

27. Pius XI, *Ad Catholici Sacerdotii*, Rome, December 1938. See *Optatam Totius*, 5, *The Theological Formation of Future Priests*, 118, 119.

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GREEK INDEBTEDNESS TO THE AFRICAN PHILOSOPHICAL HERITAGE REVISITED

I. Udoidem

"The history of Black Africa will remain suspended in air and cannot be written correctly until African historians dare to connect it with the history of Egypt . . . For us the return to Egypt in every domain is the necessary condition to reconcile African civilization with history, to build a body of modern human sciences and to be able to renew African culture . . . Egypt will play the same role in the rethinking and renewing of African culture that ancient Greece and Rome plays in the culture of the West . . ." Cheikh Anta Diop.

The need to familiarize contemporary African intellectuals with ancient African contribution to knowledge is of crucial importance. In recent times, some concerned Africans like Yosef ben-zochannan, Cheikh Diop, Lancana Keita, Henry Olela and other Africans in the Diaspora like G.M. James, Ivan van Sertima (the executive editor, *Journal of African Civilization* — which is devoted to the documentation of African heritage) have done commendable researches in the area of African contribution to knowledge and science.¹ The critics of these works have argued that the claims are not only unfounded generalizations but that they lack documentary evidence. As a contribution to the efforts of these pioneering Africans, this essay undertakes a documentary and an organizational programme on the issue of Greek indebtedness to the African philosophical heritage. Attempt will be made to use what the Ancient Greek philosophers themselves have said about their indebtedness to justify the claim that Greek philosophers were indebted to Ancient African wisdom.

On the Origin of Philosophy

Philosophy in a very broad sense of the search for knowledge began with human consciousness, when man first raised the questions: 'what', 'why' and 'how'. The human mind was challenged to provide explanations for what it experienced. The human mind wondered about the immediate objects of experience that were bewildering. These included objects like the moon, sun, mountains, rivers, man himself and, of course, the origin of the universe. This state of wonder was followed by speculations and reflective reasoning. Philosophy at this stage took the form of a systematic search for the nature of things or explanation of what was experienced. Its main characteristic was *speculative*. Definitely not all speculations were sufficient explanations. Thus, when the various speculations were subjected to *critical analysis* to test the

ones that were plausible or sufficient explanation of the objects of experience, a new level of philosophising was reached, namely, the level of *analysis*. One can here infer that from the beginning of philosophy there have been three basic stages of philosophic activity — wonder, speculation and analysis. On how philosophy began, Aristotle wrote

For it is owing to their wonder that men both now begin and at first began to philosophize, they wondered originally at the obvious difficulties, then advanced little by little and stated difficulties about the phenomena of the moon and those of the sun and of the stars and about the genesis of the universe. And a man who is puzzled and wonders, thinks himself ignorant. . . .²

It is fairly evident from the above passage that it was the attempt to provide explanation and justification for that which was experienced that gave birth to philosophy. As to where this type of activity first began, Aristotle noted that it was in Egypt where the priestly caste had time for leisure and creative reflection that this special science (a systematic search for knowledge or explanation) first began. He wrote:

*When all such inventions (inventions related to the necessities of life and art) were already established, the sciences which do not aim at giving (physical) pleasure or at the necessities of the life were discovered, and first in the places where men first began to have leisure. This is why the mathematical arts (science of precise knowledge or philosophy) were founded in Egypt; for there the priestly caste was allowed to be at leisure.*³

Aristotle's claim that philosophy began in Egypt is supported by other ancient doxographical collections. For example, Thales who is the acclaimed founding father of Greek Philosophy is said to have studied in Egypt. One collection that testifies to this claim is that of *Aetius* which was compiled in the second century A.D. A passage from it reads:

*Thales. . . philosophesas de en Aigypto aelthen eis Miletos probutos. Aetius 1,3,1. "Thales . . . having practiced philosophy in Egypt come to Miletus when he was older".*⁴

Another such passage is from Proclus in *Euclidem*. It states:

*Thales de proton eis Aigypion elthon metegagen eis ten Hellada ten theorian tauten (sc ten geometrian). Euclidem p. 65 "Thales, having first come to Egypt, transferred this study (geometry) to Greece . . ."*⁵

