



BOOK OF MORMON CENTRAL

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Appendix I: How We Learn About the Past

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Author(s): John L. Sorenson

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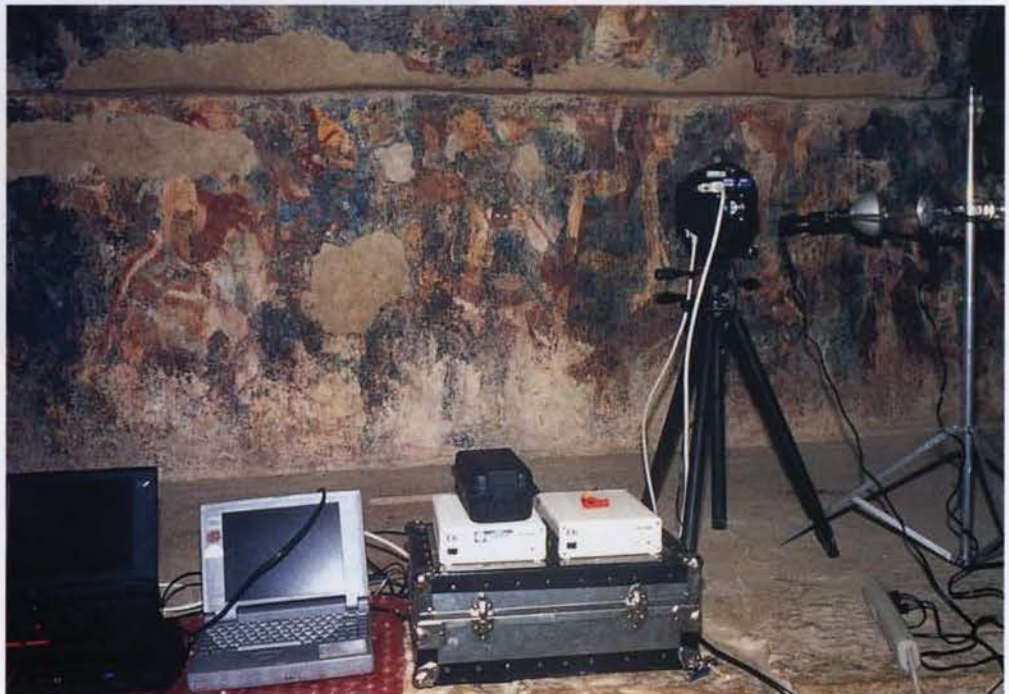
The specialized, cooperative nature of modern archaeology can be seen from this large team of researchers from a number of specialties and institutions that was assembled in 1996 to restudy the famous murals at the site of Bonampak in southern Mexico under the leadership of Dr. Steven Houston of Brigham Young University.

How We Learn about the Past

Archaeology

Archaeologists make use of the material remains left behind by past peoples in order to describe and interpret their life patterns. Ideally they excavate sites but digging is not always possible or necessary.

Many specialized fields of expertise are represented under the broad term *archaeologist*. Some of them study art styles shown on specimens whether dug up or found above ground, as in rock art. Others use the analytical and comparative methods of physical (biological) anthropologists in order to interpret what skulls and skeletons have to tell about the ethnic affiliation, age, disease, etc. of a people whose remains have been excavated. Certain specialties are even further removed from the process of excavation. For example, sophisticated scientific instruments are used to test the chemical composition of obsidian that was used for ancient tools. No two sources of this volcanic product are quite the same; therefore the tests tell where the stones came from; that is, they reveal patterns of trade.



Sophisticated imaging equipment was used at Bonampak to reveal new information that the naked eye could not detect on these vital Maya paintings, which are badly deteriorated due to atmospheric pollution.

