposition,


The geometrical function that solves this problem is, in its multiplicative form, $\frac{c}{b}=\frac{b}{a}=\Phi$ $\mathrm{b}=1 ; \quad \mathrm{a}=\Phi ; \mathrm{c}=1+\frac{1}{\mathrm{t}}=1.61803395 .$.

All the constructions of $\Phi$ that can also be found as the starting point in Byzantine basilicas and in cathedrals always have as a basis the right triangle whose sides are 1 and 2 and whose hypotenuse, $\sqrt{ } 5$, is the diagonal of a double square.

[^9]

Fig. 6. Luxor. Kamutef situated at N on the plan. The superimposition of the outline of divisional $\boldsymbol{\Phi}$ (fig. 8) gives the location of the phallus at the place of the navel.


Fig. 7. Geometrical construction of $\Phi$ (multiplacative form;

The following formula gives the same geometric function in the divisional form:

$$
\frac{a}{b}=\frac{b}{c}=\frac{1}{t}=0.61803395 \ldots
$$



Fig. 8. Geometrical construction of $\Phi$ (form based on division).

If the unity is $a$, we thus get the Golden Number ( $\Phi$ ) for $b$, and $\Phi+1-$ that is, $\Phi^{2}-$ for c .

Occasionally one hears this remark: "The Golden Number can be found everywhere." This is incorrect. But if practice and usage have established a balanced form that is pleasing or has shown itself to be particularly stable, a function of the Golden Number may be sought there. No one thought of this number in establishing this form, any more than a plant would think of it, or a woman carrying a child.

Tht Golden Number is not the product of mathematical imagination but the natural principle of the laws of equilibrium. Figure 6 shows the superimposition of the dividing function of $\Phi$ over the Kamutef, or bound figure. We see that the phallus, instead of being located at half the height of the body, is in the place of the navel. ${ }^{8}$

Thus, we are dealing with a Kamutef whose known meaning of "maternal bull" signifies the primordial seed acting on itself, or self-conception, spiritual conception of man without the maternal woman-that is, "Adamic creation."

It is then necessary to ascertain the relationships between the parts of the architecture-and the head represented on the floorand the proportions that the body must have. For we cannot trace out this head in profile any which way to complete the design shown by the pavement. The head is constructed according to very precise proportions, determined here by the walls (see fig. 9).

In addition, I had to follow the openings or doors corresponding to the different passages found in the human head.

For all these processes, I was guided by the "keys" that the Master Builders carefully set into the walls and the floor.

Here a digression is in order. I should like to point out that always, in the walls and on the floor of Egyptian temples, there are certain "keys" that are guides for measures. These "little bits of stone," set into certain blocks, are too easily attributed to sculptors' errors. The error lies in interpreting them thus. Each stone has a value and a significance, I found a great number of these "keys" that must have been set in place at the time the construction was assembled; in fact certain keys are cut in such a way that they could not have been set in place at any other time.

I point out these facts to Egyptologists and archaeologists, that they may make some unusual observations. It is an act of vandalism to touch any stone without having first situated it precisely on the plan, photographed it, and in any event measured it carefully.
${ }^{8}$ The sex organ divides the height of a man, including the crown of the skull into two equal parts. In fact, the sex organ exists only for natural man-that is to say, man exiled from earthly Paradise and possessing his own judgment. The symbolism is thus respected (see chap. II).


Fig. 9. Luxor. Bas-relief from room 20. Breakdown of the face according to the Golden Section: from the chin to the upper eyelid, 1: from the chin to the mouth, $1 / \Phi$ from the chin to the eyebrow, $\sqrt{5} / 2$ : from the chin to the eyebrow, $\sqrt{5} / 2-1$.

This precision in measurements enabled me to relate the figures of the bas-reliefs on one partition with those on the other side of the same wall; here is where transposition completes an idea. I call this process "transposition" because the complements of an idea set forth in a given room, in which it is developed, are given in another room, dedicated to another development. The accord between the two themes develops through a common element and creates a sequence that explains the true (esoteric) meaning as a logical conclusion. It often happens that the reading of texts and symbols on one wall has meaning only through this indirect superimposition through the wall. ${ }^{9}$ This superimposition, which should be studied precisely in its minutest details, is repeated for hieroglyphs as well as figures (persons, attributes, and accessories).

Transposition must not be confused with what I call "transparency." I shall have occasion later to note two typical cases, one of transposition, the other of transparency.

In the case of transparency, if the wall were made of glass one could see, for example, drawn on the verso, a sign or a figure that fills a gap on the recto. A naos or barque may remain empty and be only a container whose contents are on the other side of the wall, in a room where its theme is specially treated. In the case of transparency, the stone goes through the wall to mark an indirect connection between the two images. ${ }^{10}$

In these two processes we are dealing with a symbolic inscription of a vitally precise nature and not with an ordinary, readily decipherable cryptography.

Reading this symbolic inscription requires a philosophical directive and a searching study of the theme in the hidden meaning of the myth. This method of teaching could be called an "architectural parable."

In attempting to interpret certain "oversights" in a figuration, most people have ascribed them to negligence. Henceforth they will realize the incredible precision that the Egyptians applied to the composition of their bas-reliefs.

I hold that every stone in the walls of the covered temple was cut

[^10]${ }^{10}$ See figure 41, p. 101.
according to completely predetermined measurements; similarly, the setting of each stone was chosen with exact knowledge of the scene to be depicted there, the joints being located in such a way as to cut-intentionally-head, feet, hands, attributes, etc. (see fig. 10). All this is part of hieroglyphic writing. Epigraphy alone will never reveal the secret teaching of the Sages. One must learn to read the images.

The plans and figures shown here demonstrate better than any explanation the reality of this figuration of Man as the basis of the architecture of this temple. However, this representation-which can be verified through the proportions indicated-is still only an image. The intention of the Master Builders far surpasses a simple figuration. Since we are dealing with Man, and since the architecture takes into account the channels and vital centers of the human body, the meaning of the figurations in sculptures and bas-reliefs is equally relevant. It is a magnificent lesson for everyone to be able to study across time, the knowledge-already millennia oldbequeathed to the builders of true temples. Every vital center is


Fig. 10. Luxor. Bas-relief from room 20 showing the crown of the skull cut off by a stone joint and a "piece" emphasizing the interest of this part.
indicated. The glands and the vital connections between the organs, represented in the scenes, reveal their correspondence with the Neters that govern them; this throws much light on one of the true meanings of the pantheon.

## Summary of Principles

The sages have always endeavored to hand down to posterity the revelation of the spirit disguised in the form of the words and parables of the sacred texts.

These texts are syntheses of Knowledge whose basis is always the same, though adapted to the times and to the state of consciousness of a people or peoples.

The means adopted for transmitting this teaching are manifold, comprising legends, tales, and customs, as well as monuments, statues, and temples. Thus, up to the end of the Middle Ages, the Christian tradition assigned specific attributes to a given Saint, sculpted or painted, and these attributes are a veritable scripture revealing what cannot be said in plain words. Temples-whether Hindu. Egyptian, Jewish, Christian, or Moslem—are always conceived according to a canon that respects certain elements which explain the teaching.

In Egypt, in India, as well as later, in the Gothic period of Christian cathedrals, the temple was a book revealing an "esoteric" teaching.

Esotericism should not be understood as a rebus or a secret writing, but rather as the "spirit of the letter"-that is to say. that which cannot be transcribed clearly, not because there is any desire to conceal it, but because of the "cerebral" intellect's inaptitude for comprehending it.

The character of the means of transcription of this esotericism should therefore be such that it addresses the faculties of the
reader; the latter will read and understand it depending on his own faculties, whether normal or superior (intuition, spatial vision). Each will see in the parable or in the architecture of the true temple, what he can see: utility, aesthetics, myth and legend, philosophical principle, or vision of material and spiritual genesis.

In the case of a pharaonic temple, one must always try to determine, first of all, what theme was emphasized. The dedication gives only an initial, general indication.

It appears quite distinctly that the secret pharaonic teaching was based on the vital functions for which the organs are the living symbols, in the sense explained previously. There can no longer be any doubt of the Ancients' knowledge with regard to what might be called "spiritual metabolism." from the assimilation of nourishment to the liberation of the Energy-or Spirit-manifested in the intellectual faculties and the powers of Consciousness.

## CHAPTER II.

## Significance of the Crown of the Skull



IT IS NECESSARY to note that Egyptian figurations carefully mark—with a headband, crown, diadem, or joint-a dividing line for the top of the skull thus separating the crown of the skull. In Egypt the height of the body was measured exclusive of the crown. This affected the comparative study of the "'Golden Section" of the body among the ancient Egyptians as opposed to the Greek proportions.

If we examine the nature of this detached part of the brain, we shall better understand the significance of the emphasis placed on the crown, whether it be removed or accentuated: in this way. one of the characteristics differentiating Egyptian from Greek thought will become clear.

The head stands for the "Covered Temple." the sanctuary of the human body where all the control centers are gathered. It has the same symbolic meaning in the temple. The physiological, organic study of the head is very complex, and here I shall note the points that concern us most directly.

Among the organs of the encephalon. the following must be distinguished:

1. The medulla oblongata and the pons, the terminal point of the top of the vertebral column;
2. The cerebellum, the center for the coordination of stimuli coming from the periphery or the cerebrum, and the regulator of the motions required for standing or moving (equilibrium);
3. The cerebrum, with its two hemispheres, the control center for activity and the description of impressions;
4. The complex of the hypophysical and pineal glands, forming the true "Holy of Holies," since all the faculties of intelligence depend on these especially.

From the medulla oblongata and the pons stem twelve pairs of cranial nerves that-except for two of them-regulate the entire life of the head. (These two are the pneumogastric nerves, which innervate and connect the head with all the vegetative functions of the body, and the spinal nerves, which connect the head and the neck.)

The two hemispheres of the cerebrum are made up of the outer layer (cortex or mantle), composed of grey matter, and a white mass underlying the nerve fibers.

From the cortex, with the two lobes of the cerebrum, stem all the orders for every action of the body; it is from the frontal ascending convolution, along the Rolandic fissure (as well as from its extension on the inner surface of the cerebrum, the paracentral lobule) that all the motor impulses stem.

Here is located what in medicine is called "inverted man," because all the controls of the body stem from top to bottom, but inversely; the highest point of the Rolandic fissure controls the feet, whereas the controls for the head are located at the bottom of the fissure. ${ }^{1 .}$

Let us also note that this double part of the cerebrum is precisely that part which regulates the life of relation determining what I call the center of Cerebral Intelligence, that which requires comparison, as opposed to the Intellect (Saint Thomas Aquinas) or the "Intelligence of the Heart" of the ancient Egyptians, which gives the

[^11]direct concept, without the necessity for comparison through an opposition. ${ }^{2}$

Let us also note that the two hemispherical lobes of the cerebrum are separated by lamina (an extension of the dura-mater) which ossifies with age and is shaped like a falx, or sickle. This lamina acts as a separator, not only in fact, but also symbolically, by dividing into two halves that cortical part of the cerebrum in which ideas and the faculty of reasoned intelligence are inscribed. It is not simply a question of separating a single organ into two parts, but separating a function into two aspects, psychological Consciousness and "cerebral" intelligence. Every "notion" is the consciousness of a definition through the opposition of two possibilities, one affirmative, the other negative. The fact observed is the positive pole, and its negation makes it comprehensible. By means of this organ, we can only under-

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Fig. 11. Left side of the cerebrum, showing the principle motor and sensorial centers as well as the Rolandic fissure. The dotted line marks the part of the crown of the skull separated in the figuration of the temple.

[^12]stand through successive elimination and final selective choice, which for man is the only possibility of increasing knowledge. Thus, symbolically, this falx separates truth from error ((iood from Evil); and because of this dualization. the two lobes of the brain become the center of positive and negative inscriptions, which makes of the brain the instrument for the transcription of the direct, unique Intelligence of an

## "Adamic Man."



Fig. 12. Section of the skull, showing schematically the "cerebral falx."

The description of this "direct, and unique Intelligence" escapes us, as does any idea of Unity, which reason nonetheless imposes on us in other ways.

If, in the figuration of man, we symbolically separate this crown of the skull, it leaves us only the Divine Man, Adamic Man (Kadman, the prenatural Adam of the Kaballah) before his fall into Nature, for after the fall he finds himself in constant opposition (Adam male and Eve female) and must therefore be born and die; he can no longer understand anything by merging with the creative Unity-he can only understand through comparison of opposites (psychological consciousness).

In the Greek mode it is natural man-man here below-who is represented; thus he must include the crown of the skull as shown by the measurement of the golden section. ${ }^{3}$

[^13]In their temples the ancient Egyptians speak only of the Principles of the World and of the Cosmic: Man within terrestrial man (Microcosm). Thus, in detaching the crown when the intention so requires, they separate the organ, which is the symbol of the fall from divine, direct Intelligence into transitory nature; and this double brain (right and left) becomes the principle of the sexualization and of the intelligence of the Created World. And this is one of the aspects that particularly interests me in the symbolism of the Temple of Luxor.

To complement this explanation. I shall provide here the outcome of experiments cited by E. Gley in "The Effects of the Extirpation or Destruction of the Brain and Particularly the Cerebral Hemispheres," (Physiology, vol. 2, p. 945):
"In the case of the dog, the extirpation of the cerebral hemispheres was carried out successfully by Goltz (18891891) who even succeeded in keeping an animal alive for eighteen months, and also by Rothman (of Berlin) who kept one alive for over three years (1909-12).

Goltz's 'dog without a brain' had lost all spontaneity and was insensitive to all psychic stimuli, calls, petting, the sight of a cat, etc. . . . Nevertheless, it would walk. albeit clumsily, when it was pushed; when pinched, it would start to growl or bark or try to bite; it could hear loud noises; its pupils contracted in the light, but its gaze always remained fixed, as though lost; placed on an inclined plane, it managed to hold itself so as not to slide; it ate with difficulty, and moreover it did not go after its food; and left on its own, it would have died.