The third passage from Plutarch reads:

*"Holmer also like Thales, made water principle and birth of all things through learning from the Egyptians" (Plutarch de is. et Osir 34, 364D)*⁶

The fourth passage from Herodotus II says:

*"It seems to me that geometry was discovered from this source (re-measurement of holdings after the Nile Flood) and so came to Greece" (Herodotus II, 109).*⁷

When Plato, the founder of the Greek academy was confronted by his students regarding the origin of the Mathematical science he replied:

*The story is that in the region of Naucratis in Egypt there dwelt one of the old gods of the country, the god to whom the bird called Ibis is sacred, his own name being Theuth. He it was that invented number and calculation, geometry and astronomy, not to speak of draughts and dice, and above all writing.*⁸

On the origin of the doctrine of the immortality of the soul which Western writers have always attributed to the Greeks, Herodotus II had this to say:

*The Egyptians are the first to have maintained the doctrine that the soul of man is immortal, and that, when the body perishes, it enters into another animal that is being born at the time, and when it has been the complete round of the creatures of the dry land and of the sea and of the air it enters again into the body of a man at birth; and its cycle is completed in 3000 years. There are some Greeks who have adopted this doctrine, some in former times, and some in later, as if it were their own invention; their names I know but refrain from writing down.*⁹

If the renown historian whose testimony is recorded above, is taken seriously, it is indisputable that the Egyptians were the first to propound the doctrine of the immortality of the soul and of transmigration of the soul and of re-incarnation. The reference that there were some Greeks who had appropriated these doctrines to themselves explains why ancient Greek philosophers had various doctrines that were either identical or very similar to those of the Egyptians.

St. Augustine of Tagaste (or of Hippo as he is popularly known), an African theologian and philosopher, writing in the fourth century A.D. in defence of Egypt as the original centre of philosophical search wrote:

*I must admit that certain peoples other than the Greeks, the Egyptians, for example had before Moses' time a certain body of learning which might be called their "wisdom". Otherwise, Holy writ could not have said that Moses was schooled in all the wisdom of the Egyptians.*¹⁰

On the origin of astronomy, Plato writing in about 400 BC. acknowledged that the Egyptians were the first to make a scientific observation of the heavenly bodies. He wrote:

" . . . the first observers were made so by the excellence of their summer climate, which in Egypt and Syria is so notable; they had a full view of the stars, we may say, all the year round, as clouds and rains are perpetually banished from their quarter of the

world. Their observations have been universally diffused, among ourselves as well as elsewhere, and have stood the test a vast, indeed incalculable, lapse of years.¹¹

In his own contribution in defence of Egyptian philosophical heritage, Sir Isaac Newton who had studied a great deal of ancient Egyptian astronomy, writing in the 17th century said:

*The Egyptians were early observers of the heavens; and from them probably, this philosophy was spread among other nations; for from them that it was, and the nations about them, that the Greeks, a people more addicted to the study of Philology than Nature derived their first, as well as soundest notions of philosophy.*¹²

These acknowledgements by both the ancient and modern philosophers go to confirm and even provide the clue to the mystery of the Dogon Wisdom about the heavenly bodies. The Dogon are a group of Africans located in the north central zone of West Africa in Mali Republic. A location that is approximately 200 miles south of the legendary Timbuctu University. A Study of their ritual ceremonies reveals that they had knowledge some 700 years ago of certain heavenly stars that modern science only discovered in the twentieth century. According to Hunter Adams:

*Every 60 years, when the orbital periods of the planets Jupiter and Saturn come into synchronization, a ceremony called the "Signi" is held and a new Hogon (priest) is chosen. Its purpose is the renovation of the world. This ceremony is related to the sirius star system. Sirius, called "Sigi tolo" by the Dogon (tolo means star), although it is important, is not seen as the basis of the system but as one of the foci of the elliptical Orbit of its tiny invisible companion star called "po tolo" (Sirius B).*¹³

