

Mathematics

Supreme Mathematic, African Ma'at Magic

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The author of *Supreme Mathematic, African Ma'at Magic* (2011) is African Creation Energy (ACE), which is the brainchild of Osiadan Borebore Oboadee. He is a technologist and says the following to describe ACE:

African Creation Energy can scientifically be defined as the Work, Effort, Endeavors, and Activities of African people that cause a change. African Creation Energy is The Energy, Power, and Force that created African people and that African people in turn use to Create. African Creation Energy has been called by many different names amongst many different groups of people throughout time. African Creation Energy leads to Liberation, Survival, and Well-being when applied properly and positively by the people (Oboadee, 2021, p. 1).

Concomitantly, ACE focuses on the creative implementation of “African science, technology, engineering, and mathematics” (STEM). It is therefore perceived as representing “African spirituality, liberation, and self-determination.” In addition to the book reviewed here, ACE has also authored many other books (ACE, 2021).

Book Review

The book's goal is to demonstrate that Mathematics originated in Africa. The attendant objectives are (a) to manifest the nexus between African and modern mathematical objects, terms, and concepts; (b) to reveal how African mathematical methods can be employed to solve particular problems that cannot be easily solved by Eurocentric mathematical methods; and (c) to exhibit the great significance that Ancient Africans placed on Mathematics to solve problems, establish truth and order (*Ma'at*), and apply knowledge to establish systems and technologies needed for survival and wellbeing (ACE, 2011). In order to do all this, the book is divided into nine chapters.

Chapter 1 presents various definitions of Mathematics. The connotations include (a) the perspective of Africans' invention of Mathematics as an intellectual and scientific tool to systematically study and understand nature; (b) the formal definitions of Mathematics as the use of rigorous deductive reasoning and symbolic objects to investigate change, form, magnitude, multitude, space, and structure in order to uncover patterns, discover solutions, draw conclusions, and manifest truth; and (c) the modern scientific description of Mathematics as a “formal science” to distinguish it from the “natural sciences” such as Biology, Chemistry, and Physics. The main thesis of this chapter is that since nature is comprised of space/vacuum, matter/energy/ and time/existence, African Mathematics entails a systematic analysis of every

aspect of nature. Thus, African mathematical objects include many of the gods and goddesses like Heka, Ma'at, Ptah, Re, and Tehuti, with their associated signs and symbols (ACE, 2011).

In Chapter 2, the discussion is about the African genesis of Mathematics. The chapter begins by showing how the Greek tale of "Prometheus steals Fire" that found its way into the Biblical story of the Serpent, equated with Lucifer the Light or Torch Bearer in the Garden of Eden who convinced Adam and Eve to eat from the "Tree of Knowledge" which God had forbidden them not to do, has its origin in the story of Obassi/Abassi Osaw of the Efik people in Niger and Nigeria. Next, the origin of the term Mathematics is shown to have been derived from the Ancient Kemetian/Egyptian Tehuti, the deity of thought, knowledge, wisdom, writing, science and mathematics who was the husband of Ma'at, the Kemetian goddess of truth, justice, order, balance, and divine wisdom. Tehuti was in charge of transforming into action the will of the sun god Ra. Thereafter, the earliest exemplars of Mathematics found in Africa are reviewed. They include the 37,000-year-old Lebombo Bone with the 29 notches similar to calendar and tally sticks; the 20,000-year-old Ishango Bone for sequential numbering of prime numbers and the development of a numeral system that preceded the binary-based multiplication method of Ancient Kemet; the so-called Moscow Papyrus (2000 BC), Kahun Papyrus (1825 BC), Berlin Papyrus (1800 BC), Reisner Papyrus (1800 BC) and Rhind Papyrus (1650 BC) mathematical texts; the Akhmim wooden tablet (2000 BC), and the Kemetian mathematical leather roll (1850 BC) (ACE, 2011).

The third chapter examines the number systems of Africa that are employed as methodological and systematic ways to quantitatively demonstrate written, spoken, or other forms of communication. Explored here are African decimal numbers of the tally mark varieties, Yoruba, Igbo, Mande Malinke, Efik, Akan (Twi) and the Chokwe; African decimal powers of 10; African binary base-2, base-5, base-6, base-10 and vigesimal base-20 systems; and the Eye of Horus Kemetian binary system. The essence of this chapter is demonstrating that an African mathematical system is a systematic way of indicating quantities either as written symbols, spoken words, or some other form of communicating. For example, the African vigesimal base-20 number system can be employed to mathematically to calculate statistics, probability, or that which is probably false or probably true (ACE, 2011).

