A few kilometers outside the modern city of Cairo, on a large, flat elevation at the edge of the Sahara overlooking the Nile, is the world’s very first architectural complex. Nearly 5000 years old, the centerpiece of this mind-boggling complex is a huge stepped pyramid surrounded by strange, temple-like structures. Aligned conspicuously towards the four cardinal directions, the whole mood of this strange place evokes, for lack of better words, ‘sacred architecture’ or, perhaps more aptly, ‘sacred astronomy’.” —from the Introduction

In this groundbreaking book, Egyptologist Robert Bauval and astrophysicist Thomas Brophy uncover the mystery of Imhotep, an ancient Egyptian superstar, pharaonic Da Vinci, Michelangelo, Galileo, and Newton all rolled into one. Based on their research at the Step Pyramid Complex at Saqqara, the book delves into observational astronomy to “decode” the alignments and other design features of the Step Pyramid Complex, to uncover the true origins and genius of Imhotep.

Imhotep the African is an archeological detective story. Bauval and Brophy make the case that the legendary Egyptian physician, architect, and astronomer Imhotep was not only an historical figure but that he was black. This remarkable book challenges many assumptions about life along the Nile, revealing a worldview and technology that was more sophisticated than anything previously imagined.”
—STANLEY Krippner, Ph.D., co-author of Personal Mythology

“Imhotep the African describes how Imhotep was the ancient link to the birth of modern civilization, restoring him to his proper place at the center of the birthing of Egyptian, and world, civilization.

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Praise for *Imhotep the African*

*Imhotep the African* is an archeological detective story. Bauval and Brophy make the case that the legendary Egyptian physician, architect, and astronomer Imhotep was not only an historical figure but that he was black. This remarkable book challenges many assumptions about life along the Nile, revealing a worldview and technology that was more sophisticated than anything previously imagined.

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“Bauval and Brophy have once again brought their keen intellectual and scientific skills to bear by examining an aspect of ancient history that contemporary Egyptologists have been either too afraid or too unwilling to investigate. *Imhotep the African* is the perfect sequel to *Black Genesis*, for it presents incontrovertible truths that will either be accepted on their merits or ignored for fear of exposing a house of lies built upon foundations of historical falsehoods. It is evident to many of their colleagues that Robert Bauval and Thomas Brophy are the dynamic duo of independent Egyptologists. They are to be commended for their scholarship and their dogged determination to present an honest assessment of historical events—even if it flies in the face of conventional dogma.”

—Anthony T. Browder, author and independent Egyptologist

Praise for *Black Genesis*

*Black Genesis* offers astounding new insights as Bauval and Brophy forcefully support, with hard data, the radical idea that Egyptian civilization was the outgrowth of a sophisticated Black African culture that existed thousands of years prior to the earliest known pharaohs. Their book is a must read for anyone interested in genuinely understanding the true origins of ancient Egypt and the dynamics of how civilizations develop.”

—Robert M. Schoch, Ph.D., author of *Voyages of the Pyramid Builders and Pyramid Quest*
“Readers of *Black Genesis* will never think of ancient Egypt in the same way again. Bauval and Brophy make the case that this venerable civilization was originated by Black Africans from the Sahara Desert and that the pyramids, the statues, and the hieroglyphs were the result of their knowledge and ingenuity. The authors trace the series of errors and misjudgments that have obscured the origins of this remarkable civilization. It is time for the record to be set straight, and *Black Genesis* is the book that may well do it. This is an authoritative, excellent, well-written book.”

—Stanley Krippner, Ph.D., professor of psychology at Saybrook University and co-author of *Personal Mythology*

“In *Black Genesis*, Bauval and Brophy combined their investigative skills to answer an obvious but often-neglected question, ‘who were the ancient Egyptians?’ With new astroarchaeological evidence they build a strong case for ‘the African origin of the pharaohs’ and have dramatically altered our understanding of the past.”

—Anthony T. Browder, author and independent Egyptologist

“Extremely dense and possibly groundbreaking, Bauval and Brophy make an honest case for a ‘very different story of the origins of ancient Egypt.’ Their scholarship is meticulous.”

—*Publisher’s Weekly*, June 2011

“. . . packed with revelations!”

—*Midwest Book Review*, July 2011

“The tales of the authors’ 2008 expedition and of explorers in the past century add to the enticing read.”

—*Nexus Magazine*, August 2011
“Recommended.”

—R. Fritze, Athens State University, Choice Reviews Online, October 2011

“Both authors are highly accredited researchers who have provided an incredibly detailed book examining the connection between the astronomy of the pharaohs and their Neolithic counterparts.”