According to the Dogon, the "po tolo" (Sirius B) though invisible is the most important star in the sky. It is the egg of the world, the beginning and ending of all things seen and unseen. The period of its orbit around Sirius (the visible one) is counted twice (50 each) that is 100 years. For the Dogon, Sirius B is not only the smallest type of star in the sky, it is also the heaviest. It consists of a metal the Dogon call "Sagala" which is a little brighter than iron and so heavy that all earthly beings combined cannot lift it.¹⁴

While some of what the Dogon have said about the heavens are yet to be confirmed by modern science at least today we do know that modern science has confirmed the existence of Sirius B. What has been a startling source of bewilderment to scientists today is how the Dogon came to that knowledge 700 years before it was scientifically proven. As noted by Kenneth Brecher, a physics professor at Massachusetts Institute of Technology (MIT), "the problem for us is how the Dogon could have known a host of astronomical facts, all of which are invisible to the unaided eye".¹⁵

There are possible explanations to the Dogon Wisdom. The first is that given the fact that the Dogon city was only 200 miles from the legendary University of Timbuctu, the Dogon city (a mountainous city) could have been an observatory centre for the university, where most of their astronomers did their observations of the sky. Even if this is accepted as a possible explanation, we still have the problem of explaining the source of the University astronomers. Another possible explanation is that advanced by Chancellor Williams. His claim is that, given, as the Dogon history has shown, that the Dogon traded heavily with the Egyptians, they could have inherited their knowledge of the heavenly bodies from them.¹⁶ However, whether the Dogon received their knowledge from the University of Timbuctu dons or from Egypt, we are still saddled with how the original Africans could have arrived at the astronomical knowledge. A possible clue is from an archeological artifact — a piece of ground glass which was used as lens in the 8th century B.C. in Egypt found in British Museum. And recently the Russians have discovered a crystal lens, perfectly spherical and of great precision, said to have been used in ancient Egypt.¹⁷

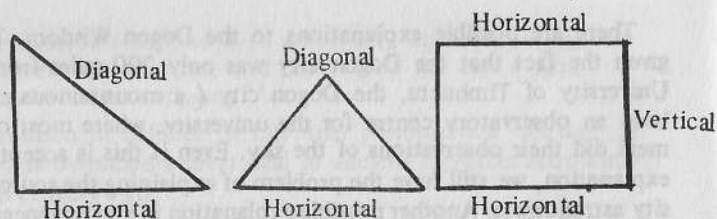
These recent discoveries and ancient acknowledgements of the Egyptians as the first astronomers testify to the fact that Egyptians and indeed Africans had developed a science that enabled them to gain access to the secret knowledge of the heavenly bodies before the Greeks.

Science and Mathematics

According to the Egyptians the immortal soul is one. Yet, this one soul is capable of taking many forms. From the doctrine of the one immortal soul, being capable of being represented in many forms the Egyptians developed the science of number. Just as the soul, though one, assumes different bodies and is manifested in the variety of human beings and other "souled" animals (Re: the doctrine of transmigration and re-incarnation), the number "one" can take different forms to give different and infinite numbers. For them "one" is "multiplicable", "addable" and "subtractable". "One" was regarded as a sacred number, a form of being that could only be represented by the symbol "I". The symbol "I" was understood to be the only composition of any number. The symbol could only be written in three ways: *vertically*, *horizontally* and *diagonally*. The combination of these motions gives the figures of all numbers and letters and the figure of a triangle the ancient mystery symbol. This is significant, for even today, the computer symbols, lettering and numbering is based on this notion.

FIG. I I II III IV V VI VII VIII IX X
 FIG. II 1 2 3 4 5 6 7 8 9 10
 FIG. III A B C D E F G H I J K L M N O P etc.

Fig. IV Vertical



With the development of the numeric science, number and symbols were put to use in the measurement of tidal waves before and after the Nile flood. Most likely for the purpose of determining the extent to which the Nile flood normally covers so as to ascertain how close people should farm or settle near the river and also for the purposes of channel and irrigation construction. As noted by Claudia Zaslavsky, "the flooding of the Nile River necessitated annual redivision of the land. Private ownership of land and the ability to produce a surplus of commodities enabled the owners to exchange their products for their private gain or to store them for future use. Thus arose the need for a system of weights and measures".¹⁸ From the science of measurement came Mathematical calculations where all measurements were calculated in relation to "one" – "I".

