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"The Old Kingdom: The Age of the Pyramids"

Cynthia May Sheikholeslami

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Cynthia May Sheikholeslami, "The Old Kingdom: The Age of the Pyramids"
January 13, 1978
Portland State University

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LARRY: [testing the microphone] One two three four five and six, seven eight nine and ten, eleven twelve thirteen fourteen fifteen sixteen seventeen eighteen nineteen twenty, okay.

SPEAKER: [off mic, unintelligible]

LARRY: I can hear it again...

SPEAKER: That's your ears, Larry.

LARRY: No, that is not. I can hear it from down here.

[pause]

HOST: Well, I'm certainly glad you're here. After having spent a considerable amount of time writing out things concerning this series, I was having tea and a young woman came in and asked me if the series was tonight, and I said well, no, it was February the thirteenth. [laughter]

[audience speaking]

HOST: Can you hear?

AUDIENCE: No.

Host: Is it on now? [audience in background] Well, I'm the test anyway, is that better?

AUDIENCE: Yeah.

HOST: Now if we can just simply keep the devils out of the projectors. If anything can go wrong it will, and the bulbs will burn out and I'm sure Bonneville will fail. [laughter]

The speaker for this evening is highly recommended by a number of well-known listeners. But I really should make a first-rate introduction to someone who won't even come forward, the person who really organized the whole thing. And I had very little to do with it, and here I am. That is Renee Bierman, who literally did the whole job. Dr. Pearson was of some help.

Well, enough said about that, the... he'll get me for that too. Ms. Sheikholeslami is a graduate from Barnard College, has done a considerable amount of fieldwork in archaeology, has a considerable name in the field of Egyptology. She could probably tell Wallis Budge a thing or two, and is at present in that position of being a project manager of the tomb, the Tutankhamun show in Seattle. Well, I don't know how many tickets they've sold; I understand Los Angeles County is going to have to import lowans. But she has planned three separate lectures. Tonight, she will deal with the age of the pyramids, and I'm not exactly sure if she'll be open to questions as to whether it will cure gout [laughter] or power us to an experience of the third kind, but for our pleasure and I'm sure for our edification, Ms. Sheikholeslami please.

[applause]

CYNTHIA SHEIKHOESLAMI: Thank you very much. I would like first of all to ask if you can all hear me, because if there is a mummy's curse, it has definitely struck me tonight and I have a cold. [laughs] So please tell me if anyone can't hear, and I will endeavor to speak up more loudly. And I also endeavor to find the podium light, when it turns on it's very nice. [pause] Right, I never look on the left hand side. I guess that's... [laughter] all you lefties out there should've come out and helped me.

It's a great pleasure for me to be able to come to Portland and speak, and to talk to you something about the history and culture of ancient Egypt. And I hope that the remarks I do have to make will enable all of you to have the opportunity to visit the *Treasures of Tutankhamun* exhibit in Seattle next summer, or perhaps this winter in Los Angeles if you're having winter vacation, or perhaps even the summer after that in San Francisco, or one of the other places where it may be; that it will help you to understand and appreciate the objects in the exhibit to a more full extent and perhaps interest you in finding out something more about

the civilization to which I have devoted my professional career. If we could have the lights and the first slides please.

Ancient Egypt didn't speak German, it's just that the relief map of Egypt that you see on your left happens to have been made by a German slide company and so they have put it in German. [laughter] But I wanted to have something to give you an idea of what the landform of Egypt was like. The red line outlines the modern country of Egypt, but Egypt is largely a desert country. It is only the narrow valley desert, the narrow depression which encompasses the Nile River, that is basically habitable by man.

The Nile Valley formed the locus of ancient Egyptian civilization and still forms the area in which modern Egyptians live. It's roughly three percent of the total area of the country, with a population now of between thirty five and forty million. In antiquity, probably a population of about four to seven million. The Nile, because it is literally the lifeline of the country, has always been an important factor in ancient Egyptian civilization, as it is today. The country was divided according to the course of the river into two areas, which the Egyptians and Egyptologists know as Upper and Lower Egypt. This is something that causes a lot of confusion for Westerners, as we're used to thinking of "up" as the top of the map. Upper Egypt for the Egyptians, however was the southern part of the country, which is in fact the upper reach of the river as far as they're concerned, as the river flows north into the Mediterranean Sea. The Delta, shaped like the Greek letter delta upside down, or Lower Egypt, where the mouths of the Nile branch out as they empty into the Mediterranean, is in fact Lower Egypt, Northern Egypt for the Egyptians. There was always an administrative division between the two parts of the country, but the kings ruled over a united land, Upper and Lower Egypt.

Our little friend the hippopotamus on your right serves as a reminder of the kind of things that can lurk in the waters of the Nile and in fact, although at some times he was regarded as a kindly beast by the ancient Egyptians, he could also be the embodiment of evil, perhaps reflecting the course of the Nile itself, which when it was in low waters was a kind and beneficent river, but at the height of the flood could wreak as much destruction as it provided benefit for the land.

The area that is irrigated by the Nile is really rather limited. In the Delta, it is some hundred miles across, but in most of Upper Egypt, that is from Cairo six hundred miles south to Aswan which we see here on the left, the floodplain of the river is nowhere greater than thirteen miles in extent. And in many cases, as here in Aswan, it is only a few meters from the edge of the river in which anything grows, and beyond is a desert which is almost totally barren and has been for at least the last five thousand years.

The Egyptians regarded the Aswan area, where a granite barrier crosses the river and forms a cataract in the river, as the southern boundary of their country and the place from which the river issued forth to provide them with life. The river's provision of life was really a rather simple matter: as the annual inundation rose, it carried with it a great deal of silt from further south in Central Africa, which was during the course of the flood deposited on the flood plain of Egypt. When the waters receded, what was left was a thick layer of muddy silt, and basically all you had to do, as many Nubian farmers still do today, was poke a stick in it, drop in your seeds, cover them up, go away and let the sun bake at them until they germinated and grew and matured, and come back and harvest the crop. Of course, you could begin to go a little fancier if you wanted to, but essentially the conditions for agricultural existence were very simple in Egypt, it wasn't an environment that the population had to work hard to overcome. It used to be thought that the prehistoric environment of Egypt was a great swamp, like the Sudd swamp in the Sudan, that had to be drained as a result of massive government effort, but the work of geologists and geographers in the last few decades has demonstrated clearly that this was not the case. And in fact agricultural existence was almost a natural thing in Egypt.

The Egyptians lived very close to nature, close to their river, close to their land, and shut away from the surrounding world very much by the barren deserts that bordered the valley on either side. They were very close, then, to the natural plants that grew in the river valley and two of them became important symbols in Egyptian art and architecture. And you will see them repeated over and over again, most particularly in the *Treasures of Tutankhamun* material, which we will look at in greater detail tomorrow afternoon. But those plants are the familiar lotus on the left and papyrus, which they also used as a source of writing material, on the right. The papyrus was a symbol of Lower Egypt, the Delta area, northern Egypt, and the lotus was the symbol of Upper Egypt, the long stem, as it were, of the flower of the Nile Valley.

The Nile always played an important role in Egyptian civilization, and it is not surprising from the prehistoric period to find the earliest artifacts already showing influence of this basically sort of aquatic environment in the midst of the desert. From the Egyptian collection in the Seattle Art Museum on the right, you see a slate palette in the shape of a Nile fish which was used for grinding the coloring materials like malachite that were used to color cosmetics, eye paint, and similar things. The Egyptians in the prehistoric period early developed a great range of artifacts, many of which were however of a rather utilitarian nature, such as these slate palettes for grinding cosmetic paints, knives which could be used for skinning animals, harpoons, fish hooks, things like that that would be necessary for survival, combs for the hair, even though they might be very elaborately decorated; and they also developed a very sort of utilitarian pottery.

