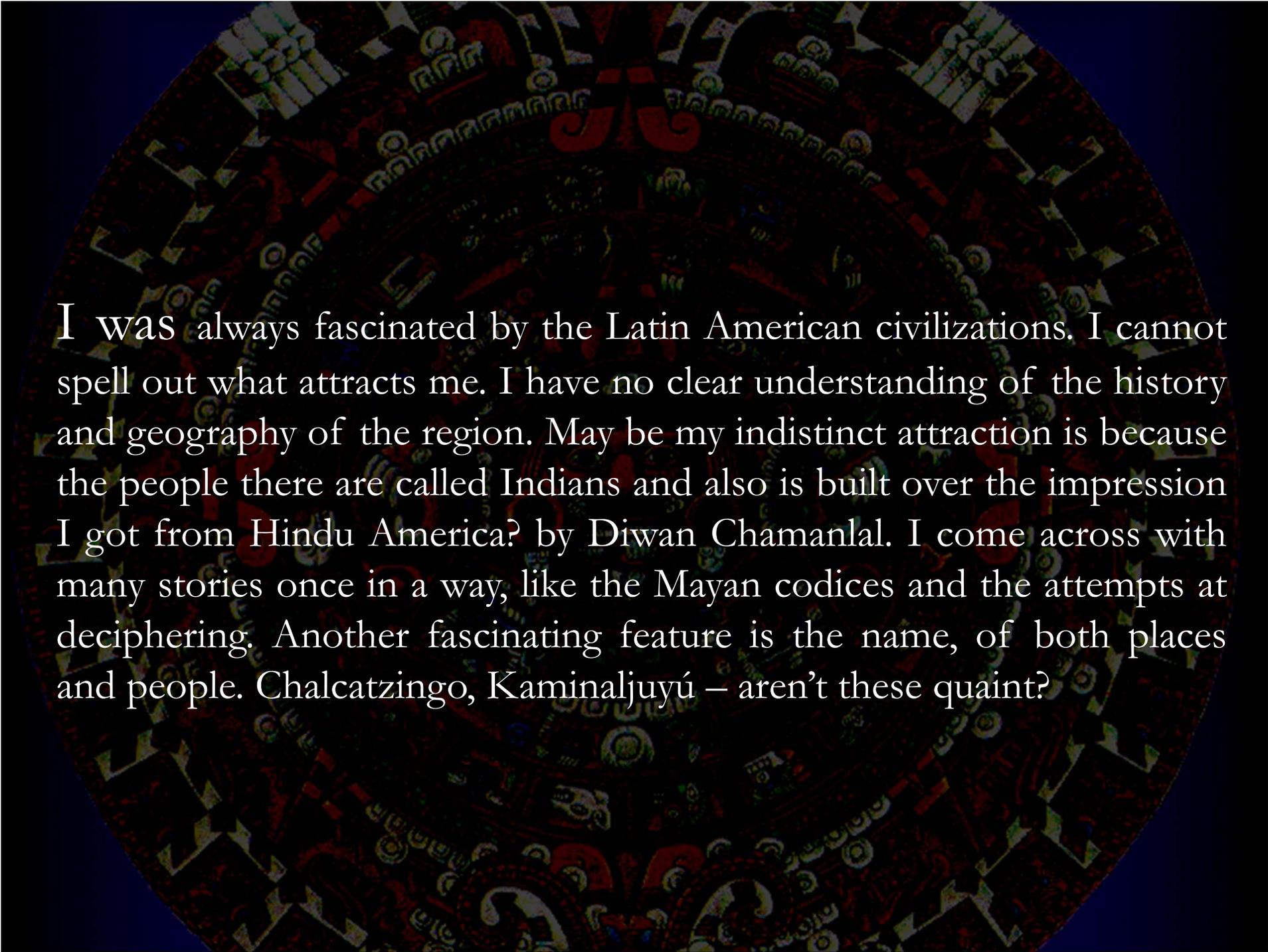
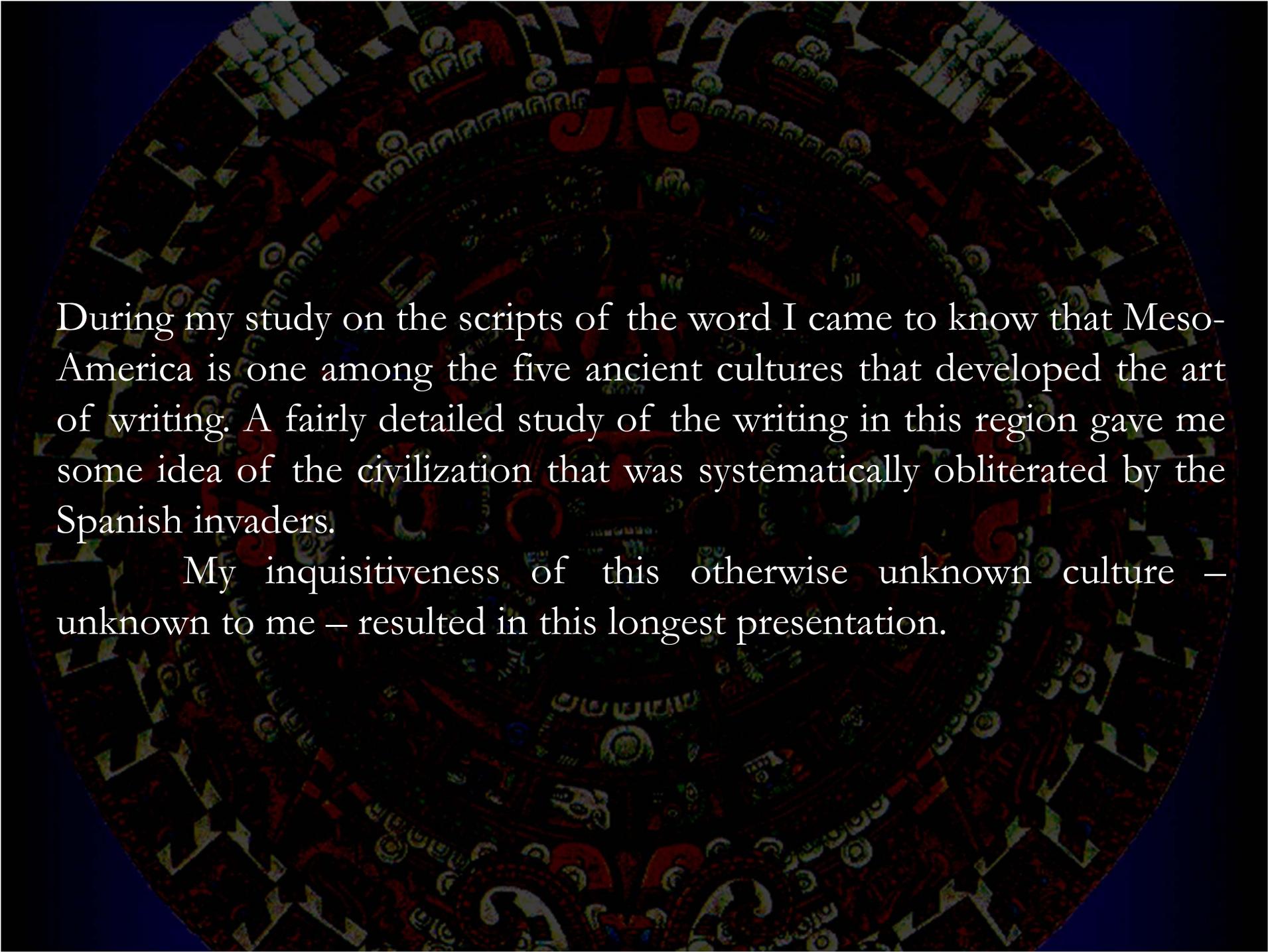