I, II, III, IIII, IIIII, etc.

I, I+I, I+I+I, I+I+I+I, I+I+I+I+I, etc.

The Ishango bone said to be 8,000 years old, which was discovered at Ishango on the shore of Lake Edward in Zaire which shows a calendrical or numeration system gives testimony to the above mathematical process.¹⁹

Plato in one of his Dialogues admired the mathematical ability of the Egyptians. While discussing how the educational programme in Greece should be modeled after that of the Egyptians, he wrote:

Well then, I maintain that free born men should learn of these various subjects as much as in Egypt is taught to vast numbers of children along with their letters. To begin with, lessons have been devised there in Ciphering for the veriest children which they can learn with a good deal of fun and amusement, problems about the distribution of a fixed total number of apples or garlands among larger and smaller groups, and the arranging of a successive series of 'byes' and pairs between boxers and wrestlers as the nature of such contests requires. More than this, the teachers have a game in which they distribute mixed sets of saucers of gold, silver, copper and similar materials or in other cases, whole sets of one material in this way, they, as I was saying, incorporate the elementary application of Arithmetic in the children's play, give the pupils a useful preparation for the dispositions, formations, and movements of military life as well as for domestic management, and make them more alert and more serviceable to themselves in every way. Then they go on to exercises in measurement of

length, surface and cubical content by which they dispel the native and general but ludicrous and shameful ignorance of mankind about the whole subject.

Clinias: And in what may this native ignorance consist?

Athenian: *My dear Clinias when I was told, rather belatedly, our condition in this matter, like you, I was utterly astounded. Such ignorance seemed to me more worthy of a stupid beast like the hog than of a human being, and I blushed not for myself alone but for our whole Hellenic world.*²⁰

Here Plato admits that the Hellenic world was ignorant of the mathematical science. It was only after he (Plato) had been to Egypt that he learned the science and when he founded his academy he emphasised mathematics and the education of the citizens as it is done in Egypt. His theory of education of the citizens as is found in the *Republic* is a carbon copy of what he saw in Egypt.

From what Plato has reported of how mathematics was taught in Egypt, one can confidently assume that the first part of the mathematics to have been developed were Arithmetic and Geometry. The former featured the addition and subtraction of numbers while the later took the form of triangle and bounded surface constructions. With these two mathematical sciences, the foundations for all technology, architecture and astronomical calculations were laid. The science of measurement and calculation was applied in the technique that led to the construction of the pyramid. Attempts to calculate the specific distance or length of the shadow of the Pyramid (whose varied distances were used to calculate or determine the various and specific times of prayer in the day) in number, led to the development of the mathematical calculation that is often referred to as the Pythagoras Theorem.

There are of course several theories as to how and why the theorem came to be named after Pythagoras. The most popular and perhaps the closest to the truth claims that due to the Egyptians belief that only the divine was capable of genuine, universal and true knowledge, they had the practice of not ascribing knowledge to any mortal man. This explains why there are no extant names as fathers of ancient African philosophy. This practice is still prevalent in most African societies. Most profound insights and wisdom are not attributed to any one person rather it is often prefaced by the saying: "As our fathers say . . ." or "According to African wisdom. . .". Thus no one person or human being is a possessor of wisdom. Wisdom or true knowledge belongs either to the gods or to the community as a corporate body. In the tradition of this practice, even though the calculation of the said theorem was developed by Aahmes, an Egyptian priest²¹, it was never attributed to him by name. But when Pythagoras who himself, a student of the Egyptian mystery school, returned to Greece and became a tutor in this mathematical science, it became a custom among the Greeks to regard this teaching as the

Pythagoras' Theorem. No where in ancient writings did Pythagoras claim that he was the originator of this science, rather he did admit that he acquired his wisdom from Egypt where he stayed for twenty-two years.²² The most common observation made by Western scholars about the nature of the Egyptian mathematical activities is that it was more of a practical inclination than a speculative endeavour. Thus the Western scholars developed the theory which claims that the theorem is ascribed to Pythagoras because he was the one who developed, systematized and provided the theoretical basis for what he saw the Egyptians practice. But the question is: how can a science that brought about such a monumental achievement like the building of the Pyramid be devoid of any theoretical foundation? What's more, given that mathematics is a science that deals with the second level of abstraction, it is hard to accept the Western scholar's argument that the Egyptians were more practitioners and not theoreticians. The type of reasoning advanced by these Western scholars sounds like one of those academic dishonesties of not wanting to give credit to Africans where they deserve it. However, which ever view one holds, it is certain that Pythagoras learned of mathematical science from the Egyptians.

