

# THE MAYAS

ALBERTO RUZ



salvat



Alberto Ruz Lhuillier (1906-1979) was born in Paris, France to a Cuban father and French mother. He started his studies in France, but in 1930, he continued them at the University of Havana.

Much later he moved to Mexico where, in November 1965, he presented his professional examination as an archaeologist in the National School of Anthropology.

Profoundly and inseparably bound to the pre-Colombian past, Dr. Ruz devoted himself, heart and soul as well as mind, to Mesoamerican archaeology and history, engaging in a number of diverse activities, such as that of archaeologist in the National Institute of Anthropology and History from 1940 on; as Director of archaeological explorations in Campeche, Yucatan and Palenque from 1943 to 1958; as Head of the Mayan Zone from 1949 to 1958; as Director of the Center Mayan Studies at the National Autonomous University of Mexico, and of the National Museum of Anthropology in 1977.

Among the innumerable publications of Dr. Ruz Lhuillier, we can mention: *Campeche in Mayan Archaeology*, 1945; *The Civilization of the Ancient Mayas*, 1968; *The Temple of Inscriptions, Palenque*, 1973; *The Tomb of Palenque*, 1974, etc.

In 1952, Dr. Ruz discovered the tomb in the Temple of Inscriptions which completely changed everything that had been known until then with reference to the Mesoamerican World.

**The Mayas** — posthumous work of Alberto Ruz Lhuillier — consists of a synthesis of the vast trajectory of investigations carried out by the author, which were destined to comprise and penetrate the very depths of the past of a people. In this work, Ruz Lhuillier expresses his interpretation of a world which still remains shrouded in darkness, doubts and uncertainties. In his conception of Mayan history there is no place for oversimplified nor anecdotal or non-essential interpretations: throughout the entire work the author maintains an analytic axis which is readily perceptible and which was enriched by the contributions which different investigators, national as well as foreign, have achieved in treating this subject matter.

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# THE MAYAS

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ALBERTO RUZ



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To the former, for having approved my working on the investigation, elaboration and edition of the first seventeen chapters during the time of my employment as a full-time professor in the Faculty of Philosophy and Letters, and as Director of the Center of Mayan Studies, a branch of the Institute of Philologic Investigations.

To the latter, for having offered me the opportunity when I had been appointed Director of the National Museum of Anthropology to conclude this project independently of fulfilling my duties which such a note worthy position implies.

I also wish to express my friendly recognition and sincere appreciation to Dr. Ricardo Guerra, Director of the Faculty of Philosophy and Letters; to Dr. Rubén Bonifaz Nuño, Director of the Institute of Philologic Investigations, and to Prof. Gastón García Cantú, Director of the National Institute of Anthropology and History in Mexico.

For the typing of the text I had the good fortune to count on the patient and worthwhile collaboration of Mrs. Marta Olivera and Mrs. Marta Luján, both from the Center of Mayan Studies, and also Miss Angélica López and Mrs. Beatriz Sánchez of the National Museum of Anthropology in Mexico City.

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## A PICTURE OF MEXICO COLLECTION

The Cultural Foundation, San Jeronimo Lidice, and Salvat have combined their forces to publish a collection under the title of "Imagen de México" (A Picture of Mexico Collection), the intent of which is to make known such cultural, artistic, environmental and other manifestations, which shaped the countenance of an aesthetic Mexico and which are the result of a complex process wherein the most dissimilar cultures converge.

If all of history is present history, it is mandatory to recognize how deep is the imprint which the Mesoamerican Universe has left in this process. There is hardly anything more appropriate than to initiate this project with the study of a magnificent and enigmatic civilization, the Mayan, a work brilliantly executed by an outstanding authority in this field: Dr. Alberto Ruz

*The Mayas*, the posthumous work of the eminent specialist in Mayan studies, is a contribution of unusual magnitude not only because it contains the synthesis of the recognized and grateful course of its investigator, or for incorporating knowledge that has not yet been known to the global vision of such a culture, but rather fundamentally for his conception of Mayan history.

In this the Mayas observe: "It is not right to depend on a nebulous background for any divination", but rather to present its principal protagonist. This attitude has enabled the author to fathom what, until now, have been enigmas and paradoxes for his foreign colleagues, and to fuse dramatically the yesterday and the today which is the historic happening and shaping of so extraordinary a people.

The theme, complex in itself is, nevertheless, treated in such a perspicacious manner that it is devoid of all stiffness as well as of predetermined concepts and, still more important, with the typical clarity of a genuine connoisseur. It is, therefore, understandable that Dr. Ruz felt that his work, *The Mayas*, has much greater weight and importance than the discovery of the Tomb of Palenque, despite the fact that it was he who had accomplished that.

In publishing this work, the Foundation as well as Salvat pay a double homage: on the one hand, to the Mayas, an undeniable participator in the Mexico of today and, on the other, to the illustrious archaeologist who dedicated his life to the study of roots which have such importance for our culture.

## Presentation

*For the students of our pre-Colombian civilizations, especially for those who, in some manner of form claim Mayan origins, on learning something about the various periods of their development which has been constant, an impassioned watch, there is now the satisfaction of being able to read *The Mayas*, a work in which the Master, Alberto Ruz, recapitulates the knowledge acquired during his entire life-time.*

*The author analyzes the fundamental works of the investigators with objectivity and reasoning which are the bases for the most exact image about this people that we can gather anywheres. He welcomes distinct points of view, explaining their motives accordingly, as well as discusses and rejects other with arguments which make this work a veritable compendium of the most recent reflection on the sujet.*

*Joseph Herbert Spinden, Sylvanus Griswold Morley, J. Eric Thompson and George Brainerd are the Mayan specialists most read by those who have been interested in becoming more deeply versed in this culture. In *The Mayas* we have once again the judgments of the specialists quoted and of specialists in complementary disciplines about which Alberto Ruz gives us his opinion and compares them, one with the other, in order to later expound his own judgments which are a synthesis of his own persevering experiences and wisdom.*

*The foundations of his deductions are unlike those utilized by the authorities mentioned above, which, however, this remarkable contribution shapes; a contribution which, with the hypotheses and certainties that he sets forth, broadens the horizons in the field for new discussions. Without acceding to any limited theory, he finds support in open and flexible perspectives which for him provide historic materialism. In this way, in evaluating the opinions of his colleagues he shows the deficiencies which he perceives and, without any lack of equilibrium he transcends individual judg-*

*ment when he makes intelligible and explicable the developments and the artistic as well as scientific creations in relation to the expansion of the structures and socio-economic organizations. That is his way of discarding every form of subjectivity since that does not constitute true knowledge and, at the same time, he provides us with a firm sustenance until there are additional notices along these lines.*

*Such an enfocussing is carried on throughout in order to understand, in a manner which we regard as one with the best foundation, the cultural decline and the abandoning of the large Mayan ceremonial centers. Dr. Ruz concentrates on the analysis of the different causes attributed to the problems and events and, many times dissatisfied with the explanations and conjetures ventured on the question with a criterion derived from a scientific method he uses, he expresses his opinion which, while it many not be surpassed seems to us most logical. In short, it is a genuine and penetrating opinion, yet without rigidity, without any mechanistic determinism.*

*In following the expansion of Mayan civilization and while taking into account, in the first place, the social roots, the means and relations of production, that is, the historic development in all its aspects, Dr. Ruz through his knowledge as an anthropologist, an archaeologist, and ethnologist, a linguistic, and a sociologist, is led to acclaim the people whose protagonist he is, a decision he defines clearly in *The Mayas*.*

*On opening this voluminous work to the section "Antecedents and Aims", the general nature of his intent is obvious. As far as I am concerned, in this introduction I fully touch upon what pertains to two or three points which for many of us has caused bewilderment for a long time. The elucidation on the development of the precapitalistic societies excels in every conceivable aspect what I read in the chapter "Socio-economic Characteriza-*

tion of Mayan Society” in which his judgment establishes, by means of an evaluation of the “theory of the form of Asiatic production”. This point is central, filled with substance and weight: “In the Marxist schemes of the evolution of precapitalistic societies we find a solution to the problem which Mayan society presents with regard to the contradiction between the economic substructure and the cultural superstructure. This clarification is encountered in the entirety of the concepts which integrate what has been designated ‘the theory of the mode of Asiatic production’, implicit in a number of texts from Marx which have been analyzed, commented on and complemented by a number of sociologists in France as Godelier, Chesneaux, Vidal-Naquet and Terray, and in Mexico by Bartra”.

“We have found an answer”, writes Dr. Ruz: not the reply coloring the attainment of his words. And this reply seems to me very judicious as also the acuity of his affirmation: “We believe that in order to reconstruct the image of any society whatsoever in our mind it is essential to depart from that which enabled it to reach was the basis of its economy and social structure. To consider only the technological, aesthetic, scientific, religious and ethical elements of a culture without trying to explain the society created them is equivalent to describing the attire of an individual while disregarding the person himself who is wearing that”.

Among the criteria of Morley and Thompson which Dr. Ruz does not accept, which are either few nor important, I want to allude, through what I have favored in this sketch, “the idyllic presentation of a society harmoniously integrated in its thinking and religious practise; the absence of social conflicts and a spiritual of mythical determinism as the driving force of its historic development”. What is distinctive of and primordial to this work is “to give emphasis to the presence of all the Mayan people in the entirety of their activities of every kind, to the time itself which characterizes

Mayan society within universal categories.

While referring to artistic creations, he does not disregard any factor “and in the case its being a determinism—he cites Bastide for us— consider the sociological to be the most influential”. At the bottom of such an assertion we find Marx, who in *Fundamental Elements of Political Economy* affirmed in 1857: “The difficulty does not depend on understanding that Greek art, the epopee, are bound to specific forms of social development. The difficulty arises in grasping that they may still provide us with artistic enjoyment and may be worth in some respects as a norm and yet as a model that is beyond attainment. In pre-Colombian art it surprises me that with such elemental means—they did not have any knowledge of metals— yet they created such beautiful works which we prefer to those which, in our time, correspond to such creations as the Lazer Ray and computers.

Dr. Ruz concludes his book with the struggles of present day Mayas. In Guatemala, the land of the Popul Vuh, with much more than half of its population indigenous, we actually have an example of such struggles. The census are racists. In order “to civilize” they lower the indigenous proportion so that we may not be what we are. The ethnocide action does not tolerate our intimate identity. Once again we are recognizing ourselves for what we are in a struggle such as that which in the classic *Facundo*, Dr. F. Sarmiento showed: civilization against barbarism. But here, civilization is represented by the Mayas and barbarism by their oppressors: and I at once draw forth from my memory the manner of thinking of José Martí: Our America will not progress while the Indian has no opportunity to progress.

The ashes of Alberto Ruz who expired in 1979, dream in the actual tomb which he discovered in 1952, that is, below the Temple of the Inscriptions in Palenque.

LUIS CARDOZA Y ARAGÓN

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To my sons  
Alberto, Jorge and Claudia  
To my wife Celia

Dr. Alberto Ruz Lhuillier considered this work "the spoiled son among his books". Unfortunately, he could not see it published, because of his sudden and deplored death on August 25, 1979; nevertheless, he has left us here "everything he knew", according to his own words.

This work, focussed within the material and scientific conception of history, is a posthumous homage to the indigenous people of Mexico as a whole, and particularly to the Maya people and culture, pre-Columbian and present, whom he loved so much.

Celia G. de Ruz



## INTRODUCTION

# Records and Aims(1)

The Palacio de Palenque, symbol of the magnificence of the Mayan people and of the greatness of their past, is still surrounded by mysteries.

In this chapter we do not mention the accounts of archaeological explorations, which sometimes present a very schematic synthesis of Mayan history. We are interested exclusively in dealing with the books that can be considered as manuals, compendiums and general divulgation works about the ancient Mayan civilization and its history.

The first really serious and general work on the civilization of the Mayas is, undoubtedly, that of Joseph Herbert Spinden. It was first published in 1913, under the title of *Study of Maya Art*. Not many years later, the same author published *Ancient Civilization of Mexico and Central America* in which more than half of the contents dealt with Maya culture. Subsequently, in 1957, Spinden combined both works under the title of *Maya Art and Civilization*, but added there of a short introduction and epilogue. For almost half a century these works have constituted the most complete synopses with reference to the Mayas.

It is obvious, nowadays, that many of the opinions expressed in them are by now anachronistic since, at the time they were published, the intensive exploration of the Mayan area had not yet been undertaken. On the other hand Spinden, who was, above all, an epigraphist, had a certain preference for the problems pertinent to the calendar and astronomy. We owe him one of the correlations between the Mayan and Christian calendars, a correlation which is still used by many investigators. When he attempted to handle the historic development of the Mayas, the dates recorded on the monuments and the artistic expressions associated with them, formed his framework, and were just about his one and only focus.

In so far as his study of art is concerned, it is confined to the analysis and interpretation of some of the elements most used in the reliefs; also to the composition of these elements, and to their place in a chronological sequence, that is, he exclusively studies the motives and Mayan art as aesthetic problems in themselves, regarding art as a "concrete expression of religion".

No suggestion is made of the social roots or basis of art, not is Mayan society mentioned, and no attempt is made to reconstruct its history. Of course, as Spinden presents the picture to us, the Mayas do not appear in the panorama of their civilization.

of *The Ancient Maya*, published for the first time in English in 1946, and in Spanish the following year under the title of *La Civilización Maya*. After innumerable editions it is still probably the work most consulted by non-specialists, and the one which still offers the most complete view of the ancient Mayas.

In this work the author has compiled all the information that was available to him as far as the Castilian chronicles and those written after the conquest by indigenous authors are concerned, and also some information from archaeological ruins and ethnographic investigations.

He describes the natural environment, the physical and psychologic characteristics of the people; their languages; their daily activities; their way of dressing; their artistic activities (architecture, sculpture, painting, ceramics, and other lesser arts); their intellectual achievements (writing, mathematics, astronomy, calendar); their beliefs and religious practices together with the survival of many of them in the customs of the modern Mayas and the main aspects of their social, political and religious organization. The general picture which Morley presents concerning the culture of the Mayas is more or less complete and continues to be acceptable.

His historical outline is, however, completely unacceptable. At the time he wrote his work, his basic ideas about the historic development of the Mayas were already invalidated by the very results of the investigations which a notable group of archaeologists from the *Carnegie Institution of Washington* accomplished under his direction. For that reason, after his death, a version of *The Ancient Maya* was published in the United States, revised by George Brainerd in which all of Morley's concepts of Mayan history, in fact all his personal contribution to the subject, were suppressed.

With great disregard Morley expressed emphatic statements on points insufficiently known by then, and he clung to his views even after the new facts had made them untenable. Throughout his work one finds subjective manifestations which, naturally, are more relevant to the sphere of emotions than to science. Extremely enthusiastic about everything Mayan, Morley made greater use of the dictates of his feelings than of the precision of scientific analysis. From then on, he committed more and more contradictions and incongruencies.

The unacceptable points of view arise from his initial statements. He considers that in a determined territory there would have existed a Mayan civilization as surely as if testimonies were found of what is referred to as "hieroglyphic and chronologic writing, *unique* in their kind", just as the form of thatching, which is known as a false arch or Mayan dome. If such elements are not found, despite the fact that the language spoken may be Maya, the territory is excluded, assertion with which he segregated the area of Mayan culture from the Highlands of Guatemala up to the shores of the Pacific. Nevertheless, *Popol Vuh* is referred to as "the sacred book of the Quiche Mayas", without remembering, apparently, the fact that the Quiches lived in a region in which they neither constructed buildings with the Mayan dome, nor were there recorded hieroglyphic inscriptions in the form of writing known in the regions which comprise the Yucatan Peninsula.

With great assurance he asserts that the origin, growth, flourishing, decadence and ruin of Mayan civilization were produced "without any influence from the outside world", just as in an ideal laboratory, isolated and free of every external contact. As he considers that the Mayas were the inventors of writing in the hemisphere, of the system of numeration by positions, and of the calendar (a product, according to him, of one sole intelligence—naturally Mayan—in the year 353 B.C. and precisely in Tikal, or maybe in Uaxactun) he cannot accede to the fact that another culture, like the Olmecan or that of Monte Alban, for example, would have left hieroglyphic inscriptions with a record of dates in an earlier





A general view of the *Pirámide del Adivino* ("Pyramid of the Prophet") and of the *Cuadrángulo de las Monjas* ("Quadrangle of the Nuns"). This great ceremonial center had its apogee during the late classical period.

epoch, and consequently rejects the dates of Stele C of Tres Zapotes, of Stele 1 of El Baul and of the "statuette" of Tuxtla, emphatically insisting that the dates are only *in appearance* older than that of the Mayas, but *that he is sure* that they were, actually, made much later.