Meso-American Writing

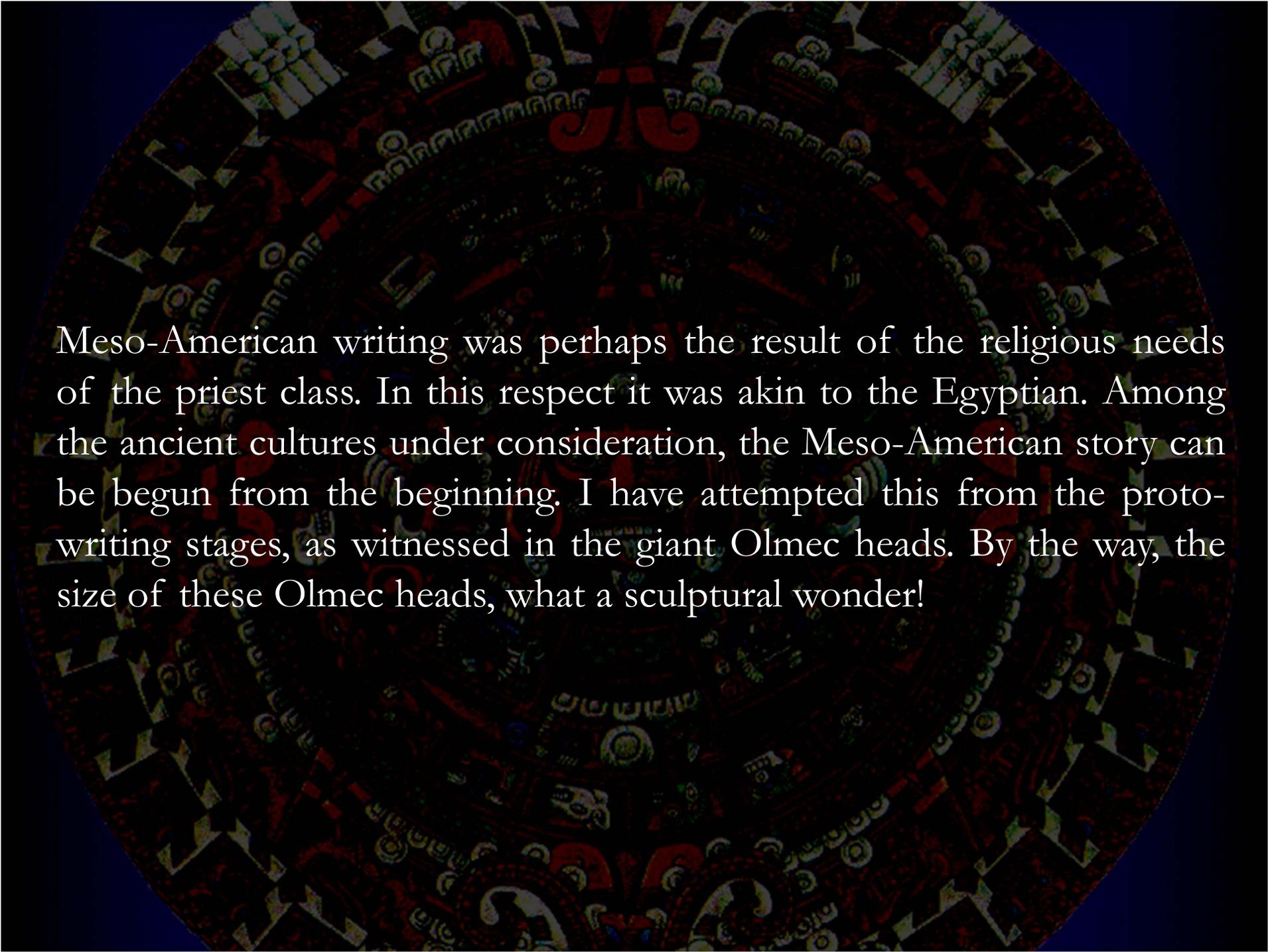


I was always fascinated by the Latin American civilizations. I cannot spell out what attracts me. I have no clear understanding of the history and geography of the region. May be my indistinct attraction is because the people there are called Indians and also is built over the impression I got from Hindu America? by Diwan Chamanlal. I come across with many stories once in a way, like the Mayan codices and the attempts at deciphering. Another fascinating feature is the name, of both places and people. Chalcatzingo, Kaminaljuyú – aren't these quaint?

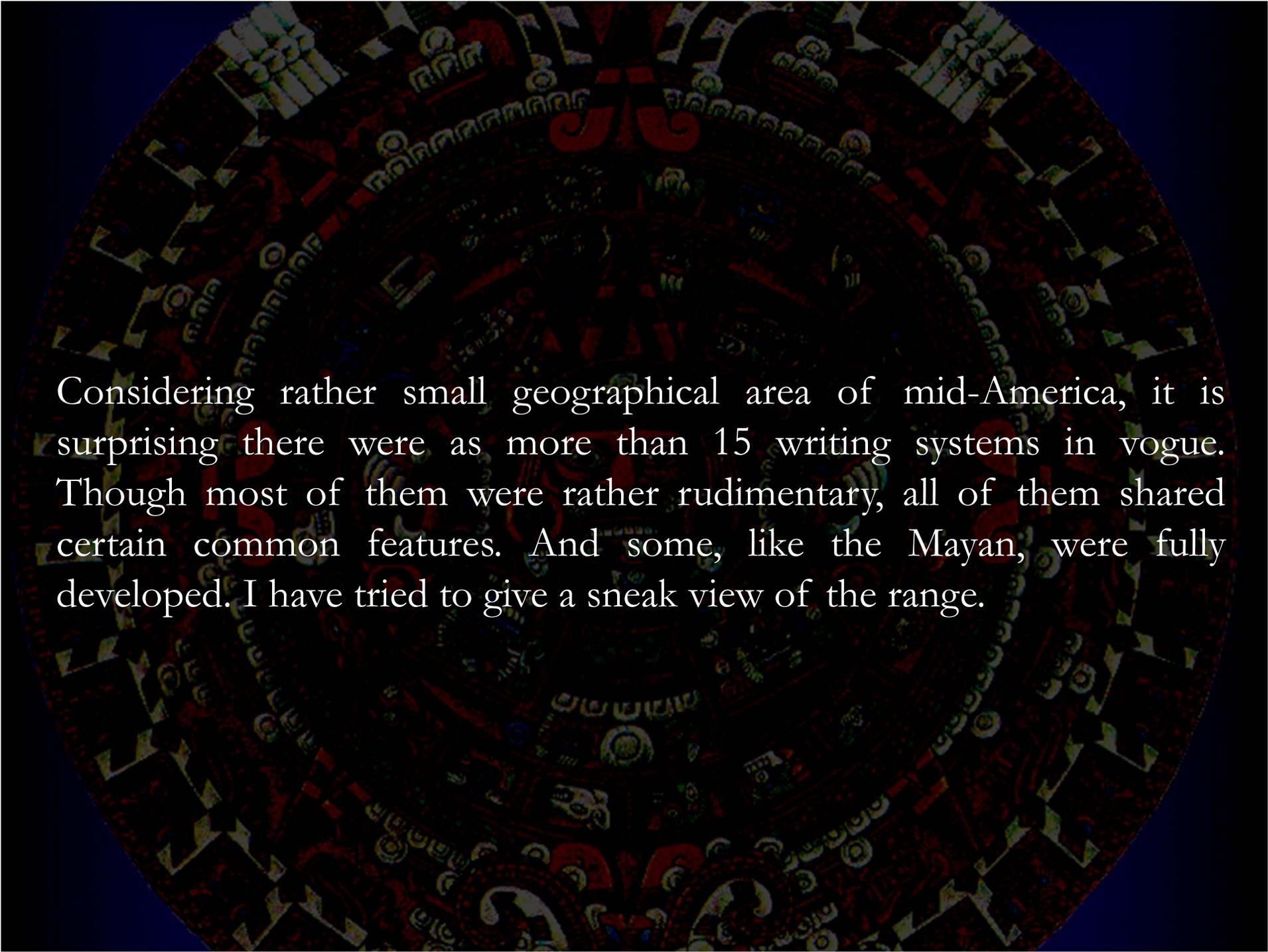


During my study on the scripts of the word I came to know that Meso-America is one among the five ancient cultures that developed the art of writing. A fairly detailed study of the writing in this region gave me some idea of the civilization that was systematically obliterated by the Spanish invaders.

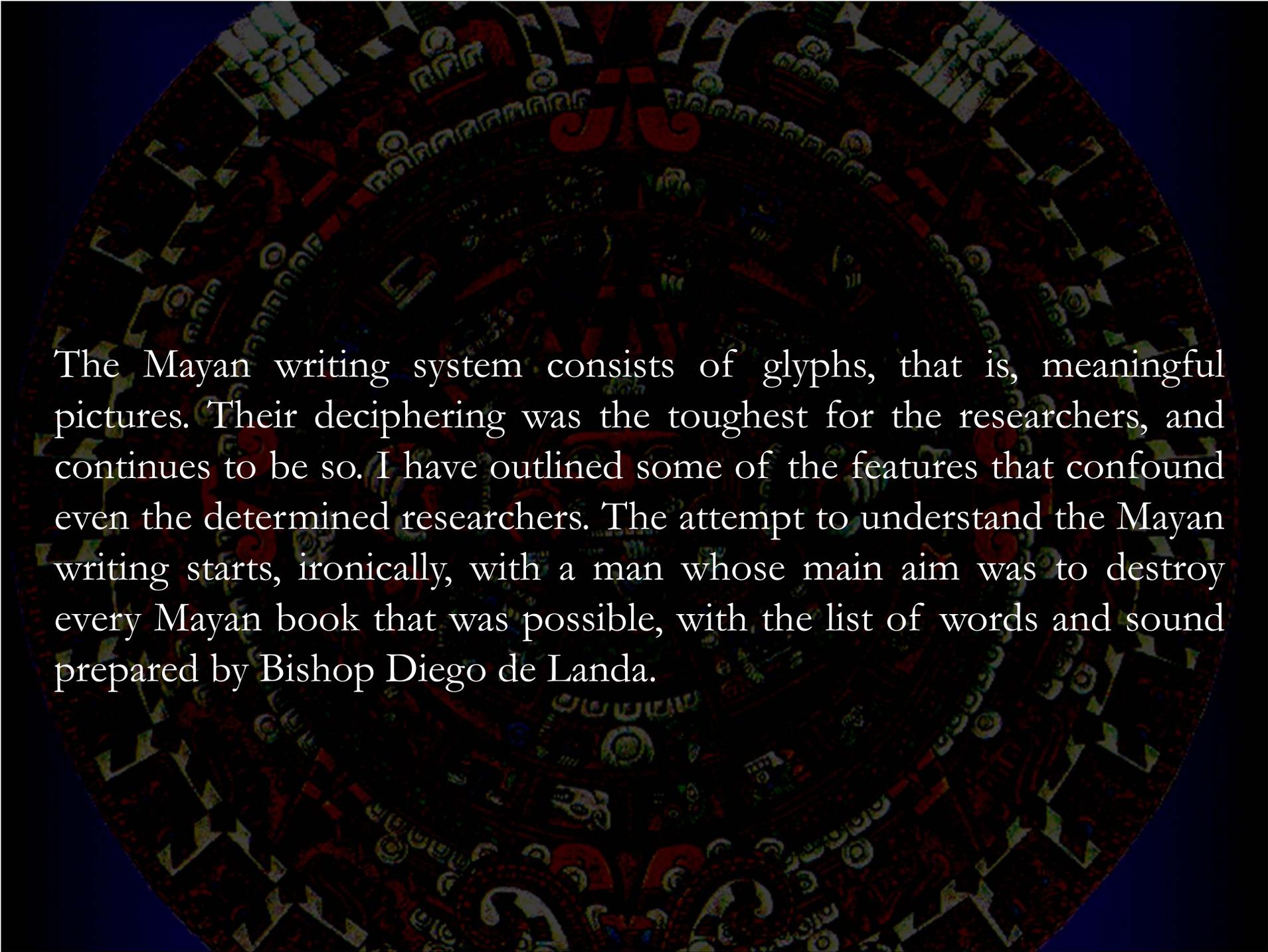
My inquisitiveness of this otherwise unknown culture – unknown to me – resulted in this longest presentation.



