

# **THE PYRAMIDS OF EGYPT**

## *An Analysis of the Best Theories*

*Compiled by Roger Waite*





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# Foreword

This book on the pyramids started off originally as a section within a much larger chronological work on Egypt and the Near East. I have been interested in theories regarding the pyramids for a long time and so while it did not directly connect with the chronological studies I was writing about I felt I couldn't write so much about Egypt without including some information about the pyramids.

I had a number of initial opinions about the pyramids regarding how they were built and when they were built and I was very surprised in the course of researching the subject further how my views changed in the process of writing this work on the pyramids. My views on how the Giza pyramids were built, who built them and when all changed as I studied the subject in greater depth.

Not only that I intended to only just focus on the pyramids but in the process of putting this together it feels like I have touched on just about every ancient mystery there is. That wasn't my intention but as I went through this I didn't feel that I could tell the full story of the pyramids without broadening the scope that includes many other ancient mysteries.

I have taken a very broad and interdisciplinary approach by analysing as many of the worthwhile theories that have been put out there. Even a casual search on youtube will acquaint the reader with quite a multitude of theories.

Those with a religious background will try to understand ancient mysteries from a biblical point of view. I'm admittedly one of those but I have tried to be balanced and present both secular and biblical viewpoints alongside of each other and let the reader decide.



# THE PYRAMIDS OF EGYPT

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# THE PYRAMIDS OF EGYPT

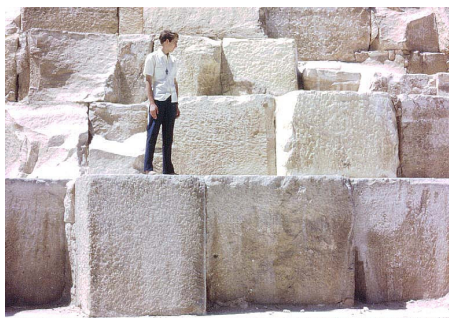
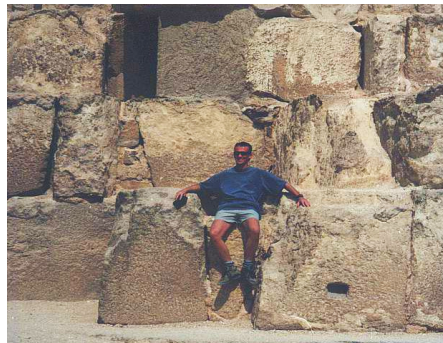
## Introduction

Egypt is best known for its pyramids, especially the pyramids in Giza of which the largest is the Great Pyramid. The pyramids of Giza are the best known of the pyramids in Egypt, however, there are dozens of pyramids in Egypt. The pyramids of Egypt can be grouped into three categories:

- 1) The pyramids of Giza
- 2) The stone pyramids built by the pharaohs of the Old Kingdom
- 3) The mud brick pyramids built by the pharaohs of the Middle Kingdom

There are some fundamental differences between the pyramids at Giza and the stone pyramids built by the pharaohs of the Old Kingdom:

- a) The pyramids at Giza are constructed entirely from hewn or cut and shaped stones all the way through, both inside and outside. The other stone pyramids that were built by the pharaohs of the Old Kingdom only have hewn or cut and shaped stones on their outside. The interior of these Old Kingdom pyramids are made of uncut stones or irregular sizes cemented together with mortar.
- b) There is a vast difference in size of the blocks used mostly in the Giza pyramids compared to the other stone pyramids that were built by the pharaohs of the Old Kingdom. The stone blocks of the Giza pyramids are much bigger and are between 3 to 6 feet high. The cut stones that make up the exterior of the other pyramids are only about 1 to 2 feet high. Additionally, the Great Pyramid has hewn granite blocks some 50 to 60 tonnes in weight that are used in the internal chambers.





- c) There is also a big difference in the height of the pyramids. The biggest pyramid outside of Giza is the Red Pyramid which stands about two-thirds the height of the two biggest pyramids at Giza.

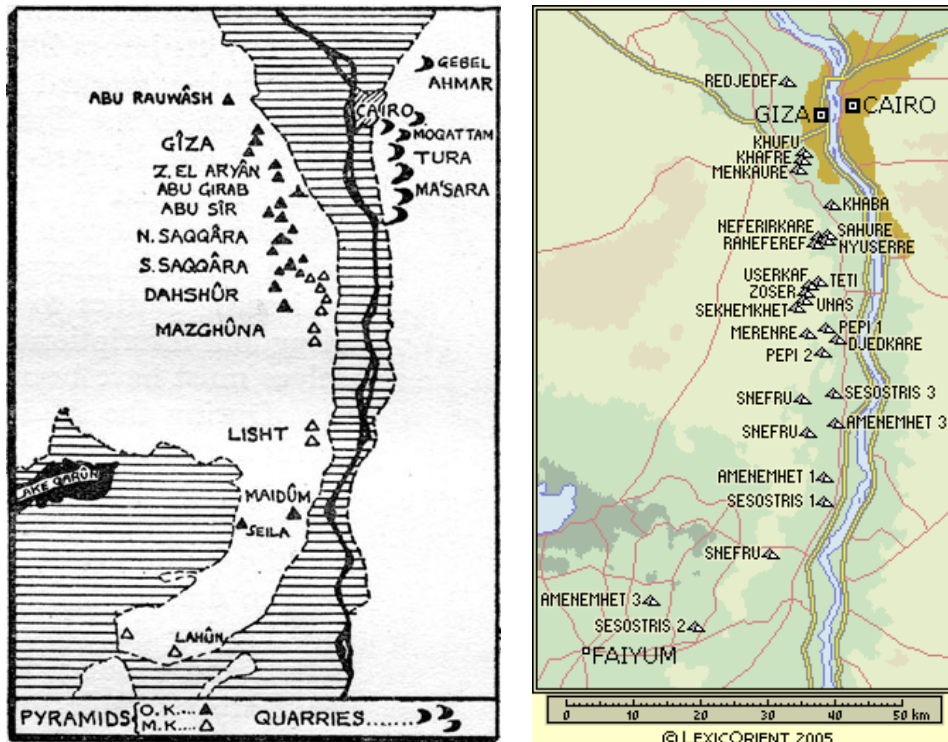
We'll spend the majority of time in this book exploring the mysteries of the pyramids of Giza but before we do I'd like to give an overview of the other pyramids of Egypt. We'll look at the stone pyramids that were built by the pharaohs of the Old Kingdom and then we'll look at the mud brick pyramids built by the pharaohs of the Middle Kingdom that are a proof of the time period that the Israelites were in Egypt.



# CHAPTER 1

## What and Where are the Pyramids in Egypt?

Below are a couple of maps showing where the main pyramids in Egypt are. The geographic dividing line between the pyramids of the Old and the Middle Kingdoms (as seen in the left map) is just south of Saqqara. Below this line are the mud brick pyramids of the Middle Kingdom with the exception of the three pyramids associated with Snefru of the 3rd dynasty.



According to the standard Egyptological viewpoint, the very first pyramid that was built was the Step Pyramid at Saqqara for the 3rd dynasty pharaoh Djoser by his vizier Imhotep. It stands 60 metres high which is a little over a third of the height of the Great Pyramid. That's approximately the height of a 20 story building. It was originally built as a single level mastaba for the burial of Djoser, according to Egyptologists, before Imhotep had a brain wave and added additional stepped layers to form a stepped pyramid, not that unlike the ziggurats of ancient Mesopotamia.

Every reference I have heard about the Step Pyramid says that it was only ever a stepped pyramid. This I found hard to believe when I visited the pyramid and walked around its base and found the remnants of these casing stones jutting out a few feet from the main body of the pyramid. It seems to me that it may well have been built as a true pyramid with smooth sides before either erosion or other builders robbed it of its all of its casing stones and what we are seeing is the inner core of the pyramid stripped of the original exterior. It may have began as stepped pyramid and then modified as a true pyramid before its exterior was later stripped away.



Surrounding the Step Pyramid are walls with temple and other stone structures within. Ron Wyatt has claimed that Joseph was Imhotep and that large storage areas within the complex are those constructed and used by Joseph to store and access grain during the years of plenty and famine. There is other evidence supporting Joseph living during the Middle Kingdom, not the Old Kingdom, and is possibly another vizier with similar titles bestowed on Joseph by his pharaoh. That said, these so-called grain pits, could have been used later by Joseph for that purpose.



Following Djoser in the 3rd dynasty was Sneferu. Depending on the interpretation, Sneferu is sometimes said to be the first pharaoh of the 4th dynasty. There are three pyramids associated with Sneferu. That there are three pyramids associated with him should throw a question mark over the constantly trotted out view that the pyramids were built as tombs for the pharaoh. Why build three if you can only be buried in one? The standard answer to that question is that there were problems with each one and so they moved onto building another till they got it right with the Red Pyramid.

The pyramid that most believe is the first of the three built is the Meidum pyramid, way south towards the great lake known as the Faiyum. It has three layers and a huge amount of stones surrounding its base very high. It is believed to have had its exterior collapse catastrophically during construction. Wikipedia has this to say about it:



The pyramid at Meidum is thought to have been originally built for Huni, the last pharaoh of the Third Dynasty and was continued by Sneferu. The architect was a successor to the famous Imhotep, the inventor of the stone built pyramid. He modified Imhotep's pyramid design in a way, which is likely to have caused the collapse of the pyramid in conjunction with the decision to extend the construction plan two times in a row, while the pyramid was already under construction...



The second extension turned the original step pyramid design into a true pyramid by filling in the steps with limestone encasing. While this approach is consistent with the design of the other true pyramids, a couple of fatal errors were made at Meidum. Firstly, the outer layer was founded on sand and not on rock, like the inner layers. Secondly, the inner step pyramids had been designed as the final stage. Thus the outer surface was polished and the platforms of the steps were not horizontal, but fell off to the outside. This severely compromised the stability and is likely to have caused the collapse of the Meidum Pyramid in a downpour while the building was still under construction...

The Meidum Pyramid seems never to have been completed. Beginning with Sneferu and to the 12th dynasty all pyramids had a valley temple, which is missing at Meidum. The mortuary temple, which was found under the rubble at the base of the pyramid, apparently never was finished. Walls were only partly polished. Two Steles inside, usually bearing the names of the pharaoh, are missing inscriptions. The burial chamber inside the pyramid itself is uncompleted, with raw walls and wooden supports still in place which are usually removed after construction...

Stones from the outer cover were stolen only after they were exposed by the excavations. This makes a catastrophic collapse more probable than a gradual one. The collapse of this pyramid during the reign of Sneferu is the likely reason for the change from the usual 52 to 43 degrees of his second pyramid at Dahshur, the Bent Pyramid (Article - Meidum).

The next pyramid usually associated with Sneferu is the Bent Pyramid. Both it and the Red Pyramid are located at Dashur between Saqqara and the Meidum Pyramid. Both pyramids are about two thirds the height of the Great Pyramid. The Bent Pyramid is 101 metres high while the Red Pyramid is 104 metres high which is about the height of a 30 story building. Wikipedia makes these comments about the Bent Pyramid:

The lower part of the pyramid rises from the desert at a 54-degree inclination, but the top section is built at the shallower angle of 43 degrees, lending the pyramid its very obvious "bent" appearance.

Archaeologists now believe that the Bent Pyramid represents a transitional form between step-sided and smooth-sided pyramids. It has been suggested that due to the steepness of the original angle of inclination the structure may have begun to show signs of instability during construction, forcing the builders to adopt a shallower angle to avert the structure's collapse. This theory appears to be borne out by the fact that the adjacent Red Pyramid, built immediately afterwards by the same Pharaoh, was constructed at an angle of 43 degrees from its base.



*The Bent Pyramid of King Sneferu (Dynasty IV) at Dahshur: it is one of today's best preserved pyramids.*

This fact also contradicts the theory that at the initial angle the construction would take too long because Sneferu's death was nearing, so the builders changed the angle to complete the construction in time. In 1974 Kurt Mendelssohn suggested the change of the angle to have been made as a security precaution in reaction to a catastrophic collapse of the Meidum Pyramid while it was still under construction.

It is also unique amongst the approximately ninety pyramids to be found in Egypt, in that its original polished limestone outer casing remains largely intact. British structural engineer Peter James attributes this to larger clearances between the parts of the casing than used in later pyramids; these imperfections would work as expansion joints and prevent the successive destruction of the outer casing by thermal expansion (Article – Bent Pyramid).

Renee Norbergen in his book “Secrets of the Lost Races” writes the following regarding how long the pyramids of Sneferu took each to build:

At Dahshur, for example, is the Pyramid of Sneferu [Bent Pyramid], approximately two-thirds the volume of the Great Pyramid. An inscription in the northeast cornerstone of the structure reveals that it was laid in the 21st year of Sneferu's reign, while halfway up is a block with another inscription, dated in the 22nd year. **In other words, it took only 2 years to raise the entire pyramid of Sneferu (p. 203).**

Wikipedia has these comments about the Red Pyramid:

Named for the rusty reddish hue of its stones, it is also the third largest Egyptian pyramid, after those of Khufu and Khafra at Giza. At the time of its completion, it was the tallest man-made structure in the world. It is also believed to be the world's first successful attempt at constructing a "true" smooth-sided pyramid...

The Red Pyramid was not always red. It used to be cased with white Tura limestone, but only a few of these stones now remain at the pyramid's base, at the corner. During the Middle Ages much of the white Tura limestone was taken for buildings in Cairo, revealing the reddish sandstone beneath.

It was the third pyramid built by Old Kingdom Pharaoh Sneferu, and is located approximately one kilometer to the north of the Bent Pyramid. It is built at the same shallow 43 degree angle as the upper section of the Bent Pyramid, which gives it a noticeably squat appearance compared to other Egyptian pyramids of comparable scale. Construction is believed to have begun during the thirtieth year of Sneferu's reign. Egyptologists disagree on the length of time it took to construct...



Archaeologists speculate its design may be an outcome of engineering crises experienced during the construction of Sneferu's two earlier pyramids. The first of these, the Pyramid at Meidum, collapsed in antiquity, while the second — the Bent Pyramid — had the angle of its inclination dramatically altered — from 54 to 43 degrees — part-way through construction. Some archaeologists now believe that the Meidum pyramid was the first attempt at building a smooth-sided pyramid, and that it may have collapsed when construction of the Bent Pyramid was already well underway — and that the pyramid may by then have already begun to show alarming signs of instability itself, as evidenced by the presence of large timber beams supporting its inner chambers.

The outcome of this was the change in inclination of the Bent Pyramid, and the commencement of the later Red Pyramid at an inclination known to be less susceptible to instability and therefore less susceptible to catastrophic collapse...

A rare pyramidion, or capstone, for the Red Pyramid has been uncovered and reconstructed, and is now on display at Dahshur. However, whether it was actually ever used is unclear, as its angle of inclination differs from that of the pyramid it was apparently intended for (Article – Red Pyramid).



According to the documentary “The Revelation of the Pyramids”, this pyramidion is 1 metre high with an angle of 51 degrees and is a scale model of the Great Pyramid, which itself is missing its capstone. The pyramidion may be the missing capstone of the Great Pyramid.

One other pyramid assigned to a 3rd dynasty pharaoh is the pyramid of Khaba at Zawyet el Aryan north of Saqqara but just south of Giza. It is quite short and in a bad state of ruin.



Following Sneferu's pyramids it is believed that his descendants of the fourth dynasty had learned the skills needed for pyramid building to create the massive pyramids of the Giza Plateau.

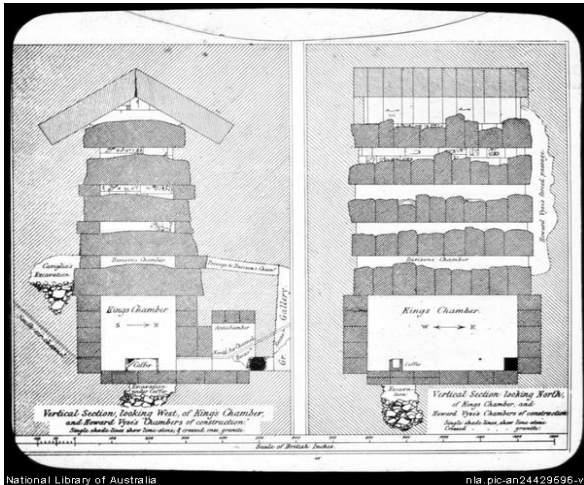
The Giza Pyramid complex is built on a levelled plateau. The largest pyramid, the Great Pyramid, is built on the northern edge of the plateau.



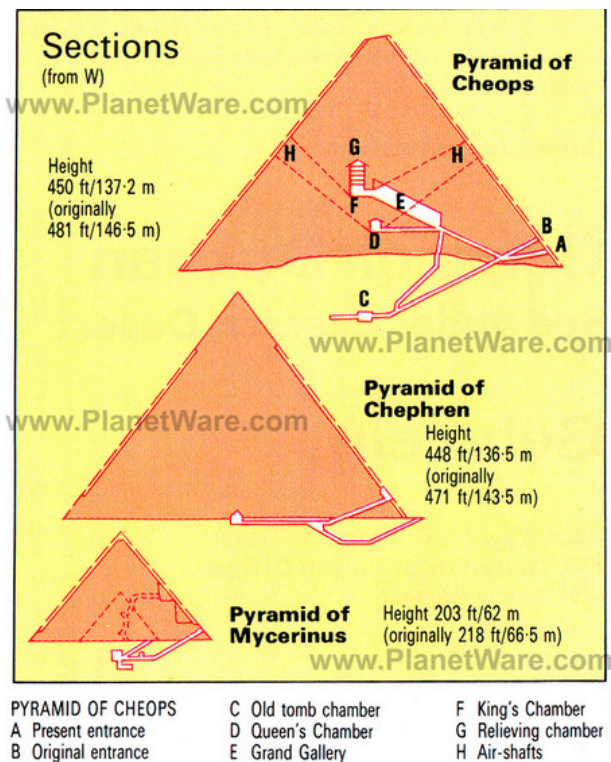
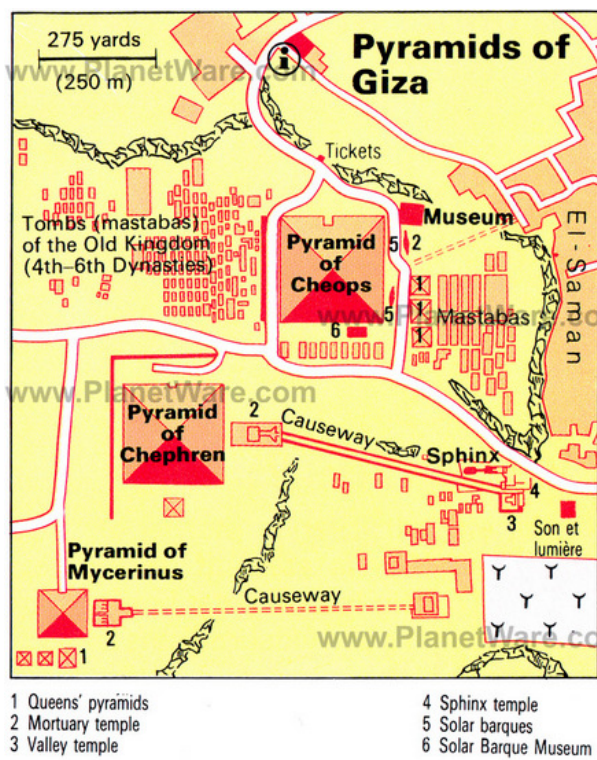


Egyptologists believe that it was built by Khufu of the 4th dynasty based on a couple of cartouches found in the granite relieving chambers. The pyramid is otherwise void of inscriptions. The Great Pyramid is built from 2.3 million stone blocks, mostly weighing around 2 tonnes.

It also has granite blocks in its interior chambers weighing up to 60 to 70 tonnes. The height of the Great Pyramid is 146 metres tall which is close to the height of a 50 story building and was the tallest structure ever built until the Eiffel Tower was built.



Many casual observers assume that the Great Pyramid is in the middle of the three major pyramids on the Giza Plateau but it is actually the pyramid associated with Khafre that is the centre pyramid of the three. Exactly south-west of the Great Pyramid is the pyramid associated with Khafre. This pyramid is only 2 metres shorter in height and still has quite a number of its original limestone casing stones left towards the top of it.







There were nearly 120 000 casing stones made of gleaming white tura limestone that originally encased the pyramids at Giza before they were stripped away to construct buildings in the city of Cairo.

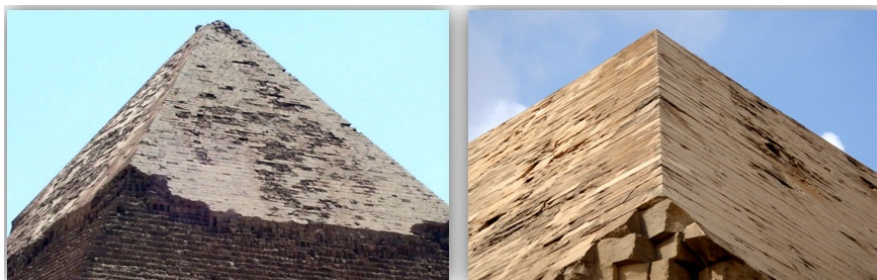
They would have been dazzling bright from many miles away and made the pyramids shine like bright jewels in the sunlight.

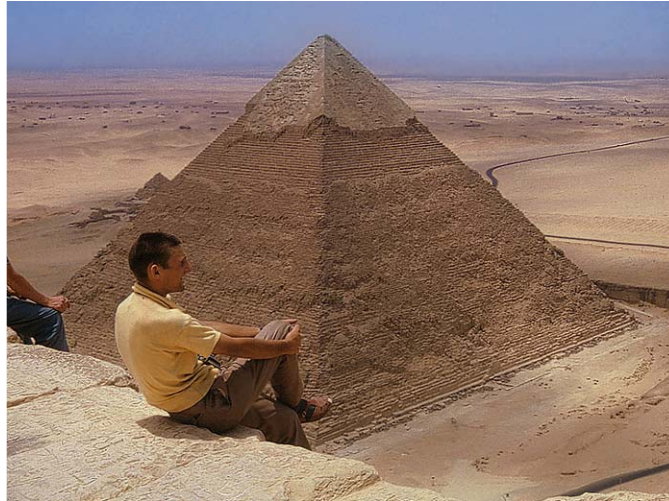


Wikipedia notes the following about the second highest pyramid in the centre that is conventionally assigned to Khafre:

The slope of the pyramid rises at a  $53^{\circ} 10'$  angle, steeper than its neighbor, the Pyramid of Khufu, which has an angle of  $51^{\circ} 50' 40''$ . The pyramid sits on bedrock 10 m (33 ft) higher than Khufu's pyramid, which makes it appear to be taller.

The pyramid is assigned to Khafre, not because of anything found in the pyramid itself, but because many statues of Khafre were found in the nearby Valley and Mortuary Temples.





The last of the three major pyramids at Giza is the one associated with Menkaure. In one of the chambers on an arch was painted the name Menkaure. Wikipedia makes these comments about this pyramid:

Menkaure's Pyramid had an original height of 65.5 metres (215 feet) and was the smallest of the three major pyramids at the Giza Necropolis. It now stands at 61 m (204 ft) tall with a base of 108.5 m. Its angle of incline is approximately  $51^{\circ}20'25''$ .

It was constructed of limestone and granite. The first sixteen courses of the exterior were made of granite. The upper portion was cased in the normal manner with Tura limestone. Part of the granite was left in the rough. Incomplete projects like this help archeologists understand the methods used to build pyramids and temples.

South of the pyramid of Menkaure were 3 satellite pyramids none of which appear to have been completed. The largest was made partly in granite like the main pyramid. Neither of the other 2 progressed beyond the construction of the inner core...

Richard William Howard Vyse, who first visited Egypt in 1835, discovered in the upper antechamber the remains of a wooden anthropoid coffin inscribed with Menkaure's name and containing human bones. This is now considered to be a substitute coffin from the Saite period, and radiocarbon dating on the bones determined them to be less than 2,000 years old.





The pyramid associated with Menkaure is further SW of the other two pyramids but not exactly SW. It is a little offset further towards south.

This offset, along with the smaller size of the pyramid, is significant to the Orion correlation theory that suggests that the pyramids form an exact match on the ground of Orion's Belt in the constellation of Orion which we'll look into more depth later.

Just as there are 3 satellite pyramids to the south of the pyramid associated with Menkaure, there are also 3 small satellite pyramids to the east of the Great Pyramid.

The other great notable structure on the Giza plateau is the Sphinx – the great half lion, half man statue that is situated to the east of the pyramid associated with Khafre.



Its head faces due east and it is the largest monolith statue in the world. It is 73 metres long, 19 metres wide, and 20 metres high. A long causeway extends between the Valley Temple which is SE of the Sphinx to a temple immediately in front of the pyramid associated with Khafre. In front of the Sphinx itself to its east is the Sphinx Temple.

There are also ancient cemeteries both east and west of the Great Pyramid which are mostly mastabas of the 4th to 6th dynasty royal houses.

Djedefra (Radjedef) ruled in between Khufu and Khafre, alleged builders of the tallest Giza pyramids. Djedefra built the most northern pyramid at Abu Rawash, north of Giza, seen below.



In comparison with the Giza pyramids it is a pitiful stone building in comparison, hardly what one would expect after Khufu supposedly just built the Great Pyramid. In all likelihood it may have been a stone mastaba like those of the two 4th dynasty pharaohs that followed Menkaure.



There are other stone pyramids that were built by the pharaohs of the 5th and 6th dynasties which are concentrated at Saqqara and Abusir.

Abusir is half way between Giza and Saqqara where the Step Pyramid is. Abusir is the location of several 5th dynasty pyramids. Below are the pyramids of Sahure, Neferirkare and Niuserre at Abusir.

Again, note the much smaller size of the pyramids and their individual blocks as well as the bad condition that they are in for pyramids built supposedly so soon after the Giza pyramids.



The largest cluster of 5th and 6th dynasty pyramids is at Saqqara and South Saqqara. The best known of these pyramids include the pyramids of Unas and Userkaf near the Step Pyramid. The pyramid of Unas has the first of the pyramid texts on its chamber walls. Yet again, note the much smaller size of the pyramids and their individual blocks as well as the bad condition that they are in for pyramids built supposedly so soon after the Giza pyramids.



One of the key features of Unas' pyramid are the Pyramid texts in the tomb chamber which are hieroglyphs and contain passages from the Book of the Dead. Blue stars adorn the the roof of the burial chamber.

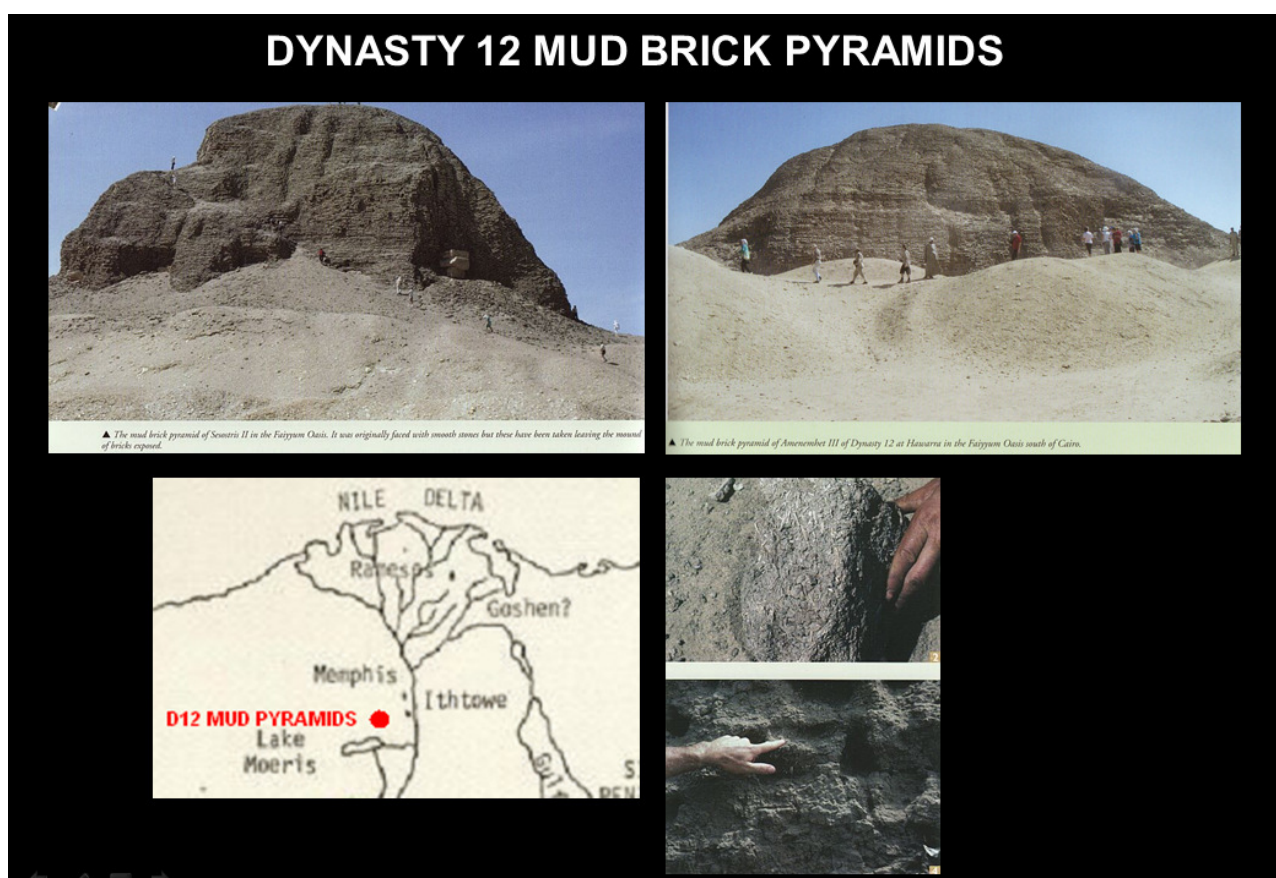
After the Old Kingdom came the Middle Kingdom. The pyramids of the Middle Kingdom differ from those of the Old Kingdom in that most were not built with stone but mud bricks. Most of these pyramids were built further south towards the great lake of the Faiyum.

Most of the 12th dynasty pharaohs each built pyramids and most of these are crumbling due to being made with mud bricks. A closer examination of the mud bricks shows that straw was used to hold the bricks together just as described in the book of Exodus.

The use of mud bricks instead of stone for construction at this time is one of many proofs that links the time of Israel in Egypt during the Middle Kingdom and not in the New Kingdom (18<sup>th</sup> and 19<sup>th</sup> dynasties) as suggested by scholars. To the right is the pyramid of Seosestris I, the most likely candidate for Joseph's pharaoh at Lisht, half way between Dashur and Meidum, going south towards the Faiyum.



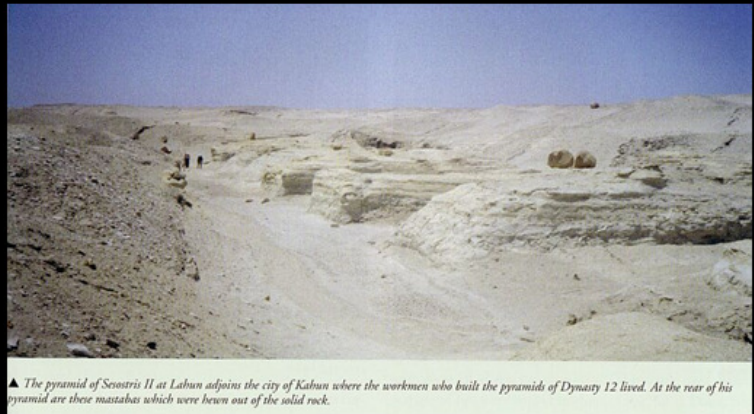
Below are pyramids of Seosetris II and Amenemhat III (the most likely pharaoh who had the Israelite babies killed) which are in the Faiyum region near the site of Lahun (Kahun). A block with flecks of straw in is shown in the bottom right picture.



Near the site of Seosestris II's pyramid is the remains of the town of Kahun. Sir Flinders Petrie excavated here from 1880 onwards. Dr Rosalie David reviewed his work there and wrote:

It is apparent that the Asiatics were present in the town (Kahun) in some numbers and this may have reflected the situation elsewhere in Egypt...their exact homeland in Syria or Palestine cannot be determined...The reason for their presence remains unclear...[Petrie discovered] wooden boxes...underneath the floors of many houses at Kahun. They contained babies, sometimes buried two or three to a box and aged only a few months at death (The Pyramid Builders of Ancient Egypt, p.191).





This is consistent with the decree of Pharaoh that all male children were to be killed at birth (**Exodus 1:16**). David also wrote the following about their sudden disappearance from Egypt:

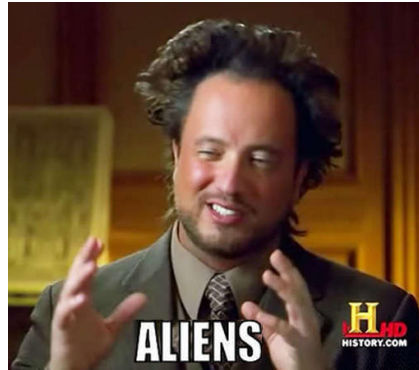
The quantity, range and type of articles of everyday use which were left behind in the houses may indeed suggest that the departure was sudden and unpremeditated (ibid, p.199).

How do slaves just get up and leave suddenly? This appears to be very strong evidence for the Israelite exodus from Egypt. It should also be noted that the name of the town, Kahun, itself a Hebrew name for a priest. The trend of pharaohs building pyramids in Egypt effectively ceased at the end of the Middle Kingdom.

## CHAPTER 2

### How Were the Pyramids Built?

We've looked at what the pyramids are and where they are so let's now dive in and look at the big question that everyone wants to know – how were the pyramids of Giza built? The answer to that question in a simple word is:



Seriously, would you trust a guy with hair like that? All joking aside, there are a few credible theories alongside of the weak ones that traditional Egyptology trots out.

Egyptology naively assumes that ancient Egyptians did not have any higher mathematics and that they had no cranes or winches and didn't even have the wheel. Circles are part of the oldest hieroglyphics in Egypt and can be seen in nature (eg. the round shape of trees used for log rollers) so why wouldn't the ancients pick up on the simple fact that the shape has the least amount of friction for moving objects along?

Egyptology is divided between two primitive methods of ramps and rollers.

With the ramp theory stones are pulled and dragged up on sledges up a ramp of around 7° that got longer and longer as the pyramid got higher and higher to keep the same incline. Such sledges have been found in Egypt but that doesn't automatically prove that was the way the Giza pyramid stones were moved along.

Critics of the ramp theory correctly state that the ramp would end up as long as a mile long and it would take more stone to construct the ramp than the pyramids. They also state that there are no remains of such a ramp which there must be if it was so big.



A recent new theory puts a twist on this ramp theory which we will look at a little later. Part of this architect's solution includes an external straight ramp like this but only up to the level of the King's Chamber. In answer to the "no remains" criticism he states that the stones used for this external ramp would then be removed from the ramp to make up the upper levels of the pyramid.

The rollers theory says that instead of, or together with, sledges the stones were rolled upwards towards the base of the pyramid before being levered up one level at a time as per Herodotus' description of how it was built.



Due to the weight of the stones these rollers would get crushed to pulp in a short period of time and would regularly need replacing. They would need an incredible amount of wood during the construction of the pyramids to use rollers this way. Just about the only trees that grow in Egypt are date palms and due to being a food source it's unlikely that they would be used in such quantities in this way.

It's only academic arrogance and the faulty evolutionary belief in a slow, linear progression of human technology that causes Egyptologists to make ridiculous claims that Egypt was unfamiliar with the wheel at this time. Later in Egypt there is ample evidence of horse and oxen-drawn wooden carts. Even horse or oxen-drawn wooden carts are a far more efficient way of transporting 2 to 10 tonne blocks to the base of the pyramids than sledges and rollers.

Let's take a look at the merits of a few different theories proposed for how the massive stones of the pyramids were transported and lifted to construct the pyramids. There's an old saying that there's more than one way to skin a cat and that there isn't just one way that could have worked in performing this awesome task. Just because it is possible with one means doesn't mean that's what was used if there were other valid options. We need physical evidence at this site to support its use as well.

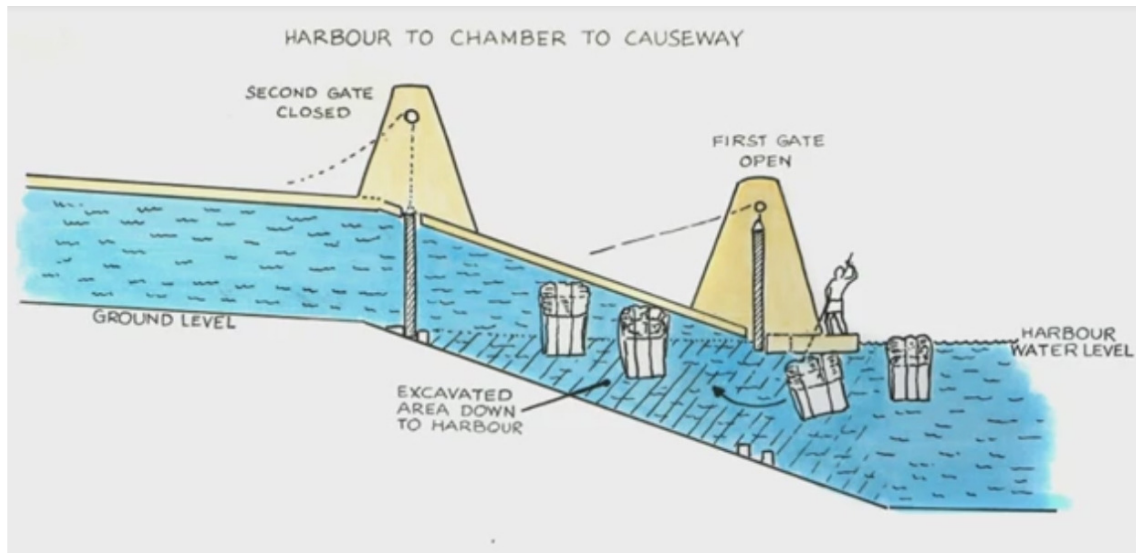
This is my sentiment regarding the first ingenious theory we'll look at. This is a workable theory but the on-site evidence is lean and there are other alternatives with better on-site evidence.

The first theory we'll look at is one put forth by Chris Massey in his book "The Pyramids of Egypt - How Were They Really Built?" The pictures below are screenshots from a youtube video covering his theory (<http://www.youtube.com/watch?v=TJcp13hA03U>). It is a hydrological solution that uses water to transport the blocks from the Nile up the causeway to the pyramids and then uses hydraulic pressure to lift the blocks up the height of the pyramids.

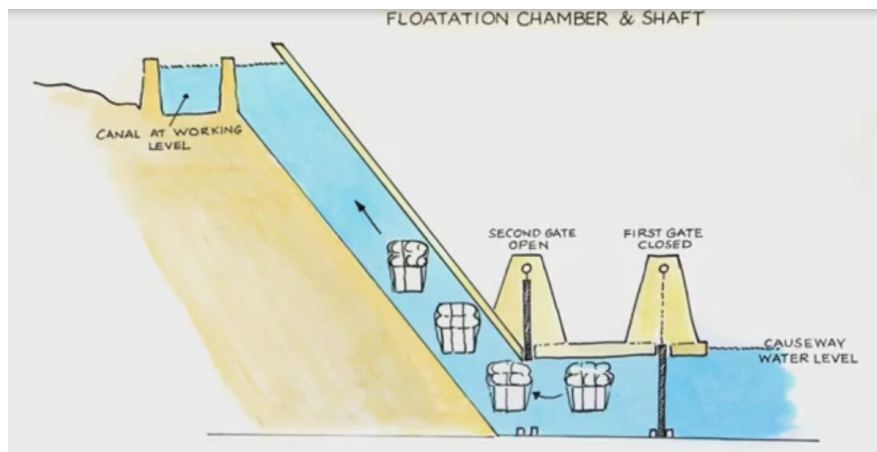
In Massey's theory the water from the Nile would be forced up the causeway. The causeway would connect to the Nile at a level lower than the top surface of the river. Water would rush into it and with nowhere else to go it would then go up the causeway.

Floats made of animal stomachs would be attached to the stones and be guided into the causeway. Gates would be used much like a canal lock system. The water, with the stones attached to floats, can only go one way and that way is uphill to the base of the pyramids

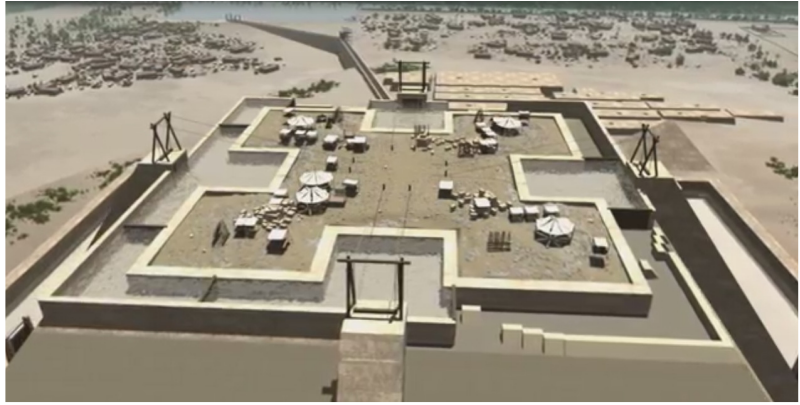
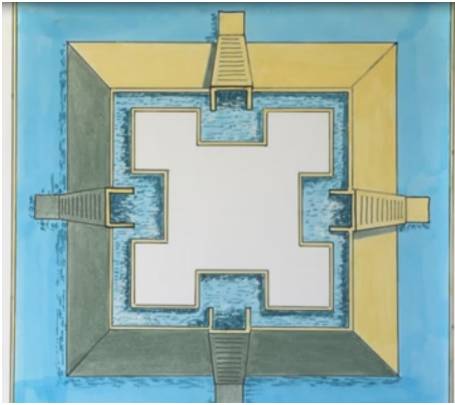




Temporary shafts would extend from the causeway up the side of the pyramid. As stones are guided through the gates the water only has one way to go and that is up moving the stone blocks with them up the sides of the pyramid.



Chris Massey envisions a canal around the base so the blocks can be guided to any one of four of these floatation shafts on all four sides of the pyramids which can be guided and worked into place once they have been elevated hydraulically to the current level of the pyramid.



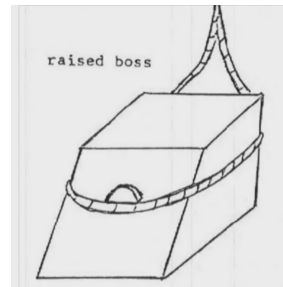
This is a workable theory for most of the stones but what on-site evidence is there for this theory? There is evidence for a canal at an Aswan rock quarry that the experts who uncovered it believe was used to float blocks between the quarry and the Nile. On many of the limestone blocks just behind the original casing stones there is a raised semi-circular ledge or boss that Massey believes was used for latching rope around the stones as they were raised out of the water.

### Canal Linking Ancient Egypt Quarry to Nile Found

Steven Stanek in Cairo, Egypt  
for National Geographic News  
October 24, 2007

Experts have discovered a canal at an Aswan rock quarry that they believe was used to help float some of ancient Egypt's largest stone monuments to the Nile River.

It has long been suspected that ancient workers moved the massive artifacts directly to their final destinations over waterways.



This semi-circular ledge could have been used to help secure ropes on blocks that were being raised but it is no proof it was being raised from water. The canal at Aswan is a better proof but does this support such a technique being used on the Giza plateau? The dimensions of the causeway appear to contradict it being used in the way that Chris Massey believes that it was.

The causeway would need to be enclosed to work in this way which it is not. As you can see from the picture below the depth of the causeway is shallower than the height of a lot of the limestone blocks.

The other misgiving I have about this theory is whether it could have been used for the biggest and most massive granite blocks used in the King's Chamber.



Herodotus' record remains the first known historical account of the complex. He wrote around 430 BC that Khufu (Cheops) built the great pyramid. He said that the casing stones had 'inscriptions of strange characters', and was told that it took 100,000 men 20 years to complete (the Great pyramid), that iron was used in the construction, and that they used 'machines' made of 'short planks of wood' to lift the blocks.

There is no evidence of the strange characters on any remaining casing stones so that immediately calls into question the accuracy of what he wrote. Whether by leverage or winching he states that they used machines to lift the blocks upwards.

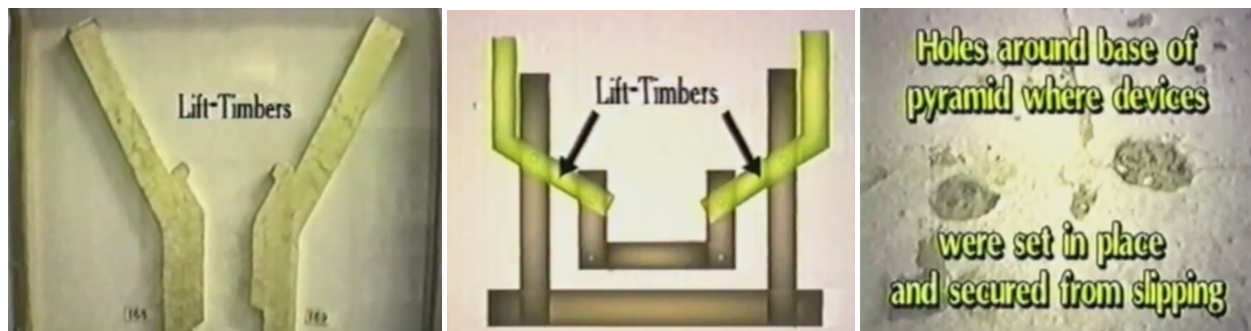


Ron Wyatt's theory (<http://www.youtube.com/watch?v=ErWkaaQ3sX8>) is that they essentially used such machines to winch the blocks up each level. Below left is a picture of one of the devices they could have used. A rotating wooden winch is being used by the guy to the left of the two people being lifted.



As far as physical evidence that this was the means of lifting the stones Ron Wyatt has three pieces of evidence.

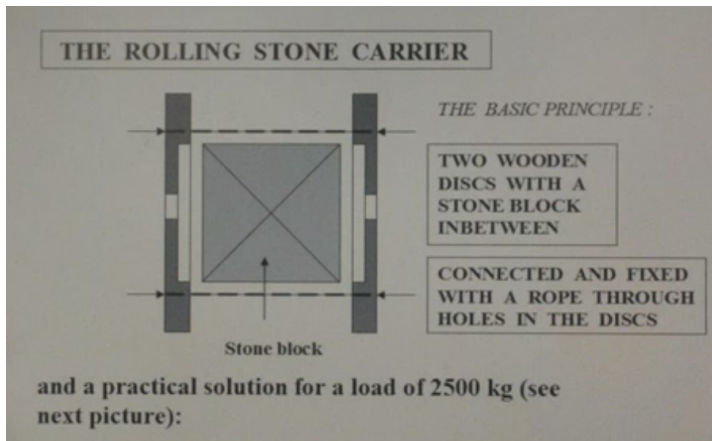
Firstly, one of the hieroglyphs (see above right), Wyatt believes is in the shape of a lifting device, though, to me, it also looks like a throne. The next piece of evidence are some timbers that no one else seems to know what they are for. Wyatt believes that these are lift timbers of these winching machines. The last piece of evidence are the series of circular holes surrounding the pyramid where devices used for lifting the stones could have been set in place and secured from slipping.





Winching is certainly an effective means of lifting such heavy loads. While it is fine with lesser blocks between 2 and 10 tonnes I am not sure how well these devices would go with the much larger 30 to 60 tonne blocks without seeing a demonstration of it. The holes around the pyramid do give some support for such devices being used.

The next theory is from Henk Koens of The Netherlands who believes that the blocks were mounted between wooden wheels and secured between them so they effectively were the axle between two wheels which could either be pulled by oxen towards the base of the pyramids or up a shallow ramp by a team of workmen. The slides below show the details of his theory (<http://www.youtube.com/watch?v=gHKQ7VWAsAg>).



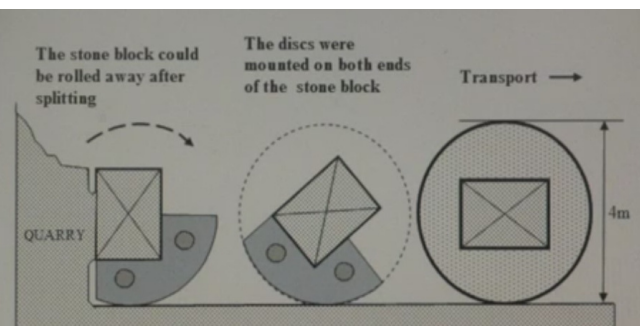
#### General conclusions for this transport system

- The rolling stone carrier was a simple design and made of local available materials. This tool made it possible to transport heavy stone blocks in an efficient way and with human power.
- The carrier was very compact, easy to handle and it could easily round sharp corners.
- With this tool the activities in the quarry can be fully explained.
- Calculations about the transport capacity and the use of manpower lead to reasonable values.
- This tool could also be used as temporary storage and was an optimal solution for long distance transportations by ship.

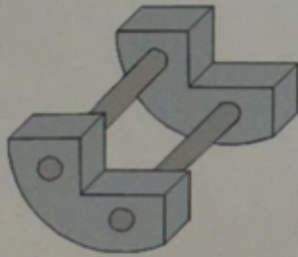
#### How were these heavy stone blocks loaded in the quarry?

In the past *Petrie* excavated some quarry tools, obviously used to handle and turn around heavy stone blocks. These tools were made of wood and consisted of two circle segments connected by wooden bars. A similar design, but of large dimensions, could have been used for the big granite stone blocks mentioned here.

When the stone block was splitted by using wedges, it rested on this tool. Then the workers pushed the stone block away from the stone wall with levers and ropes. Then it was possible to mount the discs on the stone block (see next pictures).



Mounting the transport discs with a special tool.  
60 tons granite stone block (1.5 x 2 x 8 m)



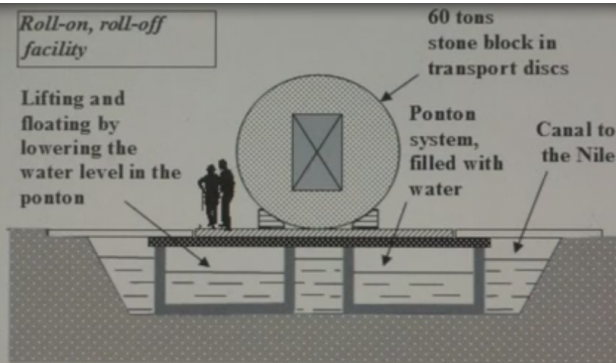
A wooden tool for large stone blocks (derived from model Petrie)

#### How many people worked in the quarries?

The "NOVA-experiment" showed us that with a correction for the primitive tools in the early days, 2 workers could carve a stone block in 2 days. So a production of 40 stone blocks per hour or 320 per day, required a daily manpower of  $320 \times 4 = 1280$  workers.

Roll-on, roll-off facility

Lifting and floating by lowering the water level in the ponton



Transport over the Nile with ponton system (model Franz Löhner adapted for rolling transportations)

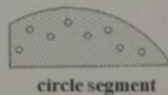
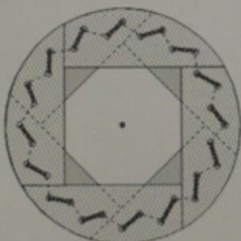
#### How were they transported?

These enormous granite stone blocks arrived by ship from Aswan, 1000km to the south of Gizeh. If the transport of such a stone block took place with a sledge, a crew of at least 400 workers would have been needed. Even with lubrication by a liquid and a very low friction factor of 0.2, the pulling force was already as high as  $0.2 \times 50,000 = 10,000\text{kgf}$  or 22,000lbs!

A disc system of large dimension (e.g. discs with a diameter of 4m or 13ft) was a far better solution. Because of the higher transport efficiency the labor force could be reduced to 15% and less. Such a disc system could also be used for the stone lifting process on the platform and for the prior long distance transportations (see next pictures).

#### Making a disc

A disc could be made of a number of similar shaped wooden circle segments. If copper nails were not available, wedges, wooden pins or a rope could be used for connection of the parts. (see next pictures).



A disc made of 8 identical wooden circle segments and a rope laced through the holes

#### Transport of a 2.5 ton stone block

On a rigid and plain bottom (wood or stones) such a system with wooden discs has a friction factor against rolling of about 0.025. We know this value from the experience with big cable reels which start to roll at slopes between 2 and 3%.

Therefore the transport of an average stone block of 2.5 ton on a horizontal surface requires a pulling force of  $0.025 \times 2500 = 63\text{ kgf}$  (139 lbs).

So a crew of 6 human workers could easily pull this stone block forward.

A wooden sledge with this load has a friction factor of 0.2 to 0.4 and requires a pulling force of at least 500 kgf (1100 lbs)!

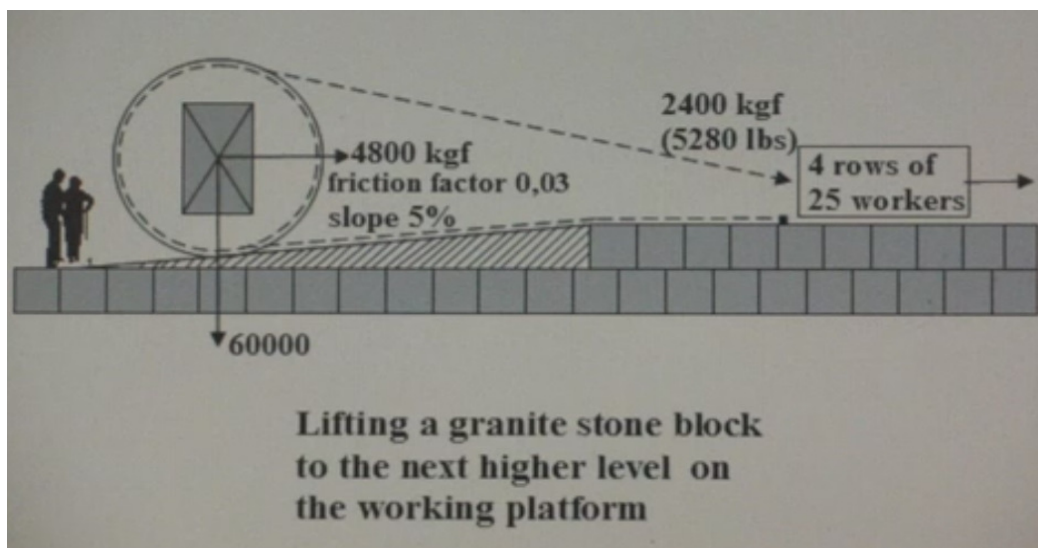
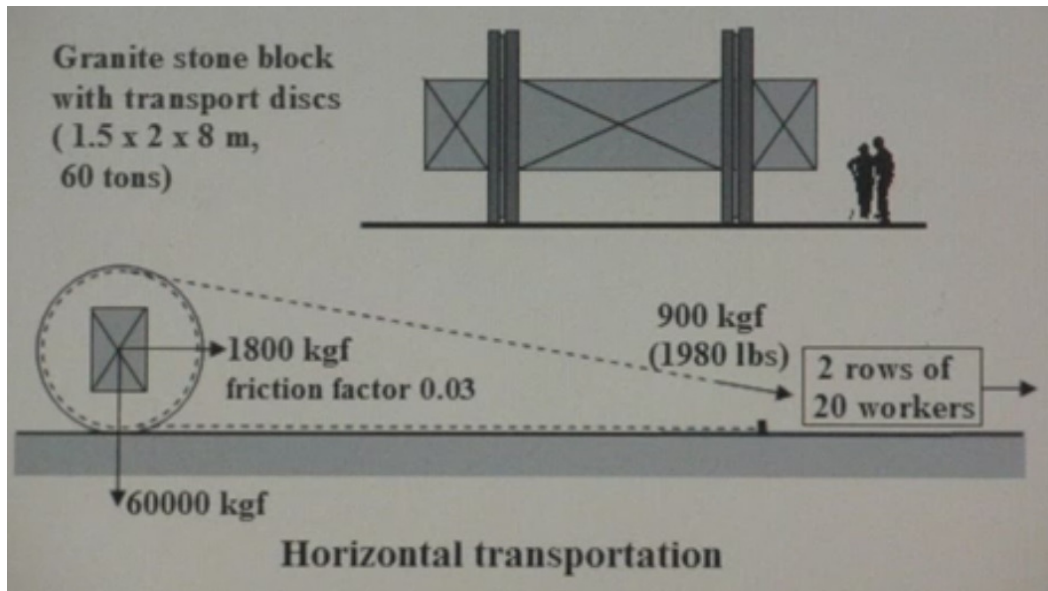
#### How many workers were needed to transport this load uphill?