With the same insistence, and regardless of how obvious many of the representations are, he asserts that the sculpture of the Old Empire lacks scenes of violence, suggesting that the scenes in which prisoners appear tied and mistreated by their masters, can be interpreted on the basis of religious and even astronomic criteria, without having to be related to martial acts. He even rotundly denies that Mayan inscriptions deal with historic subjects, since no name of any man or woman has ever been recorded on them, according to him, but exclusively matters of chronology, astronomy, religion, ceremonials and prophecies which are all associated with the date of dedication of every monument.

Based on a premise apparently right when he began his investigations, but which later explorations refuted, Morley, since 1915, created his theory of the existence of an Old Empire to which something should have happened around the year 1000 of our era,



suggesting that a New Empire was established in the north of Yucatan. Essentially, the first was limited to the central region of the Mayan area (Petén, Belice, Usumacinta, Motagua), but later Morley recognized that the Old Empire had extended to the North, penetrating the Yucatán Peninsula and forming colonies. The New Empire should have developed after the collapse of the civilization in the cities of the South, mainly because of the failure of the agricultural system, a collapse followed by the migration of the people to the North. These people, in contact with Mexican invaders, should have developed a genuine "rebirth", of which the most important testimonies are the archaeological ruins of Chichén-Itzá.

When he refers to this place, he mentions that it presents two well-defined architectural styles: the first, pure Mayan, corresponding to the period from the sixth to the tenth centuries; the second, the Maya-Mexican, from the eleventh to the fourteenth centuries. Nevertheless, he does not mention even one name for the pure Mayan style nor does he

The *Castillo de Chichen Itza* ("Castle of Chichén Itzá"). According to Morley, after the collapse of the central Mayan area which had been brought about around the year 900 A.D., many of the inhabitants migrated from this region to the North of Yucatan, forming the "New Mayan Empire". However, later studies have shown that there had never been empires in the Mayan region and that the different areas had a parallel development from the preclassical up to the postclassical period.

offer even the slightest description of the characteristics of that style, which would be related to the time of the occupation of Chichen by the Mayas of the Old Empire. The reason why Morley seems to ignore these points is obvious: it would destroy his theory which accounts for the architectonic style of the region of Puuc to the contact with the Mexican groups, while Puuc lacks (and that is what he mentions with complete surprise) every Mexican feature (Toltec would be a more correct and precise word), as this style of Puuc is exactly that of the buildings of the pure Mayan style of the type of constructions in Chichen-Itza, built between the sixth and ninth centuries, Morley could hardly be able to affirm what in the said style in Chichen was pure Mayan, while in Uxmal was due to Mexican contact.

The blindness or stubbornness of Morley in maintaining his theory in spite of the facts, led him to omit (doubtless, intentionally) some historic sources, confining himself to the use of those which, to all intents and purposes, supported his ideas. Thus, in this way, as a justification for his thesis (according to which the Puuc style is a product of a supposed Mayan rebirth, produced by contact with Mexican groups), he quotes the *Chilam Balam* of Mani, which states that in a katun corresponding to 987-1007, Uxmal was founded by Ay Suytok Tutul Xiu (a Mexican Chief). However, he does not allude in any form to a quotation from the *Chilam Balam* of Chumayel which refers to 1544, about 870 years after Uxmal had been destroyed and abandoned (674 A.D.): nor does he mention the *Relación* of Fray Alonso Ponce in which it is stated that 900 years before, in the year 1586, Uxmal had been established (686 A.D.). Regardless of the contradictions which both sources of information imply (the date for the construction and destruction of Uxmal being one and the same), they still place Uxmal in the seventh century, three centuries before its supposed founding by Mexican Chiefs, (actually, a late occupation of the place). But that did not fit in with Morley's theory, and, therefore, it was necessary to ignore it.

In summary, the manual which constitutes this very work of Morley, even though it is valid in so far as the description of the principal aspects of Mayan civilization presented, falls short completely with regard to its attempt to reconstruct the main lines of its historic development. Focussed almost exclusively on the epigraphic point of view, and from its very beginning, falsified by a simplistic theory elaborated *a priori*, its historic outline devoid of sociologic concepts, cannot even trace the dynamics of the development in the time of the Mayas.

When we referred to Morley's work, we mentioned the version revised by George Brainerd and published shortly after the death of the former. Brainerd, a specialist in the study of ceramics, within the group of investigators of the *Carnegie Institution of Washington*, left us a synthesis of his vision of the culture and history of the Mayas, which he called *The Maya Civilization* and which was published in several issues of *The Masterkey*. This synthesis, in its brevity, does not intend to do more than to describe amply the main cultural aspects and the historic periods. This was done, thereby eliminating and rectifying Morley's concepts. For example, he does not desist from including the Highlands of Guatemala in the Mayan area, although specifying that in that region some of the basic elements of Mayan culture were lacking. He denies the thesis of a migration of the people from the central area to the North of Yucatan and insists on the occupation of the Peninsula from the formative (preclassic) period on. He denies that the style of Puuc was a late rebirth of the Mayan style, occasioned by the contact with Mexican groups, but rather considers it as an exact manifestation during the classic period, without foreign influences. He presents the Mayan area as an entity culturally unified, but in which each region developed its own



particular styles, and not as localized center in Peten from which all the ideas and forms emanated. However, he coincides with Morley in emphasizing the Mayan obsession for the passage of time, for the calendar and the rituals associated therewith, discarding the possibility that the inscriptions recorded political events.

In order to explain the formation and functioning of Mayan society, he gives attention to the economic problems providing one of the new aspects for that time which is a major interest. In a comparison of the construction of the Pyramids of Teotihuacan with those of Egypt, he tries to determine in terms of days of work, the volume of the works before going on to the Mayan buildings, whereby he reached the conclusion that the villages of the formative period individually lacked the demographic density necessary to provide the manual labor which such projects would require, and that only in a collective form which, in turn, had to be under a unified political control, could they had built their ceremonial

Tulum, situated on the coast of the state of Quintana Roo, was walled during the post-classic period for defensive purposes. The so-called Castle is one of the largest constructions on this site.



centers for the communities. The development of a theocratic government to organize and direct human resources; the completion of public works, concretely the ceremonial centers; the technical and scientific progress, especially the calendar and writing; the growing complexity of religious symbolism; the noteworthy architectonic achievements; the grandeur attained by the arts; all that would stamp the gradual step from the cultural level of the formative to the much higher one of the classic period.

On the other hand, Brainerd does not believe that for this change a strong demographic increase was indispensable among the Mayas, as it was in Teotihuacan, taking into account that the heavy work on the ceremonial constructions could be taken care of by the peasants who had not been doing anything specialized during a long period of time dead, which left them only their agricultural work, although the number of capable craftsmen would then be greater for finishing the pyramids decorated with ashlar, and for the building of temples and palaces with dome roofs and their ornamental facades.

According to Brainerd, all the advances of the classic period were clearly stimulated by “institutions developed under the increasingly more complex, more amply expanded formation of the classic period”. These institutions would be the ones that have to do with the religious complex. However, Brainerd did not accept the idea that the increase in the construction of religious centers affected the economy of the people, nor did he believe that extensive irrigation works were able to give rise to the birth and development or a strong political power among the Mayas, as in the Old World. The lack of such works and the fact that the population was spread out without consisting of actual cities brought about, in his opinion, a distinct and problematic lack; and, although he recognizes that the priests played an important part in the agricultural activities through their prognostication of the time, still he does not believe function to be sufficiently definitive to explain the unquestionable control that the priesthood exercised on the population.

That the Mayan area sets up an exception which does not fit into a universal theocratic plan as regards its cultural development is the conclusion that Brainerd reaches on this subject. “No economic stimulus would have motivated the Mayas to an increasing concern through religious ceremonialism and in the form of an impressive cultural development.” He doubts that it was precisely a strong economic control, since he believes that there was no need for extensive human resources for the public works which the people were able to engage in during the free time at their disposal. He touches upon an important point when he emphasizes that religion was far more developed than economy, and that, apparently, notable advances in astronomy, mathematics and other intellectual fields “were not due to, nor immediately preceded by the invention of new techniques for economic improvement”. On confirming that the bases for the intellectual progress of the Mayas do not seem to coincide with what was established for other civilizations of antiquity, he concludes, in a pessimistic tone, that we still do not sufficiently comprehend the factors which determine the intellectual progress of certain groups of people.

It would be difficult for anyone to deny that J. Eric Thompson is the most noteworthy personality among the Mayan investigators and the one who has dealt with more aspects of Mayan civilization in the course of his investigations: archaeology—including explorations; architectonic, ceramic and epigraphic studies— ethnology and linguistics, even though his major interest was in the script. Starting from a solid universal culture and endowed with remarkable lucidity. Thompson did not limit himself to specialized studies, but rather knew how to draw a coherent picture of the history and culture of the Mayas.

Having scarcely begun his work in the Mayan field, he published in 1927, *The Maya Civilization*, a relatively brief synthesis, but in which his perspicacity is readily perceivable



It is certain that he adopted—and it is logical that he would have done so in any case—Morley's historic picture with its magnificent lines, looking upon it as the existence of an Old and New Empire. The interpretation, although incorrect, of the historical chronicles contained in the books of *Chilam Balam* induced him to arrive at erroneous conclusions with reference to the occupation of Chichen-Itza and Champoton, first, supposedly, by the Itzas, and then by the Xius. But he differs from Morley with regard to the possible causes for the decadence of Mayan culture in the central area. Thus, he considered that the hypothetical Mexican invasions were doubtful; he also rejected as causes for the decadence the anti-economic agricultural methods, as well as the epidemics or climatic changes, and, above all, he denied that there had been an exodus of the people of the Old Empire to Yucatan.

He did suggest, on the contrary, that the priestly class in power ought to be overthrown by popular revolts, in violent reaction to the oppression of a regime which needed multitudes for the construction of ceremonial centers, or which tried to impose religious innovations which the people would not accept. From the discontinuance of cultural activities (the building of monuments and the recording of dates), he deduced the expulsion and annihilation of the ruling class, followed, first of all, by a simple agricultural cult, more

The *Castillo de Chichen Itza* ("Castle of Chichen Itza") or *Piramide de Kukulkan* ("Pyramid of Kukulkan"). Chichen Itza, inhabited by the Itzas, played a significant role in the postclassical period on having joined up with the ruling families of Uxmal and Mayapan in the famous alliance known as "The Mayapan League".

appropriate for the needs of the peasant masses, and by a gradual waste of such knowledge as the art of painted ceramics and sculpture.

In 1954, being more thorough and profound, and with greater and firmer documentation acquired over more than a quarter of a century of explorations, epigraphic studies and analysis of historic sources, Thompson published one of his best works, by and large, on Mayan civilization, *The Rise and Fall of Maya Civilization*, later translated into Spanish under the title of *Grandeza y decadencia de los mayas*.

It would be feasible to ask if it was opportune or not to discard intentionally a series of aspects, on the whole, definitely essential to a book of this kind (agriculture, commerce, clothing, arms, slavery, etc.) and to have traced with sufficient scientific seriousness, but also with a bit of phantasy, some pictures of Mayan life, such as a religious ceremony which includes human sacrifices ("The Novice"); the work-day of a couple ("The Day's Cycle"); the construction works of a building ("An Architect in Chichen-Itza"); the customs related to betrothal and marriage ("Marriage à la mode") and the death and burial of a Maya ("Death and Life").

His aim, clearly expressed, was to try to explain the causes of the rise, development and decline of Mayan civilization. Discarding Morley's theories, he recognized the contemporaneousness of this civilization with other Mesoamerican civilizations (Zapotecan, Teotihuacan, Olmecan and Totonacan), as well as the cultural interrelations which had to exist among them. In addition, he accepted that the Olmecan culture had been "perhaps" prior to the Mayan, and that what was considered the most genuinely Mayan characteristics, the stele cult, and the recording of dates in hieroglyphics should have appeared centuries before that of the Mayas, in Oaxaca and on the Guatemalan coast of the Pacific. In view of the natural environment of humidity in the tropics of Peten, he further accepted that such a region was hardly propitious for the birth of an advanced civilization.

In contrast to the over-enthusiastic attitude of Morley, who attributed all the inventions and discoveries to the Mayas in the most laudatory terms, Thompson cautiously recognized that it was very possible that the people of La Venta had invented the symbol for zero; but at the same time, contradicting this supposition, he showed that we cannot be sure that these people had utilized a numeration by positions before the Mayas (nevertheless, the need for the zero is concomitant to every system in which the value of the numerals depends upon their positions). One feels his resistance to strip the Mayas of their mathematical knowledge which, supposedly, were their original creations, and, not wanting to express himself in favor of any definite people, he did suggest that the culture of La Venta could well be due to the people of the Maya language. To avoid giving the advantage of priority in time to any culture (which, for not being Mayan, would mean that they would have to restore to them the credit for their creative work), he placed the appearance of the great Mesoamerican civilization around one and the same epoch, as a parallel and, more or less, simultaneous phenomenon.

The essential subject that Thompson developed in the course of his work and which he expressed from the beginning is that some spiritual values "more important than material advance", were those which permitted the Mayan civilization to reach so high a standard, "cultural success". He further affirmed that their downfall too was motivated, to a great extent, by adverse spiritual causes.

When he wanted to synthesize his ideas relative to the dynamics of the history of the Mayas, establishing what mediums had been the motivating force for them, the recollection of a Mayan peasant came to his mind, whose friendship he had cultivated over a long period of years, and whose qualities—seriousness, loyalty, honesty, religious devotion, discipline, respect for authority, obedience, industry, patience, love for order, a deep feeling of equilibrium—were for Thompson the "epitome of the philosophy which animated the Mayan

culture". This type of character of the Mayas, under the direction of a minority endowed with great imagination and mental energy, produced the brilliant Mayan civilization, the only one (perhaps together with that of La Venta, also a product of the Mayas) which reached its full maturity in the hostile environment of the dense tropical woods.

According to Thompson's concept of the Mayan society, it made up a homogeneous unit in which theocratic rule suited the people within a cosmic order, the mechanism of which had resulted in discovering the priesthood which, as the nexus between the gods and men, enacted its functions in such a manner that a similar order governed the land. Rain, planting, fertility of the land, harvests, the very existence of the Mayas, depended upon divine influences, and these, in turn, were related to the course of the heavenly bodies, the succession of the calendric cycles, and temporal recurrences.

One of the subjects to which Thompson was especially devoted and which he treated accordingly is the philosophy of time. He supposed that "no other people in history experienced such interest for the passage of time... and that no other culture had elaborated a philosophy on a subject so unusual as that of time". Thompson's reflections on the concept that the Mayas had of eternity through their long-count calendric system, also in harmony with a cyclic one, that is, a concept of history associated with the recurrence of chronologic cycles which are not mere speculations and ought to reflect, with constant exactness, Mayan thought as regards time without end, in which human acts occur with implacable regularity, as the appearance and disappearance of the heavenly bodies, or the passing and return of the seasons, as well as of all the periods of their complex calendar.

The supposition of an authentic philosophy of time among the Mayas was abetted by Thompson but on a premise which, through investigations after the publication of his work, is questioned and probably refuted. As Spinden thought and Morley emphatically affirmed, Thompson insisted that the steles and altars were erected to show the passage of time since more than a thousand hieroglyphic texts are known which treat this subject associated with the positions of the moon and the planet Venus and related to calendaric calculations and divine aspects and rituals implicit therein. He specified that no text glorifies any ruler or any conquest, but rather contains only the record of intellectual preoccupations and manifestations of their philosophy of time, a philosophy in which calendaric cycles, celestial revolutions and divine influences were integrated in the perfect cosmic order.

The error of this brilliant hypothesis has its roots in the fact that fifteen years ago it was still believed that these were in fact the exclusive contents of the hieroglyphic inscriptions on the Mayan monuments, for the simple reason that it was only known how to decipher the dates on their diverse calendaric records (religious, solar, lunar, large count, etc.) and that the rest was not yet interpreted. A real obsession for the passage of time was attributed to the Mayas, also the creation of a metaphysics of time, when, due to our ignorance we were actually only able to read on the monuments what was relative to time, and we had no idea about the texts which accompanied the dates. Nowadays, thanks to the studies of diverse investigators, it is no longer tenable to think that the Mayas dedicated their steles, slabs and altars to the passage of time.