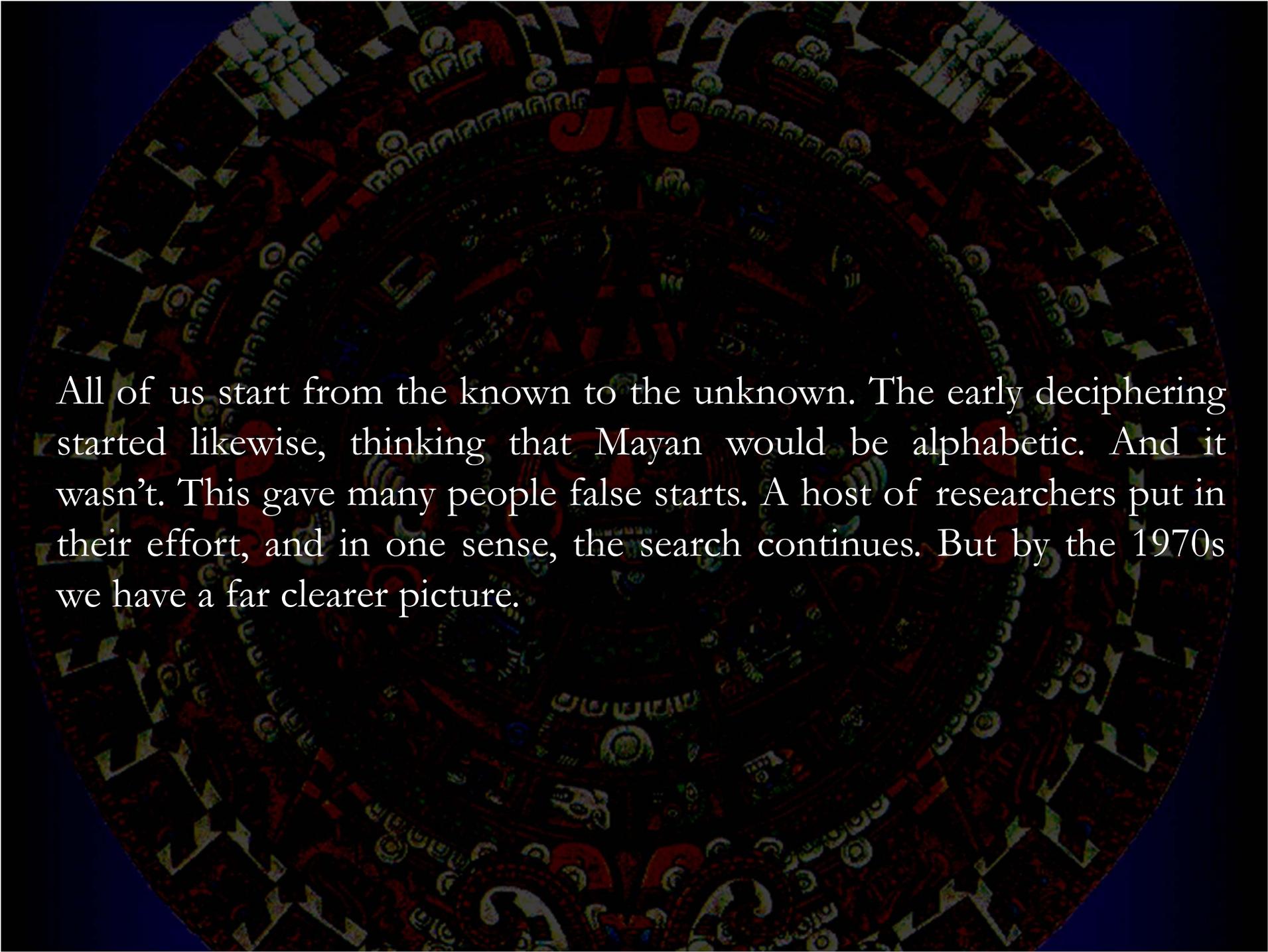
Meso-American writing was perhaps the result of the religious needs of the priest class. In this respect it was akin to the Egyptian. Among the ancient cultures under consideration, the Meso-American story can be begun from the beginning. I have attempted this from the proto-writing stages, as witnessed in the giant Olmec heads. By the way, the size of these Olmec heads, what a sculptural wonder!

A circular, highly detailed Mayan calendar stone (zodiac) with intricate carvings and hieroglyphs. The stone is dark in color, possibly black or dark red, and features a complex arrangement of symbols, including human figures, animals, and geometric shapes. The symbols are arranged in concentric circles, with the outermost ring containing the most prominent figures. The central area is filled with smaller, more intricate carvings, including what appears to be a central figure or deity. The overall design is highly symmetrical and reflects the sophisticated art and astronomy of the Mayan civilization.

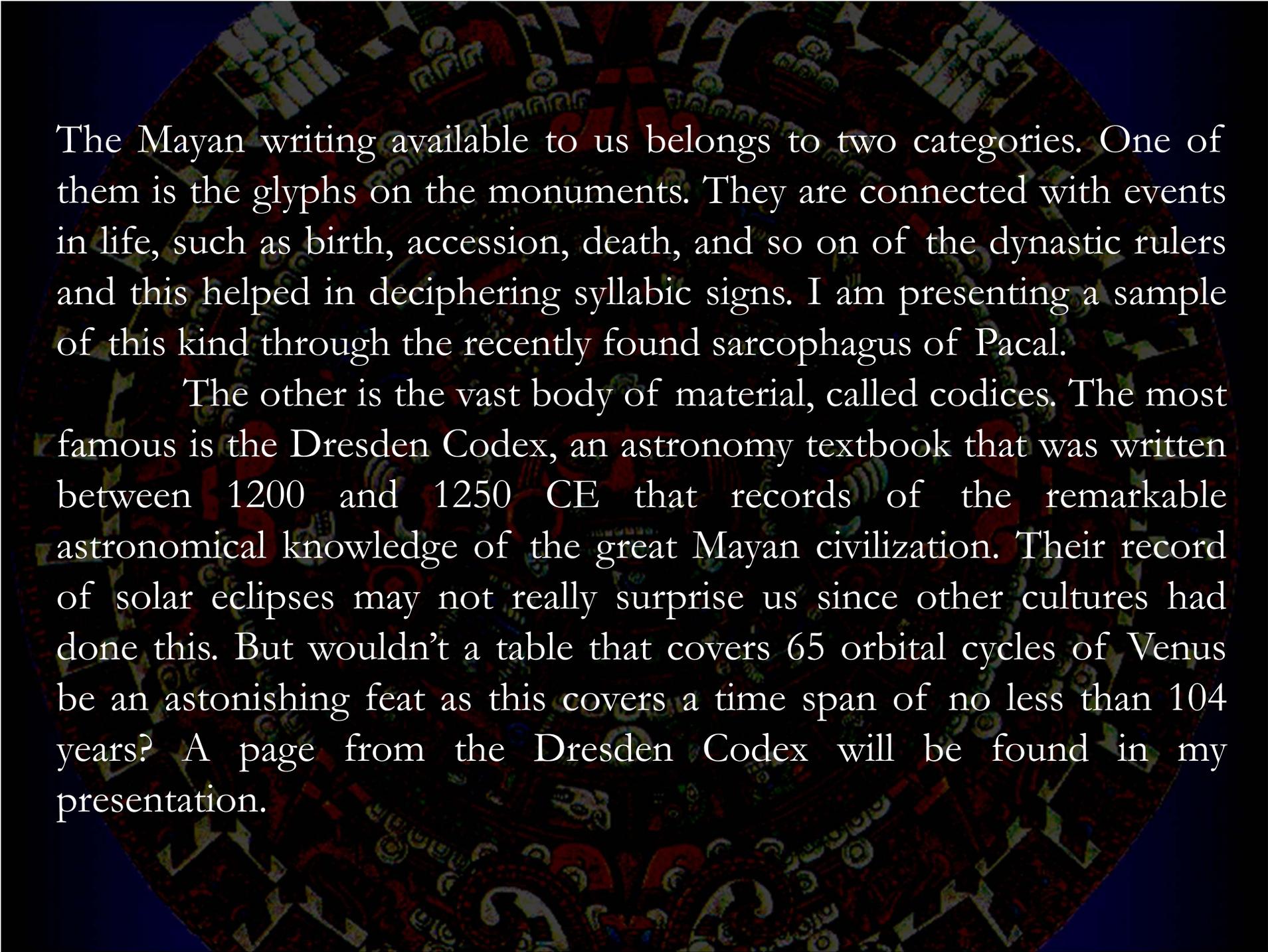
Considering rather small geographical area of mid-America, it is surprising there were as more than 15 writing systems in vogue. Though most of them were rather rudimentary, all of them shared certain common features. And some, like the Mayan, were fully developed. I have tried to give a sneak view of the range.



The Mayan writing system consists of glyphs, that is, meaningful pictures. Their deciphering was the toughest for the researchers, and continues to be so. I have outlined some of the features that confound even the determined researchers. The attempt to understand the Mayan writing starts, ironically, with a man whose main aim was to destroy every Mayan book that was possible, with the list of words and sound prepared by Bishop Diego de Landa.