Rothmann's dog was deaf and blind, and it also lacked the sense of smell (whence the abolition of all sexual life); it could maintain its equilibrium and walk; it paid no attention cither to other dogs or to people; it experienced hunger and satiety.

In summary, decerebrized animals retain, besides the organic functions, the functions of the coordination of movements and equilibration; they also retain emotional expression. Otherwise, they behave as automatons. What is removed with the outer layer of the cerebrum is the
organ of the higher psychic functions, of memory, of the association of perceptions and ideas, of reflection on sensations and representations; in short, the organ of intelligence, or, rather, of the intelligences-that is, syntheses of various psychic processes and adaptions of these to the manifold conditions of life."
These experiments show that the removal of this part of the brain leaves man alive, but without discernment, hence with no personal judgement.

Thus, this part of the organs of the encephalon plays a very important role in the evolution of consciousness.

The two hemispherical lobes of the brain are the instrument of memory and decision, hence choice.

Thus, "'Divine" man (without this part of the brain) represents the Principle or Neter, capable of living and acting, but only as the executant of an impulse that he receives; hence, he plays the role of an intermediary between the abstract impulse, outside of Nature, and its execution in Nature, without actual choice. In this regard, this entity has a primitive, and "prenatural" character.

On the other hand, natural man uses his cerebral instrument as a means of "sufferance of nature" (sufferance is to be interpreted as a deep experience through the conflict of consciousness, and not as pain). He will use it as a tool of his knowledge and his freely determined actions; these actions will thus be in agreement or at variance with natural harmony. When, through his experience, he has developed his consciousness to the utmost perfection, he will no longer need his cerebral instrument to attain it: he will need his cerebral instrument solely in order to act, in this incarnation.

The life of this "superman" (in pure contemplation and ecstasy) will again be that of "Divine" man, but in consciousness-that is to say, no longer as a blind Neter, but as a being carrying within itself all knowledge, the sum of all possible experiences. ${ }^{4}$

Thus, Man without this crown of the skull represents the prenatural Adamic Man as well as Man having surpassed Nature.

[^14]Between the two, is located terrestrial man, undergoing birth and death.

It is interesting to find this organ contained in an "external bony framework," like the carapace of an insect. This characteristic, like the sutures of the skull and the entire shape thus formed by the crown of the skull could be compared with the image of the scarab (a theme treated in Egypt especially under Thutmosis III and Amenophis III, the builders of the Temple of Luxor).


Fig. 13. Skull seen from above.


Fig. 14. Scarab seen from above.

The head of Man, which serves as the symbolic base of this temple, is depicted without the crown of the skull, as I shall showlater, and we shall then see what is the state of the man who corresponds to this instance.
this subject, since without some knowledge of it the symbols which in Egypt are connected with it-for instance, the royal diadem-would be wrongly interpreted. This diadem symbolizes the crowning of wisdom-that is to say, the continual animation of the centers of higher life in the head. Its circuit ends at the central point in the forehead, symbolized in Egypt by the frontal uraeus. When the Egyptians speak of channels in the human body, they are referring not only to physical channels (nerves and vessels) but also to circuits of energy.

Fluxes of energy are as much nutritive fluxes as "magnets" of the universal force. They are not necessarily carried by physical vessels. They could, for example, be considered fluxes of induction that emanate from specific centers precisely located according to the definite pathways enveloping physical matter.

It becomes increasingly apparent that ancient Egypt, having a "vitalist mentality" in every form of expression, borrows from Man (Microcosm) his limbs, gestures, and organs, in order to symbolize the esoteric functions of Universal Man. ${ }^{5}$

It thus fits within the same logic to choose, among the animated creatures, the most characteristic types to represent these organs and functions. Each vegetable or animal species represents, in this philosophy, a stage in the evolution of Consciousness and, so to speak, the "animated organ-type" of this phase of evolution.

## Summary of Principles

The motivation behind the emphasis on the crown of the skull can be summarized thus:

Man's corporeal life is not an end in itself, but a state of transition and a means. This is what distinguishes a spiritualistic from a materialistic concept of existence.

In spiritual philosophy there exists a permanent element that takes on a corporeal form, momentarily. The purpose of this existence is to evolve Consciousness.

The organic instrument, through which we assume consciousness in corporeal existence, plays a dominant role. This instrument is twofold. One part is the organism of the ultimate sublimation of organic elaborations, in order to disengage from it the nervous flux, the Energy or Spirit, the driving power behind vital reaction. This is the laboratory of the entire psychospiritual life; and only the Knowledge of this life can teach the human being the means of surpassing his condition as a mortal creature. The other part of the instrument is the "dualized" brain, which, through the senses, permits a contact (an intelligence) between the psycho-spiritual being and the natural environment. This cerebral intelligence, however

[^15]great its relative importance, is but a transitory means, since only the Consciousness registered in the permanent element subsists after corporeal death. And that Consciousness is registered in the permanent by means of the cerebral intellect only through suffering.

The crown of the skull, as the symbol of cerebral intelligence (a symbolism so characteristic of pharaonic Egypt), thus represents a unique means for expressing simply these abstract and complex functions.

## Reflections on a Philosophy of Measure



I SHALL NOT enter here upon an overly long development of what my observations taught me about the ancient Egyptian system of measures; I shall only note a few basic elements of their thought. transcribing these elements into a form accessible to our modern mentality.

## MEASURE CAN BE CONSIDERED THE QUANTITATIVE DEFINITION OF IRREDUCIBLE MAGNITUDES

In order to explain irreducible magnitudes more easily. I shall first provide the elements of a philosophic speculation based on a classification of these magnitudes, such as they give rise to each other.

Septuple order of irreducible magnitudes:


Opposing the abstraction of the indivisible Unity-that is, of the Origin O -is the lowest term, which is the Mass M. Between the two is located the middle term that results from this comparison of extremes: the Space $S$, which is also separating Space or "extent." It has a double nature.

Each of these magnitudes is comprehensible only through the definition of the other two. Toward the Origin, the Space-Path SP plays the reactive role, while being a resultant of the Movement

MT, which defines the Time T and the Path that is two-dimensional Space. ${ }^{1}$

Opposing the Space (Volume) SV (three-dimensional Path) is the reactive pole of the Mass M. This SV activity thus summarizes, through Movement, Time and Path. Thus, the Movement of the Volume defines the Force F which-arrested by the Mass, which reabsorbs it-gives the Energy EN (resultant energy, the final degradation of which will be heat). The Energy of Origin is always O.

I say Volume is perceptible Space. Everything in the Universe has Volume, and there exists no perceptible Space other than that of Volume. The Universe, in which there appear to be things or volumes, is not Space; it is Spirit or Formless Substance. One thing is not separated from another by a Space, but, on the one hand by a path-two-dimensional space-and, on the other, by Time. However, Time is perceptible only through the Movement, and the Path; thus, the Time that separates two objects is the measure of the Movement, which makes it necessary for the entire perceptible Universe to be nothing but Movement.

On the other hand, Time, defined by Movement and a Path, therefore has a beginning and an end. The impulse that gives in the beginning the Origin O has, as its ultimate and necessary end, the return into itself. This is the principial cycle. It will manifest itself in the concrete sequence in which this concrete end is the Mass or seed, summarizing the initial Energy, which took on the aspects of Time, Movement, and Space-Mass, this Mass or seed having concentrated Force and resultant Energy.

The Universe conceived as a living Being-Cosmic Man-is Life: that is to say, it is a gestation. Time is thus gestation, the distance between the seed and its fruit; the Movement is the growth that produces the volume, which is only substance formed into body or

[^16]volume, by a seed, Energy O-the fermenl fixator that appears as Mass.

In these conditions, Mass is nothing but the Energy O, the original Energy, but fixed: a ferment, a seed, the total obstacle to activity. The original activity being Absolute, the obstacle cannot be absolute; it is solely the sum of the resistances. If the mass were absolute, it would be the legendary "philosopher's stone" for the seed is nothing but resistance to the activity of the abstract substance that thus takes form. A defined seed gives defined form. An absolute obstacle would give the universal form, which, ultimately, would blend anew with its Cause.

Granting this, let us return to our subject, taking up again certain points noted in this explanation.

Just as the Movement defines Time and Space, the measure of length (movement) defines duration and path. But when Space-as path-must become Volume, Mass, the extreme pole of irreducible magnitudes, must be made to intervene. Between these two extremes, Space-Mass, lie Force and Energy. In fact. Movement, with Time, produces the Path that produces Force; and Force, arrested, will produce Energy (resultant energy).

It is Volume that summarizes Weight, Force, and Energy; and it is Movement that summarizes Time and Path.

Volume belongs to everything that exists; that, is to say, everything in the Universe has Volume. It is thus the summary of what we may call the "concrete series" of irreducible magnitudes.

The "abstract series" (considered "causally" and independently of "things") comprises Time and Space, represented by the Movement (causal Verb) ${ }^{2}$ which will be, of necessity, in physics as well as metaphysics, the quantitative definition indispensable at the beginning.

Thus, no measurement is possible without the establishment of a Unit that will be a measure of length.

But, inversely, if we want to remain within a "philosophical truth" this Unit of length will be dependent on all the irreducible principles that are at the root of Knowledge.

[^17]A conventional metrical system that has only a practical meaning, can thus be established, or a philosophic metrical system that will be integrated with Knowledge.

In both cases logic would lead us to choose as a basis a geodetic datum, the most general and always verifiable.

The rationalist, materialistic mentality, using this principle, has combined the decimal system with the geometric principle that, obligatorily, divides the circle of a day (the equatorial cycle) into four parts; then, subdividing each part into ten (or $10^{6}$ ), it proclaimed this size to be the unit of measure-our meter.

There is an error in this way of thinking. The ancient Egyptians were perfectly well acquainted with this meter, as is frequently shown, but they did not use it to measure a circuit.

Indeed, only imaginary lines, such as the axis of a body revolving around itself or the diameter of a curve, can be conceived as being straight. Every other line, in the Universe, that is nothing but Movement, will be curved.

The Egyptians remain faithful to philosophic reason and make of measure an expression of Knowledge; that is to say that measure has for them a universal meaning linking the things of here below with things Above (vital equivalences), and not solely an immediate, practical meaning as in the COS system of modern science, a simple system of quantitative equivalence.

It is certainly impossible to specify a basis, immutable and applicable to everything, according to the simple measurement of objects-even if the object were the earth. Everything is moving, everything is variable; this is the property of the created being and hence of the universe.

Quantity is unstable; only function has a value durable enough to serve as a basis. Now, our rational discipline no longer permits us to glimpse a solution from that angle; however, it was characteristic of the mentality of the Ancients, which people today would prefer to classify pejoratively as "Oriental Mystical thought." This classification is, in my opinion, somewhat over-simplified.

The measurements of numerous skeletons by Hambidge ${ }^{3}$ have shown that there is a principle of proportion in the size of the

[^18]bones, with a particular module for the individual. Cuvier could boast of having reconstituted an antediluvian animal from a few fossilized bones, because there is a harmony proper to each "ensemble" (or individual) formed by Nature.

But if a man constitutes an ensemble, a Unit that has its harmony, he is himself part of a whole. He cannot be born without being in relationship with his environment, and this environment extends as far as the solar system. This is a bold concept, and its philosophic nature is not in keeping with the mode of thought of our analyst scholars.

At most it might be conceded that here we are dealing with proportion, and not measurements. Indeed, it is in this fact that the whole problem lies; it is a question of recognizing what is the real value, proportion or measurement? Proportion belongs to geometry and harmony, measurement to the object and to arithmetic; and one necessitates the other. Proportion is the comparison of sizes; harmony is the relationship of measures; geometry is the function of numbers.

In an "extreme formula" it could be said that, if a man has a true module, it is because the entire universe is, for him, harmonized according to his personal module; he will understand and see it inasmuch as he is himself. And since the Universe exists for us only through our consciousness and our particular intellectual faculties, nothing, in truth, opposes the admission of the "extreme formula."

With this way of seeing, all rational science collapses, all scientific thought is precluded.

A Universal harmony, through a set of proportions, could eventually be conceded; but the Ancients, on the contrary, accorded all value to the measure and founded the universal Harmony on a basic measure particular to the man and to the place, thus variable and corresponding to life rather than to quantity.

Opposing a conventional, rational CGS system, is a natural, vitally true philosophic system.

What I've just said suffices to explain why the ancient Egyptians' Unit of measurement was always variable.

We find the importance of the measurement called the "cubit" supported, however, by the exceptional nature of the "gift of the cubit" to very high dignitaries.

We know, on the other hand, that a stable and unchanging basis exists, and that it results precisely from this natural philosophy, a knowledge to which the ceremony of the Royal Gift alludes. Thus, if the Ancients so carefully hid the secret of this knowledge from the uninitiated, it would be wise to look for the reason. Indeed, the fact of having in Nature, which is always moving, a fixed support (like that which Archimedes called for, "to take the world off its hinges"), would show that everything is connected by an unfailing logic; and this small fact would entail enormous consequences.

But for the measurement of the human body, one must be content with proportions based on a particular coefficient. One cannot fit a living thing-whether it be human society or the individualinto a theoretical scheme. All the modern attempts to formulate an "average" for measurements, including Viola's "Normotype," are misleading. The famous "golden section" of the Greeks is a systematization that, has carried us away from a living science, and pharaonic antiquity was very careful not to commit such an error. For architecture, the downfall was completed with the systematization of Vitruvias.