Turning to Thompson's concept of the social aspect, he saw the people overjoyed to have the opportunity to work in constructing ceremonial centers, offering their efforts and their suffering for greater glory for the gods, in a profound and grateful feeling of "participation" in works which assured the approval of the deities at the same time as their own material sustenance. It is very clear that Thompson felt that the spiritual aspect animated the life of the Mayas in all fields. The scientific advances acquired through the priests did not interfere with their practical goals, but rather with their intellectual needs; astronomy was not practised as a science in itself but only as a means to control the destiny of the



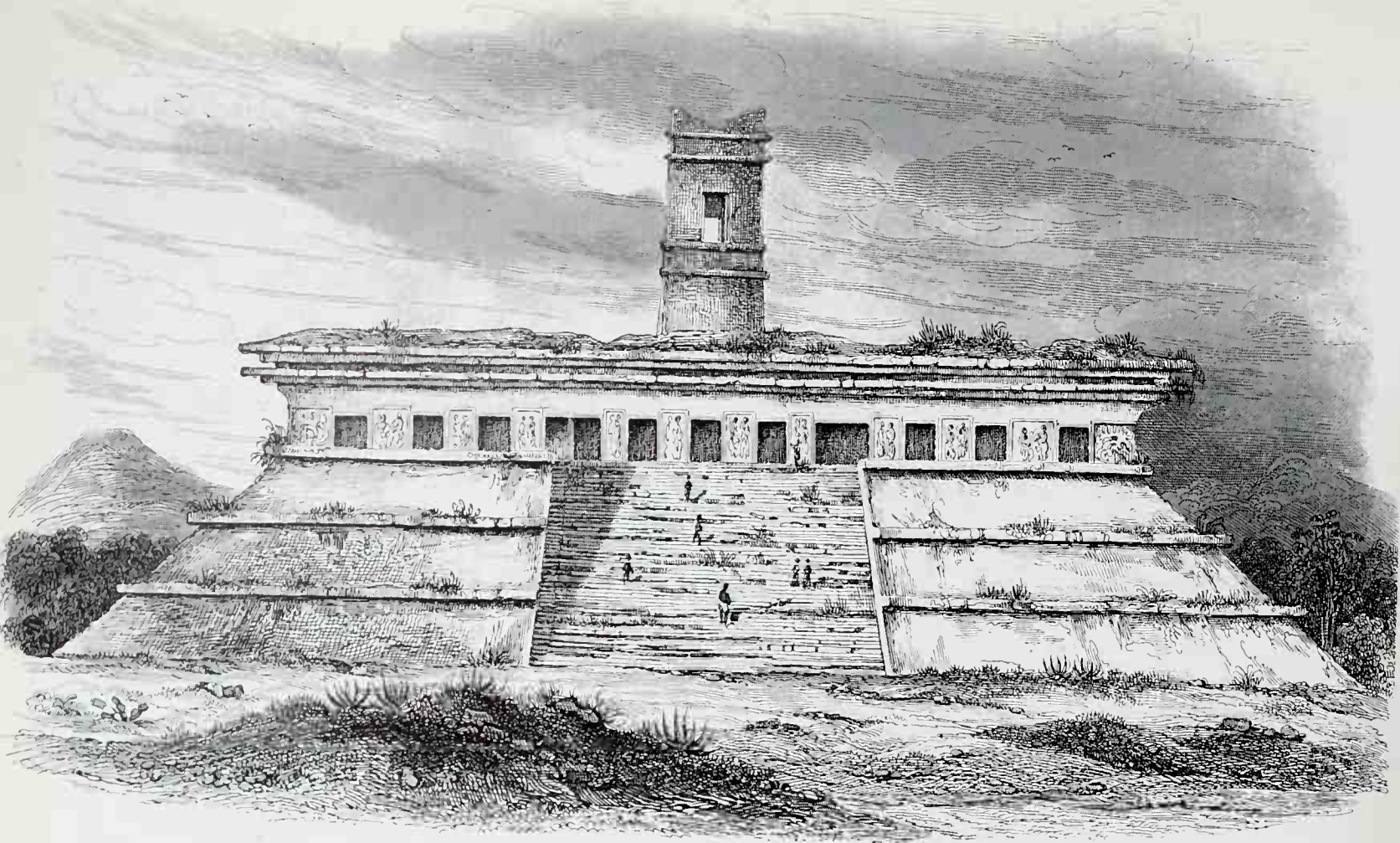


The Arc of Labna, one of the most magnificent works of the region, in which stand out the reliefs and false columns between the two frets of the sides.

people; to be acquainted with the functioning of the celestial mechanisms permitted the prognostication of the future, since everything in the cosmos integrates animated cycles through an eternal impulse; the stone roads they constructed did not serve to unite the towns or regions and to assure commercial exchange, but were useful for ritual ends such as religious procesions; the dome which roofed the buildings was not invented to give greater strength and duration to the structure but as an effort "of sacrifice".

This harmonious order, regulated beforehand by the gods, controlled by theocracy, accepted with gusto by the people, ought to have lasted eternally if it had been isolated from the rest of the world; but the Maya country formed part of a conglomerate of peoples, tribes and states forcibly interrelated. Outside influences and "exotic ideas" were to infiltrate and corrupt, disarticulate and finally demolish the marvelous world of the Mayas.

As a result of a series of chain reactions which started in the north of Mexico (invasions of barbarians who provoked a militaristic tendency, first out of sheer defense and later institutionalized, with a martial caste which was aided by the dogma of human blood as food for the solar deity), strong pressure concerning new ideas, new beliefs, new deities, was brought to bear on the Mayan area. The Mayan rulers were confronted with the obligation to adopt new cults, and the native Mayan gods were relegated, which provoked discontent among the people. Discord and dissension had pervaded their harmony, as Thompson remarked. The masses began to doubt their priests. They were tired of the tremendous pace for the construction of ceremonial buildings and residences for the Chiefs; they were tired of the increase of a parasitic class for which more food had to be produced; they were tired of wars intended to obtain prisoners for the sacrifices. When doubt set in the minds of the people with regard to their rulers and to their attitude towards the general well-being, the regime was condemned: the fall was only a matter of time, but it was approaching inexorably. It is not known exactly how it occurred in the central area, that is, if it was gradual, with intervening passive resistance, or through the physical elimination of the ruling class; but it is quite clear that in the course of approximately a century, all the ceremonial centers, large and small, of Peten, Usamacinta, Motagua, of all the regions which had seen



the development of a brilliant civilization during a millenium, ceased their activities and fell into ruins. The power had to be handed over to peasant Chiefs and witch-doctors; the jungle retrieved its rights; disorganized people could not develop another civilization; culture descended to an inordinately low level and collective existence became a precarious survival, each time more difficult.

Invaders coming from the center of Mexico imposed their power on the septentrional and meridional areas (Yucatan and the Highlands of Guatemala). The people had new masters to whom they had to continue to pay the tribute of their work, their properties, their blood. The gods were alien, the rites cruel, the rulers more implacable. Rival factions were fighting among themselves. A bellicose atmosphere had taken the place of the bygone peaceful and ordered environment. Culture became each time more decadent. The political disintegration became stronger. All that remained of the Mayan world was that it came to be an easy prey for the new conquerors who were now coming from the East.

For the brilliant investigator of the Mayan world, as Thompson was, the motivating force of their history resided in their spiritual forces. The emergence of the Mayan civilization, their development, flourishing and decline have to be interpreted in terms of the power of their religious ideas, the axis of the collective and individual life of that people. When popular rebellions destroyed the established order, the causes were essentially inconformity with new religious concepts, imposed by high pressure and foreign invasions. Thompson's concept of the historic dynamics of the Mayas is completely idealistic.

Upon referring to works of a general nature on the culture and history of the Mayas, one remembers that the French anthropologist, Paul Rivet, published *Cités Mayas* in 1954. In the very first words he states with absolute honesty that "this study is by no means an original work" and that it has only tried "to summarize the thinking [of specialists] without deforming it", while conserving only "what is essential of the facts". He presents Morley's historical development, which we have already analyzed and criticized.

Some years later (1959), the American anthropologist, Charles Gallenkamp, published a synthesis of the history of the ancient Mayas under the title of *Maya, The Riddle and Rediscovery of a Lost Civilization*. He makes no pretensions of presenting either new con-

The *Edificio del Palacio* ("Palace Building") in Palenque, according to an engraving published by Runer in Paris towards the end of the XVIII century. The Anglo-Saxon travelers were a vehicle for spreading the knowledge of Mayan Culture.

cepts or his own interpretations. As he states in the preface, when there are opposing points of view among the specialists, he presents them without committing himself in any form. His book, written for a vast secular public, primarily repeats Morley's concepts (Old and New Empire) and Thompson's (philosophy of time, the decline due to peasant revolts, etc.).

We feel that at this point it is indispensable to mention a Swiss autodidactic ethnologist, Rafael Girard, who has tried, through thousands of pages, to explain the culture and history of the Mayas as no one before him had ever done. No one can deny that several chapters, which consist of hundreds of pages in his work, are repeated more or less textually in his successive publications (*Esoterismo del Popol Vuh*, 1948; *Los chortis ante el problema maya*, 1949; *El Popol Vuh, fuente histórica*, 1952; *Los mayas eternos*, 1962; *Los mayas*, 1966). In the same way identical photographs are reproduced in different works, photographs of modern ritual scenes between which the author intercalates, from time to time, Mayan monuments which, it can be assumed, are to be associated with the actual rites.

In Girard's opinion, Mayan history cannot be explained through archaeology, nor can one expect to learn it through hieroglyphic inscriptions, since, as others (Morley, Spinden, Thompson) before him had shown, such materials do not contain any historic information. Only the modern myths, a reflection of the way of thinking of the ancient myths, that Girard alone has known how to interpret, can explain what constitutes Mayan culture, Mayan society, Mayan history. To attempt to find universal schemes in the historic development of this people is to commit the crime of high treason since the Mayas are a unique people in the world; their history has no parallels of any kind; their thinking is definitely different from the human forms known. To believe, as Thompson had, that the downfall of their civilization was due to revolutions of the people against their intellectual class is a theory at variance with Mayan idiosyncrasy. To think in terms of a struggle between democracy and absolutism is a judgement of our Western mentality and of the subversive time in which the present world lives; such problems *were unknown* to the Mayas. To suggest that, signifies to deny the indigenous spiritual reality. Mayan society produced a theocratic democracy (*sic*), a genuine religious brotherhood in whose hearts and minds such conflicts could not arise.

The scenes of supposed human sacrifices, of wars, of bound slaves, condemned or tortured, were erroneously interpreted, since such features *were unknown* among the Mayas of the classic period. We do not doubt that Girard compiles interesting ethnographic material, mainly from the Chortis, but the use he has made of that, the phantasy he has applied to it by integrating it with the myths handed down by Mayas and Quiches in the sixteenth century, above all with Mayan history, invalidates his effort. It is difficult to take seriously the historic picture he has constructed on the basis of his personal interpretation of the mythology.

The most recent work on Mayan culture is that of Michael Coe, *The Maya* (1966). Here he discards many of the erroneous concepts of the more classic works (Spinden, Morley, Thompson) already rectified through later investigations. Thus, he regards Mayan civilization as an inseparable part of the Mesoamerican culture; he regards the Olmecans as the probable inventors of the script and chronologic record designated "long count", and besides affirms that the Mayas, throughout their entire history, were influenced by Mexico. In a manner excessively simple and direct, he adopts a position or attitude contrary to that of the authors already quoted, concerning the characterization of Mayan society, which, according to him, was indubitably segregationist with the power concentrated on an élite integrated to a secular, not theocratic, government, as it had been insistently main-

tained. He also diverges from whatever served as a basis for dwelling upon a supposed philosophy and obsession of time among the Mayas, when the possibility was not yet apparent to him that the hieroglyphic inscriptions dealt with more than records of dates, and calendaric as well as astronomic calculations. He concedes that the contents must be of a historic nature.

Through the study of the changes manifested in the ceremonial centers, he lays out a sequence for a historical development. When he gets to the collapse that certainly took place in the central area, he restricts himself to the recognition that "we only know what happened" and that all the possible causes that were put forth (soil-exhaustion, epidemics, revolutions, earthquakes, lack of balance in the proportion of both sexes, as far as their number is concerned; Toltec intrusion, etc.) do not amount to more than mere conjectures. Coe gives approximately one page to this important subject. Within the framework of the books for a general, non-specialized public, Coe's is one of the most serious and probably the one which reflects best the actual state of archaeological investigations in the field of Mayan studies.

It is quite amazing that in this short account of manuals and research works on the ancient Mayas not one Mexican name appears. At any rate, apart from monographs and archaeological subjects, some publications by Mexican authors do appear, but they are only of a very general nature. Actually, nothing goes beyond the category of an article and it does not contribute new knowledge or interpretations. On the whole, the cultural picture is based on Landa, and the historic outline on Morley or Thompson. These works, among which we include ours made up of four lectures (*La civilización de los antiguos mayas*) cannot be compared with those analyzed in this chapter.

On referring to the classics of Mayan historiography (and to some few others, that would not claim such a classification or, even if they would claim it, lack the merits to gain it), analyzing the contents of his works in a very general form, we emphasize certain censurable or rejectitious aspects in the light of actual investigation. It is obvious that this criticism or rejection is involved in our goal for the express purpose of avoiding unfounded interpretations, and aprioristic criteria; of avoiding also the denial of certain forces in historic dynamics, or the oversimplified application and mechanics of outlines and unilateral focusses.

We want to say that of the authors referred to, we reject such concepts as the uniqueness of the Mayan civilization; their emergence and development independent of the other Mesoamerican civilizations; the attribution to the Mayas of the paternity of the discoveries of mathematical, astronomical and calendaric knowledge which they perfected, but which others had already had before them; the denial of the historic contents of the hieroglyphic inscriptions and of the scenes depicted on the monuments; the supposed obsession for the passage of time, which led to a standard of philosophy; the idyllic picture of a society, harmoniously integrated with religious thinking and practise thereof; the absence of social conflicts and a spiritual or mythical determinism as the motivating force of their historic development.

Mayan culture, just like all the cultures in the world, has special features which account for its individuality, but undoubtedly it is a constituent part of Mesoamerican culture and is comprehensible only within the Mesoamerican context. It acquired elements of earlier cultures, created its own, influenced and participated in others after the interrelations between the different peoples of Mesoamerica had started.