Chapter 4 interrogates the Mathematics of the deity Ma'at who, as aforementioned, constitutes the concepts of truth, justice, order, balance, and divine wisdom, and how these notions are directly connected to the subject. For example, "Order deals with rank, priority, sequence, arrangement, symmetry, harmony, position, and importance. Order is established mathematically by way of 'Ordinal Numbers' using Mathematical Set Theory" (ACE, 2011, p. 53). Accordingly, analyzed in this chapter are the mathematical symbol of "Infinity," the mathematical fractal shape called the "Infinity of the Infinities," the Kongo Cosmogram *Dikenga*, the Dogon Cosmogram *Kanaga*, the Chokwe Cosmogram *Lusona*, various mathematical geometric patterns found in applied Ma'at techniques referred to as "Cosmetology," various modern mathematical symbols for Equality, Scales of Ma'at as a Kemetian symbol for Equality, solving equations as equivalent to determining Ma'at, the Kemetian creation deity Ptah (logic and reason) depicted standing on a four-sided platform which represented as Ma'at's truth and order, African logos or logical operators, a Boule (crystal lattice) diagram showing various Venn diagram combinations of logic operators in Boolean Algebra, and the 42 Laws or Negative Confessions of Ma'at (ACE, 2011).

In Chapter 5, probability as the "Mathematics of Myth" is explained. The focus in this chapter is on how probability and statistics have been utilized by Africans to mathematically investigate

the concepts that represent the premises of myth: i.e. approximation, assumption, chaos, doubt, guessing, percentage, prediction, probability, and randomness. Tendered here are various hieroglyphics for Nun—the Kemetian symbol for “chaotic waters”; Nunet—the Kemetian deity that symbolizes “primordial abyss”; and fractal shapes found in the African Kente cloth inspired by the weaving of a spider’s web. The postulate in this chapter is that myth is separated from Mathematics because the latter’s concepts are a group of thoughts that have been verified and proven to be actual, factual and true, while the former’s concepts are a group of thoughts that may be true or false. Accordingly, a degree of uncertainty underlies the concepts, ideas and tales of myths and mythology (ACE, 2011).

The sixth chapter looks at numerology as the “Myth of Mathematics.” Consequently, the chapter delineates how numerology is employed as a mental tool to discover the nexus between numbers and reality. The offerings in this chapter include the numerological systems of Pythagoras and other Ancient Greeks who studied Kemetian Mathematics, the Kabbalah Hermetic numerology traced back to the Kemetian deity Tehuti, the Asian I-Ching/Taoism numerology traced back to the African Ifa system of the Yoruba, and Clarence 13X’s “Supreme Mathematics” numerology system. Two things are vividly evident in the chapter. One is that numerology is a mental system utilized to determine a connection between numbers and reality, as mentioned earlier. The other is that the beliefs, ideas and hypothesis that are generated in numerology are denotatively the beginning stages of any mathematical concept. The concept must be capable of going through “rigorous deductive reasoning” for it to move from the realm of numerology to mathematical reality (ACE, 2011).

Chapter 7 broaches the mathematical objects of sacred geometry. These items comprise insignias, phrases, signs, symbols, and/or words utilized to typify the variety of abstract notions in Mathematics. Formulae, functions, groups, lines, numbers, points and shapes are examples of these mathematical objects. The chapter therefore talks about the golden spiral placement of the pyramids at Giza in Kemet/Egypt, the golden spiral construction of the Nubian pyramids in the Sudan, the mathematical expression of the Golden Ratio “As above, so below” in Kemet, the Kemetian Ankh symbol of “Eternal Life” that is the origin of the Greek letter Phi, the Akan Adinkra “Gaye Nyame” symbol that shows it is comprised of two logarithmic growth spirals that resemble the numbers 6 and 9, the opposite logarithmic spirals found in the headdress of the Ekpe (leopard) secret society of the Ekoi people of West Africa, and the Vesica Piscis shaped orbit of binary stars like Sirius A and Sirius B which are significant to the Dogon people of Mali (ACE, 2011).

The eighth chapter delineates what the author dubs “The MATH *of* Math and The MATH *in* Math” (italics added by me to highlight the subtle difference). The purpose here is to demonstrate the solidity of the meaning of Mathematics as the systematic inquiry of nature by using symbols to generate answers via punctilious deductive reasoning which, in turn, powers mathematical methods and thought processes. The different features of nature are therefore shown to be studied by employing algebra, calculus, geometry, logic, and probability as the fundamental tools for the many mathematical areas, each of which is subdivided and combined into different subjects. The main aim in this chapter is to delineate what is “Meta-mathematics”: i.e.. “the process of mathematically describing and writing mathematical reasoning of mathematical theorems and mathematical methods in symbols, words, syntax and notation” (ACE, 2011, p. 112). And, since the term “meta” denotes “beyond,” “Mata-mathematics” therefore means “beyond Mathematics” or “beyond the thought process,” which is, of course, the reasoning process (ACE, 2011).

Finally, Chapter 9 explicates the idea of “Nine to the Ninth Power of Nine: 9^9^9 ” that motivated the writing of the book reviewed here. Following the author, the idea is discussed in this chapter

...esoterically and exoterically to explain its significance to the act of Creation, as well as to the ancient African concept of Engineering called “Heka” or “Magic.” Considering that the symbol for the number nine (9) in the decimal numbering system is a Logarithmic Growth Spiral, and that Exponentiation is the Mathematical Operation of growth, it follows that the mathematical expression “*ninth to the ninth power of nine*” is esoteric mathematic symbolism for Growth and Creation (ACE, 2011, p. 110).