To reach the working platform of the pyramid there must have been a ramp or a spiral road around the pyramid with a slope of about 5%. To overcome the gravity component of the load, an additional pulling force was necessary of 5% of 2.5 ton or  $0.05 \times 2500 = 125\text{ kgf}$  (275 lbs), which makes the total effort  $63 + 125 = 188\text{ kgf}$  (414 lbs). Therefore at the foot of the pyramid 10 workers with ropes were added to obtain the required extra power. So in total 16 human workers were needed to transport this load uphill.

#### How many workers were daily involved?

The uphill transportations required  $1400 / 37.5$  or 37 teams of each 16 workers and the horizontal transportations  $700 / 37.5$  or 19 teams with 6 workers, so in total  $37 \times 16 + 19 \times 6$  is 706 workers. The same number was always on the way back. One can conclude that roughly 1412 workers were daily on the road for this type of transportations.

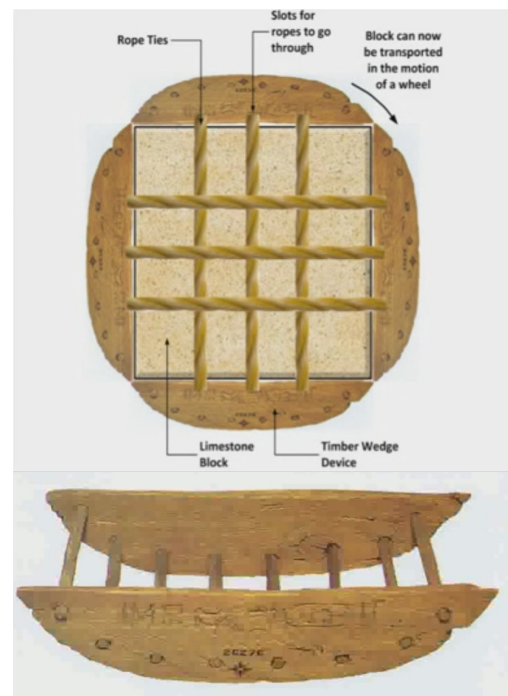




This is a very impressive theory that makes a lot of sense for the transportation of these blocks, both the basic "small" ones around 2 tonne up to the massive granite ones weighing 60 tonnes each.

The above could be enhanced by using winching machines rather than workers using brute strength to haul the stones up each level. This theory also explains the quarry canal mentioned earlier.

Additionally, there is evidence for the kind of wooden wheels that could have been used this way. On the right is one such artifact and above it we see what four of them joined together would look like to create the wheels that would surround one of the smaller blocks.



A more exotic theory about lifting the pyramids is put forth by Andrew Collins in his book "Gods of Eden" and that is the use of sonic technology or sound to lift blocks or what is technically referred to as sympathetic vibration.

Sympathetic vibration certainly has the capacity for destroying objects such as crystal glasses. Many opera singers can hit a note that matches the natural resonance of a crystal glass and cause it to shatter.



It has been suggested by a few people that God used this natural principle in the destruction of Jericho when the walls tumbled down after the horns and trumpets made a "long blast" (Joshua 6:5) as God commanded Joshua and the Israelites to do.

Andrew Collins, author of "Gods of Eden" gives what he believes is evidence that sympathetic vibration can also be used to lift objects as well but before we cover that I would like to quote from another book by Colin Wilson called "From Atlantis to the Sphinx" which summarises some of the possibilities for sonic technology in ancient Egypt.

Petrie also speaks about granite slabs and diorite-bowls incised with quite precise inscriptions. The characters, says Petrie, are not 'scraped or ground out, but are ploughed through the diorite, with rough edges to the line'. Diorite, like granite, is incredibly hard.

Graham Hancock had also seen various kinds of vessels of diorite, basalt and quartz, some dating from centuries before the time of Cheops, neatly hollowed out by some unknown technique. The most baffling of all were 'tall vases with long, thin, elegant necks and finely flared interiors, often incorporating fully hollowed-out shoulders'. (More than 30,000 were found beneath the Step Pyramid of Zoser at Saqqara.) The necks are far too thin to admit a human hand - even a child's - some too narrow even to admit a little finger. Hancock points out that even a modern stone carver, working with tungsten-carbide drills, would be unable to match them, and concludes that the Egyptians must have possessed some tool that is totally unknown to, and unsuspected by, Egyptologists. It sounds, admittedly, too preposterous to suggest that they had some kind of electric drill. Yet when we consider Petrie's comment about grooves 'ploughed through the diorite', it seems obvious that they must have had some means of making the bit spin at a tremendous speed. A potter's wheel, with suitable 'gears', might just do it.

In fact, a modern toolmaker, Christopher P. Dunn, studied Petrie's book in an attempt to make sense of his descriptions, and in an article called 'Advanced Machining in Ancient Egypt', reached some astonishing conclusions. He comments:



"The millions of tons of rock that the Egyptians had quarried for their pyramids and temples - and cut with such superb accuracy - reveal glimpses of a civilisation that was technically more advanced than is generally believed. Even though it is thought that millions of tons of rock were cut with simple primitive hand tools, such as copper chisels, adzes and wooden mallets, substantial evidence shows that this is simply not the case. Even discounting the argument that work-hardened copper would not be suitable for cutting igneous rock, other evidence forces us to look a little harder, and more objectively, when explaining the manufacturing marks scoured on ancient granite by ancient stone craftsmen."

He discusses the puzzle of how these craftsmen cut the 43 giant granite beams, weighing between 45 and 70 tons each, and used in the King's Chamber.

"Although the Egyptians are not given credit for the simple wheel, the machine marks they left on the granite found at Giza suggests a much higher degree of technical accomplishment.



Petrie's conclusion regarding their mechanical abilities shows a proficiency with the straight saw, circular saw, tube-drill and, surprisingly, even the lathe."

He goes on to mention the two diorite bowls in Petrie's collection which Petrie believed must have been turned on a lathe, because they could 'not be produced by any grinding or rubbing process'. Petrie had detected a roughness in one of the bowls, and found that it was where two radii intersected, as if a machinist had failed to 'centre' the bowl correctly on the lathe, and had re-centred it more precisely.




Examining blocks that had been hollowed out - with some kind of drill - in the Valley Temple, Dunn states that the drill marks left in the hole show that it was cutting into the rock at a rate of a tenth of an inch for every revolution of the drill, and points out that such a phenomenal rate could not be achieved by hand. (Petrie thought it could, but only by applying a pressure of more than a ton on the drill - it is not clear how this could be achieved.) An Illinois firm that specialises in drilling granite told Dunn that their drills - spinning at the rate of 900 revs per minute - only cut into it at one ten thousandth of an inch per revolution, so in theory the ancient Egyptians must have been using a drill that worked 500 times faster than a modern drill.

Another aspect of the problem began to provide Dunn with a glimmer of a solution. A hole drilled into a rock that was a mixture of quartz and feldspar showed that the 'drill' had cut faster through the quartz than the feldspar, although quartz is harder than feldspar. The solution that he suggests sounds almost beyond belief.

He points out that modern ultrasonic machining uses a tool that depends on vibration. A jackhammer used by navvies employs the same principle - a hammer that goes up and down at a tremendous speed, raining hundreds of blows per minute on the surface that has to be broken. So does a pneumatic drill. An ultrasonic tool bit vibrates thousands of times faster. Quartz crystals are used in the production of ultrasonic sound, and conversely, respond to ultrasonic vibration. This would explain why the 'bit' cut faster through the quartz than the feldspar.


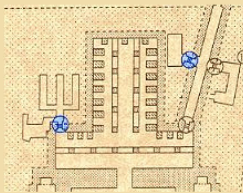
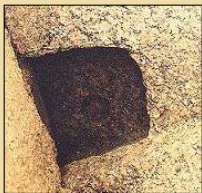
What is being suggested sounds, admittedly, absurd: that the Egyptians had some force as powerful as our modern electricity, and that this force was based on sound. We all know the story of Caruso breaking a glass by singing a certain note at high volume.

We can also see that if a pointed drill was attached to one of the prongs of a giant tuning fork, it could, in theory, cut into a piece of granite as easily as a modern rotating drill. Dunn is suggesting, in effect, a technology based on high-frequency sound. But I must admit that precisely how this force could have been used to drive the 9-foot bronze saw blade that cut the'



The ancient builders used a tube drill to hollow out the sarcophagus in the King's chamber of the Great Pyramid - they drilled off course and left a tube drill mark on the top inside of the box on the east side. They did some extra polishing to fix it up a bit but if you go to the King's chamber you can still see it if you look carefully.

Looking at the radius of the cut in the sarcophagus (less than 2") it is obvious that **in this one piece alone the masons made thousands of holes - each several inches deep.** The craftsmen who did this had mastery of the principles of drilling round hollow holes in any material, soft or hard: wood, stone, or metal, and could have drilled virtually any naturally occurring material on this planet.

What you see in these two photographs are **holes made by a tube drill in red granite.** The blue circles on the floor plan are where they can be seen in the overhead door lintels of the granite lined Valley Temple near the Sphinx.



sarcophagus in the King's Chamber eludes my comprehension. Possibly some reader with a more technically-oriented imagination can think up a solution. Unfortunately, the vibration theory fails to explain Dunn's observation about the drill rotating five hundred times as fast as a modern drill. We must assume that, if he is correct, the Egyptians knew how to use both principles.

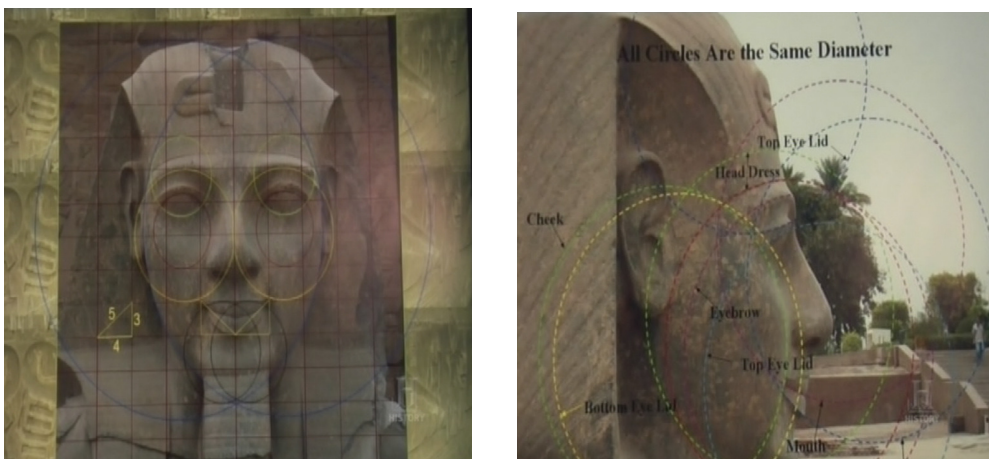
In the course of making a television programme, Christopher Dunn demonstrated the incredible technical achievement of the Egyptian engineers to another engineer, Robert Bauval, by producing a metal instrument used by engineers to determine that a metal surface has been machined to an accuracy of a thousandth of an inch, and holding it against the side of the benben stone in the Cairo Museum. He then applied the usual test - shining an electric torch against one side of the metal, and looking on the other side to see if any gleam of light could be seen. There was none whatever. Fascinated by the test, Bauval took him to the Serapeum at Saqqara, where the sacred bulls were entombed in giant sarcophagi made of basalt. These proved to have the same incredible accuracy. Why, Bauval asked me when telling me about all this, should the ancient Egyptians have needed accuracy to the thousandth of an inch for a sarcophagus? Moreover, how did they achieve it without modern engineering techniques?

The notion of ultrasonic drills at least provides a possible answer to the otherwise insoluble riddle of Hancock's swan-necked vases into which it was impossible to insert a little finger. Dunn says that the technique is used 'for the machining of odd-shaped holes in hard, brittle materials'. The technique for hollowing out such vases, even with a long drill, down a long and narrow neck still defies the imagination. But with Dunn's suggestions, it begins to seem slightly less absurd (p.42-45).

Christopher Dunn, a mechanical engineer, found cuts in some stone work north of Giza that led him to believe that only a saw 35 feet in diameter could have cut. When interviewed on the series "Ancient Aliens" he speculates that the thin deep empty pits near the Giza pyramids were not boat pits as claimed by Egyptologists but held the saws that were 35 feet in diameter.



Christopher Dunn in the documentary "The Revelation of the Pyramids" shows some other examples of evidence showing that the Egyptians must have used some type of mechanical engineering. Below is evidence of the perfect symmetry in a statue of Ramses the Great from the New Kingdom period that shows perfect curves not just in 2 but in 3 dimensions:



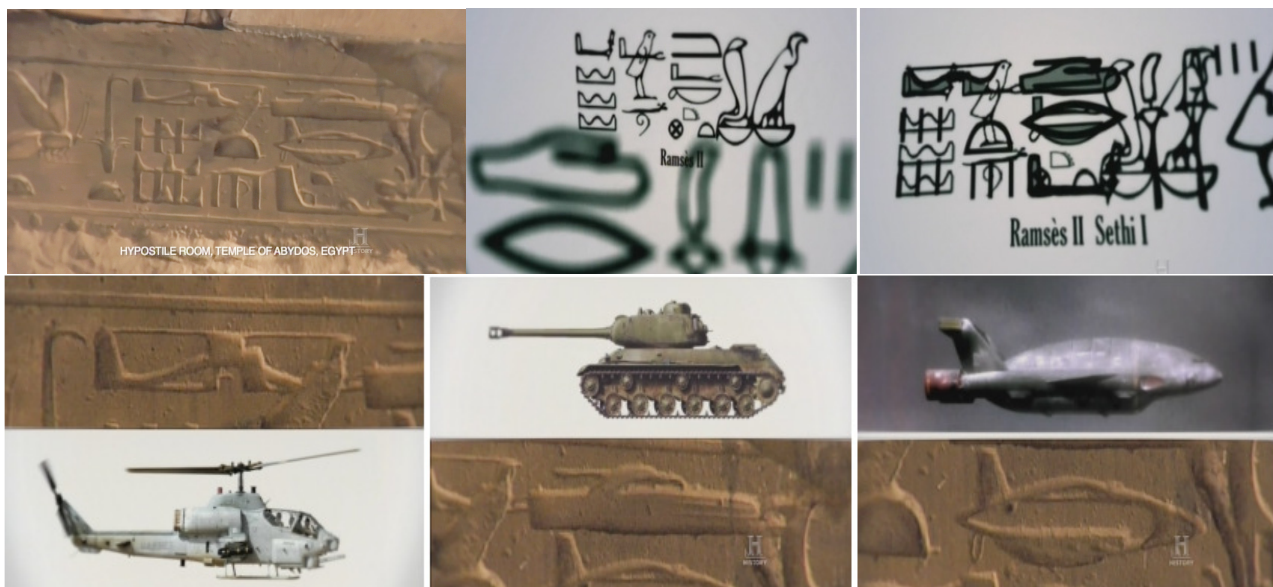


Below are two other examples of what Christopher Dunn says are parts of mechanical devices. The one on the left looks suspiciously like a flywheel of some description.



While mechanical technology appears to have been used as evidenced in what has been created we have just these couple of hints of the actual tools as next to nothing has been preserved in the Egyptian writings and inscriptions. No doubt, such technology would have been kept secret to avoid being shared with other ancient nations at the time.

One of the most remarkable inscriptions appears in a temple of Seti and Ramses the Great at Abydos from the late New Kingdom period that truly is a most amazing coincidence. What looks like a modern helicopter and tank are the amazing result of the overlaying of the names of Seti and Ramses the Great after the paint has worn off.

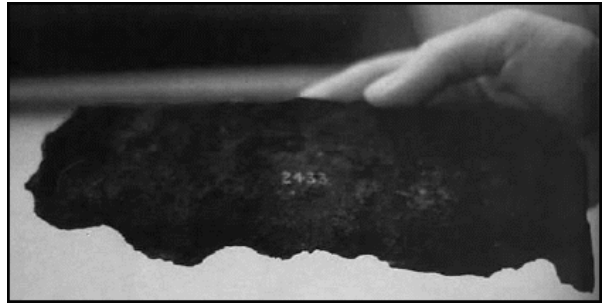


In the workmanship of many artifacts from predynastic Egypt through to the New Kingdom we see evidence of amazing workmanship with granite and diorite that strongly hints at this sonic technology and mechanical engineering using lathes but what could power such tools? The visual evidence for the use of lathes in the constructions of plates, bowls and even the precision of statues appears evident requiring the construction of lathes out of some hardened metal like iron or some other metal.

A piece of man-made wrought iron was found in the Great Pyramid during Howard Vyse's expedition inside the Great Pyramid. Robert Bauval and Graham Hancock write the following

about this discovery of man-made iron nearly 2000 years before the Iron Age supposedly began:

On Friday, 26 May 1837, after a couple of days of blasting and clearing, Hill discovered the flat iron plate mentioned above. Vyse was soon afterwards to trumpet it in his monumental opus, "Operations Carried on at the Pyramids of Gizeh" as 'the oldest piece of wrought iron known', but Hill at the time was content to write up the discovery in the proper, sober manner:



"This is to certify that the piece of iron found by me near the mouth of the air passage [shaft], in the southern side of the Great Pyramid at Gizeh, on Friday, May 26th, was taken out by me from an inner joint, after having removed by blasting the two outer tiers of the stones of the present surface of the Pyramid; and that no joint or opening of any sort was connected with the above mentioned joint, by which the iron could have been placed in it after the original building of the Pyramid. I also shewed the exact spot to Mr. Perring, on Saturday, June 24th."

John Perring, a civil engineer, thus examined the exact spot of the find. With him was James Mash, also a civil engineer, and both were "of the opinion that the iron must have been left in the joint during the building of the Pyramid, and that it could not have been inserted afterwards". Ultimately Vyse sent the mysterious artefact, together with the certifications of Hill, Perring and Mash, to the British Museum. There, from the outset, the general feeling was that it could not be a genuine piece, because wrought iron was unknown in the Pyramid Age, and that it must therefore have been 'introduced' in much more recent times.

In 1881 the plate was re-examined by Sir W. M. Flinders Petrie who found it difficult, for a variety of cogent reasons, to agree with this analysis:

"Though some doubt has been thrown on the piece, merely from its rarity, [he noted] yet the vouchers for it are very precise; and it has a cast of a nummulite [fossilized marine protozoa] on the rust of it, proving it to have been buried for ages beside a block of nummulitic limestone, and therefore to be certainly ancient. No reasonable doubt can therefore exist about its being a really genuine piece. . ."

Despite this forceful opinion from one of the oddball giants of Egyptology in the late Victorian Age, the profession as a whole has been unable to cope with the idea of a piece of wrought iron being contemporary with the Great Pyramid. Such a notion goes completely against the grain of every preconception that Egyptologists internalize throughout their careers concerning the ways in which civilizations evolve and develop.

Because of these preoccupations, no further investigations of any significance were undertaken into the iron plate for another 108 years and it was not until 1989 that a fragment from it was at last subjected to rigorous optical and chemical tests. The scientists responsible for the work were Dr M. P. Jones, Senior Tutor in the Mineral Resources Engineering Department at Imperial College, London, and his colleague Dr Sayed El Gayer, a lecturer in the Faculty of Petroleum and Mining at Egypt's Suez University, who gained his Ph.D. in extraction metallurgy at the University of Aston in Birmingham.

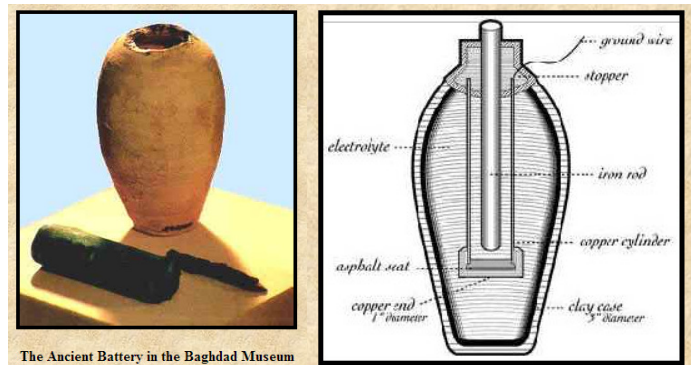
They began their study by checking on the nickel content of the iron plate. Their reason for doing this was to exclude the faint possibility that it might have been manufactured from meteoritic iron (i.e. iron from fallen meteorites - a material that is known, very rarely, to have been used during the Pyramid Age). Ready-made meteoritic iron of this sort, however, is always extremely easy to identify because it invariably contains a significant proportion of nickel - typically seven percent or more. On the basis of their first test Jones and El Gayer noted: "The iron plate from Giza is clearly not of meteoritic origin, since it contains only a trace of nickel." The metal, therefore, was man-made. But how had it been made?



Further tests proved that it had been smelted at a temperature between 1000 and 1100 degrees centigrade. These tests also picked up the odd fact that there were "traces of gold on one face of the iron plate." Perhaps, Jones and El Gayer speculated, it might originally have been "gold-plated, and this gold may be an indication that this artefact ... was held in great esteem when it was produced" (Keeper of Genesis, p.105-106).

There is some evidence of basic electrical power using batteries in the ancient world which could have powered mechanical tools.

There is the famous Baghdad battery which the Mythbusters team even proved could work to generate some electric power.



The Ancient Battery in the Baghdad Museum

One source has this to say about the possibility of electricity being used by the Egyptians:

The most illuminating evidence of Egyptian knowledge of electricity comes from the Temple of Hathor in Denderah, Egypt in the form of a mysterious relief that appears to depict what could only be a massive lightbulb.

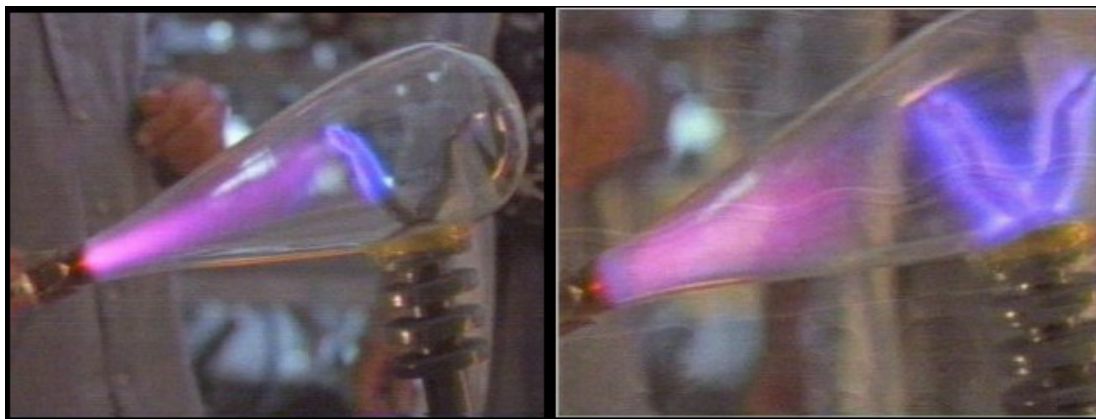


Electrical engineers have studied the design and determined that the carvings on the temple walls actually represent a type of lightbulb called a Crookes tube. Chris Dunn explains in his seminal work, "The Giza Power Plant":

"When the [Crookes] tube is in operation, the ray originates where the cathode electrical wire enters the tube to the opposite end. In the temple picture, the electron beam is represented as an outstretched serpent. The tail of the serpent begins where a cable from the energy box enters the tube, and the serpent's head touches the opposite end. In Egyptian art, the serpent was the symbol of divine energy...

"The Temple picture shows one tube, on the extreme left of the picture, to be operating under normal conditions. But with the second tube, situated closest to the energy box to the right, an interesting experiment has been portrayed. Michael R. Freeman, an electric and electromagnetic engineer, believes that the solar disc on Horus' head is a Van de Graaf generator, an apparatus which collects static electricity. A baboon is portrayed holding a metal knife between the Van de Graaf-solar disc and the second tube. Under actual conditions, the static charge built up on the knife from the generator would cause the electron beam inside the Crookes tube to be diverted from the normal path, because the negative knife and negative beam would repel each other. In

the temple picture, the serpent's head in the second tube is turned away from the end of the tube, repulsed by the knife in the baboon's hand."



According to Dunn, all aspects of the Denderah reliefs correspond exactly to modern electrical specifications. The bulb size and shape, the position of the elements relative to each other, and even the wiring patterns and insulators all match their modern counterparts. The arrangement and variations in the examples of how to manipulate the electrical energy of the bulb is also strongly reminiscent of modern scientific diagrams, the only major difference being the use of symbolic imagery, such as gods and animals, to communicate certain concepts. (<http://www.mysteriousworld.com/Journal/2003/Summer/Osiria/>)

In the workmanship of many artifacts from predynastic Egypt through to the New Kingdom we see evidence of amazing workmanship with granite and diorite that strongly hints at sonic technology but do we have any any evidence that stones can be lifted with sonic levitation?

Most of us are aware of the force and power that wind has in storms and hurricanes and how air particles can be captured to drive forward great sailing ships. Sound waves are simply moving air particles like wind but in distinct wave formations.

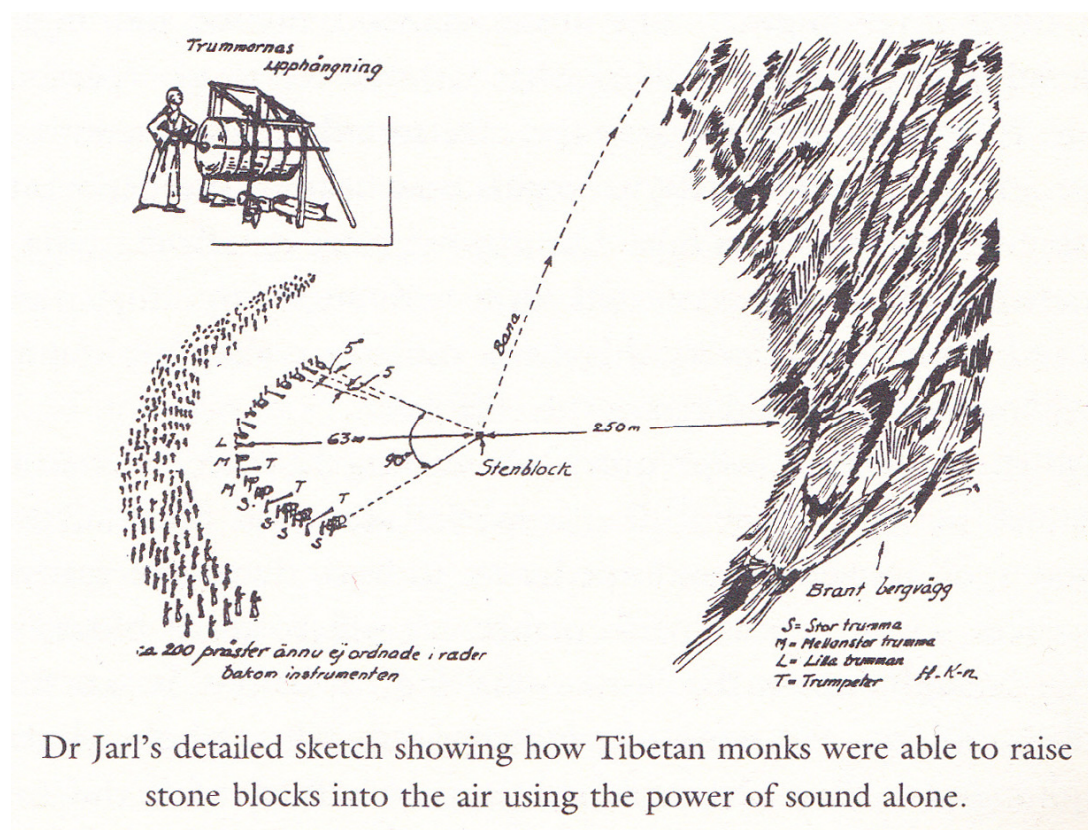
Andrew Collins in "Gods of Eden" covers much of this same material above and then adds some additional evidence regarding the possibility of sonic levitation:

The first case concerns a Swedish doctor, whom Kjellson refers to only as Jarl, his full name being withheld. During either the 1920s or 1930s - an exact date is not given - Jarl accepted an invitation from a Tibetan friend to visit him at his monastery, which was situated south-west of the capital Lhasa. It was while on sabbatical here that Jarl allegedly witnessed stone blocks, 1.5 metres in length and 1 metre in height and width, being levitated high into the air through the process of sound. These events were said to have taken place in a nearby meadow, which sloped slightly uphill towards north-west-facing cliffs.

Jarl had noticed that around 250 metres up the rocky face there was an opening to a large cave, in front of which was a wide ledge, accessible only by descending ropes hung from the top of the ridge. Here monks were busily constructing a wall of stone. He also noticed that, at an estimated distance of 250 metres from the base of the cliffs, a large flat stone had been embedded in the ground. Its upper surface contained a large bowl-shaped depression 15 centimetres deep. Around 63 metres further back from the embedded stone, a large group of yellow-robed monks seemed to be busily making final preparations for some kind of coordinated operation. Some were tending enormous drums, others supported long trumpets, many more were forming themselves into lines, while one monk used a knotted rope to mark out accurately where everyone and everything should be placed. Jarl counted 13 drums and 6 trumpets - each instrument being positioned approximately 5 degrees apart to form an arc of just over 90 degrees centred on the bowl-stone. Behind each instrument was a line of monks eight to ten deep, making the whole formation appear like a quarter-segment of a huge spoked wheel.



In the middle of the arc was a single monk holding a small drum, supported at waist height by a leather sling worn around his neck. To either side of him were other monks tending medium-sized drums. These were hung from a wooden frame by leather slings affixed to a pair of sticks, inserted sideways through their interiors, which acted as directional levers.



On either side of these two drums were further monks tending enormous three-metre-long trumpets known as ragdons. Beyond these, on either side, were a further pair of medium-sized drums, then a pair of even larger drums also hung beneath wooden frames by leather slings attached to protruding sticks.

Completing the veritable orchestra were, progressing symmetrically outwards on either side, two more ragdon-trumpets, another four large drums (two on each side), another two trumpets and, lastly, two final large drums (see illustration below). All 13 drums had a skin covering at one end only, the remaining 'open' end being pointed towards the bowl-stone.

Jarl then watched as the first stone block was dragged on a wooden sleigh pulled by yak up to the bowl-stone. Monks quickly manhandled the heavy weight on to the depression before retiring to allow the proceedings to begin.

All 19 instruments were pointed like cannons towards the stone block, and, when everything and everybody was in position, the monk with the small drum started chanting rhythmically in a low monotone voice as he began beating the instrument's covered end with one hand. It emitted a harsh, sharp sound that hurt Jarl's ears. In response, the ragdon-trumpets were sounded as the rest of the drums were struck with huge clubs 75 centimetres long, their heads covered with leather. Each drum was attended by two monks, who would take turns to beat it. Other than the monk with the small drum, no one spoke a word.

As the strange cacophony progressed, Jarl attempted mentally to record the drum sequence. It began very slowly, but then speeded up so fast that he quickly lost track of the rhythm, which blended to become a solid wall of sound. Unbelievably, the harsh noise made by the little drum managed to penetrate the combined sound produced by the trumpets and drums. This led him to conclude that it was being used to mark time.

Some four minutes passed before anything unusual took place. Then, quite suddenly, the stone block began to wobble slightly, as if gaining partial weightlessness. Finally, it lifted into the air,

rocking from side to side. It then rose upwards as the trumpets and drums were tilted accordingly. The stone climbed higher and higher, accelerating in speed and making what Jarl referred to as a 'parabolic arc' as it headed slowly towards the cave mouth. Eventually, with the monks still sounding the trumpets and beating the drums, the building-block reached its final destination before rapidly crashing on to the ledge. It hit the stone platform with such force that it sent dust and gravel flying everywhere and caused an almighty clamour that momentarily echoed across the cliff-face.

All then suddenly went quiet. On casting his eyes back to the assembled party of some 240 monks, Jarl saw that none of them seemed at all moved by the experience. Indeed, they were readying themselves for a repeat performance. Another stone block was quickly brought up to the bowl-stone and, as before, it was manhandled on to the smooth indentation. The whole musical cacophony was then resumed, starting, as before, with the small drum. For some hours Jarl watched as between five and six blocks an hour were transported in this manner. Once in a while a stone would crash on to the platform so hard that it would explode into pieces. When this occurred the monks working in the cave mouth would simply push the fragments over the cliff edge so that they crashed down on to the rocks below...

The most revealing aspect of Jarl's account is the meticulous detail with which he recorded the proceedings in the meadow that day. He wrote down every distance, every angle and every measurement, and even recorded obscure points such as the fact that the large drums consisted of three-millimetre plates in five sections, with approximately seven-millimetre-thick joints holding them together. There is too much information included in this account, preserved by Henry Kjellson, to dismiss it simply as pure fantasy.

The choice of instruments, the specific distances and angles involved, the placing of the stone blocks on a bowl-shaped stone at ground-level, along with the gradual build-up of percussive sounds, all add up to an exact science, a sonic technology, understood by the monastic community visited by Jarl. One of the most poignant statements he makes is in respect of the manner in which all 19 instruments were trained constantly on the target stone, right until it reached its point of destination...

Jarl's account is tantalising evidence of a type of sonic technology now lost to the world. On its own it can be little more than this, but thankfully it was not the only example preserved by Kjellson. In 1939 the Swedish engineer and writer attended a lecture given by an Austrian filmmaker named 'Linauer' concerning his travels in Tibet. Kjellson was able later to speak to him at length about his claims, and, having obviously satisfied himself as to their authenticity, included them in his book *Forsnunnen teknik* ('Disappeared Technology'), first published in 1961. What Linauer supposedly witnessed seems to confirm Jarl's account and also throws new light on what we know about the pyramid builders' apparent ultrasonic capabilities.

Linauer claimed that while at a remote monastery in northern Tibet during the 1930s, he was privileged to witness some very remarkable feats. They included the demonstration of two curious sound instruments which, when used in concert, could defy the laws of nature adhered to so strictly by orthodox science.

The first of these instruments was an extremely large gong mounted vertically in a wooden frame. At 3.5 metres in diameter, it was composed of three separate metals. At its centre was a circular section of solid gold, while around the outside of this was a concentric ring of pure iron. Encircling these two metals was a further ring of extremely hard brass which apparently possessed a certain amount of elasticity. In contrast, the central area of gold was said to have been so soft that it could be marked with a fingernail. In many respects the gong's appearance was not unlike a huge metal target-board. The sound it made when struck was entirely unlike that normally associated with such instruments, for instead of emitting a powerful, sustained note it produced an extremely low dumph which ceased almost immediately.

The second instrument was also composed of three different metals, although Linauer was unable to determine their exact identity. It was estimated to have been two metres in length and one metre wide (a depth is not given by Kjellson), while its shape was described as similar to that of a mussel shell, or half-oval. Strings were stretched longitudinally over its hollow surface, and it was supported by a frame that held it fixed in a slightly raised position. Linauer was told by the monks that this curious string instrument was neither played nor touched but simply sang in silence, in that it would emit, in Kjellson's words, an 'inaudible resonance wave' only



when the gong was struck to produce its characteristic sound. Used in conjunction with these curious instruments was a pair of large screens that were positioned carefully so as to form a triangular configuration with the two devices. The purpose of the screens would appear to have been to catch, contain and deflect the 'inaudible resonance wave' made by the mussel instrument.

When it came to a practical demonstration, a monk wielding a large club would approach the gong and begin striking it to produce a series of brief, low-frequency sounds that must have had a peculiar effect on the aural senses. With this, the mussel instrument would begin emitting what I can only assume was a range of ultrasonics which, when contained and directed, would induce temporary weightlessness in stone blocks. At such times a monk could lift one of these stones with just one hand. Linauer was informed that this was how their ancestors had been able to build walls of protection around the whole of Tibet. He was also told by the monks (although he did not witness it for himself) that these and other, similar devices could be used to disintegrate or dissolve physical matter (p. 66-71).

In the Temple of Karnak there is a fallen granite obelisk dating to the reign of Hatshepsut. Up until recently, it was possible to make it hum for up to 30 seconds simply by repeatedly thumping its apex.



While there appears to be evidence for the use of sonic technology in creating Egyptian artifacts, there isn't any real evidence for it being used to transport and lift the stones of the pyramids, just the possibility based on a possible ability to do so.

One of the most enigmatic man-made structures in America is Coral Castle in Florida south of Miami. John Desalvo in his book "Decoding the Pyramids" writes the following about it:

Another story involves Edward Leedskalnin, who, in the early 20<sup>th</sup> century, built a castle entirely out of large blocks of coral at his home in Florida. Each block weighed between 20 and 30 tons (16,329 and 18,143 kg). The completed castle was composed of blocks of blocks totaling some 1100 tons (997,903kg) and took him 28 years to complete. He claims to have constructed it all by himself. He never revealed his secret, which he took to the grave.



Christopher Dunn, a master craftsman and engineer from Illinois, has investigated this story known as the "Coral Castle Mystery". Dunn suggests that Leedskalnin had discovered some means of locally reversing the effects of gravity. He also speculates that Leedskalnin generated a radio signal that caused the coral to vibrate at its resonant frequency and then used an electromagnetic field to flip the magnetic poles of the atoms so they were in opposition to the Earth's magnetic field (p. 66-67).

Dunn on one documentary ([http://www.youtube.com/watch?v=o15\\_DQUm94s](http://www.youtube.com/watch?v=o15_DQUm94s)) says that he tied a cable around each block and that cable connected to the black box at the top of the tripod seen in a couple of pictures he had. The radio and electromagnetic signals were sent along this cable that was wrapped around the blocks.

He moved the whole castle to its present location at Homestead, Florida in 1936 from an earlier location further north. To facilitate the move he arranged for a truck driver to leave his long flatbed truck with him to load all the blocks onto. After he left the truck with him he came back for something about half an hour later and Ed had already loaded several massive blocks which greatly surprised the truck driver. Ed told him to come back in the morning when he promised they'd all be loaded and, sure enough, the next day they were all loaded onto the truck.



Ed, himself, claimed to have discovered the way that the Egyptians built the pyramids. If Ed used an anti-gravity means to move the stones in the way that Christopher Dunn claims it was done this doesn't prove that the Egyptians moved their blocks this way when building the Giza pyramids.

*I have discovered the secrets of the pyramids, and have found out how the Egyptians and the ancient builders in Peru, Yucatan, and Asia, with only primitive tools, raised and set in place blocks of stone weighing many tons!*  
 ---Edward Leedskalnin

There is, in fact, what appears to be some hard proof for the blocks being moved and raised in a more conventional way than any anti-gravity means when we look at the theory of French architect, Jean-Pierre Houdin.

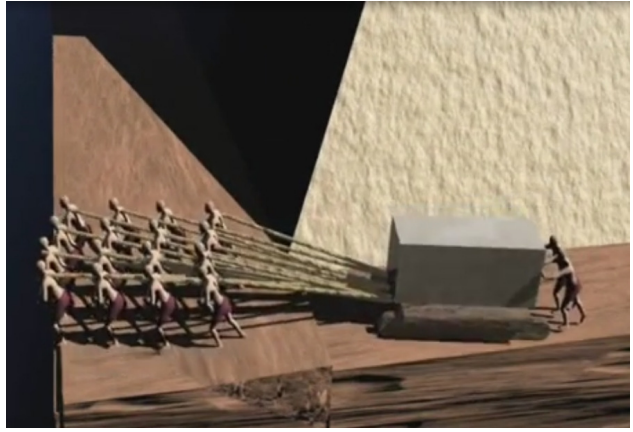
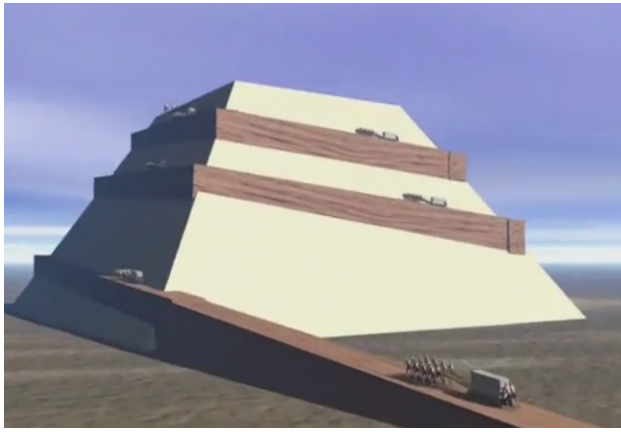
One of the most credible theories that have come out recently about how the pyramids were moved upwards from the base to where they were needed has come from French architect, Jean-Pierre Houdin (Youtube video at <http://www.youtube.com/watch?v=MpR7AKKN87E>).

Houdin saw that there are problems with both types of ramps previously been proposed. A straight external ramp rising at a 7° angle all the way up to the top would take more material to build than the pyramid, being up to a mile long plus there are no remains left of this hypothetical ramp.



The other ramp theory is a spiralling external ramp around the sides of the ramp. The problem with this type of ramp is that such a ramp would be unstable along the sides of the pyramid and it would be quite difficult to make right angle turns.

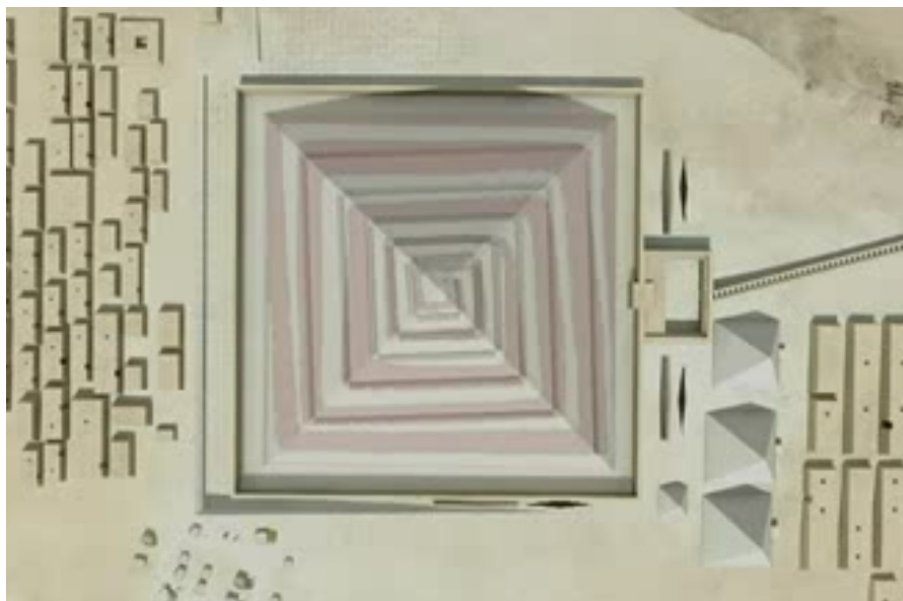




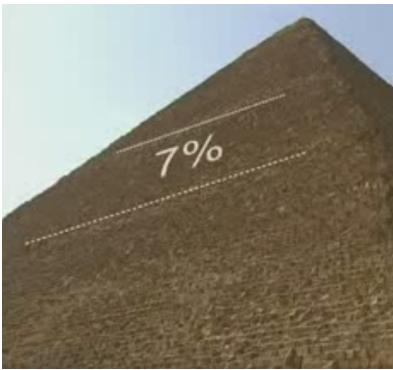
Houdin's theory is that they used an internal ramp within the pyramid that went up at an angle of  $7^\circ$ . Where it made a right angle turn there were niches made to both provide ventilation and also to use levering cranes to turn the blocks for the next ascent.



The best thing about this theory is the on-site evidence supporting this. Detailed scientific tests do show that there is an internal cavity (seen in white in the picture below) that spirals around exactly as demanded by Houdin's internal ramp.



Additionally there appears to be faint external lines that mirror where this ramp would be. There is even one niche high up, though, at this stage, there is no connection leading to where the internal ramp would be.



Houdin only believes that this internal ramp was used for the relatively smaller blocks and proposes that there was a straight external ramp that only went up as high as the King's Chamber. Once the huge granite blocks were hauled up, the stones of the ramp were deconstructed and used for the upper levels of the pyramid.

Assisting with moving up the granite blocks they had a counterweight system using a rolling sled with massive stones on that would move up and down the Grand Gallery. This is an especially interesting part of the theory in explaining the purpose of the Grand Gallery.







There is some good on-site evidence supporting this theory about the purpose of the Grand Gallery. The benches on either side on which rollers would be on which the sled would be up on top of. The sled itself would scrape at times along the side of the gallery as they go up and

down and there are grease and scrape marks the whole length of the Grand Gallery where the top and bottom of the sled would have been.

The physical evidence for this appears to be there. One thing to note relating to this theory is that the Grand Gallery runs north-south on the northern side of the Great Pyramid. If a straight external ramp were to have built just to the level of the King's Chamber then it appears that such an external ramp would have to have been on the south side of the pyramid NOT from the east where the causeway down to the Nile would be.

Sir Flinder Petrie found an iron bar within the pyramid that has been tested for its nickel content and it shows evidence of being manufactured, not fashioned from meteoric iron which has a much different nickel content.

While thick ropes may have been used to haul up the "smaller" 2 to 10 tonne blocks, it is well within the realm of possibility that they used iron chains or cables instead of ropes and iron cylinders or wheels instead of logs for rollers in the Grand Gallery.

Jean-Pierre Houdin, like most Egyptologists, imagines most of the work, with the exception of counterweight in the Grand Gallery and levers to turn the blocks at each right angle of the internal ramp, was all done using human pushing and pulling power.

The physical evidence of the spiral internal cavity supports Houdin's internal ramp as the means of moving most blocks up the pyramids and his counterweight theory has the best evidence for the purpose of the Grand Gallery.

Henk Koens' theory of wooden wheels being attached to either side of the blocks so they can be pulled along is the more sensible and effective means of transporting the blocks up the internal spiral ramp.

A mysterious, anonymous and eccentric character from Boonsberg, New Jersey, simply known by his initials E.B. (boonsberg.com) has posted some videos on youtube showing his invention called the Boonsberg egg which is an elliptical wooden disc with a hole for inserting one end of a large stone block or a car as he has in one of his videos. This is very similar to Henk Koens' theory of wooden wheels being attached to either side of the blocks.



The main difference being the slightly elliptical shape of the wooden discs. The big advantage of this shape over a perfectly circular shape is that going uphill the wheel won't roll back all the way down the slope if let go or it slips. It will tend to stop on the longer side of the ellipse.

E.B. also has a video (<http://www.youtube.com/watch?v=Gn5DSFVYGrg>) showing a winching method by which the blocks within these wooden wheels would be winched uphill. Whether using thick ropes or iron chains, this is the most efficient and most likely way that they would have pulled the blocks uphill within the internal ramp that Houdin has theorised and microgravimetry appears to have confirmed is there.





There were nearly 120 000 casing stones made of gleaming white tura limestone that originally encased the pyramids at Giza before they were stripped away to construct buildings in the city of Cairo. They would have been dazzling bright from many miles away.

One quite interesting theory regarding the accuracy of the tura limestone casing stones is one put forth by Joseph Davidovits, President of the Geopolymer Institute. One video on youtube ([http://www.youtube.com/watch?v=znQk\\_yBHre4](http://www.youtube.com/watch?v=znQk_yBHre4)) shows a reconstruction of his limestone moulding process and some blocks they created using the process. I'd like to quote one online critique of this theory which does point out one apparent flaw in this theory:



While it is accepted (begrudgingly), that the ancient Egyptians used cement in their 'seamless' joints, the French chemist and pyramid explorer Joseph Davidovits proposed that the stones themselves were also formed from concrete, mainly on the basis that the precision was within tolerances of 0.01mm in cases. It is noted that the only dimension that is constant on the casing stones is the height, and that the same precision was carried out on marble and through solid rock. It is an interesting theory and requires exploring.



Extract from Davidovits –

"This type of fossil-shell limestone concrete would have been cast or packed into moulds. Egyptian workmen went to outcrops of relatively soft limestone, disaggregated it with water, then mixed the muddy limestone (including the fossil-shells) with lime and zeolite-forming materials such as kaolin clay, silt, and the Egyptian salt natron (sodium carbonate). The limestone mud was carried up by the bucketful and then poured, packed or rammed into molds (made of wood, stone, clay or brick) placed on the pyramid sides. This re-agglomerated limestone, bonded by geochemical reaction (called geopolymer cement), thus hardened into resistant blocks."

There are some problems with this theory.

We can see that Khufu's is the best example of pyramid stonework. As the process was so successful, why wasn't it carried on later? It is suggested that the builders carried approximately double the current weight of the pyramid (water too). There is no evidence of

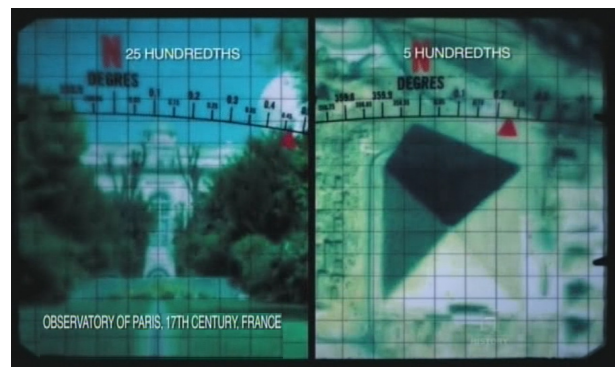
mould markings and not one block is the same size as the other (except the course heights which were constant).

It was observed that a number of blocks have sedimentation, exactly the same as in the quarries. To which Daviots' responded that the stones might not have been made in one day, so during the night sand could have been blown in which was covered by new material the next day, and therefore looked like sedimentation (<http://www.ancient-wisdom.co.uk/Ghizahow.htm>).

Some of the amazing feats of engineering accuracy of the Great Pyramid are covered in the documentary "Mysteries of the Ancient World". An architect, Gregory Pylos, spoke of the amazing strength of the foundation with regards the lack of settling in the structure. An accepting settling rate for modern office buildings is 6 inches per 100 years. The US Capitol building has settled 5 inches in 200 years. The Great Pyramid has only settled, according to his information, only  $\frac{1}{2}$  inch in 5000 years.

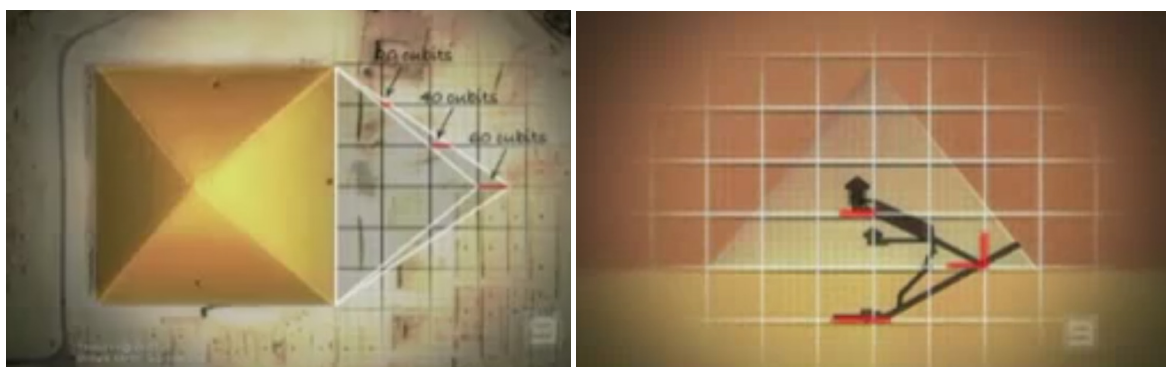
We know that the hardened bedrock was levelled and there are limestone and basalt foundations stones across the Giza plateau. Using water over the foundation may well have been part of the mix to determine how level the foundation was.

Civil engineer, Ron Clark, on this same documentary talked about the straight alignment of the four sides. Today, engineers would be happy to be within 6 inches of straight alignment for a structure as big as the pyramids. The Great Pyramid is within  $\frac{1}{4}$  inch of straight alignment which Clark says we cannot duplicate today. The pyramid is also within 3 arc minutes off true north in its north-south alignment.



The Greek historian Herodotus in his account of the pyramids said that the pyramids were built in 20 years. On average a fully shaped block would need to be laid every 3  $\frac{1}{2}$  minutes to complete the pyramids in that time. There is no guarantee of the accuracy of the information he was given by Egyptian priests who may have lived 2000 or more years after it was built so it is possible that it was constructed over a longer period. Herodotus also claimed 100 000 men worked on the pyramids though Houdin and Koens' have provided evidence of a much smaller working force of 5 000 or less.

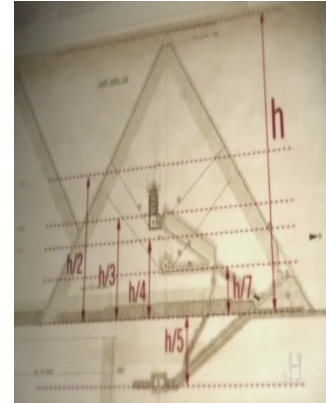
Assisting the accuracy of the Great Pyramid, Egyptologist John Romer, has discovered that the post holes to the east of the pyramids form a grid allowing for a 1:1 plan of the outer structure of the pyramid when strung together (<http://www.youtube.com/watch?v=3y-ltxDkvRI>).





Additionally, he believes there is a second plan (in black), slightly offset vertically from the first plan (in white) for the interior chambers.