In contrast to a lot of other near ancient Near Eastern civilizations, the prehistoric pottery from Egypt and in fact even the dynastic pottery from Egypt is rather mundane and without a great deal of interest, although it still has archaeological significance. But the earliest pottery was this black-topped red ware, the black top being formed by carbonization as the pot is being fired. Some of these are decorated with fanciful animal motifs such as elephants, and you also have occurring the familiar sort of mother goddess figurine, about which I don't want to get into a discussion here as to whether they're really mother goddesses or not, but it's a familiar type of figurine.

Towards the end of the predynastic period, there is noticeably an accomplishment in beginning to be able to work with hard stone, represented by the collection of vessels in the East Berlin Museum on the right. This is an ability that the Egyptians brought to pure mastery during the Old Kingdom and continued always to be able to do very well. Considering that they had only copper tools and quartz and other types of stones to work with, in trying to hollow bowls out of such materials as diorite and granite as well as the softer alabaster and limestone, they did a remarkable job in producing these really very technically, technically perfect stone vessels. They also began to make furniture legs in the form of animal legs, a feature that you will notice very prominently in the material from Tutankhamun's tomb.

In the period just before written history occurs in Egypt, about 3000 BC, the type of pottery that you see on the left was very characteristic, again you'll notice the boat design on the side of it, this vessel being in the Seattle Art Museum collection, another influence of this sort of aquatic environment, but this buff pottery with a reddish brown decoration on it is very characteristic of the last prehistoric period in Egypt.

How long ago really is all this? It's very hard for us to think in terms of even five hundred years ago, let alone five thousand years ago. But when we talk about the beginning of Egyptian history, we are talking about five thousand years ago. For us, only two hundred years ago marks the beginning of our history as a nation, an event which is being celebrated by the Egyptians for us by sending the *Treasures of Tutankhamun* exhibit to us as a bicentennial birthday present. But five thousand years before this, their own civilization began to write records down. And written history begins in Egypt and conventionally we begin Egyptian history from a time about three thousand years before Christ. However, if one looks at a scale drawing of a ribbon of time, such as this mural recently completed in the [Page?] Museum in Los Angeles County Park, that will form a nice backdrop to their exhibit of the Tutankhamun treasures, we can begin to see something of how it all fits in the scale of our own history.

At the top is the origin of the earth as a hot gaseous ball about four billion years ago. Drawn to scale are the various evolving organisms going down through the development of our own planet, until just at the bottom of the chart that little yellow line at the very end marks where the beginning of written human history. Five thousand years seems an infinite time long ago to us but it is a drop, a small sliver, on the ribbon of time in the history of our planet. And it's rather awesome to think of how we all fit into the scale of things.

Egyptian history is rather conveniently divided, for those of you who are not good at memorizing dates, as I am not at all, I always figure if it can be written down in a book it was put there so I could look it up, not have to memorize it. [laughter] So I always try and look it up, and unfortunately now I have to carry about twenty thousand books with me to look up all the things I'm supposed to know. Nonetheless, for dates it can be rather simple. The bottom of the chart on the right represents 3000 BC, and tonight we are going to talk about the bottom fifth of the chart, approximately, from about 3000 to 2000 BC. This represents the early dynastic and Old Kingdom period in Egypt. The years from about 2000 to about 1750 BC will be the topic of our discussions tomorrow morning, as we consider the Middle Kingdom, Egypt's golden age or classical period. From about 1570 to 1070 BC, in other words about the second, or about the third tenth of that chart, will be the topic for tomorrow afternoon when we discuss the New Kingdom in Egypt. The New Kingdom, of course, is the period that includes the reign of Tutankhamun whose treasures will be coming to Seattle next summer.

For many Egyptologists, Egyptian history then stops at about 1000 BC. In fact for me that's really where it begins, as I have done a lot of my own work in the period between 1000 and 500 BC in Egypt simply because as a student, I became so frustrated at having all the books stop at 1000 BC, and nothing picking up until you got to the Greek classical world about five or six hundred years later. I always wondered what was going on in that black hole, apparently not the same thing that is going on in the black holes that the physicists are writing about but... [laughter] I don't know, maybe it won't be so different when we all get finished with it anyway.

Then we have more or less roughly divided our chart in half, and we will more or less stop at that period about the time of the birth of Christ, after the Greek domination of Egypt. And just to remind you that Egypt was a Christian country for some five hundred years, from shortly after the birth of Christ until the Islamic conquest of Egypt in 641 AD, a topic which is very admirably dealt with and studied by Portland State's own Middle East Center. I'm sure many of you are familiar with all that they have tried to tell you about what has happened subsequently for fifteen hundred years of Egyptian history. I'll leave that part to another lecture, but I just want to place it in context for you. Egypt is today a Muslim country and the language is Arabic.

But for the ancient Egyptians the language was a different language, written in signs called hieroglyphs, which are explained to you in a little bit more detail further on, but you can see at the top of the panel on the right what hieroglyphs look like. The language itself is a sort of hybrid language that has affinities to the Semitic languages of the rest of the Near East, such as Hebrew and modern Arabic, also ancient Acadian and Phoenician. It also has relationships to the languages of Africa. Such modern survivors as Swahili and Berber show connections with some of the verbal and grammatical patterns of ancient Egyptian. So we usually classify it as a partly Semitic and partly African language.

The unification of Egypt, the two parts of Upper and Lower Egypt which were probably separated into discrete areas during the predynastic period, took place at just about the time writing appears in Egypt, and is conveniently summarized for us in one monument which you see on the left, which is a slate palette now in the Egyptian museum in Cairo representing a king wearing the crown of Upper Egypt, slaying enemies, and other of his prisoners are floating along at the bottom of the palette. This is a ceremonial version of one of those cosmetic palettes that we looked at a few minutes ago. On the other side is the same king, who is named Narmer, usually identified with the character the Greeks called Menes, and his name is written at the very top. But on the other side he is shown wearing the crown of Lower Egypt, again slaying enemies and showing that he has defeated a battle. The fact that he king appears in the two crowns on one monument seems to indicate that it commemorates the unification of the country into one united whole. And henceforth for three thousand years of history, the Egyptian pharaohs always call themselves the king of the two lands, the king of Upper and Lower Egypt.

Egyptian civilization very rapidly took on characteristic forms, and the panel belonging to an official of the third dynasty who lived about 2650 BC named Hesy-Re is shown on the right. It decorated part of his tomb and he's shown with the equipment of a scribe. The Egyptians were a literate people, although a small proportion of the total population was literate. But anyone who could learn how to read and write hieroglyphs could join the Egyptian bureaucracy, and once having joined the bureaucracy, if he was proficient at his task, he could rise from the bottom to the top. Very much in a sort of Horatio Alger fashion very familiar to us from our own recent past. So it was a matter of considerable pride to an Egyptian to show himself as a member of the bureaucracy, holding that thing which made him part of the ruling class of his country, the scribal equipment. Although Hesy-Re also had many other important offices.

You'll notice something about the carving of his figure which is distinctively Egyptian and usually very bothersome to people when they first see it, is they can't quite understand how it works. The head is shown in profile, the upper torso is shown as if you were looking at it head

on, though someplace in the middle in an area not clearly defined, it turns again into profile and you see the lower torso and the rest of the body in profile. The arms are usually also shown in profile. If you look closely at the head, however, you'll see that the eye is not shown in profile but rather as if you saw it head on. The Egyptians had a different point of view about how to represent a figure than we do. We try and represent it as it actually looks to us. For them, they wanted to show it in its most characteristic form, which wasn't necessarily realistic as we would term it. But the most distinctive part of a human face, for example, is the profile, however if you look at an eye in a profile it's just sort of a little line there, it doesn't show anything, so it's better to show that as if you were looking at it straight on. The torso is much more identifiable; if you look at the upper part of the shoulders straight across, but we can all tell whether we've been sticking to our diets or not by looking at the lower torso in profile. [laughter] And the same with the legs and the feet and the hands. So this was their outlook on how to represent the human figure, something that's very characteristic of Egyptian art. I think as you look at it more and more as we go through these lectures, you will begin to have a feeling for how terribly accomplished they were at making these rather awkward transitions between different views of the parts of the human body.