In ancient Egypt, measure and proportions can be adapted to the purpose and the symbolic meaning of the idea to be expressed. The cubit will not. necessarily be the same from one temple to another, since these temples are in different places and their purposes are different. The cubit will not be the same for measuring one Neter or another, according to whether the Neter is Horian or Osirian. primordial created, or natural (transitory principle). But each cubit corresponds in itself to a definite value, which means it can be used under specific conditions. ${ }^{4}$

In the Temple of Luxor columns arc made in varying propor-tions-soaring or massive, depending on whether it is a question of a growth or a foundation. The capitals represent buds opened up to breathe or closed to bear fruit. Measures and proportions provide a valuable guide for reading the meaning of these symbols.

[^19]

Fig. 16. Measure of the Black Cubit on the socle of a colossus.
To illustrate the "vital" nature of measure and to make my explanation more comprehensible, let us imagine the following example:

It is a question of measuring $a$ tree X and a tree Y . Today a yardstick of some kind would be used. The measurement would be a relative determination, calculated by units and fractions, and we should obtain only a comparison of sizes between the circumferences of the trunks, the heights, etc., of these two trees.

With the system of measurement based on the philosophic, "vitalist" principle, two different cubits would be employed, one for tree X and the other for tree Y , but these cubits would not be chosen arbitrarily.

In fact, each of these individual members of the vegetable kingdom belongs to a genus, and this genus to a family; and these families belong to an original "lineage." At the head of this lineage is a Neter, a "Principle" synthesizing all the characteristics of this lineage: its number, its rhythm, its classification in the general harmony.

[^20]Let us suppose tree X is attributed to the Neter X and tree Y to the Neter Y ; each of these Principles has a measure that corresponds to its rhythm; and this measure, applied to any one of the individuals that, in each kingdom, belongs to this lineage, will therefore determine all its particular proportions and characteristic qualities, in its growth as well as in its appearance, its behavior, and its affinities.

Thus the "cubit," whose strange divisions are geometric, astronomical, and geodetic coordinales, has a vital meaning.

On the contrary, the comparison of relative sizes is a quantitative conclusion, which in this case has no meaning.

The principle of the Neter is associated with the cubit.
The proof is found in the hieroglyphic system: the sign of the cubit is represented by a section of the forearm assuming the outline of the recumbent sign of the Neter, ${ }^{5}$ which confirms the brief explanation just given.

Let us note again the importance of the color of the sign. Often the "stalk" of the hieroglyph Neter is colored green, symbol for "vegetable," the Neter being considered as the seed that summarizes all the possibilities of a particular rhythm (figs. 17-18).


Fig. 17. The sign "Neter. "
Fig. 18. The sign of the arm.

Some may object that it is not very likely that, as I maintain, a particular cubit can give universal indications, being applied, for instance, to measuring a tree-trunk, young or old, small or large. It is true that, in current practice, this has no significance when it is solely a matter of knowing a quantitative size; an ordinary measure

[^21]will suffice. But when it is a matter of speaking about this tree as a symbol in a text of a sacred nature, the use of the particular cubit-or, inversely, the attribution of this tree to a definite Netertakes on an extremely important significance. This simple comparison, in fact, summarizes an entire philosophy, placing this object in relationship with everything that concerns the lineage of this tree in the vital harmony of the world; and this relationship will be astronomical as well as physiological.

This tradition has been preserved in modern Astrology, which attributes a given plant to a particular planetary lineage. However, this is but the ABC of a real science that was practiced in ancient Egypt in the full knowledge of cause and effect.

Let us further elucidate, by means of a geometrical image, the role of the Neter as head or Principle of a lineage.

From the sides of any angle (less than 90 degrees) one can, at any point, drop a perpendicular line to form similar right triangles.

The angle can be likened to the Neter. The proportion or rhythm that it imposes is invariable, whereas the sizes or quantities of the triangles that it defines are innumerable.

As for the measurement of man, there is one proportion that can be considered as only slightly variable: ratio of the height to the arm span, or fathom (fathom implies circuit).

And the tradition of the fathom has come down to us.
It is the fathom that plays the greatest role in the measures of the Temple of Luxor, dedicated to the Incarnation of the Spirit, or the Creation of Man.

Just as there is little difference between the cubits (the small cubit of 24 digits) of men normally large or small, so the fathom varies little among men who work a lot with their arms. In practice, a sailor can, with little error, measure his ropes and cables according to the size of his armspan, which will always be close to the meridian fathom at $45^{\circ}$ latitude. That is to say that the fathom is at once an average human measure and a measure of the earth's circumference. A thousand fathoms (the nautical mile) equal one minute of an arc,
the meridian arc now being established conventionally at $45^{\circ}$ latitude.

We see the fathom (or rather fathoms) used constantly in the architecture of the Temple of Luxor. Let us note that there also exists a sacred fathom. ${ }^{6}$

Here is an example in regard to the fathom: the strange rhomboidal distortion of the plans of the west pylon prompted us to measure them carefully several times, rectifying the gaps between the stones (which are sound in this location)—gaps caused by settling or other accidental causes.

The length of the pylon under the cornice, between tori gives, from the north side (along 12 fathoms), the meridian fathom at $90^{\circ}$ (North Pole), and from the south side the meridian fathom at $0^{\circ}$ (Equator); that is, respectively 1.86166 m and 1.8429 m (difference along 12 fathoms $=22.5 \mathrm{~m}$ ).

This could be a coincidence, but these measurements recur at several important points; let us therefore concede a repeating coincidence . . .

I shall also add that the function or proportion of the golden section is constantly operative in Egyptian architecture. It is employed with great subtlety and no mystery. With a little precision in taking measurements, it is easily found.

The Golden Number does not act solely as a function of an ideal proportion, but serves as the basis for a philosophy that makes the connection between the metaphysical state and the physical state. It is in this connection that the Golden Number's "sacred" character consists. Furthermore, the human body develops in terms of this number.

[^22]
## Summary of Principles

The aim of analysis is to split up a thing or an idea until it is reduced to an irreducible element. One thus reaches magnitudes such that each of them can only be defined by two other magnitudes. This is the original "trinity," indispensable for all cerebral consciousness, which can only apply to quantities. This "trinity" is the Measure of an irreducible magnitude. While, in the deistic conception, the origin of the world requires a Trinity in one "Person," in pharaonic Egypt we see this principle applied to the origin of each natural "lineage" of the divine manifestation. These ternary groups are thus spiritual "Measures" that are then translated by Numbers. The development of these Numbers constitutes characteristic rhythms. This development, as a Number, is inevitable and therefore is a Law.

The Number should not be considered as arithmetical "enumeration," but as an Entity. The Number is thus the extreme reduction of the philosophic thought. The Number is the father of a lineage, like the Trinity; but it is a "father"-or entity-without a specifying name. In ancient China the Number One was considered to have the value Three. This seems to be true in ancient Egypt as well.

The first five numbers, as well as all the prime numbers, are Entities, each having a value in itself, independent of enumeration. Thus it is that the numbers two, three, four, and five are Units and not compounds of Units.

For example: the number four is the value that determines forms; it has the characteristic of determining the equality of the surface and circumference of a circle or square. A square whose side is four measures sixteen in circumference and sixteen in surface. A circle whose diameter is four measure $4^{*} \mathrm{pi}$ in circumference and $4^{*} \mathrm{pi}$ in surface. This is only one example of "calculation." In fact, it is the philosophic consideration of functions that gives Numbers their real value and constitutes the "Science of Numbers." The latter bears no relation to our current mathematics.

The Science of Numbers operates constantly in ancient Egypt's application of Measures.

## CHAPTER IV.

## The Plan

When SPEAKING of Pharaonic Egypt, one must never say

"always" and always avoid saying "never," because pharaonic science is the science of Life-moving, adaptable, founded on the knowledge of death, which produces life.

The time had not yet come for a revelation of the Redemption; this was the patriarchal epoch, the source.

In the construction of the temple, several kinds of foundations can be observed:

1. The temple set on virgin soil, with no real foundation. The soil is prepared by the symbolic sowing of various materials such as charcoal, resins, bitumen, natural salts combined for this purpose, and other consecrated materials.


VIRGIN SOIL
Fig. 19. Medamud. Original temple built on virgin soil.
2. The temple constructed on chosen blocks from a temple that has been "turned under," like germinated seed that
returns to the earth. The blocks are chosen and placed with care, providing, among other things, information on the meaning of the preceding monument and on the orientations of past and future temples. ${ }^{1}$

Let us note as well foundations on the unfired bricks of a previous temple, symbolizing water, that is to say. the "mud of the waters."


Fig. 20. Karnak. Temple of Montu, resting on blocks from old temples.


Fig. 21. Karnak. Temple of Montu. Sandstone doorway resting on fired brick'.
3. The temple built on a hollow basin or stylobate filled with stones from the preceding work, in apparent disorder. ${ }^{2}$ One must be on one's guard, for this disorder is only apparent; great experience is necessary to discover in it the location of the sanctuary, the axes of orientation, and various symbols indicating the esoteric purpose of the new temple.

This stylobate plays the role of a vase, in which the final "growth" of the seed thrown in this place will be accomplished.

[^23]

Fig. 22. Karnak. Temple of Montu built on a hallow stylobate.


Fig. 23. Medamud. Original temple. Sanctuary under mounds.

Fig. 24. Abu-Simbel. Great temple hollowed out of the rock.
4. The monument dug in the earth or carved in the rock must also be noted. Here earth and rock are considered the matrix of the temple. On the foundations of the second and third types the "platform" of the base is set up. This platform is useful for tracing the "geometric functions" that serve as a definition for the measures consistent with the Idea of the temple. ${ }^{3}$ In the Temple of Luxor the same unit of measurement that is used for the geometric elaboration is employed for the head in all its details.

On the outline, necessarily rigid, are constructed the walls of the chambers and rooms of the covered temple. These walls must be adapted to the Idea to be expressed, 'and they follow the outline on the ground, while retaining their autonomy.

[^24]The pharaonic architects construct their sanctuaries just as Nature constructs a plant. If a certain cell ought to be hexagonal, it will be so-since it is living, and growing-it adapts itself according to the needs of the moment and of the place.

Similarly, certain chambers, apparently square or rectangular in plan, will be slightly rhomboidal or trapezoidal. One need only examine, in their angles, the cut of the stones to establish that for this distortion, an exceptional effort was required to give these angles a few degrees more or less than a right angle.

The same kind of rhomboids or trapezoids can be found on the surfaces of the walls or tableaux. We might be inclined to attribute this to an oversight, but these distortions are insistently compensated for or occasionally repeated. The purpose of this is always to specify measure in the spirit that I have described.

For example: The north wall of room 12, with its twelve columns, shows a slight concave curve, verifiable along two-thirds of its length. Obviously one is tempted to attribute this curve to a modification of the entire construction. However, each of the blocks making up this wall is cut with a slight curve having the same versed sine.

One stands amazed before such studied refinement, such care in remaining loyal to the symbolism of the place, down to the subtlest details.

The study of a pharaonic monument is inexhaustible.

The covered Temple of Luxor is constructed along three axes:

1. A median axis accurately dividing the south face into two equal parts-"the geometric, astronomical axis."
2. A longitudinal axis for construction-"the general axis of measures."
3. An axis dividing the width of the naos of Amun into equal parts-"the horary axis of Amun."
The geometric axis is marked in sanctuary I under the platform (see fig. 25), but its influence works in an occult manner.

The axis of measures is traced under the limestone paving of sanctuary 6 of the barque of Amun, on the sandstone platform. It was


Fig. 25. Luxor. Sanctuary 1. Indication of the median geometric axis under the pavement.
later hammered, without being effaced (see fig. 26). This axis divides the wall of the south faee into two unequal parts. The eastern part comprises exactly 10 fathoms, the western part comprises another measure of a clearly defined nature.

This axis transects with the axis of Amun, on a keystone located on the threshold between the sanctuary of the barque (room 6) and room 4.

The axis of Amun, is marked on the ground, under the limestone paving of room 6 (see fig. 26). It divides the naos of Alexander into two equal parts along its entire length; the axis is framed-to the left and right, on the south interior stiles of this naos-by two ram's-head djed pillars. ${ }^{4}$ It ends, at the north side of the temple, against the west pylon in the chapel of Amun, also in

[^25]

Fig. 26. Luxor. The two axes traced in the sandstone platform of the sanctuary of the Barque.
the center and between two ram's-head djed traced on the south wall of this pylon. ${ }^{5}$

The axis of Amun forms an angle of 54' with the general axis.
On the exterior south wall of room 1 is traced an ankh sign, the symbol of life (certain axes are indicated by an ankh). Here it is a question of an indication of "measure," resulting from a geometric function directly related to the basic unit (fathom) of the measures used in the temple.

The entire covered temple appears as a construction established on the plan of an axis and later displaced from this axis by a slight pivoting motion. This "displacement" action is constant, not only for the plan of an entire building, but for the figure as well; and this corresponds to a purpose.

[^26]We must, once and for all, conceive of the pharaonic temple as a seed in the process of bearing its fruit. It is truly the most grandiose conception of architecture. However, a building is by nature rigid. One could, if need be, imagine figurations that would recall this gestation. That would be rational, but not vital, as in the spirit of the ancient Egyptians. For them, the entire building had to live. This characteristic of gestation may have prompted Herbert Ricke ${ }^{6}$ to consider pharaonic architecture "vegetal." This is correct, since all gestation comprises both growth and vegetation, but this strict enclosure in a formula, corresponding to the weslern mentality, is devoid of life. Growth unfolds in three dimensions; and gestation is a constant transformation until the perfection of the new seed.

Comparison with other known examples, such as the aforementioned Kamutef, will reveal the method used to make this architecture "live."

The reasoning might be the following:
Since every generation involves a growth in volume, since all growth can only take place in a harmonious rhythm (that is to say, proportional to a particular coefficient), and since this rhythm is indisputably ordained by phi (the Golden Number), it is sufficient to know the module (coefficient) particular to the species or to the individual member of the species or of the Neter Principle to make a "living," harmoniously (magically) correct form, developing an architecture or image from this module with phi.
In response to this reasoning one might raise the objection that phi is the golden section of a line, but it does not apply to surfaces. And as for volumes, the problem seems to have no solution.