The height of various internal sections also appear to be the height of the pyramid divided by various whole numbers as illustrated in the diagram on the right from the documentary “The Revelation of the Pyramids”.



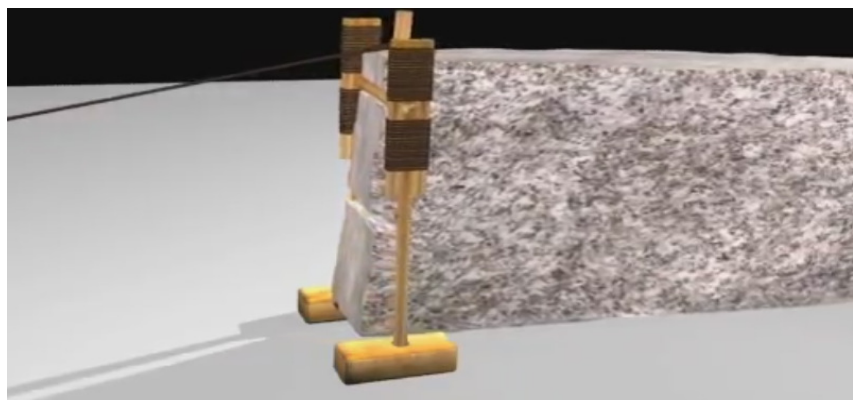
Another interesting online video that shows how one person can single-handedly move stones many tonnes and raise them is one by Wally Wallington who, first demonstrates that if you lever the block up and place stones at either end under the stone you can move the stone using a wooden device that grips the stone the length between the stones per rotation([www.youtube.com/watch?v=uYQBDhkBfr0](http://www.youtube.com/watch?v=uYQBDhkBfr0)).

Using that technique he places wood blocks under the centre and by pulling each end down with counterweights adds additional wood blocks under the centre and effectively jacked up a 8 tonne stone block several feet high.



This jacking principle is the most effective way of raising the height of blocks unaided by any anti-gravity technology.

Another online video shows a simple device for moving blocks hundreds of tonnes in weight.



Mario Jason has an ingenious solution for moving such blocks that greatly reduced the amount of force needed to move them along.

Large notches are created high along the sides and a hole is drilled into the top where tree trunks are inserted. These are then connected to a sled as per this screenshot here ([www.youtube.com/watch?v=M--f3oZcSVc](http://www.youtube.com/watch?v=M--f3oZcSVc)).

A rope at the top is used to pull the blocks along. Since the end of the stilts join with the bases a little off the ground the end of the block closest to the sled rises up and down when the rope at the top is pulled at, meaning only the far end of the block is touching the ground thereby reducing the force required to move the block along.

I haven't seen any blocks with notches on the side or top to suggest this method was used though that put could have been later cut off. This also wouldn't be useful for mountainous places like Machu Picchu.

On the History Channel documentary “Mega Movers” (<http://www.youtube.com/watch?v=4HampsITppk>) in the episode on Baalbek and its three enormous blocks that weigh

800 tonnes each that were set several feet high above the foundation they discussed what techniques could be used to move them. Vince Lee, taking his inspiration oddly enough from a Far Side cartoon, proposed one theory that could have been used by the ancients.

Baalbek itself is a Roman temple for Jupiter though many claim it was built on an earlier foundation built by a previous civilisation including these three 800 tonne stones. That said, the Romans did have a technique for accomplishing this sort of feat as there are similar sized blocks under the Wailing Wall in Jerusalem that were built by the Romans under King Herod who also built other insanely ambitious building projects like the Herodian near Bethlehem, Caesarea and Masada.

Vince Lee's theory is that under one side of the block holes were dug to allow dozens of levers along the side to be inserted and that the side of the block was gradually levered by 30 men per lever with an average load of 1.5 tonnes per gang of 30 on each lever. As it gets levered higher stones are placed underneath until it gets to its tipping height and you have a tree roller placed on the other side to raise it off the ground for the next raising sequence.

To raise the block into place an earthen mound is built and sand is used on the other side to cushion the last flip into place and then the sand is washed away.



There is certainly some mind-boggling engineering accuracy and precision across the Giza pyramids which many civil engineers say can't even be duplicated with modern equipment. The ancients followed a different track of problem-solving thought than today's engineers and their ingenuity forced them to come up with more simple, elegant solutions due to the less technical equipment they had to work with. A lot of these mysteries of engineering accuracy and precision may never be solved this side of the Kingdom.



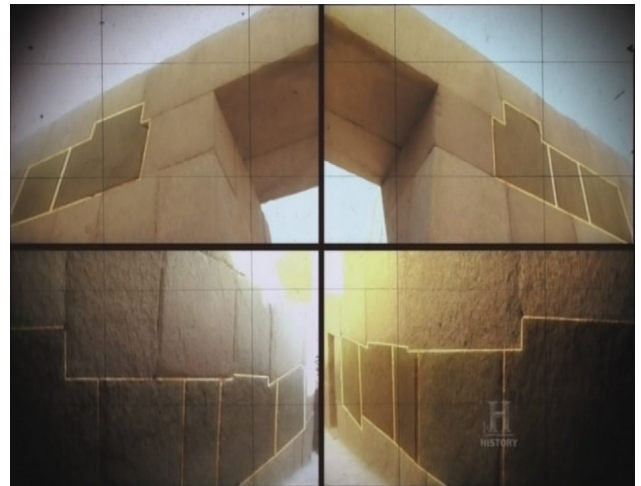
One other remarkable piece of engineering in the Great Pyramid is that the four sides are slightly concave that gives the Great Pyramid the appearance of having eight sides that only shows up on the spring or autumn equinox, much like the equinox shadow pattern at Chichen Itza in Mexico.

In closing this section on how the pyramids were built, it is also worth noting that most of the stones of the Giza pyramids and the Valley Temple are of irregular sizes. Standard size stones are more efficient from a mass production point of view so why the irregular sizes?



There is a method to this madness. Using irregular sizes helps the building better stand up against seismic activity and makes it more earthquake-proof and we can see the Giza pyramids have fared much better than many of the other stone pyramids.

That said, even in their use of irregular blocks there is a deliberate symmetry of such blocks on either side where they are used in the Valley Temple as can be seen on the right from this screenshot taken from the documentary "The Revelation of the Pyramids".



## CHAPTER 3

### Who Built the Pyramids and When?

The next great mystery about the Giza pyramids is who built them and when? The standard Egyptology view is that following Djoser's Step Pyramid at Saqqara and Sneferu's pyramids at Meidum and Dashur in the third dynasty, the Great Pyramid was the next great pyramid building on from what was learned from those previous pyramids.

Pharaoh Khufu (Cheops) built the first of the Giza pyramids, the Great Pyramid. His son, Khafre then built the middle pyramid a little lower in height than the Great Pyramid and then Khafre's son, Menkaure, built the smaller pyramid. What evidence does Egyptology have for identifying the builders of these pyramids with these pharaohs?



The pyramids are almost completely void of inscriptions and hieroglyphs, unlike the temples and pyramids elsewhere. The identification of Khufu as the builder of the Great Pyramid is due to controversial cartouches of the pharaoh found in the granite relieving chambers in the King's Chamber. The authenticity of these cartouches is questioned by various scholars.

The identification of Khafre (Chephren) with the middle pyramid is due to statues of him found in the Valley Temple near the Sphinx. The Valley Temple is directly connected to the middle pyramid by a causeway.

The identification of Menkaure with the third, smaller pyramid is due to a cartouche of him found in one of the small satellite pyramids to the south of the Giza pyramid attributed to him.

We have looked at some of the engineering marvels of the pyramids and Chris Dunn's research that also shows the high level of engineering involved with a lot of the artifacts created by the Egyptians. Those give strong indication that many of the Old Kingdom artifacts were created mechanically and maybe using ultrasonic technology so the Old Kingdom pharaohs may well have possessed such high technology. This technology, that was later lost to later civilisations, would have, most likely, been kept relatively secret and not described openly on Egypt's monuments.

The spiral internal ramp, wooden disc and winching systems as well as the counterweight system of the Grand Gallery we looked at as the most likely means of building the Giza pyramids would all be within the capability of the fourth dynasty pharaohs to achieve, though, perhaps not the engineering accuracy and precision, although maybe even that as well.

Just because they may have had the capacity to build the pyramids IF they knew of those engineering solutions doesn't mean they were the ones who built those pyramids. We need on-site evidence proving either that it was those fourth dynasty pharaohs or some earlier builders as proposed by some other researchers.

First of all, let's look at some of the differences between the Giza pyramids and the other stone pyramids of the Old Kingdom to see what those differences can tell us.

All the pyramids of the 3rd dynasty, the pyramids of the 4th dynasty outside of Giza and those of the 5th dynasty are composed of stones that are much smaller in size than the Giza pyramids. Their interiors are composed of unhewn or slightly hewn stones compared to the hewn or mostly hewn stone of the Giza pyramids.

Why would there be such a huge increase in pyramid quality from the 3rd to 4th dynasties and then a drop back to a quality even less than the 3rd dynasty straight after the Giza pyramids if they were built by the pharaohs of the 4th dynasty?



Robert Bauval and Graham Hancock make the following comments regarding the conventional view that Khufu, Khafre and Menkaure of the 4<sup>th</sup> dynasty pyramids were the builders of the Giza pyramids:

[Apart from the disputed Khufu cartouches in the Great Pyramid's relieving chambers] there are no other texts of any kind in the Great Pyramid [and none at all] in the pyramids attributed to Khafre and Menkaure. The three small 'satellite' pyramids lined up along the eastern face of the Great Pyramid, and the three other satellite Pyramids lying near the south-western edge of the site, are similarly bereft of inscriptions. Some Fourth Dynasty artefacts were found inside these six 'satellite' structures but there is no guarantee that are artefacts are contemporary with the monuments.



The same problem applies to the statues of Khafre and Menkaure that were found in the latter's 'Mortuary' Temple and the former's 'Valley' Temple. These statues are the only evidence supporting the attribution of these otherwise anonymous and uninscribed edifices to the two Pharaohs question. In all logic, however, they only suggest that attribution. They certainly do not confirm it. Khafre and Menkaure, in other words, might have built the temples. But it is also possible that they took over pre-existing structures which they had inherited from an earlier time, and that they adapted, renovated and furnished these structures with their own statues in order to suit their own purposes. After all, we do not attribute the building of London's Trafalgar Square to Nelson just because his statue stands there. By the same token Egyptologists could be going too far when they attribute the building of the Valley Temple to Khafre on the basis of his statue found there.

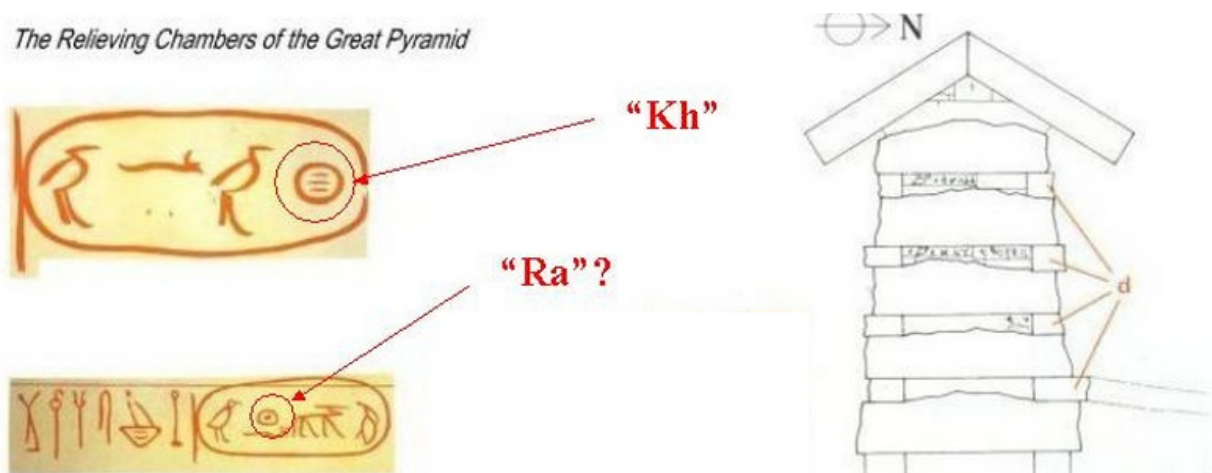
Indeed, this is an observation that is true for the Giza necropolis as a whole. The undoubted connection that it has with the Fourth Dynasty is not in dispute, but the precise nature of this connection remains unproven. To be sure, there are huge quantities of unmistakable and heavily inscribed Fourth Dynasty mastaba tombs lying east and west of the Great Pyramid and west of the Sphinx, but the contention that the Pyramids themselves are 'tombs and tombs only' is guesswork.

It could be the case, as has happened elsewhere in the world, that an ancient and sacred site designed and built for one purpose was subsequently taken over and re-used for another rather different purpose. We might imagine, for example, that the Pyramids and the other principal monuments surrounding them were originally intended to fulfil purely ritual, ceremonial and religious functions and that the practice of burying the dead there - principally Fourth Dynasty queens and nobles judging by the identifiable remains that have survived - was a later adaptation effected by people who were unconnected to the genesis of the site but who sought to be interred in a place that was imbued with ancient prestige and sanctity.

A Western analogy is the practice of burying the remains of particularly favoured individuals under the flagstones of medieval cathedrals - a practice that continues to this day, but that does not lead us to conclude that these cathedrals are tombs or even that they were built primarily for the purposes of burial (Keeper of Genesis, p.25-26).

What about that famous red painted cartouche of Khufu found in the top of the five relieving chambers that Howard Vyse claimed to have discovered that supposedly proves that the Great Pyramid was built by Khufu?

Zechariah Stichen claims that the inscription is a forgery and that the inscription is misspelled and reads "Ra-ufu". This is a false claim. It does, in fact, read "Khufu" but there is another red painted cartouche with the name "Khnum-Rafu" in the relieving chamber just beneath where the first one was found. Below is a picture of the two:



Commenting on these cartouches geologist and author, Robert Schoch, makes the comments below. One point to be aware of in this quote is that Schoch does make this mistake of reading the cartouche in the second chamber as “Khnum-Khufu” rather than “Khnum-Rafu” as shown correctly above.

Something that Howard Vyse had supposedly discovered in this uppermost chamber was a cartouche, the name of the king, which read “Khufu” roughly scrawled on the ceiling by some ancient hand in a red paint. The royal name of Khufu here was presumably the ironclad proof some Egyptologists had long sought to prove the Great Pyramid was nothing more than a huge mausoleum for the egomaniacal Fourth Dynasty King Khufu (Cheops), circa 2550 B.C.



Making my way over the uneven blocks that compose the floor of Campbell's Chamber, using a copy of Vyse's original drawings as a guide, I found the long-sought cartouche in the back corner surrounded by hideous nineteenth- and twentieth-century graffiti. But the cartouche was there, sure enough, and it indeed read “Khufu”! So is this the end of the story? Are the traditional Egyptologists correct in their assertion that the Great Pyramid is nothing more than the gigantic tomb of King Khufu? Maybe not. Indeed on seeing the cartouche, I knew this was just the beginning of my adventure.

For one thing, this particular cartouche is turned up on end, and I would soon see in the other chambers that many of the red-painted inscriptions are completely up side down. What is going on here? Well, no one was meant to view these inscriptions once the pyramid was completed and access to these chambers cut off. Vyse had suggested they were nothing but “quarry marks” put on the blocks by the gangs that cut, hauled, and positioned the stone. But was Howard Vyse being totally honest? Had maybe his workmen who blasted and chiseled their way into these chambers in fact drawn these crude “Egyptian” inscriptions on the blocks themselves?

Were these just fakes? Studying them closely, however, they looked authentically ancient to me. I could see later mineral crystals precipitated over them, a process that takes centuries or millennia, and the inscriptions continue under the overlying blocks. But, there are more cartouches than the one of Khufu in the chambers. Working my way down, sweating profusely and covered with grime, I explored Lady Arbuthnot's Chamber at length. Here are the most, if not best preserved, cartouches - and not a single one says “Khufu”! Rather, here are found two different kinds of cartouches. In one of the complete cartouches I could read “Khnum-Khuf,” where “Khuf” or “Khufu” means “he protects me” and “Khnum” is the name a god, so the whole name may be interpreted as “the god Khnum protects me.” But who or what is being protected? Is it King Khufu, or is the god Khnum actually protecting the Great Pyramid? Another complete cartouche has been interpreted simply as the name of the god, “Khnum.”

Who or what was Khnum-Khuf? The early Egyptologist Sir Flinders Petrie suggested back in 1883 that maybe Khufu and Khnum-Khuf were co-regents that shared the throne of Egypt. Even more radically, it has been suggested that these cartouches are not even the names of a person or persons, but rather either different names for a single god, or the names for several different gods. The researcher William Fix hypothesized (in his book *Pyramid Odyssey*, 1978, p. 93), based both on the attributes of various gods, their symbolism, and etymological similarities, that “Khnum, Khnoum, Khufu, Souphis, Khnoubis, Chnouphis, Tehuti, Thoth, Mercury, Enoch, Hermes, and possibly ‘Christos’ are simply different representations of the same figure and power that finds remarkably similar expression in cosmologies extending over many thousands of years.”

Is the Great Pyramid essentially the Book of Thoth memorialized in stone, as Marsham Adams contended? Did the postulant, the initiate, and the adept follow through the interior of the Great Pyramid to be subjected to trials of body and soul, ultimately (if successful) to die and be born again, finding illumination? Were the chambers of the Great Pyramid used for initiation rituals,

just as the crypts and passages of the Temple of Hathor at Dendera, or the Temple of Osiris would be thousands of years later?

Robert Bauval and Graham Hancock make these comments about the Khufu cartouches in the relieving chambers:

There are horrendous 'orthographic' problems with the hieroglyphs. These problems were first pointed out in the nineteenth century by Samuel Birch, a British Museum expert on the ancient Egyptian language. Although nobody either then or now has paid any attention to his comments, he made the important observation that the styles of writing expressed in the 'quarry marks' are a strange anomalistic hotchpotch of different eras.

Some of the cursive forms and titles used in these supposedly Fourth Dynasty inscriptions are found nowhere else in Egypt until the Middle Kingdom, about 1000 years later (when they become plentiful). Others are unknown until the Twenty-sixth Dynasty (664-525 BC). Perhaps most telling of all, however, is the use of certain words and phrases in a completely unique and zany way that occurs nowhere else in the entire sprawling corpus of writings that has come down to us from ancient Egyptian times. To give an example, the hieroglyph for 'good, gracious' appears where the number 18 is meant (Keeper of Genesis, p.103).

The fact that they are not carved into the rock but in red paint and are in such an inaccessible part of the pyramid shows that the cartouches were not a part of the original, official design of the architects for the building. They have been added unofficially but by who and why?

Egyptologists claim that these were quarry marks or graffiti by the workers but, if so, why not include their own personal name?

Perhaps the chambers were used for initiation rituals long after the pyramids were built just like in other crypts and passages in Egypt and that the ritual attendees may have been the ones who painted these cartouches. Khufu, in this context, would appear to refer to protection from the god Khufu rather than the 4th dynasty pharaoh, particularly in light of the second cartouche.

The Roman historian Strabo states that the descending passage was regularly visited in his day. That said, it is quite likely that the King's Chamber was inaccessible until the 800's AD in Mamoon's exploration, due to the granite plugs near the entrance of the ascending chamber. This would imply that they are to be dated to the time of construction. This may be this case due to the inscriptions carrying on below the joins. Even if this is the case Khufu and Ra-ufu could still refer to gods rather than pharaohs.

We actually have a stela that quite explicitly states that Khufu, presumed builder of the Great Pyramid, restored the Sphinx and that it and the Great Pyramid pre-existed Khufu:

The 'Inventory stela' - Found at Ghiza by Auguste Mariette in the 1850's, in the ruins of the Temple of Isis clearly states that Khufu restored the Sphinx. This stone provides some of the strongest evidence that the Sphinx was constructed before Khufu and not by him. It says:

**"Long live The King of Upper and Lower Egypt, Khufu, given life. He found the house of Isis, Mistress of the Pyramid, by the side of the hollow of Hwran [The Sphinx] and he built his pyramid beside the temple of this goddess and he built a pyramid for the King's daughter Henutsen beside this temple.**



**"The place of Hwran Horemakhet [The Sphinx] is on the South side of the House of Isis, Mistress of the Pyramid [Isis's Pyramid must be the Great Pyramid, being the only one north of the Sphinx].**

**"He restored the statue, all covered in painting, of the guardian of the atmosphere, who guides the winds with his gaze. He replaced the back part of the Nemes head-dress, which was missing with gilded stone. The figure of this god, cut in stone, is solid and will last to eternity, keeping its face looking always to the East" ...**



[This] implies that the Sphinx (and a temple to Isis), were extant before Khufu. While it is believed by traditional Egyptologists that this stela was carved in the 26th dynasty (664-524 BC), the reason why the statement that Khufu restored it is ignored by modern Egyptologists is a mystery, as the other information on it is regarded by the same people as historical fact...

The French Egyptologist and Director General of Excavations and Antiquities for the Egyptian government, Gaston Maspero, who surveyed the Sphinx in the 1920s asserted that:

'The Sphinx stela [Dream Stela of Thutmosis IV that is now in front of the Sphinx] shows, in line thirteen, the cartouche of Khephren. I believe that to indicate an excavation carried out by that prince, following which, the almost certain proof that the Sphinx was already buried in sand by the time of Khafre and his predecessors'.

Even if the Inventory Stela was carved at a later date (such as the 26<sup>th</sup> dynasty) there is no reason why this is not a faithful reproduction of an earlier document.

Here we have the clearest written evidence that **BOTH the Sphinx and the Great Pyramid** [The House of Isis, Mistress of the Pyramid] were built **BEFORE** Khufu, the presumed builder of the first of the Giza Pyramids.

One of the most provocative theories to come out in recent years is that the Sphinx is thousands of years older than the 4th dynasty. This is a deduction due to severe water erosion around the Sphinx and that type of erosion pattern could not have occurred since the area around Giza became desert-like. In addition to investigating the merits of this evidence and coming to a correct conclusion to answer the evidence we also need to look at what evidence there is tying the building date of the pyramids to the same date of the pyramids. Even if can be proved the Sphinx was built much older than the Old Kingdom this doesn't, by itself, prove the pyramids were also built much older than the Old Kingdom.

French mathematician and symbolist, R.A. Schwaller de Lubicz in his book "Sacred Science" (first published in 1961) was the first to raise the possibility of the Sphinx being carved long before the Old Kingdom dynasties in Egypt. He wrote:

A great civilization must have preceded the vast movements of water that passed over Egypt, which leads us to assume that the Sphinx already existed, sculptured in the rock of the west cliff at Giza that Sphinx whose leonine body, except for the head shows indisputable signs of **aquatic [water] erosion** (p.96).

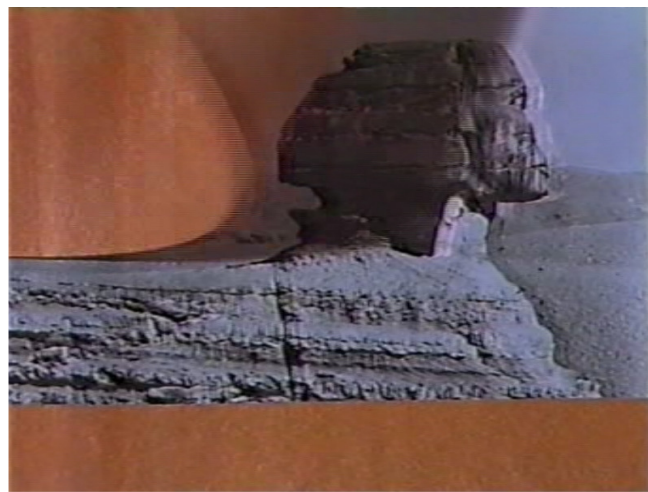


American researcher, John Anthony West, in the late 70's read this passage and thought, "Water? In the desert?" As far as John West understood, there hasn't been significant rainfall in this part of the Sahara for nearly 10 000 years. Here is a picture of John West with what he believes is the heavily water-eroded enclosure of the Sphinx.

Pursuing this line of thought, John West, approached an Oxford geologist and asked if, given a photo of an erosional profile he could tell if it was wind or water eroded. The answer was cautiously given that as a general rule yes he could.

John West played a bit of a trick on him and took a photo of the Sphinx and masked off the head and the paws and then asked him if the erosion he saw in the photo was caused by wind or by water.

On looking at the photo he said, "Unquestionably water". John West then peeled away the masking tape revealing the rest of the Sphinx to which the Oxford geologist went "Oh!" He wanted nothing more to do with where John West was taking this.



After being ridiculed for publishing this theory of a much older Sphinx than the Old Kingdom, West found a geologist in Dr Robert Schoch who was open minded and willing to examine the evidence. Below left is an illustration of how wind erosion scoures limestone with differing hard and soft layers. The soft layers will be more eroded than the harder layers. Below right is a picture of a wall from the Tomb of Debehen on the Giza plateau which is eroded in this way by wind.



Limestone eroded by water have a completely different shape as the below illustrations show. There are vertical fissures carved by the downward rainfall, it has a more rounded undulating profile and the upper layers are more eroded than the lower layers.

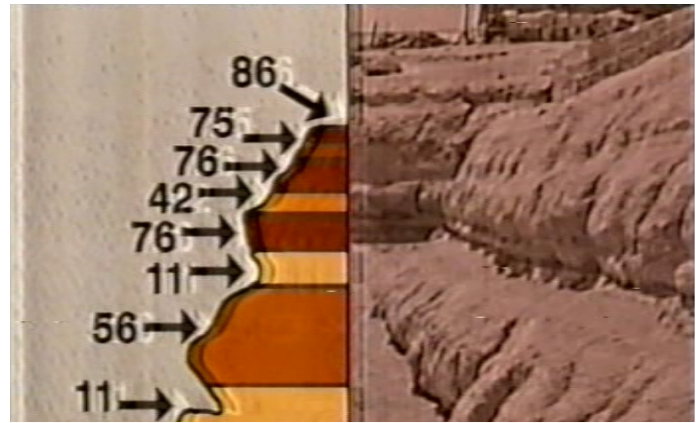


Below is a photo showing the different erosion patterns comparing that of the wall of the Temple of Debehen and the Sphinx Enclosure. They were both vertically carved by man and are a mere 300 metres apart. The water erosion pattern is seen on the Giza plateau on the Sphinx (except the head) and the walls of the Sphinx enclosure, not on other clearly 4th dynasty structures.



In the photos below you can see how far back each layer has been eroded. The numbers in the illustration show the hardness of each layer. The harder the layer the higher number given. Notice many lower numbered layers are worn further back than other higher number layers and the higher layers are more eroded than the lower ones. This proves that it was rain and not water from below (such as the annual Nile flooding) that caused the water erosion.





Another point regarding the erosion of the Sphinx and its enclosure is that it has been much less exposed to the elements as other places on the Giza plateau because it regularly fills up with sand as noted by Graham Hancock in the quote below:

There have been no significant changes in the climate of the Giza plateau over the last 5000 years. It therefore follows that throughout this entire period the Sphinx enclosure must have been as susceptible to sand encroachment as when Thutmosis cleared it - and, indeed, as it still is today. Recent history proves that the enclosure can fill up rapidly if left unattended. In 1818 Captain Caviglia had it cleared of sand for the purposes of his excavations, and in 1886, when Gaston Maspero came to re-excavate the site, he was obliged to have it cleared of sand once again. Thirty-nine years later, in 1925, the sands had returned in full force and the Sphinx was buried to its neck when the Egyptian Service des Antiquites undertook its clearance and restoration once more."

Does this not suggest that the climate could have been very different when the Sphinx enclosure was carved out? What would have been the sense of creating this immense statue if its destiny were merely to be engulfed by the shifting sands of the eastern Sahara?...

In his *Passing of Empires*, published in 1900, the distinguished French Egyptologist Gaston Maspero, who made a special study of the content of the Sphinx Stela erected by Thutmosis IV, wrote:

"The stela of the Sphinx bears, on line 13, the cartouche of Khafre in the middle of a gap ... There, I believe, is an indication of [a renovation and clearance] of the Sphinx carried out under this prince, and consequently the more or less certain proof that the Sphinx was already covered with sand during the time of Khufu and his predecessors..."

The equally distinguished Auguste Mariette agreed - naturally enough since he had been the finder of the Inventory Stela (which...asserted matter-of-factly that the Sphinx was standing on the Giza plateau long before the time of Khufu). Also generally concurring were Brugsch (*Egypt under the Pharaohs*, London, 1891), Petrie, Sayce and many other eminent scholars of the period. Travel writers such as John Ward affirmed that 'the Great Sphinx must be numberless years older even than the Pyramids'. And as late as 1904 Wallis Budge, the respected keeper of Egyptian Antiquities at the British Museum, had no hesitation in making this unequivocal assertion:

"The oldest and finest human-headed lion statue is the famous 'Sphinx' at Giza. This marvellous object was in existence in the days of Khafre, the builder of the Second Pyramid, and was, most probably, very old even at that early period ... The Sphinx was thought to be connected in some way with foreigners or with a foreign religion which dated from predynastic times."

Between the beginning and the end of the twentieth century, however, Egyptologists' views about the antiquity of the Sphinx changed dramatically. Today there is not a single orthodox Egyptologist who would even discuss, let alone consider seriously, the wild and irresponsible suggestion, once a commonplace, that the Sphinx might have been built thousands of years before Khafre's reign (*Fingerprints of the Gods*, p. 366-367).

Seismograph analysis has also determined that the porous limestone bedrock under the front legs of the Sphinx has been softened and weathered twice as much as the back part of the Sphinx. This indicates that the back half has been exposed to the elements only half as much or half as long as front half.

Perhaps the back half was carved later in Khafre's time when he may have repaired it or perhaps it was covered by sand or soil for much of the time that the front half was exposed or maybe the limestone was twice as hard at the back to begin with.



In their book “Keeper of Genesis” Robert Bauval and Graham Hancock write:

The Sphinx Temple and the Valley Temple are both anonymous monuments. And although it is certain that use was made of the latter for Khafre's funerary rituals, there is no proof that he built it. On the contrary, if Professor Robert Schoch's geological evidence is correct, then it is quite certain that Khafre did not build either of these structures. This is so because the Sphinx itself was made by hewing a deep horseshoe-shaped trench out of the bedrock of the Giza plateau, leaving a central core which was then carved into shape, and because geologists have been able to prove that the limestone megaliths used in both temples came from the trench and were thus quarried at the same time as the Sphinx. It therefore follows, if the Sphinx is indeed thousands of years older than Egyptologists think it is, that the temples must also be thousands of years older.

What we may be looking at here are the fingerprints of highly sophisticated and perhaps even technological people capable of awe-inspiring architectural and engineering feats at a time when no civilization of any kind is supposed to have existed anywhere on earth.

Supportive of this possibility is the fact that the megaliths of the temples demonstrate precisely the same apparent precipitation-induced weathering features as the Sphinx itself. And it is of interest to note that the surviving granite casing blocks seem to have been carved on their inner faces to fit over the limestone core-blocks at a time when these were already heavily marked by erosion.

Since the granite casing has the look of other Old Kingdom Egyptian architecture (while the limestone core-blocks do not) this may be taken as further evidence of the theory that an ancient, revered and much-eroded structure was restored and renovated by the Old Kingdom Pharaohs. Robert Schoch certainly favours this view. “I remain convinced,” comments the Boston University geology professor, “that the backs of the Old Kingdom granite facing stones were carved to match or complement the earlier weathering features seen on the surfaces of the core limestone blocks of the temples.” (p. 31-32)

Graham Hancock summarises the key points for why standard Egyptology attributes the Sphinx to Khafre:

There are only three “contextual” reasons why the construction of the anonymous, uninscribed and enigmatic Sphinx is now so confidently attributed to Khafre:

1. Because of the cartouche of Khafre on line 13 of the Sphinx Stela erected by Thutmosis IV. Maspero gave a perfectly reasonable explanation for the presence of this cartouche: Thutmosis had been a restorer of the Sphinx and had paid due tribute to an earlier restoration of the monument - one undertaken during the Fourth Dynasty by Khafre. This explanation, which bears the obvious implication that the Sphinx must already have been old in Khafre's time, is rejected by modern Egyptologists. With their usual telepathic likemindedness they now agree that Thutmosis put the cartouche on to the stela to recognize that Khafra had been the original builder (and not a mere restorer).



Since there had only ever been this single cartouche - and since the texts on either side of it were missing when the stela was excavated, is it not a little premature to come to such hard-and-fast conclusions? What sort of "science" is it that allows the mere presence of the cartouche of a Fourth Dynasty pharaoh (on a stela erected by an Eighteenth Dynasty pharaoh) to determine the entire identification of an otherwise anonymous monument? Besides, even that cartouche has now flaked off and cannot be examined ...

2. Because the Valley Temple next door is also attributed to Khafre: That attribution (based on statues which may well have been intrusive) is shaky to say the least. It has nevertheless received the wholehearted endorsement of the Egyptologists, who in the process decided to attribute the Sphinx to Khafre too (since the Sphinx and the Valley Temple are so obviously connected).

3. Because the face of the Sphinx is thought to resemble the intact statue of Khafre found in the pit in the Valley Temple: This, of course, is a matter of opinion. I have never seen the slightest resemblance between the two faces. Nor for that matter had forensic artists from the New York Police Department who had recently been brought in to do an Identikit comparison between the Sphinx and the statue.

The standard Egyptology view of the Sphinx says that the pharaoh Khafre (Chephren) carved the face of the Sphinx in his own image but is this so? This view was tested by John West when he asked Detective Sargent Frank Domingo of the New York Police Department, who specialises in facial identification of criminal suspects, to test this standard Egyptology view of the face of the Sphinx. In his expert opinion, after taking measurements and determining angular proportions based on points of reference, he determined that there were obvious differences and that the Sphinx did not represent the face of Khafre (Chephren) as per the statue of this pharaoh in the Cairo museum.



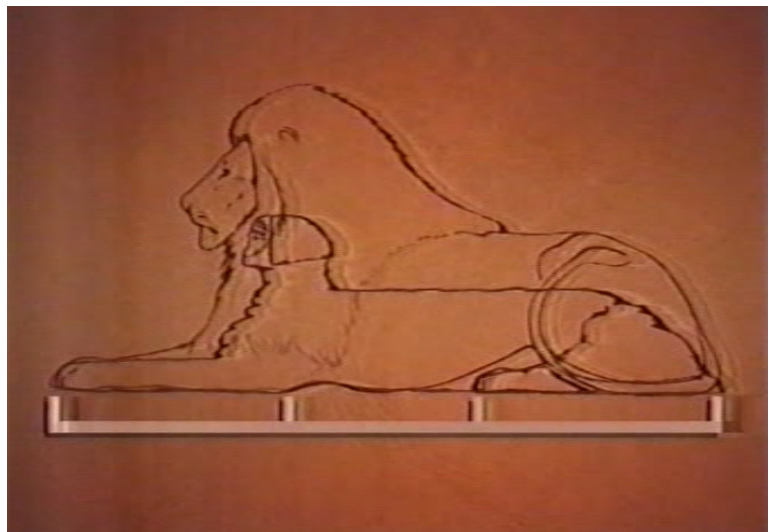


The chin protruded far more than the statue of Khafre (Chephren). The lips of the Sphinx are much thicker and the shape of the Sphinx's head is more square or broad than the narrower head of the statue of Khafre (Chephren). Frank Domingo believes that the face of the Sphinx is typical of black African facial features.



If the face is black African then who is the mysterious person it was carved to look like? The only time we know for sure that Egypt was ruled by black Africans was the 25th dynasty known as the Ethiopian dynasty which ruled around the early seventh century BC.

Frank Domingo also compared points of reference on the Sphinx and other sphinx statues in the Cairo museum and determined that the head is much smaller and height of the back in its sitting position is much lower than it should be in proportion to the size and length of the legs as shown superimposed in the diagram below. This very strongly indicates that the Sphinx was much higher originally and that it has been re-carved at times in the past when it was periodically repaired.



We have no record from the Ethiopian dynasty about the Sphinx, so if the face was carved later and it wasn't one of the Ethiopian dynasty pharaohs then who was the black African that it was carved to imitate? The face of the Sphinx may not have been human to begin with. It may have been a lion before it was later re-carved into that of a human face with the characteristic nemes head cloth.

One possible historical figure who could have been the inspiration for the current black African face is the biblical figure Nimrod (Genesis 10). He was a black man being the son of Cush and grandson of Noah's son, Ham, who's name means "burnt". Nimrod, according to Alexander Hislop in his work "The Two Babylons", believes he was the historical figure who was later worshipped as Osiris in Egypt. Some representations of Osiris (see picture on right) show him as a black man.



John West asserts that if the mastabas of the 1st and 2nd dynasties built of much softer mud bricks were subjected to the same rainfall as the Sphinx enclosure, which has channels weathered 2 and 3 feet deep into its side, then they would have long since deteriorated. This is further support, he believes, that the great rainfall which eroded the Sphinx and its enclosure preceded Dynastic Egypt.

Of course, the assertion of the Sphinx being built by a civilisation before Dynastic Egypt is utterly rejected by orthodox Egyptology.

James Romano, curator of the Egyptological Collection at the Brooklyn Museum, stated on the documentary "The Mysteries of the Sphinx":

If we were to take the alternative view [John West's theory] think of what we are stuck with - we have an antediluvian civilisation with all the trappings of later Pharaonic civilisation like the Sphinx with the characteristic Egyptian head cloth...and then you have nothing for how long? A thousand years, two thousand years and then it starts up again. Where's the link? What ties this antediluvian culture to what came later? Are you saying that two exactly parallel cultures evolved at the same place, 3,4,5 thousand years apart? It sounds like a Star Trek episode...Culture evolves in a linear fashion.

The idea that culture and technology always evolves in a linear fashion is simply false. Even conventional history shows such a reversal during the Dark Ages between the Roman Empire and the Renaissance. His point about the antediluvian civilisation having all the trappings of Pharaonic civilisation is based on the current look of the head of the Sphinx but we have already seen evidence that the head has very likely been re-carved to something different than what it originally looked like.

That said, Romano does make a valid point about the huge gap of nothing between the earlier civilisation with Egyptian civilisation.

This is a point that John West acknowledges is something that needs investigating further. He suggests that the missing archaeological links may found in the old course of the Nile which has changed course over the millennia.



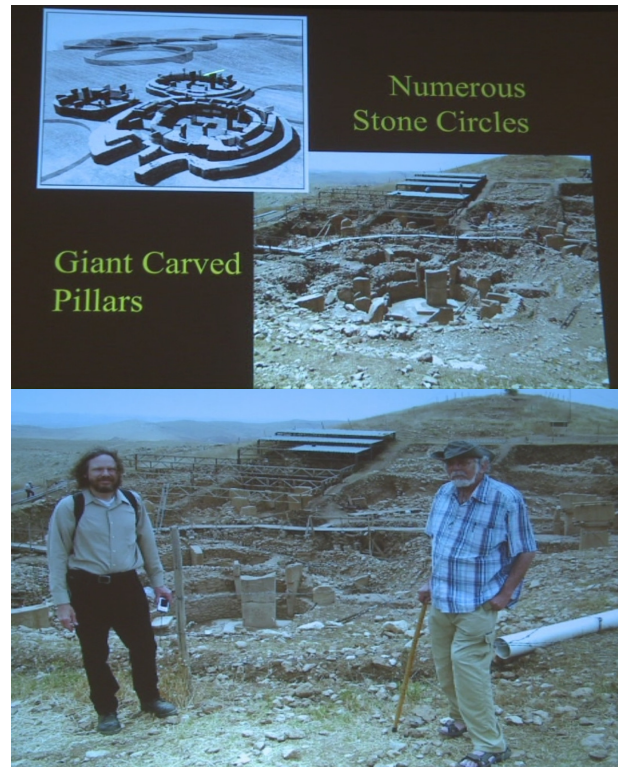
One example already uncovered that West believes may have been originally built by the earlier civilisation before Dynastic Egypt is the Osireion. There are no inscriptions or writings tying it to any known pharaoh as builder. There is no building architecturally like the Osireion anywhere else in Egypt except for the Valley Temple which West asserts was also built by this earlier civilisation with its massive granite blocks, its simplicity of design and absence of inscriptions and carvings.



Another possible example of a site that may have been built by an earlier civilisation before Dynastic Egypt is Gobekli Tepe in southern Turkey near Urfa, the traditional and most likely site for Ur of the Chaldees from which the biblical patriarch Abraham came from originally.

This site with its impressive megalithic stone circles and carved rock figures that bare certain similarities with the Easter Islands statues has been carbon dated to between 10 000 and 8000 BC.

The Bible speaks of a great worldwide Flood in the days of Noah which preceded dynastic Egypt for which there are dozens of records and myths in virtually every culture on earth. It is perhaps the most intensely pervasive “myth” in all ancient history.



No such flood is spoken of occurring during the days of the Old Kingdom so chronologically, if the Biblical account is true, this could only have occurred prior to the Old Kingdom.

The Biblical account speaks of extremely intense rainfall for 40 days. Precipitation probably was also fairly high for some decades after such a Flood, if the Biblical account is to be believed. Rainfall from such a worldwide Flood or in the early period after such a Flood potentially could be the cause for the great water erosion we see on the Sphinx. This could reconcile the geology with the archaeology providing a date only centuries, not millennia before Dynastic Egypt.

The evidence is quite strong for the Sphinx being built before Dynastic Egypt but this doesn't, of itself, prove that the Giza Pyramids were built at the same time. Is there any evidence that ties the building of the Giza Pyramids to the same builders and time period that the Sphinx was built?

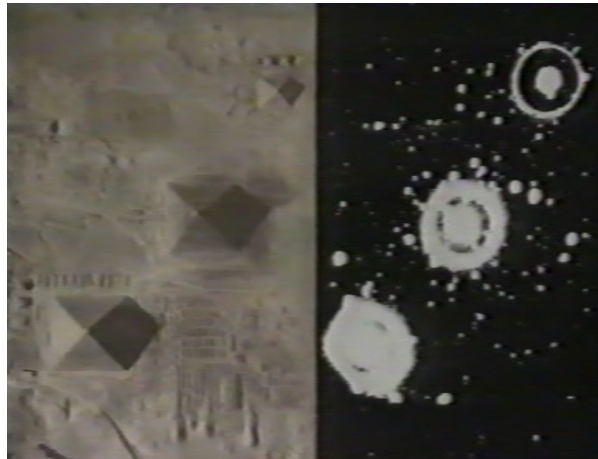
Robert Bauval and Graham Hancock have written about how the combined design of the pyramid and the Sphinx points back to a distant time in the past for its construction. Bauval explains that the Giza Pyramids are exactly proportioned to Orion's Belt in the night sky and that the shafts in the Great Pyramid point to Sirius and stars in Orion as well as the northern sky. Combining this to the time when the Sphinx (a lion) pointed to a heliacal rising of the Sun in the lion constellation of Leo gives a date for its construction during the Age of Leo. Wikipedia has this summary of their Orion Correlation Theory:

The Orion correlation theory was first put forward by Robert Bauval in 1983. One night, while working in Saudi Arabia, he took his family and a friend's family up into the sand dunes of the Arabian desert for a camping expedition. His friend pointed out Orion, and mentioned that Mintaka, the smaller more westerly of the stars making up Orion's belt, was offset slightly from the others.



**Bauval then made a connection between the layout of the three main stars in Orion's belt and the layout of the three main pyramids in the Giza necropolis.**

He published this idea in 1989 in the journal *Discussions in Egyptology*, volume 13. The idea has been further expounded by Bauval in collaboration with Adrian Gilbert (*The Orion Mystery*, 1994) and Graham Hancock (*Keeper of Genesis*, 1996), as well as in their separate publications.



The basis of this theory concerns the proposition that the relative positions of three main Ancient Egyptian pyramids on the Giza plateau are (by design) correlated with the relative positions of the three stars in the constellation of Orion which make up Orion's Belt— as these stars appeared in 10,000 BC.

Their initial claims regarding the alignment of the Giza pyramids with Orion ("...the three pyramids were a terrestrial map of the three stars of Orion's belt"—Hancock's *Fingerprints of the Gods*, 1995, p. 375) are later joined with speculation about the age of the Great Sphinx (Hancock and Bauval, *Keeper of Genesis*, published 1996, and in 1997 in the U.S. as *The Message of the Sphinx*).

According to these works, the Great Sphinx was constructed c. 10,500 BC (Upper Paleolithic), and its lion-shape is maintained to be a definitive reference to the constellation of Leo. Furthermore, the orientation and dispositions of the Sphinx, the Giza pyramids and the Nile River relative to one another on the ground is put forward as an accurate reflection or "map" of the constellations of Leo, Orion (specifically, Orion's Belt) and the Milky Way respectively. As Hancock puts it in 1998's *The Mars Mystery* (co-authored with Bauval):

"...we have demonstrated with a substantial body of evidence that the pattern of stars that is 'frozen' on the ground at Giza in the form of the three pyramids and the Sphinx represents the disposition of the constellations of Orion and Leo as they looked at the moment of sunrise on the spring equinox during the astronomical 'Age of Leo' (i.e., the epoch in which the Sun was 'housed' by Leo on the spring equinox.) Like all precessional ages this was a 2,160-year period. It is generally calculated to have fallen between the Gregorian calendar dates of 10,970 and 8810 BC." (p.189)

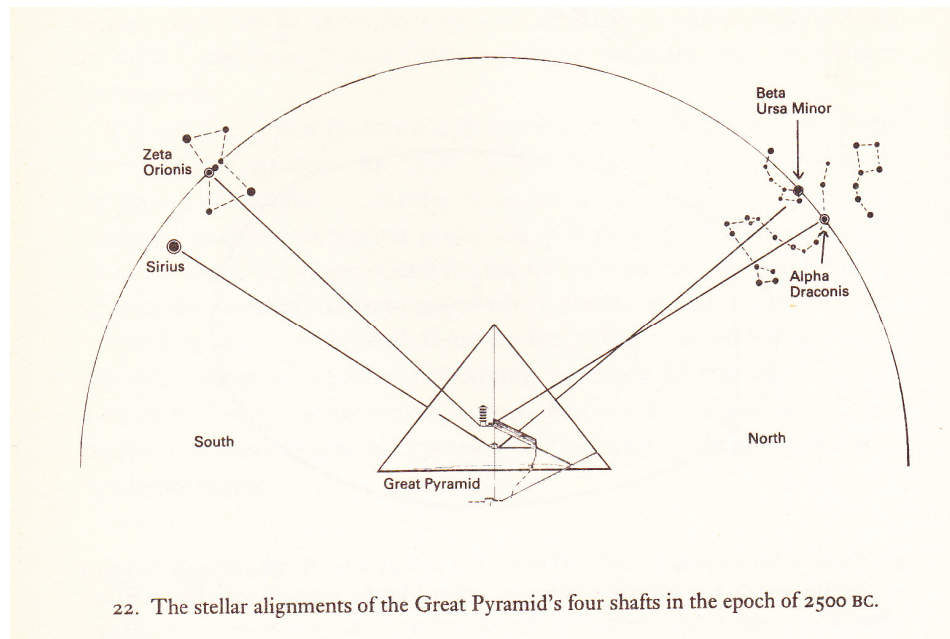
The allusions to dates c. 12,500 years ago are significant to Hancock since this is the era he seeks to assign to the advanced progenitor civilization, now vanished, but which he contends through most of his works had existed and whose advanced technology influenced and shaped the development of the world's (known) civilizations of antiquity. Egyptology and archaeological science maintain that available evidence indicates that the Giza pyramids were constructed during the Fourth dynasty period (3rd millennium BC), while the exact date of the Great Sphinx is still unclear.

Hancock does not dispute the dating evidence for the pyramids, but instead argues that they must have been planned with the knowledge of how the stars had appeared some eight thousand years before they were actually built—since the Orion correlation theory claims they are oriented that way—which, it is implied, provides further evidence for the influence of a technology and knowledge that would not have been available to the pyramids' builders.

To me, it is obvious that the layout of the Giza Pyramids on the ground is a clear and intentional match for the three stars of Orion's belt. The size and height matches the relative brightness of the stars. The smaller pyramid is offset from the straight alignment of the other two larger pyramids just like the fainter of the three stars is offset by the same angle from the alignment of the other two stars in Orion's belt.

This clear correlation almost certainly proves that all three main Giza pyramids were planned at the same time and weren't planned one after another by three consecutive pharaohs, even if they were built one after another.

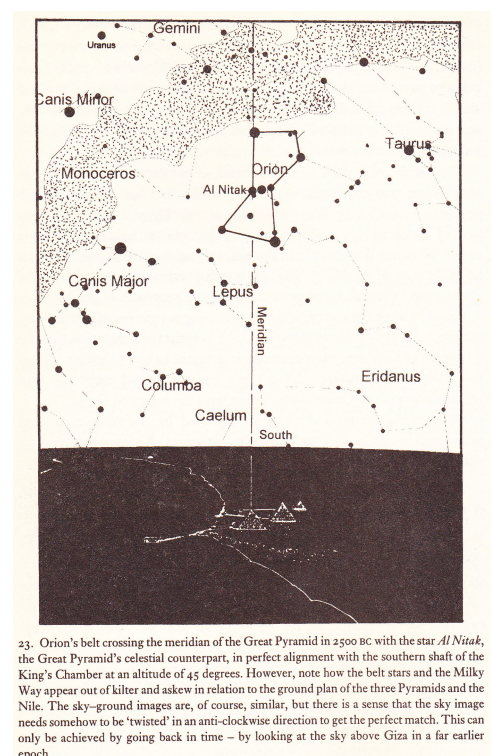
Below is an illustration showing the key stars that the shafts of the Great Pyramid would have pointed to in 2500 BC at the moment of sunrise on the spring equinox known as the heliacal rising of the Sun. The dawn rising of the Sun on the spring (or vernal) equinox was important as Egyptians started the day at sunrise and they started the beginning of the year on the spring equinox. The spring equinox is the day in spring when the Sun rises exactly in the east and sunrise and sunset fall at the same time of day. The same phenomena occurs on the autumn equinox.



According to Robert Bauval, the skymap on the ground isn't limited to just Orion's Belt. The Nile River was seen to represent the great river of stars in the sky – the Milky Way. When he plotted out by computer what the sky looked like in the south at dawn on the spring equinox in 2500 BC something wasn't quite right as seen on the next page.

As noted in the illustration's description of the sky-ground map, the Milky Way is askew and appears to be twisted 45 degrees from how it should be to mirror the course of the Nile. At this same time, the Sphinx is not pointing to its counterpart in the heavens – the constellation of Leo.

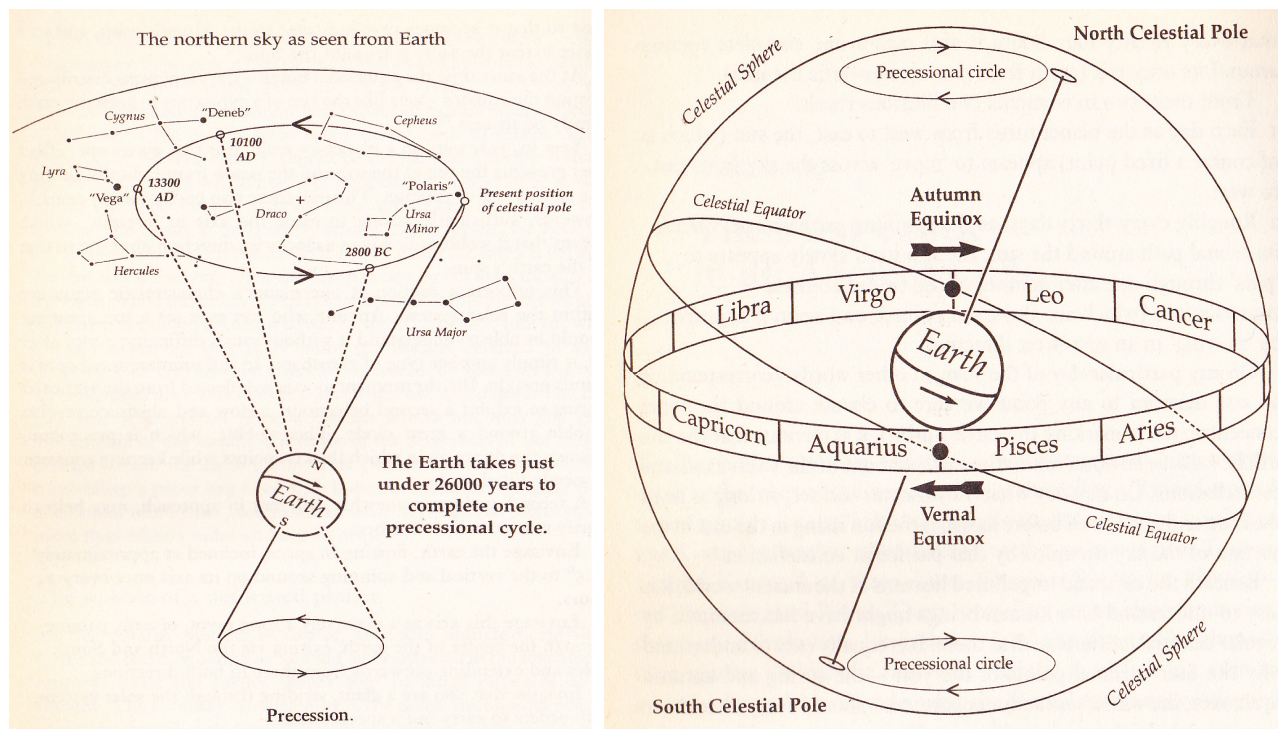
Is there a time in the past before then when there was such a match? In addition to the rotation of the Earth, there is an additional rotation that is currently occurring to the Earth.





Imagine, if you would, a gyro toy that is spun and placed on the ground. In addition to its rotational spinning, the top part of the toy is wobbling and is making a circular rotation. Now imagine the Earth spinning like that. In addition to its daily rotation, the north and south poles are wobbling like the toy. If you extend a line through the axis above the north pole it cuts a circular path against the backdrop of the stars.

This phenomena is called the Earth's procession or wobble. At the current rate of movement in the heavens astronomers have calculated that the procession takes 26 000 years to complete a full circle. Due to this procession, the constellation that the Sun rises in on the spring equinox rotates through all constellations of the Zodiac. Currently the Sun rises on the spring equinox in the constellation of Pisces and is almost about to cross into the constellation of Aquarius (the Age of Aquarius).