Also in the third dynasty, contemporary with the panel of Hesy-Re, we have the first monumental stone architecture in world history. Built as a tomb for one of the most important early Egyptian pharaohs, a man named Djoser. His funerary complex is at Saqqara, which is not far from modern Cairo, just at the junction between Upper and Lower Egypt. This was the area of the capital of Egypt in the Old Kingdom, which was located at a place called Memphis, which is not far also from modern Cairo but more close to the river's edge. And the cemetery for the royal capital at Memphis was the site we now know as Saqqara.

The Egyptians built things for the living person, the royal palaces included, out of rather temporary materials. What they wanted was for their life to continue on eternally after death very much in the way that it had been during life, but they realized that life was a mortal thing, at least that the body had a finite term of existence, so therefore they made the house that you lived in everyday while you were alive out of mud, reeds, things that would fall apart fairly quickly. But for your eternal life, you had to have something very durable. And in this case the Egyptians imitated in stone the form of the royal palace, the palace that the king would've lived in during his life. At the entrance to the complex, which has a large enclosure wall around it, as you see on the left, there is imitation in small blocks of stone of the way a brick wall is constructed, including the niching that helps to give it a textural variation as well as providing some initial support for the walls. Entering inside the complex, it is laid out in sort of an imitation of the country itself. There are different chapels and buildings dedicated to Upper and Lower Egypt. Looking on the right, you are looking across some of these chapels that border a

courtyard where the king was supposed to have to run a periodic race in order to show that he still had the physical prowess to remain as ruler, a custom that still survives in some African countries.

The monument in the background is the beginning of something that has probably fascinated more people outside of Egypt than anything else: the building of pyramids. The structure you see here is obviously of a pyramid shape, though not a true pyramid, as it moves up in steps, not in a smooth line. It originally started out as being a very different kind of tomb, made like a long low bench which was called a mastaba in Arabic, and these mastaba tombs were gradually enlarged and superimposed until they wound up with a stepped structure. Exactly why that happened, we don't know, but I will talk about it in a few minutes when we discuss something about the meaning of the pyramids themselves.

Djoser, who we see on the left and on the right, had in his funerary monument some very beautiful works of art. On the right is a scene from one of the subterranean chambers, showing the king engaged in running this athletic race wearing the tall crown of Upper Egypt. The relief, which is very difficult to photograph, is barely a few millimeters off the back surface of the stone on which it is carved, but still shows an extremely fine modeling and a great deal of variety of detail. And on the northern side of his pyramid, Djoser had a statue of himself placed in front of a temple in order to be able to oversee the cult ceremonies that were performed in the temple, so that he would know they were being carried out properly. He is represented with a lion's mane around his head; the association of the lion as the king of beasts which is perfectly familiar to all of us today.

But it is the pyramids at Giza that really attract our attention, and the Sphinx that accompanies the second one of them most of all. It is a mysterious thing to us because we don't really understand it. And because we don't really understand it, we're somewhat afraid of it, as Napoleon is represented as being in a Cruikshank cartoon on the left; when he met the Sphinx he was so terrified he had to run away. And when you see it looming out of the desert during the *son et lumière* performance at night, it does in fact seem a rather awesome and mysterious creature.

But the three pyramids at Giza do dominate the entire countryside. They were built during the 4th dynasty of Egypt, a period roughly around 2400, 2500 to 2400 BC, and range in chronological order from north to south. Viewed from the cultivated area close to them, on your right is the most famous one, the largest one, built by King Cheops.¹ The second one which

¹ Sheikholeslami uses the Greek versions of the names for the pharaohs associated with the pyramids, a convention followed in this transcription.

still retains part of its original outer casing as a capstone, was built by King Chephren and it is that one that is associated with the Sphinx. The Sphinx was carved out of a knob of living stone in front of this pyramid, in the likeness of the builder of the pyramid, and the very much smaller one at the end was built by one of their successors in the 4th dynasty, named Mykerinos. All told, there are some eighty pyramids known from ancient Egypt, from both the Old and Middle Kingdoms. Most of them are clustered in the area about forty to fifty miles south of Cairo on the west bank of the river Nile. For the ancient Egyptians, the land of the west, the land of the setting sun, was the land of death, where they believed activities associated with death and dying should take place; therefore, whenever possible they locate their cemeteries and necropolis areas on the west bank of the river. But the little black triangles on the map on the left each represent a pyramid, and you can see clustered around Cairo that there are quite a large number of them dating from both the Old and the Middle Kingdoms.

It has intrigued all of us how the Egyptians managed to build these enormous piles of stone and why they did it. Unfortunately, I'm not going to really be able to give you an answer tonight, but I would like to present to you some of the ideas that Egyptologists have about it. We are looking on the left up one of the sides of the great pyramid at Giza which is about four hundred and fifty feet high, a little bit shorter than the Washington Monument, although it's built as more or less a solid piece instead of being in parts the way the Washington Monument is. It covers an area of about seven hundred and fifty square feet. From time immemorial, it has been a pastime to figure how many football fields and St Paul's Cathedrals and Vatican Courts and so on you could get into the area covered by the great pyramid. Perhaps one of the most amusing calculations is that of Napoleon, who figured that if you took the stones of the pyramids at Giza apart and built a wall a foot thick and ten feet high, you can enclose the entire country of France with this wall by the stones that were used in composing these three pyramids at Giza. It's really almost as hard to imagine it as it is to imagine how long ago they did it, and with what primitive tools.

Well, how did the Egyptians go about building pyramids? For them, it seems to have been such a matter of simplicity that it wasn't worth writing down. At any rate, nothing has survived of what they may have ever written down about it, and we really have no account from the Egyptians themselves of how they did it. Our most contemporary account belongs to a person who was writing about two thousand years after the event. The Greek historian Herodotus is hardly what we would call an eyewitness account, but he wrote this way about how the great pyramid of Cheops came to be built. He says, "Cheops came to the throne and plunged into all manner of wickedness. He closed the temples and forbade the Egyptians to offer sacrifice,

compelling them instead to labor one and all in his service. Some were required to drag blocks of stone down to the Nile from the quarries in the Arabian range of hills. Others received the blocks after they had been conveyed in boats across the river and drew them to the range of hills called the Libyan. One hundred thousand men labored constantly and were relieved every three months by a fresh lot. It took ten years' oppression of the people to make the causeway for the conveyance of the stones, a work not much inferior in my judgement to the pyramid itself. This causeway is half a mile in length, sixty feet wide, and in height at the highest part forty-eight feet. It is built with polished stone and is covered with carvings of animals. To make it took ten years as I said, or rather to make the causeway. The works on the mound where the pyramid stands and the underground chambers which Cheops intended as vaults for his own use. These last were built on a sort of island surrounded by water introduced from the Nile by a canal. The pyramid itself was twenty years in building. It is a square eight hundred feet each way," (he was about fifty feet off in his measurement), "and the height the same, built entirely of polished stone, fitted together with the utmost care. The stones of which it is composed are none of them than less than thirty feet in length." In fact, none of the stones in the pyramid weigh less than half a ton, and the average is about one and a half tons. "The pyramid was built in steps, battlement-wise as it is called, or according to others altar-wise. After laying the stones for the base, they raised the remaining stones to their places by means of machines formed of short wooden planks. The first machine raised them from the ground to the top of the first step. On this there was another machine, which received the stone upon its arrival and conveyed it to the second step, whence a third machine advanced it still higher. Either they had as many machines as there were steps in the pyramid, or possibly they had but a single machine which, being easily moved, was transferred from tier to tier as the stone rose. Both accounts are given and therefore I mention both." Herodotus, you remember, is the "father of history," and here he is showing some of the objectivity, at least he hopes, for which he was famous. "The upper portion of the pyramid was finished first, then the middle, and finally the part which was lowest and nearest the ground. There's an inscription in Egyptian characters," he must mean hieroglyphs, "on the pyramid, which records the quantity of radishes, onions and garlic consumed by the laborers who constructed it." [laughter] Unfortunately, all this bad breath, if it ever existed, has been lost to us now, I'm sure to the great dismay of the makers of Scope. [laughter] "And I perfectly well remember that the interpreter who read the writing to me said that the money expended in this way was sixteen hundred talents of silver. If this then is a true record, what a vast sum must've been spent on the iron tools used in the work." In fact the Egyptians didn't have iron in the pyramid age. "And on the feeding and clothing of the laborers, considering the length of time the work lasted, which as has already been stated, and the additional time no small space I imagine which must've been occupied by the quarrying stones, their conveyance, and the formation of the underground apartments."