To attempt to reconstruct their history, based on the premise that, being unique, universal outlines cannot be applied to them, coincides with denying generalities concerning man, on the pretext that each one is a unique being, who cannot be duplicated and incomparable to any other, although it is certain that no culture is identical with any other,



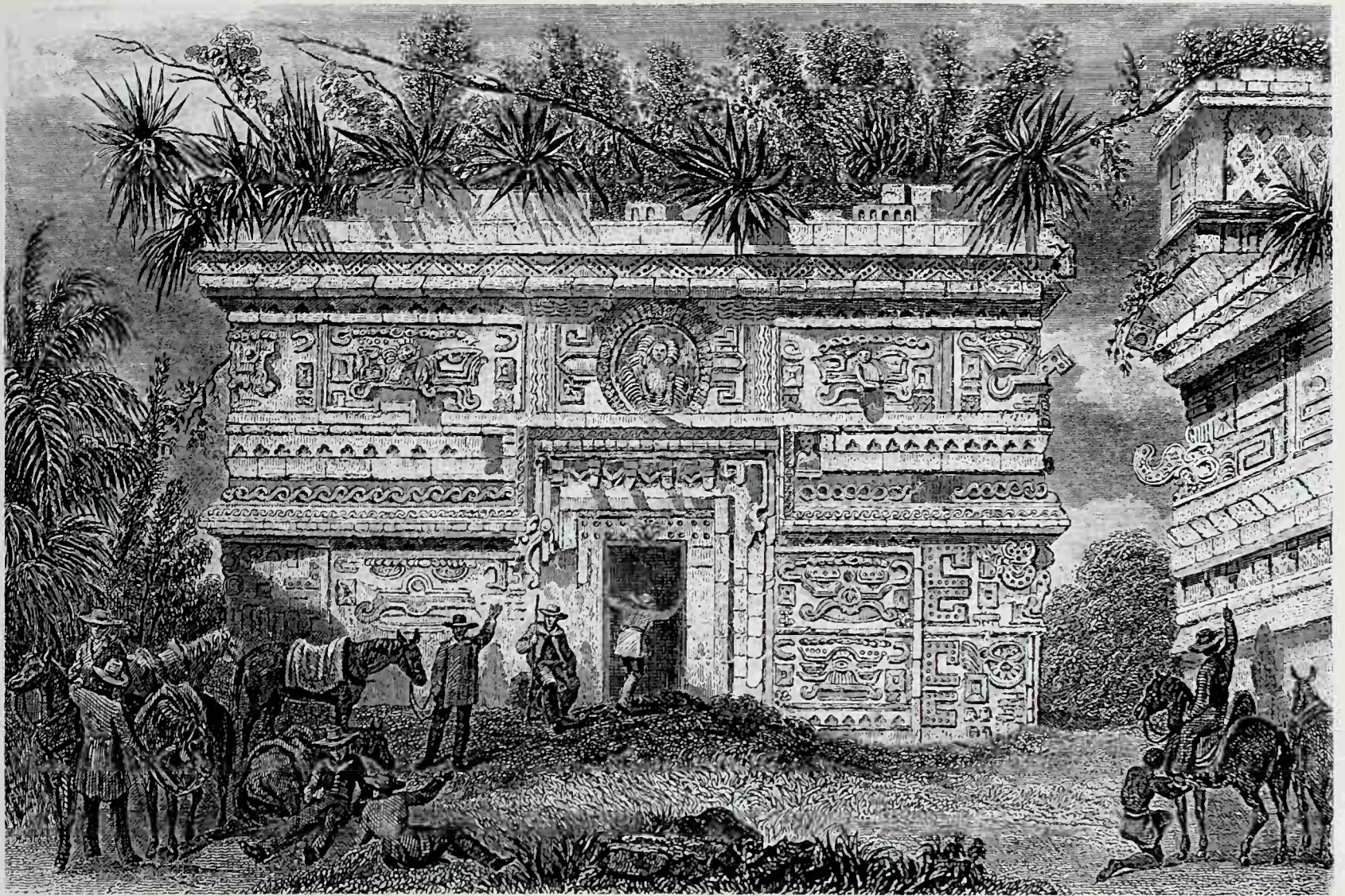


Various styles flourished during the late period in the North of Yucatan, and that was also the case in the early postclassical period. Such styles as that of *Puuc*, an example of which is the building pertaining to Sayil.

wherefore it also has to be admitted that no culture is completely different from the rest. From here on let it be understood that in the problems of Mayan culture we are going to look for the phenomena it shares with universal history. This, of course, does not have to imply the mechanical application of universal schemes, nor the constriction of facts so that they can be made to fit preestablished definitions or categories. The goal has to be that of integration, within the universal process, of all that the Mayas may have in particular in its culture and history.

The reconstruction of Mayan history—more appropriate to refer to as Mesoamerican—has been established primarily—and that is the way it has to be—according to the results of





Auber's engraving (s. XVIII) in which the artist presented the baroque elements of the facade of the building known as Las Monjas, in Chichen Itza.

archaeologic investigations. Until only a short while ago, these investigations were focussed almost entirely on the more spectacular vestiges of ancient civilizations: temples, pyramids, palaces, ball-games, tombs, that is, everything that is found in the ceremonial centers. It is evident, however, that this cultural picture which was acquired, refers to one sector of Mayan culture, that is, to the material manifestations associated with the cult; to life and death of the ruling class, a minority within the totality of the population.

On reading the greater part of investigative works, it seems that there had existed only priests, civil and military heads, high functionaries, savants and artists. Against a nebulous background one can only surmise something about the people; one takes for granted their indispensable existence, but that has no interest for the historian. When one refers to the people, it is for the purpose of presenting them in such a light that they, in their work, their faith and their sacrifices, appear to take part in the collective task which revolved around their religious acts, in perfect harmony with their rules and forming with them an integrated, balanced society, static and without conflicts.

To the left, the Templo de las Inscripciones in Palenque. Palenque was one of the most important ceremonial centers that flourished in the central Mayan area during the classic period. In the interior of the pyramid that supports the temple, Dr. Ruz found, in 1952, the most sumptuous sepulchral precinct of the whole Mesoamerican region.

To emphasize the actual presence of the entire Mayan populace in the elaboration of their culture, to specify their role in the life of the community, to define their dialectic relations with all the other social groups, the participation of each one in the establishment, rule and general use of assets; to explain the use of scientific knowledge and arts, and the socio-political role of the priesthood; to show the historic consequences of the internal conflicts linked with the process of interrelations in Mesoamerica; to clearly delineate Mayan society within universal categories; to analyze the effects of conquest, colonization, and modern acculturation of the Mayas in their ambivalence (conservatism-change, conformism-rebellion), that is the extent of the principal problems that we shall attempt, if not to solve, at least to expound.





# Mesoamerica

## The Population of the American Continent

While different families of hominids had been dispersed in the Old World for more than a million and a half years, and our direct ancestor, *Homo sapiens*, had existed more than two hundred thousand years ago, the American Continent, a vast zoological paradise, was still unknown to man.

It was only 35 000 years ago (a hypothetical figure which new findings constantly amplify), when the man of the Old World discovered and began to establish himself in America. For him it was, most certainly, a New World, even though he had no awareness of it. There is no argument about the origin of the American man, nor his passage from Northeast Asia via the Bering Strait, when the region was under ice and fridity, at which time the crossing would have been easier than now. The Aleutian Islands could also have provided a road between both continents. It is believed that the migrations started then and continued, in a more or less constant form, until some two thousand years before Christ. It is assumed that the discovery of the Continent was made as a result of the progressive diminution of the glacial cap and the displacement, towards the North, of the Asiatic fauna that, in turn, was followed by the human groups which lived precisely on that fauna.

The front steps of the *Templo de los Guerreros* ("Temple of the Warriors") in Chichen Itza. The new techniques in construction and the original spatial concepts, contributed by the Toltec invasion in the X century A.D., transformed and enriched Mayan architecture.

## Prehistory: Paleolithic

It is believed that the first immigrants were hunters, but until now the most ancient stone tools, found on the American Continent, correspond to a culture of collectors, that is, those who gathered plants, seeds, etc., for human consumption. It is more than probable that they were collectors and hunters, having come from East Asia, and that their technologic level could be assimilated to the lower paleolithic. They would be dolichocephalics, related to the Australians and Melanesians, not through direct descendancy, but through a common origin, a very ancient population of Asia and Oceania.



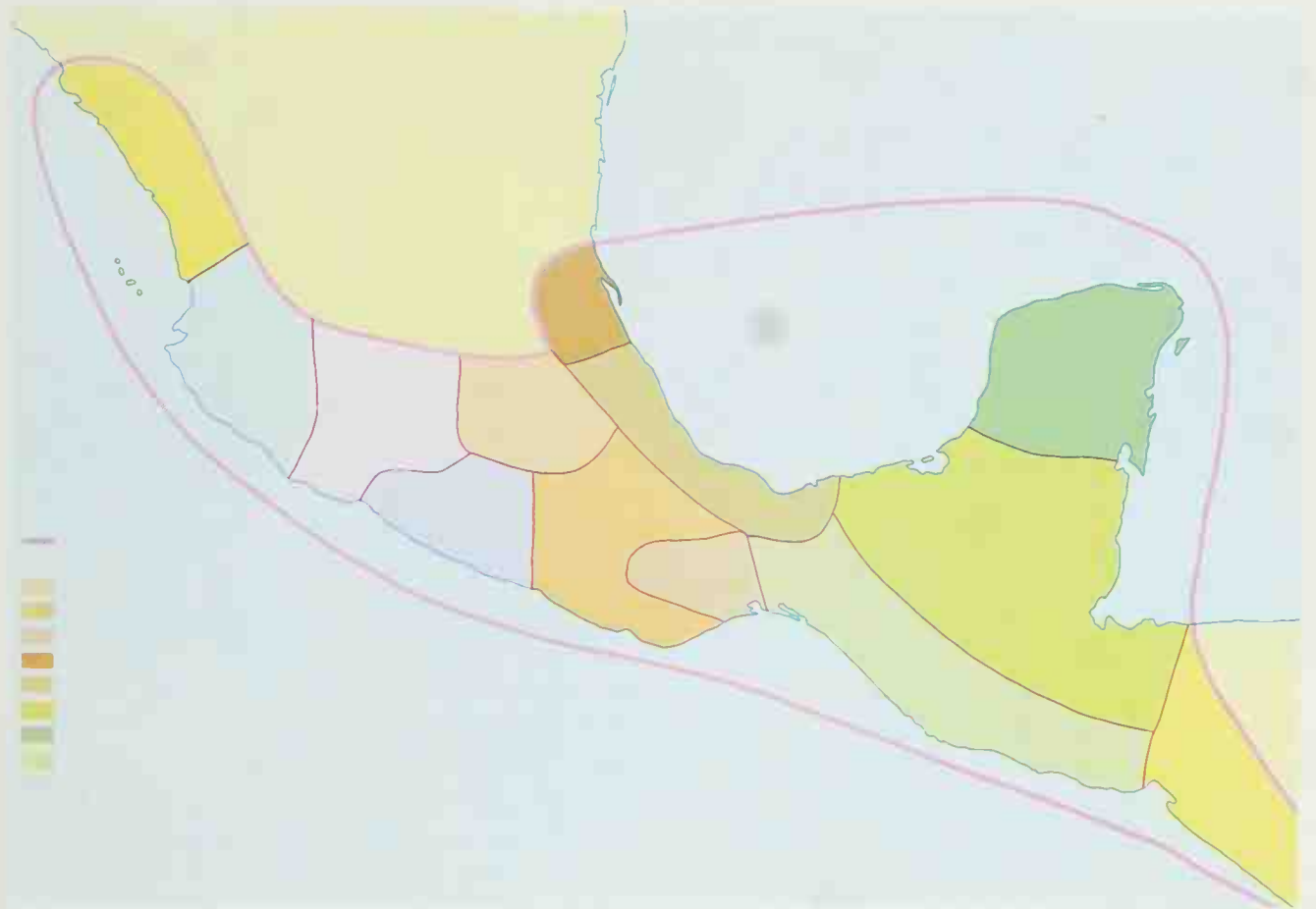
Ten thousand years later they also came from Asia and always by the same route. They were groups of hunters with a superior Paleolithic culture, who had set out from Siberia. They were brachicephalic and of the Mongoloid type. Hunters and collectors existed side by side over a period of thousands of years, the difference between them being, as Sanders and Price emphasized, not chronologic but ecologic according to the regions and the resources available; the population devoted itself mainly to the hunt or collecting, but in many instances both activities were carried out equally.

The stone objects that were found in many places, had been used by these people as tools. For those devoted to the hunt, different sharp-pointed projectiles are known, which have provided the respective names for the cultures: Sandia (25 000 to 15 000 B.C.), Clovis (15 000 to 10 000 B.C.), Folsom (10 000 to 7 000 B.C.), Yuma (7 000 to 5 000 B.C.). Apparently they lived from the hunt which embraced horses, mastodons, camels and bison, and were nomads. In the course of time, but at an extremely slow pace, they began to use different types of tools which naturally gave them a wider berth for the execution of distinct types of work. Besides projectile points, they also made scrapers, pestles, knives and hammers out of stone, and punches from bones. They probably used wooden spears as darts which permitted them to attain greater distances than that attained only from the charge of the arm.

### Mesolithic

Afterwards, in the course of thousands of years, as climatic conditions were changing, becoming each time drier and hotter, the heat and desiccation of the prairies brought about the progressive disappearance of Pleistocene fauna, that is, of huge mammals such as the mammoth, the mastodon and others of smaller size as the sloth bear, the camel and the horse. The hunters now began to hunt a minor fauna, and the gathering of vegetables (fruits, tubers) came to acquire more and more importance. The stone implements were being adapted to new needs and, in addition, through the instruments produced by simple percussion or carving stones, new objects were made by polishing them, such as axes, mortars, metals and receptacles. One of the cultures we know about from that period is the Cochise of Arizona. These groups of humans used to live in caves and followed a semi-sedentary way of life.

Thor Heyerdahl, anthropologist who tried to explain the populating of America from the beginning of the trans-oceanic voyages.



### Neolithic

Among those who gathered the vegetables, one ought to have noticed that under specific conditions the seeds of fruits which had fallen to the ground, germinated and yielded plants similar to those that the fruits had originally produced. From observing a natural phenomenon to its purposeful realization was not more than a step and it is highly conceivable that numerous collectors started out in this manner, which was to constitute the phenomenon designated the Neolithic Revolution: food production through cultivation. Such a "revolution", as has already been stated, was more akin to evolution since it was actually brought about in the course of several millenia, and transformed not only the type of alimentation, but also the way of life of the peoples. There is no doubt that, to a great extent, they still continued to depend (although each time to a lesser degree) on the hunt, fishing and gathering of seeds, but the actual fact of having assured and adequate harvest determined a greater variety of activities; thanks to the increase of leisure time they were able to give more consideration to new industries, such as basketry and especially pottery making. At the same time the need for taking care of the sown fields brought about the need for the definite establishment of populations.

The evolution in the utilization of plants should have started around the year 6000 to 7000 B.C. In Coxcatlan, a valley in Tehuacan, excavations have shown that from 7200 to 5200 B.C., beans, squash, chile, avocado and other plants had been used, some of which had probably already been cultivated while the rest were still wild. One can place corn among the plants that had as yet not been cultivated. In the same area in a second phase, between 5200 and 3400 B.C., certainly corn, beans, squash, avocado, certain kinds of chile, and other plants were most definitely cultivated. Between 2500 and 1500 B.C., agriculture had become the primordial source of activities, and the products represented 70% of the nutritional diet. It was then that there had already started the making, with clay, of receptacles for preserving and cooking foods. The way of life of the people was indeed sedentary, and the families were grouped together, forming hamlets or small villages.

It is unnecessary to state that the slow cultural evolution which constitutes the American prehistory, also took into its fold the territory we refer to as Mesoamerica, whose development we shall now present by way of a brief synthesis.

## Definition and Borders

Some thirty years ago, Kirchhoff imposed the name Mesoamerica to denote a geographic-cultural unit, a territorial *continuum* in which a culture had been developed, basically homogeneous, although ramified in regional variants, corresponding to ethnic groups linguistically differentiated. At the time of the Spanish conquest, their septentrional borders were more or less determined by the rivers Sinaloa in the West and Panuco in the East, united by a line of demarcation which passed a little northwards of the rivers Lerma, Tula and Moctezuma. In the South it encompassed the northwestern part of Honduras as well as the western tip of Nicaragua and Costa Rica.

While the meridional frontier ought to have been relatively constant, the septentrional frontier underwent several changes in the course of history, being more removed northwards in the periods of the flourishing of Mesoamerican culture, and being drawn together and bending towards the South in the epochs in which their power and cohesion were diminished. They were contiguous with such peoples as: the hunters or underdeveloped agriculturists in the North, and the well-advanced agriculturists in the South, according to the standards of Southamerican tradition.

## Cultural Characteristics

Kirchhoff, in his classic article, distinguished a number of sub-groups on the basis of a conglomeration of factors common to Mesoamerica and the people, who were superior and inferior as cultivators of North and South America: in the Andean region, and sometimes among the Amazonians, we have the superior cultivators; in South America and the Antilles we have the inferior cultivators; on the Continent we have the collectors and hunters. He punctualizes the elements unknown in Mesoamerica and present among the cultivators of North and South America, and emphasizes those which are their own and those that are exclusive of the area in question. Among the latter, the main ones are: the cultivation of cocoa and maguey, the small garden tracts, the complex of corn processed especially for *tortillas*; the double-edged sword made from obsidian leaves, the "ixcahuipilli" or the defense jackets made from cotton; the echeloned pyramids, the special structures with rings for playing ball; the hieroglyphic writing\*; the codices and maps; the calendar of 365 days, divided into 18 months of 20 days, with five intercalary, but unlucky, days; a ritual calendar of 260 days with a cycle of 52 years; the existence of calendaric festivals, the belief in propitious and unpropitious days, the calendric names of persons; the military orders denominated *jaguares* ("jaguars") and *águilas* ("eagles"), *la guerra florida* ("Flowery War") to take prisoners destined for sacrifice; the specialized markets, the social class of merchants; the use of paper, rubber and flowers in ceremonies; the self-sacrifice; the human sacrifice when hearts were torn out and the victims burned alive, the use of the skin of the victim for rituals; the belief in a number of lower worlds and in a *post-mortem* trip with different tests; rain deities with related representations; certain ritual numbers such as 9 and 13, etcetera.