—Fate Magazine, October 2011

“Black Genesis is a captivating, thought-provoking, utterly intriguing read that traces back the origins of the high civilization of ancient Egypt into deepest prehistory. Buckle your seatbelts for a rollercoaster ride.”

—Graham Hancock, author of Fingerprints of the Gods

**Praise for The Egypt Code**

“In *The Egypt Code* Robert Bauval unveils a sacred landscape, lost for thousands of years, and provides us, literally, with the key that unlocks ancient Egypt.”

—Graham Hancock, author of *Supernatural* and *Fingerprints of the Gods*

“Bauval’s arguments are very convincing. . . . They are practical, scientific views and they explain a lot that is otherwise difficult to understand. Most of all, this book is imbued with the sense of wonder that is essential for good science, plus the intrigue of a good thriller.”

—Popular Science
IMHOTEP
THE AFRICAN
ARCHITECT OF THE COSMOS

ROBERT BAUVAL & THOMAS BROPHY

disinformation®
Preface

A few kilometers outside the modern city of Cairo, on a large, flat elevation at the edge of the Sahara overlooking the Nile, is the world’s very first architectural complex. Nearly 5,000 years old, the centerpiece of this mindboggling complex is a huge stepped pyramid surrounded by strange temple-like structures, the lot contained inside a giant perimeter wall whose length is more than 1,500 meters. Aligned conspicuously toward the four cardinal directions, this strange place evokes a mood, for lack of better words, of “sacred architecture”—or, perhaps more aptly, “sacred astronomy.” No doubt something extremely potent took place here—certainly rituals of the highest order that somehow involved the cycles of the celestial bodies as seen through the eyes of a holy man or shaman. Amazingly, when one considers the extreme antiquity of this complex, Egyptologists know for sure who conceived it: Imhotep, the high priest of Heliopolis and vizier of King Netjerykhet/Djoser of the 3rd Dynasty in c. 2650 BC. And that, if the truth be told, is just about all they know with certainty. All else is educated guesses, speculation, and even fanciful thinking derived from later sources when Imhotep the man had been mythologized and even deified beyond recognition.

So who was this ancient Egyptian superstar—this pharaonic DaVinci, Michelangelo, Galileo, and Newton all rolled into one—whose very name still commands reverence and awe? From where or from whom did he acquire his vast knowledge of astronomy and the art of stone masonry? And perhaps more intriguing still, what was the real purpose of his Step Pyramid Complex at Saqqara? Is there embedded in it an encoded message? And if so, what? And from whom?

Much has been written and said about Imhotep, from scholarly theses to bizarre novels and movie scripts of pure science fiction. But the real person—his true origins, his race, the root source of his knowledge and genius—all seem lost forever in the mist of time. How does one go
about finding the truth about a man who lived 5,000 years ago? Where does one begin the search? There are no written papyri or inscriptions about Imhotep’s life that are contemporary or even near contemporary to him, except for his name and his royal titles inscribed on the podium of a broken statue found in the 1920s at Saqqara. So where can one look for more clues? Which stone remains unturned that may reveal the truth of this giant of a man?

There is one aspect of Imhotep’s life, perhaps the main aspect, that is often overlooked or, at best, trivialized by Egyptologists—his occupation as Chief of the Observers or Chief of the Astronomers, which, in today’s terminology, would be Astronomer Royal. This important occupation of sky-watching, when combined with Imhotep’s other roles as high priest of Heliopolis and vizier of the pharaoh, provides us with the means to “read” him, as it were, through the complex at Saqqara, which was designed to service the high occult rebirth rituals of pharaohs. Since 1984, I have argued that observational astronomy and a basic knowledge of the precession of the equinoxes should be incorporated into the science of Egyptology or, to be more specific, used to decode the sky religion and associated rituals found in the Pyramid Texts and incorporated into the religious architecture of the pyramid and temple builders of ancient Egypt. I applied this approach to the famous Giza pyramids in the 1990s with great success. I now want to do the same for Imhotep’s “Testimony in Stone” at Saqqara.

This was the daunting task I set myself. Knowing myself—and with so many other matters to attend to—I waited for something—a new discovery, new clues—to jumpstart the quest. As is often the case with such things, this came from a totally unexpected quarter.