Now you'll notice on the plan on the right that in front of the northernmost Pyramid of Giza, that of Cheops, there are three little dots on the plan, and you may wonder how they came to be there. They're now usually known as queens' pyramids, in fact they belong to royal women of Cheops' family. "The wickedness of Cheops reached to such a pitch that when he had spent all of his own treasures and wanted more, he sent his daughter to the streets with orders to procure him a certain sum. How much I cannot say, for I was not told. She procured it, however, and at the same time, bent on leaving a monument which would perpetuate her own memory, she required each man who saw intercourse with her to make her a present of a stone towards the works which she contemplated. With these stones she built the pyramid which stands mid-most of the three [laughter] that are in front of the great pyramid. Measuring along each side a hundred and fifty feet." [laughter] I'll leave the more mathematical of you to carry [loud laughter] those calculations to their ultimate conclusion. [laughter]

Well, that was one way of building pyramids, anyway. Herodotus gave us another account which is what most of the modern theories are based on. But what an Egyptologist does is look around and see what kind of evidence he can find about how the Egyptians went about building things. It is obvious that the first step in building a large monument of stone was to make a level surface to build it on. And surrounding the second pyramid at Giza, cut into the edge of the plateau, you can see the leveled-out space. The original surface of the plateau is towards the top of the slide where it meets the sky, and the flattened out surface, leveled-off surface on which the second pyramid stands, is the surface that you see fading off into the shadow towards the bottom of the slide. And you can see fairly clearly that the original surface of the plateau had a fair degree of slope to it; it would've been the leaning pyramid of Giza instead of the leaning tower of Pisa if they had not leveled off the surface. They were working with copper and perhaps bronze tools, wood, and other types of stone, in order to accomplish all this excavation work and also in order to quarry the stone.

On the slide on your left you see some of the ancient tools that were available to the Egyptian masons as they began their work, different types of chisels and mallets, wedges for splitting the rock off from the quarry, and different types of balls and pounders for smoothing off the uneven surface of the stone as it was dressed and fitted into place. The blocks that were of which the pyramids were built were not secured with mortar, but rather were fit together very precisely, in some cases even today you can hardly stick a piece of paper into the joins, so fine was the masonry.

We know something about the quarries from which they took this stone, as some ancient quarries have been preserved for us in Aswan. We're very fortunate that one monument that they tried to quarry out of these granite quarries in Aswan turned out to be a dismal failure,

because we have learned more from the mistakes than we have ever learned from the successes. This monument on the right was a giant obelisk, which was, as you see, quarried in very nearly its final shape out of the living rock; however, as the Egyptians worked with this particular block they found more and more flaws in the granite. First they tried sort of shortening the obelisk and making it a little thinner, things like that, but they still couldn't get rid of all the flaws, and finally they found one major one running down the middle of the whole thing and they had to abandon the project before it was ever completely removed from the quarry. But looking at this, and looking at some other marks we find on nearby rock faces in the quarry, we begin to understand how the Egyptians went about quarrying out a piece of granite.

The pyramids were built largely out of limestone, but the limestone quarries were treated in a very similar fashion. This is something that I can't illustrate for you, so I'll tell you how to quarry a granite block, and you can just transfer it to limestone and relax a little in your imaginations, since it's a softer stone to work than granite is. However, they first cleared the loose debris off the surface of the rock, then built a very hot bush or dung fire on top of the surface of the granite, and when it got very hot, doused it immediately with cold water. The surface of the rock, having been heated up very greatly, when exposed to the shock of the cold water dashed on it would immediately crack, and in that way they removed the weathered and uneven surface of the top layers of the granite. They must've understood very early the ways in which granite fractures, as they took advantage of this in order to shape their blocks. They inserted wooden wedges such, oops... [shuffling] I can never tell left from right, such as the one marked G in this slide, into small cuts in the surface of the granite, pounded them further in; then they soaked those with water until they expanded, forcing the granite to break along its plane of fracture, and kept on doing this until they had the block separated from the living rock of the quarry. And the little fringe-looking lines that you see decorating the rock face on the slide on the left are the result of these wedge marks, which have been used to break the blocks of granite off from the quarry.

They were able to transport these stones to great distances; some of the granite quarried at Aswan was definitely transported to Giza, a distance of about six hundred miles down river. Even if you're ferrying the blocks on boats down the river, it's still no easy task in order to move them, but we know they did. First they floated or dragged the block to the banks of the Nile, then loaded it on a boat. When it arrived six hundred miles and some days later south, they removed it from the boat and dragged it off to the construction site. On the right, you see the remains of a ramp which was used for dragging such blocks up to one of the Middle Kingdom pyramids at Lisht, excavated by the Metropolitan Museum of Art. And on the left, the transport of a colossal statue that will give you some idea of how they went about doing it. You will notice that the statue is about four times life size, and has been roped onto a sledge with careful

padding in order not to damage the surface of the statue. Then four teams of men have been grouped around ropes pulling at it on the front and one man is standing on the knees or lap of the colossus, clapping out a rhythm, something like "Heave... heave..." and as he does that, another man claps two clappers together [claps] in order to emphasize the rhythm, and a third man standing on his feet pours some kind of oily liquid onto the ground to ease the passage of this wooden sledge over the ground. The Egyptians knew about the wheel, but they didn't make use of it for transport vehicles, their transportation in antiquity, as even today, is basically by the river. Even today there is one railroad track and one highway that goes all the way from Cairo to Aswan, and very little else that a wheeled vehicle can travel on, and the great emphasis is on the Nile itself. There are some one hundred and seventy two men that are pulling this colossus along, so obviously there was a certain dependence on manual labor. Whether or not it was a cruel slavery such as Herodotus depicted, is still a sore point among many Egyptologists. I guess when you spend your life studying a people, you don't want to think they were stupidly enslaved; that somehow makes them not worth studying.

But all of this work could be done much more quickly than we might imagine. We have an account from the 6th dynasty, from about 220 BC, of a man who was sent to the area just south of Aswan in Nubia, now flooded by the Aswan high dam, to obtain rock for the royal sarcophagus. And I would like to read you his account of how he accomplished the task that his king had set for him. "His majesty sent me to Ibhat," which is a place in Nubia, "to bring the sarcophagus named 'Chest of the living' together with its lid and costly august pyramidion for the pyramid named 'Merenre appears in splendor,' my mistress." You'll notice that all these blocks and pyramids and things have their own names. "His majesty sent me to Yebu," another place in Nubia, "to bring a granite false door and its libation stone and granite lintels, and to bring granite portals and libation stones for the upper chamber of the pyramid 'Merenre appears in splendor,' my mistress. I traveled north with them to the pyramid 'Merenre appears in splendor,'" in other words, he's going about six hundred miles north to Cairo area, "in six barges and three towboats of eight ribs in a single expedition. Never had Yebu and Ibhat," these places in Nubia, "been done in a single expedition under any king. Thus everything his majesty commanded was done entirely as his majesty commanded. His majesty sent me to Hatnub," a famous alabaster quarry about halfway between Giza and Luxor, in other words, about two hundred miles south of Cairo, "to bring a great altar of alabaster of Hatnub. I brought this altar down for him in seventeen days. After it was quarried in Hatnub, I had it go downstream in this barge I had built for it, a barge of acacia wood of sixty cubits in length and thirty cubits in width." A cubit is about twenty inches. "Assembled in seventeen days in the third month of summer, when there was no water on the sand banks, and landed at the pyramid 'Merenre appears in splendor' in safety." The transport took place, then, during the season of low water in the Nile river. "It came about through me entirely in accordance with

the ordinance commanded by my lord. His majesty sent me to dig five canals in Upper Egypt and to build three barges and four towboats of acacia wood of Wawat," another Nubian place. "When the foreign chiefs of Irtjet, Wawat, Yam, and Medja," all areas of Nubia, "cut the timber for them, I did it all in one year. Floated, they were loaded with very large granite blocks for the pyramid 'Merenre appears in splendor.' Indeed I made a saving for the palace with all these five canals. As king Merenre who lives forever is august, exalted, and mighty more than any god, so everything came about in accordance with the ordinance commanded by his ka. I was one beloved of his father, praised by his mother, gracious to his brothers. The count, the true governor of Upper Egypt, honored by Osiris, Weni." So you can see that some of these prodigious undertakings could take place in a very short time. Although exactly how long it took to erect any of the pyramids still remains a matter of debate and speculation.