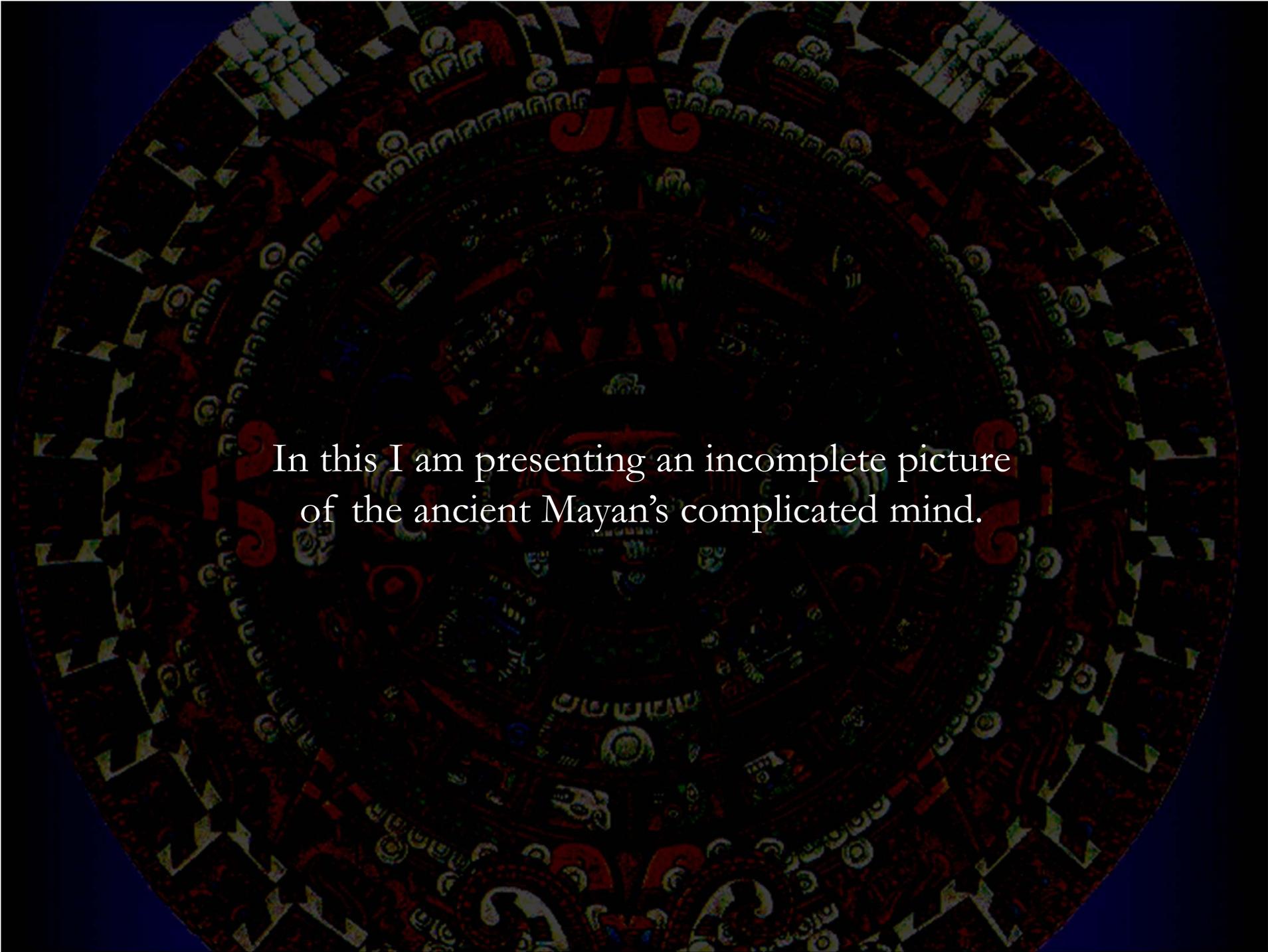
A circular, highly detailed Mayan calendar or astronomical chart, possibly a Dresden Codex page. The chart is filled with intricate geometric patterns, hieroglyphs, and a central figure. The colors are primarily red, black, and white, with some green and blue accents. The overall appearance is that of a complex, ancient manuscript page.

All of us start from the known to the unknown. The early deciphering started likewise, thinking that Mayan would be alphabetic. And it wasn't. This gave many people false starts. A host of researchers put in their effort, and in one sense, the search continues. But by the 1970s we have a far clearer picture.



The Mayan writing available to us belongs to two categories. One of them is the glyphs on the monuments. They are connected with events in life, such as birth, accession, death, and so on of the dynastic rulers and this helped in deciphering syllabic signs. I am presenting a sample of this kind through the recently found sarcophagus of Pacal.

The other is the vast body of material, called codices. The most famous is the Dresden Codex, an astronomy textbook that was written between 1200 and 1250 CE that records of the remarkable astronomical knowledge of the great Mayan civilization. Their record of solar eclipses may not really surprise us since other cultures had done this. But wouldn't a table that covers 65 orbital cycles of Venus be an astonishing feat as this covers a time span of no less than 104 years? A page from the Dresden Codex will be found in my presentation.



In this I am presenting an incomplete picture
of the ancient Mayan's complicated mind.

Meso-America is the area that covers today's Mexico and Central America.



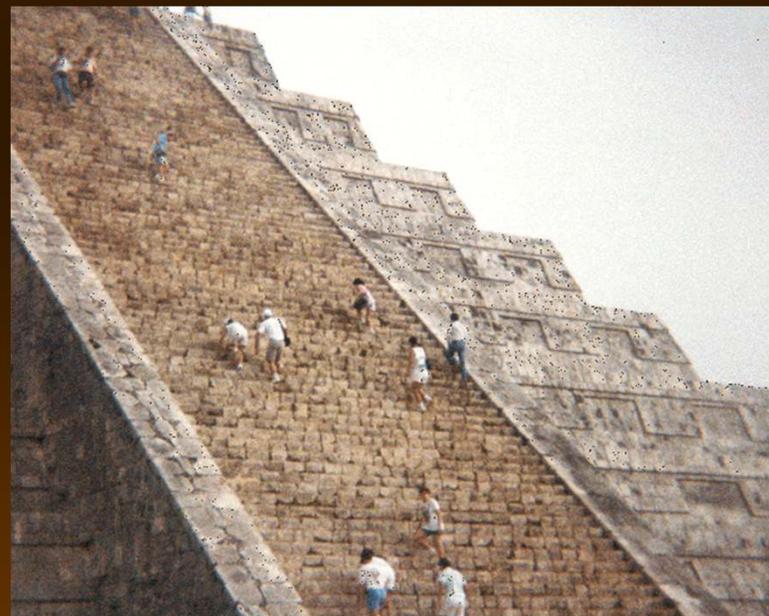
Meso-American Civilisation



Many are the vestiges of a very vibrant civilisation.

Among them are
its architectural wonders, like the pyramids,
and their scripts.

Meso-American Civilisation





Meso-American Writing

Writing in Mesoamerica dates from 1000 BCE.

But the script, in the way we understand,
took shape by the 5th century BCE.

The earliest deciphered writing
belongs to 150 CE.

As could be expected, it has features common
to all the literate cultures and some uniqueness.

Proto-writing



Like it happened in Egypt,
in the initial stages, writing was used for
religious and political messages, and
was divorced from the common people.

It all started, it looks, with the development of
a highly elaborate and conventionalized
system of symbols.

Symbols written or carved could be interpreted
by any knowledgeable person.

Proto Writing

Take the case of the colossal Olmec heads,
perhaps, of the rulers.



The pattern on the helmet must be typical and
was perhaps identifiable.

This must be their proto-writing.



Proto Writing

Once a conventionalized set of symbols with specific meanings became established, combination of such symbols could convey more complicated ideas.



On the hillock of Chalcatzingo
are a number of carvings
in low relief.

One is El Ray ('The King')

Proto Writing





Proto Writing

The relief shows
a 'king' sitting in a cave

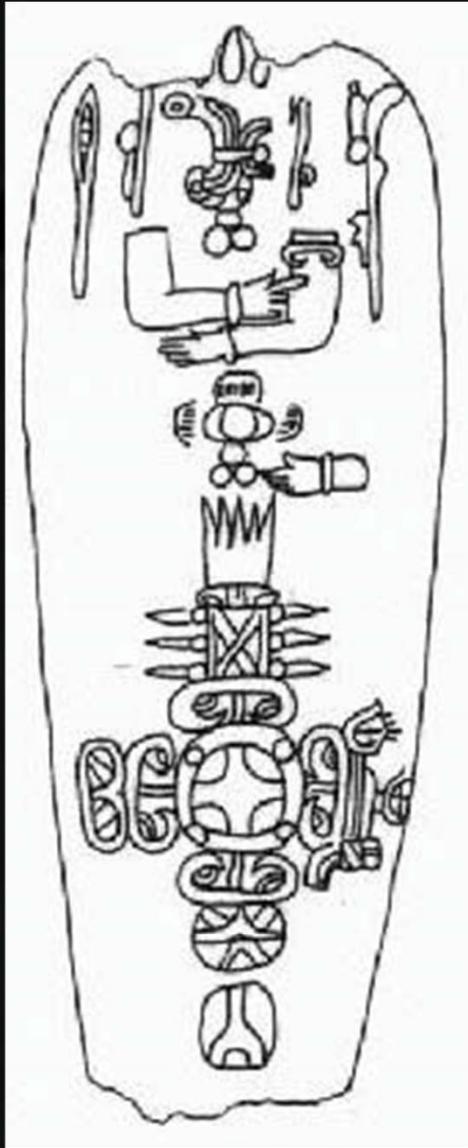


Proto Writing

The composition perhaps conveys the idea the king (4) has access to natural powers such as clouds (1), rain (3), wind and growth of plants (2).



In essence, this carving indicates the ruler's right to rule because he, and nobody else, can control the fertility of crops.



Proto Writing

Combining certain symbols, like these on the Humboldt Celt (900 BC), was another way of communicating.