In mathematical-indeed, scientific and aesthetic-terms, what the very erudite Mattila C. Ghyka ${ }^{7}$ has written about the Golden Number could scarcely be surpassed. However, here one finds only the quantitative aspect of the question, for the Ancients did not approach the problem in the same way. There is a philosophic aspect not understood by the West.

Like a Renaissance man, Ghyka allows himself to be tempted by the "Fibonacci series," which affords a pulsation of the value phi.

[^27]Male and female aspects for this number do, in fact, exist, but with no modification of its exact value. The ancient Egyptians-as far as can be ascertained-do not make use of the correct value. ${ }^{8}$ With them there are no generalities in the usage of this number but an exact reasoning with regard to its meaning.

I maintain that my reasoning is applicable and that the preceding objection has no value, because there does not exist a value phi for surfaces, and there does exist a Golden Number for volumes.

In constructing figures, one must not depart from the figure in order to deduce its movements; this is merely studying it.

It is necessary to find the geometric construction that makes it move.

There are two axes of construction:
The axis of stability, which passes through the ear (inner ear, equilibrium) and ends in the sole of the foot.

The axis of movement, which theoretically passes through the eye (it is sight that directs) and the big toe (it is on the ball of the foot that one places one's weight in order to move forward).

There are four forms of application: the immobile figure, the figure about to move (the case of the Kamutef cited), the figure in motion (the normal stride) and running (the long stride).

The principle of motion through pivoting is applied to the famous figure of the Kamutef located at N on the general plan. Figures 27 and 28 show the application of the outlines, taking into account all the stone joints, and prove that these stone joints are not located haphazardly. One might raise the objection that this figure was drawn, and placed in relationship, on an older wall. It is nonetheless true that the figure corresponds point by point with the set of joints; the accessory figures of the symbol are, on the other hand, always traced according to one of the functions of phi.

There is, indisputably, a geometric basis acting as a grid for the construction of this figure.

This geometric basis is found everywhere, but the module varies, which means that the symbolic meaning must be sought within this module.

The entire construction of the temple can be broken down, as Ludwig Borchardt has pointed out, into three phases. I shall not concern myself with the historical aspect; only the symbolism

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Fig. 27. Luxor, Kamutef. The stone joints determine the rectangle $\mathrm{ABCD} . \mathrm{AH}=\mathrm{X}$, $\mathrm{BC}=\mathrm{X} / 2.5$ and $1 / 2 \mathrm{BC}=\mathrm{X} / 5$. Given that $\mathrm{X}=1=1 / \mathrm{phi}^{2}, \mathrm{X} / 5 \mathrm{x} \sqrt{5}=1 / \mathrm{phi}$ of the complete figure equal to $\mathrm{phi}^{2} 1 /$ phi $\times \mathrm{phi}=1 / \mathrm{phi}+1 / \mathrm{phi}^{2}=1$.


Fig. 28. This outline is designed to show the two slopes imparted to the vertical line XX passing through the stone joint, and giving the Kamutef movement. The axis of stability starts from the center of equilibrium $\mathrm{X}^{\prime}$ inner ear); its slope is given by angle A. The axis of movement starts from the tip of the foot; its slope is given by

$X X=\frac{1 / 2 \sqrt{5}-1}{\phi}=Y Y$ the angle $B$.
interests me here. The first stage of the temple ineludes the covered temple and the great peristyle court (the transept; hence from T to S as indicated in fig. 48, p. 122).

The second stage adds the great Amunian colonnade (the nave), as far as the seated black colossi, located in front of its entrance.

Then there is added the court of the colossi (called the court of Ramses), with the pylons.

It is obvious that the overall plan pre-existed and that it was known to those who executed it. This is shown by:

1. the strict observance of proportions that cannot always be the result of coincidences;
2. the axis of Amun, which was traced by the first builders under the paving of the sanctuary of the barque of Amun and ends, in the north, quite precisely on the axis of the Amunian chapel set up in the colonnade of the court of Ramses, along the south face of the first pylon;
3. the astronomical character of the movement of the geometrical axis (see chapter V, "Orientation").
In the supplement to chapter VIII can be found explanations showing that the modifications of the entire building were foreseen from the start.

## Summary of Principles

A plan requires systematization to apply an idea. All systematization requires a logic, imposing a constant in the manner of execution.

In the Temple of Luxor we observe the use of several axes, which allows an action, or "movement," in the harmony of the construction. This movement takes place within a rhythm given by the "module," or the particular coefficient of the thing or idea to be defined. This is a subtle way of playing with the rigidity imposed
by matter; moreover, it demonstrates a profound understanding of Nature, which always proceeds in this manner.

For the subject occupying these pages, I have merely indicated this play in the plans, but it applies equally to volumes.

The pharaonic Masters did not make the mistake of starting from a "Euclidian point." The "point" is divine and incomprehensible, whereas in Nature everything has volume. Thus it is from volume that they start, because their thinking is positive. They do not base their geometry on an indefinable moral or sentimental abstraction. Their goal is to awaken the Consciousness of what we call God. Their means, on the contrary, are positive (i.e., within the laws of matter), as the terrestrial environment of our existence is positive. The Upanishads also teach that it is impossible for us to learn elsewhere what we are incapable of learning within our bodies.

The whole point is to activate the higher faculties, and not be content with the deceptive means of cerebral intelligence.

The volume, once cut, gives the plane. The latter is comprehensible. Three edges, at least, determine a point; this point has a meaning, because it is ternary.

This mode of thought opens the doorway onto a "Mathematical Philosophy"; it is this philosophy that is expressed in the plan of the Temple of Luxor.

## CHAPTER V.

## Orientation

IT IS THE axes of the Temple of Luxor that throw the most light
 on the architectural principle of the pharaonic temple. They are marked on the ground, and this fact may be verified.

It is this construction on three axes that gives "movement" to the entire architecture, thus creating that "living state" of which I spoke in the chapter on "The Plan." Each of these axes has, in addition to its mystical meaning, a practical meaning connected with it.

We must first establish the north-south orientation. In this connection, we encounter a problem which must be pointed out. It will always be difficult, if not impossible, to establish, amid constructions such as that of Luxor, a true magnetic north with an ordinary compass. The more sensitive the compass, the more it will undergo deviations due to the masses of blocks made of generally ferrugineous sandstone. In the Temple of Luxor is added the effect of iron bars set in the cement, recently inserted to consolidate certain parts of the masonry that were threatening to fall into ruins. Thus, unless one were to use an adjusted marine compass, one could never establish, with any certainty, a magnetic north enabling one to calculate true north. For this reason I used the Sun, which does not deceive.

The general axis is at an angle of $33^{\circ} 34^{\prime}$ from north-south. This is the axis of measures. It divides the south facade of the temple into two parts that are unequal, like most of the "votive" cubits that have come down to us. This inequality is connected not only with Time but above all with the principle of the variation of the solar influence. In fact, it would be a mistake to attempt to apply
the formula of "the Temple in the image of Heaven" in a purely astronomical connection.

I insist on affirming that pharaonic Science is vital, and never schematic. One might say: "Pharaonic Egypt abhors symmetry just as Nature abhors a vacuum."

The highest point of the sun at midday does not divide its course into two equal parts. There are variations of duration, from sunrise to noon and from noon to sunset; but that is not what matters here. It must be noted that the morning sun is not the same, vitally, as the afternoon sun, as every experienced gardener well knows.

It is not a question of an accumulation of heat in the course of the day but of a different radiation that affects all life, as an emission of ultra-violet or infra-red rays could do (and probably does).

There results from this a variation in the growth and ripening of every living thing; the measure applied to these two states is not the same. Let us acknowledge an Osirian meaning and a Horian meaning-adapted to the myth-for these measures. Indeed, in the composition of the statues and figurations, the measure corresponding to the characteristic mythical lineage is used.

The a.xis of Amun. This axis is at an angle of $34^{\circ} 27$ to northsouth. This angle corresponds to an orientation of the temple on a given hour. In this regard, one could profitably consult the list of the "solar barques" at Edfu. ${ }^{1}$

[^29]

Fig. 29. Plan showing construction along the geometrical axis and the axis of measures.


Fig. 30. Plan showing construction along the axis of Amun.

Each wall of the covered temple, which interests me especially here, is constructed along one or another of the three axes, as is shown by figures 29 and $30 .{ }^{2}$

Thus each wall and its inscription should be studied according to the axis that rules it.

There is neither poor execution nor incoherence in the architecture of the covered temple, as these halls with distorted angles or these sometimes awkwardly aligned columns might seem to suggest. And even if one does not care to place any faith in the "esoteric" reasons that I provide here for those who wish to hear them, there still remains the positive fact that in the Temple of Luxor the walls obey a law particular to each of the three axes marked on the platform and easily verifiable. This should be sufficient to alert archaeologists to the errors of their present methods of research.

Since it has been shown that there may be several axes in the construction of a pharaonic monument, and that the surveys made by the archaeological architects have been carried out according to their preconceived idea of a schematic constructon, consistent with modern thought, all the surveys carried out up to the present should be revised.

On the other hand, for the same reason, a reconstruction makes no sense and ought to be avoided.

[^30]
## Summary of Principles

Orientation is of capital importance for life on earth, since the stars govern its entire existence. The Christ cult is a solar cult; that is why cathedral choirs are oriented toward the rising sun. They are never found orientated exactly east-west, for the reason that only the North Pole is relatively fixed; the east-west bar of the Cross of orientation is mobile through the seasons. A fixed eastwest direction is purely theoretical. In the case of the pharaonic temple, observation of the orientation is a valuable indication of the temple's meaning.

This would require an explanation that I must reduce here to a few indications. We are so accustomed to the terms "left" and "right" that we no longer accord any interest to their consideration. However, they express something other than conventional designations. In Nature, left and right have a "vital" value. Hence, bodies suspended in the Universe turn around their axes.

The North Pole will be defined as the movement that, seen from this North Pole, turns from right to left. Seen from the South Pole, this same body turns from left to right. This is not simply a question of relative appearance: the physical effect is completelydifferent. Let us note something not generally known: that is, that the North Pole attracts and the South Pole repels, with respect to the masses of these rotating bodies. Our North Pole hollows out the earth and it can be said to absorb the continents, whereas the South Pole extrudes earth and it can be said to create the continents. The entire mass of our continents is projected in a spiral motion toward the North Pole. This observed fact modifies the current conception of the poles of a rotating mass. There are nol two effects, hut three: south versus south repels, north versus south attracts, north versus north is neutral.

For the ancient Egyptians the south is that which realizes, that which gives body. The north is that which inspires.

This is a brief, schematic account. In practice the functions are more fluid, hence more complex.

## CHAPTER VI.

## The Temple in Man



IN THE presentation of the sacred theme (principles) through representation in bas-relief, the parts of the body with symmetrical organs are shown in profile. The parts of the body with asymmetrical organs (left and right) are shown full-face. But when it is a question of giving measurements, or of symbolizing functions and states, all variations (positions, distortions, etc.) are permissible. For instance, the arms, characterized as left or right, are sometimes represented, depending on the intention, with two left hands or two right hands. The left hand receives, the right gives. The legs are joined or taken as one mass, as with a mummy, to express the idea of fixation, death, or inertia; they are placed one in front of the other to indicate a state of life.

Thus, the seated, standing, or running personage has its particular meaning which-like its gestures, attributes, costume, and color-must be interpreted. It is very important to note that "created" personages-that is to say, personages issued from the Divine principle and not procreated through woman-have no navel.

The figures are the primary, secret writing.
"Man, know thyself and thou wilt know the Universe and the Gods" echoes Delphi.

In the same spirit, St. John says: "For he knew what was in man" (2:25).

The Temple of Luxor was constructed to explain these things.

The pavement of the platform of the Temple of Luxor was conceived as a mosaic: It is made of very disparate pieces, which is in itself surprising when one sees with what care the rest of the edifice is constructed. It is now very damaged. In our drawing we have "reconstructed" nothing; we have only carefully surveyed each stone (fig. 31).

The different elements of a face in profile are sufficiently visible to enable one to make a complete outline of it, taking into account the proportions the face should have according to the standard Egyptian canon (fig. 32).

These proportions, transferred to the face on the pavement, coincide strikingly with the various walls that specify them (fig. 33).

In the Egyptian canon of the Neters, the head, with the crown of the skull, represents one-seventh of the body's total height. In certain instances that are more humanized, the ratio becomes $1 / 7.5$. ${ }^{1}$

If it was truly the Egyptians" intention to outline a human head in the pavement, the doorways and openings should correspond to the interior and exterior channels of the head. Now, if one studies the diagram representing a sagittal section of the head and showing the location of the central organs, one observes that all the openings are also found in the plan of the pavement, if one takes into account the fact that this plan shows the head in superimposed sections (sec figs. 34, 35 and 36).

Thus we do find the image of a human head in this construction.
This being so, the chambers and the openings take on an extraordinary meaning; here I shall note only a few important general facts, since a complete study of the relation of the myth to the physiology of the human head-its glands, organs, and circuits of blood and of humors-would require a lengthy work.

First, let us compare the general plan of the temple with the skeleton of man. the drawing of which (see fig. 2, p. 23) was executed in accordance with a study of the proportionate size of each bone and of the general proportions of the human body.

The crown of the skull does not figure in the image of the head in the covered temple, which stops at the normal height of the pharaonic headband with the facade of the south wall. We are

[^31]

Fig. 31. Survey of the southern part of the pavement of the covered temple.


Fig. 32. Pavement shown as mosaic.


Fig. 33. Bas-relief from Room 20. Projection on the southern part of the temple.