From the many conclusions that Kirchhoff extracts from his study, we shall mention his judgement to the effect that Mesoamerican culture forms part of a more extensive zone of high American cultures, aroused from a more ancient horizon of people who were not cultivators, and that the elements lacking in Mesoamerica, but which do exist in North and South America, ought to have existed also in the area we are studying, although in an earlier epoch.

## Origin

If twenty years ago, the problem of the origin of Mesoamerican culture still allowed an



Paul Rivet, author of the hypothesis of the multiple origin of the populating of the American Continent. In front: the cultivation of maize was an activity common to all the Mesoamerican area. It is assumed that the first cultivation was obtained from "teozintle" (wild maize).

\* Just a few years ago there was discovered in Peru the existence of an incipient type of writing. It was recorded on beans (sieve beans), funeral coverings and glasses (keros).

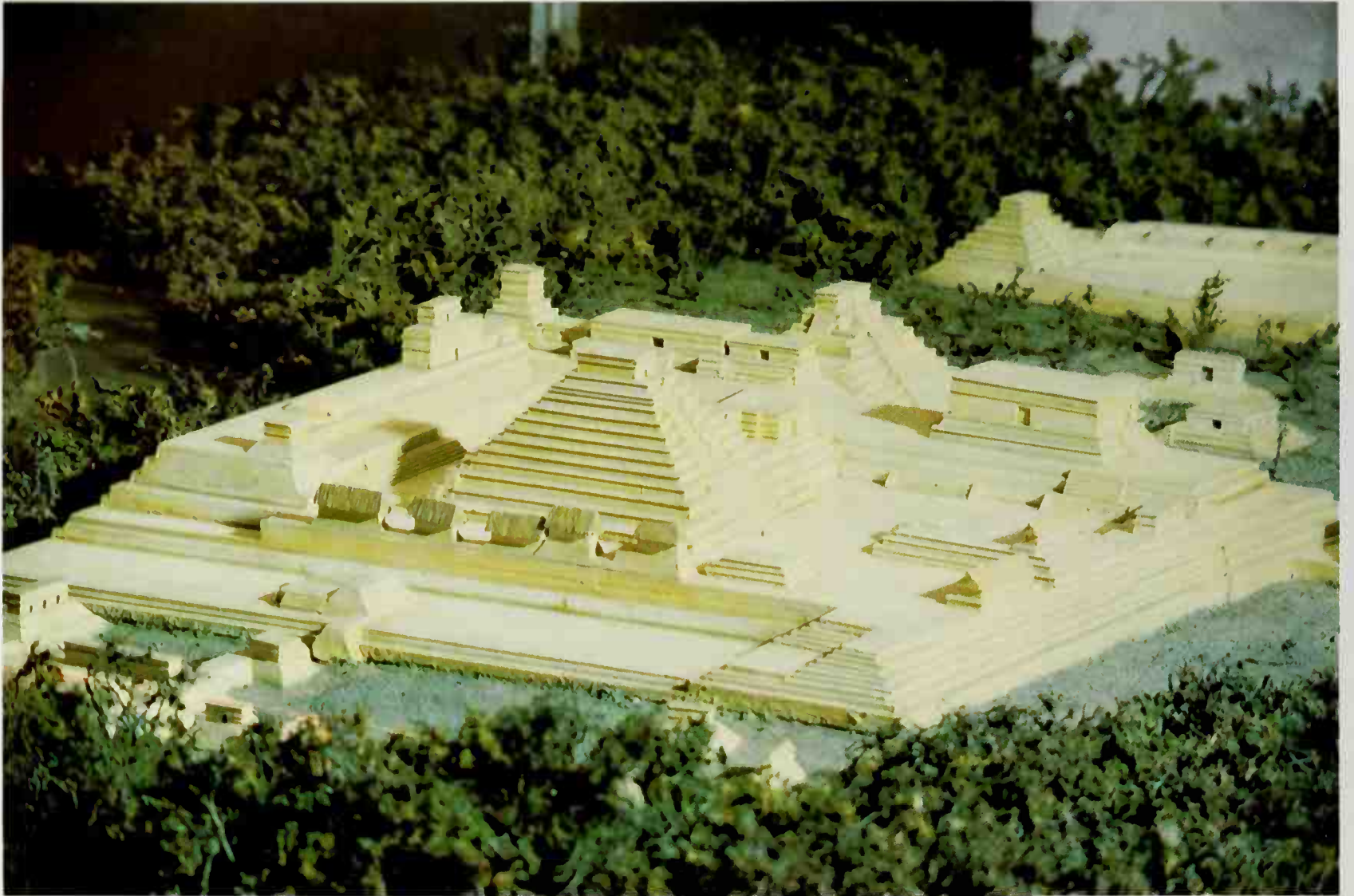


alternative—to consider it autochthonous or, on the contrary, as imported from Asia—nowadays and while new discoveries contribute data on ancient outlooks, this problem seems clearer. In fact, hardly knowing even more than very vaguely the previous stages in the formation of Mesoamerican culture and its appearance as more or less developed in distinct areas, some investigators, favoring the diffusionist concept of culture, were inclined to accept the Asiatic solution. The adherents to this theory were: Kirchhoff himself and Miguel Covarrubias in Mexico; Gordon Ekholm in the United States, and Heine-Geldern in Austria.

Besides considering some elements as imported ones, like the echeloned pyramid, Kirchhoff found his main support in the fact that, according to him, the advanced mathematical and astronomical knowledge of the Mayas were found in a true “cultural vacuum”, if one takes into account the low technological level of American cultures, which, unlike the people of antiquity of the Ancient World, had used neither the wheel, the plow nor metallurgy. Furthermore, referring concretely to the calendar based on astronomical knowledge, he felt that, although in Egypt it had resulted from the need to regulate irrigation while taking advantage of the swellings of the Nile there existed no need comparable to that among the Mayas, and therefore there was no reason to create such a calendar.

In a later work, Kirchhoff adds to his arguments a comparison between the days of the ritual calendar of Mexico (Mayan and Aztec) and the Chinese. The only real thing afforded by this comparison is that among 28 Chinese names and 20 from Mexico, the tiger, dog and serpent appear. Objectively considered this does not establish any significant relation between both calendars. In addition, Kirchhoff presents lists of deities of India and Mexico which he groups together on the basis of the function of each one, attempting to show thereby certain equivalents and, implicitly, Asiatic influences on the religious concepts of Mexico. Once again his argument does not seem convincing even to the slightest degree, since all that his comparison yields is that in India and Mexico solar gods (beneficent) and lunar gods (pernicious) were worshipped. Other deities worshipped were those of agriculture and water; of fire and war; of fertility and procreation; of destruction and death; and a goddess with diverse functions, among which was that of judging sinners. Dealing with universal concepts and those associated principally with the basic activities—agricultural—the presence of similar deities among such people, essentially agrarian as the Hindus and Mesoamerican, was to be expected.

Heine-Geldern and Ekholm have repeatedly offered supposed proof of the relation between Asia (especially the Southeast and China) and the Mesoamerican cultures (particularly Mayan). It is always a matter of objects (ceramics, sculpture) or architectonic details which present formal similarities, at times vague and at times sufficiently definite. On another occasion we already analyzed some of these “proofs” and we don’t believe there is any necessity to repeat here the arguments which we had rejected. The most conclusive proof, in our judgement, for refuting the validity of the comparative method applied to



objects and shapes from different cultures, the goal of which was to establish relations through contacts between them, was presented by Caso in the XXXV Congress of Americanists in the same session in which Heine-Geldern participated. The comparison of numerous objects, decorative motifs, shapes of bowls and receptacles, carved or sculptured figures which pertain to cultures that never had had contacts with one another (the Mycenaean with the Zapotec, the French with the Aztecs, the Norwegian with the Aztecs, the French with the Teotihuacans, the Scythians with the Zapotecs, the Sumerians with the Choleans, the Hittites with the Aztecs, the Palestinians with the Zapotecs, the Etruscans with the Totonacs) gave the impression to those who took part in the Congress of ridiculing the diffusionist theory, but, in point of fact, the methodology Caso had utilized, coincided completely with that of Ekholm and Heine-Geldern.

Kroeber, on referring to the numerous cultural elements common to the Old World and America, that basically are nothing more than results from parallel phenomena, stated: "Actually, they only arise from the same impetus, share the characteristics of the objects or of nature and only resemble to a certain extent being completely different in other senses"; and, in so far as the similarities between concepts and spiritual creations are concerned, the same author regarded them as "certain tendencies inherent to human mind in determined directions".

The discoveries of uncultivated corn, as well as the process of cultivation, in the valley of Tehuacán, which correspond to dates as remote as the year 7000 B.C. for the wild gramineous, and from the year 5000 B.C. on, for cultivated corn, leave no room for doubt as to the autochthonous origin of this basic plant of American culture. The existence in Mesoamerica (Oaxaca, the Gulf Coast, the Pacific Coast) of monuments with writing, numerals and dates, which precede by many centuries that of the Mayan hieroglyphic inscriptions, makes it completely unnecessary to insist that the Mesoamerican calendar had

Archaeology has shown that in the systematic study of the prehispanic urban centers it is possible to find the answer to the emergence and development of Mesoamerican culture in general and Mayan in particular. A maquette which shows the city of Yaxchilan (National Museum of Anthropology). To the right, the *Juego de Pelota* ("Ball-games") in Copan, Honduras.



its origin in Asia, or was preceded by it there. Thus Caso concluded his participation in the mentioned Congress, by saying: "If complex forms of knowledge, such as agriculture and writing, had, as we have seen, an independent origin, it is difficult to understand why there is a persistent insistence to the effect that the simplest inventions necessarily had to have come from some center of diffusion in the Old World".

\* The similarities in the form of containers, techniques and decorative motifs which were found among the ceramics of the Valdivia phase on the coast of Ecuador; and the ceramics of the Jomon phase from several islands of Japan, are so pronounced and repeated that they suggest the possible arrival to South America of a group of Japanese fishermen—between the II and III millennia B.C.—who possessed a complex knowledge of ceramics which later penetrated other regions, including Mesoamerica. Nevertheless, the involuntary arrival of seamen to a foreign Continent is not easy to translate as a cultural influence on the natives. Usually, the foreigners are eliminated but, if they survive they adopt the local customs. On the other hand, the primitive aspect of the ceramics mentioned, induces one rather to think in terms of parallel creations, not influences.

As we already stated when we began to explain this problem, concomitant with the increase in our knowledge of the prehistory of the formative stages of the Mesoamerican cultures, then the gaps begin to be filled in, the antecedents emerge where they were lacking so as to explain an advanced civilization, the mystery which surrounded the first steps of the different civilizations begins to disappear, and everything points to the confirmation of the autochthonous unfolding of the high level American cultures, the Mesoamerican among them.

Taking on this position, of course we do not discard the contributions made by Asiatic immigrants who, most certainly, did not arrive with empty hands and vacant minds. Without any possible argument, American prehistory is the continuation of Euroasiatic prehistory. While it is not possible to specify the exact epoch in which Asiatic immigrants stopped coming to America, it ought to have been around the year 2000 B.C. There is no doubt that they still brought cultural elements, such as, perhaps, pottery making\*, the custom of painting cadavers with ocher, the game called "patolli" and other customs or beliefs firmly established and continued in the Mesoamerican cultures. It is, however, inadmissible to think that influences, mainly stylistic, and formal similarities continued to come from Asia while such cultures were being developed (during the post-classic period also), and that these influences excluded such basic elements as the practical use of the wheel, the plow, the carriage, the potter's lathe, the semicircular arc, glazed ceramics or the religion of Buddha.



### **Chronologic Horizons**

If we set the beginning of Mesoamerican culture around the year 2000 B.C., that means that it had lasted some 35 centuries, divided into different periods and phases, based on the changes brought about in its development. Since these changes did not take place in all the cultures in a synchronic form, we are not going to specify dates for the different periods.

### **Principal Cultures**

Originating from a basic culture which we refer to as Mesoamerican, distinct cultures were being formed in different ecologic environments and as a result of interrelations among the distinct peoples in the course of the historic process. These cultures were clearly distinguished through their style, but are, fundamentally, variations of the mother culture.

Classifying them geographically, the main cultures are as follows:

Ornamented vase with bas-relief engravings (National Museum of Anthropology). Ceramics has been a very useful tool in the periodization of the Mayan society.



## PRECLASSIC OR FORMATIVE PERIOD

### Low Phase

The economic life still rooted mainly in gathering, the hunt and fishing, but with a progressive increase in beginnings of cultivation. of a sedentary life in small family groups. The production of monochrome ceramics in simple forms, not many variations, with fine decoration, and coarse, clay figurines frequently modelled as women. The lithic industry from cut stones (projectile points, knives, scrapers) and polished (mortars, metates). Stone and wood objects. Clothes from cotton and henequen. Huts from sticks with a roof from palm leaves or grass in hot places, and from thin flat stones, and sun-dried clay bricks in moderate and cold climates. Animistic religion. Worship of fertility and the dead.

### Middle Phase

Cultivation of corn as a basis for alimentation, complemented by beans, squash and chile. Human groupings in small villages; the beginning of ceremonial nuclei with platforms of earth and stone as the foundations for sanctuaries. Formation of specialized groups for ritual ceremonies. Monochrome ceramics with a greater variety of shapes, figurines of molded clay. Jade objects. Beginning of sculpture, colossal heads and huge altars.

The Jaguar deity (rain).

### High Phase

Cultural differentiation in distinct areas. Increasing importance of the ceremonial center. Building of pyramids as the bases of the temple-huts. Development of sculpture: steles which depict scenes. Hieroglyphic inscriptions with the beginning of scripts. Vigesimal numeration by points and bars. A numeric system with values according to the position of the signs. Long count. Dates on the ritual and solar calendar. Decorations on buildings in molded stucco. Ceramics no longer only monochromatic. the Old God (fire).

## PROTOCLASSIC OR TRANSITIONAL PERIOD

Acceleration of the process of cultural development. Precision of the typical features of the different cultures. Distinctions made in the priesthood. Social stratification. Ceremonial centers planned. Imposing constructions for worship. Mural paintings on ceremonial and sepulchral buildings. Steles with hieroglyphic inscriptions and dates. Important personages appear in the sculptured works. Tetrapod containers, mammalian props, and polychrome decorations.

## CLASSIC OR DEVELOPMENTAL PERIOD

### Early Phase

Important technical, scientific and artistic developments. Erection of large ceremonial centers. Invention of the projecting dome or the false arch among the Mayas. Temples and residences for the ruling class built with stone walls. Decorations in stone and stucco reliefs, and paintings in the buildings. Special buildings for ball-games. Numerous sculptured monuments with long count dates in the Mayan area. Theocratic government. Social classes well differentiated. Political states with centralized power. Polychrome ceramics in a great variety of shapes and forms.

### Late Phase

More extensive flourishing of ceremonial centers, principally Mayan, and the decline of others (Teotihuacan). Cultural attainments in the extraordinary increase in the construction of ceremonial centers, diversification of architectonic structures (pyramids, temples, terraces, squares, yards, palaces, temples in which American Indians worshipped their idols, ball-games, tombs, observatories, etc.). Art not longer only religious, but also civil (Mayan art). Theocracy and aristocracy. Complexity of polytheistic forms of religions (natural forces, plants, animals, stars, offices or occupations, abstract concepts). Cultures clearly defined in distinct areas. Ceramics very variegated in shape, decorative thematic techniques. Numerous clay figurines, modelled or molded, which represented deities, priests, civil or military chiefs, ball-players, women of high rank, common people, animals.