Theory of State

The Egyptian world from ancient historical evidence, and from all archeological and anthropological studies is noted to have been an aristocratic society characterized by the class system. The record of the ancient Egyptian Dynasties which date to at least 4000 B.C. gives testimony to the nature of statecraft that functioned in ancient Africa. Even the Biblical record (the story of Joseph and the Israelites in Egypt), is a documentation that reveals the structure of Egyptian society as of that time. In describing the structure of the Egyptian society Plato wrote:

*In the first place, there is the caste of priests, which is separated from all others; next, there are the artificers, who ply their several crafts by themselves and do not intermix, and also there is the class of shepherds and of hunters, as well as that of husbandmen. And you will observe, too, that the Warriors in Egypt are distinct from all the other classes, and are commanded by the law to devote themselves solely to Military pursuits.*²³

Here Plato identifies four major class distinctions in the Egyptian society, namely the priests, the artificers, the shepherds and the warriors.

The priests according to Aristotle in Book One Chapter One of his *Metaphysics* were a special group of people who devoted themselves to reflective investigation into the secret mysteries of life. Philosophising was their special trade. It was generally believed that they possessed some divine spark and by virtue of their vocation and learning could communicate directly with the divine. Having divine association they were regarded as having a share in

divine wisdom. It was their responsibility to function as a go-between, between the divine and human beings. They were to work side by side with the rulers to give them direction on the divine will as to how the human society should be administered.

The artificers or Kings were believed to be the direct descendants of the gods. They too had a share in divine wisdom but because they were pre-occupied with state-craft they had very little time for philosophic search. They were entrusted with the care of the society.

The group described as the shepherds also included the craftsmen, hunters and the husbandmen. Sometimes they were described as the "peddlers" meaning the worker-abouts. In contemporary expression we would say the labourers. Their main duty was to care for the economic needs of the society through farm work.

The fourth group were the Warriors. These were able bodied citizens who had the task of entertainment by physical exercise. Such exercises took the form of self defence against an aggressor as in wrestling. This form of athletic activity in the form of self defence often reached its high point in time of external aggression or war, when the professionally able bodied citizens were called upon to defend the city against the enemy. In contemporary language these would be described as the soldiers.

This structural arrangement in the society was highly hierachical. Each group was seen as an essential part of the society whose function was necessary if the society was to remain organized.

Plato modeled the structure of his ideal society in his *Republic* after his Egyptian experience. He argued that such a society must comprise of:

1. Philosophers — (Philosopher-Kings)
2. Guardians — (Kings)
3. Soldiers
4. Masses — (artisans).²⁴

There is so much similarity between the structure of the ancient Egyptian society and the ideal state proposed by Plato in his *Republic* for one not to believe that Plato was attempting to propose a model for the Greek society after what he experienced in Egypt.

On the Written Word

One of the crucial criticisms often labelled against the ancient Africans is that they left little or nothing in writing about their wisdom. Such criticisms reflect a lack of knowledge of ancient African's attitude to the written word. If the ancient Africans did not write much, it was not an historical accident rather it was a result of their philosophical attitude to the written word. And in cases where things were written down, they had reasons for not making the written works available to the general public. A reading of some passages in Plato's *Phaedrus* provides a clue to the Egyptian philosophy of the written

word. The text reads:

The story is that in the region of Naucratis in Egypt there dwelt one of the old gods of the century, the god to whom the bird called Ibis is sacred, his own name being Theuth. He it was that invented number and calculation, geometry and astronomy, not to speak of draughts and dice, and above all writing. Now the king of the whole country at that time was Thamus, who dwelt in the great city of Upper Egypt which the Greeks call Egyptian Thebes. To him came Theuth, and revealed his arts, saying that they ought to be passed on to the Egyptians in general. . . . When it came to writing Theuth said Here O King is a branch of learning that will make the people of Egypt wiser and improve their memories; my discovery provides a recipe for memory and wisdom. But the king answered and said, 'O man full of arts, to one it is given to create the things of art, and to another to judge what measure of harm and of profit they have for those that shall employ them. And so it is that you, by reason of your tender regard for the writing that is your offspring, have declared the very opposite of its true effect. If men learn this, it will implant forgetfulness in their souls, they will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves but by means of external marks. What you have discovered is a recipe not for memory but for reminder. . . .

Phaedrus: . . . *I agree that the man of Thebes is right in what he said about writing.*

Socrates: *Then anyone who leaves behind him a written manual, and likewise anyone who takes it over from him, on the supposition that such writing will provide something reliable and permanent, must be exceedingly simple-minded;*

Phaedrus: *Very true*

Socrates: . . . *The painter's products stand before us as though they were alive, but if you question them, they maintain a most majestic silence. It is the same with written words; they seem to talk to you as though they were intelligent, but if you ask them anything about what they say, from a desire to be instructed, they go on telling you just the same thing forever. And once a thing is put in writing, the composition, whatever it may be, drifts all over the place, getting into the hands not only of those who understand it but equally of those who have no business with it.*²⁵

From the above citation it is glaringly evident that according to Plato, the Egyptians were the inventors of the art of writing. But the question is, how could a people who invented the art of writing not have written down their wisdom? The answer is that the ancient Egyptians did write their wisdom,

but because they considered such body of knowledge sacred, they treasured it in the temples only to be handled by those tutored in the art. Besides, since the written word according to Thamus the Egyptian King, was not only capable of misleading the simple-minded but its use limited and impeded human creativity and insight, the Egyptians thought it wise to keep the written word away from those who had no business meddling with it. It was not until the conquest of Northern Africa in 332 B.C. by Alexander the Great that Aristotle, who was Alexander's personal tutor, had access to the temples and the secret writings from which he compiled what came to be known as *Aristoteles Corpus* and that the Egyptians' secret wisdom became a public material.

It is interesting to note here that Socrates' suspicion of the written word and his refusal to write any philosophy had a direct bearing from the Egyptian attitude to the written word. It might also be noted with significance that the ancient Egyptian attitude to the written word is still being echoed in twentieth century writings. Walter J. Ong in his book, *Interfaces of the word*, wrote:

*It would appear that the technological inventions of writings, print, and electronic verbalization, in their historical effects, are connected with and have helped bring about a certain kind of alienation within the human life world. This is not at all to say that these inventions have been simply destructive, but rather that they have restructured consciousness, affecting men's and women's presence to the world and to themselves and creating new interior distances within the psyche.*²⁶

In another passage he adds:

*Oral utterance thus encourages a sense of continuity with life, a sense of participation because it is itself participatory. Writing and print, despite their intrinsic value, have obscured the nature of the word and of thought itself, for they have sequestered the essentially participatory word — fruitfully enough, beyond a doubt — from its natural habitat, sound, and assimilated it to a mark on a surface, where a real word cannot exist at all.*²⁷

The Egyptians of old understood these very well when they argued that the written word "will implant forgetfulness in their souls, people will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, but by means of external marks." Thus the Egyptian king rejected the written word as a source of wisdom. In its place he emphasised the role of individual memory and creativity within the context of communal discussion as the source of wisdom.²⁸ To re-echo this ancient practice, St. Augustine of Tagaste, a north African philosopher, writing in the 4th century A.D. said: *Noli foras ire in te redi, interiore homine habitat veritas*, "Do not wish to go out, go back into your-