In early December 2007, I received a phone call from a friend whom I had not heard from in years—Mark Borda, a businessman turned desert explorer. Mark called from his home in Malta to tell me of an amazing discovery he had made a few weeks earlier in Gebel Uwainat—an uninhabited mountain region in the remote southwest of Egypt’s Western Desert. Mark informed me excitedly that he had found hieroglyphic inscriptions on a boulder, which, on first analysis, showed that the ancient pyramid builders of Egypt had managed to travel to this distant place and meet with a previously unknown people—something that had so far been deemed
impossible by Egyptologists due to the total aridity of the region and the distance involved. Mark’s discovery changed all this. To me, however, it also meant that an important “missing link” had been found that could connect the ancient Egyptians to their true black-African origins. For now Mark’s crucial discovery could be linked with another all-important discovery made in 1997 by American and Polish anthropologists at Nabta Playa, a prehistoric site of great antiquity located some 100 kilometers due west of the Nile, but still 500 kilometers east of Gebel Uwainat.

At Nabta Playa, a plethora of mysterious man-made megalithic structures—stone alignments, stone circles, strange tumuli, and deep burials—were found to have astronomical alignments and symbolism closely resembling, if not identical to, that of the pyramid builders of Egypt. Was it from these mysterious megalithic stargazers that Imhotep derived his advanced astronomical knowledge and stone-shaping art? The question begged the answer.

No sooner had Mark hung up than I decided, there and then, to investigate this matter further. I had to see these hieroglyphic inscriptions for myself and, hopefully, find more clues in their vicinity that could help resolve this enigma. So I contacted an American colleague and friend from San Diego, author and astrophysicist Dr. Thomas Brophy, who had already carried out extensive research at Nabta Playa, and invited him to join me on an expedition into the Egyptian Sahara. Thomas, too, had a strong hunch that the Egyptian civilization was connected to a prehistoric African people who inhabited the Sahara thousands of years before the pharaohs. In 2003, Thomas had boldly gone on a solo expedition to Nabta Playa to obtain the precise coordinates of the stone alignments and had published his findings in a book, *The Origin Map*, as well as in peer-reviewed articles.

In early April 2008, Thomas and I set off from Cairo with a small convoy of 4-wheel-drive vehicles. We were guided by Mahmoud Marai, a professional desert guide who had been with Mark Borda when the Gebel Uwainat inscriptions were discovered. The story of this expedition and our findings are told in our book *Black Genesis* (Inner Traditions, 2011). In *Black Genesis*, however, we refrained from discussing Imhotep and his true origins because we wanted first to establish a firm foundation for our thesis. Later in the course of 2011, I had the opportunity to visit several times and do research at the Step Pyramid Complex at Saqqara. It was
then that Thomas and I reconnected to write the story of Imhotep based on our new research.

In *Black Genesis*, our approach was to apply our knowledge of observational astronomy and precession to “decode” the alignments and other design features of the Step Pyramid Complex. Slowly but surely, we began to enter the mind-set of Imhotep via his *opus magnum* in stone. As if immersed in a whodunit detective story, we followed the clues that took us on an exhilarating magical mystery tour that started at Saqqara and led us beyond its confines to temples in Upper Egypt—and ultimately, as we had suspected, to the stones of Nabta Playa and the black-African stargazers who had placed them there.

Throughout the rest of this book, for simplicity and ease of reading, we always use “we” when describing our travels, researches, and previous publications, even when the actual event involved only one or the other of us. For example, the visit to the Heliopolis area of Cairo (chapter 1) involved only myself and a small group, while the 2003 visit to Nabta Playa (chapter 4) involved only Thomas and a small group. If the actual referent is not obvious from the context, in essentially all cases it can be found in the references we cite.

Thomas and I are proud to have pooled our knowledge and experiences again in this quest for the truth of the origins of Egypt’s civilization. It’s a rewarding feeling that is not easy to describe. Our ultimate reward, however, will be that you enjoy reading our story as much as we enjoyed writing it.

—ROBERT BUAVAL, JANUARY 8, 2013

Why should we attempt to combine the rigors of the science of modern astronomy with the more art-like pursuits of Egyptology and biography? As synchrony would have it, I am drafting this on a very chilly American holiday—Martin Luther King Day—while President Barack Obama delivers his second inaugural address, echoing the words of MLK and offering a poetic route to an answer for that question: “We, the people, declare today that the most evident of truths—that all of us are created equal—is the
star that guides us still; . . . [T]o hear a King proclaim that our individual freedom is inextricably bound to the freedom of every soul on Earth.” Later in his speech, Obama continued to echo MLK by articulating the many ways in which “our journey is not complete” until we incorporate that “most evident of truths,” through our actions, into our worldview. The inextricable linking of the “I” that is “we” and the re-integration of the interior arts with the exterior sciences are the two axes of the integral mission to achieve a sustainable post-postmodern worldview.