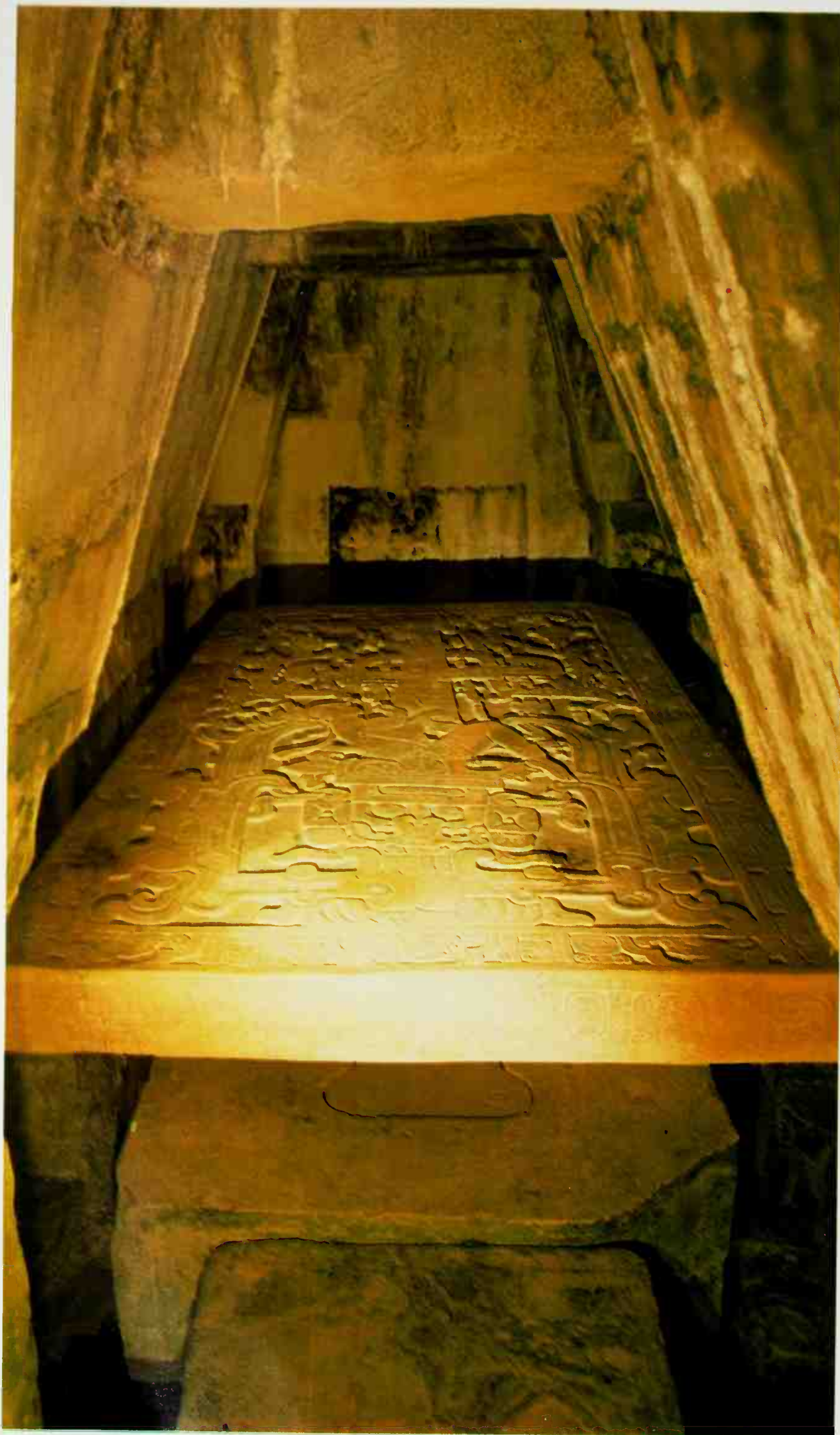
## POSTCLASSIC PERIOD OR PERIOD OF DISINTEGRATION

### Early Phase

Discontinuance of cultural activities in the large classic ceremonial centers. Pressure from the uncivilized groups on the septentrional border of Mesoamerica, ethnic movements from Central Mexico to the South and Southeast; internal disintegration for economic and social reasons. Increase of militaristic influences; increase in human sacrifices. Flourishing of new states, a product of the disintegration of the large centers and mixed cultures which resulted from the arrival of people recently acculturated. Beginning of the use of metallurgy. Fine X orange-colored and "lead-colored" ceramics.

### Late Phase

Continued pressure and invasions at the septentrional border. Invasion of new ethnic, bellicose groups. General states of war; integration of Aztec imperialism. Fortified cities. Exacerbation of human sacrifices. The War of the Flowers. Increase in commerce. Artistic decadence. The bow and arrow. Arrival of the Spaniards.



In 1952, the unique Mesoamerican funeral crypt connected with a temple was discovered on the inside of the *Templo de las Inscripciones* ("Temple of Inscriptions"). It has the form of a monolithic sarcophagus and contained a human skeleton covered with jade jewels.

## CULTURES FROM THE NORTH

Within the septentrional borders of Mesoamerica and outside of these limits as well forming cultural islets in an area of collectors and hunters—there were marginal cultures in which are recognized elements from Central Mexico combined with others originating from the Southwestern United States. We think of La Quemada and Chalchihuites (Zacatecas) and Casas Grandes (Chihuahua) as some of the main centers which correspond to such cultures.

## WESTERN CULTURES

Under this heading we can include the cultures of the actual states of Sinaloa, Nayarit, Jalisco, Colima, Michoacan and part of Guerrero and Guanajuato. Many objects are known from these regions, the greater part obtained from secret excavations, especially from sacking tombs. The figurines and genuine clay statues reveal a great diversity of style, according to the regions they come from. Almost always they represent human beings, animals, huts and even models of villages, and frequently scenes of daily life. Western art is realistic; the same in the "primitive" manifestations that in a more worked-out style; in many instances, it tends to caricaturize and always shows vigor and originality. From the historic angle, the culture of the Tarascans is the best known.

## CULTURE FROM CENTRAL MEXICO

Concentrated in the regions of the central valleys of the high table-land of Mexico, these cultures are certainly the ones which have received more attention from investigators, for the simple reason that our information about them is not only from archaeological sources but also, to a great extent, from historic as well. Arranged chronologically, the main ones are those that we are going to refer to next. Obviously we exclude the stages which correspond to prehistorics and we start from what we consider the beginning of prehistory, that is, around the year 2000 B.C.

During almost the entire course of the two millennia prior to our era, Mesoamerican culture in Central Mexico presented aspects so similar in the entire area that it is possible to regard it as one culture only. From that preclassic culture we are reminded of some centers, almost all situated around or near the ancient lakes of the Valley of Mexico, Arbolillo, Zactenco, Copilco, Tlatilco, Cuicuilco, Ticoman, Tlapacoya, etc. The great classic culture of Central Mexico was that of Teotihuacan, which started to develop during the last two or three centuries before our era, this culture not only ruled that region but also spread out, up to districts very remote, in the course of almost a millennium.

The historic development in the central region of Mexico was marked by violent invasions of successive waves of people of a very low cultural level, who had not yet gone beyond the stage of hunting, fishing and gathering. These peoples came to the northern plains with bellicose intents and destroyed the civilized centers. When they understood the advantages offered by a civilized way of life, they did not delay in becoming sedentary and cultivators as well, joining the native populace, assimilating their culture and creating a new one which, to a great extent, was an extension of the previous one, but with a special stamp of its own.

Teotihuacan was destroyed in this way and the Toltec culture of Toyan (Tula) followed, which did not last for more than three centuries, but which also influenced other Mesoamerican civilizations. Their destruction, towards the end of the XII century, was likewise due to new immigrants who were barbarians known by the generic name of Chichimecans, as the invaders of the valley of Teotihuacan at the decline of its culture. After becoming civilized these new Chichimecans founded Tenayuca and later Texcoco. Around the beginning of the XIV century new barbaric tribes came to the valley of Mexico. They were the "Mexicas" who had in their midst the Aztec tribe which did not delay not only in mastering all the people of Central Mexico from their capital in Teochtitlan, but also in creating a true empire whose borders extended to all Mesoamerica.

## CULTURES OF THE ATLANTIC GULF

Important cultures developed along the Gulf of Mexico, excluding the coast of the peninsula of Yucatan. The most ancient—which covered a great part of the preclassic period—was the Olmecan or that of La Venta, situated south of the actual State of Veracruz and north of Tabasco. This culture, apparently the first completely different from that of Mesoamerica, undoubtedly played an important role in the formation of the others.

More to the North, that is, in the central region of Veracruz, the culture known as Totonacan was located; their most important center must have been El Tajin. This culture which came under the sway of Teotihuacan elements, in its turn influenced others, as the numerous findings of such characteristic objects as yokes, palms, and votive candles, show even in remote regions.

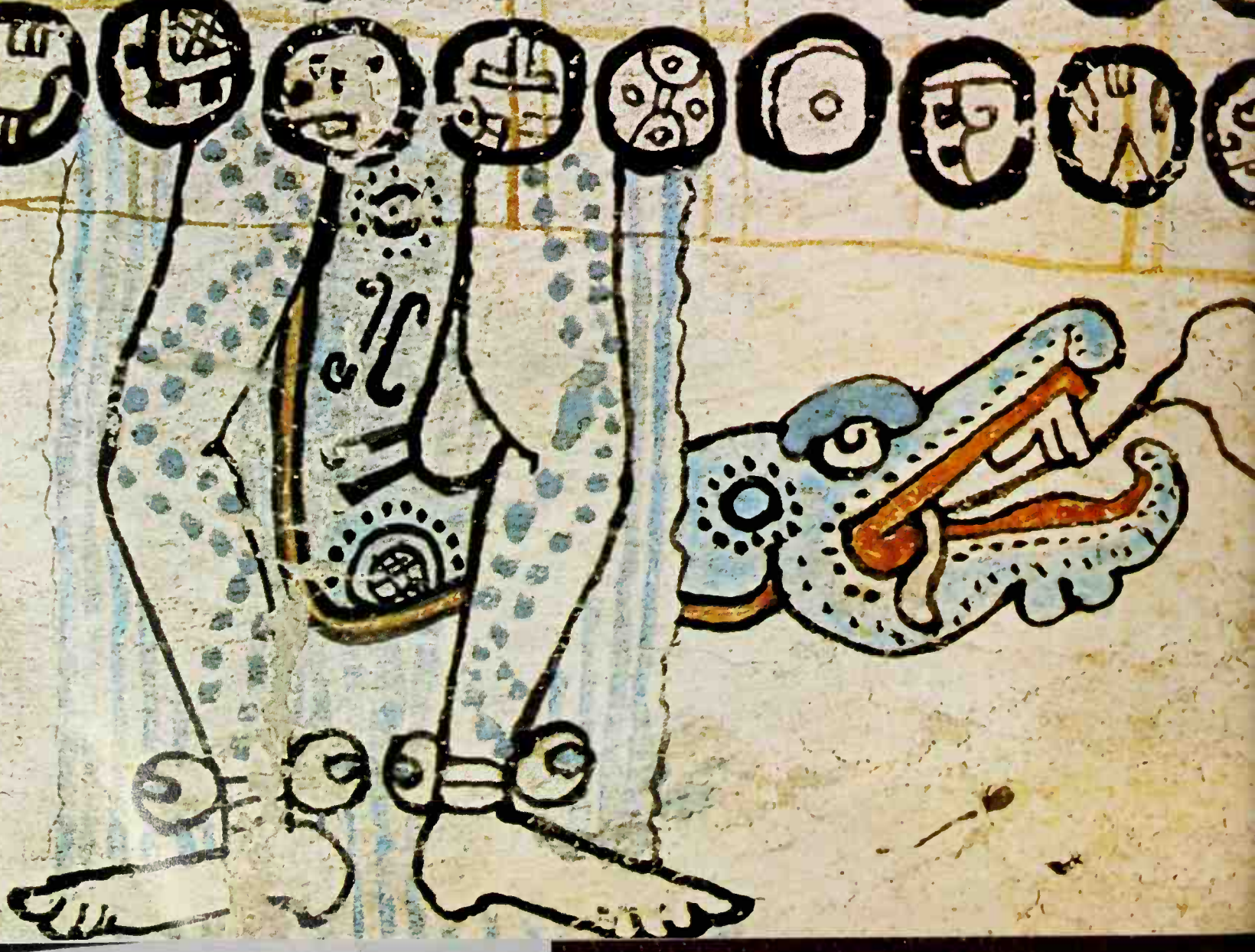
Still more to the North, a group linguistically affiliated with Mayans, the Huastecan, which had separated from the rest of the Mayan branch during the preclassic period, created a culture of its own with clearly defined features.

## SOUTHERN CULTURES

At this time we are referring to the culture of Oaxaca, for which we make use of abundant archaeological information. The most important cultures among them were the Zapotecan, through which it was possible to establish an extensive sequence and to determine the principal stages by means of explorations of what had been its major center: Monte Alban, and the Mixtecan, which had developed more or less simultaneously with that of the Zapotecan, but in mountainous country, while this latter was established in the large valleys. During the postclassic period, the Mixtecan dominated these valleys and imposed their might on the Zapotecs. One of their most well-known centers is Mitla.

## SOUTHEASTERN CULTURE AND THE CULTURE OF CENTRAL AMERICA

We are now referring to Mayan culture which had a territorial expanse calculated at more than 400 000 square kilometers, which comprised the present Mexican states of Yucatan, Campeche, Quintana Roo, part of Tabasco, and Chiapas, and the present Republic of Guatemala, Belize and the western tip of the Republic of El Salvador and Honduras. The chapters which follow are devoted to this culture.



# Sources of Information

It is important, we believe, to remind the public of what our main sources of information are, concerning the ancient Mayas with regard to their history and cultural achievements. We can categorize these sources as historic, archaeological, ethnographic and linguistic.

## Spanish Historic Sources

The reports of those who took part in the conquest and that for such reason were also the first Europeans who discovered the Mayas, are among the testimonies of major importance about these people. Even more important, however, are the chronicles written by those who arrived at the time of the conquest or shortly thereafter. The greatest number of them lived for many, many years among the conquered people thereby being able to acquire direct knowledge about their customs, their beliefs, their knowledge and their history in general. It is obvious that the testimony of the conquering warriors, as also that of those whose duty was to complete the military triumph with the spiritual conquest of the vanquished, is at fault in many instances, if not for a lack of veracity, at least in the interpretation of the elements of a culture which was so different from theirs, certainly for the lack of ability, the limitations, and prejudices, entirely natural, of course, for men of action and friars of that epoch. It is a task for the historian, when he analyzes information from the Spanish historic sources, to appraise the subjective aspect which so frequently alters the actual facts to which he makes reference.

The first Spaniards who came in contact with the Mayas did not leave us any direct testimony of such a contact and of their understanding and awareness of the native culture. In 1511, returning from Darien, an expedition conducted by Valdivia was shipwrecked in front of the Eastern coast of the Peninsula of Yucatan. Some fifteen of the shipwrecked reached the shore and apart from two of them the others perished, most of them sacrificed. The two survivors, Jeronimo de Aguilar and Gonzalo Guerrero, each one in his own way,

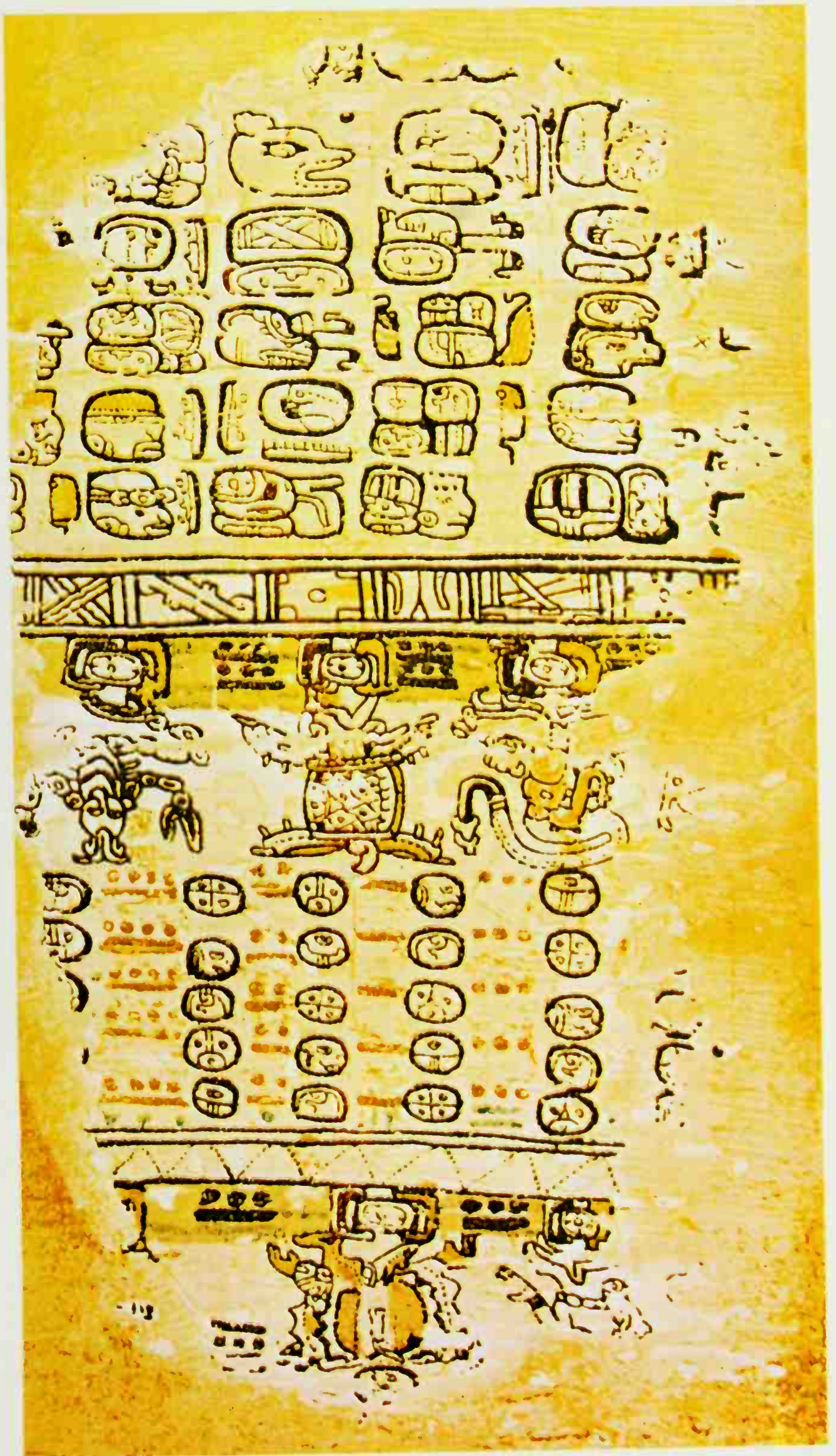
A page from the *Códice de Dresde* ("Dresden Codex"), one of the fundamental elements for the study of Mayan civilization.

played a significant part in that phase of the Mexican history which began with the conquest. The former, during almost eight years of captivity, had learned to speak Yucatecan Maya to perfection, and was the first interpreter on whom Cortes relied to handle the natives before the arrival of La Malinche. She spoke Chontal, one of the Mayan languages, and Nahuatl, and served as translator for the Mexican groups. She translated what Cortes said to his interpreter, Aguilar. The latter founded the first Mexican family, a mixture of half-breed, Spanish-indigenous. Aguilar refused to take part in the conquest and, furthermore, according to a number of chroniclers, seems to have been the one who encouraged, organized and directed the resistance movement against the invaders.