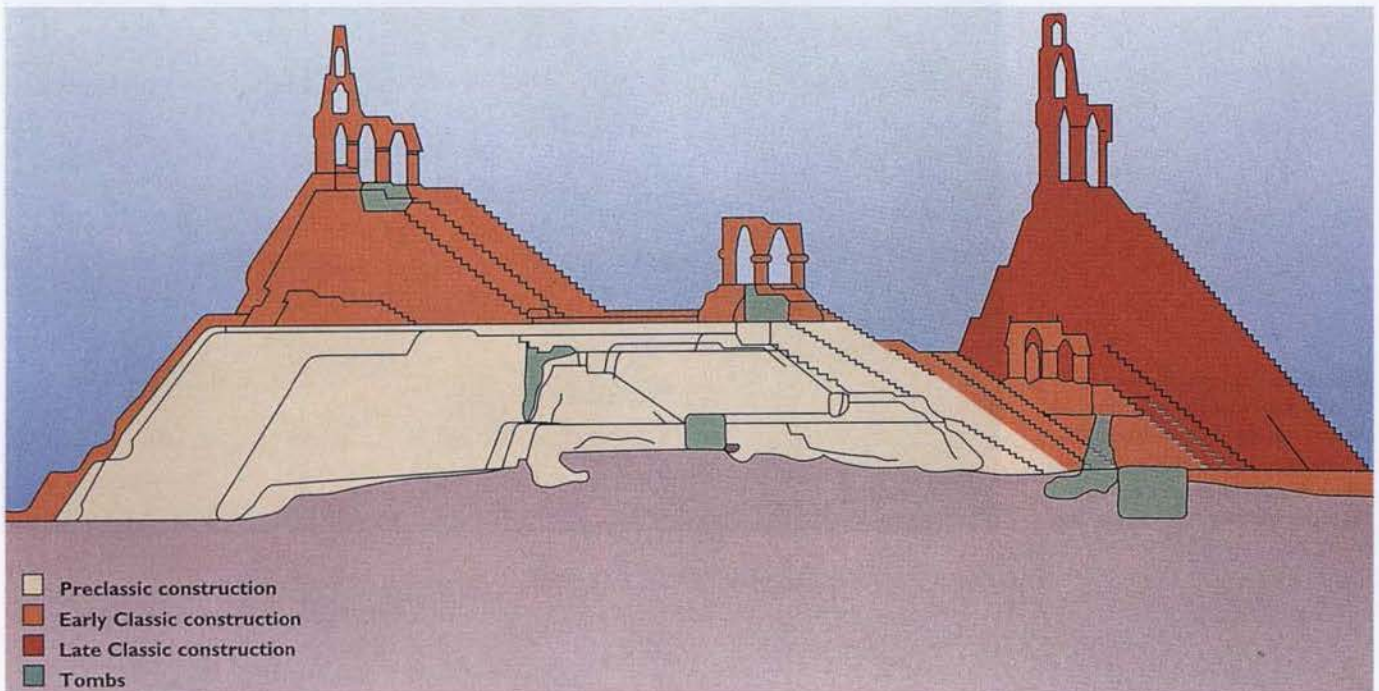
Chemical tests have also been used to determine what types of life activities (for example, food preparation, stone working, or painting) were carried out in particular rooms in a structure.²⁰⁷ And the climate of an ancient site may be described based on plant pollen retrieved from soil samples.

The wide variety of expert tasks involved in modern archaeology means that teamwork is essential. Generations ago the archaeologist was a lone heroic figure, and he is still celebrated in movies as the professor who knows everything about every ancient group. (The type is classically exemplified by the photograph on page 1, in the introduction, of British archaeologist Alfred Maudslay at work more than a century ago under primitive conditions at the ruins of Chichen Itza.) Today, however, the coordination of a wide variety of skills is essential for doing proper archaeology and may also entail such high-tech tools as internet-linked computers at the dig site. The new mode also means that long periods of laboratory work have to be completed in order for the specialists to have their full say. (Thus archaeology is very expensive.) Finally, an integrated picture of the ancient lifeways is constructed by a team of synthesizing scholars out of the mass of technical data.



At most sites the first and most basic kind of archaeology is collecting specimens from the surface, chiefly pottery fragments because they are often abundant. The position of artifacts must be recorded since nobody can know at the time of the field investigation what facts about ancient life may eventually be revealed by detailed studies of the distribution. Often, surface collecting and mapping are the only studies of a site that researchers can afford to do.

Whether one layer of remains lies above or beneath another (stratigraphy) is a key concern in excavation, because those vertical relationships establish what is earlier and what is later. Eventually the relationships discovered are summarized in diagrams such as this simplified version from the work on the north acropolis at Tikal.





Governments may be concerned that important ruins be restored so that visitors may come to a site and learn about life in the past. This scene shows rebuilding work at Monte Alban under the direction of archaeologists and engineers.



Archaeologists like to discover monuments, especially those with inscriptions on them, like this Maya stela from Ixtutz, Guatemala. Much of the writing can now be deciphered. But most areas in Mesoamerica, and even most Maya sites, do not yield stones with writing on them.