Indeed, as Chandan Chaurasia points out, “Ninth power of the ninth power of nine is the largest in the world of numbers that can be expressed with just 3 digits. The very task to compute it is staggering to the mind. The answer to this number will contain 369 million digits. And to read it normally, it would take more than a year. To write it down, you would require thousands of miles of paper” (2013, p. 1).

In light of the discussion in the preceding paragraphs, the strength of this book is that it brings together various aspects on the origin of African Mathematics from different sources to present a coherent holistic picture of the subject. The book’s weakness is twofold. First, it does not cite the sources from which the evidence presented were culled within the text. Second, many major sources such as the other books reviewed in this chapter are not included in the references section.

Book’s Greatness

A couple of facets support my determination that the book is great. One facet is that it has received a large number of references on the Internet. For example, a concentrated search on the Google search engine with quotation marks on the title of the book in order to isolate only those places where it is mentioned on July 16, 2022 revealed about 28,600 results in 0.49 seconds.

The other facet is that 315 verified buyers of the book from across the world via Amazon.com have rated it very highly as follows: 4.7 out of 5 stars; 5-star = 84%; 4-star = 10%; 3-star = 2%; 2-star = 1%; and 1-star = 2%. Verified buyers of the book have also written rave reviews about it on the Amazon.com website. To begin with, Dante writes:

I thought this book was excellent! I read it front to back in a few hours! It does an excellent job of connecting math to its African origins in terminology, thought and its development. This book doesn’t get technical in terms of math, which I liked. It focuses on the concepts of math versus the application of math (i.e. you won’t find math problems being solved), such as the numerical systems like base 10, binary, etc. I have two other books by African Creation Energy called “The Science of Sciences and the Science in Sciences” and the other is “9 E.T.H.E.R. R.E. Engineering.” I can’t wait to start reading them! (Amazon.com, 2021, p. 1).

Next, 24dude says the following:

Worth more than I paid for. I finished the book. It’s part of a trilogy to help people of

African descent open their minds and to liberate themselves from the western manipulation on the black mind. The book is a tool to show and empower the black body (you) with showing how and what mathematical concepts came from and how to apply it in your day to day life and problem solving. The book went into a deep dive into the mathematical concepts and where they originated (Africa) and a whole bunch of other stuff like talking about different deities and how they operate. Mostly the book wants you to make conclusions on your own, gives you a guide and not from someone else telling you what's right and wrong (Western society) (Black oppressive system). It's funny how this book came at the right stage of my growth because I appreciate it. Definitely a good read (Amazon.com, 2021, p. 1).

Also, Charles East says that it is a "good read." Z. K. Green urges: "Buy this book. It is worth it!" Infinite GODdness states: "I just started reading this one...So far so good!" Amazon Customer acclaims: "real deep." Sharon McElroy writes: "A very interesting read." T. Free lauds it as "Brilliant...! Proud owner. If not for yourself then a child to learn and grow from. A great place to start if you are new to book collecting. Clear explanations. Promoting Clear Understanding." Mr. S. Adeyemi characterizes it as "Interesting." According to Aaron Graham, it is a "Great book for gaining knowledge on the origins of mathematics and science." Kelly Holder remarks: "Thank u just wat I was looking for" (Amazon.com, 2021, p. 1).

Conclusions and Recommendations

Abdul Karim Bangura makes the following lamentation in his *African Mathematics: From Bones to Computers*:

Scholars and other professionals working in the field of Mathematics Education in Africa have identified a plethora of problematic issues in the endeavor. These issues include attitudes, curriculum development, educational change, instruction, academic achievement, standardized and other tests, performance factors, student characteristics, cross-cultural differences and studies, literacy, native speakers, social class and differences, equal education, teaching methods, knowledge level educational guidelines and policies, teacher associations, transitional schools, comparative education, other subjects such as Physics and Social Studies, skills development, surveys, talent, educational research, teacher education and qualifications, academic standards, teacher effectiveness, lesson plans and modules, teacher relationship, teacher characteristics, instructional materials, program effectiveness, program evaluation, African culture, African history, Black Studies, class activities, educational games, number systems, cognitive ability, foreign influence, inequalities, ethnicities, and fundamental concepts (2012, p. 1).

But, as Bangura also provides plenty of empirical evidence in his *The African Mother Tongue and Mathematical Ideas: A Diopian Pluridisciplinary Approach*, African languages exhibit all nine design features of the principal method of human communication (i.e. language) that can facilitate the domestication of mathematics for effective learning. These nine design features are "(1) mode of communication, (2) semanticity, (3) pragmatic function, (4) interchangeability, (5) cultural transmission, (6) arbitrariness, (7) discreteness, (8) displacement, and (9) productivity" (Bangura, 2020, p. 3).

The ACE book reviewed here has provided some of the preceding tools. Two recommendations are therefore suggested. First, a great deal of effort must be made to domesticate Mathematics Education in African mother tongues. Second, future researchers must engage in work that provides the missing tools and also strengthen those that already exist.

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