Proto Writing

Symbol of ruler

Greeting the lord

Casting of corn

Royal head dress



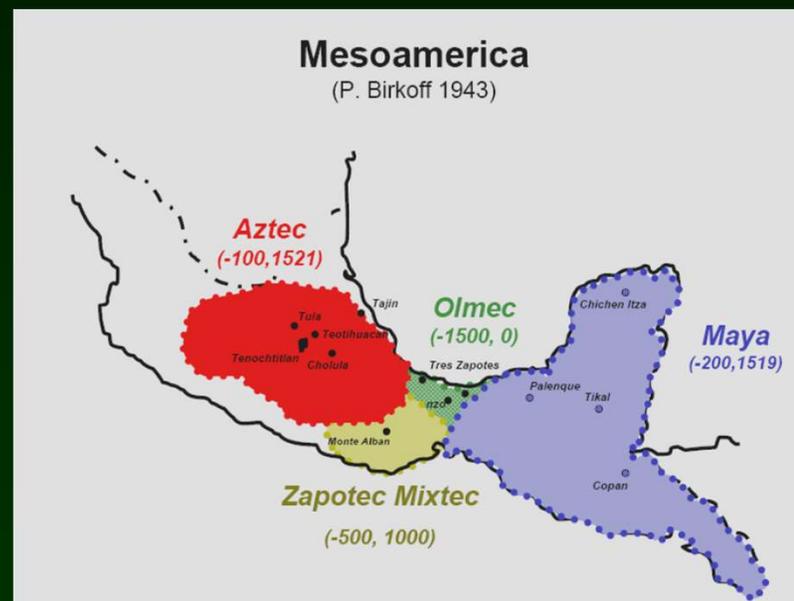
Four groups of symbols perhaps worked together to convey some message.

The celt probably was a greeting from one ruler to another.

Meso-American Writing Systems

About 15 distinct writing systems have been identified.

Most of them are rudimentary and highly pictorial.



Only Zapotec, Olmec and Maya consisted of extensive texts.
And these are the earliest too.

Meso-American Writing Systems



However they share these common characteristics among others:

Many characters are complex pictures

The shape of the signs is squarish

The numerical system had a base 'twenty' (vigesimal)

Media used

Writing was
carved into stone on the side of buildings,
on the lintels over doorways,
on wall panels and on stelae and altars
(Maya, Zapaotec, Aztec)



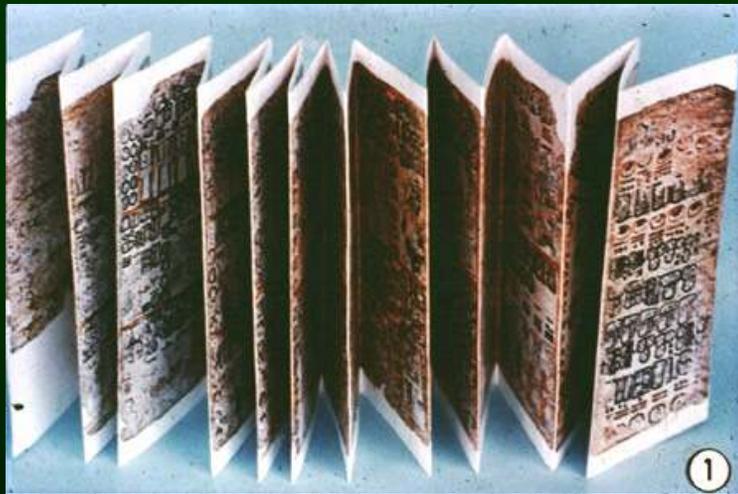


Media used

It was painted on ceramics, portable objects made of stone, bone or pottery and on stucco walls (Maya, Mixtec)

Media used

It was painted
in color on codices
(Maya, Mixtec, Aztec)





Mesoamerican Scripts

Now let us briefly look at
important Mesoamerican writings

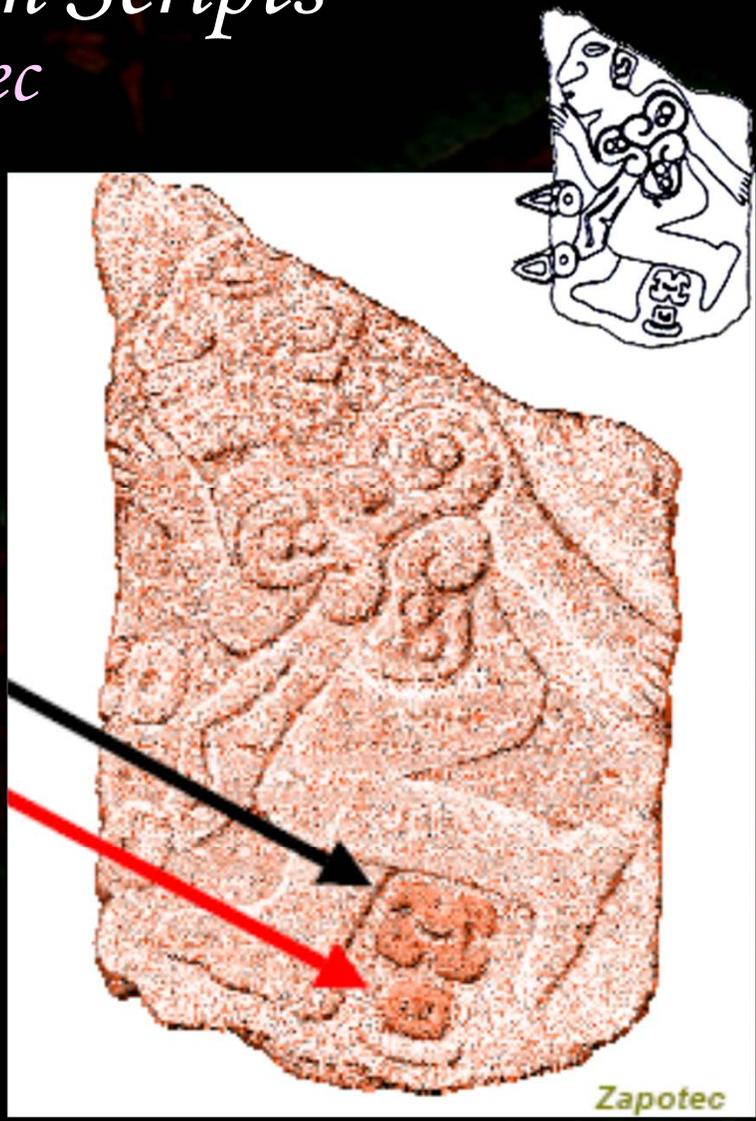
Mesoamerican Scripts

Zapototec

The earliest inscription is *Danzante* from the Valley of Oaxaca depicting a captive. It contains two glyphs.



Monument 3
from San José Mogote, 500 BC



Zapototec

Mesoamerican Scripts

Zapototec



These stone slabs display a continuous text, perhaps conveying some abstract ideas, calendrical as well as non-calendrical.

Stelae 12 & 13 (500-200 BC)

Mesoamerican Scripts

Epi-Olmec

The Olmec Indians,
developed a writing system
around the 1st century BC.

In their inscriptions
we get a reference to their era.
It starts from the Long Count,
representing
the year 3113 BCE.

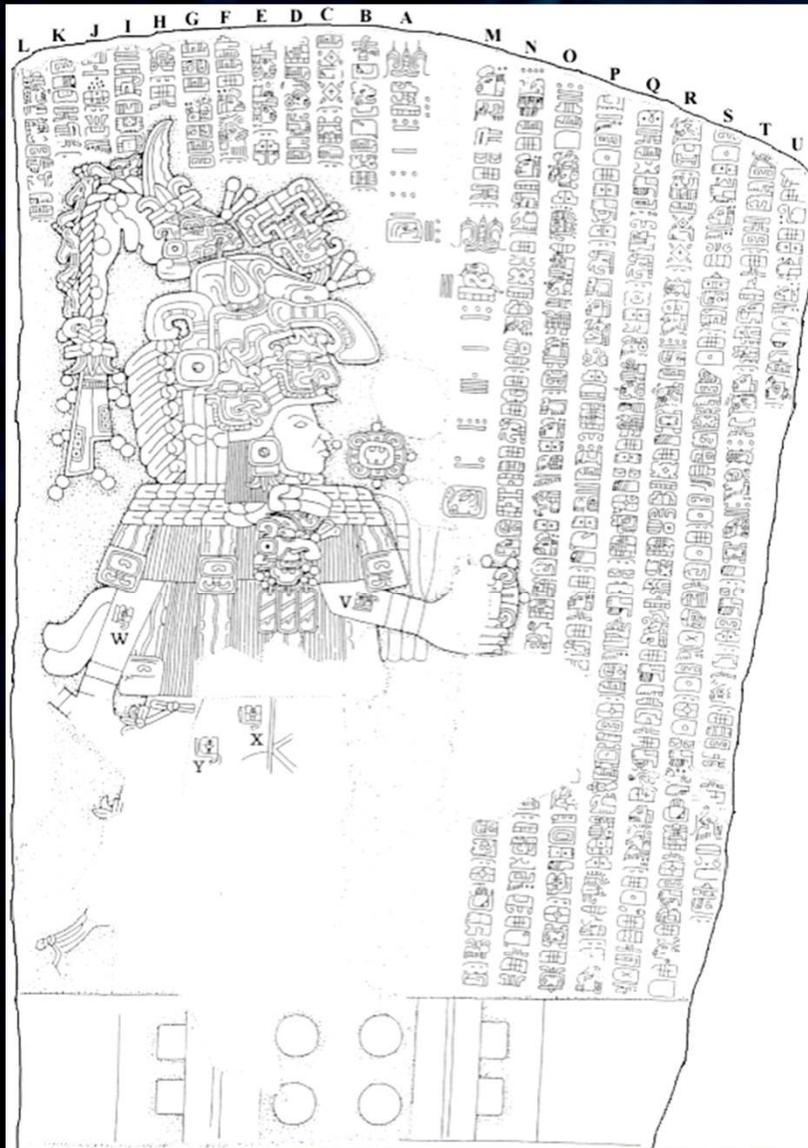
Does this year have connection with
our Kali Yuga, 3102 BCE?