Complementary Studies



Fragments of pots are the most abundant kind of artifact the archaeologist brings to light. Rarely are whole vessels discovered. When carefully washed, sherds can sometimes be fitted together into a three-dimensional jigsaw puzzle so that we can see the shattered pot reconstructed.

Here an artist shows the full repertoire of the ancient ceramic artists' craft at two moments in history. From the Chiapas-Guatemala border region, a suite of styles (left) made during the Ocos phase (about 1400 B.C.) is compared with those of the Cuadros phase (below) from about three centuries later. Once these styles have been dated, discovering even a single new fragment may tell the expert the approximate date of the layer in which it was found.

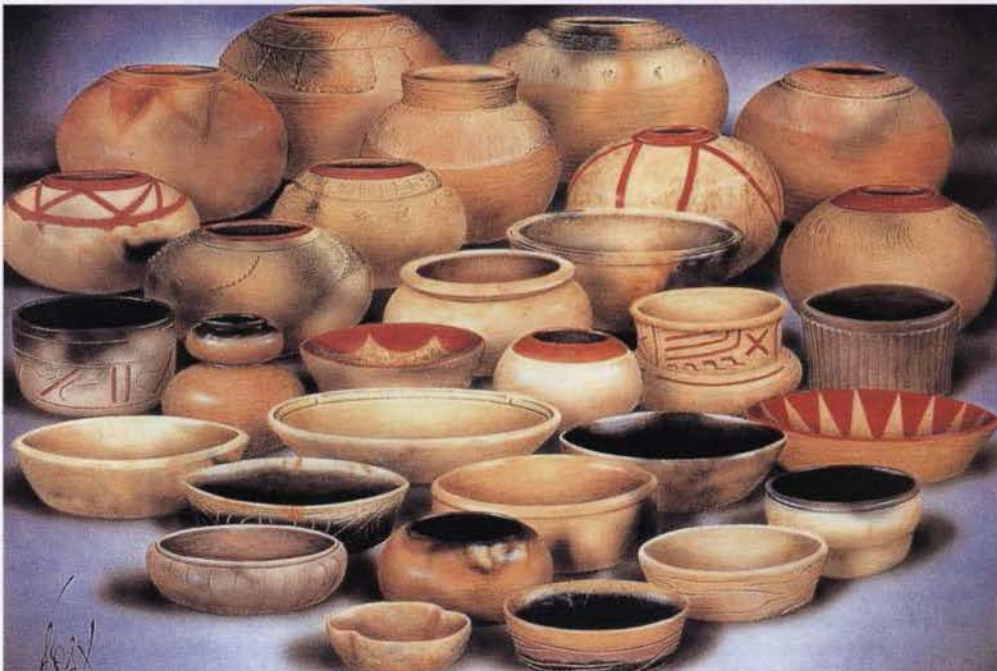


Fig. 1. The Ocos phase (left) and the Cuadros phase (right) of ancient ceramic art from the Chiapas-Guatemala border region. The Ocos phase (left) is characterized by reddish-brown vessels, while the Cuadros phase (right) is characterized by light-colored vessels. The vessels shown are representative of the styles of each phase.

Complementary Studies



By our day many ruins and monuments have been destroyed by nature or have been looted for artifacts to sell to rich collectors, so information about ancient ways that the ruins and artifacts might have given to archaeologists had they been properly discovered has often been lost. But early explorers' accounts of ruins, as well as reports from observers of how natives lived before modern ways changed them, tell us things of value about what has disappeared. This drawing by Frederick Catherwood was executed during his exploration with John Lloyd Stephens at Copan, Honduras, in 1839. Joseph Smith and his associates were excited when they saw scenes like this in Stephens's 1841 book, the first substantial information they had access to that showed that there even was an ancient American civilization.



Social anthropologists (or ethnographers) and other observers have lived among surviving Mesoamerican peoples that are descended from the bearers of the ancient civilization. Much of our ability to interpret the remains found by the archaeologists is based on this eyewitness information. Here a Lacandon Indian of Chiapas demonstrates to visitors and his sons the old technique of fire starting still in use among his people.