We have the reports from some of the members who had taken part in the first three expeditions which came to Mexico from Cuba. Of special value are the reports of Bernal Diaz del Castillo, a soldier who in his old age, had turned to the writing of chronicles. In addition to his information we also have the diary of Juan Diaz, the scribe of Juan de Grijalva, head of the second expedition, plus the letters of Hernan Cortes to the Spanish sovereigns with reference to the third expedition. The information provided in these first chronicles is not very extensive but does not lack interest. In the greatest number of cases, the contact established between the Spaniards and the natives was not very far-reaching nor even peaceful, and the facts reflect the circumstances under which they were realized. Thus we are fully aware of the distance covered by these three expeditions; we also know the precise points at which the Spaniards landed and the nature—peaceful or violent—of the encounters; also the reference, usually direct, to some of the aspects of the indigenous culture: embarkations, homes, temples and altars, idols, dress and adornments, arms and tactics of war, of useful, natural and manufactured products, etcetera.

With regard to the people of Yucatan, most of the information we have is undoubtedly from Diego de Landa, who wrote in 1566, but it wasn't until three centuries later that his work was published. Apart from the chapters dealing with the discovery and conquest, the work of Landa, *Relación de las cosas de Yucatán*, is, presently a treatise on ethnography and history, in which there is no lack of geographic, climatologic, botanic and zoologic data. In the square below, we quote the main titles of these chapters:

The most important old buildings. Government, priesthood, science, letters, and books of Yucatan. Arrival of the Tutul-Xius and the alliance they made with the lords of Mayapan. Vices of the Indians. Manner of building houses. Obedience to and respect of the Indians for their masters. Manner of decorating their heads and wearing their clothes. Food and drink of the Indians in Yucatan. Painting. Land left fallow and tilled, ready for sowing the following year. Their sprees, banquets, farces, music and dances. Industry, commerce and money. Agriculture, and seeds. Justice, and hospitality. System of counting among the Yucatecans. Genealogies. Inheritances and guardianship of orphans. Succession of lords. Marriages. Frequent repudiations among the Yucatecans. Weddings. Baptism in Yucatan. Their form of confession. Abstinences and superstitions. Diversity and abundance of idols. The work of the priests. Sacrifices and mortifications. Weapons of the Yucatecans. Military chiefs. The militia and the soldiers: customs of war. Crimes and punishments. Education of the youth. Dress and decoration of Indian women. Chastity and education of Indian women. Duels. Burials of the priests. Belief in a future life. The count of the Yucatecan year. The personages in the days of the calendar. Festivals for the ominous days. Sacrifices for the New Year. Interpretation of the calendar. The century of the Mayas. Writing. Multitude of buildings. Izamal, Merida and Chichen Itza. Fertility of the land. Fish, iguanas and lizards. Serpents. About bees, their honey and wax. The flora of Yucatan. Birds of the land and sea. Other animals of Yucatan.



Among the archaeological sources for the study of Mayan culture are the three Codices: 1) that of Dresden; 2) that of Madrid, and 3) that of Paris. Here we have page XXIV of the Paris Codex, guarded in the National Library of that city. It contains calendaric computations, rituals, ceremonies and prophecies connected with them.

There is no need to insist that if we didn't have Landa's *Relación* our knowledge of the ancient Mayas, their culture and history, would be still more deficient in some aspects. What we know of the Mayan writing proceeds mainly from his information, but his religious fanaticism led him to deplorable excesses against the cultural expressions (books, sculpture) of the ancient indigenous, which he destroyed implacably. However, the *Relación* of the bishop of Yucatan restores, to a high degree, his place in history.

Other chronicles of the XVI century, whose works cover much more than the Mayan area, treat some aspects of the people who lived there at that time. That is the situation of Bartolome de las Casas, Pedro Martir de Angleria and Antonio Ciudad Real, among others.

For the same century and for the septentrional part of the Mayan area, we also have at our disposal some information which is the result of an inquiry conducted by the Spanish crown among the Spanish *encomenderos* who were granted some lands in Yucatan by royal decree. Their information is contained in *Relaciones Histórico-Geográficas de las Provincias de Yucatán*. The uniformity of the entries which correspond to many Yucatan towns, suggest that the greater part of the questionnaire sent by the authorities was answered by Antonio Chi, an interpreter for the Crown, since many of these Spanish *encomenderos*, or perhaps even all, lacked sufficient interest and ability to gather and analyze the data on the life and customs of the Indians whom they had just acquired.

During the XVII century several chroniclers added more facts to what had been left by the authors already cited. Among them we have to mention Diego Lopez de Cogolludo and Bernardo de Lizana, both of them, as Landa, Franciscan friars, who wrote the history of their religious order in Yucatan, but who also devoted several chapters to the culture and history of the inhabitants.

For the Southern part of the Mayan area, that is to say, mainly Guatemala, we have among the chroniclers of the XVI and XVII centuries, Las Casas, already mentioned; Diego Garcia de Palacio, Alonso de Zorita (or Zurita) and brother Roman y Zamora, of the Augustine order. The former were the auditors of Guatemala. From the XVII century we have, among other chronicles, those left by Antonio de Remesal, a Jacobin friar; Martin Alfonso Tovilla and, especially Francisco Antonio Fuentes y Guzman. To these ones we have to add, although it is at the beginning of the XVIII century, the very important one of the friar Francisco Ximenez. These chronicles, less systematic in their presentation of data than that of Landa, deal principally with the military conquest and with the subsequent one of spiritual quality. Nevertheless, through the reports of trips, of the "penetration" into wild regions, of the subjection of the Indians to the Spanish rule, of the founding of convents and of the problems, dramatic at times, which arose between the natives and the civil and religious authorities, we are familiar with the way the Quiche Indians, the Chols, the Lacandons and other, who had settled in what is now Guatemala and Chiapas, lived and thought.

### Indigenous Historic Sources

The friars, more intelligent and cultured than the conquerors and the Spanish *encomenderos*, in order to reach the indigenous and catechise them, learned the native language. But in addition to that, anticipating what is presently done among the indigenous groups, they taught them to write their language according to the Spanish alphabet. In some cases, the transmission of this language came to be done secularly—as is still the case in many communities—in oral form, without the benefit of any written records, and in other cases the texts were written in hieroglyphics. Due to such initiative of some friars of the XVI century, the most important testimonies were then collected and guarded, which presents us what Leon Portilla has called "the vision of the vanquished".

Comparing the Spanish historic sources with those of the natives, a great difference stands out between the rationalist intent of the Europeans to understand that people, and their strange culture—an intent usually unfruitful—and the authentic expression of magic-







Among the historic sources useful for acquiring knowledge about Mayan culture are the *Relaciones* ("Relations") of Landa, and data provided by the first Spanish expeditions to the Peninsula of Yucatan, as those of Juan de Grijalva (left) and of Hernandez de Cordoba (upper).

religious thinking, whose structure is not rationalist, but rather more readily identifiable with poetry.

One can note how the Spanish chronicler and even the most perspicacious of them treats, on the whole, only the superficial aspects; he tries to guess or sense, as a function of his own concepts and cultural patterns, the facts he describes, comparing them with those which seem similar to him as far as their worth is concerned. That is the reason why he frequently fails in his interpretations. The indigenous chronicler, on the other hand, does not attempt to make himself understood: his one interest is to express himself. With words in his own language he holds sway over his knowledge, his awareness, his recollections, his thinking, in the way his mentality has acquired, stored, and unfolded them. Hence, many texts, transcribed by the native chronicler in his own language, but utilizing the Spanish letters, makes it difficult for us to understand, or rather, makes it impossible for us to comprehend. The complexity of the mythical world, that they reveal to us, is like a labyrinth often impenetrable. However, not everything lies within the nature of esoteric doctrine since the native sources have also contributed to the richest and most abundant information about the culture and history of the Mayas.

At the time of the conquest, a prophet (*Chilam* or *Chilan*) in Yucatan with the family name *Balam* (jaguar) becomes renowned when he predicted the coming of white-skinned strangers with beards, bearers of a new religion. At least that is what is stated in *Relación de Mérida*, written after the conquest. Nothing has been able to be confirmed, that is, if such a prophet had existed or if the prophecy was invented *a posteriori*, to propitiate the coming of the strangers. Much later the name of *Libros de Chilam Balam* was given to all the manuscripts which were beginning to appear in different towns of Yucatan.

It is known that eighteen *Libros de Chilam Balam*, for which only half of that number are available in photocopies, pertain to the towns of Chumayel, Tizimin, Mani, Calkini, Kaua, Ixil, Tekax, Tusik and Nah. Some of these have been published. The documents which have come down to us, up to the present, are all copies which were made in the course of centuries by their respective owners, to avoid their being lost to posterity as the paper on which they were written on, began to crumble.

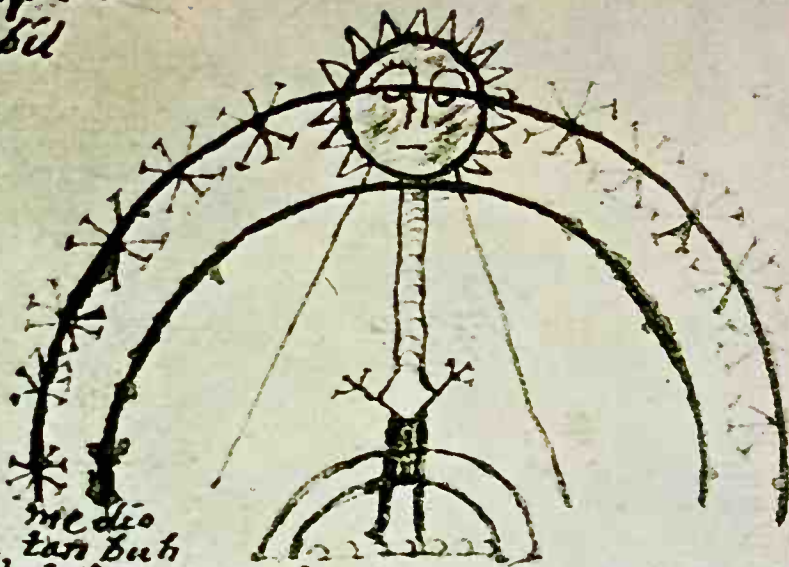
From one *Chilam Balam* to another, the contents varies considerably, but many texts appear to be repeated in various books and, at times, with a number of discrepancies. Some of these texts are of historic nature, very brief, and nothing more than mere references to some events, lacking actual precision or details. Such works are accompanied by dates recorded in the form known as the "short count", a shortened form of computing time which was utilized in Yucatan, a number of centuries before the conquest. In the religious texts, which are perhaps the most important, in some cases one can detect Christian influence: they reflect the process of syncretization which started at the beginning of the colonial epoch. Also of tremendous importance, in spite of the unclarity of the language, are the prophecies associated with the different calendaric periods (*katuns*, *tuns*) and the prognostications pertinent to the days of the ritual calendar. The riddles in "the language of Zuyua" are typical of the esoteric doctrine of religion, and these had to be solved by the candidates for the priesthood. There are also texts which explain the Mayan calendar; others, undoubtedly quite apart from Mayan, as the history of the Maiden Teodora and King Almanzor, an Arabic tale; and others in which the European and indigenous elements are encountered in strange combinations as, for example, astrologic texts which are associated with disease and native remedies.

In the meridional part of the Mayan area, specifically among the Quiches, who established themselves in the Highlands of Guatemala, the same phenomenon took place there as in Yucatan, which has made available a valuable document, written immediately after the conquest, by an anonymous Quiche who had been taught to write his language with a Dominican friar, Francisco Ximenez who had found the original at the beginning of the XVIII century in the town of Chichicastenango.

The *Manuscrito de Chichicastenango*, better known as *Popol Vuh* or *Libro del Consejo*

Eclipse  
Vchibil

Dze Sol  
Kin

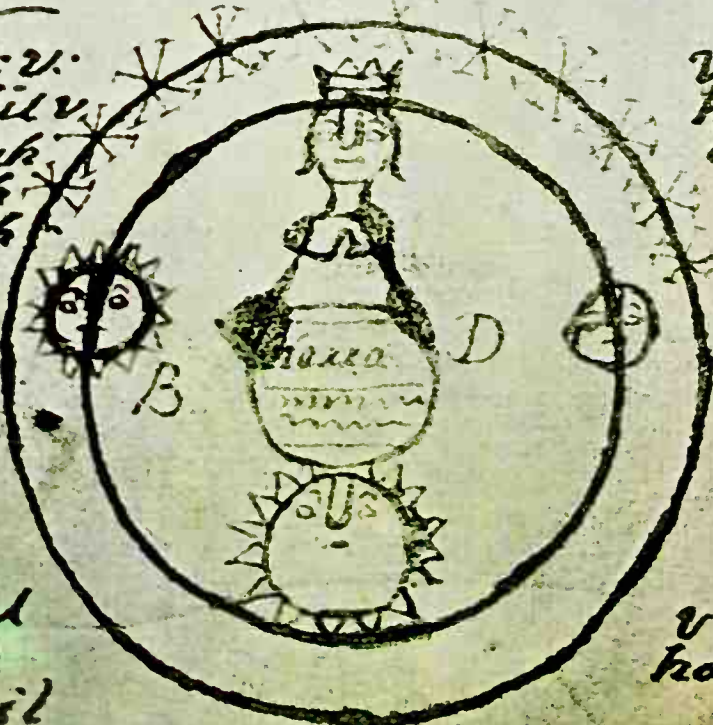


medo  
tan buth

mundes  
yoholcat

tixiblabob-tuxaxob yan lay hun buha: ucun basl  
machibil: ucach ki ni: hebur yan chumuco: lay  
Cuchi bil: neup tan ba ucach y. V. tuchibil. kin  
bal ucach payan be. timaili chi bil  
ucach uxim bal tixaman: nohoch: ~~hachbil~~  
petili tun: vchibilob kin y. V: timaili ~~hach~~  
chue chum kin: Vnu cul ~~udial yoholcat~~  
mayawini cob bal cuyachul ~~kin y. V~~  
: V: lae

Vchibil: v.  
machibil v.  
Chih: cah  
hamych  
tal ucach  
V: y kin  
tu hel  
peten



Vchibil  
Kin: ma  
chibil v  
cahi:  
Caham  
yeh tal  
ucach  
kin y  
V: tu  
hel pe  
ten

Chicul  
tuman  
D. licil

v lah cet  
hat-

heccac machi bil vlah

Knowledge of the Codices and Mayan texts helped in providing a greater understanding about these people. In this case, the Chilam Balam of Chumayel provided important historical data.