Fig. 34. Schematic sagittal section showing the location of the principal organs: (1) falx cerebri; (2) corpus callosum; (3) septum lucidum; (4) trigonum; (5) tela chorioidea; (6) third ventricle; (7) white anterior commisure; (8) epiphysis (pineal body); (9) corpora quadrigina; (10) optic chiasma; (11) corpus mamillare; (12) pharyngeal orifice of the Eustacian tube; (13) cerebral peduncle; (14) pons; (15) medulla oblongata; (16) cerebellum; (17) olfactory bulb; (18) lamina cribrosa of the ethmoidal bone; (19) hypophysis (pituitary body); (20) soft palate; (21) salivary glands; (22) thyroid cartilage; (23) clavicle.


Fig. 35. Projection of the southern part of the temple on the sagittal section, indicating the position of the principal organs.


Fig. 36. Bas-relief from room 20. Projection on the sagittal section.


Fig. 37. Luxor. Sanctuary of the barque of Amun. Surrey carried out in 1948


## EPOCH OF AMENOPHIS II $1411 \mathrm{BC}-1375 \mathrm{BC}$



EPOCH OF ALEXANDER 356 B.C.-323 B.C.
Fig. 38. Sanctuary of the barque of Amun.
therefore dealing with Adamic man, with divine intelligence, before the "fall" into Nature.

The figure of man that serves as the basis of the Temple of Luxor is prenatural Neter man, for the nasopharyngeal opening remains closed and will not be opened until the end of the pharaonic epoch. This will be the epoch of his natural animation or earthly incarnation, corresponding to the moment when the child inhales air as it is born into this world. Until this time, this Neter man does not breathe the outer air and lives only through his inner ear, symbol of his direct inspiration. ${ }^{2}$

The respiratory canal is indicated, along the axis of the temple from the hypostyle room (lungs) into room 12 (rear nasal fossae), by an uninterrupted series of long paving stones which cross the thresholds of all the doorways and pass under the wall (still closed under Amenophis III) that separates rooms 6 and 12. It is here, at the site of the nasopharyngeal orifice, that we find-existing since the beginning - a niche, on the side of room 6, in the exact spot where later a doorway was made (figs. 37 and 38). Furthermore, it appears from the architecture that the idea of a passage was expressed, from the beginning, by the aforementioned large slabs. passing under the still-solid wall, and by the first course of stones connecting, in this place only, room 6 and room 12.

In support of this thesis I give here the physiological application of the act of swallowing which will give me the opportunity to present a brief example of interpreting the correspondences among a physiological function, the architecture, and the figurations.

During swallowing we do not breathe into the lungs; but if. at this moment, one closes one's nostrils, the auditory perception of external sounds is altered. Thus Understanding ${ }^{3}$ is opened up. This is not mere supposition, but the secret of the occult effect of pronouncing certain words (Mantram). The reason is (hat the Eustachian tube, which provides air to the eardrum (middle ear) is usually closed and opens only at each swallowing movement by the following mechanism: the rear nasal fossae are normally in communication with the oral part of the pharynx, through the naso-

[^32]pharyngeal passage (the part of the wall between rooms 6 and 12 opened in the late dynastic period). This passage is occluded by the action of the muscles of the staphylopharyngeal pillars, which contract and join at the moment of swallowing. At this moment the orifice of the Eustachian tube opens, under the pressure of the soft palate (south partition of room 2 , representing the coronation).

However, for swallowing to take place there must be a liquid medium; the production of saliva is thus of great importance. The salivary secretion of the sublingual and submaxillary glands (north partition of room 2, representing the swamp ${ }^{4}$ ) is instigated by the "cord of the eardrum," a nerve so named because it traverses the eardrum. The nerve that innervates these glands is called the tympanicolingual nerve, but experiments have shown that only the cord of the eardrum gives these glands their secretory fibers.

This phenomenon of "the calling to the inner ear" may be compared with the gesture of "swallowing one's saliva" in moments of extreme concentration, when one finds oneself hard pressed for an answer.

On the east side of room 12 is located the eye, marked on the ground. In this room is developed the theme of the twelve hours of the day. The young King enters from the east and reaches puberty. The measurements confirm this, and with them one can follow the life of the King.

In this same room is seen the solar barque bearing the naos containing the Falcon crowned with the solar disk. Here the accent is placed on the eye, by the mention of Horus. We know that the brain of a bird is retinal-that is to say, that it contains in more specially developed form, the cerebral organs of vision. Thus one

[^33]should principally seek in Horus the symbolization of the eye, and its relation to the center of visual consciousness.

The medulla oblongata, from which stem the twelve pairs of cranial nerves, ends in the west side of room 12. From the medulla the marrow continues into the spinal column, and from the marrow stem all the sensory and motor spinal nerves. However, if there is a central severance of the motory nervous channel, excitation of the sole of the foot will show there is a break in the motory arc. Normallyplantar excitation of the feet causes a flexion of the toes toward the soles, and when the big toe disassociates from the other toes (that is to say, remaining extended while the others are bent), it is a sign of a central interruption of the motory nervous channel.

However, on the one hand, the theme of the "Nine Bows," ${ }^{5}$ generally placed under the feet of the King, is indicated at Luxor by the group of archers on the north face of the east pylon, where the soles of the feet are located (see fig. 39). On the other hand, we must note the important connection between the west pylon, representing one of the feet, and room 12, because we find in both exactly the same measurement, that is, 12 fathoms (see fig. 40).

## *

The Sanctuary (room 6) unites, appropriately, several functions; it is located precisely in the pharynx, where the food and air that support life are admitted and where the voice, the word that creates, is amplified. The barque is located at the site of the uvula and controls the opening and closing of this junction. The barque goes-as the symbolism requires-from east to west; ${ }^{4}$ the naos opens on the north side.

It is on one of the paving stones in front of the step of the sanctuary of the barque (room 6) that the profile of an ithyphallic Min is carved. ${ }^{7}$

[^34]On the threshold between rooms 4 and 6 is embedded the key where the axes of Amun and of Measures transect.

Room 6 deserves particular attention, since it shows us, among other things, the state of this sanctuary under Amenophis III. at the place where the present naos was erected, under Alexander the Great.

There still exist the sockets for the socle of the barque, for the wooden naos, for the entry step, and for the twelve posts to support a veil surrounding the naos and the four columns of Amenophis III. The same is true for the two low ramps for the ascent toward the sacred barque (see figs. 37 and 38).

It is on the site of these columns of Amenophis III that the naos of Alexander is built. Let us take note of a tendency to reveal, from this time on, what had hitherto been kept secret. This naos is a masterpiece for the study of Numbers. The Ptolemaic epoch, marking the end of the Egyptian mission, had as its goal "opening the doorways" to the teachings of the past, which motivated the actual construction of the symbolic doorways that characterize this time.

The organs of the direct intellect-principally, the pituitary gland (hypophesis) and the pineal "eye" (epiphysis)-are located in the southern secret sanctuaries.

The pituitary gland, being located at the entrance of room 1 (the central secret sanctuary) is thus considered a doorway-that is to say, as a passage (see fig. 35).

Room 1 contains what physiology defines textually as "the trigonum or four-pillared vault that joins the two horns of Amun." There could be no better description of the architectural aspect and the function of this sanctuary.

The starting points of the cornices of the base of the naos are an integral part of the southern columns. Everything here bears the stamp of a duality.

In this same room are located the "choroid plexuses" in which a mysterious transformation takes place between the blood and the cerebrospinal liquid. Medicine holds that blood introduced into the

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Fig. 39. Luxor. East pylon, north face. We see, next to the gateway, nine pairs of horses pulling nine chariots and driven by eight archers with servants. The ninth archer would be located where the stone is hammered out.


Fig. 40. Luxor. South facade of the pylon.


Fig. 41. Luxor. Example of transparency between rooms 12 and 5.
choroid plexuses comes out (by means of dialysis, supposedly) in the form of a crystalline liquid, colorless like spring water. The figurations in this room also seem to indicate, in these plexuses, at least a partial elaboration of a blood-red ferment, with the help of the cerebrospinal fluid that comes from the marrow.

The three southern sanctuaries are separated by walls. This separation does not exist in the human head; but inner exchanges, as yet unexplained, occur in the organs located in this place, and here the walls present one of those typical instances of "transposition" that I mentioned in chapter I. The reading of a partition (image and text) remains absolutely incomplete without its complement given on the other surface of the same wall.

A similar instance, but of transparency, is found in the wall separating room 12 from room 5. If one superimposes the sagittal section of a skull on the plan, one observes, in fact, that this wall represents the "lamina cribrosa of the ethmoid bone" and that the olfactory bulb is found in room 5, and the zone of olfactory sensation in room 12. The olfactory ramifications pass through the lamina cribrosa (see fig. 35).

However, on the side of the wall in room 12 we find on the surface the symbols for fabrics, and, in transparency in room 5, the "boxes for cloths" (fig. 41).

The explanations that I provide here are intended to point out one of the secrets for the true reading of the texts.

This inscription of the "cloths" and of the "box for cloths" placed in transparency, deserves special attention, in order to confirm-with proof of the Egyptian knowledge of the most secret functions of the human organism-the method of teaching employed by the Ancients, and the way we should endeavor to decipher it.

Among the cerebral organs, the olfactory organ is the oldest; that is to say, it is the earliest (like the sun at the eastern horizon). It is in room 5, at the point where the hieroglyph for the "box for cloths" is found, that the olfactory bulb for the head marked in the pavement is located. This room is located exactly at the height at which the Uraeus (the figure of the sacred serpent) should be placed on the forehead (that is, the eastern external wall of room 5).


Fig. 12. Underside of the brain, showing the olfactory bulbs and the olfactory tracts.

Now, among animals the serpent has the most primitive brain, which is typically an olfactory brain. Thus, here there is a rather curious "coincidence."

The wall's characteristic of transparency, placing the hieroglyph for cloths of room 12 in the symbol for "box for cloths" represented in room 5, would suffice to establish a relationship between the symbol for cloths and the olfactory bulb. To this is added the characteristic of what weaving represents as a symbol-that is to say. the interlacing of threads, just as the nerves are interlaced so as to make perceptible the contacts of the individual with the environment. Thus, we frequently find the symbol for cloths in these three secret sanctuaries.

Figure 42 shows clearly what I am suggesting here. The olfactory bulb, with the olfactory tract splitting in two. constitutes an organ whose image is identical to the symbol for cloths. Since we are dealing with a primitive organ, which is extremely important for all primitive (sexual) life, it merits using as a model.

Fig. 43. Hieroglyphic symbol for fabric.
In figure 34 one can follow the olfactory fibers, some of which pass into the white commissure, where they interlace.

Then the olfactory fibers proceed toward four centers. It is entirely probable that the hieroglyphic symbol for fabric is derived from the actual act of weaving, when the heddle separates the threads of the warp so as to enable the shuttle to pass with the thread of the weft. But the image of the olfactory bulb corresponds too well, and the choice of the site in the temple in which it is inscribed is too significant, not to suggest a desire to emphasize an esoteric intention. That is what I wish to point out here.

The head and neck are in profile up to the walls which indicate the clavicles. Here the front view of the chest (hati) begins. However, the thyroid and the thymus are still indicated and explained on the walls of room 9 (west wall of this room, which is located on the east side of the temple).

It should be noted that the body is seen full face, but the spinal column remains located on the west wall. ${ }^{8}$

The columns of the hypostyle symbolize the breasts, representing the nutritive aspect, of a lunar nature. This is indicated by the pavement and by the bases of these columns, which represent a lunar crescent.
${ }^{8}$ The temple wall that, on the western side, bounds the peristyle court (transept) would symbolize the spinal column. It bears the figures of thirteen harnessed horses, of which the thirteenth (according to the measurements) falls at exactly the height of the first lumbar vertebra. Now, the marrow that traverses the twelve dorsal vertebrae also penetrates the first lumbar vertebra and stops at this point. Coincidence?

Proceeding from my theory that everything is deliberate, everything has meaning, I sought a similar example. I found in the temple of Montu, at Karnak, a similar instance of the base of a column (fig. 44).


Fig. 44. Karnak. Temple of Montu. Base cut in a lunar crescent.
It is thus certain that these, lunar crescents are intentional. ${ }^{9}$
They are clearly marked at Luxor in the north row of the columns of the hypostyle, and they continue, diminishing progressively, toward the southern rows. Since they occur at exactly the level of the breasts of our Microcosmic Man, it means that this symbolism is deliberate.

Confronted with such a set of facts, can one continue to speak of "coincidences"?

The knowledge of the functions of the human body that the Egyptologists attribute to the Ancients bears no relation to that revealed by the Temple of Luxor. One can get an idea of the opinion currently held by referring to a summation of the voluminous works of Herman Grapow. ${ }^{10}$

Now, if it were to be based solely on the data of current philology, the reading of the teaching of ancient Egypt would still be only a smattering, for, as this book shows, the thought of the

[^36]Ancients is expressed by an entire complex of elements founded on myth, the meaning of which has never been understood. Egyptology must be practiced on the site and not solely in the study.

It has been said that the Master Builders of the cathedrals expressed themselves in stone, and this is true.

But who has thought to give his full attention both to the measures (in order to find in them the meaning of numbers) and to the figurations based on pharaonic myth? Who, in this vein, has attempted the true reading of the hieroglyphic signs?

This implies the study of the intentional meaning of each document-or, more exactly, the meaning it should have. Thus, having noted the separation of the crown of the skull, one should try to find out what it means, since this point was emphasized. One should not conclude, on the basis of an apparently primary text, that the Ancients wished to say what we understand: one must try to find out why they expressed themselves thus.

The Ancients never "popularized" anything; to the uninitiated they provided only the minimal useful teaching. The explanation, the philosophy, the secret connection between the myth and the sciences were the prerogative of a handful of specially instructed men. Did not Pythagoras wait twenty years before being admitted into the Temple? Did he not, in his own teaching, impose silence on pain of death? Therefore, this teaching was not written down.