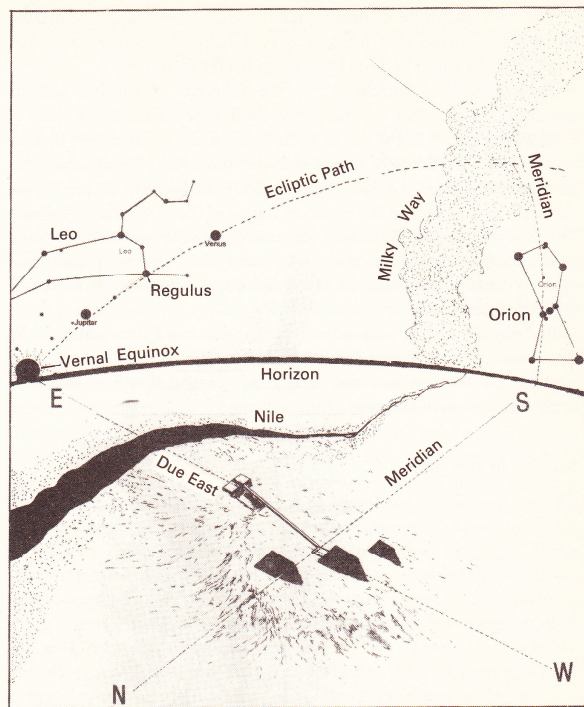


Prior to the current Age of Pisces, the Sun rose in the constellation of Taurus and before that Aries. The Age of the lion constellation of Leo is much further back, almost half the whole precessional cycle.

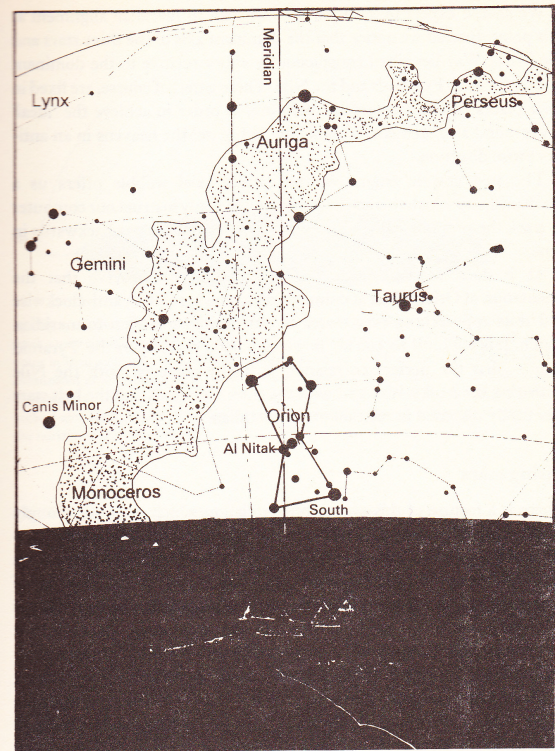
The effect of this processional movement in the east is that the Sun rises in a different constellation about once every 2 000 years. The effect in the south in Egypt is that the constellation of Orion moves up and down at dawn on the spring equinox.

Winding back his computer simulation of what the sky looked like at dawn on the spring equinox, Bauval found what he believes is the ideal match for sky-ground connection in both the east and south for the year 10 500 BC. This appears to be the only time this processional cycle where we have this match where at dawn on the spring equinox the Sun rises in the east in the constellation of Leo, Orion is in the south at its zenith and the Milky Way mirrors the course of the Nile.





30. The moment of sunrise on the vernal equinox in 10,500 BC. At the exact moment that the top of the solar disc broke over the horizon due east in direct alignment with the gaze of the Sphinx the three stars of Orion's belt culminated at the meridian in the pattern that is mimicked on the ground by the three great Pyramids. Sphinx and Pyramids thus appear to 'work together' as an architectural representation of this unique celestial conjunction.



24. The perfect match of sky-ground images is achieved in 10,500 BC when the pattern of the Milky Way and of the three stars of Orion's belt at meridian transit is precisely matched by the course of the Nile and the pattern of the three great Pyramids on the ground.

Bauval and Hancock state the following regarding this celestial conjunction:

Throughout the ancient world the moment of sunrise, and its conjunction with other celestial events, was always considered to be of great importance." At the spring equinox in 10,500 BC, as should by now be obvious, a particularly spectacular and statistically improbable conjunction took place - a conjunction involving the moment of sunrise, the constellation of Leo and the meridian transit of the three stars of Orion's belt. It is this unique celestial conjunction (which furthermore marks the beginning of the 'Age of Leo' and the beginning of the upwards precessional cycle of the belt stars) that the Great Sphinx and the three Pyramids of Giza appear to model.

But why should the ancients have sought to create a simulacrum of the skies on the ground at Giza? Or, to put the question another way, why should they have sought to bring down to earth an image of the heavens?

There exists an ancient body of writings, compiled in Greek in the Egyptian city of Alexandria in the early centuries of the Christian era, in which sky-ground dualisms form a predominant theme, linked in numerous convoluted ways to the issue of the resurrection and immortality of the soul. These writings, the 'Hermetic Texts', were believed to have been the work of the ancient Egyptian wisdom god Thoth (known to the Greeks as Hermes), who in one representative passage makes the following remarks to his disciple Asclepius:

"Do you not know, Asclepius, that Egypt is an image of heaven? Or, so to speak more exactly, in Egypt all the operations of the powers which rule and work in heaven have been transferred down to earth below?"

The purpose to which these powers were harnessed, in the Hermetic view, was to facilitate the initiate's quest for immortality.

Curiously, precisely such a quest for precisely such a goal - 'a life of millions of years' - is spelled out in ancient Egyptian funerary texts which supposedly pre-date the Hermetic writings by thousands of years...

In the Pyramid Texts we thus find a high priest making this cryptic statement:

"Your mouth is in good order for I split open your mouth for you ... O king, I open your mouth for you with the adze of **iron** of Upuaut, I split open your mouth for you with the adze of **iron** which split open the mouths of the gods ... Horus has split open the mouth of this king with that wherewith he split open the mouth of his father, with that wherewith he split open the mouth of Osiris ..."

From such utterances, and many more like them, it is clear that iron was somehow seen by the composers of the Pyramid Texts as being imperative in the rituals aimed at ensuring new life - cosmic and stellar life - to the dead king. More importantly the above verse also connects the metal and its uses to the ancient prototype of all such rituals by means of which Osiris himself, Egypt's 'Once and Future King', died and was then restored to immortal life as Lord of the sky-region of Orion.

This region, as we shall see in Part III, was known as the Duat. In it all the Pharaohs of Egypt hoped that they would reside eternally after their own deaths:

"The gate of the earth is open for you ... may a stairway to the Duat be set up for you to the place where Orion is ..."

"O king ... the sky conceives you with Orion ... the sky has borne you with Orion... "

"O king, be a soul like a living star ..."

"The gate of the earth-god is open ... may you remove yourself to the sky and sit upon your iron throne ..."

"The aperture of the sky window is opened for you..."

"The doors of iron which are in the starry sky are thrown open for me, and I go through them..."

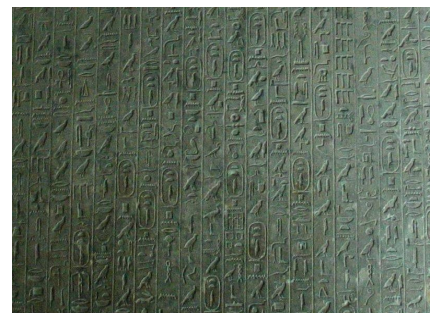
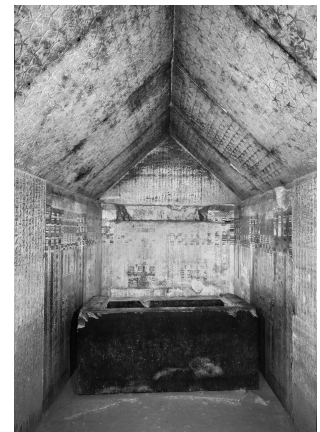
What seems to be envisaged here, taken literally and reduced to the basic common denominators running through all the above utterances, appears to be nothing less than an **iron "Stargate" intended to admit Osiris, and all the dynasties of dead kings after him, into the celestial realms of the belt of Orion** (Keeper of Genesis, p. 78, 109).

These references in the Pyramid texts to launching the dead pharaoh to the constellation of Osiris via an iron door appear to be what inspired the creators of the science fiction show "Stargate".

Bauval believes the Pyramid texts under the shoddy 5th dynasty pyramid of Unas at Saqqara are the key to unlocking the purpose of the pyramids much like the Bible is the key to understanding why medieval cathedrals are built in the shape of a cross – the software, if you like, to understand the purpose of the hardware.

Bauval believes they served a spiritual and religious purpose of the Egyptians believing that they could launch the ka or spirit of the dead pharaoh into the heavens and achieve immortality with his ancestor Osiris in the constellation of Orion.

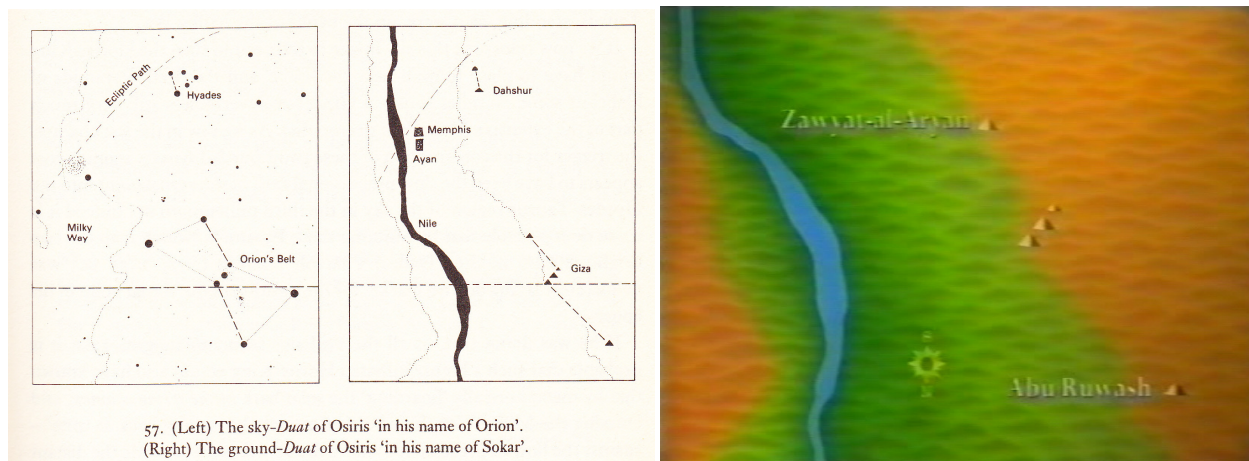
Another point he makes concerning the astronomical nature of layout as Giza (Fingerprints of the Gods, p. 255) is that the two remaining causeways point 14 degrees north and





south of the eastern point of the horizon. These are the mid-points of where the Sun rises between the solstices and equinoxes. The Sun rises 28 degrees to the north and to the south on the solstices.

Continuing on the sky-ground correlation with the Giza pyramids matching Orion's Belt and the Nile representing the Milky Way Bauval and Hancock believe that the pharaohs that later built other neighbouring pyramids tried to follow this pattern with other stars, even if not so accurately. The two pyramids at Dashur built by Sneferu match the location of where two key stars in the constellation Hyades would be on this ground map of the heavens.



Two other pyramids attributed to third and fourth dynasty pharaohs are located at Abu Ruwash, north of Giza and Zawyat-al-Aryan, south of Giza. These loosely approximate the position of two other key stars in the constellation of Orion. It should also be noted that the condition of these two pyramids attributed to the same dynasty as the Giza pyramids are very poor, totally unlike the Giza pyramids supposedly built by the same dynasty of pharaohs.

Bauval and Hancock have their critics. A BBC Horizon documentary entitled "Atlantis Reborn Again" took a negative view towards their theory. I'd like to quote certain excerpts from the documentary interspersed with my comments:

DR. ED KRUPP (Griffith Observatory, Los Angeles): When *The Orion Mystery* came out my curiosity was naturally aroused. Anybody comes up with a good idea about ancient astronomy I want to know about it and in going through the book there was something nagging. In *The Orion Mystery* there's a nice double page spread and anybody looking at this would say ah, Giza pyramids, belt of Orion, one kind of looks like the other, you know you've got three in a row, three in a row, slanted, slanted, we've got a map and what I was bothered by turned out to be really pretty obvious. In the back of my head I knew that something was wrong with these pictures and what's wrong with these pictures in their presentation is that north for the constellation Orion is here at the top of the page. North for the Giza pyramids is down here. Now they're not marked, but I knew which way north was at Giza and I knew which way north was in Orion. To make the map of the pyramids on the ground match the stars of Orion in the sky you have to turn Egypt upside down and if you don't want to do that then you've got to turn the sky upside down.

NARRATOR: But Hancock and Bauval reject Krupp's analysis. They point out that Orion can only be seen by looking in a southward direction.

ROBERT BAUVAL: So you're looking south of correlation and for the natural tendency is to draw what you see in that direction and you would come up with looking at three stars in that pattern and three dots, or three pyramids, or three marks in the same direction.



NARRATOR: If you choose a time when Orion is at its highest point in the sky looking south high over the pyramids there is an apparent match and Bauval and Hancock's view seems convincing.

GRAHAM HANCOCK: There's no other way you can draw them except in the way that the pyramids lie on the ground today. You can't do it in any other way. If you're extremely pedantic and believe that the Ancient Egyptians' priesthood was a group of narrow-minded bureaucrats determined to follow procedure above all else then it's true that the northern most star is depicted in the southern most place on the ground and the southern most star in the northern most place on the ground and this is what Ed Krupp is getting at, but if you regard it as a work of symbolic and religious art meant to copy on the ground what the observer sees in the sky then there's just no other way you can make it than the way it is made.

NARRATOR: But there's evidence that the Egyptians may well have seen it another way; perceiving the sky as forming a canopy over their heads, with north in the sky matching north on the ground, and the top of Orion thus pointing north. The pyramids are set out facing precisely north, south, east and west and research suggests they were aligned using the north polar stars and also there are shafts built through the north and south sides of the great pyramid which point directly to stars in the north and south of the sky indicating that the Egyptians clearly linked directions on the ground and in the sky.

ED KRUPP: That locks the pyramids north side and south side to the north side of the sky and the south side of the sky. That means the Egyptians, in building and laying out the pyramids, said we know where north is and we care about it because we've incorporated it into the architecture. The Egyptians were perfectly capable of drawing the pyramids right if they wanted to. If they wanted Orion's belt to look like Orion's belt on the ground and match up with the north and south sides of the pyramid they could have done that.

Krupp is correct that the star that apparently matches the southern smallest pyramid is the northernmost of the stars in Orion's Belt but if you look south to the pyramids and beyond to Orion's belt in the south of the sky, the furthest pyramid (Menkaure's) appears higher on the horizon just as the star corresponding to it appears highest in the sky so there's no issue with the correlation theory on this point.

NARRATOR: There's more. Astronomer Anthony Fairall has re-examined that precise 45 degree angle that seemed to link the pyramids with the belt stars as they were in 10,500 BC. Fairall found that the match was not as precise as originally claimed. The angle formed by the two large pyramids is 45 degrees, but the angle formed by the Belt stars is 54. Hancock and Bauval dispute the large size of Fairall's angle, but accept there is a discrepancy.

The date of the correct alignment is not critical in proving that the Sphinx predated Dynastic Egypt. Robert Schock has a more conservative estimate of the age of the Sphinx of 7000-5000 BC based on the water erosion.

Hancock states on the documentary that the pyramids were built around 2500 BC but their layout commemorates the "first time" which he believes matches 10 500 BC according to the astronomical layout of the Sphinx and the Giza pyramids.

KATE SPENCE (University of Cambridge): It's entirely possible to explain the position of the pyramids relative to each other just through the geology of the site and the nature of the pyramids themselves. If we look at a map of the pyramids which shows the contour lines you can actually see it quite clearly. These are the pyramids, the Khufu pyramid, Khefren and Menkaure and they're built on a ridge which runs diagonally. The reason they're set obliquely to the ridge is because they're aligned so carefully towards north, so this is the first pyramid to be built, the Khufu pyramid and when Khefren came along to build his he couldn't build it in a

straight line because there's a quarry here and it's very steeply sloping. So he had to set the pyramid back, for two reasons, both so that it was on a reasonably high level and also so that he could get a clear view of north for the alignment, and exactly the same thing happened when Menkaure came to build his. It's actually set back from the line of the Khefren pyramid because if you see here the contours are very close so it's quite steep, so it's set on a level plateau at about the same height as the Khefren pyramid and with a clear view towards north.

NARRATOR: It seems clear that as the Egyptian kings built their monuments across the Giza plateau the decisions they made about the position of the pyramids were not inspired by a pattern of stars but were the result of the limitations of the site they chose to build on.

The narrator's comment above shows the obvious bias against Bauval and Hancock's correlation theory.

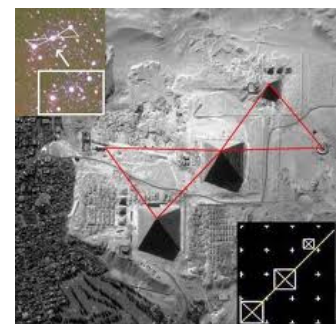
The idea that the pattern of the terrain motivated the offset of the Menkaure pyramid is flawed for a couple of reasons. Firstly, notice the photo of the pyramids below:



If the builder of the smallest pyramid wanted to line it up with the others it would have been just below where it is in this photo and, as you can see, it is flat terrain, not on sloping terrain. Even if it were on a slope there is evidence much of the Giza plateau was manually levelled before beginning the larger pyramids and such levelling could have been done before building the smallest pyramid.

What has to be kept in mind is that it is not just the position of the pyramids in relation to each other that mirrors Orion's belt but the size also matches the relative brightness of the stars.

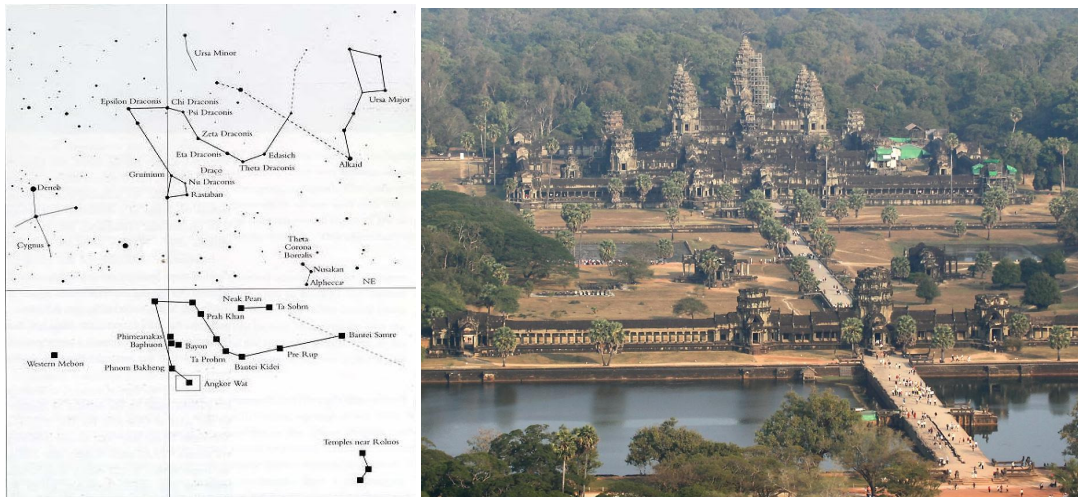
Another possibility for the Orion correlation is the belt being where Khafre's pyramid is and by including the Sphinx and another object at Giza there may be a match with the whole constellation of Orion as per the picture to the right.



NARRATOR: But Graham Hancock's radical theory about the past does not depend on the Orion theory alone. He claims to have discovered a global network of ancient monuments, either mapping constellations on the ground or linked in other ways to the stars. He believes that they're all based on a 12,000 year-old blueprint of the night sky. Far from Egypt Hancock has

discovered other crucial evidence in Cambodia, at one of the most extraordinary archaeological sites in the world: the temples of Angkor Wat. The temples were built by the Khmer people 3,000 years after the Giza pyramids were built, but Hancock claims to have found evidence of a more ancient master plan.

GRAHAM HANCOCK: There's a similarity, a very strong similarity between the pattern of the temples on the ground and the pattern of the stars in the constellation of Draco, one of the great northern constellations. Quite simply if you take a map of the temples of Angkor and join the dots to connect up the different temples you find that you have drawn out on that map the pattern of the constellation of Draco.



NARRATOR: As Hancock shows in his television series, it does seem as if the temples at Angkor are a genuine mirror of the stars mapped out by the lost civilisation, and that wasn't all. The temples of Angkor also seemed to be connected with that momentous date: 10,500BC as a result of precession.

GRAHAM HANCOCK: I found extraordinarily that the, that the correlation becomes as close as possible to perfect only at one date, and that is 10,500BC.

NARRATOR: In his television series, Hancock refers to the work of one of the world's leading experts on Angkor, Eleanor Mannikka. She has spent 20 years surveying and mapping the temples and now she's examined Hancock's theory in detail.

ELEANOR MANNIKA (University of Michigan): This hypothesis is based on the fact that certain temples are placed in their position because they have to follow a pattern that evokes the constellation Draco, so if we look at this we see the beginning apparently is the head right here at Angkor Wat and the pattern goes from there up to Phnom Bakheng which is this enormous central mountain. Then it travels up here to (TEMPLE NAME) Thom and then it goes over here to (TEMPLE NAME) and from (TEMPLE NAME) it goes to (TEMPLE NAME). Then it goes to (TEMPLE NAME), then it goes to (TEMPLE NAME), out here to (TEMPLE NAME) built in the 12th century. I see a vague resemblance of course because it goes up and down and off, but actually the tail of Draco goes way up like this, it doesn't just go off like that.

NARRATOR: When examined closely the actual match between the temples and the constellation is not at all precise. Does Hancock have an answer?

GRAHAM HANCOCK: There's a rather good correspondence. By no means you know absolutely spot-on accurate, but a rather good correspondence between the stars in the sky and the temples on the ground and when you bear in mind that these temples were constructed across hundreds of square miles of really very dense jungle, something like 1,000 years ago, when there was no ability for the builders to get above their subject and check that they were achieving a perfect design, I think they did a very good job.

NARRATOR: But surveying has never depended on viewing from above. It's all done by measuring distances and angles on the ground. Mannikka's investigations show that the Khmers must have been expert surveyors. Such is the precision of their work that she is convinced that



they could have accurately laid out and built any pattern they wanted, and there is good evidence which reveals why the Khmers placed the temples where they did.

ELEANOR MANNIKKA: Certain of these temples within this so-called constellation here are where they are for very clear-cut historical reasons referred to in inscriptions, very obvious reasons. For example, (TEMPLE NAME), which is located here on top of the central hill at Angkor, had to be the place where the king put his royal temple because nothing else was so prominent at the site. Up here at (TEMPLE NAME) there was a very bloody battle around 1190. That's why (TEMPLE NAME) is here. It couldn't be anywhere else. It had to be here 'cos the battle was here.

NARRATOR: Mannikka discovered that the position of every one of the temples included by Hancock can be explained in similarly well documented ways. Hancock includes only ten temples in the shape of the constellation Draco, but investigation of the Angkor region has revealed that there are more than 60 temples. It seems arbitrary to use so few out of so many. The correlation he has found begins to look more like coincidence than planning.

GRAHAM HANCOCK: I'm sure that, that there are academics who can find a dozen reasons why the resemblance of the temples of Angkor to the pattern of the constellation of Draco is accidental and a coincidence and can be explained in all sorts of other ways, but I've put forward my case in as much detail as I can in my work. I think there is a striking resemblance between the basic pattern on the ground and the pattern of the constellation in the sky.

NARRATOR: But there is a final problem. Although Hancock believes the Khmer based their cherished temples on the constellation of Draco, strangely it is not mentioned in any of their inscriptions.

ELEANOR MANNIKKA: Draco had nothing to do with the culture whatsoever. I mean there's no reference to the constellation in any inscription, there's no reference to it whatsoever in any way. No Draco.

I concur with Eleanor Mannikka and the documentary producers on this one regarding the pattern of Draco being mirrored in the temples of Angkor Wat. That said, there may be a hint of a connection with a more ancient civilisation than the Khmer builders in relation to this site as will be mentioned a little later.

Another person who has critiqued Hancock and Bauval's 10 500 BC civilisation theory is Alan Alford. Below I quote from his critique on this theory which is found at <http://www.eridu.co.uk/Author/egypt/lost.html>:

## EGYPT – THE LOST CIVILISATION THEORY

### The Pantheonist Lost Civilisation Theory

The pantheonist theory proposes that a highly advanced civilisation existed on the Earth during during the precessional age of Leo (c. 10900-8700 BC), but was destroyed by a cataclysm circa 10500 BC and hence became a 'lost civilisation'. The theory proposes that the lost civilisation encoded the date 10500 BC into their monuments (e.g. by astronomical alignments) so as to commemorate the date of the cataclysm.

The pantheonist theory is best known from the writings of Robert Bauval, Adrian Gilbert and Graham Hancock. But it has its roots in an assortment of different writings. Firstly, in Plato's story of Atlantis, which recalled the destruction of an advanced civilisation nine thousand years before the time of Solon, i.e. c. 9600 BC. Secondly, in the prophecies of certain mystics, such as Edgar Cayce. And thirdly, in the writings of Zecharia Sitchin, who dated the beginning of history to the Great Flood in 11000 BC, at the beginning of the age of Leo.

It is on the writings of Bauval, Hancock and Gilbert that I wish to comment here, in particular their claims that the Giza Pyramids and Sphinx were built to commemorate the date 10500 BC.

### The Orion Theory

In 'The Orion Mystery' (1994), Robert Bauval and Adrian Gilbert made a very interesting discovery, namely that the three main pyramids at Giza (of Khufu, Khafre and Menkaure) formed a pattern on the ground virtually identical to that of the three belt stars of the Orion constellation. This was a perfectly plausible hypothesis. However, Bauval and Gilbert then entered controversial territory. Using computer software, they wound back the Earth's skies to ancient times, and witnessed a 'locking-in' of the mirror image between the pyramids and the stars at the same time as Orion reached a turning point at the bottom of its precessional shift up and down the meridian. This conjunction, they claimed, was exact, and it occurred precisely at the date 10450 BC.

In 'Keeper of Genesis' (1996), Robert Bauval teamed up with Graham Hancock, and took the 10500 BC theory further, claiming corroborative evidence in the form of the Sphinx at Giza (see below).

In 'Heaven's Mirror' (1998), Graham Hancock tried to argue that the date 10500 BC was encoded also at the ancient Cambodian site of Angkor Wat (the temples, he alleged, were in the image of the constellation Draco at exactly 10500 BC).

On 15th September 1998, I issued a detailed rebuttal of Hancock's Angkor Wat theory, which I published on my website. I concluded that 'Hancock's case is extremely weak, and by pursuing it with such vigour (claiming 'no doubt that a correlation exists' p.126, and then winding back the skies to 10500 BC to claim a 'precise' match) he risks bringing this kind of research into disrepute. He certainly does Robert Bauval no favours, for many people will now highlight the poor quality of Hancock's research to debunk the more plausible (though unproven) 10500 BC alignment at Giza.'

My comments were to prove farsighted. On 4th November 1999, BBC screened a Horizon documentary which raised serious questions about Bauval and Hancock's pantheonist theory. Hancock, in particular, was ridiculed for his theory of a 10500 BC alignment between Angkor Wat and the constellation of Draco (rightly so in my opinion). But Bauval too was criticised for being careless in his calculation of the 10500 BC alignment between the Giza Pyramids and the stars of Orion's Belt. To the shock and horror of Bauval's followers, the BBC claimed that the accurate 10500 BC 'lock-in' between the Giza pyramids and Orion's Belt was not quite so accurate after all. Worse still, in the ensuing furore, Bauval and Hancock actually conceded the point and admitted that the alignment was not precise.

Bauval and Hancock went on to accuse the BBC of bias, and their complaint was upheld in one respect (although not in the majority of respects) by an independent commission. Nevertheless, in the heat of the argument, the fact was obscured that (a) the alleged accuracy of the Pyramids/Orion's Belt alignment had been absolutely central to Bauval and Hancock's original argument of a lost civilisation of 10500 BC; and (b) the alleged accuracy of the Pyramids/Orion's Belt alignment had been successfully rebutted by the BBC.

The present situation is this. It is accepted that the alignment between the Giza pyramids and the stars of Orion's Belt is not precise but approximate. Therefore, no firm conclusion can be drawn about any particular date which the monuments might have commemorated. Accordingly, the pantheonist theory of Giza is entirely baseless (nevertheless, it remains an important discovery that the layout of the three Giza pyramids mirrors the shape of Orion's Belt).

### The Sphinx Problem

One of the foundation stones of the pantheonist theory is the Great Sphinx of Egypt, which is presumed to have the body of a lion, thus evoking the precessional era of Leo (10900-8700 BC).

In his follow-up work with co-author Graham Hancock, Robert Bauval wound back the skies to show that not only did the three Giza pyramids line up with the three stars of Orion's Belt at 10500 BC, but also, at the same time, the constellation of Leo rose exactly due east of the Sphinx.

This occurrence, they said, was unique to 10500 BC, and it was therefore beyond coincidence that the Sphinx had been carved in the form of a lion.

According to Bauval and Hancock (and other researchers, such as John Anthony West) the weathering of the Sphinx by rainwater supports a date of construction c. 10500 BC, at the same time as the ground plan had been designed for the three Giza pyramids.

I would like to make three critical observations on this theory.

Firstly, the geological evidence for an older Sphinx, based on the work of the geologist Robert Schoch, is more in line with 5000-4000 BC than with the extreme date of 10500 BC. I know from personal discussion with Robert Schoch that he is quite unhappy with the way Bauval, Hancock and West have hijacked his evidence to fit their pet theory.

Secondly, as I pointed out in chapter 1 (p. 24) of my book 'The Phoenix Solution' (1998), there is a much more plausible reason for the importance of the age of Leo in ancient Egypt, namely that the Sun rose against the backdrop of Leo during the heliacal rising of the star Sirius at the summer solstice throughout most of Egyptian dynastic history. The leonine imagery of the Sphinx (if indeed it be a lion) points us not necessarily to the 11th millennium BC, but rather to the much more plausible era of the 4th millennium BC.

Thirdly, I would question the assumption that the Sphinx has the body of a lion. In fact, as Robert Temple has pointed out, the Sphinx has 'no mane, no tufted tail (and) no raised haunches', which we would expect of a lion, and nor does it have a lion's powerful shoulders. Furthermore, the lion was a dualistic concept in ancient Egyptian myth and architecture; lion sphinxes, for example, were generally built in pairs, protecting the entrances to temples. And yet the Sphinx of Giza is most certainly a solitary figure; there is no evidence whatsoever for a second Sphinx.

On balance, it seems to me that, as Robert Temple has suggested, the Sphinx was built with the body of a dog, presumably to symbolise Anubis (with the cat's tail representing a later modification). Anubis, it should be noted, was the god who guarded the Earth and the Underworld, and protected the body of Osiris. With the Pyramid representing Osiris (Pyramid Texts, Utterance 600), it would make sense that the Sphinx was originally an image of Anubis (its head was probably recarved from the head of a dog to the head of a king).

The Anubis theory may, or may not, be correct, but its plausibility brings into question the widely-held assumption that the Sphinx has the body of a lion. Of course, if the Sphinx has the body of a dog, then astronomy is of no use whatsoever in dating it.

All things considered, the Sphinx offers no evidence whatsoever in support of the pantheonist lost civilisation theory. It might well date to the pre-dynastic era (as I have indeed argued in 'The Phoenix Solution'), but probably to no earlier than the 5th or 6th millennium BC.

### Summary

Much credit is due to Bauval, Gilbert, Hancock and West for getting us all looking at Egypt again with a fresh perspective. But the debate must move on, and frankly I would like to see an end to this obsession with 10500 BC. At the present time, there is not one single piece of evidence anywhere in the world to justify the idea that 10500 BC was being commemorated by a lost civilisation. In my view, this obsession with 10500 BC has done great harm, and continues to do great harm, to the cause of those, such as myself, who would make a serious challenge to official dogma on the origin of the Giza pyramids and the history of civilisation. Yes, there is a mystery which requires an explanation. But what if the answer to the mystery lies not in 10500 BC but rather in the more plausible period of 6000-5000 BC? The worst thing we can do is investigate the past with a preconceived dogma to rival that of mainstream academia. Rather, it is time to take account of all the scientific evidence and draw our conclusions accordingly.

I would agree, for the most part, with Alford's critique. The alternative astronomical observation of the heliacal rising of Sirius rather than the Sun in Leo is quite a sound possibility but would require the Sphinx to be a lion rather than a dog such as Anubis. Anubis



is rarely, if ever, portrayed in a sitting position plus the bump on the front of the Sphinx is called the lion's heart by the Arabs, the very same name they give to Regulus, the brightest star in Leo.

Another factor that needs to be factored is that the speed and length of the processional cycle may have changed over time. The constancy of the processional cycle is an assumption.

Immanuel Velikovsky in his famous work "Worlds in Collision" produced ancient evidence supporting great global catastrophes that he believes were caused from the near passings of large heavenly bodies that could very well have altered or even created the earth's wobble due to the gravitational and electromagnetic attraction between the earth and such bodies.

Commenting on the difference between the Giza pyramids and those pyramids of the fifth and sixth dynasties Graham Hancock writes:

Because we wanted to cover as much of the distance to Abydos as was possible before nightfall, Santha and I reluctantly decided that it was time to get back on the road. Although we had originally intended to spend only a few minutes, the sombre gloom and ancient voices of the Unas tomb chamber had lulled our senses and almost two hours had passed since our arrival. Stooping, we left the tomb and climbed the steeply angled passageway to the exit, where we paused to allow our eyes to adjust to the harsh mid-morning sunlight. As we did so, I took the opportunity to look over the pyramid itself, which had fallen into such a crumbling and thoroughly dilapidated state that its original form was barely recognizable. The core masonry, reduced to little more than a nondescript heap of rubble, was evidently of poor quality, and even the facing blocks - some of which were still intact - lacked the finesse and careful workmanship demonstrated by the older pyramids at Giza.

This was hard to explain in conventional historical terms. If the normal evolutionary processes that govern the development of architectural skills and ideas had been at work in Egypt, one would have expected to find the opposite to be true: the design, engineering and masonry of the Unas Pyramid should have been superior to these of the Giza group, which, according to orthodox chronology, had been built about two centuries previously.

The uncomfortable fact that this was not the case (i.e., Giza was "better" than Unas and not vice versa) created knotty challenges for Egyptologists and raised questions to which no satisfactory answers had been supplied. To reiterate the central problem: everything about the three stunning and superb pyramids of Khufu, Khafre and Menkaure proclaimed that they were the end products of hundreds, perhaps even thousands of years of accumulated architectural and engineering experience. This was not supported by the archaeological evidence which left no doubt that they were among the earliest pyramids ever built in Egypt - in other words, they were not the products of the mature phase of that country's pyramid-building experiment but, anomalously, were the creations of its infancy.

A further mystery also cried out for a solution. In the three great pyramids at Giza, Egypt's Fourth Dynasty had reared up mansions of eternity - unprecedented and unsurpassed masterpieces of stone, hundreds of feet high, weighing millions of tons apiece, which incorporated many extremely advanced features. No pyramids of comparable quality were ever built again. But only a little later, beneath the smaller, shabbier superstructures of the Fifth and Sixth Dynasty pyramids, a sort of Hall of Records seemed to have been deliberately created: a permanent exhibition of copies or translations of archaic documents which was, at the same time, an unprecedented and unsurpassed masterpiece of scribal and hieroglyphic art.

In short, like the pyramids at Giza, it seemed that the Pyramid Texts had burst upon the scene with no apparent antecedents, and had occupied centre-stage for approximately a hundred years before 'ceasing operations', never to be bettered.

Presumably the ancient kings and sages who had arranged these things had known what they were doing? If so, their minds must have contained a plan, and they must have intended a strong

connection to be seen between the completely uninscribed (but technically brilliant) - pyramids at Giza, and the brilliantly inscribed (but technically slipshod) pyramids of the Fifth and Sixth Dynasties (Fingerprints of the Gods, p. 401-402).

Graham Hancock discussed this with John West and recorded his comments about this same anomaly:

"Egyptologists," said John West, "are the last people in the world to address any anomaly."

Of course, there are many anomalies in Egypt. The one West was referring to at that moment, however, was the anomaly of the Fourth Dynasty pyramids: an anomaly because of what had happened during the Third, Fifth and Sixth Dynasties.

Zoser's Step Pyramid at Saqqara (Third Dynasty) was an imposing edifice, but it was built with relatively small, manageable blocks that five or six men working together could carry, and its internal chambers were structurally unsound. The pyramids of the Fifth and Sixth Dynasties (although adorned inside with the beautiful Pyramid Texts) were so poorly built and had collapsed so completely that today most of them amount to little more than mounds of rubble.

The Fourth Dynasty pyramids at Giza, however, were wonderfully well made and had endured the passage of thousands of years more or less intact.

It was this sequence of events, or rather its implications, that West felt Egyptologists should have paid more attention to:

"There's a discrepancy in the scenario that reads: building kind of rubbishy pyramids that are structurally unsound, suddenly building absolutely unbelievable pyramids that are structurally the most incredible buildings ever conceived of, and then immediately afterwards going back to structurally unsound pyramids. It doesn't make sense. It's like building the Model-T Ford, then suddenly inventing and building the '93 Porsche and making a few of those, then forgetting how to do that and going back to building Model-T Fords again...Civilizations don't work this way."

"So what are you saying?" I asked. "Are you saying that the Fourth Dynasty pyramids weren't built by the Fourth Dynasty at all?"

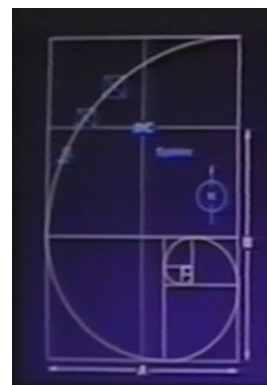
"My gut feeling is that they weren't. They don't look like the mastabas in front of them. They don't look like any other Fourth Dynasty stuff either ... They don't seem to fit in ..."

"And nor does the Sphinx?"

"And nor does the Sphinx. But the big difference is that we don't have to rely on gut feelings where the Sphinx is concerned. We can prove that it was built long before the Fourth Dynasty."

Geometrically there appears to be evidence supporting both the pyramids and Sphinx are positioned in relation to one another as part of a grand overall plan.

If an archimedian spiral is created and its curve goes through each of the tops of the three pyramids and a grid is drawn dividing up the spiral evenly as per the diagram below then the Sphinx is positioned in the middle of the area cut by the upper part of the spiral.



Also, if we draw an equilateral triangle that includes the top of the Great Pyramid and Menkaure pyramid and a circle that touches the tops of the Great Pyramid and Khafre pyramid then the head of the Sphinx is at one of the places where these two cross as per the picture below.



Assuming we have intentional placements of the structures to fit in with this geometry we have two possibilities:

- a) The Sphinx and Pyramids were built at the same time
- b) The Sphinx was built first and later the Pyramids were built together and then positioned in relation to the Sphinx to create this geometrical relationship.

I'd like to continue to quote at length from Graham Hancock's book "Fingerprints of the Gods" where he has a running dialogue with John West and Robert Bauval on when they think the pyramids were built:

"OK. So do you think it's possible that the pyramids are as old as the Sphinx too?"

"It's hard to say. I think something was there where those pyramids now are - because of the geometry. The Sphinx was part of a masterplan. And the Khafre Pyramid is maybe the most interesting in that respect because it was definitely built in two stages. If you look at it - maybe you've noticed - you'll see that its base consists of several courses of gigantic blocks similar in style to the blocks of the core masonry of the Valley Temple. Superimposed above the base, the rest of the pyramid is composed of smaller, less precisely engineered stuff. But when you look at it, knowing what you're looking for, you see instantly that it's built in two separate bits.



"I mean I can't help but feel that the vast blocks on the bottom date from the earlier period - from the time the Sphinx was built - and that the second part was added later - but even then not necessarily by Khafre.

"As you go into this you begin to realize that the more you learn the more complex everything becomes. For example, there may even have been an intermediate civilization, which actually would correspond to the Egyptian texts. They talk themselves about two long prior periods. In the first of these Egypt was supposedly ruled by the gods - the Neteru - and in the second it was ruled by the Shemsu Hot, the "Companions of Horus".

"So, as I say, the problems just get more and more complicated. Fortunately, however, the bottom line stays simple. The bottom line is the Sphinx wasn't built by Khafre. The geology proves that it's a hell of a lot older ..."

"Nevertheless the Egyptologists won't accept that it is. One of the arguments they've used against you - Mark Lehner did so - goes something like this: 'If the Sphinx was made before 10000 BC, then why can't you show us the rest of the civilization that built it?' In other words, why don't you have any other evidence to put forward for the presence of your legendary lost civilization..."

"First off, there are structures outside Giza - for example the Osireion in Abydos, where you've just come from. We think that amazing edifice may relate to our work on the Sphinx. Even if the Osireion didn't exist, however, the absence of other evidence wouldn't worry me. I mean, to make a big deal out of the fact that further confirmatory evidence hasn't been found yet and to use this to try to scuttle the arguments for an older Sphinx is completely illogical.

"Analogously it's like saying to Magellan ...'Where are the other guys who've sailed round the world? Of course it's still flat.' Or in 1838 when the first dinosaur bone was found they would have said, 'Of course there's no such thing as a giant extinct animal. Where's the rest of the skeletons? They've only found one bone.' But once a few people began to realize that this bone could only be from an extinct animal, within twenty years the museums of the world were filled up with complete dinosaur skeletons. So it's sort of like that. Nobody's thought to look in the right places.

"I'm absolutely certain that other evidence will be found once a few people start looking in the right places - along the banks of the ancient Nile, for example, which is miles from the present Nile, or even at the bottom of the Mediterranean, which was dry during the last Ice Age."



I asked John West why he thought that Egyptologists and archaeologists were so unwilling to consider that the Sphinx might be a clue to the existence of a forgotten episode in human history.

"The reason, I think, is that they're quite fixed in their ideas about the linear evolution of civilization. They find it hard to come to terms with the notion that there might have been people, more than 12 000 years ago, who were more sophisticated than we are today ... The Sphinx, and the geology which proves its antiquity, and the fact that the technology that was involved in making it is in many ways almost beyond our own capacities, contradicts the belief that civilization and technology have evolved in a straightforward, linear way ... Because even with the best modern technology we almost couldn't carry out the various tasks that were involved in the project...

"The technology was involved in taking the stones, quarrying the stones, to free the Sphinx from its bedrock and then in moving those stones and using them to build the Valley Temple a couple of hundred feet away ..."

This was news to me: "You mean that the 200-ton blocks in the Valley Temple walls were quarried right out of the Sphinx enclosure?"

"Yes, no doubt about it. Geologically they're from the identical member of rock. They were quarried out, moved over to the site of the Temple - God knows how - and erected into forty-foot-high walls - again God knows how. I'm talking about the huge limestone core blocks, not the granite facing.

"I think that the granite was added much later, quite possibly by Khafre. But if you look at the limestone core blocks you'll see that they bear the marks of exactly the same kind of precipitation-induced weathering that are found on the Sphinx. So the Sphinx and the core structure of the Valley Temple were made at the same time by the same people - whoever they may have been."



"And do you think that those people and the later dynastic Egyptians were connected to each other in some way? In *Serpent in the Sky* you suggested that a legacy must have been passed on."

"It's still just a suggestion. All that I know for sure on the basis of our work on the Sphinx is that a very, very high, sophisticated civilization capable of undertaking construction projects on a grand scale was present in Egypt in the very distant past. Then there was a lot of rain. Then, thousands of years later, in the same place, pharaonic civilization popped up already fully formed, apparently out of nowhere, with all its knowledge complete. That much we can be certain of. But whether or not the knowledge that Ancient Egypt possessed was the same as the knowledge that produced the Sphinx I really can't say."



"How about this," I speculated: "The civilization that produced the Sphinx wasn't based here, at least not originally ... It wasn't in Egypt. It put the Sphinx here as some sort of a marker or outpost ..."

"Perfectly possible. Could be that the Sphinx for that civilisation was like, let's say, what Abu Simbel [in Nubia] was for dynastic Egypt."

"Then that civilization came to an end, was extinguished by some sort of massive catastrophe, and that's when the legacy of high knowledge was handed on ... Because they had the Sphinx here they knew about Egypt, they knew this place, they knew this country, they had a connection here. Maybe people survived the ending of that civilization. Maybe they came here.... Does that work for you?"

"Well, it's a possibility. Again, going back into the mythologies and legends of the world, many of them tell of such a catastrophe and of the few people - the Noah story that's prevalent through endless civilizations - who somehow or other retained and passed on knowledge.

"The big problem with all this, from my point of view, is the transmission process: how exactly the knowledge does get handed on during the thousands and thousands of years between the construction of the Sphinx and the flowering of dynastic Egypt. Theoretically you're sort of stuck - aren't you? - with this vast period in which the knowledge has to be transmitted. This is not easy to slough off.

"On the other hand we do know that those legends we're referring to were passed on word for word over countless generations. And in fact oral transmission is a much surer means of transmission than written transmission, because the language may change but as long as whoever's telling the story tells it true in whatever the language of the time is ... it surfaces some 5000 years later in its original form. So maybe there are ways - in secret societies and religious cults, or through mythology, for example - that the knowledge could have been preserved and passed on before flowering again. The point, I think, with problems as complex and important as these, is simply not to dismiss any possibilities, no matter how outrageous they may at first seem, without investigating them very, very thoroughly"...

I found the implications of the Orion correlation complicated and eerie. On the one hand, the Great Pyramid's southern shafts "precessionally anchored" the monument to Al Nitak and Sirius in 2475-2400 BC, dates which coincided comfortably with the epoch when Egyptologists said the monument had been built.

On the other hand, the disposition of all three of the pyramids in relation to the Nile Valley eloquently signalled the much earlier date of 10 450 BC. This coincided with the controversial geological findings John West and Robert Schoch had made at Giza, which suggested the presence of a high civilization in Egypt in the eleventh millennium BC. Moreover, the disposition of the pyramids had not been arrived at by any random or accidental process but seemed to have been deliberately chosen because it marked a precessionally significant event: the lowest point, the beginning, the First Time in Orion's 13,000-year "up" cycle.

I knew that Bauval believed this astronomical event to have been linked symbolically to the mythical First Time of Osiris - the time of the gods, when civilization had supposedly been brought into the Nile Valley - and that his reasoning for this derived from the mythology of Ancient Egypt which directly associated Osiris with the Orion constellation (and Isis with Sirius).

Had the historical archetypes for Osiris and Isis actually come here in the First Time, twelve and a half thousand years ago? My research into Ice Age mythologies had persuaded me that certain ideas and memories could linger in the human psyche for many millennia, transmitted from generation to generation by oral tradition. I could therefore see no prima facie reasons why the Osirian mythology, with its strange and anomalous characteristics, should not have originated as far back as 10450 BC.

However, it was the civilization of dynastic Egypt that had elevated Osiris to the status of the high god of resurrection. That civilization was one that had few known antecedents, and none at all recognizable in the remote epoch of the eleventh millennium BC. If the Osirian mythology had been transmitted across 8000 years, therefore, then what culture had transmitted it? And had this culture also been responsible for both the astronomical alignments proven to have been manifested by the pyramids: 10450 Bc and 2450 BC?



These were among the questions I planned to put to Robert Bauval in the shadow of the pyramids. Santha and I had arranged to meet him at dawn, at the Mortuary Temple of Khafre, so that the three of us could watch the sun come up over the Sphinx.

Positioned beside the eastern face of the Second Pyramid, the largely ruined Mortuary Temple was a spooky, grey, cold place to be at this hour. And as John West had indicated during our conversation at Luxor, there could be little doubt that it belonged to the same severe, imposing and unadorned style of architecture as the better-known Valley Temple. Here, at any rate, were the same enormous blocks, weighing 200 tons or more each. And here too was the same intangible atmosphere of vast antiquity and awakening intelligence, as though some epiphany might be at hand. Even in its present, much despoiled state, this anonymous structure, which Egyptologists had called a Mortuary Temple, was still a place of power that seemed to draw its energy from an epoch far in the past.

I looked up at the huge mass of the Second Pyramid's eastern face just behind us in the pearl-grey dawn light. Again, as John West had pointed out, there was much to suggest that it might have been built in two different stages. The lower courses, up to a height of perhaps forty feet, consisted largely of cyclopean limestone megaliths like those in the temples. Above this height, however, the remainder of the pyramid's gigantic core had been formed out of much smaller blocks weighing around two to three tons each (like the majority of the blocks in the Great Pyramid).

Had there been a time when a twelve-acre, forty-foot-high megalithic platform had stood here on the hill of Giza, west of the Sphinx, surrounded only by nameless square and rectangular structures such as the Valley and Mortuary Temples? In other words, was it possible that the Second Pyramid's lower courses might have been built first, before the other pyramids - perhaps long before, in a much earlier age?

That question was still on my mind when Robert Bauval arrived. After exchanging a few chilly pleasantries about the weather -- a cold desert wind was blowing across the plateau - I asked him, "How do you account for the 8000-year gap in your correlations?"

"Gap?"

"Yes; shafts that seem to have been aligned in 2450 BC and a siteplan that maps star positions in 10 450 BC."

"Actually, I see two explanations that both make some kind of sense," said Bauval, "and I think the answer has to be one or the other of these ... Either the pyramids were designed as a sort of 'star clock' to mark two particular epochs, 2450 and 10450 BC, in which case we actually can't say when they were built. Or they were built up over ..."

"Hang on with that first point," I interrupted. "How do you mean 'star-clock'? How do you mean we can't say when they were built?"

"Well, let's assume for a moment that the pyramid builders knew precession. Let's assume they were able to calculate the declination of particular star-groups backwards and forwards in time, just as we can today with computers ... Assuming they could do that then, no matter which epoch they lived in, they'd have been able to make a model of what the skies over Giza looked like in 10450 BC or 2450 BC as required, just as we could.

"In other words, if they'd built the pyramids in 10450 BC they would have had no difficulty in calculating the correct angles of inclination for the southern shafts so that they would be sighted on Al Nitak and Sirius around 2450 BC. Likewise, if they'd lived in 2450 BC they'd have had no difficulty in calculating the correct site-plan to reflect the position of Orion's Belt in 10450 BC. Agreed?"

'Agreed.'

"OK. That's one explanation. But the second explanation, which I personally favour -- and which I think the geological evidence also supports - is that the whole Giza necropolis was developed and built up over an enormously long period of time. I think it's more than possible that the site was originally planned and laid out at around 10450 BC, so that its geometry would reflect the

skies as they looked then, but that the work was completed, and the shafts of the Great Pyramid aligned, around 2450 BC."

"So you're saying that the ground-plan of the Pyramids could date back to 10450 BC?"

"I think it does. And I think that the geometrical centre of that plan was located more or less where we're standing now, right in front of the Second Pyramid ..."

I pointed out the large blocks in the lower courses of the huge edifice: "It even looks like it was built in two stages, by two completely different cultures ..."

Bauval shrugged. "Let's speculate ... Maybe it wasn't two different cultures, Maybe it was one culture, or cult - the cult of Osiris, perhaps. Maybe it was a very long lived, very ancient cult dedicated to Osiris that was here in 10450 BC and was still here in 2450 BC. Maybe what happened was that some of the ways that this cult did things changed over time. Maybe they used huge blocks in 10450 BC and smaller blocks in 2450 BC... It seems to me there's a lot here that supports this notion, a lot that says "very ancient cult", a lot of evidence that has just never been investigated."

"For example?"

"Well, obviously the astronomical alignments of the site. I've been among the first to start looking into those properly. And the geology: the work that John West and Robert Schoch have been involved in at the Sphinx. Here are two sciences - both hard, empirical, evidence driven sciences - that have never been applied to these problems before. But now that we have started to apply them, we're beginning to get a whole new reading on the antiquity of the necropolis. And I honestly think we've just scratched the surface and that much more will emerge from the geology and the astronomy in the future.

"In addition, nobody's yet made a really detailed study of the Pyramid Texts from anything other than the so-called 'anthropological' perspective, which means a preconceived notion that the priests of Heliopolis were a bunch of half-civilized witch-doctors who wanted to live for ever ... Actually they did want to live for ever but they certainly weren't witch-doctors ... They were highly civilized, highly initiated men and they were, in their own fashion, scientists, as we can judge from their works. Therefore I suggest that it's as scientific or at least quasi-scientific documents that the Pyramid Texts need to be read, not as mumbo-jumbo, I'm already satisfied that they respond to precessional astronomy. There may be other keys too: mathematics, geometry - particularly geometry ... Symbolism ...

"What's needed is a multi-disciplinary approach to understanding the Pyramid Texts ... and to understanding the pyramids themselves. Astronomers, mathematicians, geologists, engineers, architects, even philosophers to deal with the symbolism - everybody who can bring a fresh eye and fresh skills to bear on these very important problems should be encouraged to do so."

"Why do you feel the problems are so important"

"Because they have a colossal bearing on our understanding of the past of our own species. The very careful, very precise site-planning and setting-out that appears to have been done here in 10450 BC could only have been the work of a highly-evolved, probably technological civilization."

"Whereas no such civilization is supposed to have existed anywhere on earth in that epoch."

"Exactly. It was the Stone Age. Human society was supposed to have been at a very primitive level, with our ancestors wearing skins, sheltering in caves, following a hunting-gathering way of life and so on and so forth. So it's rather unsettling to discover that civilized people seem to have been present in Giza in 10450 BC, who understood the obscure science of precession extremely well, who had the technical capacity to work out that they were witnessing the lowest point in Orion's precessional cycle - and thus the beginning of the constellation's 13,000 year upwards journey - and who set out to create a permanent memorial of that moment here on the plateau. By putting Orion's Belt on the ground in the way they did they knew that they were freezing a very specific moment in time."

A perverse thought occurred to me: "How can we be so sure that the moment that they were freezing was 10450 BC? After all, Orion's Belt takes up that same configuration in the southern sky, west of the Milky Way at 11-plus degrees above the horizon, once every 26 000 years. So why shouldn't they have been immortalizing 36 450 BC or even the precessional cycle that began 26 000 years before that?"

Robert was clearly ready for this question. "Some ancient records do suggest that Egyptian civilization had roots going back almost 40,000 years," he mused, "like that strange report in Herodotus that talks about the sun rising where it once set and setting where it once rose ..."

"Which is also a precessional metaphor."

"Yes. Precession again. Most peculiar the way it always keeps cropping up ... At any rate, you're right, they could have been marking the beginning of the previous precessional cycle."

"But do you think they were?"

"No. I think 10450 BC is the more likely date. It's more within the range of what we know about the evolution of homo sapiens. And although it still leaves a lot of years to account for before the sudden emergence of dynastic Egypt around 3000 BC, it isn't too long a period..."

"Too long a period for what?"

"It's the answer to your question about the 8000-year gap between the alignment of the site and the alignment of the shafts. Eight thousand years is a very long time but it isn't too long for a dedicated highly motivated cult to have preserved and nurtured and faithfully passed on the high-knowledge of the people who invented this place in 10450 BC."

"How high was the knowledge of those prehistoric inventors?"

"They knew their epochs," said Bauval, "and the clock that they used was the natural clock of the stars. Their working language was precessional astronomy and these monuments express that language in a very clear, unambiguous, scientific manner. They were also highly skilled surveyors - I mean the people who originally prepared the site and laid out the orientations for the pyramids - because they worked to an exacting geometry and because they knew how to align the base-platforms, or whatever it was they built, perfectly to the cardinal points."