I see our attempts in this current book as a small part of that great mission. Attraction to the modern pursuit of archaeoastronomy in general fits into that context as well. Something about the mysterious monuments of deep antiquity that our ancestors have left for us speaks to a time when the inner arts and the outer sciences were more fused—yet somehow more noble, even more aware, in ways that our modern rigid segregation of the inner and the outer blocks us from embracing. And clearly, Imhotep played a key role in bringing those noble truths of awareness into the earliest embodiments of human civilization. The current integral mission to bring together all the disciplines in pursuit of a more powerful, wholistic grasp of reality is a step forward toward completing our journey to reunite with the essence of our own origins. It is in that spirit that I joined Robert Bauval on our journeys to the remotest desert—on a mission toward the reality of our deep past. And in that spirit, I hope we bring to readers of this volume some of the results of those journeys—with both fidelity and enjoyment.

—THOMAS BROPHY, JANUARY 21, 2013
THE CITY OF THE SUN

Heliopolis: one of the most important cult-centers of the pharaonic period and the site of the first sun-temple, dedicated to the god Ra-Horakhty . . .

IAN SHAW AND PAUL NICHOLSON

The greatest center of magic in Egypt was probably the holy city of Heliopolis, the city of the sun, where the most ancient theology developed. Here were preserved numerous papyri, “magic” in the widest sense of the word, including medical, botanical, zoological and mathematical texts. Most Greek philosophers and savants travelled to Heliopolis to study some of that knowledge.

CHRISTIAN JACQ

A lonely obelisk stands in the northeast part of the modern city of Cairo. It represents Heliopolis, the most revered “center of learning” of the ancient world. Most Egyptologists believe that Heliopolis existed long before the pyramids. It was known as Innu by the ancient Egyptians; later, the Hebrews called it On; much later still, the Greeks gave it the current name of Heliopolis, which means “City of the Sun.” Today, local inhabitants call it Ain Shams, “Eye of the Sun.”

Egyptologists tell us that Heliopolis was headed by a high priest—the our mau, or Chief of the Observers—whose main function was to observe the night sky and the motion of the stars. One such high priest, indeed
the earliest known to us by name and the most revered, was a man called Imhotep, “He Who Comes in Peace.” So famous and admired was Imhotep that, during the latter part of the pharaonic civilization, he was venerated as a god. Later, the Greeks regarded him as the Father of Medicine, associating him with Asclepius and thus bestowing on him the unique position of being a historical human, not a king, who was officially deified. Imhotep even gained super-villain stardom status in Hollywood in 1932 in the original movie *The Mummy* starring Boris Karloff, and subsequently in the 1999 loosely remade blockbuster by Stephen Sommers starring Brendan Fraser. The latter grossed 415 million dollars and spawned several sequels—the 2001 *The Mummy Returns* and the 2004 *Revenge of the Mummy*—as well as many spinoffs like the *Scorpion King* and a series of novels, cartoons, and comic books. Second only to Tutenkhamun, or perhaps now even on a par with the boy-king, Imhotep holds a central place in modern pop culture, ranking in the Top 10 list of super villains thanks to Karloff and Fraser.

The truth, however, is that very little is known about Imhotep the man. Although he receives high praise from Egyptologists and historians alike and is often referred to as a genius—or the inventor of architecture, or the father of science—Imhotep’s true identity is really largely the subject of guesswork and speculation. In fact, as high priest of Heliopolis during the 3rd Dynasty of Egyptian kings, Imhotep’s name appears less than half a dozen times in contemporary texts. The recent academic work on the 3rd Dynasty refers to him in only seven of its 300 pages, with most of the information culled from writings long after Imhotep’s time. In short, one could say that Imhotep is a Jesus of deep antiquity—highly mythologized and eventually divinized, but with little or no contemporary archaeological or textual evidence to support the myth. The main reason for this huge lacuna is that Egyptologists have generally ignored one of Imhotep’s most important proficiencies: his highly advanced knowledge of astronomy.

**Imhotep and Heliopolis**

Imhotep’s architectural masterpiece, the fabulous Step Pyramid Complex at Saqqara, has for too long been studied as only that—an architectural masterpiece. But we have come to see it as an astronomical “manual” in stone. The Step Pyramid Complex, as we shall see in the coming chapters,
Model of the Step Pyramid Complex of Imhotep now in the auditorium of the Visitors’ Center at Saqqara.

View of the Step Pyramid Complex at Saqqara looking northwest.
is a sort of pharaonic “Da Vinci Code,” which, if properly understood and decoded, can take us into the mind and even the origin of the architect-astronomer genius who created it.