Herodotus often mentions the obligation he was under to remain silent concerning "sacred" subjects. Therefore, these instructions had not been changed.

Furthermore, the druidical teaching was the privilege of a priestly class, guardians of the most secret oral traditions of a people.

People cling obstinately to the "classical" prejudice and, in order to defend this thesis, prefer to link the ancient Egyptians with the anthropoids! They would even diminish the value that the Greeks had in demonstrating the great Knowledge of ancient Egypt.

Did not the ancient Greeks go to study in the sanctuaries of Lower Egypt, as close to the source as possible? They had fewer prejudices than their modern champions! When Grapow denies the Ancients a knowledge of the nerves, of the circulation of blood, etc., we can remind him that Hippocrates, as Iversen recently confirmed (Carlsberg Papyrus No. 8, 1939), borrowed extensively from
pharaonic documents, and did so in B.C. 450. Now, Hippocrates spoke of nerves, of blood circulation, and of glands.

Some will claim that Greece was able to understand, and elucidate rationally, what the Ancients had "dimly suspected" or known empirically.

It is certain that the Greek documents that have come down to us intact are rare, whereas the Egyptian monuments and texts provide inviolate evidence of their concepts and modes of expression. What has been transmitted to us through the indirect channel is that "analytical" mentality which is so contrary to the approach of the ancient Egyptians and was certainly excluded from the Greek Mysteries-that mechanical, "rational" mentality guilty of having led us to that disaster of which even the most blind now have some foreboding.

In conclusion to the foregoing, the pharaonic teaching shows us Man composed of three beings: the sexual being, the corporeal being, and the spiritual being. Each has its own body and organs. These three beings are interdependent, in the flux of juices and the nervous influx; the spinal marrow is the column of "fire" that connects the whole.

The being properly called "corporeal" is the body-the chest and abdomen, where the organs for the assimilation of solids, liquids, and air are located.

The head is the container of the spiritual being, where the blood, built up in the body, comes to be spiritualized in order to nourish the nervous flux and prepare the "ferments" of the blood and the "seed." "

This is a greatly condensed aspect of Man in the image of the Universe.

[^37]In the head the entire encephalon could be thought of as a foetus in gestation: it is bathed by the cerebrospinal fluid, typically Amunian (amnion) in character, and the choroid plexuses (chorion) bring to this point the nutritive blood, which will itself be spiritualized.

## *

Contemporary medicine attributes to all these centers very detailed descriptive names, derived from Greek or Latin elements. No vital link coordinates this purely encyclopedic knowledge.

One would seek in vain knowledge of this kind and a special vocabulary in ancient Egypt.

The myth is a whole, the synthesis of all science, since it transcribes the
the parietal part involves the maximum development and shows a crystalline lens, a vitreous body, a true retina complete with rods, and cellular elements that can be homologated with choroid elements.

In man, one can picture three structures that combine to form the pineal apparatus, in which only the epiphysis shows much development.

Only since 1900 has the study of this organ become more exact, picturing its effect on the genital glands. Today, the supposed visual vestige of the parietal apparatus is still assumed, as well as a development among the higher vertebrates of the pineal apparatus, which has a genital influence. Thus there are two formations, the first of which is atrophying.

It is thought that epiphysectomy entails a distinct increase in the development of the genital gland, and moreover, that the epiphysis has a restraining effect on sexual development.

The absence of the effect of an epiphysectomy at an adult age seems to prove the predominant role of the pineal gland at the period of puberty. It is thought that the pineal gland does not affect the sexual glands directly but probably through the intermediary of the hypophysis.

Anatomically, it is located below the lower lamina of the tela chorioidea and is attached by two of its six peduncles to the anterior pillars of the trigonum. The wall separating rooms 1 and 7 probably represents the "tela chorioidea."

Moreover, in room 7, the King is a young boy between seven and twelve years of age, and this is the only place where he is represented at this age and accompanied by his mother.

On the other hand, on the north wall of room 9 (which is located at the height of the clavicle), the King has the proportions of an adult; however, the clavicle is the first and final point of ossification and indicates the two extreme moments of the formation of the body.

Here I shall point out again that room 9 is the room of conception.
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 in theology, which is the metaphysic of the Becoming and the Return.

It is in this vein that their meaning must be sought.

I must stop my statement here. My goal-which was to set forth the indisputable argument that the symbolic presided over the construction of the Temple of Luxor-has been achieved.

If I have been forced to expatiate at length on indispensable digressions, I have done it only to introduce the reader more easily to a mentality that is completely foreign to students of classical thought, and to archaeologists in particular.

I am aware of the criticism that these passages will elicit. A few people will realize, however, that I am proposing here a newmethod for the study of the past; I willingly offer to guide them. Alas, it is not to great numbers of people that I direct this essay.

## Summary of Principles

It is said that "Man is of Nature; Man is in Nature, and Nature and Man are One." Now, man cannot create-that is to say, make something out of Nothing-any more than Nature can. Man is identified with Nature, and any "creation of the mind" (implying human thought), which is but an assemblage of existing parts, is the result of a state of Consciousness that makes the connection between the qualities and possibilities of the Universe on the one hand, and their organic summation in the individual on the other.

Man is the individualization of all the functions, affinities, and
powers of the Universe; and Consciousness is the Measure of individualization, rendering actual that which is virtual in the cosmic harmony. Man is the Microcosm, Consciousness is the Temple in Man. Individualization has incorporated in the organism the "functions of genesis," separating creative Thought into Time and Space; Consciousness must unite them anew.

Thus Consciousness-the Temple in Man-comes from the knowledge of the elements of genesis, that is to say, from the sanctuaries, hence from the knowledge of the spiritual bond that unites them. In other words, there is the knowledge of Good and Evil, and the knowledge of Unity; the intelligence of the "mortal," which separates like the scythe, and the Intelligence of the permanent, which unifies.

## CHAPTER VII.

## The Crossing:

## Egyptian Mentality



THE FEW basic philosophical elements that I have briefly reviewed in an effort to explain the method of the Ancients for applying architectural symbolism, are not sufficient to explain the basis of the mentality of pharaonic Egypt.

I have said that this mentality presented itself as vitalist, but this epithet does not simply mean that a spiritual or metaphysical principle presides over Life. That would be a definition in the occidental spirit, consistent with a direct mentality, which I call "mechanical" because each element of the thought is given directly and meshes with another thought to formulate a conclusion within set limits. I also call this mentality "mechanical" because it seeks to make every notion objective and attributes all the value to the "thing," to the arrested idea-that is to say, the idea framed in time and space.

The pharaonic mentality is typically indirect. A defined form is used to evoke the Idea of this form-that is to say, the abstract complex that presides over this defined form.

The best way to make myself understood would be the following image:

If, in a fairly dark room we stare at a spot of bright light for a while, when we close our eyes, we shall see, in lieu of this bright spot, the same spot, only dark. Similarly, if we stare at a bright color, for example, green, when we close our eyes, we shall see the exactly complementary shade of red.

The Occidental would say that light and the color green are the reality. The ancient Egyptian would say that the reality is the inner vision, outside of the object.

This example can also be used to explain what I mean by vital reaction. The concept "vitalist" implies, for the Ancients, the evidence of the vital phenomenon as based on the principle of reaction.

We find a very similar mental disposition in China, at least in the ancient China still imbued with the Wisdom of old.

There is a valid psychological reason behind this manner of thought. The fact of expressing a desire very easily provokes a subconscious resistance or doubt. Now, there is more power in subconscious doubt than in conscious belief: hence the instinctive and unconscious race to deny-or prevent-the production or realization of what was desired.

But the reason for this "indirect mentality" among the ancient Egyptians is based on the certain fact that everything in Nature (which is alive) is provoked by the action of the complement. This creates the crossing ${ }^{1}$ and the play of resistance.

Before one can inhale deeply, one must first exhale all the air in the lungs. This would be the vital reaction, the reaction of the organism, which is its real action and not the voluntary action imposed on it.

Similarly, the decomposing action of death brings about new life in organic matter: hence the paradox, that we die the moment the cells of our bodies cease dying, for it is their constant death that supports life-that is to say, regeneration.

However, this is still only the physical aspect of reaction. For the mental aspect and consciousness, the reality of man is aroused by provoking the reaction through the brutal, concrete fact. This reality, which is in us, is measured by the state of consciousness or of intellectual culture. We react to the extent that is fitting for us, and this will be a factual reality, whereas the thought imposed on us remains outside of us; that is to say, it penetrates no further than into our memory. And only what we have experienced (one might say "suffered") impregnates our being and can modify our innate consciousness.

The reasoning could be formulated generally as follows:

[^38]We become aware-that is to say, we can qualify a thing or an idea-only by means of comparison. The extreme comparison for Being would be Non-being. For us a thing exists only because it can, in the final analysis, not be. Now, presence is susceptible to changes; but absence-non-being-is immutable.

This reasoning of absurdity however, underlies any philosophy of Unity-that is to say, "God." Within this Non-being of Nature, which comprises all "things," is summarized like a seed-everything that can be.

Ancient Egypt accords the entire value to this Cause and not the object that has emanated from it. When the Ancients draw a figure, it is not the figure they look at, but what they are projecting of themselves onto this figure; physically, they view this figure as a shadow, a silhouette against the light of its absence. They detect its contours.

When they draw a geometrical figure, it is not this figure which interests them, but the inexorable Law that prescribes it and the inevitable consequence that this law provokes. Thus, geometry takes on the same living characteristic of life as the images they carve or draw.

## Summary of Principles

> "The light shineth in darkness and the darkness comprehendeth it not." (John 1:5)

Affirmation and negation are compensatory and together create nothingness. The cross, once drawn, effaces: it says yes and no at the same time. But negation denies itself, and affirmation can only affirm itself. Simple crossing effaces; double crossing denies the negation and affirms the affirmation. The crossed fists of the royal mummy is a death gestating the second crossing (indicated by the scepters), which is the resurrection. This is the death of one form
for the life of another state in which the mortal, the negation, is eliminated.

I will say: to create is to make something from nothing; thus, this nothing is virtually this thing. The created thing will be the negation of nothing, the affirmation of the corporeal form. To negate this nothing is to pass from the virtual to the actual. But the negation of nothing is absurd; hence negation can only apply to the thing which is transitory, which is able not to be. Thus, the negation of the present bodily form is the affirmation of its virtual, indcstructable reality.

That which is, is able "not to be" in its present form; but its Idea, or virtual reality, does not cease to be, as a possibility, immanent in the general Cause whence the whole emanates.

Is the present form necessary? It matters little-its possibilityexists; it will be if its void exists, if its absence imposes itself.
"There will be Light if the darkness feels its absence." The Consciousness of the absence of Light will create the call that will make the light shine. This is the true prayer. It is the evocation. This is the pharaonic mentality.

## The Egyptian <br> Canon for a Standing Man



DEFINITION'S should be used only as a point of comparison. It is thus that the canon, as the principle of proportions for the construction of the figure, should be viewed. This allows one to note all the variations and distortions in the representations in order to know the Idea that is being expressed.

## The CANON IN TERMS OF ITs RELATIONSHIP

TO THE System of Quadrature by 19 Units
E. Mackay ${ }^{1}$ notes that in Egyptian Quadrature a line passes in front of the ear and back knee, and ends, on the base line, at a point located one square behind the big toe of the back foot. Another important line, immediately in front of the preceding one, passes through the middle of the iris of the eye and ends at the big toe of the back foot.

The line that passes in front of the car is thus found on the static axis of the standing and walking man. On this line are the semicircular canals of the inner ear in which are located the sense of orientation and stability.

The axis of movement passes through the eye: the eyes are luminaries, the eyes guide. One goes toward what one is looking at, and it is on the big toe of the back foot that one places one's weight in order to advance.

[^39]Two methods of quadrature are known. ${ }^{2}$
The first method divides the height of the entire man into 19 units.

The second divides the height of the entire man in 22 units, or sometimes 22 and a fraction.

The multiplicity of other divisions are not to be trusted. They have nothing to do with the canon; their aim is to locate measures, or they serve as symbols. In certain instances-as in the division by 7 units-it is a matter of simplification for the placement of the outline (when, for example, one wishes to make the total height equal to seven heads).

The method of 19 squares, which is quite inconvenient for the division of a number of digits that is a multiple of 24 or 28 , is nonetheless the method that corresponds best to geometrical construction with phi and provides the explanation of the pharaonic canon.

A square is constructed whose side equals the height of the man including the crown of the skull; this height counts as 19 (see fig. 45).

The crown of the skull which counts as 1 , is then removed; there remain 18 for the height, excluding the crown.

To the width of the square is added the height of the crown, giving the fathom-that is, 20 units.

Then, to determine the personage's navel, the height is considered as if it were that of the man including the crown; this height of 18 is divided by phi to locate the navel slightly above 11 units, starting from the soles of the feet.

This is the general scheme, revealed by the use of the number 19; but in reality it is necessary to observe that the coefficient C that is to say, the value of the crown-is variable and constitutes the personal module.

According to the measurements recorded at Luxor, and based on a great number of other monuments, the quadrature would permit only the following measurements to be located almost uniformly:

Length of the foot $=3$ units (unit of the widths of the composition),
Height of the knees $=51 / 4$ to 6 units (between which is located the kneecap),

[^40]

Fig. 45. System of 19 squares, applied to a figure in room 20 of the Temple of Luxor.

Height of the shoulders $=16$ units (beginning of the neck), Height of the forehead $=18$ units (line of the hair piece), Height of the vertex or the uraeus $=19$ units.
Other essential points-such as the apron, the belt, the navel, the breast, the corselet, the necklace, the chin-correspond either to a personal proportion or to the desire to indicate a very definite measure.