self. Truth dwells in the inner man".²⁹

Despite these copious citations and textual evidence in support of Egypt as the original centre of philosophical search, several Western scholars have tried to deny any Greek indebtedness to Africa's philosophical heritage. Even if their denial were worth a grain of salt, there is still a curious phenomenon surrounding Thales and other ancient Greek philosophers and their relationship to Egypt and other African cities like Alexandria and Ethiopia. Most history of philosophy texts do admit that the early Greek philosophers travelled to Egypt. The question could be raised then as to whether they went to Egypt as teachers to teach in Egyptian schools or as students to study in the secret centres of wisdom. If they went as teachers, then one would be justified to claim that at least there were existent philosophical centres in Egypt prior to the advent of Greek masters. If they went as students, then Egypt must have already been a renowned centre of learning which attracted students from all over the Mediterranean environs including Greece. However, from the evidence from the doxographical collections and the testimony of Aristotle and Plato, it is more reasonable and plausible to conclude that the ancient Greek philosophers studied philosophy, mathematics and science in Egypt.

Conclusion

The aim of the paper was to give some documentary evidence for the claim of Greek indebtedness to African philosophical heritage. The paper focused mainly on what the ancient Greek philosophers themselves said concerning their indebtedness.

On the origin of philosophy, the paper cited Aristotle's assertion that philosophy began in Egypt among the priestly caste. Other passages from Homer, Thales, Plato, Herodotus and St. Augustine were also cited in support of the Egyptian origin of philosophy and Greek philosophers' indebtedness to Egyptian wisdom especially in the areas of philosophical doctrines, mathematics, science and the theory of State.

On the origin of mathematics or the science of numbering and measuring, the paper traced it to the Egyptian notion of one immortal soul. Just as the one immortal soul can assume different bodies and is manifested in the variety of human beings and other "souled" animals, the Egyptians believed that the number "one" can take different forms to give different and infinite numbers. For them, "one" is multiplicable, addable and subtractable, and can only be represented by the symbol "I". The symbol I was understood to be written in three ways: vertically, horizontally and diagonally. The combination of these motions gives the figures of all numbers and letters and the figures of a triangle — the ancient mystery symbol. With the development of the numeric science, number and symbols were put to use in the measurement of tidal waves before and after the Nile flood. From the science of measurement came mathematical calculations where all measurements were

calculated in relation to "one" — "I". Thus the science of measurement and calculation was applied in the technique that led to the construction of the Pyramid. Attempts to calculate the specific distance or length of the shadow of the Pyramid (whose varied distances were used to calculate or determine the various and specific times of prayer in the day) in number, led to the development of the Geometric calculation that came to be known as Pythagoras Theorem. From this it could be seen how Greek mathematicians like Pythagoras were indebted to Egyptian science.

On the theory of State, the paper compared the class system in the ancient Egyptian society to the structure of Plato's ideal society in the Republic. Because of the one-to-one similarity between the structure of the two societies, and the fact that Plato himself had admitted having travelled to Egypt, the paper concluded that Plato must have based his theory of State on what he experienced in Egypt.

In responding to the criticism that ancient Africans left little or nothing in writing about their wisdom, the paper argued that the refusal of ancient Africans to make public their written work was not a historical accident, rather it was a result of their philosophical attitude to the written word. Even though the Egyptians were the inventors of the art of writing, they treasured written wisdom in the temples only to be handled by those tutored in the art. Besides, since the written word was considered not only capable of misleading the simple-minded, but its use limited and impeded creativity and insight, the Egyptians thought it wise to keep the written word away from those who had no business meddling with it. It was this hidden body of knowledge that Aristotle inherited during the invasion of North Africa by Alexander the Great. So, according to George G. M. James, what is now known as Aristotle's *corpus* can be viewed as a stolen legacy.

In conclusion, the paper argues that on account of all the textual evidence from the Greek philosophers themselves and the logic of relationship between the ancient Greek philosophers and the Egyptian schools, it is reasonable to conclude that the Greek philosophers owed a great deal to the ancient African philosophical heritage.