The first hint of this “Saqqara code” was given to us by Sir I. E. S. Edwards, one of the most eminent Egyptologists of the 20th century and widely acknowledged as the authority on Egyptian pyramids. The first time we met this affable scholar was in the summer of 1985 at his home near Oxford, where we had a long talk about pyramids. It was then, as we talked of the astronomy of the pyramids, that he referred to the new edition of his famous book *The Pyramids of Egypt*, the first edition of which appeared in 1947, the last in 1993. He pointed to this passage, which related specifically to Imhotep:

On the ground of internal evidence alone it has been deduced that the Pyramid Texts [dated c. 2300 BC] which refer to the stars had an independent origin from the solar spells and that eventually they were merged into the Heliopolitan doctrine. Imhotep’s title “Chief of the Observers,” which became the regular title of the High Priests of Heliopolis, may itself suggest an occupation connected with astral, rather than solar, observation. Here therefore may be the difference between the underlying purpose of the true and step pyramid, the latter being the product of a stellar cult and intended to enable the king to reach the astral heaven.³

Later, because of the overwhelming internal evidence of observational astronomy in the Pyramid Texts, Edwards preferred to translate Chief of the Observers as Chief of the Astronomers.⁴ He died in September 1996, long before we took up this hint and began to look carefully at the astral aspect of the Step Pyramid Complex.

In 2005, I moved from England to Cairo, and set up a study base near the Giza pyramids. From the balcony of my fourth-floor apartment, I had a view of the Great Pyramid. From the rooftop, I could easily see the majestic Step Pyramid at Saqqara, the principal legacy of Imhotep. The result of my 2005–2006 Egypt study was the book *The Egypt Code*, in which we showed how various aspects of the Step Pyramid Complex were designed according to “sacred astronomy”—i.e., astronomical observations incorporated into the architecture of a sacred complex.⁵
View from the rooftop of our apartment building in Cairo, with the Step Pyramid at Saqqara in the far distance.

View of the Great Pyramid from our apartment balcony in Cairo.
We will revisit this material in chapters 3 and 4 when we probe the Step Pyramid Complex and the Saqqara code. But first, we need to understand what went on at the cult center of Heliopolis and, more specifically, why it was that Imhotep was both high priest and master architect of the Step Pyramid Complex.

**El Massalah**

Today, the local Arabs call the spot where the temple of Heliopolis once stood *El Massalah*, the Obelisk. This is because the only visible thing that remains—other than a very small part of a temple’s foundation and a few pitiful broken statues—is a lonely free-standing obelisk. When the city of Fustat (medieval Cairo) was built by the Arabs starting in the late 7th century, the remains of the temples and buildings of Heliopolis were systematically ransacked and used as a quarry for building material. The few remaining artifacts are strewn outside a rickety wooden shed within a large open rectangular space known as *Tel el Hisn*, the Hill of the Horse, which is surrounded (“besieged” is a better word) quite literally by ugly apartment blocks built in the 1960s and 1970s during Nasser’s socialist era. Ancient Heliopolis is now an integral part of the Matareya district, swallowed by the ever-growing city of Cairo.

We vividly recall our first trip to Matareya, ancient Heliopolis, in March 1993. It was a time of turmoil when anti-government terrorists had set off makeshift bombs in central Cairo, one of which exploded inside a restaurant in Tahrir Square on February 26, killing two students at the nearby American University and injuring many others.
One week later, on March 5, we decided to visit the Egyptian Antiquities Museum in Tahrir Square. We reckoned that, with such low tourism, it would be an ideal opportunity to take photographs unobstructed by the usual throng of tourists. As we happily clicked away in the ground-floor gallery, we became aware of a commotion at the entrance of the museum. A congregation of impressive-looking Coptic bishops had come into the gallery with their bodyguards. Upon seeing us, one of the bodyguards, indicating that he was armed by placing his hand inside his jacket, shouted “no photos!” But one bishop, named Baba Moussa, asked who we were. After we explained that we were taking pictures for a book, he signaled his bodyguards to let us take all the photos we wanted.

![Robert Bauval with Ethiopian and Egyptian Coptic bishops in the Cairo Museum, March 1993.](image)

It was still early when we finished, so we decided to go to Matareya to take some photographs of the obelisk of Sesostris I (a 12th-Dynasty king) and whatever else remained of ancient Innu. The obelisk, 120 tons of solid granite towering some twenty meters, stands like a forlorn sentinel helplessly watching the ever-encroaching slums of Cairo. A beggar approached me with one palm outstretched and his other hand pointing at the obelisk and cried “el-massalah! el-massalah! Bakshish, bakshish!” We wondered if he, or indeed any of the locals today, were aware that this quasi-abandoned archaeological site was once the greatest center of learning of the ancient...
world, where scholars from as far off as Greece came to be tutored by the Egyptian priest-scientists of Innu. For thousands of years, luminaries like Pythagoras, Eudoxus, Cnidus, and even, it is said, the great Plato came to be taught the sacred sciences of ancient Egypt: geometry, mathematics, medicine, divination, and, above all, astronomy.