The final finishing of the stones was done at the site, and the stones were probably dragged up an earthen ramp to their appropriate position in the pyramid. Then the final finishing of the surface was done as the earthen ramp was removed on the way down. When the whole complex was finished, it should look something like the one we see in the reconstruction drawing on the left, which represents a 5th dynasty pyramid complex a little bit south of Giza at a site called Abusir. You are seeing the pyramids on the west bank of the river which is in flood. Just at the edge of the flood waters near that little clump of palm trees in the lower right corner of the slide, is a temple that we call the Valley Temple because it's right at the edge of the Nile Valley. It was here that the corpse of the deceased king was ferried by boat and laid out for the final purification and mummification rites. When these had been performed, the priests carried the body in a funeral procession up this long covered passageway, known as a causeway, to a temple against the eastern face of the pyramid called the pyramid temple. Egyptological nomenclature is *very* imaginative. [laughter] In this temple, the final funeral ceremonies were performed, and through a door in the back of it, the body was carried out to an entrance in the north side of the pyramid and put into the burial chamber inside the pyramid, which was then sealed off with great portcullis blocks of stone, and hopefully never to be opened again. Of course the thieves didn't lose much time, and they tunneled their way into all the pyramids way back in antiquity. Even a couple hundred years after these pyramids were built, there are texts lamenting the fact that all the pyramids had been robbed and no royal body is safe. So it didn't take them long. The pyramid temple on the east side remained always in use for the mortuary cult of the king. And you can see that that is the important part, the other valley temple is more temporary. In the case of the middle and left hand side pyramids, you'll notice there seems to be only one causeway between them, which is not straight as in the case of the righthand one. Well, what happened was first the pyramid on the right was built, then the one on the left, and lastly the one in the middle. And the guy in the middle, when it got to building a causeway, either he died before he finished it and they finished it up hastily, or he ran out of money or

something, but what he did was take over his predecessor's causeway and bend the axis a little bit and divert it to his own pyramid temple so it served for both of them. But the temples for all three pyramids continued to be in use for some time.

Well, what do the Egyptian pyramids mean? That is another question that is very difficult for us to answer. These are not Egyptian pyramids, although they are called pyramids very often, or ziggurats which is a very closely aligned term. But they have something very fundamentally different about them from Egyptian pyramids. Egyptian pyramids, whatever they meant and whatever else they were used for, and however they can be interpreted, were at least always tombs. They were meant to have the king buried inside them. They have very little interior space, just a small burial chamber containing the royal sarcophagus, and that's about it. The pyramids of the sun and the moon, however, at Teotihuacán in Mexico, dating from about three thousand years later than the Egyptian pyramids, are however intended to be temples, not tombs. They have no interior space at all, there are no chambers inside them. They have running up the front stairways leading to the top, and the function of them seems to have been to enable the priest to, in effect, ascend the mountain, such as you see in the background, in order to have their temple located above profane eyes and closer to the god to whom they were appealing. The same can be said of the ziggurat, of which the tower of Babel is perhaps the most familiar example from the Bible. These were large mud brick structures of a pyramid-like form that were built in ancient Mesopotamia in Iran. The one on the left is at Chogha Zanbil in southwestern Iran, and you can see again it is a massive structure with no interior space, but with a stairway leading on up to the top, and originally at the top there was also a temple platform on which the priests could perform certain specialized functions.

The Egyptian pyramid, however, had a name. The name of the great pyramid at Giza, which is written in hieroglyphs on the left, is "Cheops is the one belonging to the horizon." This immediately underlies something of the divine character of the Egyptian king, which is further emphasized in a statue that was found in the valley temple of the pyramid of Chephren, the second pyramid of Giza, shown on the right, now in the Cairo Museum, where you see the king wearing one of his royal headdresses and standing behind him is a falcon who is enfolding the king's head in his wings. The falcon for the Egyptians was the symbol of royalty *par excellence*; it represented also a god named Horus, and the king was believed to be the living Horus on Earth. And when he died he became again part of the spirit of the falcon, and lived eternally as a divine spirit after life as Horus. So the pyramid was a place to bury a divine king and was very much associated with that.

Why did it take the shape that it did? The primeval state was a great dark chaos, a watery chaos, and at the beginning of creation a small mound emerged of a sort of pointed shape, and

on that a phoenix bird alighted. And then the creation story goes on to say how the various parts of our world came into existence. This is a sort of natural creation legend, and it is very easy to see how the Egyptians got the idea. On the left you can see the receding waters of the Nile flood and how the land does seem to appear in little hillocks and on the right is the Benben bird, or the phoenix, sitting on the very right on the top of a pyramid-shaped mound, this is actually the primeval mound; he is believed to be alighting on it. You can see the artist has even... the Egyptian artist himself has even represented it in the same form that a pyramid is. So one interpretation is that the top of the pyramid represented the tip of this primeval mound on which the phoenix bird could come and alight, and therefore it was a place that would constantly symbolize the creation of the world.

There are other people that believed, on the basis of Egyptian texts, that the sides of the pyramid formed sort of a stairway or ladder to heaven. If you remember the sort of stepped shape of the step pyramid that we looked at the beginning of the lecture, you'll remember that it did look like a double flight of stairs that you could climb up towards the sky on. Comparing this to the pyramid at Giza, it has a straight side; it was originally coated with a very fine limestone coating which had a perfectly smooth, angled surface, so there weren't the steps that you can climb up now today. But people have long noticed that it seemed very much to be the same angle as the sun's rays as they come down out of the sky, so in some of the texts there is reference to the king traveling all along the sun's rays to join the other celestial gods in the hereafter. It's thought that maybe this imitated the sun's rays, and enabled the king to travel up the sides of this monument to join the other gods in the celestial hereafter.

A more naturalistic explanation, perhaps, is that the form imitated something that the architects saw in their surroundings. In the southern part of Egypt in Nubia, where we know the Egyptians had activity in the Old Kingdom, in fact they even quarried a lot of their pyramid stones from there. The natural outcropping of rocks in the desert assume a pyramid-like form; they are visible for miles and miles across the desert. The Egyptian king was a divine king with great power, and he may have wanted to set his pyramids up in this rock form that was visible for so many miles across the flat barren desert as a constant reminder of his power to his people, something that would be visible all the time, and it would embody his divine presence in a very concrete form.

Well these are some of the theories that Egyptologists spend a lot of their time discussing, there are a lot of other people who spend a lot of time discussing other things about the pyramids, which I don't want to get into here. At this point all any of us can say is that we really don't know, but it seems that the shape of the pyramid probably did embody partly this sort of

mythological significance and partly also the idea of demonstrating or emanating power of the king.

We know that the king was believed to want to join the sun and the stars after death. In fact, in one of the subterranean chambers of the step pyramid, Djoser had stars carved on the ceiling, showing that he believed it was a celestial sphere even though it was dug under the ground. And boats were buried next to the pyramids, in order to enable the kings both to use them in their funerary services to reach the valley temple from the palace where they had died, and also to be able to ferry up into the sky on these boats in order to join the celestial gods. The oldest ship that has been recovered in the world was found buried on the southern side of the great pyramid of Cheops at Giza, and is shown in the slide at the top of the picture. It is an extremely long boat; it shows signs of actually having sailed in the water. It is built out of cedar of Lebanon, it's rather a contrast to our only surviving image of the great king for whom it was built, this little about three inch high statue of King Cheops himself. But almost everything about this boat was preserved; even the ropes that had been used to drag it along the banks were still lying coiled on the decks when it was discovered.