COMPARISON OF UGRIAN LANGUAGES OF NORTHWESTERN SIBERIA WITH PENUTIAN NATIVE AMERICAN LANGUAGES OF CENTRAL CALIFORNIA

<i>Ugrian</i>		<i>Penutian</i>	
ulu, uli	head	uli, uri	head
tabor	hair	tapor	hair
tai	forehead	tai	forehead
xorox	throat	xorxos	throat
t'iwiy	lung	tawe	lung
ngissu	finger joints	'issu	finger
kora	leg, foot	koro	leg, foot
jet	to tattoo	yétkû	tattoo on face

Language comparisons offer another line of information to be researched for history. Conventional linguists consider the comparison of languages between the Old World and the New to be naïve, so they don't attempt such studies. A few qualified scholars, however, have braved professional disapproval to make such comparisons and report interhemispheric links. Dr. Otto Sadowsky, a native speaker of a language belonging to the Ural-Altai group of central Eurasia, by a strange set of career accidents ended up studying Amerindians of northern

California and was shocked to discover direct parallels to Old World tongues familiar to him. He has concluded that a small group of people migrated in a short period of time, three or four thousand years ago, from interior western Siberia along the Arctic coast to Alaska then along the coast to California. His discoveries defy the dogma of no linguistic connection between the hemispheres preached by the majority of linguists. A tiny sample of the thousands of similarities in vocabulary that he has established is shown in this table.²⁰⁹

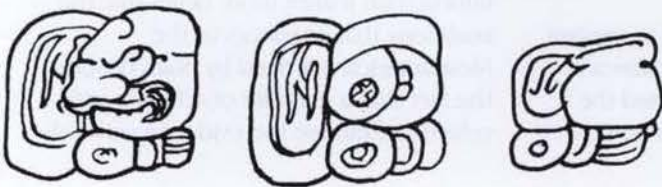
While the languages he has treated do not occur in Mesoamerica, his work should warn scholars that unsuspected but convincing linguistic links may yet be shown for Mexico and the Old World too. In fact, one linguist, Dr. Mary LeCron Foster of the University of California at Berkeley, claims such a connection between Egyptian and Mixe-Zoquean, the language of the Olmecs, although her results are not yet fully published.²¹⁰ Brian Stubbs has documented the presence of Hebrew/Arabic elements in tongues of the Uto-Aztecan family.²¹¹



Linguistic scholars collect information from native language speakers. Their data yield valuable dictionaries that permit reconstructing much of the history of the two hundred or so languages once used in Mesoamerica. The historical data in turn show anthropologists some of the concepts that were used in the ancient cultures. For example, Dr. Lyle Campbell, seen here working with informants in Mexico, and a colleague have shown that the people we now call the Olmecs, of the second and first millennia B.C., apparently had words meaning "dance," "incense," "festival," "tobacco," "to play music," "to buy something," and "to plane wood."²¹² Archaeologists are unlikely to discover material remains that would establish the presence of such culture traits in that remote period. (Recall that those people were contemporary with the Jaredites.)



Art historians apply principles derived from studies of art in other parts of the world to interpret pieces from Mesoamerica, place them in orderly sequences, and establish interconnections between styles. This famous ceramic disk, which shows a few Near Eastern features, comes from central Veracruz and dates between the seventh and tenth centuries.



This is the story
the old men used to tell:
In a certain time
which no one can now describe,
which no one can now remember,
those who came here to sow,
our grandfathers and grandmothers
landed here, arrived here,
following the way,
and came at last to govern
here in this land,
which was known by a single name,
as if it were a little world of its own.

They came in ships across the sea
in many companies,
and arrived there on the seashore,
on the northern coast,
and the place where they left their ships
is now called Panutla
which means, "Where one crosses the water."
They followed the coast,
they sought the mountains,
and some of them found
the mountains capped with snow,
and the smoking mountains,
and arrived at Quauhtemalla [Guatemala],
following the coast.
The journey was not made
at their own pleasure:
the priests led them,
and their god showed them the way.
They came at last
to the place called Tamoanchan,
which means, "We seek our house."

Traditions and legends provide information about the past, although it is not easy for the specialists in those matters to sort fact from fancy in the tales. Of particular interest are a series of accounts that report that Mesoamerican ancestors had arrived from across the sea.²¹⁴ The text of one such account, from the Codex Matritense obtained by Sahagun, is reproduced here.

Epigraphy, the study of inscriptions, has flourished in recent decades in Mesoamerica. More and more writings on the monuments can now be read. Mayan texts, decipherers now say, quite often use versions of this glyph sequence that means "it came to pass."²¹³ Of course, similar phrasing is very frequent in the text of the Book of Mormon.