The various epithets given to Heliopolis make this more than evident—“the chosen seat of the gods,” “the horizon of the sky,” and “the sky of Egypt,” to cite but a few. Abdel-Aziz Saleh, a professor of Egyptology at Cairo University who spent many years excavating at Heliopolis, noted that “a number of high-priests of Ounu [Innu, Heliopolis] were individually entitled ‘He who discloses the secret of Heaven [sky]’ and the ‘Supervisor of the mysteries of Heaven [sky].’” 6

So important was Heliopolis as a seat of high learning that, even though some of the great scholars from Greece may not actually have made the journey to study there, their biographers nonetheless feigned that they had in order to enhance their scholarly prestige. Even Christ did not escape such a connection, for the district of Matareya was once an enclave of “Followers of Jesus,” later to become the Copts, the Egyptian Christians who fervently believe that the Holy Family received sanctuary at Heliopolis. The canonical gospel of Matthew in fact says that the Holy Family sought refuge in Egypt from King Herod’s campaign to kill all baby boys in Palestine. Indeed, to this day, just a few hundred meters

Edwin Long’s painting of the Holy Family in Egypt, inviting the connection between Isis and the infant Horus, and Mary and the infant Jesus.
down the road from el-Massalah, the small Church of the Holy Family stands, its interior walls decorated with scenes of the family entering on a donkey into the semi-ruined city of Heliopolis.

Remarkably, there is a superb painting by the 19th-century artist Edwin Long showing Joseph leading the donkey that carries Mary with the infant Jesus in her arms, while passing by a religious procession with an effigy of Isis carrying the infant Horus. Many historians of religion hold that the Isis-Horus myth was absorbed into Christian mythology and converted into the Mary-Jesus myth, complete with the astro-symbology of the Star of the East, a clear indication of the enormous influence that Heliopolis had on world culture.⁷

The guard at the small ticket office outside the Heliopolis archaeological site told us that it was closed. The fact that the guard was alone made it easier to offer the proverbial bakshish (bribe/tip) to be let inside. An Egyptian note equivalent to about two U.S. dollars did the trick. The area was littered with garbage, and there were ugly puddles of green sewage water around the ruins. A few broken statues were displayed on the floor outside the small shed. We focused on taking photos of the obelisk, then a few others of the surrounding ruins and broken statuary. Then we drove
to the nearby Church of the Holy Family. There, a friendly guard let us into the small but very moving church, and we took some photographs of the murals showing the Holy Family at Heliopolis.

The Bird of Creation and the Marking of Time

The Pyramid Texts comprise the oldest collection of ancient Egyptian religious texts, perhaps the oldest known texts in the world. They were found by French Egyptologist Gaston Maspero in 1881 and 1882, carved on the inside walls of 5th- and 6th-Dynasty pyramids at Saqqara. The oldest version is found in the pyramid of King Unas (last king of the 5th Dynasty, c. 2300 BC), which stands but a few hundred meters to the southwest of the earlier Step Pyramid Complex of Imhotep. The Unas pyramid has been closed since the late 1990s, but we managed to enter it several times between 1992 and 1995. On one occasion in December
1993, we spent several hours inside it filming a television documentary for the BBC’s Everyman series, *The Great Pyramid: Gateway to the Stars*, which aired on February 7, 1994.

There is a passage in the Pyramid Texts (Utterance 600) that speaks of Heliopolis in an intriguing way: “O Atum-Khoprer (the rising sun), you rose high on the heights, you rose up as the benben stone in the Mansion of the Phoenix in Heliopolis.” The *benben* stone was a very ancient and very sacred relic that was kept in the main temple at Heliopolis, called the Temple of the Phoenix (see Appendix I). But the most accredited translator of these texts, British philologist Raymond O. Faulkner, imposed the Greek word “phoenix” on the much older ancient Egyptian word *bennu*. The *bennu* was a magical bird that, according to the Egyptian Creation Myth, had appeared at the “first dawn of creation” to set time in motion by uttering a great cry that initiated life on earth. It is also evident that there is a word-play between *benben* and *bennu*, for both have the same etymological root, *ben*, and both are linked to the same ideas of creation and time. According to archaeoastronomer E. C. Krupp, the ancient priests of Heliopolis had interpreted an actual astronomical observation—not of the rising sun *per se*, but rather of the sun rising along with a very special star, the star Sirius:

> The world began in earnest there (at Heliopolis) when Sirius, the stellar signal for the Nile Flood, in its first return to the predawn sky, alighted as the bennu, the bird of creation, upon the benben and then took wings as the sun followed it into the heavens to bring light, life, and order to the cosmos.8

It is well known that the star Sirius, called Spd by the ancient Egyptians, was associated with the birth of Horus, the divine archetype of kings said to be born from the womb of the goddess Isis. It is also known that this star was used as a marker for calendric computations and especially to act as the starting point of the year—as well as to what is loosely termed the “Great Year,” but is more accurately referred to by Egyptologists as the *Sothic Cycle* (a name derived from the Greeks, who called Sirius Sothis).

When we speak of time, it is wise to note the words of archaeoastronomer R. W. Stoley. This astute scholar emphasized that “ultimately, our clocks are really timed by the stars. The master-clock is our earth, turning on its axis relative to the fixed stars.”9 Early humans lacked
mechanical devices to measure the passing of time. So they, and especially the ancient Egyptians, used the natural “clock” of our world—the earth itself or, to be more precise, the apparent perpetual cycle of the fixed stars as they “sail” from east to west every night. The priests of Heliopolis, as the Chief Observers, were responsible for this important function. And even though they may not have known that it was the earth’s own rotation and revolution around the sun that caused the apparent cycles of the stars, they, as we today, could observe the motions, record their duration, and therefore calculate the cycles.

Egyptologists are in agreement that, of all the stars that were observed by the ancients, one special star stood out above all others: Sirius (known as Alpha Canis Majoris by modern astronomers). Egyptologists have recognized how important the first dawn rising of Sirius, technically known as the “heliacal rising,” was to the Egyptians:

The importance of Sirius for the Egyptians lay in the fact that the star’s annual appearance on the eastern horizon at dawn heralded the approximate beginning of the Nile’s annual inundation which marked the beginning of the agricultural year . . . The Egyptian year was considered to begin on 19 July (according to the Julian calendar) which was the date of the heliacal rising of the dog star Sirius.
The Nile River overflows and floods the adjacent valley in Egypt every year at about the time of the Summer Solstice—the last week in June, according to our present Gregorian calendar. By a propitious coincidence, the star Sirius also rises in the east for the first time at dawn after a prolonged period of “invisibility” that lasts some seventy days. It is no wonder, therefore, that the early inhabitants of the Nile Valley saw a connection between the annual heliacal rising of Sirius and the annual inundation of the Nile. And since this event regenerated Egypt’s crops with rich detritus and fertilizers brought down from central Africa by the river, it is easy to see how this astronomical event was mythologized into the “birth of Horus” and, by extension, that of his earthly incarnation, the pharaoh.

A powerful and elaborate sky religion centered on the rebirth of kings among the stars gradually developed around, or at least fundamentally intertwined with, this one vital astronomical observation. It would also lead to the design and construction of “resurrection machines” in the form of the great pyramid complexes of the Old Kingdom, whose ultimate function was to bring about the transfiguration of the king’s lifeless body into a “living star” in the sky.12

The Sothic Cycle

It would have been relatively easy for the ancient Egyptians, or indeed anyone else for that matter, to count the days from one heliacal rising of Sirius to another and come up with the 365-day annual cycle. However, it was eventually noticed that, every fourth year, the heliacal rising was delayed by a day, so that this fourth year of the cycle had 366 days. This was called the tetraeteris by the ancient Greeks, and known to the Romans as the quadrennium.13 Today, this “extra day” is taken into account in our Gregorian calendar by having a “leap year” of 366 days once every four years. The leap year was introduced by Julius Caesar in the Julian calendar, which, interestingly, was designed for Caesar by an Egyptian astronomer, Sosigenes of Alexandria.

It seems clear that the ancient Egyptians were quite aware of the extra day in the yearly cycle but, for reasons that we shall soon see, did not adjust for it in their 365-day calendar, known as the civil calendar.
Today, we know that this extra day occurs because the solar year is not exactly 365 days long, but nearly 365\(\frac{1}{4}\) days. At any rate, Egyptologists and astronomers alike agree that the ancient Egyptians did not correct their civil calendar by introducing a leap year, in spite of the fact that they were aware that their calendar “drifted” a lot over time. The question, therefore, is why not? Here, however, is where Egyptologists and astronomers part ways. For the explanation that is self-evident to astronomers is generally rejected by modern Egyptologists—thus the Sothic Cycle debate.