"Do you think they also knew that they were marking out the site of the Great Pyramid on latitude 30° North?"

Bauval laughed: "I'm certain they knew. I think they knew everything about the shape of the earth. They knew their astronomy. They had a good understanding of the solar system and of celestial mechanics. They were also incredibly accurate and incredibly precise in everything they did. So, all in all, I don't think anything really happened here by chance - at least not between 10450 BC and 2450 BC. I get the feeling that everything was planned, intended, carefully worked out ... Indeed I get the feeling that they were fulfilling a longterm objective - some kind of purpose, if you like, and that they brought this to fruition in the third millennium BC."

"In the form of the fully built pyramids which they then precessionally anchored to Al Nitak and to Sirius at the time of completion?"

"Yes. And also, I think, in the form of the Pyramid Texts. My guess is that the Pyramid Texts are part of the puzzle."

"The software to the Pyramids' hardware?"

"Quite Possibly. Why not? At any rate it's certain that there's a connection. I think what it means is that if we're going to decode the pyramids properly then we're going to have to use the Texts."

"What's your guess?" I asked Bauval. "What do you think the purpose of the pyramid builders really might have been?"



"They didn't do it because they wanted an eternal tomb," he replied firmly. "In my view, they had no doubts at all that they would eternally live. They did it - whoever did it - they have transmitted the power of their ideas through something that is to all intents and purposes eternal. They succeeded in creating a force that is functional in itself, provided you understand it, and that force is the questions it challenges you to ask. My guess is that they knew the human mind to perfection. They knew the game of ritual ... Right? I'm serious. They knew what they were doing. They knew that they could initiate people far ahead in the future into their way of thinking even though they couldn't be there themselves. They knew that they could do this by creating an eternal machine, the function of which was to generate questions."

I suppose that I must have looked puzzled.

"The machine is the pyramids!" Bauval exclaimed, "the whole of the Giza necropolis really. And look at us. What are we doing? We're asking questions. We're standing out here, shivering, at an ungodly hour, watching the sun come up, and we're asking questions, lots and lots of questions just as we've been programmed to do. We're in the hands of real magicians here, and real magicians know that with symbols - with the right symbols, with the right questions - they can lead you into initiating yourself. Provided, that is, you are a person who asks questions. And, if you are, then the minute you start asking questions about the pyramids you begin to stumble into a whole series of answers which lead you to other questions, and then more answers until finally you initiate yourself..."

"Sow the seed."

"Yes. They were sowing the seed. Believe me, they were magicians, and they knew the power of ideas ... They knew how to set ideas growing and developing in people's minds. And if you start with such ideas, and follow the process of reasoning like I did, you arrive at things like Orion, and 10450 BC. In short, this is a process that works on its own. When it enters, when it settles into the subconscious, it is a self-willing conversion. Once it's there you can't even resist it."

"You're talking as though this Giza cult, whatever it was - revolving around precession, and geometry, and the pyramids, and the Pyramid Texts - you're talking as though it still exists."

"In a sense it does still exist," Robert replied. "Even if the driver is no longer at the wheel, the Giza necropolis is still a machine that was designed to provoke questions." He paused and pointed up to the summit of the Great Pyramid where Santha and I had climbed, at dead of night, nine months previously. "Look at its power," he continued. "Five thousand years on it still gets you. It involves you whether you like it or not ... It forces you into a process of thinking ... forces you to learn. The minute you ask a question about it you've asked a question about engineering, you've asked a question about geometry, you've asked a question about astronomy. So it forces you to learn about engineering and geometry and astronomy, and gradually you begin to realize how sophisticated it is, how incredibly clever and skilful and knowledgeable its builders must have been, which forces you to ask questions about mankind, about human history, eventually about yourself too. You want to find out. This is the power of the thing"...

The astronomical Age of Pisces began around the time of Christ. Readers must judge for themselves whether it is a coincidence that the principal symbol used for Christ by the very early Christians was not the cross but the fish.

During the preceding age, which broadly-speaking encompassed the first and second millennia BC, it was the constellation of Aries - the Ram - which had the honour of carrying the sun on the vernal equinox. Again, readers must judge whether it is a coincidence that the religious iconography of that epoch was predominantly ram-oriented. Is it a coincidence, for example, that Yahweh, God of Old Testament Israel, provided a ram as a substitute for Abraham's offered sacrifice of his son Isaac?" (Abraham and Isaac are assumed by biblical scholars and archaeologists to have lived during the early second millennium BC).

Is it likewise coincidental that rams, in one context or another, are referred to in almost every book of the Old Testament (entirely composed during the Age of Aries) but in not a single book of the New Testament? And is it an accident that the advent of the Age of Aries, shortly before the beginning of the second millennium BC, was accompanied in Ancient Egypt by an upsurge in

the worship of the god Amon whose symbol was a ram with curled horns? Work on the principal sanctuary of Amon - the Temple of Karnak at Luxor in upper Egypt - was begun at around 2000 BC and, as those who have visited that temple will recall, its principal icons are rams, long rows of which guard its entrances.

The immediate predecessor to the Age of Aries was the Age of Taurus -- the Bull which spanned the period between 4380 and 2200 BC. It was during this precessional epoch, when the sun on the vernal equinox rose in the constellation of Taurus, that the Bull-cult of Minoan Crete flourished...Readers must judge whether it is a coincidence that Egyptians at the very beginning of the dynastic period were already venerating the Apis and Mnevis Bulls – the former being considered a theophany of the god Osiris and the latter, the sacred animal of Heliopolis, a theophany of the god Ra (Fingerprints of the Gods, p. 449-452, 471-481).

The geological evidence for the Sphinx being built before Dynastic Egypt is very conclusive according to Robert Schock, who had the overwhelming support of the geologists that he presented his evidence to.

Architecturally, the evidence against the Giza pyramids being built by the fourth dynasty pyramids appears very strong when the quality of the Giza pyramids is compared to the other Old Kingdom pyramids, including others of the fourth dynasty. We also have the Inventory Stela telling us that the Great Pyramid was existence before Khufu.

That said, there is one fact of geology that I can't get out of my mind in relation to the date of construction for the Giza pyramids – the lack of erosion on the tura limestone casing stones.

If they were made of granite that would account for the lack of erosion if they dated to the same time as the Sphinx, however they are made of limestone and should have the same heavy erosion as the Sphinx and the Sphinx enclosure if they dated to the same time as the Sphinx.

If the Inventory Stela is to be believed more than the connection between the relieving chamber cartouches with Pharaoh Khufu and we factor in both the architectural and geological evidence we are pointed to certain conclusions.

The Sphinx (along with the Sphinx Temple and Valley Temple) was built first while there was still heavy rainfall in Egypt (or Noah's Flood for those who believe in the Biblical account) and this is evidenced by the heavy water erosion.

The Pyramids were planned later and were positioned to incorporate the pre-existing Sphinx into its geometric plan as well as mirror Orion's Belt. The geological evidence points to a time after the heavy rainfall period (or after Noah's Flood for those who believe in the Biblical account) and the written evidence of the Inventory Stela tells us that they were built before Khufu of the fourth dynasty.

Architecturally, there isn't a fit with the other Old Kingdom pyramids so we are led to the conclusion that the Pyramids were built some time in the Pre-Dynastic time following the heavy rainfall period (or shortly after Noah's Flood for those who believe in the Biblical account).

The time period between the building of the Giza pyramids and the rise of Dynastic Egypt would appear to be brief due to the position of the shafts which Bauval believes best fit to aim at certain stars north and south around 2500 BC. Also, if the cartouches of the relieving chambers of the Great Pyramid do date from its construction then the labourers of the

pyramid knew the hieroglyphic language that would soon be used by Dynastic Egypt. This would only prove that the labourers hired were Egyptian. The great architects and builders may have come to Egypt and been foreigners to the land.

The architectural and engineering skills that went into building the pyramids appear to have been lost to the Dynastic Egyptian rulers who came after them though some technology appears to have been passed down and presumably kept relatively secret, such as acoustic technology and some form of basic electricity and metal working that allowed the Old Kingdom to produce statues and other objects that bare all the hallmarks of being produced in a mechanical way that Christopher Dunn has documented.

I'd like to now quote at length from a fascinating book called "Secrets of the Lost Races" by Rene Noorbergen that give us some eye-opening background into the pre-dynastic civilisation shortly before the rise of Dynastic Egypt:

Concerning the Genesis 10 record of the dispersion of tribes and nations in the dawning days of Middle East history corroborating this "Mother of the World" concept, Professor W. F. Albright, internationally recognized as one of the leading authorities on Middle East archaeology, says, "It stands absolutely alone in ancient literature without a remote parallel even among the Greeks.... "The Table of Nations" remains an astonishingly accurate document.... [It] shows such remarkable "modern" understanding of the ethnic and linguistic situation in the modern world, in spite of all its complexity, that scholars never fail to be impressed with the author's knowledge of the subject."

The list he refers to mentions the descendants of Noah, the offspring of his three sons. It gives the first generation of descendants of each son, and, what is more important, it lists the names, which often provide us with clues to their history and dwelling place. The first and second generations left their mark in Egypt, Palestine, Asia Minor, Assyria, Phoenicia, Armenia, the Persian Gulf region and lands in between. The third generation...moved into Europe, Spain, southern Arabia, Lower Egypt, Upper Egypt, the Black Sea region, and Babylonia. The fourth generation...made swift moves into the area presently called Yemen, the land that subsequently was known as the home of the Queen of Sheba. When the fifth generation...arrived on the scene, the record tells of the descendants of Eber, meaning "pilgrim, migrant," the father of a widely scattered people called Habiru. Very little is known about the individual accomplishments of these people until the fifth generation is reached. Peleg...whose name means "division, a measurement," is then mentioned, for Genesis 10:25 states, "...the name of one was Peleg; for in his days was the earth divided..."

It is very apparent from the generation list of the sons of Noah that the post-Flood peoples spread rapidly across the surface of the earth. In just the second generation, the grandchildren of the patriarch had settled in lands from Iran to Spain, from northern Europe to Ethiopia. The following generation and their offspring were of course even more widespread. It also becomes obvious that in order for the Genesis 10 genealogy list to have been composed, there must have been an advanced degree of communication among all these people. Someone living during the colonizing of these distant lands had the ability to correspond with all the descendants over a relatively long period of time—otherwise the composition of such a detailed listing as the "Table of Nations" would have been impossible. This communication between remote regions presupposes an early knowledge of geography.

**In fact, there is ample evidence that not long after the Deluge, the descendants of Noah carried out an extensive survey of the entire globe, mapping and charting every continent!**

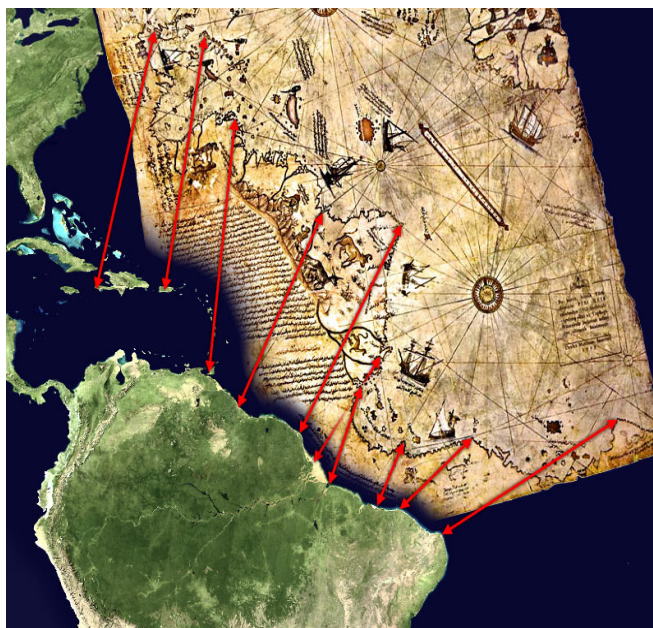
The evidence for this post-Flood survey of the earth has been preserved in a number of medieval and Renaissance maps which are extremely accurate—so accurate that the longitude and latitude measurements, as well as the knowledge of the earth's surface that is revealed, extend far beyond the capabilities of the early historical cartographers. These cartographers admit—and there is intrinsic proof of this in the maps—that their maps were copies of still older maps whose origins were lost in antiquity.



One map in particular that has received considerable attention is the Piri Reis chart of 1513. Piri Reis, whose actual name was Ahmet Muhiddin, not only distinguished himself as a captain in the Ottoman fleet of Suleiman the Magnificent, but was also an itinerant map maker and collector. In the most famous of his atlases, the *Kitabi Bahriye*, and in the notations on his 1513 chart, he revealed that he drew his maps from a composite of twenty older maps. Eight of these maps, he claimed, were from the time of "Alexander, Lord of the Two Homs," i.e., Alexander the Great. He secured other maps from a captured Spanish sailor in 1501 who told Piri Reis that he had been on Christopher Columbus' three voyages to the New World. In exchange for his freedom, the sailor gave the Turkish captain a number of charts which Columbus had used in locating the islands of the Western Hemisphere. Columbus had, in effect, only rediscovered lands which someone else had charted centuries before...

The map received scant publicity when it was found, but copies were sent to various prominent museums. It was not until 1956 that a visiting Turkish naval officer gave a copy of it to the U.S. Navy Hydrographic Office in Washington, D.C., where Captain Arlington H. Mallery subjected the map to a comprehensive analysis.

The first extraordinary feature about the map Mallery noted was that it showed South America and Africa in correct relative longitude. In the sixteenth century, when the map was drawn, longitude was found only by guesswork. It was another two hundred years before the correct longitudinal relationship between the two continents was established!



Even more startling, however, was Mallery's discovery that the map accurately showed the coastline of Queen Maud Land in Antarctica— even though the map was drawn in 1513, and the southern continent's existence was not verified until 1819! But there was more. Mallery found that the islands and bays of the depicted coastline are the same as they appear below the antarctic ice sheet, as recently revealed by seismic echo soundings.

In 1957 the map was presented to Reverend Daniel Lineham, S. J., director of the Western Observatory of Boston College, who had participated in an expedition to Antarctica. After careful examination, Lineham reached the same conclusion as Mallery: the Piri Reis map pictured, in great detail, regions scarcely explored today, including an antarctic mountain range that remained undiscovered by modern researchers until 1952. The unavoidable conclusion was that Piri Reis must have possessed charts drawn by someone who had mapped Antarctica before the ice cap covered the southern continent...

The subject came to the attention of Professor Charles H. Hapgood...Professor Hapgood's examination resulted in a number of startling observations, each one of which augments the mystery of the map's origin.

1. The center of the Piri Reis map is located at the intersection of the meridian of Alexandria— 30 degrees East longitude—and the Tropic of Cancer. Because all the ancient Greek geographers based their maps on the meridian of Alexandria, its use as a center on the Piri Reis chart confirms Reis's statement that a number of the source maps he used dated back to the Alexandrian period.

2. Another indication of Greek influence in the map was the discovery that the map projection was based on an overestimate of  $4\frac{1}{2}$  per cent in the circumference of the earth. Only one geographer in the ancient world had made that overestimation—the Greek Eratosthenes.

When the Piri Reis map grid was redrawn to correct the Eratosthenes error, all existing longitude errors on the map were thereby reduced to almost zero. As Hapgood noted, this could only mean that the Greek cartographers, when they prepared their maps using the circumference of Eratosthenes, had before them source maps which had been drawn without the Eratosthenes error—in fact without error at all! The conclusion is obvious: the geographical knowledge which Piri Reis incorporated into his 1513 map ultimately originated not with the Greeks but with an earlier people who possessed a more advanced science of map making than even the Greeks!

3. The map as a whole reveals a remarkable accuracy of longitude and latitude measurements. In Piri Reis's day, instruments enabling a navigator to find correct longitude were nonexistent. Not until the invention of the chronometer in 1765 were accurate longitude readings possible. Determination of latitude, however, involves precise astronomical observation, but conspicuous differences are evident when it is done by trained men rather than by adventuresome explorers. On his first voyage to the New World, for example, Columbus made no longitudinal measurements and attempted only three for latitude—which incidentally were all incorrect. For almost one hundred years after that famous voyage, European map makers, using the guesswork of the explorers, placed such large islands as Cuba and Hispaniola above rather than below the Tropic of Cancer!

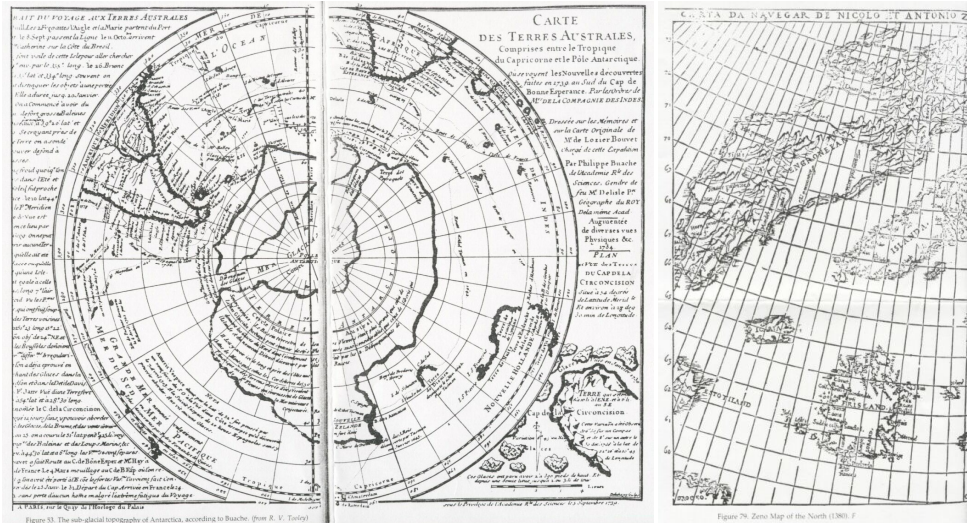
In contrast, not only are the Caribbean, Spanish, African and South American coasts on the Piri Reis map in correct positions relative to each other, but even such isolated land areas as the Cape Verde Islands, the Azores, and the Canary Islands are accurately situated by latitude and longitude—the first two without error and the last within less than a degree. Hapgood commented that there simply is no way to explain the sophistication of the Piri Reis map in terms of the comparative ignorance of sixteenth-century cartographers. The map bears irrefutable testimony to a scientific achievement far surpassing the abilities of the navigators and map makers of the Renaissance, the Middle Ages, the Arab world, or any of the ancient geographers. It is the product of an unknown people antedating recognised history.

4. The Piri Reis chart depicts the Caribbean region at right angles to its normal (Mercator) position, and South America appears stretched out. Hapgood contends that the original source maps from which the Piri Reis map was made must have been drawn using a circular grid based on spherical trigonometry, with the focal point situated in Egypt. Testing this hypothesis, the Hydrographic Office of the U.S. Navy drew a modern map using the same grid, and in such a construction the Caribbean indeed appeared at right angles and South America was elongated. This type of circular projection was not fully developed in Europe until centuries after the map was drawn. Piri Reis revealed his unfamiliarity with such a projection by treating the land area of the original as a flat Mercator-type relief and shifting and splicing the original grid to compensate for the curvature! The Piri Reis map also shows islands and several locations along the Central and South American coast which were either briefly explored but not accurately positioned or not discovered at all prior to 1513. These include the Isle of Pines, Andros Island, San Salvador, Jamaica and others. Farther down the coast of South America, the chart shows the mouths of the Amazon and the island of Marajo, correctly shaped and perfectly located in longitude and latitude.

Undoubtedly, the most intriguing feature of the Piri Reis map is the coastline of Antarctica, showing the region of Queen Maud Land. Modern seismic maps disclose that this coast is a rugged one, with numerous mountain chains and individual peaks breaking through the present levels of ice. The Piri Reis map shows the same type of coast, but without the ice. In one instance, Mallery discovered two bays on the Piri Reis map where the seismic map showed land; however, when the experts were asked to check their measurements, they found that the sixteenth-century map was correct after all.

What is the ultimate conclusion of the cartographers? Professor Hapgood and others see no way of reconciling the cartography of 1513 with the data on the controversial Piri Reis map concerning the geography of Antarctica. They concur that the chart indicates that someone possessing measuring techniques which were not employed in Europe until the nineteenth century mapped Antarctica before the continent was covered with ice. Core samples taken in the Ross Sea off the Antarctic coast in 1949 by the Byrd Expedition reveal that there was indeed a time in the distant past when fine-grain sediments were deposited, indicating an ice-free coast and rivers that conveyed silt down to the sea.

Surprisingly enough, the much-analyzed Piri Reis map is not the only map to evince a futuristic knowledge of the earth in remote history. The Orontius Fineus map of 1531 shows rivers in Antarctica where today mile-thick glaciers flow; the Hadji Ahmed map of 1559 depicts the Ice Age land bridge that existed between Siberia and Alaska. The Zeno brothers, in 1380, may have accurately pictured the topography of Greenland below the northern icecap, while the Andrea Benincasa map of 1508 indicates that northern Europe was covered by the farthest advance of the Ice Age glaciation.



The only realistic conclusion one can reach on the basis of the accumulative evidence of the medieval maps is that they all have their origin in source maps constructed by an advanced civilisation antedating any of the known ancient cultures. Years before the Egyptian, Babylonian, Greek and Roman civilisations existed, at a time when the Antarctic and Arctic were just beginning to feel the advance of the unyielding sheets of glacial ice, this unknown culture possessed a knowledge of cartography comparable to what we have today. These people knew the correct size of the earth; they used spherical trigonometry in their mathematical measurements; and they utilized ultramodern cartographical projections... For measuring longitude and latitude. The pre-ancient civilisation of the past, Professor Hapgood concludes, must have been organized and directed on a global scale.

In order to place these findings on this ancient universal survey within the historical framework, as endorsed by Professor Albright, we must carry our assumptions a little further by saying that this survey had to have been made shortly after the Flood (when the land masses were left in their present forms), but before the ice began to accumulate at the poles.

In Genesis 10:25 we meet a descendant of Noah called Peleg who was given his name because "in his day was the earth divided." The usual interpretation of this passage is that it refers to the division of nations; however, it could also mean division as in "allotment, marking off an area, a measurement." A more accurate translation of this historical passage could therefore read, **"Peleg, in his day was the earth measured, or surveyed."** Even more perplexing is that the record indicates that there have been others equally involved in this cartographic process.



**Mizraim, a grandson of Noah, comes to mind as one who may have shared in the responsibility of charting the world. His name means "to delineate, to draw up a plan, to make a representation," especially in association with measuring distances.**

Mizraim was the founder of ancient Egypt [Egypt is also known by Egyptians as Misr which comes from the name of Mizraim, who was a son of Noah's son, Ham, and he was also the uncle of Nimrod]. It is significant to note that at least two of the Renaissance maps showing advanced



knowledge, the Piri Reis chart and the Reinal chart, dating back to 1510, were based on a circular projection with the focal point in Egypt.

A third descendant of Noah who presumably also participated in the mapping of the globe was Almodad [Not one of the names in Genesis 10, a seventh-generation descendant of Noah], whose name when translated from the Hebrew, means "measurer."

**In the Chaldean Paraphrase of Jonathan there is preserved an ancient tradition which tells that he was the "inventor of geometry," "qui mensurabat terran finibus"—"who measured the earth to its extremities."**

Almodad is regarded as a progenitor of the southern Arabians. Is there a connection between him and the fact that many of the Renaissance maps revealed peculiarities of the earth's geography which were first noticed by the Arabs, when taken from ancient sources never fully identified?

The relationship between Peleg, Mizraim and Almodad may be even closer than at first suspected. According to the record, their lifespans overlap, so that the mapping process, covering perhaps...a span of 300 years, was extended over enough years to be total and complete. This conclusion is backed by what we find in the Renaissance maps.

It does not leave room for speculation, for among the maps of Antarctica, for example, the Bauche map of 1737 (copied from an older Greek map) shows the continent completely free of ice; the Orontius Fineus map of 1531 indicates that the center of the continent was beginning to fill with ice when its source maps were drawn, but the Piri Reis chart of 1513 and the Mercator chart of 1569 picture only the Antarctic coast left uncovered by glaciers. It is therefore apparent that Antarctica was surveyed not once but several times, before and during the period the southern polar icecap spread over the continent.

In the Zeno brothers' map of 1339, Greenland is shown free of glaciers as it was prior to the Ice Age, while Ptolemy's map of the North depicts a glacial sheet advancing across south-central Greenland, and at the same time it shows glaciers retreating from northern Germany and southern Sweden. This could only have come from the findings of surveying parties that tracked the areas before, during, and after the Ice Age.

The world contains a treasure of evidence pointing toward unceasing activity on the part of geographers, surveyors and scientifically oriented explorers during the grey dawn of post-Flood development.

#### Other Evidence of Post-Flood Geographical Surveys

The scope of the surveying techniques developed by the ancients should not be underestimated. The sacred Hindu books, the Puranas, refer to direct communication between India and distant places around the world. The Indians were well acquainted with western Europe, which they called Varaha-Dwipa. England was known to them as Sweta Saila, or "the Island of the White Cliffs"; and Hiranya, or Ireland, as the Irish legends relate, was visited by the Dravidians, a group of men from India. **The Irish say that they stayed for only a brief time and had come as surveyors, not invaders...**

#### Evidence of a World Survey in Egypt

Serious consideration must be given to the involvement of Mizraim with the world survey that was conducted after the Flood. We know from Egyptian history that Mizraim is regarded as the forefather of all Egyptians, and it is significant that the secular records of Egypt testify that from a very early period the Egyptians were indeed knowledgeable about land measurements and practiced sophisticated surveying techniques.

Livio Catullo Stecchini, one of the world's foremost authorities on ancient measures, discovered a peculiar hieroglyph that appeared on all the thrones of the pharaohs, beginning at the Fourth Dynasty. The hieroglyph is composed of knotted ropes symbolising the union of Upper and Lower Egypt at the thirtieth parallel, where the southernmost tip of the Nile Delta crosses the meridian 31° 30' east of Greenwich, which appears to have been established as the prime meridian of Egypt in unknown antiquity...

## Evidence of a World Survey in China

Among the early Chinese we find evidence that they too possessed advanced knowledge obtained from the geographical survey of the world taken soon after the Flood. One of the oldest Chinese literary works that has survived is called the "Shan Hai King, The Classic of Mountains and Seas", a treatise on geography. Its authorship is ascribed to "the great Yu," who became Emperor in 2208 B.C., and the date for the writing of the treatise is approximately 2250 B.C... For several hundred years after its writing, the Shan Hai King was regarded as a scientific work, but during the third century B.C., when many Chinese records were reevaluated and condensed, it was discovered that the geographical knowledge it contained did not correspond to any lands known at that time. Thus, the Shan Hai King was reclassified as myth and was relegated to an unimportant position in Chinese literature.

Within the past few years, however, several portions of the Shan Hai King have been reexamined, and the information they contain has altered many previous assumptions concerning the treatise. In the Fourth Book, entitled "The Classic of Eastern Mountains", are four sections describing mountains located "beyond the Eastern Sea"—on the other side of the Pacific Ocean. Each section begins by depicting the geographical features of a certain mountain—its height, shape, mineral deposits, surrounding rivers and types of plants and vegetation—then gives the direction and distance to the next mountain, and so on, until the narrative ends. By following these clues and the directions and distances provided, much as one would a road map, investigators have discovered that these sections describe in detail the topography of western and central North America.

The first section begins on the Sweetwater River and proceeds southeast to Medicine Bow Peak in Wyoming; then to Longs Peak, Grays Peak, Mount Princeton, and Blanca Peak in Colorado, to North Truchas Peak, Manzano Peak, and Sierra Blanca in New Mexico; then to Guadalupe Peak, Baldy Peak, and finally Chinati Peak, near the Rio Grande in Texas.

The second section describes an expedition over an even more expansive area. It begins in Manitoba, at Hart Mountain near Lake Winnipeg, and proceeds to Moose Mountain in Saskatchewan; it goes from there to Sioux Pass (between Andes and Fairview) in Montana; to Wolf Mountain and Medicine Bow Peak in Wyoming; to Longs Peak, Mount Harvard, and Summit Peak in Colorado; then to Chicoma Peak, Baldy Peak, Cooks Peak, and Animas Peak in New Mexico; then on into Mexico, describing the Madero, Pamachic, Culiacan and Triangulo heights, reaching the Pacific Coast near Mazatlan.

The third section is a tour of the mountains along the Pacific Coast: Mount Fairweather and Mount Burkett in Alaska; Prince Rupert and Mount Waddington in British Columbia; Mount Olympus in Washington; Mount Hood in Oregon; and Mount Shasta, Los Gatos, and Santa Barbara in California.

The fourth and last section covers several peaks in a small area: Mount Rainier in Washington; Mount Hood, Bachelor Mount, Gearhart Mountain, Mahogany Peak, and Crane Mountain in Oregon; and Trident Peak and Capitol Peak in Nevada.

Not only is The Classic of Eastern Mountains a geographical survey, but the accounts in each section give the observations and experiences of the surveyors, from picking up black opals and gold nuggets in Nevada to watching the seals sporting on the rocks in San Francisco Bay. They were even amused by a strange animal who avoided its enemies by pretending to be dead: the native American opossum.

Other portions of the Shan Hai King, specifically the Ninth and Fourteenth books, also describe regions in North America. One notable description given in the Fourteenth Book is of a "luminous" or "great canyon," "a stream flowing in a bottomless ravine," in the "place where the sun is born." Anyone who has witnessed a sunrise in the Grand Canyon will know what the early surveyors had seen. Still other parts of the Shan Hai King, currently under investigation, are said to be accounts of explorations farther to the east, in the Great Lakes and the Mississippi Valley areas. It is very evident from the accuracy of the geographical details and the personal observations in the Shan Hai King that an extensive scientific survey of the North American continent was made by the Chinese almost 4,500 years ago.

After the initial inquiries into the Shan Hai King were begun, it was noticed that along many of the routes which the surveyors of North America took, there existed several examples of rock drawings. The most notable are Writing Rock near Grenora, North Dakota, and Writing-on-Stone in Alberta, Canada. Yet another rock script occurs in British Columbia, and petroglyph expert Philip Thornburg was the first to recognize among the stone pictures a carving of a *sisutl*—the Chinese dragon. Thornburg observed, "There does seem to be a Oriental background to them. Since they are carved in sandstone, it's virtually impossible to say what age they are. I've found some that were buried under a foot of topsoil. Now this wasn't the kind of topsoil that would have washed over them. This was formed there placing the age of the carving around five to seven thousand years— which is really ancient for this country." Thornburg discovered one petroglyph on Vancouver Island that had had a hole worn through it by dripping water, proof that it had been there for some time.

William and Mae Marie Coxon, amateur archaeologists have spent the last decade studying the Canadian and other petroglyphs found around the world. The conclusion of their research has been that at a very remote period in human history a group of people they call the Stone-Writers left their traces on every continent.

By careful comparison, the Coxons discovered 241 special sequences of particular geometric signs and symbols. The distribution of examples of these sequences was 201 in the Middle East, 171 in the Far East, and 131 in the Americas. By dating the petroglyph remains in the Nile Valley to compare with the later Egyptian civilisation, the Coxons were able to date the Stone-Writers' appearance as being about 1,500 years before the rise of Egypt.

From the drawings themselves, the two researchers were able to describe the Stone-Writers as average to above average in height, wearing short kilts that came to the knees, much like the ancient Egyptian laborers. They must have possessed great strength and endurance to have penetrated into the inhospitable terrain where many of their glyphs were found. The Coxons are convinced that the Stone-Writers were not barbaric hunters or nomads but an intelligent people who were systematic in what they did; the symbols had meaning and purpose in their repetition and locations. The Coxons note "They traveled the oceans, or at least the coastlines, and they penetrated far up into the continents along the rivers.... Along the streams, lakes and ocean shores, they left guide signs to mark the way for others who followed them...." The Stone-Writers were thus explorers and geographers, probably the very same explorers and geographers who charted the world after the Flood.

The Coxons' work in symbols is being verified by a number of other researchers. English archaeologist S. F. Hood, after studying tablets at the prehistoric site of Tartaria in Rumania, discovered correlations between the tablet symbols there and those found in Crete, Iraq, Egypt, and the Balkan countries. His conclusion was that a system of signs was used over an extensive area 6,000 years ago. N. Vlassa, of the Museum of Cluj, supports these findings with discoveries of his own. Almost identical symbols from the same time period appear at Vinca and Tordos in Rumania, at Troy, and on the Aegean island of Melos. On the basis of his own research and that of his colleagues, Hood believes that a single system of glyphs originated from Iraq or some other country in the Middle East and were disseminated from there over a wide area in a very short time. Oswald O. Tobisch, in his work *Kult Symbol Schrift*, has carried the research a step further and, like the Coxons, sees striking parallels in symbols in Africa, Europe, Asia and America...

#### The Reason for a World Survey—The Earth's Magic Lines

It is quite evident that soon after the Flood and before and after the language disorder...the descendants of Noah undertook a geographic survey and exploration of the entire world's surface, leaving their traces in the form of maps, symbols and place names.

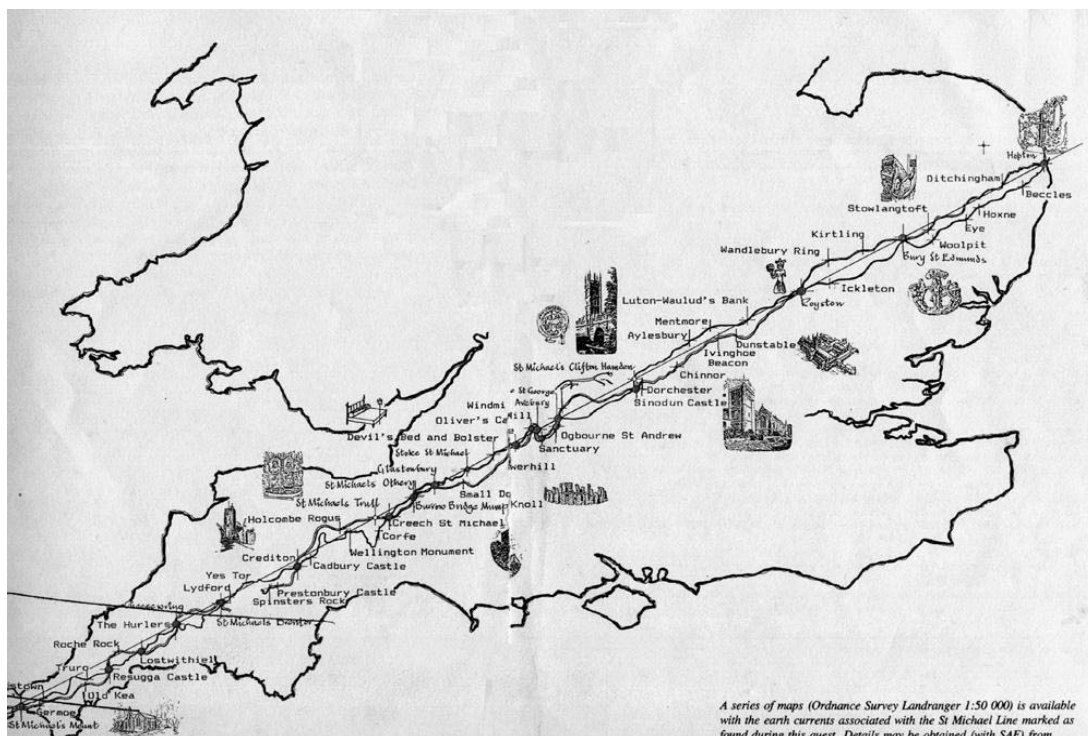


This was most assuredly accomplished with knowledge preserved from the antediluvian era. yet why was it done? Why did the ancients undertake such a momentous task? Why did they decide on this type of adventure, while the memory of the global devastation was still fresh in their minds?

There are some obvious explanations. As Noah and his family stepped down from their survival vessel, they looked upon a world totally alien to them. All the familiar landmarks had disappeared. Forests were gone, rugged mountain peaks faced them on all sides, and from the murky waters below rose the foul stench of decay. The earth that they once had known was now wiped completely clean of any previous civilisation. It was as if they had landed on another planet.

As the new generations were born and grew up on the foothills of Mount Ararat, their innate curiosity concerning this new land forced them to venture out into the hinterland, to explore for fertile valleys, plains and forests... The valuable resources of the earth had been washed away and laid down in new deposits by the turbulent Flood waters. The natural inclination of the post-Deluge generations would be to search for these treasure-troves. Professor Hapgood suggests still another reason. He believes that the mapping of a continent on such a vast scale, as with Antarctica, requiring much organisation, numerous exploring expeditions and many stages of data compilation, must have been motivated by a powerful reason. He feels that economic gain may have been this reason; yet, the exploratory expeditions did more than merely discover and cultivate new areas; they actually divided the earth into parcels of land, with each one bounded by what are now called ley lines.

Until a warm summer afternoon in the early 1920s, there was no indication other than the historical Genesis record that this ever occurred. Alfred Watkins, a merchant whose hobby was prehistory, was riding horseback through the Bredwardine hills near Hereford, England. On reaching the summit of a grassy hillock, he rested, letting his eyes gaze over the tranquil English landscape. Suddenly he saw something he'd never noticed before. Several church steeples were aligned straight across the countryside. Knowing that these churches had been constructed on the sites of prehistoric sanctuaries, he wondered whether it was possible that they had once been linked by an invisible web of lines. While still pondering this question, he suddenly realized that not only ancient temples, but also mounds, old standing stones, crosses, crossroads, sacred trees, moats and sacred wells also stood on the same lines!



Racing home, Watkins painstakingly marked all the ancient sites and monuments he knew from his studies onto a one-inch ordnance map, and even though finding five or six points in alignment would have been beyond mere chance, he found himself confronted with eight, nine and even more points, all stretching out in precisely straight lines! Carrying his initial research a

step further, he compared his points to positions on other maps he had marked, and discovered that the lines could be extended for miles and miles, usually ending at a mountain peak or a high cliff. Aided by a friend, Watkins undertook a detailed survey of all England and Scotland and everywhere they found further traces of a prehistoric network of dead-straight alignments that had once extended over the entire island.

Building on the accomplishments of Watkins, Major H. Taylor of the British Army set out, accompanied by a professional surveyor, to do an even more detailed study of the strange alignments. Taylor discovered more landmarks previously not known, or at least not recorded in modern times. His findings were eventually published in a small book entitled *The Geometric Arrangement of Ancient Sites*. But if he thought he'd have a publishing first, he was mistaken, for a year prior to the emergence of his book, a German geographer, Dr. Heinisch, had already presented a paper dealing with the same discoveries before an international congress held at Amsterdam. Delivering his paper, "Principles of Prehistoric Cult Geography," he proposed to a hushed audience that at one time in the distant past a magical principle had existed by which holy sites were situated. They were placed, he submitted, on lines that were constructed in relation to the positions of the sun, moon and planets. In addition he claimed he had uncovered evidence that the units of measurement used to construct these lines were, like those of the early Egyptian geodetic surveys, based on simple fractions of the earth's dimensions. He had found examples of these lines not only in Britain but all over Europe and the Middle East. Greatly impressed by the vast extent and accuracy of the construction of these lines, Heinisch concluded that they bore testimony to the past existence of a widespread civilisation that possessed advanced knowledge of both technology and magic...

Evidence that these lines existed in remote history can be found in ancient literature. For example, in their conquest of the Etruscans, the early Romans noted standing stones set in linear patterns over the entire countryside of Tuscany. Later, during the Latin invasions of Greece, they recounted the fact that "stone pillars" were found running straight and true along the roads through the hilly Hellenic landscape. The Romans were not particularly surprised at finding these straight tracks, for they had discovered them in almost every country they subjugated: across Europe, North Africa, Crete, and as far west as the regions of ancient Babylon and Nineveh. We now recognize that the Romans' reputation as builders of straight thoroughfares was partly attributable to their simply utilizing sacred lines that existed long before their conquests, and which they then transformed into military and commercial routes. Even today, the Bedouins of North Africa use the line system marked out by standing stones and cairns to help them traverse the desert wastes. When were these stones erected? The nomads shake their heads when asked this question for even though they need the markers for survival, they know nothing of their origin.

While the lines have been forgotten in most countries, in other parts of the world the prehistoric line system is still being used. One such system exists in the interior of Australia among the aborigines, who tell of a past age, which they call "dream time," when the "creative gods" traversed the country and "reshaped" the land to conform to important paths called turingas. At certain times of the year, they say, the turingas become revitalized by the energies flowing through them, giving new life to the adjacent countryside...

The ancient legends of earth currents which are affected by planetary motions and which in turn affect fertility are not fantasy or religious superstition; they are based on very real scientific principles. We are only beginning to realize today that the entire surface of the earth is bathed in the energy of the earth's magnetic field and that this field is subject to certain influences from above and below. The strength and direction of the magnetic currents vary according to the positions of the sun, moon and the closer planets in much the same way as the ebb and flow of the tides take place according to the position of the moon. At the same time, characteristics of magnetic currents are also influenced by the terrain over which they flow. A flat landscape exhibits placid and regular activity, while rocky or broken land shows disturbed behavior.



Magnetic flows are especially agitated over the geologic faults over which many of the prehistoric ley lines have been found.

While some investigators are studying the variations of current on the earth's surface, others are attempting to discover what effects these same currents have on certain nonliving and living components. After exhaustive research, involving 200,000 experiments over ten years, Giorgio Piccardi, Director of the Institute for Physical Chemistry in Florence, Italy, has concluded that water is extremely sensitive to electromagnetic fields, and that as the fields are changed or influenced, so the chemistry of water may be altered. Piccardi also found that since the earth's energy field is subject to change by changes in the positions of the sun and moon, chemical reactions using water as a base also change accordingly.

The Florentine chemist's work has been verified by W. H. Fisher of the National Center for Atmospheric Research of Boulder, Colorado, who noted further that since water is the liquid of life, electromagnetic fluctuations could thus affect growth. Drs. A. A. Boe and D. K. Salunkhe, horticulturists at Utah State University, have come up with significant results. When green tomatoes, for example, were placed within a magnetic field, they ripened four to six times faster than under normal conditions. The researchers also noted that seeds of a variety of plants grew many times faster than usual when they had been placed in a current. More recent research has uncovered not only that the living plant is stimulated, but that currents also affect the soil in which the plant grows. The movement of galactic bodies, it now appears, causes certain magnetic fluctuations which in turn increase the fertility of plants as the chemistry of the mineral content of the soil is changed.

Of course we are only beginning to understand the principles behind celestial and terrestrial magnetic influences on the earth's surface, but it seems that people in centuries past not only knew these principles but applied them for their own benefit. First, these early people must have had the scientific knowledge to be aware of the currents' existence, so they developed a technology for detecting those currents. Second, they must have possessed the end product of a tremendous body of research and experimentation that covered centuries, perhaps, and by which they knew how to manipulate the currents toward a predictable result. We can only guess at this from what remains of the earlier culture, for we ourselves have not yet reached that level in our understanding.

It appears that the currents began at certain natural energy "springs" in the earth, which were later marked as religious sites, and from here the currents were directed to specific centers—towers or mounds—where they were gathered and from which they were eventually dissipated to the surrounding countryside. Astronomical observation was of paramount importance, for only by a constant watch over the celestial movements could the waxing and waning of the currents be measured and anticipated...

According to Gey Underwood, author of "The Pattern of the Past", the standing stones served the same purpose as the needles of Chinese acupuncture. Just as the needles are claimed to redirect the flow of "life forces" in the human body to restore health, so the standing stones were placed in such a manner so as to realign earth magnetism from the natural paths to artificial ones. Using special dowsing equipment for detection, Underwood found evidence that the magnetic currents in parts of his native Britain do in fact run in rows parallel to the straight lines of the standing stones with a precision that characterizes human construction rather than natural patterns...

Looking at what we now know concerning the ley lines, we can make several observations. Examples of ley-line systems are found all over the earth—in Europe, Africa, Asia, Australia, and the Americas—and the legends and traditions associated with them indicate that they were all based on the same principle, magnetic manipulation, and were used for the same purposes. Their conception certainly did not originate with one group of isolated people and then slowly spread to other neighboring groups; rather, the system appears to have sprung up all over the world simultaneously, planned by a culture that had surveyed the globe and charted the geographical features that revealed the underlying major centers of magnetic activity and inactivity. The very nature of the operation of the lines required that for the system to work to its full potential, all the terrestrial surface currents had to be accounted for. The ley-line system was thus a truly global system. Commenting on the lines, John Michell writes in "The View over Atlantis":



"A great scientific instrument lies sprawled over the entire surface of the globe. At some period—perhaps it was about 4,000 years ago—almost every corner of the world was visited by a group of men who came with a particular task to accomplish. With the help of some remarkable power, by which they could cut and raise enormous blocks of stone, these men erected vast astronomical instruments, circles of erect pillars, pyramids, underground tunnels, cyclopean alignments, whose course from horizon to horizon was marked by stones, mounds, and earthworks "

Such a global undertaking implies the existence of a single authority directing a unified effort the inhabitants of the whole world. Also, just as local sections of the ley lines had a specific center or even several nodes where the energies converged, so it is likely that the single authority operated from a world center where the energies of the entire global line system were gathered. The system appears to have operated for a period of time, but then something happened— something significant enough to mark a break in world conditions and to bring the world line system to an end...

As Michell described it, "All we can suppose is that some overwhelming disaster, whether or not of natural origin, destroyed a system whose maintenance depended upon its control of certain natural forces across the entire earth. All attempts at reconstructing whatever it was that collapsed during the great upheaval have ever since been frustrated by schism and degeneration. Falling ever deeper into ignorance, increasingly at the mercy of rival idealists, the isolated groups of survivors all over the world forgot their former unity, and, in the course of striving to re-create some local version of the old universal system, perverted the tradition and lost its spiritual invocation" ...

The city of Babel represented a "United Nations," or a political center for world government. The Tower of Babel, on the other hand, intended to be a great structure reaching to the skies, may have represented something even more significant. As noted earlier, there very likely had been a world center where the surface energies of the globe were eventually gathered from the global ley-line system.

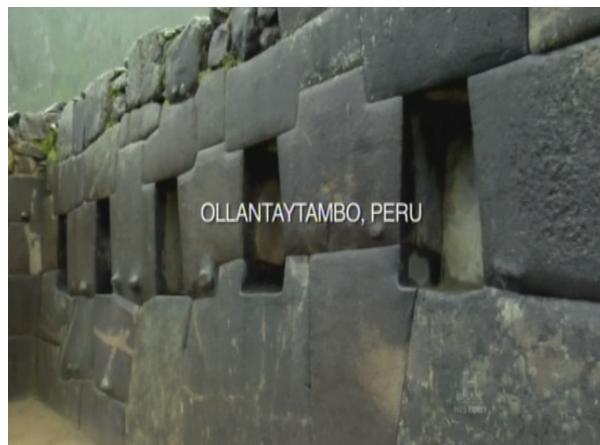
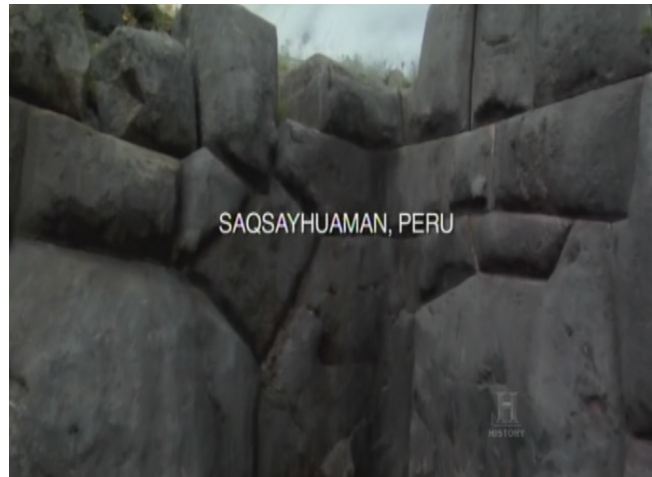
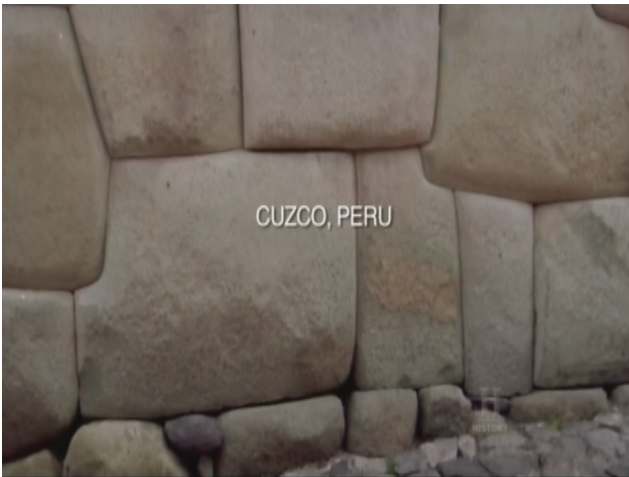
We know that the place where the currents were accumulated was usually characterized by a mound or tower. The Tower of Babel may have been the receiving station for the ley-line currents of the earth. By their possession of such a center of the world's energies, the ruling authorities at Babel literally controlled the world, for everyone who desired to benefit from the world ley-line system would have had to serve the rulers of Babel.

We know from all accounts that the lines were used for occult purposes, so there were spiritual as well as material energies involved. The post-Flood ley-line system was very probably a reconstruction of a system used before the Flood" (Secrets of the Lost Races, p. 92-119).

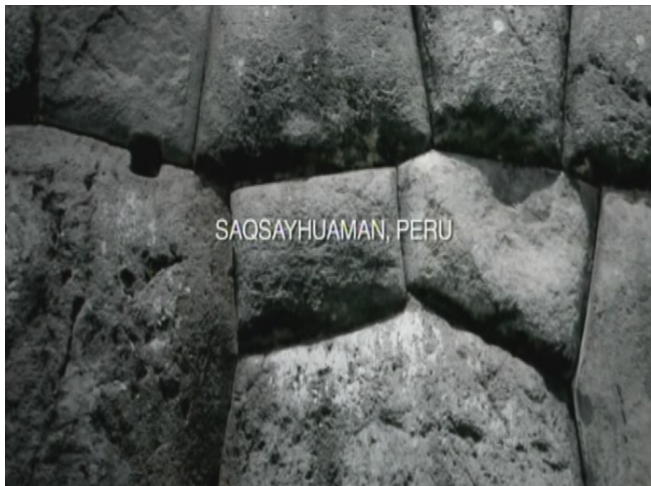
This worldwide geographic survey done in the time shortly before dynastic Egypt is most likely the same civilisation that built the pyramids. A recent documentary called "The Revelation of the Pyramids" based on a book by Jacques Grimault builds on from that and ties in the pyramids into its purpose.

In the Valley and Sphinx Temples at Giza there are also granite sections where there are enormous granite blocks weighing many tens of tons in weight. They are completely devoid of any inscriptions and many of the stones are irregular in size. In some places some stones bend around corners.

This same building style is seen in other megalithic sites around the world such as Easter Island and in Peru at sites such as Machu Picchu, Cuzco, Sacsayhuaman and Ollantaytambo. Below are a number of comparison photos:







Even more amazing that the similarity of building style is their alignment in relation to one another. Connect a line 100 miles in width starting from Easter Island in the Pacific and it goes through all four Peruvian megalithic sites mentioned above. Keep going across into Africa and the same line connects with the pyramids at Giza. Coincidence or was this done by design? Additionally, this line is exactly at 30 degrees from the equator.





Egypt is not the only place where pyramids are found. Most people are familiar with the pyramids in Central America.

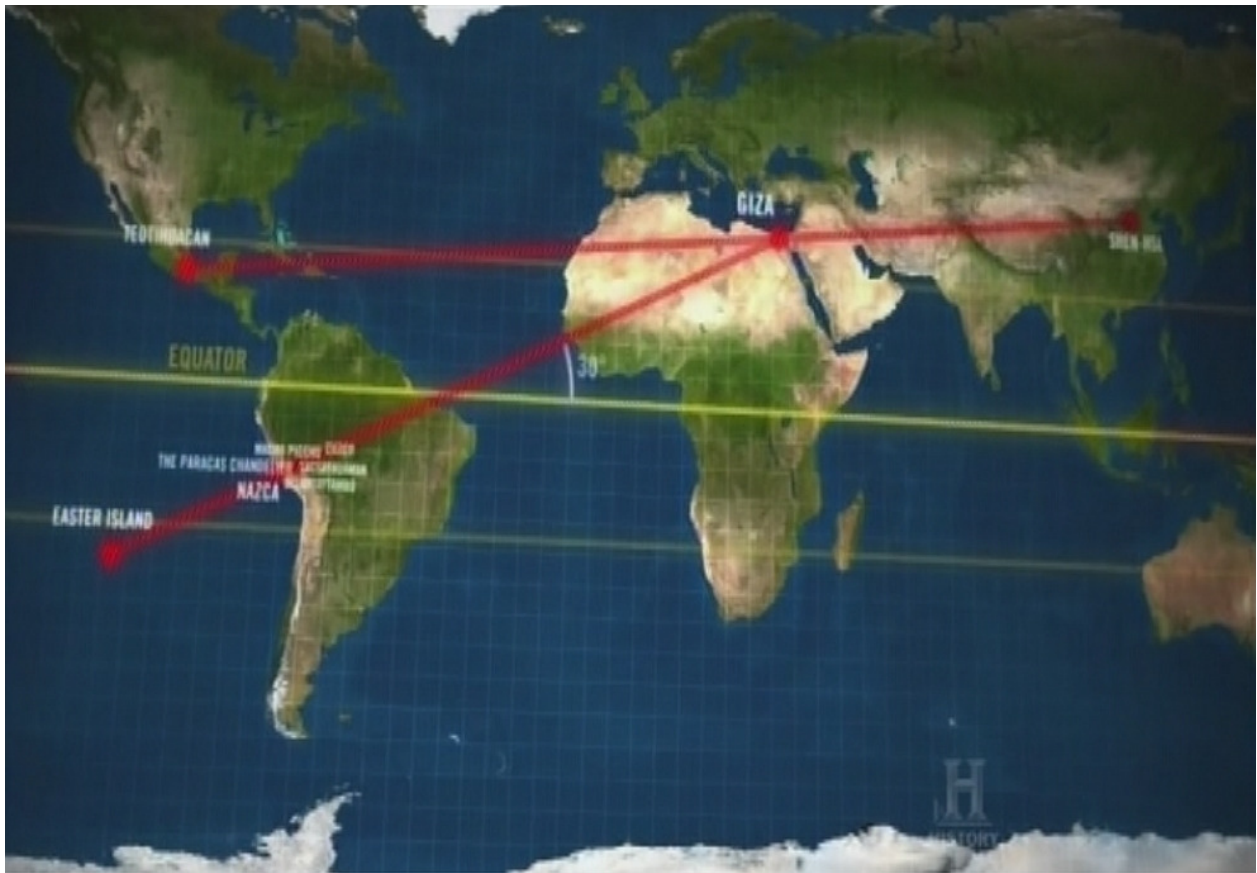
The most famous of these Central American pyramids are those at Teotihuacan not far from Mexico City. Like at Giza there are three main pyramids amongst others – the Pyramid of the Sun, Pyramid of the Moon and the Pyramid of the Feathered Serpent.