The proportions most frequently encountered in all the averages established by contemporary anthropometry for the ratio between man's height and the spread of his arms are 1.03 and 1.045 . $^{3}$

[^41]The ratio $19: 20$ can only be an "approximation"; the headband, which must not be confused with the delimitation of the forehead, gives the "personal module."

This "module,"' in the adult subjects of this temple, is indeed 1.03 and 1.045 .

To cast some light on the refinement of this system of quadrature in the Egyptian canon, I provide here the same face divided according to the method of 19 squares (fig. 46) and according to the golden section (fig. 47). Calculations prove that in these two divisions the forehead and the upper edge of the headband coincide within hundredths, if the top of the headband is placed at $181 / 2$ squares.

Thus we find it possible to make the module, the play of the phi, and the play of 19 squares coincides very closely.

The system of 19 squares gives the broadest approximation of phi that is adequate in practical terms. This facilitated the technician's work, and then the Master could make rectifications without revealing the essential functions.

For example, the navel falls at 11 squares, starting from the soles of the feet, ${ }^{4}$ but it should be located at 11.4 in the case cited earlier.' Such a rectification can be made unerringly by a practiced
b. Main anthropometrical characteristics of the average man according to Quetelet in Anthropometric (average calculated from 30 Belgian men of 25 to 30 years of age, selected according to an aesthetic criterion): total height $=$ 168 cm ; height of the navel above the ground $=101.5 \mathrm{~cm}$; spread of arms $=$ 173.1 cm . Hambidge, quoted by Manila C. Ghyka, Esthetique des Proportions dans to Nature et dans les Arts, p. 275. Average most frequently encountered for the spread of the arms $=1.045$ for a height of 100 .
${ }^{4}$ The navel thus divides the height 18 in the ratio $11: 7=1.57142=$ half of "technical pi", or $22 / 7$, generally attributed to Archimedes.
With quadrature in 22 units (the head being contained 7 times in the body), we find a direct play with this technical pi.
${ }^{5}$ The personage in room 20, taken as an example, has as his personal coefficient $19 / 1.03=18.446$ for his height excluding the crown of the skull; this measurement is indicated by the upper line of the headband, and his navel is located at $18.446 / \mathrm{pi}=11.4$ from the soles of his feet.


Fig. 46. Detail of the application of the method of 19 squares to a face in room 20 of the Temple of Luxor.
eye, which explains the many still visible "corrections" often found on the outlines.

For the coefficient C we round off the number to the nearest thousandth to simplify the reading. But, proof exists in the plan, of more thorough exactitude, corresponding to the real functions, which a specialist can easily discern.


Fig. 47. Study of the profile (fig. 46) divided according to the Golden Section (see also figs. 7, 8, and 9.).

## A Study of the Proportions between the Head REPRESENTED IN THE PAVEMENT AND THE BODY ESTABLISHED ACCORDING TO THE MEASUREMENTS OF THE TEMPLE.

This study shows us two rhythms in the measure of the man of Luxor:

1. The measure of the eorporeal man, which gives for the length of the temple, 140 fathoms, is the man excluding the crown of the skull (FP), and would give 142 fathoms for the man including the crown (TP; see fig. 48). ${ }^{6}$
2. For the head or "control" part of this body, there is a different measure, whose rhythm would give $265.74-265.83 \mathrm{~m}$ as the total measure of the man including the crown of the skull (TP).

The greatest length of the temple, from the south wall to the west pylon, is $258 \mathrm{~m}( \pm 10 \mathrm{~cm})$, which corresponds to 140 meridian fathoms at $0^{\circ}$.

1. The proportion most widely adopted for the size of the human head is $13 / 100$ the height; the head is then contained 7.692 times in the total height.

In the personages represented in the bas-reliefs at Luxor, this proportion varies between 7 and 7.5 heads, depending on the intention.

In trying to find out on what basis the complete personage should be founded, I had to go along with the indications given by the head in the pavement, and I got 18 fathoms for the length FM. Taking the crown of the skull as 2 fathoms, this would give 20

[^42]

Fig. 48. Diagram of the Temple of Luxor showing the ages of man.
fathoms for the head (TM); furthermore, since the total length of the temple (FP) equals 140 fathoms, the head would thus be contained 7 times in this length and 7.1 times in the theoretical length TP.

Hence, the symphisis pubis should be located halfway along the total length TP (measurement verified); this point lies in the thickness of the south wall separating the court of Amenophis III from the colonnade of Amun.

This being so, the eye in the pavement is too high for a figure whose geometric outline divides the face into two equal parts, passing through the upper eyelid. The half-head of 10 fathoms would be located at the midpoint of the eye.

However, the entire '"skeleton" of the personage corresponds strictly to the proportions of a man whose height comprises 7.1 heads, as is shown in plates based on medical data (see fig. 1-2).

It is indeed this measurement, FM, that governs the general plan.
2. In considering only the head in relation to the rest of the temple, we are dealing, then, with a man whose head, slightly too large, gives precisely the proportion of a boy before puberty, who has reached the age of 12 at the maximum.

This is confirmed by the fact that the King is represented as a child (between 7 and 12 years) with his mother only in sanctuary 7, where the pineal gland is located. It is this gland which changes at this age, with the awakening of the intelligence in harmony with the sexual apparatus, in order to pass from the "pineal eye" phase into the epiphysis state. ${ }^{7}$

Moreover, this temple is said to be the one in which the King spent his childhood.

Let us recall, in the Gospel of St. Luke (2:41-49), the journey to Jerusalem of the child Jesus with his parents, when he had reached his twelfth year, and how, while wandering in the temple, he astonished the doctors with his intelligence and knowledge.

[^43]The two rhythms of the Temple of Luxor show us:
a. That by the overly large head in the pavement, this temple indicates a definite age of 12 years; and that, however, all the stages of growth (past and future) of this child are transcribed in measurements in the different stages of the architecture.
b. A geometrical action that makes the defined Measures, the canon, and the two personal coefficients of the personages of 7.1 and 6.5 heads contained in the development of the temple coincide.
(A) Actual natural growth, shown by the measurements of the temple.

Daffner gives 50.6 cm for a newborn infant whose future height will be 166.5 cm ; now, the relation between these two measurements is 3.2906 .

Moreover, the Westcar Papyrus, a prophetic text, which is attributed to the Fourth Dynasty and concerns the child King who is to become head of the line of the Fifth Dynasty, assigns to the newborn a cubit's length; this relationship between a cubit and the height of an adult man constructed according to the fathom and the perfect "canon" would be exactly 3.274.

Finally, the relation between the future length of the temple (TP) and that of the platform (FB) is $3.274 .^{8}$

Furthermore, the total length of the newborn is equivalent to 4 heads, ${ }^{9}$ and the head of the child King comprises the south sanctuaries and room 12, thus all the vital centers whose positions

[^44]remain stable in the course of man's development (see fig. 49). During man's growth this center does not move, as if the central organs of the intellect located in the sanctuaries, were the fixed point around which the entire body oscillates.

The covered temple represents the newborn infant.
The second stage of construction includes the peristyle court, hence, the child at 2 , or $21 / 2$, since, according to tradition (and confirmed by anthropometry), he has reached half his total future height - the "age of the abdomen," according to Thooris.

The third stage of the construction adds the nave, and the child is then 7 or 8 years old-the "age of respiration," says Thooris; thus, the capitals of the columns of the nave are open corollas.

Amenophis III ceased construction at this point. Ramses added on the court and the pylons; and there we find the final phases of construction.

Toward 12 years, the child attains about five-sixths of his future height, which brings us to the west door of the court of Ramses.

The dimension of the head of this 12-year-old child is indicated on the plan by the length FM, and the ratio between the head and the height of the child $(\mathrm{FJ})$ is $6.481 .^{10}$

It should be noted that it is by the west door of the court of Ramses that both the barque and the princes enter the temple, as the bas-reliefs indicate.

Finally, with the pylons, we find the proportions of a young man of about 18 years of age, whose head (TM) is contained in TP 7.1 times.

All of the foregoing is based solely on the play of 140 and 142 fathoms for the lengths FP and TP of the temple. Now the face in itself comes into play; while, enlarging the personage, it will still, in its final proportion, bring us back to the age of 12 .
(B) Geometric Play

As is shown on the geometric outline of the face according to the canon (fig. 46), the crown of the skull marked off by the headband represents $1 /$ phi $^{2}$ of the height of a head with value 2 , so that the length FM equals phi.

Moreover, we have seen that, for a personage whose height

[^45]

Fig. 49. Luxor. The newborn infant in the covered temple.
measures 7.1 heads (which is the case for the skeleton superimposed on the general plan), the perfect coefficient of the module is 1.03.

Now, the figure traced on the ground demonstrates that the south wall F represents the upper edge of the headband. Thus, the length FP must be multiplied by $1.03^{11}$ in order to get the theoretical length of the man suggested by the face in the pavement.

The paving stone that marks the upper eyelid is at a distance of 20.50 m from the "key" at the crossing of the axis delimiting the bottom of the face (the chin). Now,

18 fathoms pavement,
$20.50 \mathrm{~m} \mathrm{x} /$ phi $=33.17 \mathrm{~m}=$
Head in the FM
Head of the 12-year-old child
$\mathrm{FP} \times 1.03=258 \mathrm{~m} \times 1.03=265.74 \mathrm{~m}$.

The face traced on the ground thus belongs to a head 41 m long, of which the crown of the skull measures 7.83 m , to which we should add 258 m in order to have the complete man, or 265.83 m . We may compare this last result with the application of the module ( 265.74 m).

Thus, there is geometrical coincidence, but the head is included in the total length only $6.481^{12}$ times, which brings us back to the proportion of the 12 -year-old-child for the head in the pavement.

## *

A final proof for the measurements of the temple and their rectification (double rhythm) is given by the west wall of sanctuary 1 (fig. 50) and the royal figure B.

Here we are dealing with a royal personage without a navel, hence with a creation and not a procreation through woman-that is to say, in keeping with the principle of the Kamutef.

The proportion between the head and the height of the body
${ }^{12}$ Actually, $41 \mathrm{~m} \mathrm{x} 6.481=265.74 \mathrm{~m}$, and 6.481 is the ratio of the head and the height previously found for the 12 -year-old child.

Let us note that if we were to multiply the size 265.74 m by 1.2 , which will give the length of the adult, we should get 318.888 in, that is to say, half of 637.776 m , or 1/20,000 of Hayford's semiaxis with a difference of 628 m less.

According to Bulletin Geodesique, no. 7 (1925) p. 540 ff :
Until 1925 geodesy used the following values for the earth's semiaxis:
Bessel's semiaxis: $6,377.397 \mathrm{~m}$
Clark's semiaxis: $\quad 6,378,206 \mathrm{~m}(1886)$
Clark's semiaxis: $\quad 6,378,249 \mathrm{~m}(1880)$
Hayford's semiaxis: 6,378,388 m
In the temple we find that the mean between 265.74 m and $265.83 \mathrm{~m} \mathrm{x} 24,000$ $=6,378,840 \mathrm{~m}$.

In 1925, the geodesy section of the International Geodetic and Geophysic Union adopted Hayford's ellipsoid, which gives a semiaxis of $6,378,388 \mathrm{~m}$.

In comparing the above measurements, we find a difference of 991 m between Bessel's and Hayford's parameters and only 452 m between Hayford's semiaxis and that calculated from the temple's data.

This measurement is so close to the geodetic datum that one might be led astray. However, the point here is not a geodetic calculation; we are in fact confronted with a coincidence-probably intentional. We know, on the other hand, that there does exist a function connected with geodetic calculations that gives, on a philosophic basis, amazingly precise details.


Fig. 50. Luxor. West wall of sanctuary 1.
changes with age. If one wishes to change the age of a personage on a bas-relief, one can modify only the size of the head and not the size of the legs, which are limited by the base line. This is exactly the problem of the temple that we find explained in the aforementioned bas-relief.

Here we see five kings, just as there are five basic changes of axis and five ages indicated.

The first king, to the north (A), is the smallest; his height comprises about 7.1 heads.

The last king, to the south (E), is the largest of all; his height from the ground to the vertex comprises only about 6.5 heads.

The second king (B) has two very clearly determined measurements of height: from the ground to the vertex, and from the ground to the head of the uraeus. In addition, the outlines of two superimposed faces can be seen: the original profile of the head was rectified in such a way that the old profile subsists as evidence and as a point of comparison with the new profile (figs. 51 and 52).

The original face gave the profile a size corresponding to 6.5 heads within the total height, hence the proportions of a 12 -yearold child; the rectified profile reduces the size of the face, which is then contained 7.1 times in the height defined by the uraeus, and
the proportion becomes that of an adult man of 18 , according to the Egyptian canon. Thus we have in this bas-relief the representation of the temple itself, and this bas-relief is found in the place that corresponds physiologically to the profound transformations at the age of puberty. This is one more proof that the entire principle of growth and the transformation of the microcosmic man serve as the symbolic basis for this temple.

The summary of the measures of this arrangement of proportions is provided below.

We should find, in the general dimensions of the temple (considered as a man) an application of the Egyptian "canon"; that is to say, we should be able to divide the length of the temple (TP) by 19 and get a unit of measurement that applies to the whole of the architecture.

Moreover, if the west wall of sanctuary 1 truly indicates the program of the two rhythms of the temple, we should find there indications or confirmations of these measures.

Now, in fact, in order to find the posited lengths of the man in the temple parallel to the axis of Measures, we must take the height indicated by the first king to the north, King A (fig. 50), and multiply it by 19 times 10 , and we shall find the proposed length for the measurement TP , containing the personage of 7.1 heads. Then we must take the height indicated by the last king to the south. King E (fig. 50), and multiply it by 19 times 10 , and we shall have the predicted dimension for the personage of 6.5 heads in the temple.

These figures not only confirm the hypothesis of the two rhythms, but specify their dimensions in such a way that by simply multiplying the height of King A by 10 we get the unit of measurement that can be used to place the entire temple in a grid, the temple being considered as a personage. This unit multiplied by 19 gives the height of the 18 -year-old man, and consequently the length of the temple (TP).