The adoption of a civil calendar of 365 days without a leap year every fourth year meant that the calendar drifted from the true astronomical year at the rate of nearly one full day every four years. A simple calculation shows that this would create a cycle of \(365\frac{1}{4} \times 4 = 1,461\) years (or 1,460 years if the extra \(\frac{1}{4}\) day is left out). This, in a nutshell, is the calculated Sothic Cycle for a 365-day civil calendar or a 365\(\frac{1}{4}\)-day (approximate solar year) calendar. In reality, as we shall see in a later chapter, this value can vary by a few years when and if the cycle is actually observed—that is, its start and end dates are actually recorded. And to be precise, the solar
year, also called the tropical year, which is the precise time between one Vernal Equinox and the next is about 365.2422 days, while the sidereal year, which is the time it takes earth to return to the same relationship of the sun to distant fixed stars is about 365.2564 days. In Black Genesis, we show how the fact that the solar year is a bit shorter than 365¼ days and the sidereal year is a bit longer than 365¼ days makes the average Sothic year, which is a combination of the two, come out very close to 365¼ days. At any rate, the Sothic Cycle debate among academics is simply this: Many astronomers believe that the Egyptians had to be aware of it and even made use of it in their calendric computations, but contemporary Egyptologists don’t.

Much ink has been spilled in this Sothic Cycle debate. It is fair to say, however, that the previous generation of Egyptologists was quite open to the idea of the Sothic Cycle, while today’s Egyptologists reject it on the basis that there is no direct evidence to support the notion that the 1,461-year cycle was known, let alone used, by the ancient Egyptians. We shall unequivocally demonstrate in chapter 3 that the ancient Egyptians not only knew the Sothic Cycle, but also used it from the very earliest times.

**Polemics**

The first-century Roman historian Cornelius Tacitus, who consulted the works of Egyptian astronomer-priests, reported that the cyclical return of the Egyptian “phoenix”—i.e., the bennu—to Heliopolis was none other than the cyclical return of the heliacal rising of Sirius to its point of origin on the calendar, namely New Year’s Day:

The bird called the phoenix (bennu), after a long succession of ages, appeared in Egypt and furnished the most learned men of that country and of Greece with abundant matter for the discussion of the marvelous phenomenon [of its magical return] . . . it is a creature sacred to the sun . . . Some maintain that it is seen at intervals of 1,461 years, and that the former birds flew into the city called Heliopolis.  

Egypt, with her mysteries, seems to have exercised a special fascination on the imagination of Tacitus; he boasts of knowing her better than others.
British Egyptologist R. T. Rundle Clark also asserts:

Underlying all Egyptian speculation is the belief that time is composed of recurrent cycles which are divinely appointed: the day, the week of ten days, the month, the year (and) even longer periods . . . 1,460 years . . . in conjunction of . . . stars and inundation. In a sense, when the Phoenix gave out its primeval call it initiated all these cycles, so it is the patron of all divisions of time, and its temple at Heliopolis became the center of calendric regulation. As the herald of each new dispensation, it becomes, optimistically, the harbinger of good tidings.16

It seemed obvious to these experts, as it is also obvious to us, that the Sothic Cycle of 1,460 or 1,461 years, namely the calculated return of the heliacal rising of Sirius to its starting point in the calendar, was the same as the return of the mythical phoenix—i.e., the Egyptian bennu—that periodically returned to Heliopolis to begin a “new age.” And because the heliacal rising of Sirius symbolized the birth of Horus, the birth/rebirth of the pharaohs, earthly incarnations of Horus, was associated with this astronomical phenomenon.

We suppose, however, that pharaohs who happened to be born when a Sothic Cycle began were regarded as special, perhaps even messianic. In our book *The Egypt Code*, we argue that the birth of the pharaoh Akhenaten in c. 1356 BC coincided in his lifetime with the return of a Sothic Cycle and may have been the impetus for the dramatic religious reform he instigated. It is also possible that the birth of the 3rd-Dynasty pharaoh Djoser, whom Imhotep served as vizier and high priest, also coincided with such a return of a Sothic Cycle and, consequently, may have been the religious, intellectual, and creative impetus that brought about the Step Pyramid Complex.

*Censorinus*

If a Sothic Cycle ended and a new one began at intervals of 1,461 years, and if we know at least one of these start/end years, it should be relatively easy to work out when other Sothic Cycles begin by simply adding or subtracting increments of 1,461 years. As far as we can make out, however, the ancient Egyptians left us no records of such events.