It is with the 5th dynasty that we first begin to know something about what the Egyptians themselves thought their pyramids were for. As beginning with the 5th dynasty, the very last king of the 5th dynasty in fact, a man named Unis, we have texts carved on the walls of the tomb which when translated tell us something about what the Egyptian belief of what the royal afterlife was like. These texts, in the usual imaginative style, carved inside pyramids, are known as—you guessed it—pyramid texts. [laughter] I would like to read you a few selections of some translations of pyramid texts to give you an idea of what Egyptians thought the royal afterlife was going to be like.

In the first section, the king arrives in heaven where he cooks and eats the gods in order to become omnipotent by absorbing all their powers. "The sky is overcast, the stars are darkened, the celestial expanses quiver, the bones of the earth gods tremble, the planets are stilled. For they have seen the king appearing in power as a god who lives on his fathers and feeds on his mothers. The king is a master of wisdom." In another passage, a not quite so powerful king asks the gods not to forget him. "Be not unaware of me, O god, if you know me I will know you. Be not unaware of me, O bull of the sky, of me it is said, the star of the lower sky," or the Earth. In still another section of the text, the dead king ferries across the sky to join the sun god. "The reed floats of the sky are sent down for me that I may cross on them to the horizon to Horakhty, the god of the horizon. The nurse canal is opened, the winding water way," which is probably the Milky Way, "is flooded. The fields of rushes are filled with water and I am ferried over to yonder eastern side of the sky. To the place where the gods fashioned me wherein I was

born new and young." Still elsewhere the dead king is represented as flying up into the sky. "Someone flies up from you, O men, as do ducks. He wrests his hands from you as does a falcon escaping from a fowler. He is removed himself from you as does a kite. The king is safe from him who is obstructive on Earth, the king is loosed from him who attacked him." This type of passage is the source for one of the Egyptian euphemisms for the death of a king, in which people said "the falcon flew up" in order to mean that the king died.

It is perhaps logical now to move on to some explanation of the Egyptian hieroglyphs themselves. It is by reading this that we are able to have these kinds of texts that give us more insight into Egyptian history and culture. The last hieroglyphs were written by the Egyptians about 495 AD, and for about thirteen hundred years everybody, in the western world at least, and it seems everybody in the world, forgot how to read them and no longer knew what they said. In 1799 when Napoleon invaded Egypt, his men were digging the foundations for some trench or fortification and they found an inscribed stone. This stone was found at a town called Rosetta on the Mediterranean, not far from Alexandria. It was recognized that it was divided into three sections, and that probably it was three different versions of the same kind of decree. Well, the bottom one was written in Greek, on this stone which you see on the right, and for a well-trained student of the 17th, 18th, and 19th century, it was no problem just to pick up Greek and read it the way you might read the daily news. And so they quickly translated it off and found that it was a decree in honor of one of the Egyptian temples. The signs at the top they realized were the ancient Egyptian writing, but they didn't know how to figure out what they could say, how they said the same thing that the Greek text said. It was the final efforts of a young French scholar named Jean-François Champollion, whose portrait you see on the left, that gave the clue to the Egyptian hieroglyphs. He discovered that they were basically to be read phonetically, and he did it on the basis of matching up the names of the king mentioned in the Greek text with names of the king which were set off in separate little circles in the hieroglyphic text, realizing that only the royal name could be so set off in these circles which we call cartouches.

The Egyptian hieroglyphs are very different from other kinds of picture writing. Our own southwestern American Indian petroglyphs tell a story by themselves in the arrangement of the signs, each picture tells a complete or a part of a story. It is not just a discrete or individual element by itself, although we still in many cases are unable to reconstruct the stories, we don't know if all of the carvings on this newspaper rock are contemporary, and meant to be part of the same story, or what they're supposed to refer to, or why they were all carved over each other the same place. But still we know something, that these were attempts to use the pictures as episodes in a story. To remind you of the episodes in the story, they weren't supposed to be read the way we read words on printed page. The so-called Maya hieroglyphs

are also very different from the Egyptian ones, although again they are still imperfectly understood. Scholars have advanced enough in their understanding of them to know that each one of these little signs is supposed to represent a phrase or a sentence, and is not just an individual letter like our alphabet letters are.

For the Egyptians, on the other hand, the basic elements in their writing were a phonetic alphabet, the same kind of principle that we use today. However, instead of using our kind of letters from the Latin alphabet, they used pictures. The pictures themselves had names. Each object that was represented in the pictures had a name, and in this case it had a one-syllable name, such as “Ba,” which is the left hand sign in the second row, is the B sound. That is the word for a foot, which is what is represented in the picture. Looking below it you see a little ripple which you can easily identify as a ripple of water. This was pronounced something like “N” or “Nu” in ancient Egyptian and represented the letter N. What makes ancient Egyptian difficult for us is that they wrote only consonants and semi-consonants and not vowels, and in contrast to Arabic and Hebrew, they did not have any special markings to indicate what the vowels were, so we don't know what the vocalization of their language was like. We know only the consonants. But knowing that they had this twenty-four-sign alphabet, it is very easy then to read their words even if we're not quite sure how they were pronounced. Scholars usually conventionally insert something like a short “e” into the middle of the consonant clusters in order to make them pronounceable when they're talking about it.

To show you in a little bit more detail how this works, I should explain that there are other kinds of signs used in the Egyptian hieroglyphic writing system. Beside these one consonant sound signs, there are also signs that have two or three consonants to them, the ankh sign that is very familiar to you, very much used by hippies and others in recent years, is an Egyptian sign which in fact does mean “life.” Originally it was a picture of a sandal strap, and it has three consonant sounds to it, an [...] which is a semiconsonant, an “n,” and a “kh” sound; the sounds aren't all the same as in English. But “ankh” is a triconsonantal Egyptian sign. Now there was still another kind of sign, which we call a sense sign or a determinative. This was to tell you something about the meaning of the word. And looking at the chart on the right, you can see how it works in the case of homonyms. Now comparing these two charts, if you had time and your eyesight is a lot better than mine, you could see that in the top row you have three phonetic alphabetic letters represented: H, N, and W. Well, it so happens in the ancient Egyptian language that there were three words that were spelled “H,” “N,” and “W,” which we may conventionally pronounce as *henu*. Now how are you going to tell the difference? For us, we make some differences in spelling as with s-e-n-t, c-e-n-t, s-c-e-n-t, and I'm sure all of you have played games like “teakettle,” in which you try and confuse and amuse your audience by making mistakes in the use of these words which sound the same. Well, the Egyptians had

perhaps a more clever way of going about it. Instead of all these complicated orthographic changes, they just went ahead and spelled the word as it was pronounced, “henu” in all three cases. Well, how do you tell which word you have? You put a determinative or sense sign on the end, to tell you which henu you mean, which makes a lot of sense. So it's easy to remember that way.