In sum, Kings A and E indicate, by their proportions and measurements, the two rhythms of the temple, viewed along the axis of Measures. King B shows the application of this double rhythm.


Fig. 51. Luxor. West wall of sanctuary 1. The two profiles of King B.


Fig. 52. Luxor. West wall of sanctuary 1. The two profiles of King D. The earlier face is outlined in black. The original position of the eye is marked by a dolled line; note the intentional break in the serpent.

## Conclusions

The elements observed in the Temple of Luxor prove:

1. That the pharaonic temple has a didactic purpose; hence every detail has its import.
2. That the entire value is accorded to the teaching; the technical aspect is subordinated to this aim.
3. That there is, in the inscription by means of texts and figurations, a method for translating a philosophically ordained thought.
4. That symbolism is the method of transcription of the thought of the Ancient Egyptians, in writing and in figuration as well as in the architecture.
5. That there is a precalculated program, realized through Time by successive Kings, heirs of the tradition.
6. That the monument is constructed (contrary to our current principles of architecture) on several axes; that each axis has a meaning, and that this meaning dictates the meaning of the parts subordinate to it.
7. That there is, in pharaonic Egypt, geodetic, astronomical, and physiological knowledge surpassing that which Egyptology has hitherto been able to concede.


## NETER MEANS PRINCIPLE OF LIFE, AND THE TEMPLE IS ITS HOUSE


[^0]:    ${ }^{1}$ His wife, Isha Schwaller de Lubicz, a specialist in Egyptian hieroglyphic language, later wrote a two-volume novel depicting life in ancient Egypt through the eyes of a young man who attains the level of temple initiation. In Her-Bak Chirk Pea (Inner Traditions. 1979) and Her-Bak: The Living Face of Ancient Egypt (Inner Traditions. 1978) she utilizes philosophic inspiration and research material from her husband's work. His stepdaughter Lucie Lamy carried out the exacting survey of the entire temple.

[^1]:    ${ }^{2}$ For a more complete biographical account, see AOR, Sa vie, Son oeuvre by Isha Schwaller de Lubicz (Paris: La Colombe, 1963), and Serpent in the Sky: A Study of the Work of Schwaller de Lubicz by J. A. West (New York: Harper \& Row, 1978).

[^2]:    ${ }^{3}$ As quoted in Henry George Farmer, "The Music of Ancient Egypt," The New Oxford History of Music (London, Oxford University Press, 1957) p. 259.

[^3]:    ${ }^{1}$ Evolution of an "innate consciousness" toward psychological consciousness, which is "consciousness of the innate consciousness," the first stage toward a consciousness freed from physical contingencies.

[^4]:    merit, an organ that it no longer shows in its adult stage, I must find this organ in an adult lower animal whose development was arrested at the stage considered embryonic.'"

[^5]:    ${ }^{1}$ Parthenogenesis is taken here in the sense of "creation," and not in the "zoological" sense of being at one point male, then female, as is the case with the androgynous mollusks.

[^6]:    ${ }^{2}$ Etienne Drioton, "La Protection Magique de Thebes a l'Epoque des Ptolemees," in Bulletin d'Ethnographie, No. 23 (1931).

[^7]:    ${ }^{3}$ H. Schafer, "Die angebliche Basilikenhalle des Temples von Luksor. Gedanken zur Geschichte des Agyptischen Tempelbaus" in Zeitschrift fur agyptische Sprache. vol. 61 (1926) pp. 32-57.
    ${ }^{4} \mathrm{~A}$ more learned etymological meaning has been preferred for tram saeptum: "beyond the boundary." The fact that the nave is septuple in its length is overlooked.

[^8]:    ${ }^{5}$ This was correctly noted by P. LaCall in "Le Plan du Temple de Louxor" in Memoires de l'Academie des Inscriptions, vol.18, no. 2 (1941).

[^9]:    ${ }^{6}$ For a study of these proportions, see chapter VIII.
    ${ }^{7}$ See chapters II and VIII.

[^10]:    ${ }^{9}$ I say "indirect"' to avoid confusion with superimposing the outlines of figures on the same scene, which has a purpose similar to that of transparency.

[^11]:    ${ }^{1}$ With respect to the zones of the cerebrum. I must point out the auditory zone, which is located beneath the temporal bone.

    This explains the Egyptian expression "to give the temple" (Maat) for "to pay attention."

    Thus the meaning of this figure of speech is to "open one's intelligence to the word." This proves two things:

    1. The Ancients put more value on the vital function than on the organ of perception (currently we would say "to lend an ear").
    2. The Ancients had an accurate knowledge of the centers of life and intelligence, and knew everything about the brain, which contradicts the statements of Professor Hermann Grapow (see chapter VI, p. 105, note 10).
[^12]:    ${ }^{2}$ Taken as a whole the cerebrum, center for all the coordinations of ideas, is thus the center of all personal reactions. Among all the ancient peoples the "simpleminded" are considered to be inspired, or capable of being directly inspired, acting in the absence of any true, reasoned will.

[^13]:    ${ }^{3}$ See chapters I and VIII.

[^14]:    ${ }^{4}$ The crown of the skull, containing the physical organ of the brain, should not be confused with the coronal circle that surrounds this braincase. I cannot treat this circle here, since it corresponds to conduits of energy flux that belong to a subtler state of the human body. On the other hand, I cannot remain entirely silent on

[^15]:    ${ }^{5}$ The "Purusha" of the Vedas (Upanishads).

[^16]:    ${ }^{1}$ Two-dimensional space should be conceived as a "plane" without thickness. It is therefore a question of a "function" and not of a "thing." However, we cannot conceive ot action without the body in motion, since we only understand action through the body in motion. Thus, it is by means of Consciousness, generated by our existence, that we elaborate our "understanding" of the principles causing this existence. This is not the "knowledge" that is direct consciousness, hence knowledge of functions without a moving object. Exact science (which is nothing but hypotheses) appeals to this direct (a priori) consciousness because "Reason" imposes on us these notions for which we have no concepts.

[^17]:    ${ }^{2}$ The French Le Verbe is conventionally rendered as the Word (or Logos). We have retained "Verb" in this translation because of the author's intention of conveying the sense of an eternally acting power at the origin of creation.-Trans.

[^18]:    ${ }^{3}$ Cited by Mattila C. Ghyka, in Esthetique des proportions dans la nature el dans les arts (Paris: Gallimard, 1927) p. 272.

[^19]:    ${ }^{4}$ In this connection. I can fill a gap that, Kamel Oshman Chalet Pasha was obliged to leave in his very interesting work on "The Nilometric Cubit" in the Bulletin de la Societe Royale de Geographic, vol. 21, (1943). Here, the author reports the existence of a cubit, called the "Black Cubit," of unknown origin. This cubit is carved on the socle of the black granite colossus to the east of the entrance leading

[^20]:    from the court of Ramses to the great colonnade. This black cubit is found only on black stones or on what corresponds to their symbol. Its measured length is 54 cm . By my calculations its mathematical length would be 54.02376 cm (see fig 16).

[^21]:    ${ }^{5}$ The sign of the arm being the individualization of the Neter, it gives birth, functionally, to the sign of the "cubit":
    

[^22]:    ${ }^{6}$ I use the epithet "sacred" to designate what, in the teaching of the temple, had a key value.

[^23]:    ${ }^{1}$ See Alexandre Varille (Quelques Caracteristiques du Temple Pharaonique, 1946 on reusages.
    ${ }^{2}$ See figure 25, p. 72.

[^24]:    ${ }^{3}$ Here I am referring only to the stone platform, but a geometric outline is also found in brick constructions.

[^25]:    ${ }^{4}$ Djed pillars are those having the appearance of a bundle of stalks tied together Trans.

[^26]:    ${ }^{5}$ In the ceiling of the Amunian naos of Alexander there is a reused sandstone trave whose ornamentation is similar to that of the pink granite architrave at the entrance to the chapel of Amun, of the repository of Ramses II, in the first court of the temple.

[^27]:    ${ }^{6}$ See Herbert Ricke, Bemerkungen zur Aegyptischen Baukunst des allen Reichs, vol. 1 (1944).
    ${ }^{7}$ Manila C. Ghyka, Esthetique des Proportions dans la Nature et dans les arts, and Le
    nombre d'or, les Rythmes, les Rites.

[^28]:    ${ }^{8}$ An exception must be made for the initial technical drawing which investigates the relationships of whole numbers.

[^29]:    ${ }^{1}$ The Egyptians conceived the sun-Re-as riding across the sky by day and under the earth by night in a boat or barque. A list of these barques was kept at the Temple of Edfu.-Trans.

[^30]:    ${ }^{2}$ Ludwig Borchardt, Zur Geschichte des Lugsortempels (1896) must not have known of this aspect of the construction; this is why he corrected distortions, modifyingmistakenly - the angle of the south face.

[^31]:    ${ }^{1}$ For a discussion of the proportions of the Egyptian canon, see chapter VIII.

[^32]:    ${ }^{2}$ The styles of catalepsy of certain Hindu "fakirs" are achieved through closing this passage by swallowing the tongue.
    ${ }^{3}$ In French the word for understanding (entendement) shares the same root as entendre, "to hear" or "to understand."-Trans.

[^33]:    ${ }^{4}$ In this connection I quote from Hippocrates: "Thus the glands, profiting from the superabundant hunger of the rest of the body, find a suitable nourishment. And, therefore, where there are swampy parts of the body, there are found the glands; and proof of this is that where there are glands there also are hairs. Nature produces glands and hairs. Glands and hairs are equally useful: glands for the affaent humor, as has been said; hairs, having precisely what the glands furnish them, spring up and grow, gathering the superfluity which seethes toward the extremities. But there, where the body is dry, there are neither glands nor hairs."

[^34]:    ${ }^{5}$ In French the word are means both "bow" and "arc"-Trans.
    ${ }^{6}$ At Karnak, in the corresponding sanctuary, the barque does not lie crosswise with respect to the doorway of the naos. but in the same direction as this doorway, this sanctuary being oriented east-west.
    ${ }^{7}$ A large fragment of pink granite, with the name of Thutmoses III, representing an ithyphallic Min, was reused on the top of the roof of the sanctuary of Philip

[^35]:    Arridheus at Karnak, with the sex organ placed in the direction of the west-east axis of the temple. See J. dc Rouge. "Etudes des monuments du massif de Karnak" in "Melanges d'archeologie egyptienne el assyrienne, vol. 1 (1873), p. 68; G. Legrain, "Le logement el le transfert des barques sacrees," in Bulletin de l'Institut Francois de Caire. vol. 13 (1917) p. 18.

[^36]:    ${ }^{9}$ The present explanation does not, however, preclude the possibility of a displacement of columns at Luxor.
    ${ }^{\mathrm{n}}$ Herman Grapow, Ueber die anatomischen Kenntnisse des altagyptishen Aerzte (1935): "To say the least, there could not have been any clear idea of the contraction of the heart muscles and of the circulation of the blood, since it views as a specific cause of illness the excess of blood in the heart. And yet, the Egyptian doctor already had "a vague presentiment" that there is some connection between the heart and the lungs when he spoke of the blood of the lungs in the heart" (p. 15); "the concept 'nerves' is lacking (I should like to say 'Of course'), and nothing was yet known of the functions of the brain and of the spinal marrow" (p. 15).

[^37]:    ${ }^{11}$ I.e., the epiphysis. Galen (A.n. 131) called it the scolecoid, and at that period he indicated that it was already being called the epiphysis. Certain writers at the time assumed that it had to serve as a sluice for the amount of spirit necessary for the maintenance of psychic equilibrium. Descartes considered it the seat of the Soul.
    The most numerous works relate to the study of Saurians and Lacertians, in whom the pineal gland truly merits the name "pineal eye." Among the Saurians

[^38]:    ${ }^{1}$ Crossing is indispensable for any nervous "sensation," thus for all consciousness. That we see this crossing applied in their mentality again suggests that the ancient Egyptians had a profound knowledge of the human body and the nervous system.

[^39]:    ${ }^{1}$ E. Mackay, "Proportion Squares on Tomb Walls in the Theban Necropolis," in Journal of Egyptian Archaeology. 4 (17):77.

[^40]:    ${ }^{2}$ R. Lepsius, Denkmaler (1897) p. 233-38.

[^41]:    ${ }^{3}$ Encydopedie Francaise, vol. 4, 56, 5.
    a. Average proportions of a European of average height ( 1.65 m ), calculated by J. Denicker. according to the tables of P. Topinard: with the height taken as 100 , the head $=13$; span $=104.4$

[^42]:    ${ }^{6}$ When speaking of the measurements of the temple in relation to those of the man, I shall adopt the following conventions: man without the crown of the skull $=$ FP, and head without the crown of the skull $=\mathrm{FM}$, man with the crown of the skull $=\mathrm{TP}$. and head with the crown of the skull = TM (fig. 48).

[^43]:    ${ }^{7}$ See the note on the epiphysis in chapter VI, p. 107.

[^44]:    ${ }^{8}$ In fact: $261: 70 \mathrm{~m} / 3.274=79.93 \mathrm{~m}$ as the length of the platform, which actually measures 79.60 m and 80 m along the east and west sides respectively, the difference being due to the slant.
    ${ }^{9} \mathrm{a}$. The proportion of the head at different ages is based on Quetelet's table, except for the 7.1 heads, which is particularly Egyptian.
    b. The size of the child at various ages is based on the tables of Doctors Variot and Chaumet (the result of 4,400 measurements made in the schools of Paris). compared with a table of Landois, which gives the same findings.

[^45]:    ${ }^{10}$ We see that the relationship FJ/FM (that is to say. $215 \mathrm{~m} / 33.17 \mathrm{~m}$ ) $=6.481$.