La Mojarra Inscription



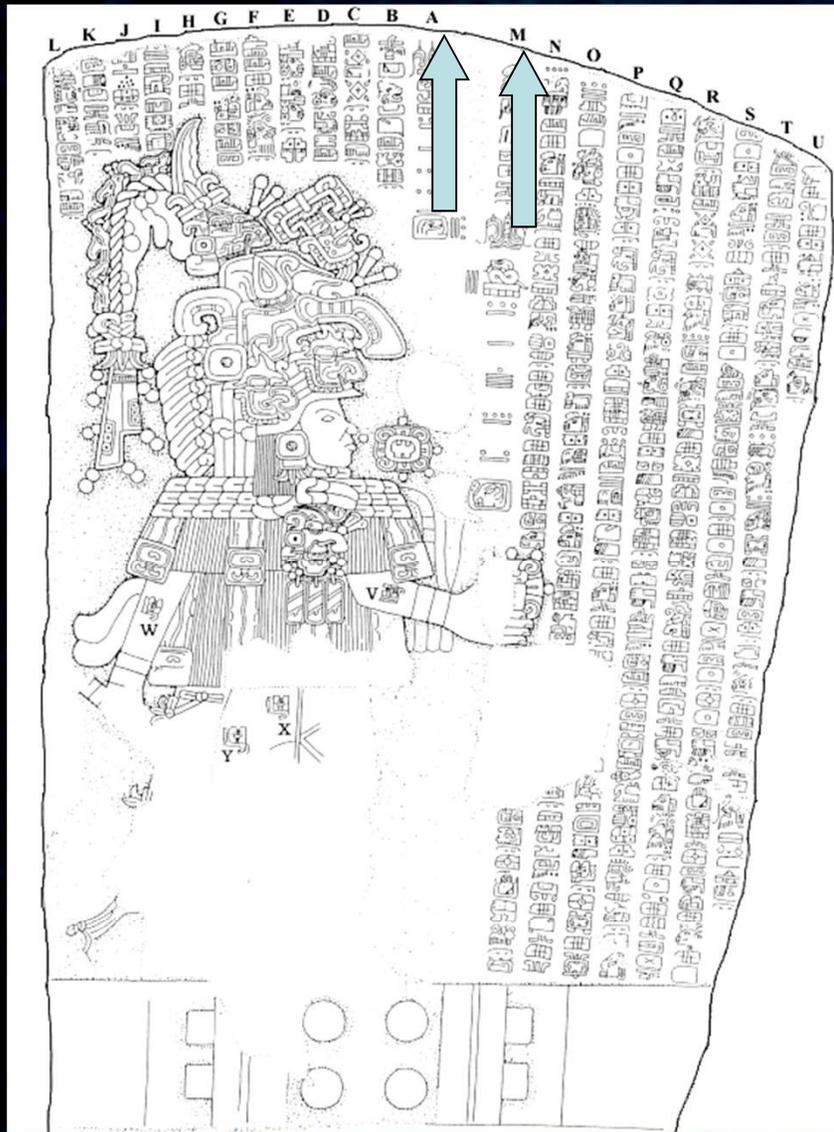
A stone weighing about 4 tons was found in 1986.
Dated to 150 CE, this contains
the earliest readable inscription of Mesoamerica.
The figure depicted is Harvester Mountain Lord.
It describes ritual bloodletting,
warfare and political intrigue.



La Mojarra Inscription

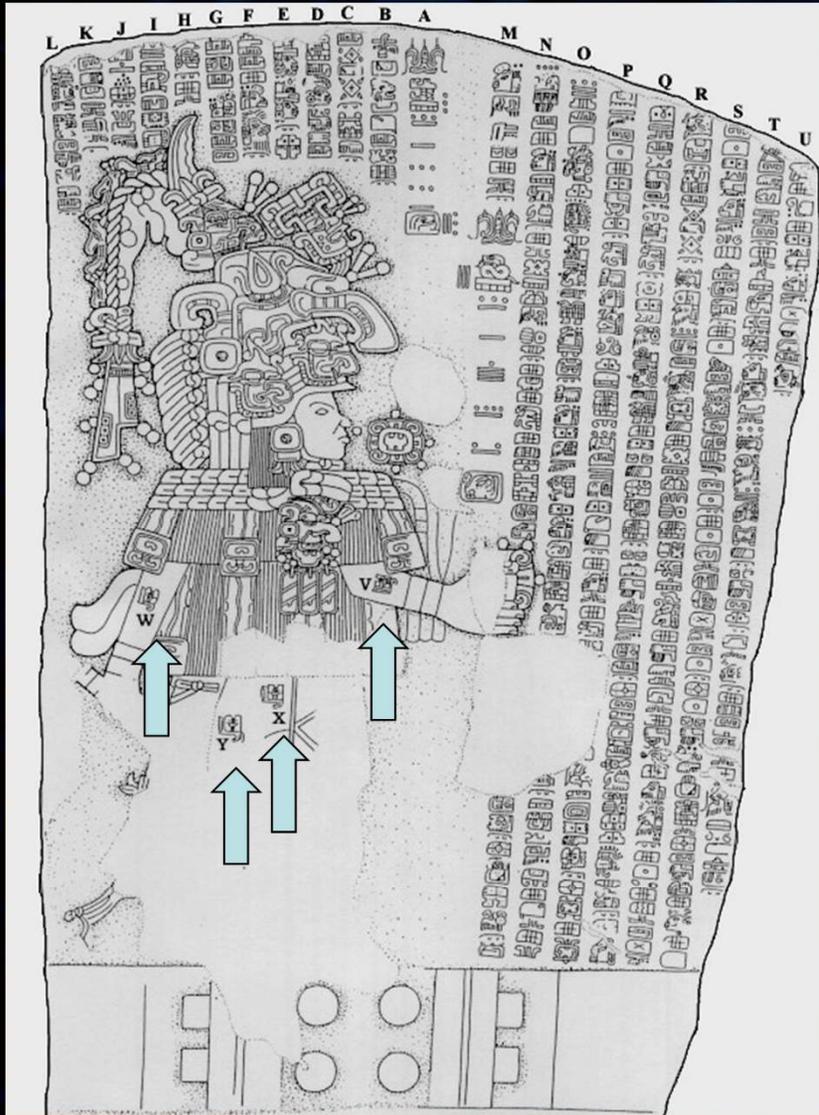
The script is logo-phonetic.
The text is written vertically
around the figure.

La Mojarra Inscription



It starts in the middle
of the block and
is identified as column A.

The text continues on the left.
It returns to the middle,
resumes from column M and
proceeds towards the right.



La Mojarra Inscription

After exhausting the space, the text is written in the central portion around the figure of the Lord. (V, W, X, and Y).



La Mojarra Inscription

We may decipher
Line A
of this inscription.



La Mojarra Inscription

	} it was the 3rd day
	} of the 17th month;
	} the long count was 8.5.3.3.5,
	} the day was 13 snake

Mesoamerican Scripts

Aztec & Mixtec



Both Mixtec and Aztec writing systems were logographic, consisting of a combination of signs and pictures.

Mixtec Writing



The few surviving Mixtec manuscripts, written on deerskin and known as codices, allow us to trace the Mixtec script to 940 CE.

Mixtec Writing



This codex depicts warriors conquering a town.
This is surmised from the warriors' drawn weapons (1)
and the arrow piercing the hill (2).
The glyphs with dots (3) above may be names.



Mayan Civilisation

At the height of their civilisation (200-900 CE), the Mayans had developed exceptionally advanced mathematical systems, achieving the use of zero and place notation.

They had also made great strides in astronomy.

Their astronomical tables and data have been found to be remarkably accurate.



Mayan Civilisation

Their mathematics and sophisticated calendric and astronomical systems were inextricably linked to their religion.



Maya Writing System

Maya writing preserves a vast body of material and is the only fully enunciated phonetic Mesoamerican script.

As a representative of Mesoamerican writing the Mayan script is taken for a detailed discussion.



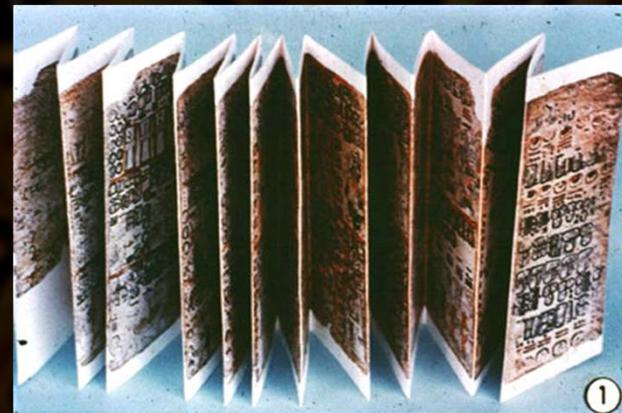
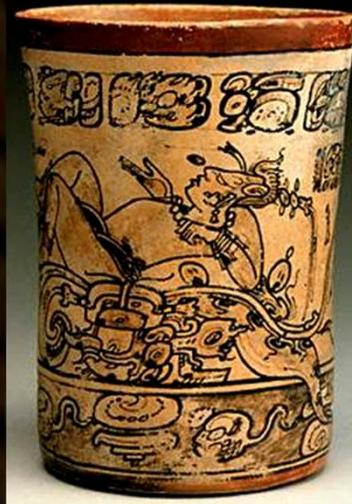
Maya Writing System

The important period of Mayan writing
can be divided into:

- Classical Period (200-900 CE)
mostly inscriptions, and
- Post-Classic Period (900-1500 CE)
mainly manuscripts

Maya Writing System

There are many lengthy narrative accounts inscribed on buildings and slabs and painted on ceramic vessels and codices.



Deciphering the Mayan Script



The history of the decipherment of the logo-phonetic Mayan script is long and has been eventful.

The quest started in the 16th century following the Spanish conquest, and was marked by major breakthroughs in the 1970s and 1980s.