The first word “henu” is a liquid measure, and so as a determinative you put a little picture of a beer pot, which is the quantity being measured at the end. The second “henu” is a word for rejoicing, so you have a little picture of a man who is throwing up his hands and beating his chest in jubilation. The third one means “neighbors,” so what is more logical than to have a picture of a man and a woman with three little plural strokes underneath them, indicating people? And there you have obviously the “henu” that refers to other people or neighbors. So it's very easy to keep them apart. There were about six to seven hundred of these phonetic and sense signs commonly used by the Egyptians, but the first twenty-four are pretty easy to learn; once you do that, you can all more or less write your names in hieroglyphs which I suggest is perhaps your project for office doodling next week. [laughter] At least it'll take your boss a while to figure out what it is you are doing, so he can reprimand you for it. [laughter]

Okay, let's do a little bit more in how to read hieroglyphs. One of the common types of documents on which Egyptians wrote was a stela that was set into the wall of the tomb recording the amount of funerary offerings that should be given to a particular person. The one on the left is in the collection of the Lowie Museum of Anthropology in Berkeley, and belongs to a man named Wepemnofret, who is shown seated on a chair in front of a table, and in front of him are a long list of all the kinds of things that he wants to have as funerary offerings. In case his relatives should slip up, the fact that they are written down there will magically enable them to continue being offered to him in perpetuity. And make no mistake about it, he wants you to know that it's Wepemnofret's offerings and not Ty's offerings, and not Mereruka's offerings, and nobody else. So he writes his own name very clearly over his head, and you see a detail of how that is done on the right. I mention to you that there are some signs that have two or three consonant values. The horns, pair of horns on the right hand section, have the value “wep,” W-P. Now the Egyptians sometimes I guess didn't have confidence in themselves that they would remember that that was W-P, so they wrote the single consonant alphabetic signs along with it as phonetic complements to make sure you knew how to pronounce it. So you see the quail chick in the front which represents the sound W, and the top of a stool underneath the horns which represents the sound P. Then there is a second section of his name, the second syllable, M, is just one single sign which is an owl and represents the letter M. The third part of his name, “nofret,” is written in a little bit more complicated fashion. The tall sign at the beginning of the white outline is a triconsonantal sign, it has three values: N, F, and R. Now they

seemed to be a little bit more confident in how they could read this, so as a phonetic compliment they only put the R down, not the N and the F. And finally there is a T on the end of his name, and the little half-circle at the end is the alphabet sign for T. So now you know how to write an ancient Egyptian name, "Wepemnofret," and if any of you happen to be named Wepemnofret, or are about to christen your babies, then you know how to write your name in hieroglyphs too.

For the ancient Egyptians, their hieroglyphs were also works of art. They realized that they could be pretty and beautiful, they took a great concern to arrange them very attractively in horizontal or vertical columns. They could be written either from left to right or right to left, you can tell which direction by the fact that the head of the sign points toward the beginning of the line. So in other words, if we could go back a minute, [shuffling sounds] oops. Let's see, sorry. There are only six buttons here. You must excuse me if I press them wrong. You can see Wepemnofret's name there is written from right to left, but the little birds are facing towards the right so you know it's the right-hand margin that's the beginning of the line. They also painted their hieroglyphs in a great deal of detail, and you can see some examples of this on the left. This has sometimes helped Egyptologists to determine what they were meaning, as in the lower right hand corner of that slide, you can see the detail of the little tree, obviously, when that occurs it has something to do with trees or gardens. This sign, you might at first think was something like a three-humped camel, but by looking carefully at the details of the painting you realize it represents the mountainous horizon of the desert. When you look closely you'll see it has little gravelly dots and things on it, and the humps represent the mountains. So it helps us to understand what the Egyptians meant by their determinatives, and gives us clues to the meanings of the words. But they were always very attractive too.

Now these hieroglyphs also are very difficult to keep drawing all the time, and in fact the Egyptians used them mostly for formal and monumental inscriptions. For everyday business documents and letters they used a more cursive form of it, somewhat similar to our handwriting which we call hieratic. This hieratic was in use from the Old Kingdom onwards, and on the right you see a piece of papyrus with hieratic writing on it. If you look at it, think carefully without even knowing anything about hieroglyphs and Egyptology than you already do, you may be able to recognize what it is. It is an accounts papyrus set up in a very similar fashion to what a bookkeeper might set up a modern ledger today. With the various categories arranged all across the top and down the right margin, and scattered across in the appropriate columns are the numbers that indicate how much of this was used on a certain day, and so on and so forth. This comes from the pyramid of Sahure at Abusir, and we looked at the reconstruction drawing of that pyramid complex just a few minutes ago.

As I mentioned, being a scribe was very important to the ancient Egyptians; it was your entrée into the bureaucracy and into the ruling class of the country. Once you became proficient as a scribe, then virtually anything was open to you. In contrast to most other ancient monarchs, the Egyptian pharaohs themselves were also taught how to read and write. They are one of the few literate monarchs of the ancient world. But writing was sometimes an onerous task; very much as you have the big guy in the office who's trying to keep everybody else in line, the Egyptian office also had an overseer, seen standing at the left with his rows of scribes in his charge. And in a detail on the right, you can see how the scribes knelt down holding the papyrus on boards in their hands and painting on it with a chewed reed brush as they took down the dictation or wrote letters or kept accounts, whatever was their allotted task. They also composed many works of literature, which unfortunately aren't too terribly well-known—I'll try and read you some more selections of them today and tomorrow—to contemporary Americans, but they have some very good poetry, very fascinating stories and tales, and a great number of rather bombastic historical records.

What happened to these ordinary people when they died? In the Old Kingdom, they wanted to be buried next to their king as members of the court, surrounding the pyramid, very much as they surrounded the king in his court during lifetime. In the area of Giza then, surrounding the great pyramids which are those big X boxes running diagonally across the slide on the left, you see a lot of little rectangles. These represent the tombs of the members of the royal family. Towards the east or bottom side of the slide and to the west or the other side, the top side of the rightmost pyramid on the slide, are the mastabas of Cheops' court. And on the right, you see looking over the top of the great pyramid, a view of these mastabas. By chance, they grew out in a rather regular arrangement which looks very much like town planning; in fact, it's really sort of groups of mastabas belonging to members of a similar family that have been arranged. The mastaba is the Arabic word for bench, and you can see very well how they got to have that name from the early archaeologists, since they looked very much like a kind of stone bench that is seen outside the door of a villager in Egypt today.

These mastabas had a strange arrangement to them. There was a burial chamber dug into the ground underneath them. Into the east side were cut smaller or larger or even a series of rooms, which were decorated with scenes of daily life of the time and was one of our best sources for knowing how the Egyptians of the Old Kingdom lived. The burial chambers themselves were provided with different types of furniture, and there were also partly closed-off chambers which contained statues of the owners of the tomb. In the case of royal owners of mastabas, you have rather elaborate furniture and statues, as the case here. The mother of Cheops was a woman named Hetepheres, and her furniture was found, actually removed from her original tomb and reburied in a secret chamber just on the eastern side of her son's

pyramid at Giza, and it was reconstructed very carefully by an Egyptian restorer named Ahmed Youssef, who had had a great deal of training as a cabinet maker. When these objects were found, all the original wood had rotted away, and all that was left was the gold overlay and casing. By observing the position of each of these pieces of gold and inlay, and the way it had fallen, he was able to determine what the shape of the wood underneath it must've been like, and therefore to replace each one of these inlays and overlays into its original place. When it was all put together, we found that we had the burial... the bedroom furniture of a queen. There was a light portable wooden structure which could've been draped with linen to provide a cool sleeping place and help keep the mosquitos, which in Giza are quite vicious, out; a nice chair for her to sit, a long low chest which contained her heavy silver bracelets, and her sloping bed with a footboard at the bottom and this high headrest or Egyptian pillow at the top edge. The statues that were placed in the tomb are some of our finest surviving examples of Egyptian art of the Old Kingdom. I'll just have time to show you a few selections here. One of the most famous pairs, now in the Egyptian Museum in Cairo, belongs to Prince Rahotep and Princess Nofret.

This might be a place to mention something about Egyptian skin color and the racial composition of the Egyptians. The Egyptians today are a very mixed group of people; they show influences of both Semitic and African physiognomy, and probably in antiquity they were also a very mixed group. Due to all the kind of racial prejudices that were prevalent in the late 19th and early 20th century, when Egyptologists were first beginning to study and understand this civilization, there was a lot of discussion about a special dynastic race, as they thought that anyone who really had African blood in them couldn't possibly have produced any of the magnificent wonders that they were engaged in rapidly excavating from the sands of Egypt, and therefore they wanted to prove that there had been some sort of super race from the outside that had come in and suddenly produced all these things. For this there is not any shred of evidence to be found today. When you see the Egyptians represented in tomb paintings and statues they have a conventional skin color, which for men is sort of a dark reddish-brown and for women is sort of a light yellowish color. There's also been a lot of discussion about why the difference between men and women, some people think it's because the women spent more time indoors and they didn't get so burned by the sun outside, but it seems just to have been a way to clearly show the difference between men and women. In some cases you have rows of statues of men, all statues of men, in which they're alternately the dark reddish and the light yellowish color, showing that they were just trying to distinguish between each individual statue and that its not particularly a sex-linked characteristic. But I guess you can speculate on why the man is redder and why the woman is lighter; that kind of thing can go on forever.