Less known to most people is that there are lots of pyramids in Shen Hsi in China. These are huge pyramids as big as the ones at Giza but made of earth rather than stone but with a shallower angle like the pyramids in Mexico. Below are a few photos of them:



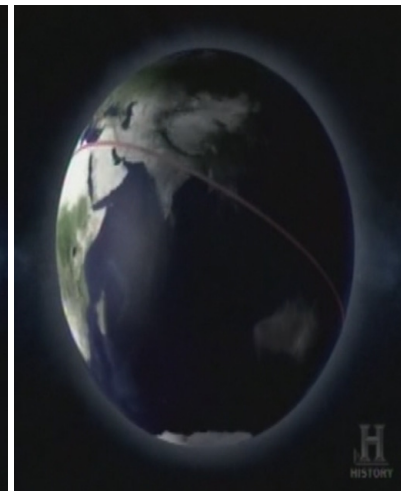
Like in Mexico these pyramids antedate the civilisations that followed. Now look what happens if we draw a straight line between Teotihuacan and Shen Hsi in China:



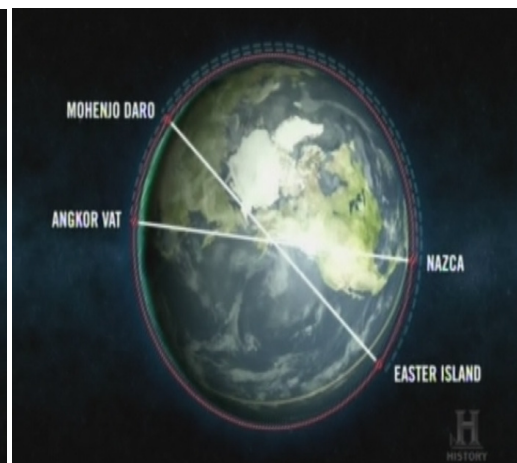
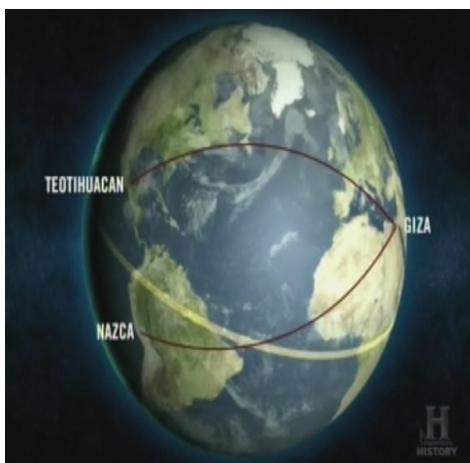
As the narrator asks on the documentary: “Can we still speak of coincidence?” One researcher they interviewed went another step further and continued the line between Easter Island and Giza as if it was an equator at an angle of 30 degrees to our current equator. Not only did it go through the megalithic sites of Peru but it also went through a number of ancient sites such as Tassili N’Aljier in Algeria, the Siwan Oasis in Egypt, Petra, Mohenjo Daro in Pakistan and Angkor Wat in Cambodia. Some of these ancient sites are built over even more ancient sacred sites.







There are a couple more “coincidences” to add further to all this which you can see in the illustrations below. If a line is drawn between Teotihuacan and Nazca then both the distance and angle from that line between Teotihuacan and Giza and Nazca and Giza are the same. Also, directly opposite the globe from Nazca is Angkor Wat and directly opposite Easter Island is Mohenjo Daro.



I would concur with the producers of the documentary that all of this is not blind chance and that the same civilisation that built the pyramids were responsible for many of these other megalithic sites and their particular placements around the world.



In my opinion, the original work on these sites (other later civilisations added onto these sites) was the very early post-Flood civilisation that undertook the great world survey that Rene Noorbergen documents in his book "Secrets of the Lost Races".

There are numerous legends from South America about a mysterious legendary figure called Viracocha and his followers who once visited in the distant past long before the Spaniards and made a great impact on the local South American Indians. I quote from Graham Hancock's book "Fingerprints of the Gods" where he discusses these legends that may give us more insight into perhaps the same people who built the world's great megalithic structures:

It seemed that in the early sixteenth century, before the Spanish began to demolish Peruvian culture in earnest, an idol of Viracocha had stood in the Holy of Holies of the Coricancha. According to a contemporary text, the "Relacion anonyma de los costumbres antiguos de los naturales del Piru", this idol took the form of a marble statue of the god - a statue described "as to the hair, complexion, features, raiment and sandals, just as painters represent the apostle Saint Bartholomew". Other accounts of Viracocha likened his appearance to that of the Saint Thomas."

I examined a number of illustrated ecclesiastical manuscripts in which these two saints appeared; both were routinely depicted as lean, bearded white men, past middle age, wearing sandals and dressed in long, flowing cloaks. As we shall see, the records confirmed this was exactly the appearance ascribed to Viracocha by those who worshipped him. Whoever he was, therefore, he could not have been an American Indian, they are relatively dark-skinned people with sparse facial hair. Viracocha's bushy beard and pale complexion made him sound like a Caucasian.

Back in the sixteenth century the Incas had thought so too. Indeed their legends and religious beliefs made them so certain of his physical type that they initially mistook the white and bearded Spaniards who arrived on their shores for the returning Viracocha and his demigods, an event long prophesied and which Viracocha was said in all the legends to have promised. This happy coincidence gave Pizarro's conquistadores the decisive strategic and psychological edge that they needed to overcome the numerically superior Inca forces in the battles that followed.

Who had provided the model for the Virachochas?

Through all the ancient legends of the peoples of the Andes stalked a tall, bearded, pale-skinned figure wrapped in a cloak of secrecy. And though he was known by many different names in many different places he was always recognizably the same figure: Viracocha, Foam of the Sea, a master of science and magic who wielded terrible weapons and who came in a time of chaos to set the world to rights.

The same basic story was shared in many variants by all the peoples of the Andean region. It began with a vivid description of a terrifying period when the earth had been inundated by a great flood and plunged into darkness by the disappearance of the sun. Society had fallen into disorder, and the people suffered much hardship. Then:

"there suddenly appeared, coming from the south, a white man of large stature and authoritative demeanour. This man had such great power that he changed the hills into valleys and from the valleys made great hills, causing streams to flow from the living stone..."

The early Spanish chronicler who recorded this tradition explained that it had been told to him by the Indians he had travelled among on his journeys in the Andes:

"And they heard it from their fathers, who in their turn had it from the old songs which were handed down from very ancient times...They say that this man travelled along the highland route to the north, working marvels as he went and that they never saw him again. They say that in many places he gave men instructions how they should live, speaking to them with great

love and kindness and admonishing them to be good and to do no damage or injury one to another, but to love one another and show charity to all. In most places they name him Ticci Viracocha..."

Other names applied to the same figure included Huaracocha, Con, Con Ticci or Kon Tiki, Thunupa, Taapac, Tupaca and Illa. He was a scientist, an architect of surpassing skills, a sculptor and an engineer:

"He caused terraces and fields to be formed on the steep sides of ravines, and sustaining walls to rise up and support them. He also made irrigating channels to flow ... and he went in various directions, arranging many things."

Viracocha was also a teacher and a healer and made himself helpful to people in need. It was said that "wherever he passed, he healed all that were sick and restored sight to the blind."



This gentle, civilizing, "superhuman", samaritan had another side to his nature, however. If his life were threatened, as it seems to have been on several occasions, he had the weapon of heavenly fire at his disposal:

"Working great miracles by his words, he came to the district of the Canas and there, near a village called Cacha ... the people rose up against him and threatened to stone him. They saw him sink to his knees and raise his hands to heaven as if beseeching aid in the peril which beset him. The Indians declare that thereupon they saw fire in the sky which seemed all around them. Full of fear, they approached him whom they had intended to kill and besought him to forgive them ...

"Presently they saw that the fire was extinguished at his command, though stones were consumed by fire in such wise that large blocks could be lifted by hand as if they were cork. They narrate further that, leaving the place where this occurred, he came to the coast and there, holding his mantle, he went forth amidst the waves and was seen no more. And as he went they gave him the name Viracocha, which means 'Foam of the Sea'."

The legends were unanimous in their physical description of Viracocha. In his "Suma y Narracion de los Incas", for example, Juan de Betanzos, a sixteenth-century Spanish chronicler, stated that according to the Indians, he had been "a bearded man of tall stature clothed in a white robe which came down to his feet and which he wore belted at the waist."

Other descriptions, collected from many different and widely separated Andean peoples, all seemed to identify the same enigmatic individual. According to one he was:

"A bearded man of medium height dressed in a rather long cloak ... He was past his prime, with grey hair, and lean. He walked with a staff and addressed the natives with love, calling them his sons and daughters. As he traversed all the land he worked miracles. He healed the sick by touch. He spoke every tongue even better than the natives. They called him Thunupa or Tarpaca, Viracocha-rapacha or Pachaccan..."

In one legend Thunupa-Viracocha was said to have been a "white man of large stature, whose air and person aroused great respect and veneration." In another he was described as a white man of august appearance, blue-eyed, bearded, without headgear and wearing a cusma, a jerkin or sleeveless shirt reaching to the knees".

In yet another, which seemed to refer to a later phase of his life, he was revered as "a wise counsellor in matters of state" and depicted as "an old man with a beard and long hair wearing a long tunic."



Above all else, Viracocha was remembered in the legends as a teacher. Before his coming, it was said, "men lived in a condition of disorder, many went naked like savages; they had no houses or other dwellings than caves, and from these they went forth to gather whatever they could find to eat in the countryside."

Viracocha was credited with changing all this and with initiating the long-lost golden age which later generations looked back on with nostalgia. All the legends agreed, furthermore, that he had carried out his civilizing mission with great kindness and as far as possible had abjured the use of force: careful instruction and personal example had been the main methods used to equip the people with the techniques and knowledge necessary for a cultured and productive life. In particular, he was remembered for bringing to Peru such varied skills as medicine, metallurgy, farming, animal husbandry, the art of writing (said by the Incas to have been introduced by Viracocha but later forgotten), and a sophisticated understanding of the principles of engineering and architecture.

I had already been impressed by the quality of Inca stonework in Cuzco. As my research in the old town continued, however, I was surprised to discover that by no means all the so-called Inca masonry could be attributed with any degree of archaeological certainty to the Incas. It was true that they had been masters in the manipulation of stone, and many monuments in the Cuzco area were indisputably their work. It seemed, however, that some of the more remarkable structures routinely attributed to them could have been erected by earlier civilizations; the evidence suggested that the Incas had often functioned as the restorers of these structures rather than their original builders.

The same appeared to be true of the highly developed system of roads connecting the far-flung parts of the Inca empire. The reader will recall that these roads took the form of parallel highways running north to south, one along the coast and the other through the Andes. All in all more than 15,000 miles of surfaced tracks had been in regular and efficient use before the time of the Spanish conquest, and I had assumed that the Incas had been responsible for all of them. I now learned that it was much more likely that they had inherited the system. Their role had been to restore, maintain and unify a pre-existing network. Indeed, though it was not often admitted, no expert could safely estimate how old these incredible highways were or who had built them.

The mystery was deepened by local traditions which stated not only that the road system and the sophisticated architecture had been "ancient in the time of the Incas", but that both "were the work of white, auburn-haired men" who had lived thousands of years earlier.

One legend described Viracocha as being accompanied by "messengers" of two kinds, "faithful soldiers" (huaminca) and "shining ones" (hayhuaypanti). Their role was to carry their lord's message "to every part of the world."

Elsewhere there were phrases such as: "Con Ticci returned...with a number of attendants"; "Con Ticci then summoned his followers, who were called viracocha"; "Con Ticci commanded all but two of the viracocha to go east..."; "There came forth from a lake a Lord named Con Ticci Viracocha bringing with him a certain number of people..."; "Thus those viracochas went off to the various districts which Viracocha had indicated for them"...

Garcilaso [de la Vega] also reported something else interesting. In his "Royal Commentaries of the Incas" he gave an account of how, in historical times, an Incan king had tried to emulate the achievements of his predecessors who had built Sacsayhuaman. The attempt had involved bringing just one immense boulder from several miles away to add to the existing fortifications: "This boulder was hauled across the mountain by more than 20 000 Indians, going up and down very steep hills...At a certain spot, it fell from their hands over a precipice crushing more than 3000 men".

In all the histories I surveyed this was the only report which described the Incas actually building or trying to build with huge blocks like those employed at Sacsayhuaman...As I looked at them I felt that they could, indeed, have been erected before the age of the Incas and by some infinitely older and more technically advanced race...

If so, who had been the original builders?



The Viracochas, said the ancient myths, the bearded, white-skinned strangers, the “shining ones”, the “faithful soldiers”...

Before me was a passage from Fr Jose de Acosta’s “Natural and Moral History of the Indies” in which the learned priest set out “what the Indians themselves report of their beginning”:

“They make great mention of a deluge which happened in their country...The Indians say that all were drowned in the deluge and they report that out of Lake Titicaca came one Viracocha who stayed in Tiahuanaco, where at this day there are to be seen the ruins of ancient and very strange buildings and from thence came to Cuzco and so began mankind to multiply”...



I read the following passage summarising a legend from the Cuzco area:

“For some crime unstated the people who lived in the most ancient times were destroyed by the creator...in a deluge. After the deluge the creator appeared in human form from Lake Titicaca. He then created the sun and moon and stars. After that he renewed the human population of the earth” (Fingerprints of the Gods, p. 48-55, 57).

There are numerous echoes of people and events we read of in the Bible. The legends speak of the Great Flood in Noah’s day. Viracocha is described in much the same way as Jesus is teaching the way of love for fellow man and healing the sick by touch and performing many miracles. Viracocha, from the area of Lake Titicaca where great monolithic structures are, is described as the creator in human form.

There are examples of the Lord coming down and appearing amongst men in the Old Testament such as coming down to see the Tower of Babel and visiting Abraham and seeing the sin of Sodom and Gomorrah and many believe that the Lord was Melchizedek, King of Salem (Jerusalem) based on Hebrews 7:3 where it says “he has neither beginning of days, nor end of life” The Jewish tradition of Melchizedek is that he was Noah’s son, Shem.

Viracocha lived amongst and taught them for a considerable period of time based on these legends. In Amos 3:2 God says to Israel “You only have I known of all the families of the earth”. This appears to indicate that Viracocha was not the creator in human form but, if a Biblical figure, one of His emissaries.

If one of His emissaries, then who might best fit what we know of Viracocha? The legends say that Viracocha appeared soon after the Flood at Lake Titicaca and most archaeologists date the great monolithic ruins there to about 2000 BC.

Peleg, mentioned before, is a possibility. Another possibility is Noah’s son, Shem who lived for hundreds of years after the Flood in the Bible but nothing is heard of him in his latter days unless he was the legendary Melchizedek. Shem and his line of descendants are believed to be the ones who carried the torch of God’s teachings in the early post-Flood period. He would have known much about pre-Flood technology. The references to terraces and sustaining walls that he was involved with brings to mind the great site of Machu Picchu.

He would have been a great prophet who great miracles could have been done through such as healings. The “shining ones” is a biblical term used for angels. Viracocha had the “gift of

tongues” or languages. If the Biblical account is correct, this might indicate that he was there until some time after the confusion of languages at Babel.

During their stay in South America some of the viracochas probably also journeyed across the Pacific to Easter Island. Eventually the whole company but a couple returned east across the ocean.

Easter Island is known for its legendary Moai statues that were probably carved by these same people as these same monument builders in South America. Easter Island also has inscriptions written in a mysterious script that has never been deciphered that is very similar to that found in Mohendro Daro in Pakistan.



Robert Schoch’s wife made an interesting observation after watching David Talbott’s documentary “Symbols of An Alien Sky”. She noticed that the characters of the Easter Island inscriptions looked a lot like many of the pictographs found all around the world which Talbott and Anthony Peratt believe are massive plasma formations that occurred in the past.

**Catherine Ulissey:**  
The rongorongo characters look like the plasma petroglyphs

Peratt's Experiments	Peratt's Conceptuals	Peratt's Petroglyphs	Rongorongo

**Nazca Lines, Peru - - A Connection?**

Nazca Monkey	Nazca Spider	Nazca Man	Nazca Hands

Easter Island Rongorongo Details

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E. I. Petroglyph

We believe the rongorongo is a scientific text that predates the Bible by thousands of years and records a “plasma event” (probably a coronal mass ejection and/or solar proton event) orders of magnitude larger than anything seen in recorded history - - surpassing even the Carrington Event of 1859, which fried the telegraph lines of the time.

**A major solar outburst could end an ice age!**

Peratt believes in the ancient past that there were super auroras where there were far more charged particles entering the Earth's magnetosphere via the poles. Talbott believes this also but, in his view, he ties them into a different planetary alignment in the Earth's past.

Much of the iconography and pictographs such as the universal stick man with dots on either side has been replicated by Peratt in the laboratory in electrical plasma experiments. Most of the iconography and pictographs appear to date from the second millennium BC and even quite late into that time period. It may be a remnant effect of a global catastrophe in the middle of the second millennium BC (catastrophic end of the Middle Kingdom in Egypt) which will be discussed shortly.

In Central America we find the same legends of an individual who matches the same description as the South American Viracocha. Graham Hancock in "Fingerprints of the Gods" tells us the following about these legends:

After spending so long immersed in the traditions of Viracocha, the bearded god of the distant Andes, I was intrigued to discover that Quetzalcoatl, the principal deity of the ancient Mexican pantheon, was described in terms that were extremely familiar.

For example, one pre-Colombian myth collected in Mexico by the sixteenth-century Spanish chronicler Juan de Torquemada asserted that Quetzalcoatl was "a fair and ruddy complexioned man with a long beard". Another spoke of him as, "era Hombre blanco"; a large man, broad browed, with huge eyes, long hair, and a great, rounded beard – "la barba grande y redonda" Another still described him as

"a mysterious person...a white man with strong formation of body, broad forehead, large eyes, and a flowing beard. He was dressed in a long, white robe reaching to his feet. He condemned sacrifices, except of fruits and flowers, and was known as the god of peace ... When addressed on the subject of war he is reported to have stopped up his ears with his fingers."

According to a particularly striking Central American tradition, this "wise instructor... ":

"came from across the sea in a boat that moved by itself without paddles. He was a tall, bearded white man who taught people to use fire for cooking. He also built houses and showed couples that they could live together as husband and wife and since people often quarreled in those days, he taught them to live in peace"

The reader will recall that Viracocha, in his journeys through the Andes, went by several different aliases. Quetzalcoatl did this too. In some parts of Central America (notably among the Quiche Maya) he was called Gucumatz. Elsewhere, at Chichen Itza for example, he was known as Kukulcan. When both these words were translated into English, they turned out to mean exactly the same thing: "Plumed (or Feathered) Serpent". This, also, was the meaning of Quetzalcoatl.

There were other deities, among the Maya in particular, whose identities seemed to merge closely with those of Quetzalcoatl. One was Votan, a great civilizer, who was also described as pale-skinned, bearded and wearing a long robe. Scholars could offer no translation for his name but his principal symbol, like that of Quetzalcoatl, was a serpent. Another closely related figure was Izamana, the Mayan god of healing, who was a robed and bearded individual; his symbol, too, was the rattlesnake.

What emerged from all this, as the leading authorities agreed, was that the Mexican legends collected and passed on by Spanish chroniclers at the time of the conquest were often the confused and conflated products of extremely long oral traditions. Behind them all, however, it seemed that there must lie some solid historical reality. In the judgement of Sylvanus Griswold Morley, the doyen of Maya studies:



"The great god Kukulcan, or Feathered Serpent, was the Mayan counterpart of the Aztec Quetzalcoatl, the Mexican god of light, learning and culture. In the Maya pantheon he was regarded as having been the great organizer, the founder of cities, the former of laws and the teacher of the calendar. Indeed his attributes and life history are so human that it is not improbable that he may have been an actual historical character, some great lawgiver and organizer, the memory of whose benefactions lingered long after death, and whose personality was eventually deified."

All the legends stated unambiguously that Quetzalcoatl/Kukulcan/Gucumatz/Votan/Izamana had arrived in Central America from somewhere very far away (across the "Eastern Sea") and that amid great sadness he had eventually sailed off again in the direction whence he had come. The legends added that he had promised solemnly that he would return one day - a clear echo of Viracocha it would be almost perverse to ascribe to coincidence. In addition, it will be recalled that Viracocha's departure across the waves of the Pacific Ocean had been portrayed in the Andean traditions as a miraculous event. Quetzalcoatl's departure from Mexico also had a strange feel about it: he was said to have sailed away "on a raft of serpents"...

Quetzalcoatl/Kukulcan/Izamana was quite explicitly portrayed in many of the Mexican and Mayan accounts as having been accompanied by "attendants" or "assistants".

Certain myths set out in the Ancient Mayan religious texts known as the Books of Chilam Balam, for instance, reported that "the first inhabitants of Yucatan were the "People of the Serpent". They came from the east in boats across the water with their leader Itzamana, "Serpent of the East", a healer who could cure by laying on hands, and who revived the dead.

"Kukulcan," stated another tradition, "came with nineteen companions, two of whom were gods of fish, two others gods of agriculture, and a god of thunder ... They stayed ten years in Yucatan. Kukulcan made wise laws and then set sail and disappeared in the direction of the rising sun"...

Like some long-lost twin of Viracocha, the white and bearded Andean deity, Quetzalcoatl was depicted as having brought to Mexico all the skills and sciences necessary to create a civilized life, thus ushering in a golden age." He was believed, for example, to have introduced the knowledge of writing to Central America, to have invented the calendar, and to have been a master builder who taught the people the secrets of masonry and architecture.

He was the father of mathematics, metallurgy, and astronomy and was said to have "measured the earth". He also founded productive agriculture, and was reported to have discovered and introduced corn - literally the staff of life in these ancient lands. A great doctor and master of medicines, he was the patron of healers and diviners "and disclosed to the people the mysteries of the properties of plants". In addition, he was revered as a lawgiver, as a protector of craftsmen, and as a patron of all the arts.

As might be expected of such a, refined and cultured individual he forbade the grisly practice of human sacrifice during the period of his ascendancy in Mexico. After his departure the bloodspattered rituals were reintroduced with a vengeance. Nevertheless, even the Aztecs, the most vehement sacrificers ever to have existed in the long history of Central America, remembered "the time of Quetzalcoatl" with a kind of nostalgia. "He was a teacher," recalled one legend, "who taught that no living thing was to be harmed and that sacrifices were to be made not of human beings but of birds and butterflies."

Why did Quetzalcoatl go away? What went wrong?

Mexican legends provided answers to these questions. They said that the enlightened and benevolent rule of the Plumed Serpent had been brought to an end by Tezcatilpoca, a malevolent god whose name meant "Smoking Mirror" and whose cult demanded human sacrifice. It seemed that a near-cosmic struggle between the forces of light and darkness had taken place in Ancient Mexico, and that the forces of darkness had triumphed ...

The supposed stage for these events, now known as Tula, was not believed to be particularly old - not much more than 1000 years anyway - but the legends surrounding it linked it to an infinitely more distant epoch. In those times, outside history, it had been known as Tollan. All the traditions agreed that it had been at Tollan that Tezcatilpoca had vanquished Quetzalcoatl and forced him to quit Mexico...

Cortez and his men were few, the Cholulans [of Mexico] were many. When they marched into town, however, the Spaniards had one major advantage: bearded and pale-skinned, dressed in shining armour, they looked like the fulfilment of a prophecy - had it not always been promised that Quetzalcoatl, the Plumed Serpent, would return "from across the Eastern Sea" with his band of followers?"

Because of this expectation, the naive and trusting Cholulans permitted the conquistadores to climb the steps of the ziggurat and enter the great courtyard of the temple. There troupes of gaily bedecked dancing girls greeted them, singing and playing on instruments, while stewards moved back and forth with heaped platters of bread and delicate cooked meats.

One of the Spanish chroniclers, an eyewitness to the events that followed, reported that adoring townsfolk of all ranks "unarmed, with eager and happy faces, crowded in to hear what the white men would say". Realizing from this incredible reception that their intentions were not suspected, the Spaniards closed and guarded all the entrances, drew their weapons of steel and murdered their hosts. Six thousand died in this horrible massacre which matched, in its savagery, the most bloodstained rituals of the Aztecs: "Those of Cholula were caught unawares. With neither arrows nor shields did they meet the Spaniards. Just so they were slain without warning. They were killed by pure treachery."

It was ironic, I thought, that the conquistadores in both Peru and Mexico should have benefited in the same way from local legends that prophesied the return of a pale, bearded god. If that god was indeed a deified human, as seemed likely, he must have been a person of high civilization and exemplary character - or more probably two different people from the same background, one working in Mexico and providing the model for Quetzalcoatl, the other in Peru being the model for Viracocha. The superficial resemblance that the Spanish bore to those earlier fair-skinned foreigners opened many doors that would otherwise certainly have been closed. Unlike their wise and benevolent predecessors, however, Pizarro in the Andes and Cortez in Central America were ravening wolves. They ate up the lands and the peoples and the cultures they had seized upon. They destroyed almost everything (Fingerprints of the Gods, p. 110-120).

The legends of Quetzalcoatl show him originally as a man of peace and a great civiliser yet Quetzalcoatl was morphed into a Plumed or Feathered Serpent as time went on and human sacrifices were made to Quetzalcoatl.

Immanuel Velikovsky in his book "Worlds in Collision" made the extraordinary claim that the plagues of the book of Exodus were caused by the passing of a massive heavenly body based on ancient writings all over the world including the Americas. The bold claim repeated in legends all over the world is that this great heavenly body was the planet Venus, a relatively new-born planet. The Mayas tell of a time of a great cataclysm when the earth quaked and the sun's motion was interrupted, the waters turned to blood. In Ancient Mexican records we read:

The sun refused to show itself and during the four days the world was deprived of light. Then a great star...appeared, it was given the name Quetzal-cohuatl...the sky to show its anger...caused to perish a great number of people who died of famine and pestilence. (Worlds in Collision, p. 158-159)

Quetzal-cohuatl is the well-known name for the planet Venus. The word Quetzalcoatl means Feathered Serpent. This comet with its tail, at times, had a serpent or dragon-like appearance. The Mexican Indians relate that Venus smoked. "The star that smoked...was Sitlae choloha, which the Spaniards call Venus."



In the Indian sacred Vedas it is said that the star Venus looks like fire with smoke.

Velikovsky writes the following about what he believes was Venus' second passing at the time that the Sun stood still and great stones (meteorites) fell from heaven just over 50 years later:

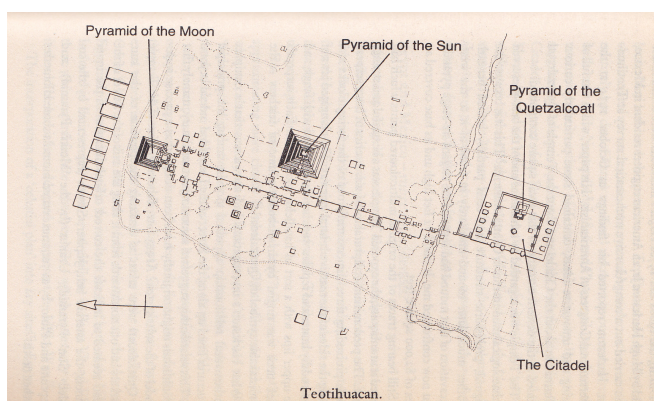
The works of Fernando de Alva Ixtlilxochitl, the early Mexican scholar (c. 1568-1648) who was able to read old Mexican texts, preserve the ancient tradition according to which the multiple of fifty-two-year periods played an important role in the recurrence of world catastrophes. He asserts also that only fifty-two years elapsed between two great catastrophes, each of which terminated a world age.

They watched for the appearance of the planet Venus, and when, on the feared day, no catastrophe occurred, the people of Maya rejoiced. They brought human sacrifices and offered the hearts of prisoners whose chests they opened with knives of flint. On that night, when the fifty-two-year period ended, a great bonfire announced to the fearful crowds that a new period of grace had been granted and a new Venus cycle started.

The period of fifty-two years, regarded by the ancient Mexicans as the interval between two world catastrophes, was definitely related by them to the planet Venus; and this period of Venus was observed by both the Mayas and the Aztecs. The old Mexican custom of sacrificing to the Morning Star survived in human sacrifices by the Skidi Pawnee of Nebraska in years when the Morning Star 'appeared especially bright, or in years when there was a comet in the sky.' What had Venus to do with the catastrophes that brought the world to the brink of destruction? (Worlds in Collision, p.155)

The legendary great, white peaceful civiliser of the Americas, Quetzalcoatl, was transformed in the minds of the ancient Mexicans into the planet Venus which, according to Velikovsky, was born as a great comet that threatened the earth and appeared like a dragon in the sky. This feared body was associated with a global catastrophe at the time of the Exodus. Quetzalcoatl was transformed from the peaceful civiliser into a destructive god in the heavens that was immensely feared and had to be placated by human sacrifice. Graham Hancock tells us the following about the similarities of the pyramids at Teotihuacan and at Giza in Egypt:

Just as at Giza, three principal pyramids had been built at Teotihuacan: the Pyramid/Temple of Quetzalcoatl, the Pyramid of the Sun and the Pyramid of the Moon. Just as at Giza, the site plan was not symmetrical, as one might have expected, but involved two structures in direct alignment with each other while the third appeared to have been deliberately offset to one side.



Finally, at Giza, the summits of the Great Pyramid and the Pyramid of Cephren were level, even though the former was a taller building than the latter. Likewise, at Teotihuacan, the summits of the Pyramids of the Sun and the Moon were level even though the former was taller. The reason was the same in both cases: the Great Pyramid was built on lower ground than the Pyramid of Cephren, and the Pyramid of the Sun on lower ground than the Pyramid of the Moon." Could all this be coincidence? Was it not more logical to conclude that there was an ancient connection between Mexico and Egypt?...

The orthodox view is that Archimedes in the third century BC was the first man to calculate pi correctly at 3.14. Scholars do not accept that any of the mathematicians of the New World ever



got anywhere near pi before the arrival of the Europeans in the sixteenth century. It is therefore disorienting to discover that the Great Pyramid at Giza (built more than 2000 years before the birth of Archimedes) and the Pyramid of the Sun at Teotihuacan, which vastly predates the conquest, both incorporate the value of pi. They do so, moreover, in much the same way, and in a manner which leaves no doubt that the ancient builders on both sides of the Atlantic were thoroughly conversant with this transcendental number...Now let us consider the Pyramid of the Sun at Teotihuacan. The angle of its sides is 43.5 degrees (as opposed to 52° in the case of the Great Pyramid). The Mexican monument has the gentler slope because the perimeter of its base, at 2932.8 feet, is not much smaller than that of its Egyptian counterpart while its summit is considerably lower (approximately 233.5 feet prior to Bartres's 'restoration').

The 2pi formula that worked at the Great Pyramid does not work with these measurements. A 4pi formula does. Thus if we take the height of the Pyramid of the Sun (233.5 feet) and multiply it by 4pi we once again obtain a very accurate read-out of the perimeter: 233.5 feet x 4 x 3.14 = 2932.76 feet (a discrepancy of less than half an inch from the true figure of 2932.8 feet). This, surely, can no more be a coincidence than the pi relationship extrapolated from the dimensions of the Egyptian monument (Fingerprints of the Gods, p. 182-183, 192-193).

Colin Wilson in his book "From Atlantis to the Sphinx" writes the following about Teotihuacan:

The city with the buried pyramids was the ancient capital of Teotihuacan. The local Indians knew nothing about its origin – they said that it had already been there when the Aztecs came... The faces portrayed on pottery and masks had an incredible variety: Caucasian, Greek, Chinese, Japanese and Negro (A later observer also noted that there were Mongoloid faces and every kind of white person, particularly Semitic types). It seemed that, at some point in history, the land of the Aztecs and the Mayas had been a cosmopolitan centre like Constantinople" (From Atlantis to the Sphinx, p. 154-155).



Prior to the Aztecs were the Olmecs. Regarding the Olmecs Hancock writes:

The Olmecs, after all, had built a significant civilisation which had carried out prodigious engineering works and had the capacity to carve and manipulate vast blocks of stone (several of the huge monolithic heads weighing 20 tons or more had been moved as far as 60 miles overland after being quarried in the Tuxtla mountains)...Strangely, despite the best efforts of archaeologists, not a single, solitary sign of anything that could be described as the "developmental phase" of Olmec society had been unearthed anywhere in Mexico (or, for that matter, anywhere in the New World). These people, whose characteristic form of artistic expression was the carving of huge negroid heads, appeared to have come from nowhere...

It was with such thoughts that I continued my slow walk among the strange and wonderful monuments of La Venta. They whispered of ancient secrets - the secret of the man in the machine ... the secret of the negro heads ... and, last but not least, the secret of a legend brought to life. For it seemed that flesh might indeed have been put on the mythical bones of Quetzalcoatl when I found that several of the La Venta sculptures contained realistic likenesses

not only of negroes but of tall, thin-featured, long-nosed, apparently Caucasian men with straight hair and full beards, wearing flowing robes ...

Matthew Stirling, the American archaeologist who excavated La Venta in the 1940's, made a number of spectacular discoveries there. The most spectacular of all was the Stele of the Bearded Man...

Stirling and his team worked for two days to free the great rock. When exposed it proved to be an imposing stele fourteen feet high, seven feet wide and almost three feet thick.

The carvings showed an encounter between two tall men, both dressed in elaborate robes and wearing elegant shoes with turned-up toes. Either erosion or deliberate mutilation (quite commonly practised on Olmec monuments) had resulted in the complete defacement of one of the figures. The other was intact.

It so obviously depicted a Caucasian male with a high-bridged nose and a long, flowing beard that the bemused archaeologists promptly christened it 'Uncle Sam'...

29, 30, 31, 32 Found in the same ancient archaeological strata with the strongly negroid Olmec heads, are images like these (from La Venta and Monte Alban) that appear to depict bearded Caucasian figures. The Central American deity Quetzalcoatl (like Viracocha in the Andes) was reported to have been tall, pale-skinned and bearded.



The same went for two other Caucasian figures I was able to identify among the surviving monuments from La Venta. One was carved in low relief on a heavy and roughly circular slab of stone about three feet in diameter. Dressed in what looked like tight-fitting leggings, his features were those of an Anglo-Saxon. He had a full pointed beard and wore a curious floppy cap on his head. In his left hand he extended a flag, or perhaps a weapon of some kind. His right hand, which he held across the middle of his chest, appeared to be empty. Around his slim waist was tied a flamboyant sash. The other Caucasian figure, this time carved on the side of a narrow pillar, was similarly bearded and attired.

Who were these conspicuous strangers? What were they doing in Central America? When did they come? And what relationship did they have with those other strangers who had settled in this steamy rubber jungle - the ones who had provided the models for the great negro heads?

The secular explanation that Graham Hancock offers (Fingerprints of the Gods, p. 227) for the great flood catastrophe in the legends of the Americas and elsewhere in the world is the rapid melting of glaciers at the end of the last Ice Age causing enormous flooding.

At some point after this flood catastrophe Viracocha and Quetzalcoatl / Votan / Kukulcan and his followers came to the Americas from the east. Among his company may well have been some negroes who were the models for the massive Olmec head stones. They later departed but little of their high technology survived.

The same situation occurs in Egypt. A highly technological people comes in after the great ancient wet period (or soon after the great Biblical Flood) and builds the Giza pyramids and probably the Osireion and only some of its high technology survives with most being lost. What happened to cause this break in technology?

Even though they claim a far earlier date for the Sphinx, Bauval and Hancock don't deny that the pyramids were built no earlier than shortly prior to dynastic Egypt yet the high technology used to construct the Giza pyramids is so soon lost when dynastic Egypt rises within the next few centuries. What happened to cause this loss of technology? And where did it come from in the first place.

Graham Hancock proposes the tradition of Atlantis that was wiped out at the time of a great flood such as the rapid melting of glaciers may be the answer to where it came from.

The Book of Genesis in the Bible offers another scenario. One writer who explores this possibility in great depth is Stephen Collins in his booklet "As it was in the Days of Noah" which I now quote from:

Many "ancient mysteries" which have long baffled mankind can be explained in the historical accounts of the Bible...

The prophecy of Jesus Christ to be examined is found in Matthew 24:37, and is part of Jesus' prophecy concerning the times which will indicate that his second coming is near. It states:

**"But as the days of Noah were, so shall also the coming of the Son of man be..."**

Since these similarities are given as unique identifiers of the time of Jesus Christ's return, it is apparent that Jesus is telling us there will be unique parallels between Noah's pre-flood period and the latter days...There are several biblical comments about pre-flood society. The most familiar is in Genesis 6:1-13, which states:

**"...men began to multiply on the face of the earth...And God saw that the wickedness of man was great...that every imagination of the thoughts of his heart was only evil continually...But Noah found grace in the eyes of the Lord...and Noah walked with God. The earth also was corrupt...and the earth was filled with violence. And God looked upon the earth, and...it was corrupt; for all flesh had corrupted his way upon the earth." (Emphasis added.)**

The record that "men began to multiply on the face of the earth" indicates Noah's generation was experiencing a global population explosion... **An explosive increase in the human population is the first factor which our generation has in common with Noah's pre-flood generation...**

Like Noah's generation, our generation is plagued by violence, crime and wickedness. Grisly wars have been fought with advanced weapons that have greatly escalated the violence of warfare. Civilian society (particularly in urban areas) is becoming increasingly violent with murders, drug wars and senseless violence becoming commonplace...

there is considerable evidence that there was, indeed; a "high-tech" society in earth's distant past... We will now examine some biblical evidence that an ancient "high-tech" society existed on our planet.

Genesis 4:16-24 provides us with a genealogical history of a few of Adam's descendants through Cain. Verses 19-22 makes some important statements regarding three sons of a man named Lamech. These three sons were named Jabal, Jubal, and Tubalcain. This text provides the following information about them:

"Jabal... was the father of such as dwell in tents, and of such as have cattle...Jubal...was the father of all such as handle the harp and organ. And...Tubalcain, an instructor of every craftsman in bronze and iron..." (KJV with marginal references)

The above descriptions, however brief, reveal much about pre-flood society. We are told that Jabal developed the art of animal domestication. This implies that he was a cattle-breeder, with at least some understanding of genetics to breed livestock for commercial purposes. That Jabal is called the "father" of those who breed cattle indicates that he was the first of many cattle



breeders...We are then told that Jubal was the "father" of those who used musical instruments. The fact that some men had the time to devote their energies to the development and use of musical instruments shows that there was sufficient "division of labor" in society so that it was not necessary for everyone to devote himself to survival activities...

Tubalcain is mentioned as the "father" of craftsmen in bronze and iron. The Hebrew word translated "iron" is "barrel," the same word translated as "iron" in many Old Testament books describing more recent time periods<sup>2</sup>. The Bible clearly states that mankind had metallurgical skills long before the Flood. It also indicates that there was no separate pre-flood "bronze age" or "iron age," but that craftsmanship in copper and iron ores occurred simultaneously! Tubalcain was not the only person skilled in metalworking, but was "an instructor" of other craftsmen. In modern terms, he operated a metallurgical "tech-school"...

**Visualize what technological achievements could now be on the earth if Galileo, Da Vinci, Copernicus, Newton, Edison, Einstein, Van Braun, and others could have worked together for centuries!** If they had pre-flood lifespans, they would have been able to pool their knowledge and develop joint inventions over centuries! If, in addition to shared longevity, these scientists, scholars and thinkers had a common language as well, the growth in knowledge and scientific applications would develop at a logarithmic pace!

The concept of individuals living many hundreds of years in pre-flood society seems unbelievable to many. Yet the Bible indicates a major factor was present in the pre-flood world which would have significantly slowed the aging process. The Bible states that God created a very large body of water in the earth's upper atmosphere in addition to dividing the waters that were already on the earth's surface in such a way that dry land could appear. This massive, insulating layer no longer exists, but its creation is described in Genesis 1:6-8:

"And God said, Let there be a firmament [the expanse of the sky] in the midst of the waters, and let it separate the waters [below] from the waters [above]. And God made the firmament [the expanse] and separated the waters which were under the expanse from the waters which were above the expanse." (The Amplified Bible)...

Science has determined that there is a relationship between the aging process and exposure to the sun's ultraviolet radiation. While this relationship has not yet been quantified, the aging effects of the sun's radiation would have had much less effect on pre-flood mankind because they were shielded by this upper atmosphere layer of water. This upper-atmosphere layer of water contained so much water that it took "40 days and 40 nights" for it to fall to the earth in the form of torrential rain as "the windows of heaven were opened" during the Flood (Genesis 7:11-12). With the upper-atmosphere water layer absent in the post-flood world, mankind was exposed to far more of the sun's radiation, and human lifespans were quickly reduced...

A trilogy of books by Dr. Barry Fell (Bronze Age America, America B.C. and Saga America) have shown that ancient mankind had a well developed system of international commerce, utilising ocean-going ships to transport both people and products to other continents. They demonstrate that the Phoenician/Hebrews, Carthaginians and others had extensive knowledge of the New World, leaving their inscriptions, temples, coins, and artifacts all over North America. It is apparent that trans-oceanic commerce was fairly common from at least 1700 BC until the much more recent "Dark Ages," with North Africans, Romans, Jews, Norsemen, Arabs, Chinese and others also being present in North America.

Indeed, it can be seen that the period of ignorance about the New World which occurred during the Dark Ages was the exception in world history, not the rule! So much knowledge known to the ancients was lost in the Dark Ages that it created the illusion that mankind was discovering new knowledge when it emerged from the Dark Ages... In recent centuries, the "Spanish Armada" of 1588 has assumed legendary status as a great naval fleet, yet it was less than one tenth the size of the Carthaginian and Roman naval fleets, according to ancient records...

Let us now examine some remarkable "ancient mysteries" to determine just how advanced very ancient civilisations were. Erich von Daniken documented a number of these "ancient mysteries" in his books *Chariots of the Gods* and *In Search of Ancient Gods*. He lists the following "mysteries" from the ancient world in *Chariots of the Gods*.

"In Lebanon there are glasslike bits of rock, called tektites, in which radioactive aluminum isotopes have been discovered.

"In Egypt and Iraq there were finds of cut crystal lenses which today can only be made using cesium oxide, in other words an oxide that has to be produced by electrochemical processes.

"In Helwan there is a piece of cloth, a fabric so fine that today it could be woven only in a special factory with great technical know-how and experience.

"Electric dry batteries, which work on the galvanic principle, are on display in the Baghdad Museum.

"In the same place the visitor can see electric elements with copper electrodes and an unknown electrolyte...

"Ornaments of smelted platinum were found on the Peruvian plateau.

"Parts of a belt made of aluminum lay in a grave at Yungien, China.

"At Delhi there is an ancient pillar made of iron that is not destroyed by phosphorus, sulphur, or the effects of the weather" ...

In light of the above, consider that the Bible stated in Genesis 4:22 that pre-flood mankind was involved with metalworking in copper and iron ores. Since some of the above ancient artifacts require factories with "high-tech" electrical and chemical capacities (with chemical pollution as a by-product), we find a logical context for the assertion of Genesis 6:11-12 that the earth itself became "corrupt" (polluted) in pre-flood society. Do Daniken's "ancient mysteries" date from the biblical pre-flood world?

Let us now combine the prophecies of Daniel 12:4 and Matthew 24:37. Daniel's prophecy stated that "at the time of the end...knowledge shall be increased." An examination of the Hebrew word "rabah," which is translated into the English word "increased" is most instructive. This word literally means: "to be many, multiplied." This same word "rabah" is used in Genesis 7:16 to describe how the waters "increased" on the earth to create the Deluge of Noah's time.

**Clearly, Daniel's prophecy indicates that mankind's knowledge will increase exponentially, not incrementally, in the end time...**

Ancient "model airplanes" have been found in Egypt and Colombia, with expert examinations confirming the airworthiness of their designs... An ancient 11 and 1/2 pound skull made out of pure rock-crystal was found in Mayan ruins in British Honduras. Von Daniken comments that "nowhere on the skull is there a clue showing that a tool known to us was used!"...



The factual existence of ancient aircraft models (including one with "stealth" technology) and the apparent existence of a bullet wound in an ancient bison skull indicates that Genesis 6:11's comment that pre-flood society was "filled with violence" meant a lot more than bludgeons and knives were being used as weapons...

In Romans 1:18 Paul declared that some people will "hold back the truth in unrighteousness," accurately foretelling that mankind would invent a mental deception (evolutionary theory)

about how the creation came into existence without a Creator in order to blind themselves to God's reality...

The existence of an ancient "high-tech" society is quite compatible with the Bible. Therefore, while this author disagrees with Von Daniken's theory about the origin of an ancient "high-tech" society, he nonetheless admires Von Daniken for his intellectual honesty in publicising the evidence of ancient "high-tech" civilisations, and proposing a theory to explain it.

**All facts indicating that ancient mankind also had a "high-tech" society demonstrate that we have found another parallel between modern society and the society of ancient Noah...**

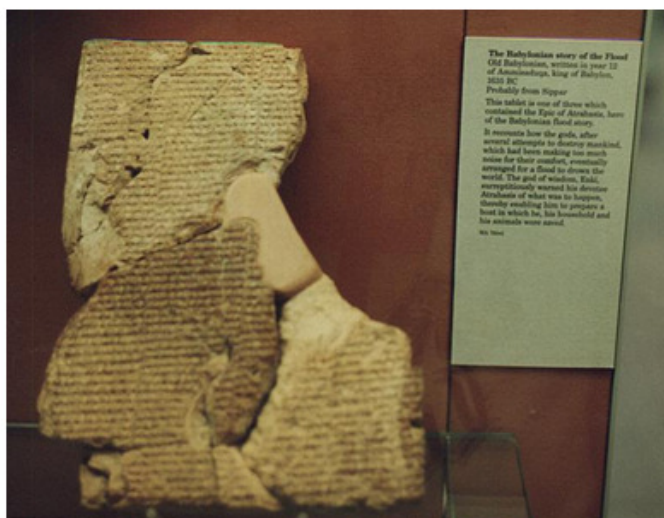
A question needs to be asked. If this ancient "high-tech" society existed, why didn't it leave more artifacts? The answer is found in the Deluge itself. The Bible states that the Flood was a worldwide event...

The Bible is very clear that a worldwide flood occurred, leaving no leeway for a "regional flood" interpretation. During a worldwide flood there would be awesome tidal waves and destructive wave action. It is likely that changes in the weight of waters on the earth's tectonic plates triggered great seismic activity (earthquakes, volcanoes, and both upthrusts and downthrusts of the earth's surface).

Widespread seismic activity and global wave action would scour the surface of the earth, destroying virtually everything that mankind had built. Modern man knows what destruction a tsunami (tidal wave) can do to a coastal city in mere seconds or minutes! Visualize the destruction of multiple tsunamis, and surging wave actions which went on for months!

The existence of sea-life fossils and sedimentary layers on mountains indicate the reality of ancient worldwide floods... If the Flood were regional, Noah would not have needed an ark; God could simply have told him to migrate to higher ground. Also, God's entire purpose in the Deluge was to destroy all life on the planet's surface; a regional disaster would not have accomplished that goal...

## The Epic of Gilgamesh and the Epic of Atrahasis





Since it would have taken years to build and provision such a vessel, Noah had much time to collect and preserve whatever pre-flood items he wished, and to stockpile whatever he needed to start life anew after the Flood. Such items would include clothing (sturdy fabrics and an aluminum belt?), works of art and/or examples of current technology (a rock-crystal head and ornaments of platinum?), toys for eventual grandchildren (model airplanes?), and certainly portable sources of heat and light (batteries?).

The ancient "high-tech" artifacts documented by Von Daniken likely were all part of the Ark's cargo. That is why they survived in such undamaged condition. After the Flood the Bible tells us that mankind was scattered abroad on the earth after their languages were confused (Genesis 11:8). Undoubtedly the contents of the Ark were coveted by all the nascent nations of mankind, and each carried with them a portion of the Ark's contents as they scattered in all directions. This accounts for the wide distribution of ancient "high-tech" items across the earth's surface. Many "high-tech" artifacts would have become prized national possessions which were, as mankind lost its pre-flood skills, regarded as mystical or religious objects from a time when "gods" ruled the earth.

Surely, many such artifacts were destroyed or lost during the millennia since the Deluge, but some have survived to be ancient "mysteries" in modern Museums. Scarcely anything on the surface of pre-flood society would have survived the ravages of the worldwide Flood and destruction. Only in the highest regions (the last areas to be flooded would receive the least wave-action) would some well constructed items survive. It is in the high altitudes of the Andean Plateau that von Daniken's concrete ancient airfield, airfield markings and radar dish are located...

If the idea of manned flight in ancient history still sounds impossible, consider the following. Von Daniken cites the shocking result of a translation of an ancient manuscript by the International Academy of Sanskrit Research at Mysore, India. The ancient text, attributed to a "Maharashi Bharadwaja, a seer in the remote past," describes "the secret of making planes invisible, of the uncanny possibility of hearing conversations inside enemy planes and taking them down"<sup>57</sup> A facsimile of the Sanskrit manuscript (with translation; appears in von Daniken's book, *In Search of Ancient Gods*. The "manuscript from the pre-historic past" is entitled *Aeronautics*, by Maharashi Bharadwaja. Its translation includes the following:

**"In this book are described...the art of manufacturing various types of Aeroplanes of smooth and comfortable travel in the sky...That which can travel in the sky, from place to place, land to land, or globe to globe..."**

**"The secret of constructing aeroplanes, which will not break...which cannot catch fire, and cannot be destroyed. The secret of making planes motionless. The secret of making planes invisible. The secret of learning conversations and other sounds in enemy planes. The secret of receiving photographs of the interior of enemy planes'."**<sup>58</sup>

This 'prehistoric' document discusses such 'high-tech' subjects as constructing aircraft of fire-retardant material, making aircraft 'hover' in place (like helicopters or the 'Harrier' fighter), stealth technology, air-to-air surveillance and in-flight image transmission...



Remember the ancient Sanskrit document about air travel which mentioned the existence of "aeroplanes...which can travel...globe to globe." The word "globe" shows that the spherical nature of the planets was known to very ancient mankind, and this ancient document asserts that manned vehicles existed in ancient times which could fly between the "globes" (i.e. "planets")...

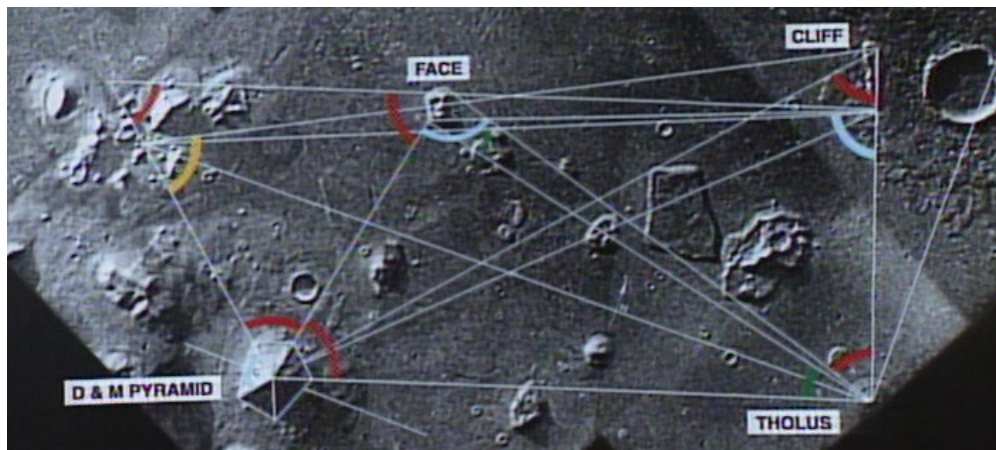
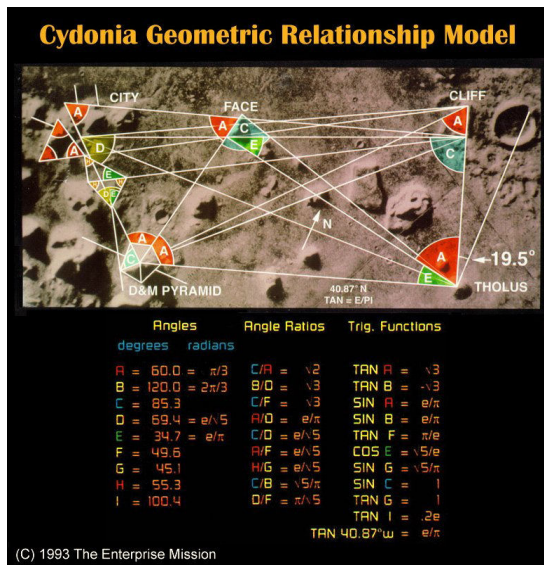
In the 1980's a new development in the heavens was discovered which shocked modern mankind! This development has been the subject of media coverage in both the established

media and the non-establishment tabloids. This development was the discovery of a gigantic sculpted human face, encased in a helmet. This sculpted face was not discovered on the earth, but on Mars!...

These "intriguing features" on Mars were described as:

"...symmetrically formed mounds...seem to resemble the Pyramids in Egypt. Their near-perfect proportions have roused the curiosity of many scientists. But even more curious than the Pyramids is a Sphinx-like formation ten miles away, the face on Mars...The symmetry of the face, the detail of its features, argue that its existence is not simply a caprice of nature...

**The most likely source of the civilisation that sculpted this face on Mars is the pre-flood world of Noah.** However, due to evolutionary indoctrination, many will attempt to find an evolutionary "solution" to the problem of a human face in outer space. Therefore, evolutionists generally speculate that advanced outer space aliens performed these (and all other) ancient "high-tech" projects...



The Bible does not record that God put any limitations on Noah regarding what he could bring with him into the post-flood world. By the time the Flood arrived, the Ark was probably filled with pre-flood supplies, artifacts, tools, etc...Perhaps Noah's family also brought books, tools and technical manuals on the ark with them. Even if Noah didn't bring or want them on the Ark, his family may have brought them on board to preserve critical information for their post-flood lives.

Immediately after the Flood, Noah's sons and daughters-in-law began having children which became the forebears of all modern races and nations (Genesis 10). Genesis 11:1 confirms that everyone spoke the same language, so knowledge could be pooled just as easily as in pre-flood days. While mankind's lifespans began a steady decline after the Flood, the immediate post-

flood generations still lived for centuries, allowing knowledge to be pooled among many generations as well.

Genesis 11:4 shows that mankind was determined to "stick together," pool their efforts, and not be "spread abroad upon the face of the earth." Genesis 11:3-4 also shows that mankind began a major urbanization/construction project soon after the Flood. Post-flood mankind had no intention of being "hunter-gatherers!" Indeed, they had eight eye-witnesses of the pre-flood society (Noah's family), and while Genesis 9:26 implies that Shem shared Noah's zeal for God, there is no hint that the others family members cared for Noah's values.