Mayan Script



Each sign in the Mayan script is a glyph.

Each glyph may represent
an idea or a sound, or both.

That is, the script is logo-phonetic.

There is no alphabet in Mayan script.

Mayan Script



Before we go further, let us have a look at samples of the syllabic and the logographic charts prepared by epigraphists.

This could help in following the later discussion

A	BA	CHA
E	BE	CHE
I	BI	CHI
O	BO	CHO
U	BU	CHU

A Sample Syllabic Chart

The most obvious feature of the chart is the large number of variant signs for a single sound.

For example, *cha* has four versions.

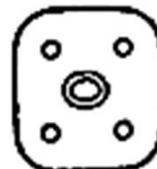
This feature is known as homophony.

A Sample Logographic Chart

Here are shown
a few logograms,
signs signifying
an object or an idea.



ahaw
(lord)



bih
(road)



hok'
(to take office)



k'al
(twenty)



akot
(to dance)



chan
(sky)



hoy
(to bless,
make proper)



k'awil
(spirit)



chan
(snake)



hun
(headband)



k'in
(sun)



Difficulties in deciphering



The Mayan language was unknown
to the explorers in the 16th century.

But the speakers of the language today,
helped with the vocabulary,
though they could not read the glyphs.

But the diversity among the dialects of the language
was vast.

Reading Mayan poses a number of problems

A glyph may represent an idea, or a sound or both;
and there is no clue to these.

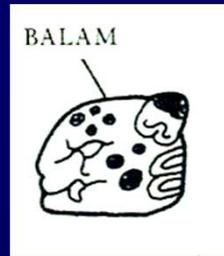
For example, this glyph may represent



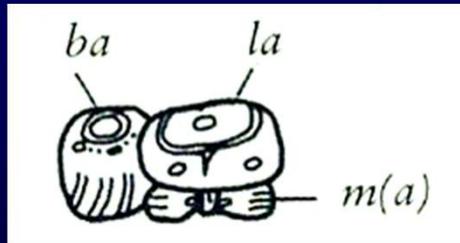
- Cauac, a day's name,
- a 365-day year and pronounced *haab*,
- syllable *Cu*
- etc

A word can be written in more than one way.

For example, the word, BALAM, meaning *jaguar* may be written as



a logogram for jaguar, or



using phonetic components

or, various combinations of the two

Further, there are multiple glyphs for some sounds..

For example,



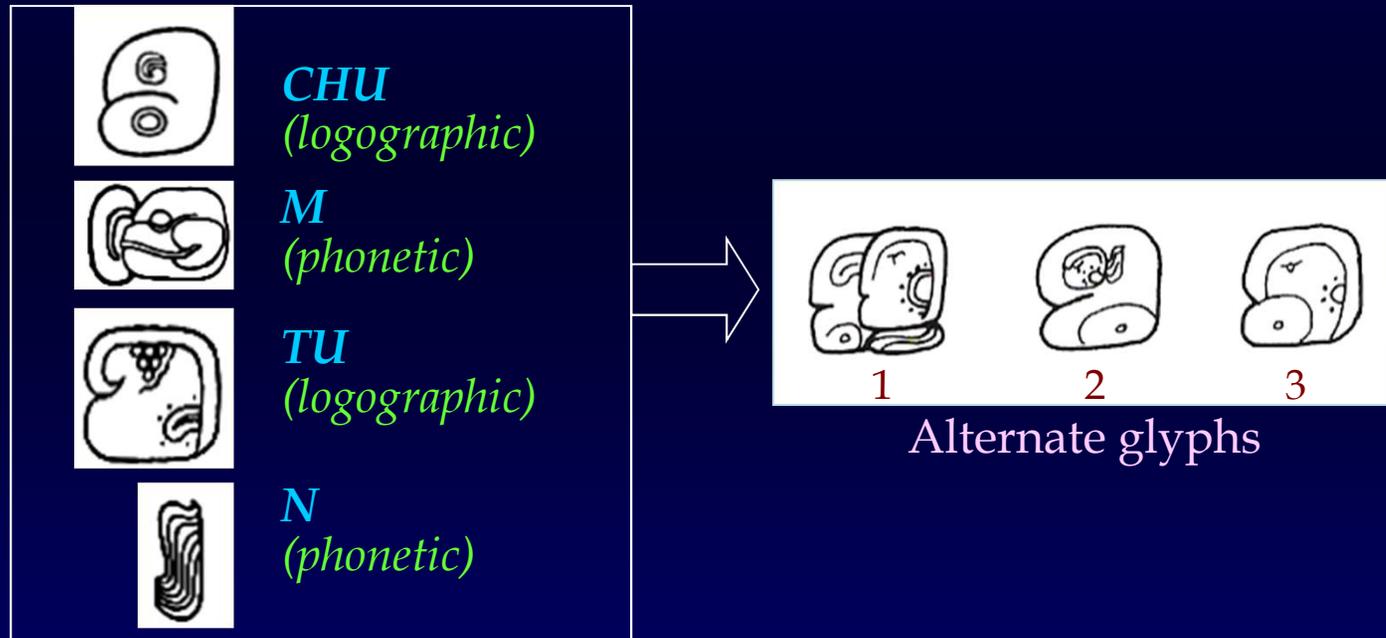
these are the four different glyphs
for the syllable *CHA*



and these are the three different glyphs
for the syllable *BU*

To complicate further, the constituent symbols can be combined in a number of ways

There are four constituent symbols of Chum tun.



And all of them are equally acceptable



We have similar situations in English too!

Homophony (variant signs for a single sound) in English

'whey', 'weigh' and 'way'
are all pronounced the same way.

'gh' (in trough), 'ph' (graph) and 'f'
have the same sound.

Polyphony (variant sounds for a single sign) in English

'g' and 'c' are pronounced in more than one way

And we don't notice them!



It may be pointed out that
in Chinese too constituent symbols combine,
but strictly in a specific manner.

Deciphering the Mayan Script

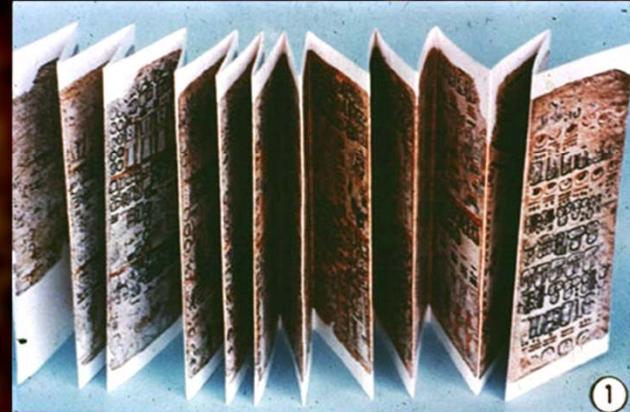


We shall be taking two examples:
writing from a page of a codex and
inscriptions on a stone



Codices

A codex means an ancient manuscript.
Mesoamerican codices are folded books.
The writing was done on fig bark paper
bound in jaguar skin.

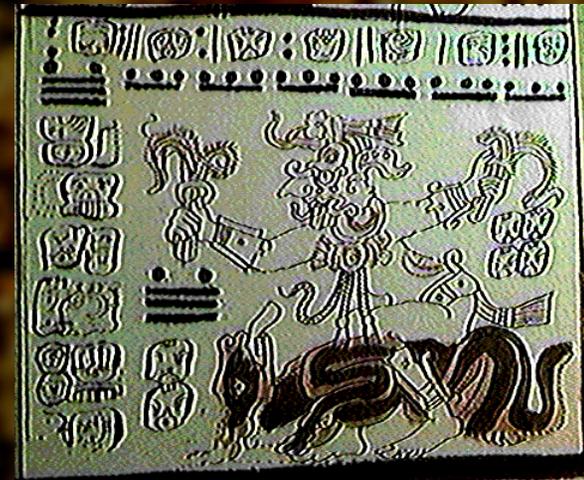




Codices

They are sacred manuals
in which are recorded crucial information
used by the priests
to interpret and influence unseen forces etc.

Dresden Codex



The Dresden Codex was written
between 1200 and 1250 CE.

It is one of three codices that escaped destruction
by the Spanish conquistadors
in the 16th century.

It turned up in Dresden, Germany, in the 1700s.



Dresden Codex

The Dresden Codex contains complex astronomical calculations.

These are made using eclipses and movements of planet Venus, giving an astrological significance.

Dresden Codex



The codex depicts a number of rituals and gods and matters connected with daily life such as agriculture.



Codices

The codices look like strip cartoons about Mayan Gods, Goddesses and deified animals.





Codices

Instead of being given close to the figures, the captions are generally written above the characters.

Dresden Codex

Page 19 of the Dresden Codex
is taken for a brief discussion.