REFERENCES

1. Some of the most noted works in this area include, Cheikh Anta Diop, *The African Origin of Civilization: Myth or Reality*, Lawrence Hill & Co., Westport, 1974; George G. M. James, *Stolen Legacy*, Philosophical Library, New York, 1954; Lancana Keita, "The African Foundations of Greek Philosophy", *African Philosophy*, Richard Wright (ed.), University Press America Lanham, 1984, pp. 57-76; Henry Olela, "The African Foundations of Greek Philosophy", *African Philosophy*, Richard Wright (ed.); Innocent C. Onyewuenyi, *African Origin of Greek Philosophy*, Black Academy Press, Owerri, 1986; Ivan van Sertima (ed.), *Egypt Revisited* (1983), *Blacks in Science* (1984), *Nile*

- Valley Civilizations (1985), *African Presence in Early Europe* (1986), *Great African Thinkers* (1986) all published by Transaction Books, New Brunswick (U.S.A.).
2. Aristotle, "Metaphysics" Bk. 1, ch. 1, 982b 12-24, translation from *The Basic Works of Aristotle*, by Richard McKeon, Random House, New York, 1941.
 3. *Ibid.*, 981b 19-24.
 4. The translation is from *The Presocratic Philosophers* by G. S. Kirk and J. E. Raven, Cambridge University Press, London, 1981, p. 76.
 5. *Ibid.*
 6. *Ibid.*, p. 77.
 7. *Ibid.*
 8. Plato, "Phaedrus", 274c-d. Translation from *The Collected Dialogues*, by Edith Hamilton and Huntington Cairns, Princeton University Press, New Jersey, 1961.
 9. Kirk and Raven, *Op. Cit.* p. 222.
 10. St. Augustine, *City of God*, Bk. XVIII, ch. 37, edited by Vernon J. Bourke, Image Books, New York, 1958, p. 404.
 11. Plato, "Epinomis", 987a-d, translation from *The Collected Dialogues* by Hamilton & Cairns.
 12. Isaac Newton, *Principia*, trans. by A. Motte, Revised and edited by F. Cajori, University of California Press, Berkeley, 1960, p. 549.
 13. Hunter H. Adams III "African Observers of the Universe: The Sirius Question" in *Blacks In Science* by Ivan van Sertima, Transaction Books, New Brunswick (U.S.A.), p. 29.
 14. *Ibid.*
 15. Kenneth Brecher, "Sirius Enigmas", *Technology Review*, December 1977, p. 59.
 16. Chancellor Williams, *The Destruction of Black Civilization*, Third World Press, Chicago, P. 210; See also Brecher, *Technology Review*, p. 61.
 17. See Camille Flammarion, "The Companion of Sirius", *The Astronomical Register* No. 176, August 1877, cited by Adams in *Blacks in Science*, p. 41. See also Tompkins, *secrets of Great Pyramids*, Harper Colophon edition, New York, 1978, p. 219.
 18. Claudia Zaslavsky, *Africa Counts*, Lawrence Hill & Co., Connecticut, 1973, p. 20.
 19. *Ibid.*, p. 19.
 20. Plato, "Laws" 819b-e, translation from *The Collected Dialogues*, by Hamilton & Cairns.
 21. The Aahmes' Papyrus dates to about 2000-1700 B.C., See Will Durant, *The Story of Civilization*, Vol. 1, Simon and Schuster, New York, 1954, p. 180. For further discussion on how Aahmes developed Geometry, see Beatrice Lumpkin, "Mathematics and Engineering in the Nile Valley", *Nile Valley Civilization*, edited by Ivan van Sertima, 1985, pp. 102-111.
 22. See Richard Wright (ed.) *African Philosophy* p. 80, 87. See also Kirk and Raven, *The Presocratic Philosophers*, p. 223, Note 271; See Ivan van Sertima (ed.) *Nile Valley Civilization*, pp. 67-77.
 23. Plato, "Timaeus", 24a-b, Translation from *The Collected Dialogues* by Hamilton and Cairns.
 24. Plato, "Republic", Bks. II-VI.
 25. Plato, "Phaedrus", 274c-275e, translation from *The Collected Dialogues*.

26. Walter J. Ong, *Interfaces of the Word*, Cornell University Press, Ithaca, 1977, p. 1
27. *Ibid.*, p. 21.
28. For a detailed analysis of the relationship between Memory and Creativity, see Udoidem, "Epistemological Significance of Proverbs. . .", *Presence Africaine*, No. 132, 1984, pp. 131-135.
29. St. Augustine, *De Vera Religione*, 39, n. 77.

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