In these mastaba tombs at the entrance, there's usually a relief of the tomb owner guarding the tomb facing inward ready to lead you into it. One of these tomb owners, a man named Ty, is shown on the left. Inside the chapel in the superstructure of the mastaba, was a separate room called a serdab which was often quite hidden from the viewer who entered the chapel to perform funerary ceremonies, but had an eyehole looking out for the tomb owner to be able to see that all these ceremonies were properly performed. And these, as I mentioned, provide some of our best sculpture from the Old Kingdom. Interestingly enough, the Egyptians did know dwarves and had no compunctions about representing them in their art, as you see in the group with the dwarf Seneb and his wife at the Cairo Museum on the right. He has a perfectly normal wife and a pair of normal healthy-looking children. It is not quite certain how the Egyptians regarded dwarfs, but they seem in certain instances to have held them in high regard. They were very much in evidence in the court. They also made use of them as jewellers, working with gold and precious stones, apparently on the theory that if they tried to abscond with the raw materials they would be easily spotted in the crowd. [laughter] The other question is whether they made a distinction between dwarfs and pygmies. There are records of dancing small men, shall we say, being imported from Africa. However, most anthropologists or archaeologists don't believe the Egyptians penetrated far enough south to have had contact with true pygmies, so either they were traded several times over from further south in Africa until they reached the Egyptians, or in fact they were importing dancing dwarves.

Be that as it may, I would just like to read you a copy of a letter, as it's one of the few Old Kingdom letters we have preserved, received by an official named Harkhuf whose tomb is at Aswan, from King Pepi the Second of the fifth dynasty. This letter was written when Pepi the Second was a child of about ten years old, about 2250 BC. Now Harkhuf was so proud of having received an actual real letter from... [audio cuts out for one second]

[resumes with Sheikholeslami reading from the letter] ..."You have said in this dispatch of yours that you have brought all kinds of great and beautiful gifts which Hathor, mistress of Imu," in Nubia, "has given to the Ka of king Neferkare," Pepi the Second, "who-lives-forever. You have said in this dispatch of yours that you have brought a pygmy of the gods' dances from the land of the horizon dwellers. Like the pygmy whom the gods' seal-bearer Bawerdjed brought from Punt," probably Somalia, "in the time of king Isesi," about two hundred years earlier, "you have said to my majesty that his like had never been brought by anyone who did Iyam previously. Truly, you know how to do what your lord loves and praises. Truly, you spend day and night planning to do what your lord loves, praises, and commands. His majesty will provide your many worthy honors for the benefit of your son's son for all time, so that all people will say when they hear what my majesty did for you, 'Does anything equal that which was done for the sole companion Harkhuf, when he came down from Iyam on account of the vigilance he

showed in doing what his lord loved, praised, and commanded?" Now we get to the real meat of the letter as far as the king was concerned. "Come north to the residence at once. Hurry, and bring with you this pygmy whom you brought from the land of the horizon dwellers, live and hale and healthy, for the dances of the god, to gladden the heart and delight the heart of king Neferkare-who-lives-forever. When he goes down with you into the ship, get worthy men to be around him on deck, lest he fall into the water. When he lies down at night, get worthy men to lie around him in his tent, inspect ten times at night! My majesty desires to see this pygmy more than the gifts of the mine land and of Punt. When you arrive at the residence and this pygmy is with you live and hale and healthy, my majesty will do great things for you, more than was done for the gods' seal-bearer Bawerjed in the time of king Iseki. In accordance with my majesty's wish to see this pygmy, orders have been brought to the chief of the new towns of the companion overseer priest to command that supplies be furnished from what is under the charge of every storage depot and every temple that has not been exempted." So at least one pygmy or dwarf or whatever he was made one Egyptian king pretty happy. It's nice to hear, speaking to you from almost five thousand years ago, the excitement of a child at seeing something that for him is a novelty.

The walls of these mastaba tombs, as I said, were decorated with scenes of daily life, which I'd like to show you just a few. As Egypt was basically an agricultural country, agricultural scenes predominate, such as herding the cattle and carrying them across the stream. In the detail on the right, you'll notice that the man has put the calf onto his back and jumped into the stream to ford it. Cows don't particularly like to cross streams, it's sort of hard to nudge them across, but a mother, of course, will follow her child anywhere. So the mother cow whom you see bleating in the center is following her child, and the rest of the herd, with good instinct, just plunges on into the river afterwards. And they find when they get there that there may be some tasty morsels growing up from the bottom there. The cow in the background there is having a nip of something tender she's found sticking its little sprouts up above the surface of the water.

All the produce of these agricultural estates had to be turned into something consumable. One of the favorite things to be consumed was beer, a popular drink of the ancient Egyptians, and on the left you see a brewer who is straining the beer mash into a large jug. Now of course, it's perhaps not the case for you here in Oregon, but we in Washington have to pay a liquor tax on our beer, and there are those that don't like to pay the taxes, and they don't like to pay income taxes which we're being threatened with also, and so we're about to meet the specter which has been haunting the Egyptians for five thousand years of the tax collector. And you see on the right, from the tomb of Mereruka at Saqqara, the tax collector who is beating the delinquent taxpayers. I've often thought of sending this in with my tax returns to the IRS, [laughter] but I

had a friend who did me one better. When part of her tax returns were being investigated, she was also studying Egyptology at Chicago with me. She dragged out the volume in which this scene was illustrated and spent the afternoon on the floor explaining it to the tax collectors, and they became so fascinated they forgot what it was that they'd come to investigate her about, and five o'clock came and they had to go home, and she has never seen them since. [laughter] Who says Egyptology can't be practical? [laughter]

The final focus of the chapel in the superstructure of the mastaba tomb was the false door, literally believed to be a doorway which the spirit of the deceased could rise from the burial chamber and come forth through it to receive food offerings that would be placed on the little altar in front of it, which actually takes the form of the Egyptian hieroglyph for "to offer." And overseeing it all, as here in the mastaba of Ty with his false door in the hidden statue chamber, or serdab, would be a statue of the tomb owner himself. And it is the walls surrounding these false doors that were decorated with the scenes of daily life, so just in case the relatives didn't keep their promises and they diverted the funds which were supposed to pay for the offerings to other things, a procedure with which we are all too familiar with these days, that magically the scenes on the wall would continue to provide the sustenance that the soul needed in the life after death.

Some of these serdab statues... seem to have also been a fear that they themselves might come to harm, and so they had reserve heads as they're called, also placed in the statue chamber with them. Some of these provide our finest examples of portraiture from the Old Kingdom, as you can see on the left in this bust of Ankhhaf, now in the Museum of Fine Arts in Boston. It is really a classic portrait of a very wise old official, and there is an extreme feeling of calm and equanimity in the face of the reserve head in the Vienna Museum, which you see on the right. Both of these were found in mastaba tombs in Giza.

So in the past couple of hours we have journeyed from the beginning of Egyptian history, when the kings became the embodiment of the falcon god Horus, seen here atop the king's name, enclosed in the royal palace facade in a first-dynasty stela from Abydos on the left, through the Great Pyramid age to the end of the Old Kingdom at the close of the 6th dynasty, about 2200 BC. The first millennium of Egypt's history, then, has been outlined for you tonight. May the magnificent plumed gold head of Horus from Hierakonpolis, now in the Cairo Museum, watch over you with its sharp black eyes until we meet again tomorrow to trace the remaining two thousand years of the history of Pharaonic Egypt. Thank you very much.

[applause]

[program ends]