They could easily have told succeeding generations how things were "in the good old days" before the Flood: relating the many luxuries and conveniences that were available to pre-flood society. Many of the artifacts which Noah placed on the Ark would have been clear evidence that post-flood society was frightfully "backward" compared to pre-flood times. There may have been books, photos, tools, technical manuals, etc. on the ark that facilitated the speedy redevelopment of industrial skills in post-flood society. A single pre-flood "encyclopedia set" would give vast technical instructions on every subject known to pre-flood mankind!...

Having one language, examples of pre-flood technology to analyse, and survivors of pre-flood society to instruct them, it wouldn't have taken long to begin rebuilding aspects of the pre-flood world. Noah's family may have included persons who already had specialised pre-flood knowledge. Noah's sons had each lived for 100 years in pre-flood society, and we do not know what professions they had prior to the Flood. Their wives may also have had specialised skills. Noah and his wife had 600 years of pre-flood experience! If Noah's family included persons whose pre-flood skills were that of a chemist, an aeronautical engineer, a metallurgist, or a physicist, it wouldn't take long to teach these skills to the newly-maturing humans...

Genesis 11:4 records that mankind had two post-flood projects: (A) to build a city, and (B) to construct a tower (since called "the tower of Babel"). The "tower of Babel" project was so advanced that God observed in Genesis 11:6-8:

**"...this they have begun to do: and now nothing will be restrained from them, which they have imagined to do...**Let us go down, and there confuse their language, that they may not understand one another's speech. So the Lord scattered them abroad from thence upon the face of all the earth..." (Emphasis added.)

What was the "tower" project of post-flood mankind? Genesis 11:4 offers this clue:

"And they [post-flood mankind] said, Go to, let us build a city and a tower, **whose top may reach unto heaven.**" (Emphasis added.)

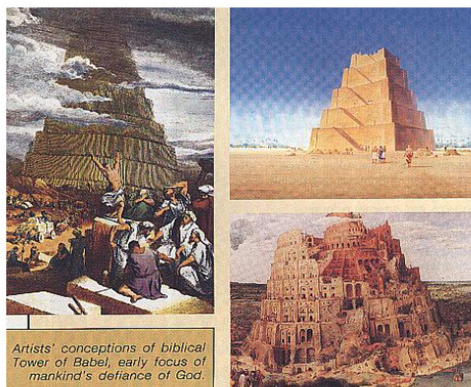
The standard interpretation of this verse is that mankind attempted to make bricks "out of slime and mortar," and tried to build a massive "skyscraper" which would reach into the clouds ("toward heaven"). However, there is a major problem with this. Unless they were reinforcing this building with steel girders, this brick building would collapse of its own weight before it got too many stories high. Also, God looked at this "tower" project, and was so impressed with their accomplishment that he said "this they begin to do: and now nothing will be restrained from them, which they have imagined to do."

Would the construction of a mudbrick building so impress God that he would essentially say: "if they can do this already, then they will be able to implement even their wildest imaginations." Of course not! No brick building would be that impressive to God.

The standard interpretation of this event is that God stopped the project because mankind's vanity was the motivation for this project. However, the Bible account says nothing about God stopping the tower project because of their vanity. God stopped the project because mankind's technical skills were advancing far too fast for his allotted timetable for mankind! They were developing technologies which would enable them to implement whatever they imagined, and God intervened to stop it.



## The Tower of Babel



## Ancient Sumerian text - Enmerkar and the Lord of Aratta



"Once upon a time...  
the whole universe, the  
people in unison, to Enlil  
**IN ONE TONGUE** gave  
praise."

Is God against progress? Of course not. However, he has certain divine timetables for mankind's level of knowledge... Had God allowed this to continue, mankind would have had a civilisation paralleling the pre-flood world soon after the Flood! Since God's plan allowed for such a parallel civilisation to exist only in "the latter days," he had to intervene and "nip in the bud" mankind's technological development...

The fact that mankind was able to achieve this state of affairs soon after the Flood strongly argues that they had access to pre-flood, technological secrets that had survived via the Ark. They all still spoke the same pre-flood language as well so knowledge could be shared easily. God decided the best way to stop the post-flood "knowledge explosion" was to make them unable to understand each other's words or writing...

When God changed the languages, he apparently changed everyone's language. Not only could people no longer understand each other, but also no one could understand the pre-flood language! By doing so, God "cut off" all nations from information contained in pre-flood documents. The precious pre-flood documents now became useless except for kindling. While mankind was still familiar with pre-flood accomplishments, its access to pre-flood technical knowledge was lost. With the chaos that immediately set in, the "tower project" was abandoned and mankind scattered around the world, dividing into their respective language groups (from these groups, our modern nations and languages have developed)...

Also, virtually all "high-tech" artifacts would have been destroyed in the biblical Flood, obliterated by either wave actions or seismic activity. That is why the undamaged examples of ancient "high-tech" items likely survived the Flood in Noah's Ark! Also, even in post-flood sites, the lack of bronze and iron objects does not mean that societies did not possess them. Simple common sense tells us that stone artifacts have far greater resistance to weathering than do metal objects. Long after metallic objects had rusted away to nothing, stone objects and artifacts would remain.

Graham Hancock in "Fingerprints of the Gods" gives evidence that the story of the Tower of Babel was also known to the people of Central America:

Diego de Duran, a conscientious and courageous collector of indigenous traditions, was yet another Franciscan who fought to recover the lost knowledge of the past. He visited Cholula in AD 1585, a time of rapid and catastrophic change. There he interviewed a venerated elder of the town, said to have been more than one hundred years old, who told him this story about the making of the great ziggurat:

"In the beginning, before the light of the sun had been created, this place, Cholula, was in obscurity and darkness; all was a plain, without hill or elevation, encircled in every part by water, without tree or created thing. Immediately after the light and the sun arose in the east there appeared gigantic men of deformed stature who possessed the land. Enamoured of the

light and beauty of the sun they determined to build a tower so high that its summit should reach the sky. Having collected materials for the purpose they found a very adhesive clay and bitumen with which they speedily commenced to build the tower ... And having reared it to the greatest possible altitude, so that it reached the sky, the Lord of the Heavens, enraged, said to the inhabitants of the sky, 'Have you observed how they of the earth have built a high and haughty tower to mount hither, being enamoured of the light of the sun and his beauty? Come and confound them, because it is not right that they of the earth, living in the flesh, should mingle with us.' Immediately the inhabitants of the sky sallied forth like flashes of lightning; they destroyed the edifice and divided and scattered its builders to all parts of the earth"...

The Central American and Middle Eastern tales were obviously closely related. Indeed, the similarities were unmissable, but there were also differences far too significant to be ignored. Of course, the similarities could be due to unrecorded pre-Colombian contacts between the cultures of the Middle East and the New World, but there was one way to explain the similarities and the differences in a single theory. Suppose that the two versions of the legend had evolved separately for several thousands of years, but prior to that both had descended from the same remotely ancient ancestor? (Fingerprints of the Gods, p. 122-123).

Alexander Hislop in work "The Two Babylons" traces the roots of much of the ancient trinities in the pagan religions of the world back to the worship of Nimrod and his wife Semiramis. Nimrod, a descendant of the black forefather Ham, was said by his fair-skinned widow Semiramis, after Nimrod was killed, to have been reborn through their fair-skinned son, Tammuz.



This story is repeated in Egypt where Seth (most likely, the biblical Shem) killed Osiris and cut him up into pieces. His widow, Isis, is said to have recovered his body and had the child Horus who Isis claimed was the reborn Osiris and hence we have the origin of the mother and child worship in Egypt. Commenting on this and describing Osiris' racial appearance Hislop writes:

The Babylonian divinity was also represented very frequently in Egypt in the very same way as in the land of his nativity--i.e., as a child in his mother's arms. This was the way in which Osiris, "the son, the husband of his mother," was often exhibited, and what we learn of this god, equally as in the case of Khons, shows that in his original he was none other than Nimrod...Osiris, in like manner, the child of the Egyptian Madonna, was equally celebrated as "the strong chief of the buildings." This strong chief of the buildings was originally worshipped in Egypt with every physical characteristic of Nimrod.

I have already noticed the fact that Nimrod, as the son of Cush, was a Negro. Now, there was a tradition in Egypt, recorded by Plutarch, that "Osiris was black," which, in a land where the general complexion was dusky, must have implied something more than ordinary in its darkness. Plutarch also states that Horus, the son of Osiris, "was of a fair complexion," and it was in this way, for the most part, that Osiris was represented. But we have unequivocal evidence that Osiris, the son and husband of the great goddess-queen of Egypt, was also represented as a veritable Negro.

Nimrod's uncle, Mizraim, was the founder of Egypt and he was likely involved in the great worldwide survey that took place in his time. It is likely that the Giza pyramids were a part of this worldwide survey involving many megalithic structures and, most likely, their focal point.



Mizraim would be one of the leading contenders as the main builder of the Giza pyramids. Generally Caucasian peoples have been the dominant inventors and scientists in history so

either Shem, Peleg or someone else in their line of descendants might have been the main architect of the Giza pyramids. At some point in predynastic Egyptian history Nimrod had great influence in Egypt and either he or some of his followers may have reshaped the Sphinx in his image.

It is quite likely that the Sphinx bears the re-carved image of Osiris, who as Plutarch notes, was black in appearance.

Those with a religious background will try to understand the ancient mysteries from a biblical point of view. I'm admittedly one of those but I have tried to be balanced and present both secular and biblical viewpoints alongside of each other and let the reader decide.

I'd like to quote now from an interesting article that presents the view of a religious writer looking at the question from a biblical point of view. This extract is from an article called "Who Built the Great Pyramid?" by Herman Hoeh:

The Great Pyramid IS one of the wonders of the world. It is the only one of the seven wonders of the ancient world which still remains. Surely there is some significance in its endurance through the ages -- especially since THIS PYRAMID, MISSING ITS CAPSTONE, IS FOUND ENGRAVED ON OUR MONEY. Why should we Americans -- the children of Joseph's son Manasseh -- engrave this EGYPTIAN Pyramid on our money? Who was actually responsible for the building of this marvel of the ages?...

Who was Cheops or Khufu? When and why did he build the pyramid?

Cheops NOT an Egyptian! The Egyptians like to boast about their pyramids. Yet the greatest pyramid of all, they admit was not built by an Egyptian! And they admit that all their later copies of the Great Pyramid are quite inferior to the first one built by Khufu. The Egyptian historian Manetho, who lived in the third century before Christ, wrote that Khufu "was of a DIFFERENT RACE from the Egyptians" ("Wathen's Arts and Antiquities of Egypt", p. 54).

Herodotus, the famous Greek historian of the 5th century before Christ, states that the builders of the Great Pyramid were SHEPHERDS ("Euterpe" § 128). But the Egyptians were not shepherds! Notice Genesis 46:31-34:

"And Joseph said unto his brethren ... I will go up, and shew Pharaoh, and say unto him, My brethren, and my father's house ... are come unto me; and the men are SHEPHERDS ... And it shall come to pass, when Pharaoh shall call you, and shall say, What is your occupation? That ye shall say, Thy servants' trade hath been about cattle .... FOR EVERY SHEPHERD IS AN ABOMINATION UNTO THE EGYPTIANS.

The Egyptians were not shepherds. They employed others to tend their cattle. Yet Khufu, or Cheops, the builder of the Great Pyramid, WAS A SHEPHERD!

Josephus, the Jewish historian, wrote that the Egyptians set the Israelites "to build pyramids" ("Antiquities of the Jews", bk. II, ch. ix, § 1). But the pyramids which the Israelites built during their enslavement were hastily constructed, inferior duplicates of the first mighty Pyramid of Khufu or Cheops. Who was Cheops the shepherd who built the first Pyramid before the enslavement of the Israelites?

Cheops NOT an Idolater. Cheops was not a polytheist. He was a worshipper of the One God. "Cheops closed the temples and prohibited the Egyptians from offering sacrifices," wrote Herodotus in book II of his "History", § 124. The God whom Cheops served was named "Amen" in the older Egyptian spelling. And -- strange though it may be -- ONE OF THE NAMES OF JESUS CHRIST, from the Hebrew, is "AMEN" (Rev. 3:14).

The Pharaoh of Upper Egypt, under whom Joseph served, was named Amenemhet III. "Amen" was a common name among the Pharaohs in Joseph's day. The Pharaoh must have been



strongly influenced by the religion of Cheops. But this is not all! Pharaoh Amenemhet gave Joseph "to wife Asenath the daughter of Potiphera priest of ON" (Genesis 41:45).

Who was the God "On"? Is it significant that "On" is but another name (in Greek) for the God "Amen" -- Jesus Christ, the LORD of the Old Testament! In Revelation 1:8, Christ speaks of Himself as the "One who is" -- the "existing One." In the original inspired text of this verse, the Greek word Christ used was "On"! -- the "existing one"!

The Egyptian rulers knew of the Creator in the days of Joseph! Not until nearly the days of Moses did gross idolatry spread throughout Egypt!

When did Cheops live? According to the eleventh edition of the "Encyclopaedia Britannica", he lived 4700 B.C. -- which would make him live 700 years before Adam! Such a date is preposterous! More recent conservative scholars place him 2600 B.C. -- 250 years BEFORE the flood in Noah's day! But the flood, according to the Egyptian records, occurred centuries BEFORE CHEOPS LIVED! Cheops lived AFTER the flood! This date is wrong, too! Obviously modern scholars DO NOT KNOW when Cheops lived. But they could know if they only believed the Bible record!...

The facts of history are that Cheops (1726-1663 B.C.) was a young contemporary of King Zoser of Egypt. Zoser (1737-1718 B.C.) built the "step pyramid" shortly before Cheops built the Great Pyramid (Budge, "A History of Egypt", vol. II, p. 9).

Now the surprise of history is that king Zoser ruled part of Lower Egypt AT THE SAME TIME JOSEPH WAS PRIME MINISTER UNDER PHARAOH AMENEMHET III, king of Upper Egypt. Ancient Egypt, remember, was a confederation of small city states. Amenemhet III (1741-1692 B.C.) was king of Upper Egypt and Pharaoh of all Egypt. But under him were lesser kings, among whom was Zoser. CHEOPS WAS A FOREIGN KING whose domain extended into the Delta of Egypt.

KING ZOSER RECORDED THE SEVEN YEARS' DROUGHT IN JOSEPH'S TIME. "My heart is in great anxiety," said Zoser, "for in my time the Nile has not overflowed for a period of SEVEN YEARS" ("Cambridge Ancient History", p. 309-310, vol. I). The Bible reveals the seven years of famine extended from 1727 to 1720 B.C.



Here is clear evidence that Cheops, a contemporary of Zoser, must have built the Great Pyramid during the beginning of the sojourn (1726-1487 B.C.) of Israel in Egypt and about the time of the seven years of famine!

A noted man who helped Cheops in building the Pyramid was named "Souf". He was "chief of the works of Khufu" (Rawlinson's "Egypt", ch. 14). This man has been an enigma to the historians (see Maspero's "Dawn of Civilization", pp. 363-364). Elsewhere he is called "Saf-hotep" -- meaning "Saf the servant." He was apparently one of 12 BROTHERS who built the Labyrinth -- the "Pentagon" of Ancient Egypt -- for Amenemhet III (Wathen's "Antiquities", p. 142). Certainly there is no doubt who "Souf" was! He could be none other than JOSEPH!

The name given Joseph by Pharaoh was "ZAPH-nath-paaneah" (Gen. 41:45). The Egyptians still call Joseph "Yousuf." Certainly there need be no doubt when Cheops lived!

A corrupted Egyptian story records an incident in the later life of Cheops or Khufu, in which he calls an aged Egyptian sage to his palace (Budge's "Egypt", vol. II, p. 43). The sage lived 110 years. Joseph died at 110 years of age (Gen. 50:26). There can be no mistaking this coincidence!

Cheops Wrote Scripture. Not only did Cheops worship Amen or On -- that is, Jesus Christ; he also wrote Scripture! Manetho, the Egyptian historian, wrote of Cheops: "He was arrogant toward

the gods, but repented and WROTE THE SACRED BOOK ... a work of great importance" (see Wathen's "Antiquities", p. 268; and Budge's "Egypt", vol. II, p. 31).

But which Sacred Book? Certainly none of the Sacred Books of Egypt's pagan religion -- for Cheops closed their temples and forbade their worship. Was this Sacred Book an Egyptian Book? No! Cheops, remember, was of FOREIGN RACE -- and it is quite obvious that Cheops's Sacred Book was not preserved by Egyptians who later opposed his religion.

A clue to the answer is found in Egyptian records. Cheops has another name -- Saaru of Shaaru (Petrie's "History of Egypt", vol. I, p. 37). Saaru is another name "for the inhabitants of Mt. Seir" (Rawlinson's "History of Egypt", ch. 22). Khufu, then, was a foreign King whose domain extended from Mt. Seir to Lower Egypt during and after the time of Joseph. Petra is in Mount Seir. Dr. Meredith and I visited, in 1957, the domain of Cheops, both in Egypt and in Mt. Seir.

Mt. Seir was famous in history as the "Land of Uz" (Vol. III of "Clarke's Commentary", preface to Book of Job). Uz was a descendant of Seir the Horite (Gen. 36:28). The Arabs preserve a corrupt record of Cheops of Mt. Seir or of the Land of Uz. They call him the "wizard of Oz."

Now what individual who dwelled in Uz was arrogant, repented of his sin and wrote a Sacred Book? None other than JOB! And the Sacred Book is the Book of Job!

Job -- AS MR. ARMSTRONG LONG AGO PERCEIVED -- could be none other than the Cheops who built the Great Pyramid! The ancient Greeks called Job "Cheops" -- pronouncing the letters "ch" almost as if they were an "h." We call Job "Hiob" in German -- and we pronounce the final "b" as if it were a "p" much as the Greeks did. Plainly, Cheops is but an altered pronunciation of Job!

Job Was a King! When Job was being tested, he cried out that he wished he had died: "Why died I not from the womb? why did I not expire when I came out of the womb .... Then had I been at rest WITH KINGS and counsellors of the earth, WHICH BUILD DESOLATE PLACES for themselves" (Job 3:11-14)...

Cheops lived in Joseph's time. SO DID JOB! Job lived in the generation after Esau, for one of his friends was Eliphaz the Temanite (Job 2:11). Eliphaz was the father of the Temanites (Gen. 36:11) and the son of Esau, Jacob's brother (verse 10). Eliphaz and Joseph were first cousins.

Job lived before the Mosaic law which permitted only Levites to sacrifice. Notice that Job sacrificed to God for his family as was customarily done in patriarchal times (Job 1:5; 42:8).

None of the conversation in the book of Job refers to the exodus under Moses. But the flood is still uppermost in the minds of the people (Job 22:17-18).

Cheops or Job came to the throne in 1726 B.C. That date is proved in the forthcoming book on World History. Surprisingly that is the year in which Jacob entered Egypt with his family. A coincidence? Consider this! Coming into Egypt with Jacob in 1726 was a grandson -- named Job! "And these are the names of the children of Israel who came into Egypt, Jacob and his sons ... And the sons of Issachar: Tola, and Phuvah and JOB, and Shimron" (Genesis 46:13)...

Job lived long before the time of Daniel. Even in the time of Daniel and the apostles, the dates for the prophetic future were not opened to understanding [Daniel 12:4]. If they were not permitted to know the times and seasons, certainly Job would not have known them, much less built the pyramid to fit chronology! Yet adherents to pyramidology contend that Cheops did know these things...

The pyramid was built for another purpose than to reveal chronology. We do not yet know all the factors surrounding the building of the Pyramid. But it is a monument, undoubtedly designed by Job, TO COMMEMORATE WHAT JOSEPH DID FOR EGYPT AND TO MARK THE BORDER of the territory given to Joseph's family in the land of Egypt by Pharaoh...

Because the Great Pyramid stands at the border between these two divisions of Egypt, many have taken Isaiah 19:19-20 to refer to the pyramid. Certainly the "altar" mentioned in this verse is not the pyramid. God forbids any altar of carved [hewn] stone (Exodus 20:25-26).

But the Great Pyramid MAY be the pillar which Isaiah referred to, and it MIGHT be again dedicated in the future as a pillar or monument of witness to what the Eternal -- the Amen -- will do in delivering Egypt from the revived Roman Empire. A pillar is sometimes used in the Bible as a BORDERLINE (see Genesis 31:52)...

God's GOVERNMENT is also in the form of a PYRAMID. Christ is the rejected "capstone" (Psalm 118:22). What more fitting monument could Job have built than this to the God whose Government rules invisibly over the world and who sends His prophets to warn it before every calamity (The Plain Truth, May 1964).

There are a number of interesting points in Herman Hoeh's article but the overall premise that Job was the builder of the Giza pyramids is, I believe, incorrect due to the plain written evidence on the Inventory Stela that they were in existence before Khufu plus the technological difference between the Giza pyramids and the other Old Kingdom pyramids including other 4th dynasty pyramids.

Hoeh here is using Ussher's Bible chronology which is not as accurate as Thiele's Bible chronology. The famine of Joseph's time was about 60 years later in the 1660's BC.

Assuming the tiny statuette of Khufu in the Cairo Museum is definitely Khufu, we can tell that physically he was very broadheaded (what anthropologists call brachiocephalic). Esau's descendants, which include the Palestinians, are not brachiocephalic the way that Khufu is pictured in his statuette. This seems to argue against Khufu being Job.

The record of the seven year famine in Djoser's time on the Hungry Rock inscription near Luxor on the Nile is an intriguing reference which may refer to the famine in Joseph's time.

There is a much better case for an earlier king, Soesestris I, earlier in the 12th dynasty being the pharaoh of Joseph than the mean-looking Amenemhat III. There is insufficient time between Amenemhat III and the catastrophic end to the Middle Kingdom during the 13th dynasty to match the timing of events in the Biblical record. Herman Hoeh's view that the 3rd dynasty ruled parallel with the 12th dynasty is certainly a possibility because of the evidence of the Hungry Rock seven year famine inscription.

Another writer who has written on this subject from a similar religious point of view as Herman Hoeh is Sydney Bristowe. She advocates Shem, who she believes was referred to as Set and Shu by the Egyptians, was the builder of the Great Pyramid. I'd like to quote a few extracts from her book "The Man Who Built the Great Pyramid:

Diodurus Siculus (200 BC) was told by the Egyptian priests that their god Amon was called Hamon or Ham by the Jews. And in an Egyptian inscription the god Osiris is made to announce his identity with Nimrod in the words:

"Courage never forsakes my limbs, I am of the race of the Mentu...**the Prince Royal Nimrod**" (Records of the Past, Vol.II, p.115).

And since, as Sir Henry Layard writes, "the identity of Nimrod with the constellation Orion is not to be rejected," the following inscription found in a papyrus in a wooden effigy of Osiris at Thebes also connects that god with Nimrod:

"O God Osiris, come to thy abode for those who were thy foes exist no more. T'is that which emanates from thee bestowes the brilliant lustre to Orion's stars" (Egypt, the Land of Wonder, Oxley)...



The inscriptions have revealed the identity of Shu with the Pyramid Builder in various ways, one being that they show Shu to have been identical with Khnum or Num of whom the Cambridge History says, speaking of the Pyramid: "Its builder was Khnum-Khufu or shortly Khufu, the Cheops of Herodotus" (Vol 1, p. 281), and, as we have seen, the Arabs said that "Num-Khufu lived in the Pyramid with Noah," a very natural confusion of ideas if, as I am claiming, Num-Khufu was Noah's son, Shem.

Professor Max Muller noted the connection between Shu and Khnum; he writes:

"The Soul of Shu is Khnum" (Egyptian Mythology, p. 219).

And Professor Sayce, referring to Shu, speaks of "A text at Esna which identifies him with Khnum" (The Religions of Egypt and Babylonia, p. 225).

Professor Max Muller also identifies Khnum with the god Ptah and while in one of his works Mr Massey says that **Ptah "was the architect who placed his building on the pole and the four cardinal points" he says elsewhere, "Shu raised the four pillars of the four quarters"** – remarks which are not only useful, as further identifying Khnum with Shu, but are also interesting in view of the uniquely perfect orientation of the Great Pyramid...

The same hieroglyphic (a growing plant) stands for both ST (Set) and Shu (or Su) and from such indications Mr. Massey concluded that:

"Shu is Seth to whom the pillars and stele are attributed" (Book of Beginnings, Vol. II, p. 282).

The name Set or Seth was but a shallow disguise for that of Shem, for the Hebrew names Seth and Shem are practically synonymous, one meaning "to put or place" and the other "he puts or places". In Numbers 24 Shem is called Sheth while in some Egyptian inscriptions, as Dr Birch remarks the opponent of Osiris is called not Seth but Semu, which is significant since the Greek for Shem is Sem. Another name for Shem was Sutekh; Dr Kitto writes:

"It can scarcely be doubted that the Set or Sutekh of the Egyptian Pantheon is the Hebrew Seth" (Cyclopedia of Biblical Knowledge, "Seth").

That the Greek writers changed the name of Set into Typhon is yet another proof that he represented Shem, for, as one writer says:

Greek mythology speaks of Cronus, Japetus and Typhon as...sons of Ouranus [Uranus – probably the Greek version of Noah]...(Worship of the Dead, Garnier, p. 18).

The name Typhon was perhaps inspired by the story of Shem's sudden descent upon Egypt, his execution of Nimrod and suppression of the Hamitic rulers for as Professor Wilkinson writes:

"The word Typhon was applied to a whirlwind in former times as at the present day" (Ancient Egyptians, Vol. III, p. 144)...

Josephus (AD 50) evidently knew that Typhon represented Shem for he wrote:

"Typhon or Set was the father of the Jews and the builder of Jerusalem" (Cory's "Fragments", p. 138)...

Manetho hints that Nimrod succeeded Ham as king of Egypt by placing Osiris (Nimrod) after Amon (Ham) in his list of god kings and Narmer (Nimrod) after Menes (Ham) in his first dynasty of human beings...

Diodorus repeats another story in which Shem is called Typhon and is described as the brother (instead of uncle) of Osiris. He writes:

"They say that while Osiris governed in Egypt with all the justice imaginable he was murdered by his wicked brother Typhon and that he mangled his dead body into six and twenty pieces and gave to each of his confederates in the treason a piece..." (Times History, Vol. 1, p. 283)...

As if to make up for their inability to hide the fact that Shem put Nimrod to death, the priests invented an elaborate myth in which they made the dead Osiris king of the underworld and Shem a criminal tried, condemned and executed by him...Another story was invented in which a posthumous son is born to Isis, the wife of Osiris and is reared by her with the one idea of avenging the death of Osiris upon Set who is called Horus is seen in drawings as a hawk-headed man killing a crocodile which represents Shem...

Why “nothing interested the Egyptians more than the fate of Osiris after death” as the Cambridge History remarks is, I suggest, because although the fact of Nimrod’s ignominious end in this life could not be hidden, he could be idealized as a spirit and surrounded by an atmosphere of mystery and romance which now even appeals to those who do not recognize in Osiris the mythological representative of the wicked Nimrod (The Man Who Built the Great Pyramid, p. 73-74, 82, 117-120, 126, 128-130).

She has some good solid evidence connecting Shem with the Egyptian Set, Shu and Ptah and some quite reasonable evidence linking Osiris with Nimrod. Her evidence connecting Set (Shem) as builder of the pyramids is more tentative.

The reference to Shu and Ptah with the four cardinal points and four pillars is quite intriguing bringing to mind the precise orientation of the Great Pyramid with true north.

Shem, according to the Bible, lived on either side of the Flood and would have been familiar with high technology if the pre-Flood world of the Bible was highly advanced as Stephen Collins contends in his booklet “As it was in the Days of Noah”. He and / or those of that early post-Flood period before the Tower of Babel catastrophe were likely the builders of the Giza pyramids if the Biblical account is true.

The softer limestone on the Giza pyramids does not bare the rainfall erosion of the Sphinx and its enclosure (and Sphinx and Valley temples) pointing us to a post wet period for their building. The Inventory Stela tells us that the pyramid was already in existence in Khufu’s time and the shaft alignments in the Great Pyramid point us to a time sometime around 2000-2500 BC so they were likely built soon before dynastic Egypt comes on the scene by a people who passed on some technology but much is lost by the time dynastic Egypt comes along.

## CHAPTER 4

### Why were the Pyramids Built?

The answer to why the pyramids were built is quite simple – they were built as landing pads for aliens. Well, at least that is what we are led to believe in the popular science fiction show “Stargate”.



The standard Egyptological argument is that the pyramids were built solely as tombs for the pharaohs. How does this view stack up. To discuss this I'd like to quote again from Graham Hancock's book “Fingerprints of the Gods”:

According to all orthodox Egyptologists the pyramids had been built as tombs - and only as tombs - for these three pharaohs. Yet there were some obvious difficulties with such assertions. For example, the spacious burial chamber of the Khafre Pyramid was empty when it was opened in 1818 by the European explorer Giovanni Belzoni. Indeed, more than empty, the chamber was starkly, austere bare. The polished granite sarcophagus which lay embedded in its floor had also been found empty, with its lid broken into two pieces nearby. How was this to be explained?

To Egyptologists the answer seemed obvious. At some early date, probably not many hundreds of years after Khafre's death, tomb robbers must have penetrated the chamber and cleared all its contents including the mummified body of the pharaoh.

Much the same thing seemed to have happened at the smaller Third Pyramid, towards which Santha and I were now walking - that attributed to Menkaure. Here the first European to break in had been a British colonel, Howard Vyse, who had entered the burial chamber in 1837.

He found an empty basalt sarcophagus, an anthropoid coffin lid made of wood, and some bones. The natural assumption was that these were the remains of Menkaure. Modern science had subsequently proved, however, that the bones and coffin lid dated from the early Christian era, that is, from 2500 years after the Pyramid Age, and thus represented the “intrusive burial” of a much later individual (quite a common practice throughout Ancient Egyptian history).

As to the basalt sarcophagus - well, it could have belonged to Menkaure. Unfortunately, however, nobody had the opportunity to examine it because it had been lost at sea when the ship on which Vyse sent it to England had sunk off the coast of Spain. Since it was a matter of record that the sarcophagus had been found empty by Vyse, it was once again assumed that the body of the pharaoh must have been removed by tomb robbers.

A similar assumption had been made about the body of Khufu, which was also missing. Here the scholarly consensus, expressed as well as anyone by George Hart of the British Museum, was



that "no later than 500 years after Khufu's funeral" robbers had forced their way into the Great Pyramid "to steal the burial treasure". The implication is that this incursion must have occurred by or before 2000 BC -- since Khufu is believed to have died in 2528 BC. Moreover it was assumed by Professor I.E.S Edwards, a leading authority on these matters, that the burial treasure had been removed from the famous inner sanctum now known as the King's Chamber and that the empty "granite sarcophagus" which stood at the western end of that sanctum had "once contained the King's body, probably enclosed within an inner coffin made of wood".

All this is orthodox, mainstream, modern scholarship, which is unquestioningly accepted as historical fact and taught as such at universities everywhere. But suppose it isn't fact. The cupboard was bare.

The mystery of the missing mummy of Khufu begins with the records of Caliph Al-Ma'mun, a Muslim governor of Cairo in the ninth century AD. He had engaged a team of quarriers to tunnel their way into the pyramid's northern face, urging them on with promises that they would discover treasure. Through a series of lucky accidents "Ma'mun's Hole", as archaeologists now refer to it, had joined up with one of the monument's several internal passageways, the "descending corridor" leading downwards from the original concealed doorway in the northern face (the location of which, though known in classical times, had been forgotten by Ma'mun's day). By a further lucky accident the vibrations that the Arabs had caused with their battering rams and drills dislodged a block of limestone from the ceiling of the descending corridor. When the socket from which it had fallen was examined it was found to conceal the opening to another corridor, this time ascending into the bowels of the pyramid.

There was a problem, however. The opening was blocked by a series of enormous plugs of solid granite, clearly contemporaneous with the construction of the monument, which were held in place by a narrowing of the lower end of the corridor. The quarriers were unable either to break or to cut through the plugs. They therefore tunnelled into the slightly softer limestone surrounding them and, after several weeks of backbreaking toil, rejoined the ascending corridor higher up - having bypassed a formidable obstacle never before breached.

The implications were obvious. Since no previous treasure-seekers had penetrated this far, the interior of the pyramid must still be virgin territory. The diggers must have licked their lips with anticipation at the immense quantities of gold and jewels they could now expect to find. Similarly - though perhaps for different reasons, Ma'mun must have been impatient to be the first into any chambers that lay ahead.

It was reported that his primary motive in initiating this investigation had not been an ambition to increase his vast personal wealth but a desire to gain access to a storehouse of ancient wisdom and technology which he believed to lie buried within the monument. In this repository, according to age-old tradition, the pyramid builders had placed "instruments of iron and arms which rust not, and glass which might be bended and yet not broken, and strange spells ..."

But Ma'mun and his men found nothing, not even any down-to-earth treasure -- and certainly not any high-tech, anachronistic plastic or instruments of iron or rustproof weapons ... or strange spells either.

The erroneously named 'Queen's Chamber' (which lay at the end a long horizontal passageway that branched off from the ascending corridor) turned out to be completely empty - just a severe, geometrical room.

More disappointing still, the King's Chamber (which the Arabs reached after climbing the imposing Grand Gallery) also offered little of interest. Its only furniture was a granite coffer just big enough to contain the body of a man. Later identified, on no very good grounds, as a "sarcophagus", this undecorated stone box was approached with trepidation by Ma'mun and his team, who found it to be lidless and as empty as everything else in the pyramid.

Why, how and when exactly had the Great Pyramid been emptied of its contents? Had it been 500 years after Khufu's death, as the Egyptologists suggested? Or was it not more likely, as the evidence was beginning to suggest, that the inner chambers of the pyramid had been empty all along, from the very beginning, that is, from the day that the monument had originally been sealed? Nobody, after all, had reached the upper part of the ascending corridor before Ma'mun

and his men. And it was certain, too, that nobody had cut through the granite plugs blocking the entrance to that corridor.

Commonsense ruled out the possibility of any earlier incursion - unless there was another way in...

The full extent of the descending corridor was, however, well known and explored in classical times. The Graeco-Roman geographer Strabo left quite a clear description of the large subterranean chamber it debouched into (at a depth of almost 600 feet below the apex of the pyramid). Graffiti from the period of the Roman occupation of Egypt was also found inside this underground chamber, confirming that it had once been regularly visited. Yet, because it had been so cunningly hidden in the beginning, the secret doorway leading off to one side about two-thirds of the way down the western wall of the descending corridor, remained sealed and undiscovered until the nineteenth century.

What the doorway led to was a narrow well-shaft, about 160 feet in extent, which rose almost vertically through the bedrock and then through more than twenty complete courses of the Great Pyramid's limestone core blocks, until it joined up with the main internal corridor system at the base of the Grand Gallery.

There is no evidence to indicate what the purpose of this strange architectural feature might have been (although several scholars have hazarded guesses). Indeed the only thing is clear is that it was engineered at the time of the construction of the pyramid and was not the result of an intrusion by tunnelling tomb-robbers. The question remains open, however, as to whether tomb-robbers might have discovered the hidden entrance to the shaft, and made use of it to siphon off the treasures from the King's and Queen's Chambers.

Such a possibility cannot be ruled out. Nevertheless, a review of the historical record indicates little in its favour.

For example, the upper end of the well-shaft was entered off the Grand Gallery by the Oxford astronomer John Greaves in 1638. He managed to descend to a depth of about sixty feet. In 1765 another Briton, Nathaniel Davison, penetrated to a depth of about 150 feet but found his way blocked by an impenetrable mass of sand and stones. Later, in the 1830, Captain G.B. Caviglia, an Italian adventurer, reached the same depth and encountered the same obstacle...

Is it likely that such a cramped, blocked-up shaft could have been a viable conduit for the treasures of Khufu, supposedly the greatest pharaoh of the magnificent Fourth Dynasty?

Even if it hadn't been choked with debris and sealed at the lower end, it could not have been used to bring out more than a tiny fraction of the treasures of a typical royal tomb. This is because the well-shaft is only three feet in diameter and incorporates several tricky vertical sections.

At the very least, therefore, when Ma'mun and his men battered their way into the King's Chamber around the year AD 820, one would have expected some of the bigger and heavier pieces from the original burial to be still in place - like the statues and shrines that bulked so large in Tutankhamen's much later and presumably inferior tomb. But nothing was found inside Khufu's Pyramid, making this and the alleged looting of Khafre's monument the only tomb robberies in the history of Egypt which achieved a clean sweep, leaving not a single trace behind - not a torn cloth, not a shard of broken pottery, not an unwanted figurine, not an overlooked piece of jewellery - just the bare floors and walls and the gaping mouths of empty sarcophagi...

The other remarkable feature of Khufu's Pyramid was the absence of inscriptions or decorations anywhere within its immense network of galleries, corridors, passageways and chambers, and the same was true of Khafre's and Menkaure's Pyramids. In none of these amazing monuments had a single word been written in praise of the pharaohs whose bodies they were supposed to house.

This was exceptional. No other proven burial place of any Egyptian monarch had ever been found undecorated. The fashion throughout Egyptian history had been for the tombs of the pharaohs to be extensively decorated, beautifully painted from top to bottom (as in the Valley of the Kings at Luxor, for example) and densely inscribed with the ritual spells and invocations

required to assist the deceased on his journey towards eternal life (as in the Fifth Dynasty pyramids at Saqqara, just twenty miles to the south of Giza)...

Moreover, it was clear that these pharaohs [Khufu, Khafre, Menkaure] must indeed have been closely associated with the monuments, not only because of the folklore passed on by Herodotus (which surely had some basis in fact) but because inscriptions and references to Khufu, Khafre and Menkaure had been found in moderate quantities, outside the three major pyramids, at several different parts of the Giza necropolis. Such finds had been made consistently in and around the six subsidiary pyramids...

If he (Khafre) indeed built the pyramid as his tomb, it seemed inconceivable that such a man would have failed to stamp his name and identity somewhere within its interior. I found myself wondering yet again why Egyptologists were so unwilling to consider the possibility that the funerary complex might have been Khafre's work and the pyramid someone else's?...

Khufu's father Snefru, the first king of the Fourth Dynasty was believed to have built the so-called 'Bent' and 'Red' Pyramids at Dhashur, about thirty miles south of Giza - an attribution that was itself mysterious (if pyramids were indeed tombs) since it seemed strange that one pharaoh required two pyramids to be buried in...

We need not reiterate here the many shortcomings of the "tombs and tombs only" theory. However, these shortcomings were not limited to the Giza pyramids but applied to all the other Third and Fourth Dynasty Pyramids listed above. Not a single one of these monuments had ever been found to contain the body of a pharaoh, or any signs whatsoever of a royal burial.

Some of them were not even equipped with sarcophagi, for example the Collapsed Pyramid at Meidum. The Pyramid of Sekhemkhet at Saqqara (first entered in 1954 by the Egyptian Antiquities Organization) did contain a sarcophagus - one, which had certainly remained sealed and undisturbed since its installation in the "tomb". Grave robbers had never succeeded in finding their way to it but when it was opened it was empty...

Why, in other words, if [the Great Pyramid's] purpose was to conceal and protect the body of Khufu, had it been designed so that it could not fail to attract the attention - in all epochs and under all imaginable circumstances - of treasure-crazed adventurers and of prying and imaginative intellectuals?...

Logic therefore suggested that the pyramid builders must also have understood exactly what kind of beacon they were piling up (with such incredible precision) on this windswept plateau, on the west bank of the Nile, in those high and far away times.

They must, in short, have wanted this remarkable structure to exert a perennial fascination: to be violated by intruders, to be measured with increasing degrees of exactitude, and to haunt the collective imagination of mankind like a persistent ghost summoning intimations of a profound and long-forgotten secret (Fingerprints of the Gods, p. 312-324, 329-332)

It is easily understandable why Egyptologists came up with the idea that the pyramids were built to be tombs for the pharaohs when they found the granite boxes labelled a sarcophagus due to the similar other sarcophagii that really were used for burials in the Valley of the Kings.

However, under closer scrutiny, the theory as Hancock points out just doesn't hold water. The clear evidence shows that the granite boxes found in pyramids weren't robbed of their contents and were put into the pyramids deliberately empty for a purpose other than as burial tombs. All the granite boxes found in the other Old Kingdom pyramids were found to all be EMPTY without a trace of any bones, body, treasure or scraps of any other material.

To be fair to Egyptologists, it is possible that there may have been bodies in the granite boxes of those Old Kingdom whose chambers had been accessible in ancient times. It is in the realm of possibility that an event occurred like what happened to most of the mummies found in the Valley of the Kings where, due to tomb raiders, the priests removed all the mummies and



buried them together in a same place. This possibility might work for many of the Old Kingdom pyramids but as Graham Hancock has meticulously shown does not work for the Great Pyramid.

Robert Bauval believes the answer to their purpose lies in the Pyramid Texts found in the pyramid of 5th dynasty pharaoh Unas. He believes they are the software to understand the hardware of the pyramids. We have previously shown that the southern shafts at dawn on the vernal equinox appears to pointed to the constellation of Orion.

Bauval believes that in the Great Pyramid's King's Chamber that a ceremony was held to launch the spirit of the dead pharaoh (his ka) to join his ancestor Orion in the heavens and live forever in the stars. In "Keeper of Genesis" he writes:

In the Pyramid Texts we thus find a high priest making this cryptic statement:

"Your mouth is in good order for I split open your mouth for you ... O king, I open your mouth for you with the adze of **iron** of Upuaut, I split open your mouth for you with the adze of **iron** which split open the mouths of the gods ... Horus has split open the mouth of this king with that wherewith he split open the mouth of his father, with that wherewith he split open the mouth of Osiris ..."

From such utterances, and many more like them, it is clear that iron was somehow seen by the composers of the Pyramid Texts as being imperative in the rituals aimed at ensuring new life - cosmic and stellar life - to the dead king. More importantly the above verse also connects the metal and its uses to the ancient prototype of all such rituals by means of which Osiris himself, Egypt's 'Once and Future King', died and was then restored to immortal life as Lord of the sky-region of Orion.

This region, as we shall see in Part III, was known as the Duat. In it all the Pharaohs of Egypt hoped that they would reside eternally after their own deaths:

"The gate of the earth is open for you ... may a stairway to the Duat be set up for you to the place where Orion is ..."

"O king ... the sky conceives you with Orion ... the sky has borne you with Orion..."

"O king, be a soul like a living star ..."

"The gate of the earth-god is open ... may you remove yourself to the sky and sit upon your iron throne ..."

"The aperture of the sky window is opened for you..."

"The doors of iron which are in the starry sky are thrown open for me, and I go through them..."



What seems to be envisaged here, taken literally and reduced to the basic common denominators running through all the above utterances, appears to be nothing less than an **iron "Stargate" intended to admit Osiris, and all the dynasties of dead kings after him, into the celestial realms of the belt of Orion.**

As we have seen the Old Kingdom pharaohs do not appear to have been the builders of the Giza pyramids so if that purpose was ascribed to them by the Old Kingdom pharaohs it doesn't automatically follow that the original builders shortly before dynastic Egypt had the same purpose in mind. That said, Bauval's theory is still a possibility I cannot rule out, though I believe we'll see stronger contenders as we further explore the theories.

In the 19th century British-Israelite writers proposed that notches along the passageways when measured from a certain spot in pyramid inches encoded dates for biblical prophecies. Such notches and where to start measuring from are quite obscure. Even if they were clear the Book of Daniel (Daniel 12:4) notes that the understanding of lots of end-time prophecies, and this would include dates, was closed to his understanding and that the understanding wouldn't be opened until the end time, let alone to the builders of the pyramids before Daniel.

Immanuel Velikovsky, author of "Worlds in Collision" wrote an article simply entitled "The Pyramids" (<http://varchive.org/ce/pyramids.htm>) which gives his own theory on why the pyramids were built which I quote from now:

For what purpose were the pyramids erected? No hint was found in the hieroglyphic literature. Already in antiquity Greek authors debated this question. In the fifth century before the present era Herodotos gave a detailed account of their construction, but no indication of their purpose.

Not even a tale concerning the purpose of the pyramids came down from the time they were constructed. "for some reason or other, the builders of the pyramids concealed the object of these structures, and this so successfully that not even a tradition has reached us which purports to have been handed down from the epoch of the pyramids' construction...

If they were built for astronomical purposes only, why were they built in groups, when an unobtruded horizon requires a single elevation? And why were smaller pyramids built next to the large ones in space and after them in time? And if they were granaries, why is the space so small inside such large constructions?

But if the pyramids were intended as tombs, why were the kings who built them not entombed in them? And why was it that the kings of the great dynasties in later times, who built the imposing temples and palaces of Thebes and Memphis, did not care to build pyramid-tombs for themselves?...

I shall here join the list of those who tried to solve the mystery of the pyramids and point to a purpose which, as far as I know, was never discussed, but which seems to me to be the true one.

After the great catastrophes of the earlier ages the kings of Egypt, conscious of the possibility of their repetition, erected the pyramids as huge shelters for themselves and the most important persons of their household.

The pyramids as shelters have large bases and enormously thick walls to protect the chambers inside from hurricanes, avalanches of meteorites or brimstone, poisonous gases, and inundation. The pyramidal form is statically the strongest possible structure for opposing a vertically directed impact from above (meteorites), as well as lateral pressure (of floods and hurricanes). The entrance is situated not on the level of the ground but high above it; the water of a flood forty feet high would not penetrate the pyramid of Cheops.

But if the water were to rise as high as the entrance and force the door, it would not reach the chambers, which were situated at a higher level. The outer surface of the pyramid was covered with smooth stones, and was not in steps as it has been since the stone facade was removed and used for other purposes during the later ages. This smooth surface was the best protection against a shower of bolides and served also to protect against the penetration of water. The entrance door was a swivel construction.

Two narrow channels inclined at 31 degrees (northern) and 45 degrees (southern) to the horizon served for passage of air to the King's Chamber. They could be closed off at their lower end. No large bolide could enter these channels.

They were also placed in such a manner that from the inside of the pyramid two standard points of the sky could be observed; but if the pyramids were tombs, no observation of the sky would take place there, and if they were observatories, two small fixed openings would enable the observer to see only very limited squares on two sides of the sky. But by observing two points on the sky one could judge meteorological conditions on the outside and also, in the case of a clear sky, whether the four directions remained unchanged...

The constructors of the pyramids had very much in mind the possible effects of earthquakes, and they solved their problem very satisfactorily. The sides of the Great Pyramid, which are built at an angle of 51 degrees 51 minutes to the horizon, can hardly have their stones moved from the outside; a movement to the inside is barred insofar as the pyramid is filled from the apex to the base with stones, the only exception being the chambers and the corridor to them, including the Grand Gallery. The King's Chamber in the Cheops pyramid has five superimposed ceilings of great blocks of granite; the rest of the pyramid is built of limestone. Should one granite roof give way, the next one would absorb the shock...Earthquakes like the one in the first century during which 30,000 people perished in Egypt could do no harm to the pyramids...

Did the pyramids serve well the purpose they were built for? The pyramid age belongs to the Old Kingdom. During the Middle Kingdom only a few and very insignificant pyramids were erected. Already the cataclysm which terminated the Old Kingdom proved that the pyramids, though responding to many of the tasks of a shelter, were inadequate in some respect.

The catastrophe during which the Israelites left Egypt was the same which ended the Middle Kingdom. In the inscription on the shrine from el-Arish we do not find that the royal family went to seek refuge outside the palace: "nobody left the palace during the nine days of the tempest." Also the biblical story tells of casualties in the family of the king and his palace when the earth was convulsed and "the houses were smitten." Apparently at that time the futility of the shelters had become known. This implies that during the cataclysm which put an end to the Old Kingdom the pyramids were recognized as potentially fatal traps.

The pyramids were not sufficiently protected against electrical discharges. Lightning is attracted by the vertex of the pyramid. The builders of the pyramids knew of course the fact that tall buildings attract lightning; they must have also known that lightning is abundant in the storms that accompany and follow cataclysms. It seems to me that the ancient way to protect a building from lightning must have been by building thick walls and erecting pillars around the buildings. Electrical currents travel the periphery of a cable: the enormously thick walls protect the inner chambers from electrical discharges. But this protection could be proven as sufficient only during ordinary thunderstorms.

When at the close of the Old Kingdom interplanetary contacts caused tremendous discharges, some of the pyramids became electrocuting chambers. The fields of saltpeter (potassium nitrate) close to the pyramids show where the bolts fell; some of the pyramids drew to themselves ramifications of the great bolt.

Velikovsky certainly notes the stability of the pyramids in withstanding earthquakes, floods and other catastrophes and advances shelter as the purpose for them. There are a couple of points that come to mind that seem to argue against that theory.

Firstly, if it was designed purely for shelter from catastrophes why are the chambers so small and its passages such strange angles? Secondly, there seems to be no purpose for the granite box inside the King's Chamber if shelter was the only purpose of the pyramids.

We have looked at the astronomical alignments that appear to be encoded in the design of the pyramids and the Sphinx. What has been known for some time now is that there is a lot of mathematics and geometry encoded in the design of the Great Pyramid, though curiously no-



one ever studies the other two pyramids for this sort of information – the Great Pyramid seems to get all the attention.

Below is a sampling of the mathematics and geometry encoded in the Great Pyramid:

- Half of the perimeter (Length of 2 of the 4 sides) / the height of the pyramid =  $\pi$  (Pi)
- The surface area of the 4 sides / surface area of the base =  $\phi$  (Phi)  
Phi is the mathematical golden number of 1.618. It is the only number which equals itself squared when 1 is added to it ( $\phi + 1 = \phi^2$ ) and equals 1 / itself when 1 is subtracted from it. ( $\phi - 1 = 1/\phi$ )
- Half of the perimeter / the total height of the pyramid from subterranean chamber =  $\phi^2$
- Draw a circle with the same circumference as the perimeter of the base and its radius will equal the height of the pyramid
- The length of the pyramid in metres – the height of the pyramid in metres = 314.16 metres (100 x Pi)
- Half of the perimeter in metres x 100 =  $\phi^2$  metres
- The perimeter of the floor of the King's Chamber = 31.416 metres (10 x Pi)
- The perimeter of the floor of the King's Chamber in metres – the width of the King's Chamber in metres = 10 x  $\phi^2$  metres.

One website (<http://www.goldennumber.net/phi-pi-great-pyramid-egypt>) has this to say regarding the maths and geometry found in the Great Pyramid:

There is still some debate as to whether the Great Pyramid of Giza in Egypt, built around 2560 BC, was constructed with dimensions based on phi, the golden ratio. Its once flat, smooth outer shell is gone and all that remains is the roughly-shaped inner core, so it is difficult to know with certainty.

There is compelling evidence, however, that the design of the pyramid embodied these foundations of mathematics and geometry:

- Phi, the Golden Ratio that appears throughout nature.
- Pi, the circumference of a circle in relation to its diameter.
- The Pythagorean Theorem – Credited by tradition to mathematician Pythagoras (about 570 – 495 BC), which can be expressed as  $a^2 + b^2 = c^2$ .

First, phi is the only number which has the mathematical property of its square being one more than itself:

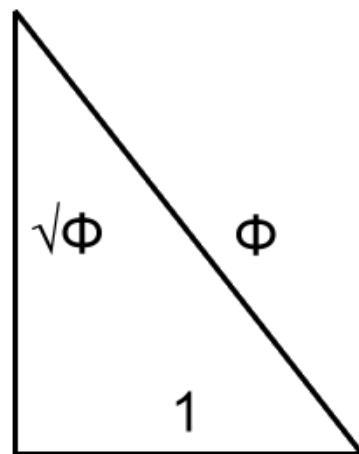
$$\phi + 1 = \phi^2$$

or

$$1.618... + 1 = 2.618...$$

By applying the above Pythagorean equation to this, we can construct a right triangle, of sides a, b and c, or in this case a Golden Triangle of sides  $\sqrt{\phi}$ , 1 and  $\phi$ , which looks like this:

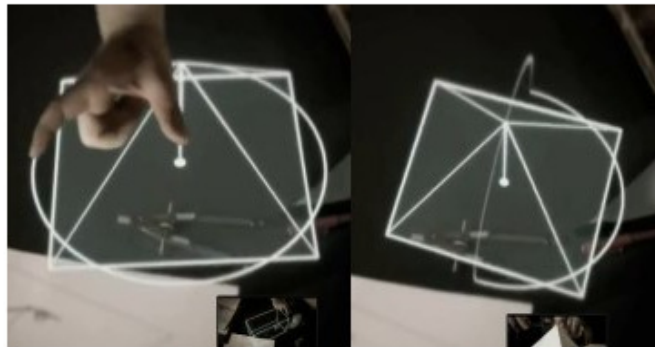
This creates a pyramid with a base width of 2 (i.e., two triangles above placed back-to-back) and a height of the square root of Phi, 1.272. The ratio of the height to the base is 0.636.



According to Wikipedia, the Great Pyramid has a base of 230.4 meters (755.9 feet) and an estimated original height of 146.5 meters (480.6 feet). This also creates a height to base ratio of 0.636, which indicates it is indeed a Golden Triangle, at least to within three significant decimal places of accuracy. If the base is indeed exactly 230.4 meters then a perfect golden ratio would have a height of 146.53567, so the difference of only 0.03567 meters appears to be just a measurement or rounding difference.

The Great Pyramid has a surface ratio to base ratio of Phi, the Golden Ratio. A pyramid based on a golden triangle would have other interesting properties. The surface area of the four sides would be a golden ratio of the surface area of the base. The area of each triangular side is the base x height / 2, or  $2 \times \Phi / 2$  or  $\Phi$ . The surface area of the base is  $2 \times 2$ , or 4. So four sides is  $4 \times \Phi / 4$ , or  $\Phi$  for the ratio of sides to base.

The Great Pyramid also has a relationship to Pi. There is another interesting aspect of this pyramid. Construct a circle with a circumference of 8, the same as the perimeter of this pyramid with its base width of 2. Then fold the arc of the semi-circle at a right angle, as illustrated below in "Revelation of the Pyramids". The height of the semi-circle will be the radius of the circle, which is  $8/\pi/2$  or 1.273.



This is less than 1/10th of a percent different than the height of 1.272 computed above using the Golden Triangle. Applying this to the 146.5 meter height of the pyramid would result in a difference in height between the two methods of only 0.14 meters (5.5 inches).

Its near perfect alignment to due north shows that little was left to chance. Some say that the relationships of the Great Pyramid's dimensions to phi and pi either do not exist or happened by chance. Would a civilization with the technological skill and knowledge to align the pyramid to within 1/15th of a degree to true north leave the dimensions of the pyramid to chance? If they didn't intend the precise 51.83 degree angle of a golden triangle, why would they have not used another simpler angle found in divisions of a circle such as 30, 45, 54 or 60 degrees? If the dimensions of the pyramid were not based on both phi and pi, would it not be most reasonable to assume that phi was used since it is based on the visible base of the pyramid and not an invisible circle with the same circumference as that base?

Other possibilities for Phi and Pi relationships: Even if the Egyptians were using numbers that they understood to be the circumference of the circle to its diameter and the golden ratio that appeared in nature, it's difficult to know if they truly understood the actual decimal representations of pi and phi as we understand them now. Since references to phi don't appear in the historical record until the time of the Greeks hundreds of years later, some contend that the Egyptians did not have this knowledge and instead used integer approximations that achieved the same relationships and results in the design.