In codices,
above the portrait of each divinity
appears the glyph meaning its name

Young Moon Goddess
Young Moon Goddess glyph



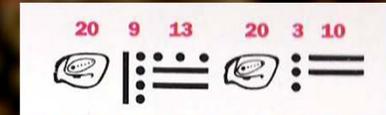
Dresden Codex

Death God
Death God glyph

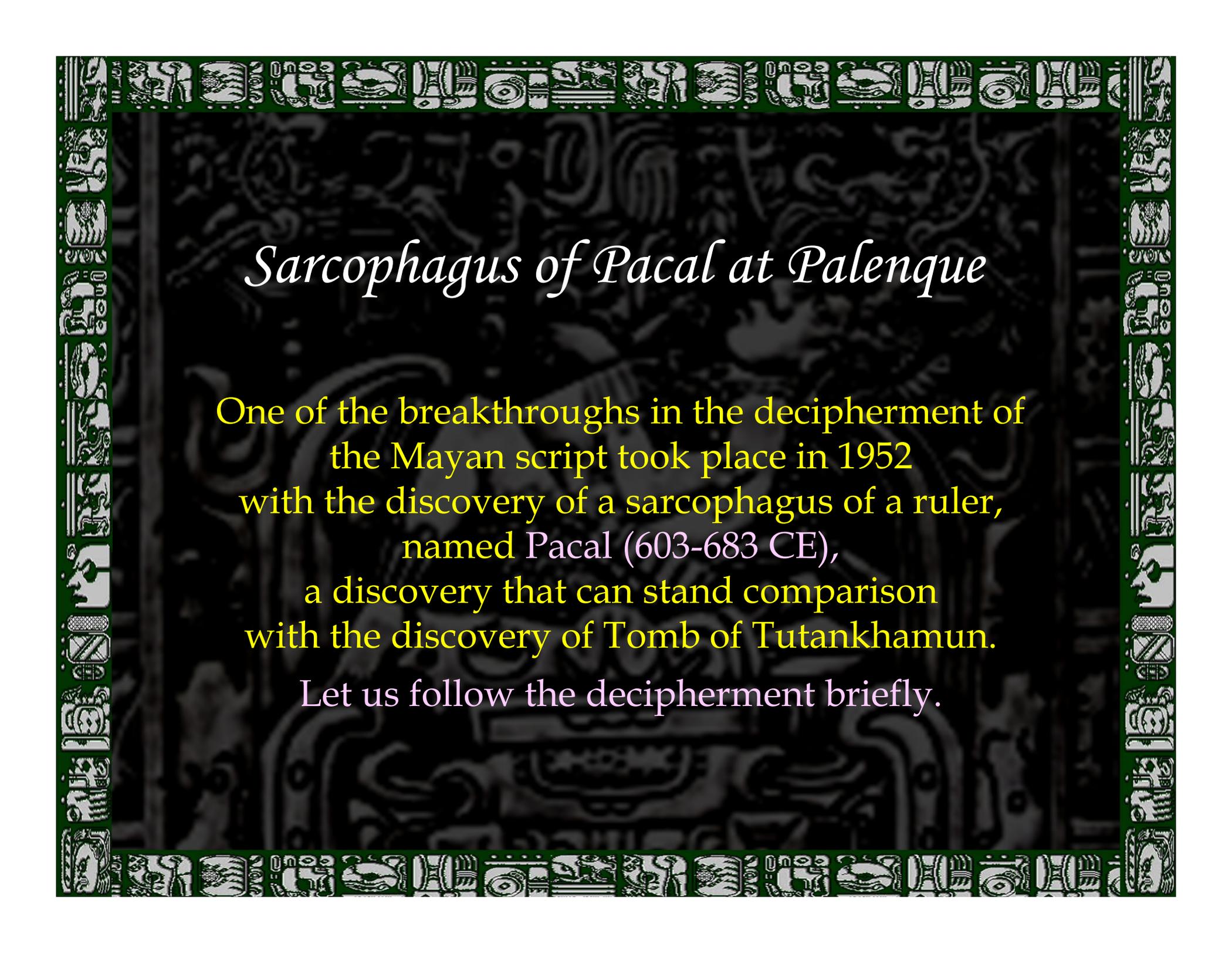


Dresden Codex

Months



In this part of the page five dates are given.
The months are shown on the left,
and the numerals
required for calculations are given on the right.



Sarcophagus of Pacal at Palenque

One of the breakthroughs in the decipherment of the Mayan script took place in 1952 with the discovery of a sarcophagus of a ruler, named Pacal (603-683 CE), a discovery that can stand comparison with the discovery of Tomb of Tutankhamun.

Let us follow the decipherment briefly.

Temple of Inscription at Palenque



The temple is found in the most beautifully conceived of the Mayan city-states, Palenque and one of the loveliest archaeological sites in the world.

The sarcophagus in it covered the remains of the Maya ruler. The pit contained a bounty of treasure that included life-size jade mosaic mask of the king.



Sarcophagus of Pacal

A giant slab of stone covered the remains of Pacal.

The carving on it is also a work of art.



Sarcophagus of Pacal



The ruler is shown falling down
the Great Trunk of the World Tree



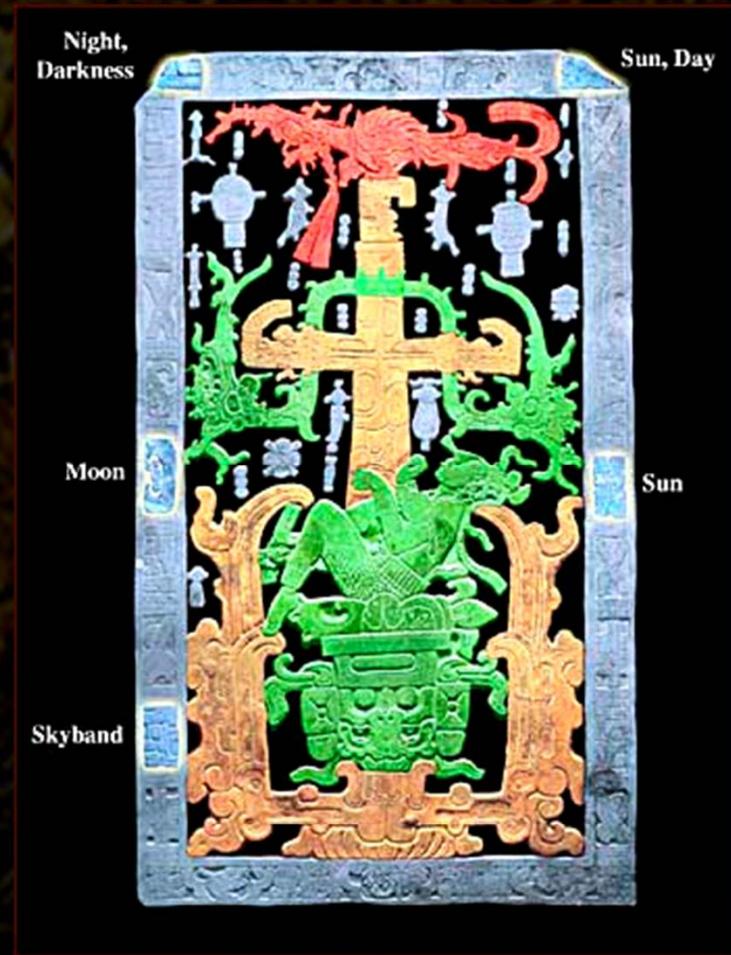
Sarcophagus of Pacal at Palenque

Pacal is falling down the great Trunk of the World Tree from the celestial bird (heaven) into the open jaws of the Other World.

He is accompanied by a monster carrying a bowl of sacrifice.

Sarcophagus of Pacal at Palenque

One can see five glyphs
on the border,
important participants
in the Mayan lore,
like sun, moon,
day, night etc.



Sarcophagus of Pacal



There are glyphs on the bottom edge that helped in deciphering the Mayan script.

Sarcophagus of Pacal

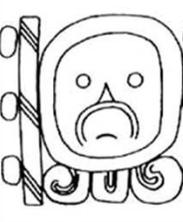
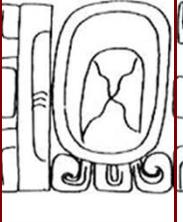
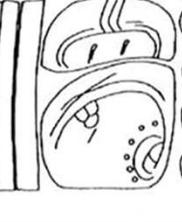
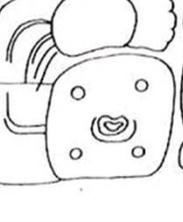
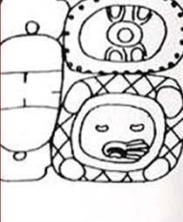
There are eight signs representing various numerals and names of days and months.



Experts have found these to be the dates of birth and death of the buried.

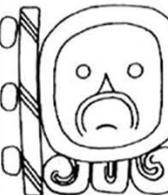
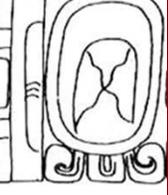
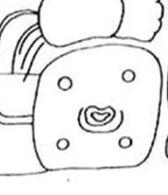
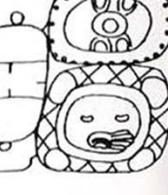
Sarcophagus of Pacal

Let us try to read the glyphs.

							
8 Ahau (a date)	13 Pop (a date)	Birth	6 Etznab (a date)	11 Yax (a date)	80 years	Death	Hand Shield
Birth date			Death date & Age			Name	

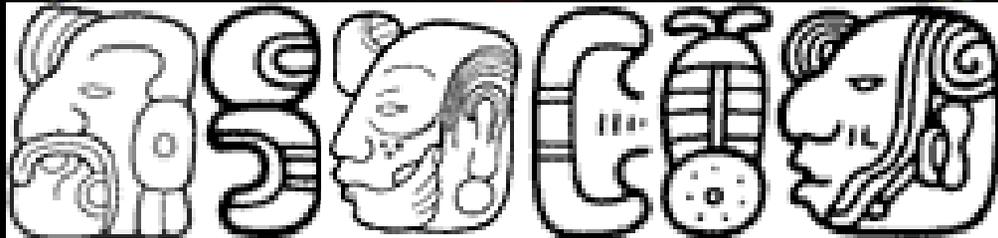
These second dates are according to Long Count,
similar to our Christian Era

Sarcophagus of Pacal

							
8 Ahau (a date)	13 Pop (a date)	Birth	6 Etznab (a date)	11 Yax (a date)	80 years	Death	Hand Shield
Birth date			Death date & Age			Name	

The inscription shows that the ruler, called Hand-Shield, was born on the 26th March 603 and died at the age of 80 on the 31st August 683 (dates correlated to the Christian era).

Finally, let me attempt to select the glyphs
which might sound like my name



S(a) wa mi na t(h)a n(a)



*That was a civilisation,
violent and superstitious, but
that made great strides in
art and architecture
mathematics and astronomy.*

*It has left behind huge monuments
comparable to the Egyptian pyramids
and enormous secrets for us to fathom,
while exploring new dimensions in
written communication.*