A rather amazing mathematical fact is that pi and the square root of phi can be approximated with a high degree of accuracy using simple integers. Pi can be approximated as 22/7, resulting in a repeating decimal number 3.142857142857... which is different from Pi by only 4/100's of a percent. The square root of Phi can be approximate by 14/11, resulting in a repeating decimal number 1.2727..., which is different from Phi by less than 6/100's of a percent. That means that Phi can be approximated as 256/121.

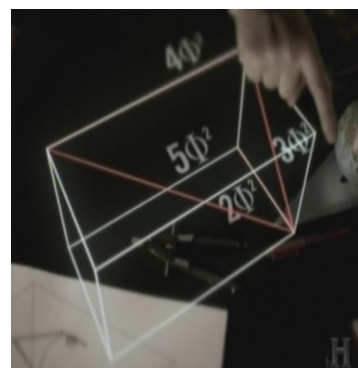
The Great Pyramid could thus have been based on 22/7 or 14/11 in the geometry shown about. Even if the Egyptians only understood pi and/or phi through their integer approximations, the fact that the pyramid uses them shows that there was likely some understanding and intent of their mathematical importance in their application.

It's possible though that the pyramid dimensions could have been intended to represent only one of these numbers, either pi or phi, and the mathematics would have included the other

automatically. We really don't know with certainty how the pyramid was designed as this knowledge could have existed and then been lost. The builders of such incredible architecture may have had far greater knowledge and sophistication than we may know, and it's possible that both pi and phi as we understand them today could have been the driving factors in the design of the pyramid.

The golden number and Pi are found over and over again in measurements around the pyramid. Another example is in the measurements of the Kings Chamber as seen in the picture on the right:

In 1793 the measurement we know as the metre had its modern birth and it was chosen by dividing the length of the distance between the equator and the North Pole by 10 000 000. It appears that the ancient Egyptians also knew the circumference of the earth and knew the measurement of a metre which some researchers believe the unit of a cubit is derived from.



Some claim that how the modern metre should be determined was passed down through time by secret societies and was re-born in 1793 as a standard measure (the word metre means a universal standard). When the pyramidion was discovered near the Red Pyramid it was discovered to be exactly 1 metre high and was an exact scale model of the Great Pyramid with the same angle of 51 degrees 50 minutes.

In 1925 it was determined by Egyptologists (mostly based on measurements of the Great Pyramid as well as cubit rods found) that the length of the cubit was 52 cm and 3.6 millimetres. If we draw a circle with a diameter of 1 metre, it will have a circumference of 3.14 (Pi) metres. If we divide 3.14 (Pi) metres by 6 we come up with exactly 52 cm and 3.6 millimetres. If a circle has a circumference of 3.14 (Pi) metres then the part of the circumference that is formed by 60 degrees of that circle equals exactly a cubit. Additionally  $3.1416 \text{ metres (Pi)} - 2.618 \text{ metres } (\phi^2) = 0.5236 \text{ metres or 1 cubit.}$

The metre is determined as being  $1/10\,000\,000^{\text{th}}$  of the length of the distance between the equator and the North Pole. This measurement appears to have been known to the pyramid builders. Great tracts have been written with all sorts of mathematical measurements contained within the Great Pyramid. Many seem to infer that they knew the circumference of the earth and the length of the earth's orbit around the Sun and even the speed of light. Some measurements are questionable while others appear very sound like the ones noted above.

I'm a very pragmatic person and I find myself wondering what the practical benefit was to encoding all this mathematics into the design of the pyramid.

All this mathematics, geometry and astronomical alignments are, in effect, are a message in a bottle. On this point Robert Bauval and Graham Hancock make these comments:

Moreover, returning briefly to Dr Philip Morrisson's remarks quoted earlier, we think that the Giza necropolis also qualifies rather well for the description 'packed full of clues and unmistakable clever devices.' Indeed, it seems to us that a truly astonishing quantum of ingenuity was invested by the Pyramid builders to ensure that the four fundamental aspects of an 'unmistakable' message were thoroughly elaborated here:

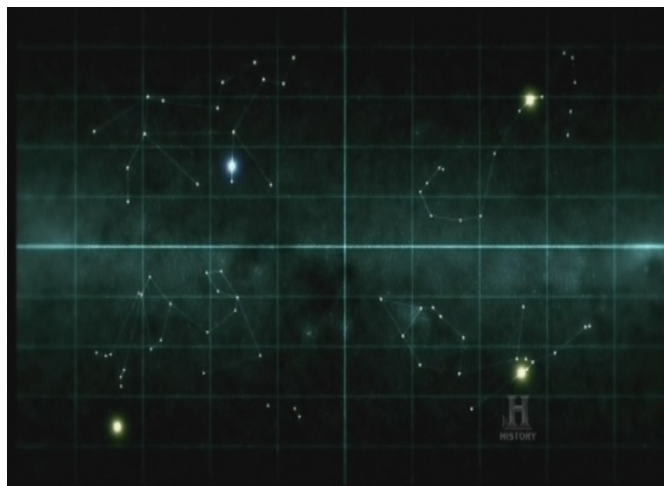


1. the creation of durable, unequivocal markers which could serve as beacons to inflame the curiosity and engage the intelligence of future generations of seekers;
2. the use of the 'common language' of precessional astronomy;
3. the use of precessional co-ordinates to signal specific time-referents linking past to present and present to future;
4. cunningly concealed store-rooms, or 'Halls of Records' that could only be found and entered by those who were fully initiated in the 'silent language' and thus could read and follow its clues (Keeper of Genesis, p. 241-242).

Of course, point 4 is unproven. No such Hall of Records has been found. Microgravimetry has highlighted the probable existence of certain subterranean empty cavities including one under the front of the Sphinx. Restrictions on archaeological diggings by the Egyptian authorities has not allowed anyone to follow up on what might be in some of these cavities and there's no guarantee anything would be found in them.

Going back to what may be encoded astronomically at Giza, the documentary "The Revelation of the Pyramids" adds more to what has been covered so far with the Orion correlation.

The Sphinx is located SE of the Great Pyramid in line with its NW to SE axis. The Sphinx is a combination of a lion and a man. There are four key stars in the zodiac that face opposite of one another: Regulus in the constellation of Leo, Alderbran in the constellation of Taurus, Antares in Scorpio and Formerhat which was anciently in Aquarius. Regulus (Leo) is opposite Formerhat which was anciently in Aquarius. These constellations are a lion and a man. The Sphinx is a combination of these two symbols.



Anciently the constellation of Scorpio was represented by an eagle. Opposite of that constellation was Taurus. The combination of the eagle and the bull is seen in the winged bulls of Assyria.

Those four keys stars keep the same position in relation with one another over time. There is an unusual bump on the front of the Sphinx called the "lion's heart" by the Arabs. This same name is also used to refer to Regulus in the constellation of Leo the lion.

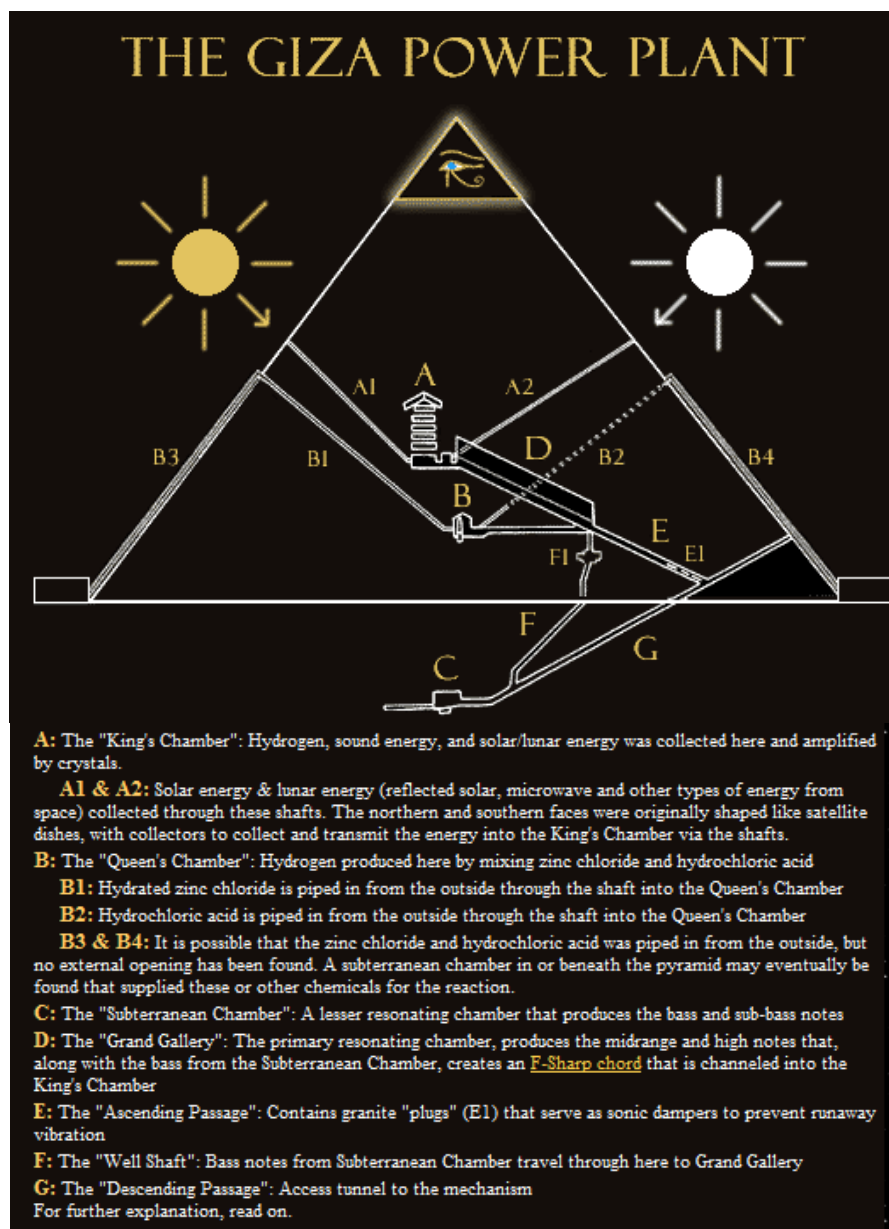


When the Sphinx points to the constellation of Leo at the same time (most likely at dawn on the spring equinox – the ancient start of the year) it signals a new cycle in the earth's 26 000 year precessional cycle.

The producers of the documentary felt that the ancients may have been warning us about something that occurs through this precessional cycle, perhaps great climactic disasters that might be tied in with the precessional cycle. Personally, I doubt that last point for two reasons. Firstly, the Bible says that man (NOT the earth) has only been here 6 000 years and secondly, if we were being warned of something why do it so obscurely in such a way that people can interpret the hidden signs so differently?

In addition to the mathematics, geometry and astronomy encoded at Giza is there a more pragmatic reason to move millions of stones onto the site at Giza?

Engineer Christopher Dunn, who's research on the high level of technology in the Egyptian stone work we have already looked at, has a fascinating and provocative theory that the Great Pyramid was used to generate power. He outlines this in his book "The Giza Power Plant". Below I quote from a website that summarises what he covers in his book:



## EARTH ENERGY

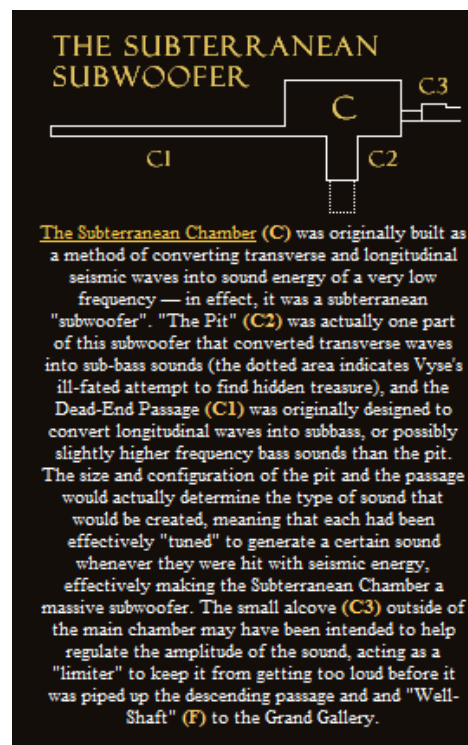
The first and most important part of the process is the tapping of earth's limitless supply of seismic energy, which creates the majority of the power plant's power. The Great Pyramid, as many researchers have discovered, was built with a degree of architectural precision that is unmatched even today. The perfectly squared base, oriented perfectly towards the four cardinal directions, is the aspect of the building that is perhaps the most commented-upon feature of the pyramid. What is less well known is the fact that the pyramid is not perfectly flat on the bottom, as one might expect. Instead, it is built upon an outcropping of limestone, the first few courses of stone built around the mound and later covering over it. This is important, as we shall see.

Dunn believes that the Great Pyramid was designed to be what is called a "coupled oscillator" with the Earth. A coupled oscillator is a device that is designed to allow the vibratory energy of one vibrating object to be picked up by a connected object so as to transfer the vibratory energy from the first object to the second object — in this case, from the Earth to the Great Pyramid. This is why the pyramid was not built upon a flat surface, but incorporates part of the Earth into its superstructure — the earth is effectively "coupled" with the Great Pyramid, allowing Earth's natural tectonic vibrations to easily pass into the pyramid. As Dunn explains, "Covering a large land area, the Great Pyramid is, in fact, in harmonic resonance with the vibration of the Earth — a structure that could act as an acoustical horn for collecting, channeling, and/or focusing terrestrial vibration." And there are other aspects of the pyramid's construction that help make it an extremely efficient coupled oscillator. For one, the Great Pyramid integrates into its design the concept of pi, where the height of the pyramid is the same as the ratio between the radius of a circle and its circumference. Just as  $2 \times \pi \times \text{the radius of a circle} = \text{its circumference}$ , so too  $2 \times \pi \times \text{the height of the pyramid} = \text{its circumference}$ . As such, like the Earth, (and all spheres) the Great Pyramid integrates into its structure the concept of pi, which helps it resonate with Earth's energy. Other aspects include the relative placement of the pyramid in the approximate center of Earth's land masses, its placement at precisely at 30 degrees north latitude, and many other interesting facts and figures that lend great weight to Dunn's theory too numerous to get into here.

The process of powering up the Giza Power Plant begins in the Subterranean Chamber (C), which was dug deep in the limestone bedrock beneath the pyramid. When the Subterranean Chamber was first discovered, the Egyptologists, caught in their "burial chamber" mindset, assumed that the rough-hewn, seemingly "unfinished" chamber had been abandoned by the Egyptians who decided instead to bury Pharaoh Khufu in a chamber higher up in the superstructure of the pyramid. However, if we look at the Subterranean Chamber as part of a larger resonating chamber intended to convert seismic energy into acoustic energy, its meaning and usage becomes clear.

The Subterranean chamber is a fairly small chamber that has two interesting features: "the Pit", and "The Dead-End Passage". The Pit is a twelve-foot deep pit (dug into deeper in 1837 by Howard Vyse, who was searching for a hidden chamber beneath it) that is just inside the entryway to the Subterranean Chamber, and the Dead-End Passage, a 2.5-foot square, 53-foot-long horizontal passage hewn into the living rock in the south side of the Subterranean Chamber. Outside of the "resonating chamber" paradigm the existence of these chambers makes no sense.

However, if one looks at these chambers from the scientific perspective, with the idea that they had been created for a specific purpose, it becomes clear that these chambers had been created as a means of converting seismic energy to sound.





Seismic energy takes the form of two basic waveforms while underground: transverse waves, and longitudinal waves. Transverse waves, also known as primary or compressional "P" waves, cause particles to oscillate parallel to the direction that the wave is traveling. Longitudinal waves, however, cause particles to oscillate perpendicular to the direction that the wave is traveling. So, in order to capture the energy from both types of waves, you would need to create two resonance chambers that are specially configured to capture and convert these two different types of energies — one vertically oriented, and one horizontally oriented — which is exactly how the sub-chambers that are found in the Subterranean Chamber complex are configured.

The Pit (C2) would be used to convert transverse waves, which would transfer their horizontal energy into its vertical sides, causing it to resonate like a subwoofer in a stereo system. The Dead-End passage (C1), conversely, would pick up and convert longitudinal waves, which would transfer their vertical energy into its horizontal walls, floor and ceiling, also causing it to resonate like a subwoofer. The reason for the rough condition of the Subterranean chamber and its sub-chambers may be that the antediluvian Egyptians had actually manually "tuned" the chamber by digging out various parts of the floors. The very rough Pit may be the bass speaker or even the subwoofer, as very low frequencies are non-directional and do not require fine-tuning.

The carefully carved Dead-End Passage, with its exact height and width of 2.5 feet, may have been effectively "tuned" to act more of a higher-frequency, "bass" speaker, slightly higher in frequency than the Pit subwoofer. If true, this implies that the entire pyramid is essentially a gigantic speaker system, where the Subterranean Chamber complex acts as the subwoofer as well as the bass speaker. Dunn believes that the frequency of the pyramid is actually 6 hertz, however, which would mean that the Subterranean subwoofer might actually be a subsonic subwoofer, producing sound that is below the threshold of human hearing. However, Dunn believes that it may still be detectable by the human body as physical vibration, which accounts for the strange feeling of "pyramid power" that people feel when entering the Great Pyramid.

Thus the Subterranean Chamber would more accurately called the "Subterranean Subwoofer". But why did the antediluvian Egyptians have a need for such a huge subwoofer? And if it was indeed intended to be a gigantic speaker system, how were the midrange and high notes produced? By examining the acoustics of the inner chambers of the Great Pyramid, we can follow where the sound would go, and hypothesize on how it would behave. The heavy bass sound, which is non-directional, would flood through absolutely every opening, and even through the superstructure of the pyramid, like water. It would first travel up the "Well Shaft" (F), and then into the descending passage, up towards the entrance, causing every part of the pyramid to vibrate.

At the top of the Well Shaft is the "Grand Gallery" (D) a long, high-ceilinged passageway that has been carved in a manner that has not been duplicated anywhere else in ancient Egypt. The walls are "corbelled", which means that they have been cut in such a way that the gallery becomes increasingly narrower in steps as one approaches the ceiling, which is covered with tiles that are angled towards the "Kings Chamber" (A). Moreover, historical reports of Al-Mamoun's failed attempt to plunder the pyramid describe similar tiles on the floor that were also angled towards the King's Chamber, which Al-Mamoun had discarded and had thrown down the well-shaft. The tiles were removed because they were actually obstructing their progress up the Grand Gallery. But if the Gallery was intended to be part of some great funereal procession, why was it arranged in such a way so as to be difficult for humans to navigate?



Motivated by the theory that the Grand Gallery had been built with an acoustical use in mind, Dunn set about testing its acoustical properties. Predictably, acoustic experiments undertaken by Dunn and his colleagues showed that Grand Gallery was indeed an acoustical resonating chamber that was specifically designed to reflect all sound that was emitted anywhere in the Great Pyramid — including the Subterranean Subwoofer — into the King's Chamber. The tiles on the ceiling, as well as the missing tiles on the floor, all acted to bounce sound back towards the King's Chamber.

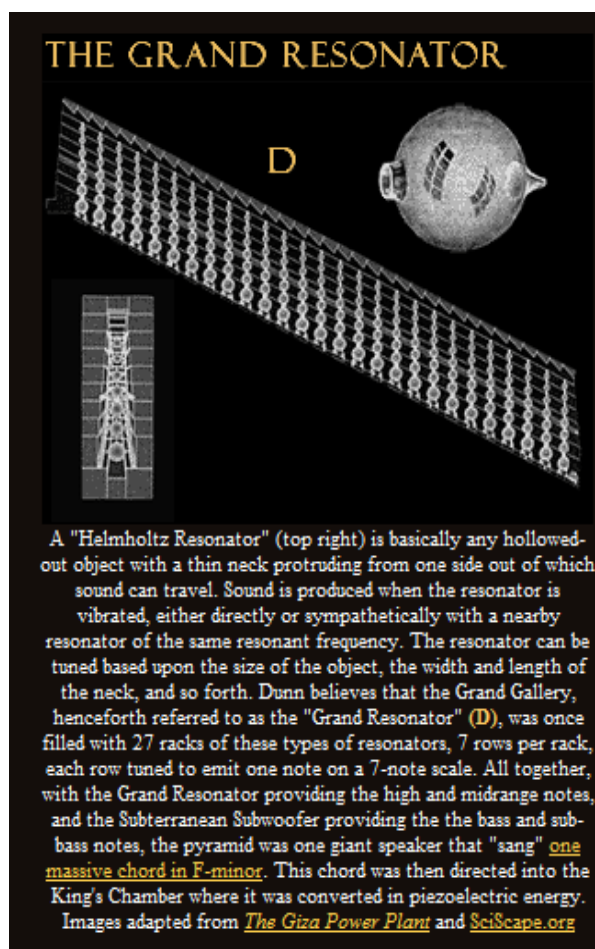
Dunn also theorized that the Grand Gallery, like the Subterranean Chamber, had been designed as a massive sound generator. Analysis of the Grand Gallery revealed ramps running along where the walls met the floor on both sides which had matching pairs of slots on either side, spaced at regular intervals, 27 in all. To explain how the Grand Gallery might also have been used to generate sound, Dunn hypothesized that there had been 27 vertical racks, which he called "resonator assemblies", that stretched all the way to the ceiling. Each of these racks held 7 rows of what are now called Helmholtz resonators, which are basically hollowed-out spheres that, when vibrated, emit sound of certain frequency that varies depending upon their size and shape. Dunn explains,

To extrapolate further we could say that each resonator assembly that was installed in the Grand Gallery was equipped with several Helmholtz-type resonators that were tuned to different harmonic frequencies. In a series of harmonic steps, each resonator in the series responded at a higher frequency than the previous one. In a manner similar to the King's Chamber's response to energy inputs — its creation of an F-Sharp chord — these resonators raised the frequency of the vibrations coming from the Earth.

To increase the resonators' frequency, the ancient scientists would have made the dimensions smaller, and correspondingly reduced the distance between the two walls adjacent to each resonator. In fact, the walls of the Grand Gallery actually step upward seven times in their height and most probably the resonators' supports reached almost to the ceiling. At their base, the resonators were anchored in the ramp slots.

Not surprisingly, there is additional evidence in the Grand Gallery to support this premise, especially in a design feature of the gallery that is seldom given much thought. This is a groove, or slot, cut along the length of the second layer of the corbelled wall. This groove suggests the resonators were held in place inside the Grand Gallery and positioned, or keyed, into the structure by first being installed into the ramp slots and then held in a vertical position with "shot" pins in the groove. Once the resonator assemblies were positioned and locked into place, the angle of the slot effectively prevented them from moving.

According to Dunn's theory, each of these racks, 27 in all, held 7 rows of Helmholtz Resonators, each of which emitted a tone equivalent to one step in the Egyptian musical scale. Though no one knows for sure what the Egyptian scale was, Dunn believes that the sound generated by the Subterranean Subwoofer and the Grand Resonator combined together played what we would now call an F-Sharp chord. Dunn arrived at this conclusion based on the fact that sound experiments proved that the King's Chamber — and indeed the entire Great Pyramid — is tuned to the F-Sharp chord. Dunn elaborates,



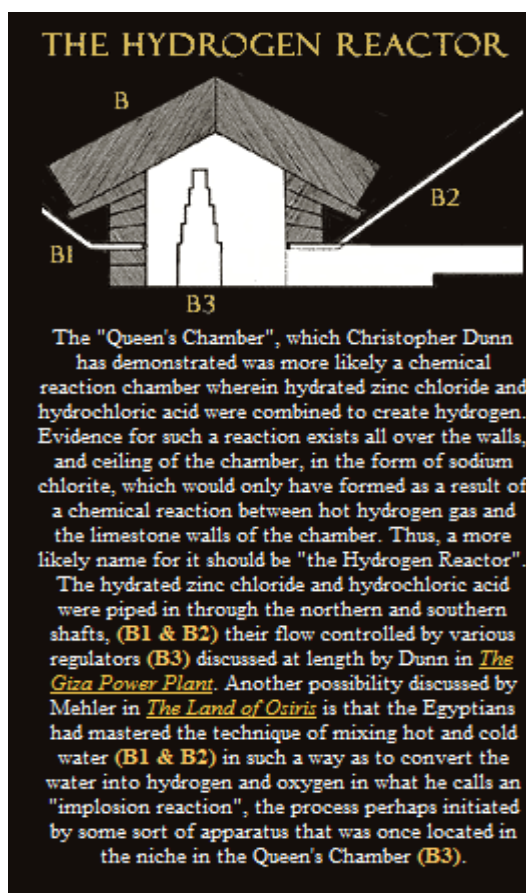
Subsequent experiments conducted by Tom Danley in the King's Chamber of the Great Pyramid and in the chambers above the King's Chamber suggest that the pyramid was constructed with a sonic purpose. Danley identifies four resonant frequencies, or notes, that are enhanced by the structure of the pyramid, and by the materials used in its construction. The notes from an F Sharp chord, which according to ancient Egyptian texts [are] the harmonic of our planet. Moreover, Danley's tests show these frequencies are present in the King's Chamber even when no sounds are produced. They are there in frequencies that range from 16 Hertz down to 1/2 Hertz, well below the range of human hearing. According to Danley, these vibrations are caused by the wind blowing across the ends of the so-called shafts — in the same way as sounds are created when one blows across the top of a bottle. Included in the program is a meeting with a Native American maker of sacred flutes from Oregon. His flutes which are made to serenade Mother Earth, are tuned to the key of F Sharp!

Based upon Dunn's research, then, it appears that the "earth power" that was used to power the Giza Power Plant came in the form of seismic energy that was converted to sound through highly sophisticated architectural and musical means. This sound was carefully tuned so as to generate an F-Sharp chord, which, acoustically concentrated in the King's Chamber, caused the granite walls, floor, ceiling and sarcophagus in the King's Chamber to resonate. The quartz crystals that make up 50% of the structure of granite resonate at certain frequencies, and when they resonate they generate a form of electricity called piezoelectricity, so when the pyramid was in full swing, the entire King's Chamber must have contained a tremendous amount of electrical energy, ready to be put to use.

## HYDROGEN

The second element that Dunn proposes was necessary for the Giza Power Plant was hydrogen. He believes that the two shafts (B1 & B2) that lead to the so-called "Queen's Chamber" (B) were once used to feed hydrated zinc chloride and hydrochloric acid into the Queen's Chamber in order to provoke a chemical reaction that would result in the creation of pure hydrogen. He came to this conclusion due to the fact that the entire Queen's Chamber — walls, ceiling and floor, as well as the passageway that led to it — had been and still is covered in 1/2 inch of a salty material that is a combination of calcium carbonate (limestone), sodium chlorite (salt) and calcium sulfate (gypsum).

Some have speculated that this salty substance was a leftover from the Great Flood, which would have indeed flooded the Great Pyramid for a time if the tsunami had reached that far. However, they forget that the rest of the pyramid is salt-free, which negates that possibility. In fact, the only possible way that the walls, ceiling and floor of the Queen's Chamber could have been covered was if the salt had been deposited as a result of hot hydrogen reacting with the limestone walls.

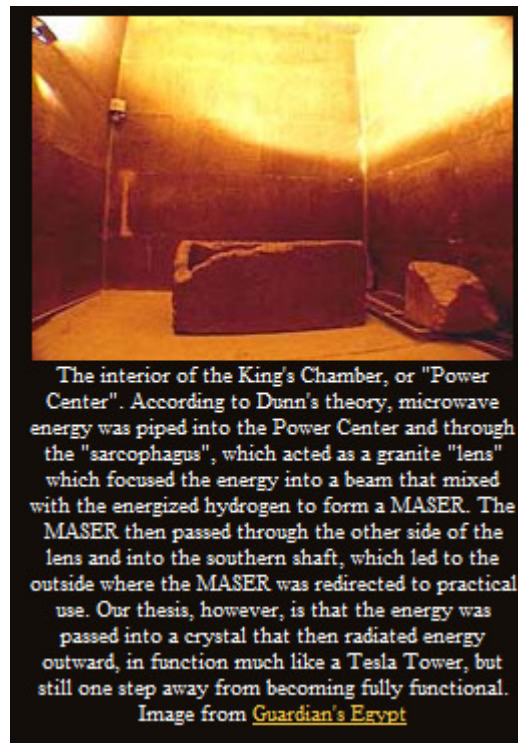


There is no other possible way, as the salty residue on the limestone walls could only have occurred as a result of a unique chemical reaction that can only be caused by hot hydrogen gas reacting with limestone. But by what means were the zinc chloride and hydrochloric acid piped into the Queen's Chamber and mixed? The answer is in fact very simple: the mysterious shafts that were found by the stonemason Wayneman Dixon in 1872. Dixon, when searching the walls of the Queen's Chamber for clues leading to other secret tunnels or chambers, chanced upon a couple of thin slits in the northern and southern walls of the Queen's Chamber. He set at the slits with hammer and chisel, and found that they were slits in a thin covering for two long shafts that were approximately 7" square and went far into the body of the pyramid.



Over a century would pass until 1991, when a German engineer by the name of Rudolf Gantenbrink teamed up with the German Archaeological Institute to investigate the largely unexplored shafts in the King's and Queen's Chambers. The King's Chamber shafts (A1 & A2) had been found to lead to the outside of the pyramid, but they could not find the Queen's Chamber shafts' openings on the outside. As part of an agreement with the Egyptian authorities, Gantenbrink had agreed to clean out the King's Chamber's shafts of all the debris that had accumulated there, and to install a ventilation system to decrease the temperature and humidity within the pyramid that had been greatly elevated by the huge number of tourists within the pyramid.

Having completed this part of his task, Gantenbrink built a robot specially designed to measure and videotape the interior of both the King's Chamber and Queen's Chamber shafts. And in 1993, Gantenbrink successfully used a robot named "Upuaut II" to successfully navigate the Queen's Chamber shafts, discovering in the process a mysterious door that terminated the shaft almost 200 feet into the body of the pyramid. Unfortunately, after the discovery of the door, there was a sudden deterioration in the relationship between Gantenbrink and the Egyptian authorities, and as a result, Gantenbrink became disheartened and abandoned the project.



Another decade slipped away until on September 17, 2002, the Gantenbrink Door was finally opened. Unfortunately, nothing was found but a small space, after which another block of stone again blocked the passageway. Dunn had expected to see the passageway go downward into the body of the pyramid, where he believed there were pumps which would feed the zinc chloride and hydrochloric acid into the respective shafts, but no shafts or holes were immediately visible (though later analysis of the video by Christopher Dunn shows what may be a small hole in the terminus of the shaft).

Unfortunately, we may not find the answer for another decade or more, or possibly much longer, due to the extreme restrictions that have been placed on archaeological excavation of the pyramid in recent years.

At any rate, Dunn's theory sounds plausible. We have seen that the Great Pyramid is essentially a gigantic speaker system tuned to generate an F Sharp chord, which in turn was directed into the all-granite King's Chamber. This resonating granite, which is made up of roughly 1/2 quartz crystals, then generated a great deal of piezoelectricity, a tremendous amount of potential energy just waiting to be released through some sort of medium. But what medium? Dunn believes that the hydrogen that was created in the Queen's Chamber, or "Hydrogen Reactor", filled the entire inside of the pyramid, particularly the King's Chamber, where it was propelled by the force of the sound waves. Dunn elaborates,

After transducing mechanical energy into electrical energy, there has to be a medium through which the electricity can flow and be utilized. In a modern power plant, steam passes across turbine blades causing rotation of a generator that stimulates electron flow through copper wires. In this power plant the vibrations from the Earth cause oscillations of the granite within the King's Chamber, and this vibrating mass of igneous, quartz-bearing rock influences the gaseous medium contained within the chamber. Currently this gaseous medium is air, but when this power plant operated, it was most likely hydrogen gas that filled the inner chambers of the Great Pyramid.

But sound and hydrogen were only part of the equation. Dunn believes that an additional force was brought in in order to generate what modern science calls a MASER — Microwave

Amplification through Stimulated Emission of Radiation. MASERS — a form of laser that utilizes microwaves as its power source, and hydrogen as its medium — can be produced by modern science with relative ease. But how on Earth, assuming the technological level of the antediluvian Egyptians was adequate to the task, could the Great Pyramid have been designed so as to capture or generate microwave energy?

#### SOLAR & LUNAR ENERGY

Another anomaly of the Great Pyramid that rarely gets any attention is the fact that the outer faces are slightly concave — not easily noticeable, but definitely a distinct architectural feature that must have been intentional. Many have speculated on the reason, but none had come up with a logical answer — until now.

Dunn, in the process of theorizing what possible use a resonating granite chamber full of hydrogen might be good for came to the conclusion that it is useless unless there is some sort of method of drawing that energy outside of the pyramid so it could be put to use in some sort of application. Eventually he did come up with answer, an answer that solved the mystery of the King's Chamber, as well as a couple of other related mysteries that have baffled Egyptologists for over a century.

In order to create a MASER, one would have to create an environment of stimulated hydrogen, and then pass a directed beam of microwave energy through that medium, the result being a powerful beam of light with a great deal of energy. We have already determined that there was an environment of stimulated hydrogen in the King's Chamber, but how does the microwave radiation become introduced? Are there shafts in the King's Chamber like those in the Hydrogen Reactor, that could have been used to introduce radiation into the King's Chamber? In fact, like the Hydrogen Reactor, the King's Chamber — which we shall henceforth refer to as the "Power Center" — also has two shafts in its northern and southern walls. However, unlike the Hydrogen Reactor's shafts, which had been narrowed to slits purposely to help meter the amount of liquid that came through them, the Power Center's shafts were wide open. Also unlike the Hydrogen Reactor's shafts, the Power Center's shafts reached all the way to the outside of the pyramid. And therein lies our answer.

Another often overlooked fact about all three of the Giza pyramids is that they were all once covered by a layer of pure white "casing stones" that gave the pyramid a beautiful, smooth, highly reflective outer finish. Unfortunately, through earthquakes and plunder by local arabs, the casing stones have mostly been removed from the pyramids. As John DeSalvo of the Great Pyramid of Giza Research Association explains,

The beautiful smooth blocks which covered the entire exterior, thus encasing the whole structure, became known as Casing Stones. At the present, only a few of these are left in position on each side at the base, most of the others having been stripped off by the Arabs and cut up to build mosques in Cairo. One of the largest remaining Casing stones is nearly 5 feet high by 8 feet at the bottom, and weighs about 14 tons. Before the Arabs began to tear off the very beautiful casing stones about 600 years ago, it was magnificent to behold. The ancient writer, Strabo, said of the Great Pyramid, "It seemed like a building let down from heaven, untouched by human hands." It has been calculated that the original pyramid with its casing stones would act like gigantic mirrors and reflect light so powerful that it would be visible from the moon as a shining star on earth.

The bright white casing stones would make an ideal reflector for both light and cosmic rays that hit Earth 24 hours a day. Yet our modern reflector telescopes have to be concave, curved like a dish, in order to reflect the light into a central focal point that then captures the radiation. Most people don't realize this, but the Great Pyramid is actually concave on all four sides — the only pyramid in the world that it like this. As such, Dunn argues, the Great Pyramid likely had collectors on its northern and southern faces that collected the solar energy by day, and the lunar energy — radiation from space, including reflected solar light off the lunar surface, and various other types of background radiation including microwaves — by night. Once again, Dunn had found the solution, and the concept of the Giza Power Plant was born.

## CRYSTAL ENERGY

Though to this point I agree with Dunn's ideas almost without reservation, it is at this point where his theories and mine diverge as to how the energy takes its final form. As we have seen, the interior of the King's Chamber, or "Power Center", was filled with hydrogen and a deafening level of noise in the form of an F-Sharp chord, which vibrated the granite of the room and of the "sarcophagus", creating a powerful piezoelectric charge that energized the hydrogen and primed the room for the introduction of microwave energy in order to form a MASER. The microwave energy was piped in from the outside through the northern shaft, the opening of which can be seen on the right, above the rock. It then passed, according to Dunn's theory, through the "sarcophagus", that was actually just a granite "lens" that was used to focus the microwave energy into a beam that mixed with the energized hydrogen to form a MASER. The MASER then passed through the other side of the lens and into the southern shaft, which led to the outside where the MASER was redirected to practical use.

I'd like to quote now from Alan Alford who has written this critique of Dunn's Power Plant theory found at <http://www.eridu.co.uk/Author/egypt/rivaldunn.html>:

### A CRITIQUE OF CHRISTOPHER DUNN'S GIZA POWER PLANT THEORY

#### Introduction

To write a popular alternative book on the pyramids of Egypt ideally requires three essential qualities: 1. a total disdain for Egyptologists; 2. a passing knowledge of the subject concerned; and 3. an alternative theory that verges on the incredible. All three of these qualities come together in Christopher Dunn's provocative study of the Great Pyramid, *The Giza Power Plant* (Bear & Co, 1998).

Dunn, a master craftsman and engineer, has long argued that the ancient Egyptians used advanced power tools in their cutting and working of granite and other hard stone. This led him to contemplate the source of the energy required by the power tools, and ultimately to propose that the Great Pyramid of Giza was the power plant at the centre of an ancient, hi-tech national grid!

Underlying Dunn's theory of the Great Pyramid is his unswerving belief that the Egyptian pyramids must have been something more than tombs for the pharaohs. Following William Fix (*Pyramid Odyssey*, 1978), Dunn hinges his view on two key observations: 1. the failure of Egyptologists to find an original (as opposed to intrusive) pyramid burial, and 2. the sheer redundancy of stone in the earliest true pyramids, the giant pyramids of Giza and Dahshur. If the pyramids were merely tombs of the pharaohs - for which the direct evidence is lacking - why were they built to such enormous sizes? And, in the case of the Great Pyramid, why was it given such a unique and complex array of internal passages and chambers?

Dissatisfied with the conventional explanation of the Great Pyramid - and of course the many alternative theories proposed as of 1998 - Dunn set out to reverse engineer the Pyramid's design in accordance with his considered view that it was in fact a hydrogen-fuelled power plant.

It has captured the imagination of thousands of readers, but can Dunn's theory possibly be true? Or, if not, could he at least be on the right lines when he argues that the Pyramid was some kind of power plant?

As I am not an expert on hydrogen power, I will not address the technical feasibility of Dunn's theory. But I would like to identify some areas where the fit between his theory and the design of the Pyramid is not as neat as he would like to think it is. Whether these discrepancies are fatal to his theory, or merely require some subtle modifications, I will leave it to the reader to judge.



## The Queen's Chamber

Let us begin in the Queen's Chamber, which is the engine of the alleged power plant. Here, according to Dunn, two chemicals - hydrated zinc chloride and dilute hydrochloric acid - were mixed together to create hydrogen gas. But where did these chemicals come from? Dunn argues that they were pumped from an underground chamber up a vertical shaft and then fed by gravity through the so-called 'airshafts' which exit in the north and south walls of the Queen's Chamber. Moreover, he surmises that the flow of chemicals was triggered via copper cables which were attached to the back of the copper 'handles' in the so-called Gantenbrink 'door'.

Three facts, however, militate against this theory.

Firstly, there is no evidence for the vertical shaft, nor the copper cables. Quite the opposite. When National Geographic's robot drilled through the 'door' at the top of the 'airshafts' in September 2002 (four years after Dunn's book was published), it revealed only a hollow cavity measuring about 8 by 8 by 8 inches. Dunn's hypothesised vertical shaft was not in evidence; nor was there any sign of the copper cables which supposedly ran from the 'handles' into the mouth of the vertical shaft. While it may be possible that the camera angle prevented these things from being seen, it would take a brave man to bet on it given that the next phase of robotic exploration is imminent.

Secondly, Dunn supposes that each 'airshaft' released chemicals into the Queen's Chamber via a tiny crack in the wall. But the case for this is not convincing. Although it is true that Waynman Dixon spotted a crack in the south wall and hence discovered the southern shaft in 1872, the historical record indicates that no such crack was apparent in the north wall at that time. The opening up of the mouths of this pair of shafts has unfortunately destroyed the evidence either way. Nevertheless, the most likely scenario is that the shafts were originally sealed at their lower ends - perhaps as conduits to secret chambers - and that the crack in the south wall was caused by settlement over thousands of years.

Thirdly, even if we give Dunn the benefit of the doubt concerning the two points above, it remains hard to understand why the builder would go to the immense trouble of building tiny sloping shafts 213 feet long when they could have created the same head pressure and flow by means of two reservoir pools situated immediately above the Queen's Chamber, saving on pumping costs as well as building costs. Dunn fails to explain the length and bearings of the shafts, and ignores the evidence cited by Gantenbrink for the existence of secret chambers beyond the 'doors' and stone plugs.

Still, for the sake of argument, let us put these difficulties to one side, and follow Dunn's theory as the hydrogen gas emerges from the Queen's Chamber.

## The Well Shaft

According to Dunn, hydrogen gas and spent chemicals flowed down the Queen's Chamber Passage toward its intersection with the bottom part of the Grand Gallery. There, the hydrogen gas passed through perforations in the bridging slab and travelled up the Grand Gallery, while the spent chemicals drained off into a large hole, 28 inches square, at the bottom of the west wall of the Gallery. Let us focus for now on those spent chemicals.

Once again, we hit problems.

Firstly, if the flow of chemicals was determined by two tiny cracks in the walls of the Queen's Chamber, why was it necessary to have a drainage shaft measuring 28 inches square? Dunn attempts to get around this problem by supposing that the drain - the entrance to the Well Shaft - was enlarged by the guardians of the Pyramid when they entered and inspected its upper parts, long after it was built. In his support, he quotes Petrie, who asserts that the entire Well Shaft was cut out by the builders as an afterthought. But both Dunn and Petrie overlook the point that the uppermost part of the Well Shaft is built with neatly squared blocks, whereas the section immediately below it is a rough tunnel through the lowermost layers of masonry. Therefore, while the inspection scenario may explain the rough tunnel and the violent removal of the ramp stone at the Gallery's bottom west corner, it does not provide any basis for the belief that the shaft in between was enlarged. Furthermore, Dunn seems to accept (p. 214) that the next section of the Well Shaft, the part lined with limestone blocks immediately below

ground zero, was part of the original design and construction. The evidence, therefore, suggests that the upper section of the Well Shaft was cut with dimensions of 28 by 28 inches from the outset - a size inconsistent with the function that Dunn attributes to it.

Secondly, Dunn supposes that the spent chemicals flowed down the Well Shaft into the Grotto, where they were directed into a hole six feet deep; they then soaked away through the floor which consists of packed earth. To make this scheme work, he has to assume that the original Well Shaft terminated at the level of the Grotto. The lower part of the shaft, he believes, was cut by the guardians in order to inspect the upper parts of the Pyramid (as proposed by David Davidson in 1927). But Dunn misses a key piece of evidence which indicates that the Well Shaft was cut from the top downwards through the bedrock. To quote J.P. Lepre: 'The Well Shaft was dug out from the top down. This is indicated by the fact that its bottom end penetrates a few feet below its lowermost doorway. If it had been hewn from the bottom up, this bottom section would surely have been level with its doorway at that point.' Lawton and Ogilvie-Herald likewise write in *Giza The Truth*: 'There is incontrovertible evidence that the Well Shaft is an original feature which was dug from the top down'.

This in itself is not fatal to Dunn's argument. He could modify his theory to have the chemicals drain all the way down the Well Shaft into the Subterranean Chamber and its Pit (and he does indeed allow for this possibility on p. 206 of his book). But if this was the aim, why did the builders connect the Well Shaft into the side of the Descending Passage and not take it directly into the Subterranean Chamber? Why make the chemicals drain along the lower forty feet of the Descending Passage - an area in which sensitive machinery and equipment would surely have been housed if the Pyramid was a power plant?

### The Grand Gallery

Returning to the hydrogen gas, Dunn claims that it filled the Grand Gallery and travelled into the King's Chamber, where it was used to create microwave energy. To this end, it was necessary to excite the hydrogen atoms by means of acoustic and electromagnetic (piezoelectric) energy.

How was this achieved? Acoustic energy is the key to Dunn's hypothesis. One of the most interesting ideas in his book is that the Pyramid was coupled acoustically with the Earth and resonated in harmony with it. He makes a strong case that the King's Chamber in particular was designed to resonate at certain frequencies, hence the granite beams in its tower-like superstructure and the nodular design of its floor. The purpose of this, according to Dunn, was to generate piezoelectric energy from the quartz-bearing granite of which the chamber was made.

But Dunn must also explain the unique design of the Grand Gallery, and for this reason he makes the crucial - and in my view mistaken - assumption (p. 160) that the vibrations of the Earth were of insufficient amplitude to drive directly the granite beams above the King's Chamber. The purpose of the Gallery, he surmises, was to collect the vibrational energy over a large area and direct it into the King's Chamber - in the form of airborne sound - to increase the acoustic energy to the required level.

Here in the Grand Gallery further problems emerge. Dunn claims that the Gallery was fitted with twenty-seven sets of Helmholtz resonators, fixed into position by means of the twenty-seven pairs of niches in the side ramps and the pair of grooves in the side walls. But both the niches and the grooves testify against this theory.

The niches in the side ramps of the Gallery are tucked away next to the walls, where they are overhung by the first of the seven corbels that give the Gallery its distinctive design. They are not in a suitable position to act as supports or anchor points for any kind of structure - hence the peculiar shape of the ladder holding the resonators in figure 41 of Dunn's book. The true purpose of the niches remains a mystery, but they would not have contained anything taller than 7 feet 6 inches, well short of the 28 feet height of the Gallery.

The grooves in the side walls are also a problem. Dunn suggests that the ladders of resonators were held in place by 'shot pins' (presumably made of metal or stone) which slotted into the grooves. But this is inconsistent with the fact that the grooves are continuous, running the whole way up the Gallery from bottom to top. If Dunn's theory was correct, we would expect to see fifty-four bolt holes in the walls, not two continuous grooves.

It gets worse. J.P. Lepre reports that there are chisel marks all the way along the grooves, indicating that something was once contained between them. In his book *The Egyptian Pyramids*, p. 82, he writes: 'Among the interesting architectural features of the Grand Gallery are two grooves cut into the east and west walls... Hundreds of rough chisel marks are staggered along the top edges of these grooves... It is certain that something did traverse the Gallery'. Lepre speculated that the Gallery might have been roofed by 'cedar panels inlaid with gold', while for my part I have suggested wooden panels painted with stars (signifying the creation of the stars). But whatever it was that once spanned the Gallery at half its present day height, it completely fouls up Dunn's theory, as well as a few other theories to boot.

### The Granite Plugs and The Antechamber

Dunn's theory of the Grand Gallery also drives his interpretation of the Granite Plugs (in the Ascending Passage) and the Antechamber to the King's Chamber.

The Granite Plugs, he suggests, performed two critical roles in the power plant. Firstly, they would have allowed the operators to monitor the energy level in the Gallery, by means of vibration sensors attached to the bottom plug. And secondly, they would have allowed the operators to transmit an out-of-phase interference sound wave into the Gallery, to prevent the vibrating system from running out of control. But if this was the purpose of the Plugs, then why did the builders not fit a single plug? Why was it necessary to fit three? Dunn does not explain. Moreover, he does not explain why the bottom plug was hidden behind a camouflaging stone, the so-called prism stone. Why would the builders have done this, if the operators needed regular access to the Plugs?

The Antechamber, according to Dunn, contained an acoustic filter that allowed only certain desirable frequencies (apparently an F-sharp chord) to enter the King's Chamber. These input frequencies were matched to the prime resonant frequency of the King's Chamber. However, there are some aspects of the Antechamber's design that Dunn's theory does not address, such as the four vertical grooves in the south wall, and there are other aspects that are not adequately explained, for example the purpose of the Granite Leaf and the standing space in front of it, and the fact that the Antechamber is made primarily of granite (as if to suggest that it was built to resonate in its own right, like the King's Chamber).

### The King's Chamber

Finally, we come to the King's Chamber, where the acoustic energy supposedly caused piezoelectric energy to be released by the quartz in the granite. According to Dunn, the prime resonant frequency of the chamber would have been matched to that of hydrogen, thereby ensuring that the hydrogen gas which filled the room would absorb the acoustic and electromagnetic energy efficiently and be pumped to a higher energy state.

But how was this potential energy harnessed and utilised by the Great Pyramid builders? Here, Dunn stretches our credulity to the limit. His proposal goes like this: a microwave signal from space entered the King's Chamber via its northern 'airshaft' and had its power boosted by a 'crystal box amplifier' contained in the sarcophagus. This microwave signal then stimulated the energised hydrogen atoms, causing them to emit microwave energy. This process having repeated itself exponentially, the microwave energy was collected in a receiver contained in the mouth of the southern 'airshaft' and thence up through the shaft to the outside of the Pyramid. There, it was beamed up to an orbiting satellite, which in turn channelled the energy back to Earth to provide electricity.

There are several comments to be made here.

Firstly, the mouth of the northern airshaft is cut too high in the wall to align with the sarcophagus, so any incoming microwave signal would have passed right over the top of it. It is not clear how it could have interacted with any equipment inside the box.

Secondly, Dunn assumes that the sarcophagus had no lid (pp. 189, 222) and that the signal interacted with hydrogen atoms inside the box. But there is clear evidence that the sarcophagus did originally have a lid and that it was hermetically sealed (see my book *Pyramid of Secrets*, pp.



73-74). I am not entirely certain how this affects Dunn's theory, but there could not have been any hydrogen in the box.

Thirdly, the mouth of the southern airshaft is cut too high in the wall to align with the sarcophagus, so it is difficult to see how the output from the box could have been channeled into the shaft.

Fourthly - and worst of all - Dunn insists that the entire lengths of the northern and southern airshafts would have to have been lined with gold-plated iron in order to have an efficient conduit for the electromagnetic radiation (pp. 186, 221-22). This is quite simply at odds with the facts, as Dunn well knows. For both the shafts have been surveyed by robot and not a trace of a metal lining has been found (the iron plate found by Vyse in 1837 was embedded in masonry close to the southern shaft but it is not clear whether it actually formed part of the shaft). So, what happened to the iron? How was it removed from tiny shafts measuring approximately 8 by 8 inches to their entire lengths of 235 feet and 174 feet respectively? A job for the tooth fairies?

#### Conclusion - My Personal View

Dunn's power plant theory has some good points, notably the idea of resonance in the King's Chamber, but on too many aspects it is at odds with the physical evidence inside the Great Pyramid. The theory requires, at the very least, a major overhaul, and in its present form is unlikely to become the rallying point for an attack on orthodoxy which Dunn sees as an urgent necessity. On a personal note, Dunn is a likeable and intelligent man who evidently possesses boldness of thought and an open mind, and it will be interesting to see whether he can now extend these qualities to the revision - or even abandonment - of his theory!

Alford notes some obvious flaws in the details of what Dunn proposes. The core idea of the pyramid being a "coupled oscillator" and the purpose of the subterranean chamber appears quite sound. The resonance in the Kings Chamber does lead one to think that acoustic technology was involved.

The choice of granite for the Kings Chamber is an interesting one. Due to its hardness it retains its dimensions over time allowing for the measurement precision noted previously but it also should be noted that granite is crystalline in nature making it possible to be used in the production of piezoelectricity. Wikipedia has this to say about piezoelectricity:

Piezoelectricity is the electric charge that accumulates in certain solid materials (such as crystals, certain ceramics, and biological matter such as bone, DNA and various proteins) in response to applied mechanical stress. The word piezoelectricity means electricity resulting from pressure. It is derived from the Greek piezo or piezein (πιέζειν), which means to squeeze or press, and electric or electron (ἤλεκτρον), which stands for amber, an ancient source of electric charge. Piezoelectricity was discovered in 1880 by French physicists Jacques and Pierre Curie.

The piezoelectric effect is understood as the linear electromechanical interaction between the mechanical and the electrical state in crystalline materials with no inversion symmetry. The piezoelectric effect is a reversible process in that materials exhibiting the direct piezoelectric effect (the internal generation of electrical charge resulting from an applied mechanical force) also exhibit the reverse piezoelectric effect (the internal generation of a mechanical strain resulting from an applied electrical field). For example, lead zirconate titanate crystals will generate measurable piezoelectricity when their static structure is deformed by about 0.1% of the original dimension. Conversely, those same crystals will change about 0.1% of their static dimension when an external electric field is applied to the material. The inverse piezoelectric effect is used in production of ultrasonic sound waves.

Dunn has some sound evidence for his belief that chemicals flooded the Queen's Chamber with the sodium chlorite found throughout it, though Alford exposes some problems in how the chemicals were fed into it.

The theory on how power was transmitted and used by the pyramid builders is quite fuzzy and more work needs to be done on a more coherent theory along with addressing the problems in a number of Dunn's details. That said, he may well be on the right track even if there needs to be serious revision done on the details. I do not have the scientific expertise to comment any further or offer any alternate to some of those details which need to be altered.

My strong personal feeling is that there is much more to the purpose than just encoding mathematical and astronomical data as part of the great worldwide survey done that included many megalithic sites and that it has some practical purpose to motivate such an enormous amount of work.

## Summary

My overall conclusions about the pyramids are the following:

The Sphinx and its temples bare water erosion consistent with intense rainfall such as the Biblical Flood or the rainfall period long before Dynastic Egypt. The Giza pyramids do not have this erosion and were hence built in the early post-Flood or post rainfall period just before Dynastic Egypt. The Giza pyramids were the first of the pyramids in Egypt in the early post-Flood or post rainfall period just before Dynastic Egypt.

The builders incorporated the position of the pre-existing Sphinx into the geometric plan. The Giza pyramids encoded much mathematical and astronomical data (such as matching Orion's Belt) as part of the great worldwide survey done that included many megalithic sites. It is quite likely that the chambers were designed to take advantage of acoustic technology and the pyramid may have been a coupled oscillator to tap into the earth's very low frequency seismic energy and perhaps converted to usable power as Chris Dunn has theorised.

Microgravimetry appears to confirm the existence of an internal spiral ramp as theorised by Houdin. As theorised by Henk Koens, rolling stone carriers (probably slightly elliptical) were most likely used to roll and transport the blocks, probably with oxen to the site and a winching system was likely used to transport them up the internal spiral ramp. Houdin's theory of a trolley with large stones in the Grand Galley being used as a counterweight to help lift the granite blocks into place appears to be a strong contender for its purpose.

Wondering and admiring them, the Old Kingdom pharaohs were moved to copy them to make a name for themselves starting with the so-called Step Pyramid and then the pyramids of Sneferu at Meidum and Dashur, the latter adding to the Giza sky-ground map as did the inferior third and fourth dynasty pyramids at Abu Ruwash and Zawyat-al-Aryan.

Following them came Unas' pyramid where hieroglyphics are added in pyramids for the first time, though the construction work of these Old Kingdom pyramids are much inferior to the Giza pyramids. Perhaps not understanding the purpose of the Giza pyramids they mimicked certain features like adding an empty sarcophagus with not even a hint of bones or a body let alone any treasure.

Finally, the age of the Egyptian pyramids ended with the mud brick pyramids of the Middle Kingdom which the Israelites played a part in building when in Egypt.