(Book of Advice or Counsel), is, without doubt, a transcription of some pictographic, rather than a hieroglyphic codex (hieroglyphic inscriptions are unknown to the Quiche region). This is inferred from the introduction of the author, who mentions the existence of "the original book, written a long time ago, but whose vision remained impenetrable to the investigator".

The *Popol Vuh* provides us with an exact and detailed version of the cosmogony and mythology of the Quiche people, written in a language full of poetry. The creation of the world, of the elements, of the stars, of the animals and vegetables, of man, all are described there. So, too, are depicted the struggles between the mythological heroes and the forces of evil, before their apotheotic transformation into the Sun and the Moon. The *Popol Vuh* is also the history of the Quiches from the creation of the first four men by the gods, who had made their bodies from corn dough, to the lords of those distinct lineages who were ruling when Alvarado's soldiers violently and with cruelty succeeded in becoming part of their history. This record serves to establish that the culture of the people of the Guatemalan altiplano, centuries before the conquest, that is, the period in which the Toltec civilization flourished, bore a marked Mexican stamp. Frequent allusions to *Tollan* and *Quetzalcóatl* disclose that there had been contacts between the people of Central Mexico and those of the Highlands of Guatemala.

The *Memorial de Solola* (Solola's Reminiscences) or *Anales de los Cakchiqueles* (Annals of the Cakchiquels) came to be an integral part of the Cakchiquels, as the *Popol Vuh* was for their neighbors the Quiches: the summary of their history, written by people of their own ethnic group. The original version, which is dated from the end of the XVI century, was written in Cakchiquel. Various authors, all of whom are members of the *Xehil* family, collaborated in this work and their names appear in the document. Much later it was transcribed, also in Cakchiquel, but in Spanish letters, the copy of which bears data up to the year 1604. In contrast to the *Popol Vuh*, the *Memorial de Solola* contains very little information of a cosmogenic nature, but the historical information is more detailed and complete than the latter. The history of the Cakchiquels begins with the creation of the first man and continues until almost a century after the conquest by the Spaniards. It shows a parallelism between the history of the Quiches as far as the origin of their culture is concerned, the legendary *Tula*, emphasizes the quality, frequently hostile, of their relations with the Quiches. The Spanish conquest is narrated with crudeness, contrasting the cordial, friendly form in which they had received the invaders, with the crimes and abuses of Alvarado, all of which served as the driving force for a rebellion which lasted many years, until the absolute rule of the Cakchiquels wasted away. The *Memorial*, in the last part, becomes the diary of the community in which different scribes make note of facts which have no historic transcendence, such as marriages, deaths, land disputes, earthquakes, and other events of even less significance.

### Archaeologic Sources

Here we refer to the architectonic monuments, the sculptures, objects made from clay, stone, bone, shell and other materials; the paintings, inscriptions, in short, everything which was produced in the Mayan area prior to the arrival of the Spaniards. Among the archaeological sources we also include the only three painted "books" which have come down to us (*Códices de Dresde, París y Madrid*) ("The Dresden, Paris and Madrid Codices"), because of the fact that we cannot read them in their entirety and that they do not seem to contain any historic information.

The monuments in the ceremonial centers; the common buildings and the reliefs they enclose; the murals, the thousands of objects which have turned up from the explorations, as offerings in the temples, other buildings dedicated to worship, and in the tombs, not only show the material culture of the ancient Mayas, but also many aspects of their way of thinking, their beliefs, and manner of conducting themselves. The reconstruction with reference



to Mayan culture, which may be attempted has to be based, mostly, on the archaeologic findings, since the historic sources refer only to the centuries immediately preceding the Spanish conquest, and, the information presented is many times vague, if not doubtful, because of the contradictions and incoherencies which it implies. It is to archaeology to which we can turn as it has made possible to delineate, in a general form, the cultural history of many Mayan centers, their principal stages and the changes which they had attained either through internal motivations or external influences. It is quite obvious that some phases of the culture do not leave any material vestiges, but it is almost always feasible to infer from these remains, if not a direct and accurate information, at least some possible hypotheses which can find confirmation in the historic sources.

### Ethnographic Sources

When one begins the study of Mayan culture—and this is valid for other Mesoamerican cultures as well—one has to take into account that neither the Spanish conquest, nor the three centuries of colonial domination, nor the century and a half of republican life, destroyed that culture. It is quite in order to remember that many millions of individuals continue to speak—many of them in an exclusive form—some of the languages of the Mayan group and that they continue to carry on a way of life very similar to that of their ancestors. The methods of cultivation, the types of dwellings, alimentation, standards of behavior, beliefs, rites, ceremonies and very many other aspects of the customary daily life as well as the form of thinking of the ancient Mayas have survived and are still in actual use in the present time. The tremendous significance of ethnologic studies pertinent to the numerous contemporaneous Mayan groups is to be found precisely therein.

It is obvious that the process of acculturation of these groups, in the course of centuries, has not left intact the ancient cultural elements. It is up to the historian and ethnologist to distinguish between what constitutes the survival of autochthonous patterns and what was attained through occidental culture.

### Linguistic Sources

We have already remarked that there are several million individuals who still speak the languages of the Mayan linguistic family. It is hardly necessary to recall that language is precisely a part of the culture and, therefore, it includes or reflects many of the cultural components. The vocabulary of a language naturally includes the names which integrate the natural environment (fauna and flora) of the people who speak it; or that are related to their activities, to the instruments they use, to the methods of work, or what is applicable to their domestic and social organization, or to their knowledge and ways of thinking. Linguistic studies enable us to detect cultural changes, contacts with other peoples and, under certain conditions, to deduce their possible or probable historic origin.

### Comparative Sources

This chapter would be inadequate and incomplete if we did not insist on the stringent need not to restrict ourselves to sources that are directly related to the Mayas in any attempt to reconstruct their history and culture. It is further indispensable to insist that the Mayans do not constitute an independent historic phenomenon but rather form an inseparable part of the Mesoamerican phenomenon. The historic sources which pertain to other peoples, the comparison of their archaeologic remains with those of other civilizations of Mesoamerica, all these are aids for understanding what the Mayas actually accomplished.

An aerial view of Tulum. Protected by its walls and coral-line reefs from the Caribbean Sea, the city of Tulum was studied and investigated to some extent by Dr. Ruz in the decade of the 1950's. In actuality, the archaeological investigations of that area have been undertaken again.



# The Mayan Area

As we begin this chapter we have to make it clear what we consider as the Mayan area: the entire territorial expanse in which the Mayas lived prior to the conquest—and the territory they still occupy—, the people linguistically related that comprise the group designated Mayan, with the exception of the Huastecs. Although of the same linguistic family, the Huastecs separated from the common branch before they were integrated in the Mayan culture, and, in addition, they are in an area far removed from the general Mayan family. We offer this notation here since some authors (Morley, Kidder) exclude from the area of Mayan culture any region which did not have certain specific forms as “A hieroglyphic writing and a unique chronology of its own, and for what is referred to as North America, an architecture of stone also unique in its class, which used roofs in the form of a dome of a stone ledge (the false arch)”. On the basis of this criterion one should not consider the Quiche region as part of Mayan culture as they do not have hieroglyphic inscriptions nor buildings with the Mayan dome. Yet the *Popol Vuh* of the Quiches is, in Morley’s opinion, “the most remarkable work of its kind in the Southern Mayan territory”.

In our opinion, the Mayan area in Mexico embraces the present states of Yucatan, Campeche, Quintana Roo, almost all of Tabasco and the western half of Chiapas; the entire Republic of Guatemala; Belice or British Honduras, and the western extremities of the Republics of Honduras and El Salvador. This land, in our calculations, covers more than 400 000 square kilometers, that is, in terms of European countries, an area greater than that of both Germanys, or Italy, or, more or less equivalent to Sweden.

Physiographically this territory can be divided into three well differentiated areas. On the basis of their location they are customarily referred to as meridional, central and septentrional. It is interesting to anticipate that a cultural division and a historic development sufficiently well differentiated, correspond to the natural divisions just noted. We do not pretend to suggest a geographic determinism which would have conformed the culture and

The disk originating from Chukultik (National Museum of Anthropology), on which a ball-player appears with the hieroglyphic inscription of a date, corresponds to the year 590 A.D.

history of all three regions, although there is no doubt that the geographic factor played an important role.

#### Meridional Area

This corresponds, in its greater portion, to the Highlands of Guatemala and the part contiguous with El Salvador and, in addition, the narrow strip adjacent to the coast of the Pacific Ocean. The latter, the width of which does not go beyond 40 or 50 kms, is slightly above sea-level, with a hot, humid climate; with its own kind of tropical vegetation, and does not represent more than a minimum part of the whole area. The rest consists of mountainous ridges of volcanic origin, from which some of the highest peaks of America project, as the Tacana and Tajumulco, which are higher than 4 000 meters. There are valleys and plateaus with fertile land between the chains of mountains, from which flow the great rivers Usumacinta and Motagua; from them, in turn, are formed lakes Atitlan and Amatitlan. Numerous rivulets descend from the southern slope of these mountains and cross the coastal belt. In the altiplano the climate is moderate in summer with a large period of rainfall, while the winter is dry and cold. Vegetation abounds in the woods with conifers in the mountains, grass in the highest parts, and cultivation of cereals, vegetables and fruits in the valleys.

The fauna embrace the felines: jaguars, ocelots, pumas, wildcats; deer and other small mammals; serpents and birds among which the quetzal was readily outstanding for its beauty and the value of its plumage.

The rich soil is due to orogenetic movements and contains sufficient minerals which were utilized in prehispanic times, mainly jadeite, iron pyrites, hematites and cinnabar.

Volcanic eruptions provided the ancient Mayas with such materials as lava, alluvial stones, obsidian and ashes.

#### Central Area

This embraces the septentrional slope of the mountain ranges of Guatemala and Chiapas, and the Lowlands which extend to the North, crossed by chains of hills. It includes the north of Guatemala (Peten), Tabasco, the southern part of Campeche, and Quintana Roo, Belice with its volcanic system (the Mayan Mountains), and the west of Honduras which is also mountainous. The area is channelled by the middle and lower courses of the Usumacinta River with its numerous tributaries (Salinas or Chixoy, Pasion, Lacantun with its own tributaries—Lacanha, Jatate, Tzendales—, San Pedro Martir), Grijalva (fed by the Macuspana), Candelaria, Hondo and its tributaries (Azul, Uaxactun, Bravo) and Motagua, to mention only some of the most important. Numerous lakes and lagoons complete the hydrographic system. Among these are Lago Peten-Itza, Laguna Perdida, the lagoons of Miramar, the lagoon of Terminos and Lago Izabal. There are vast swampy regions. The climate is extremely hot and the precipitation of rain is much higher there than in the rest of Mesoamerica. The rains fall almost daily, all year round, and in some regions the average annual rainfall is almost four meters. The greater part of the Central Area is covered with high, dense forests in which abound such trees as the mahogany, cedar, the zapodilla, the God-tree, the browse-wood, the Mexican fig-tree and many varieties of palm. Apart from the prairies, the soil is very fertile with a huge covering of humus, most suitable for the cultivation of cereals, vegetables and fruits; many fruits still grow wild.

The fauna, as the flora, is rich and diverse, abounding in jaguars, pumas and other felines; stags, peccaries, wild boars, monkeys and smaller mammals; there are many poisonous serpents, and lizards; many kinds of birds such as pheasants, turkey-gobblers, macaws, parrots, toucans, etc., and innumerable insects, most of them harmful or, at least, disagreeable to man.





A drawing originating in the National Museum of Anthropology in which the diversifications of the natural regions of the Mayan area are shown.

The soil is of a calcareous formation with moderate folds, and in the lowest part, i.e., the coastal plains of Tabasco and the southwest of Campeche, it is formed by loamy and sandy sediments which are carried by the rivers. Eventually the calcareous rock contains some flint-stone.

#### Septentrional Area

This region constitutes the septentrional half of the Peninsula of Yucatan that is north of an imaginary line which, perhaps, would just about unite the lagoon of Términos with the Bahía de la Ascension. In so far as its present political division is concerned, it corresponds to the State of Yucatan and the major part of Campeche, and Quintana Roo. It forms a vast plain, crossed in an irregular form from the West to the East by some chains of hills which do not exceed 100 meters in height. There are only three small rivers: Champoton on the western coast, Lagartos on the septentrional and Xelha on the Caribbean, some lagoons—Coba, Chichankanab, Ocum, Nohbec—and one lake (Bakalar) which complete the very limited superficial hydrographic system. In the most northern part of the peninsula, where there are virtually no water currents, innumerable cenotes (*dzonot* in Yucatecan Maya), natural subterranean deposits which are found when, as a result of the process of erosion or by accident, the calcareous incrustations which form the soil of the peninsula are broken. The rain precipitation is extremely low (less than half a meter in a year); that, plus the scantiness of land suited for vegetation (calcareous rock crops up frequently or the soil is only covered with a few centimeters of humus) yield a vegetation which each time is scarcer and sparser, especially closer and closer to the northern part. The woods which are an extension of the jungle of the Central Area become lower and less dense until they reach the groves of dwarf oaks and even the semiaridity of the extreme north.

The fauna, like the flora, is scarcer and less varied here than in the Central Area. However, there are some felines, many stags, wild boars and small mammals such as rabbits and armadillos; birds and reptiles. The bees find the pollen they need for making honey and wax on the shrubs and flowers among the low mountains.

The ground is a calcareous crust, at times full of flint-stone which covers a sand coat also calcareous, known as *sahcab* (Mayan Yucatecan) "white earth".



# The Mayan Men

Originally we had called this chapter "The Mayan Man". However, as we were getting our materials together and had as much interest in treating the ethnolinguistic aspect as the somatic and psychologic, we realized that, as in many disciplines, it is more correct and appropriate to use the plural instead of the singular when referring to problems of the human species.

## Ethnolinguistic Groups

The aprioristic prejudice in considering the Mayas as a unique phenomenon, independent and isolated in the world, has led many scholars of the Mayan field to affirm that the Mayan languages have no affinity with other languages of Mexico or Central Mexico. Tozzer adhered to this idea implicitly and was quoted by Morley who shared this view. Of course, since the latter, in accordance with his outline of the development of Mayan civilization, starting out from its nucleus in Peten, Guatemala, firmly asserted that "the language of the Old Empire ought to have been the progenitor of the modern Mayoid group".

Other authors, as Thompson for example, who also accede that the Mayan languages have no relation to the languages of Mexico and Central America, consider only exclusively two Mayan languages—that of the Highlands and that of the Lowlands—and some fifteen dialects. On the other hand, according to the judgement of such distinguished linguists as Swadesh and McQuown, 28 languages are recognized, each with one or more local dialects, and they, in turn, can be grouped into subgroups according to the degree of affinity which exists among them.

Swadesh, one of the linguists who studied the languages of America with much more dedication and competency, included the Mayan languages which we have already enumerated in a group which he designated "Macromayan" and which embraces in addition to those mentioned, the following: Lenca spoken in Honduras and El Salvador, and Xinka in the south of Guatemala; Mixe in Oaxaca and Totonacan in Veracruz. Swadesh further felt

A Tzotzil woman from Chenal, Chiapas. In point of fact, in all the Mayan territory there are groups which still try to maintain their own cultural traditions.

that the Macromayan group was related to what he designated "Macroaztec" which embraces also the languages of the Nahuatl family, forming with the Penutian languages "a segment of an extensive net which pertains to the entire hemisphere", that is to say, in no form can the Mayan languages be considered as isolated, by and large, from the languages of Mexico and Central America. They definitely show affinities with those of the contiguous localities on the borders of the Mayan area, and, to a lesser degree and indirectly, with some of the large linguistic groups of the American Continent.

The lexico-statistical method, a comparative technique for the different languages which was carefully worked out by linguists has made it possible to establish just about the probable moment in which any one of the Mayan languages separated from the common branch. Glottochronology, the results of this laborious investigation, provides the following picture in which are indicated the approximate dates when the separation from the main languages started, beginning with a hypothetical Proto-Mayan.

The distribution of the main ethnolinguistic groups is presented in the corresponding map: Linguistic Map for the Mayan Territory.

Within the Mayan area, in the southern part of Guatemala and in El Salvador there are *pipil* groups which linguistically belong to the Nahuas. Apart from the area indicated, as has already been stated, there is the Huastec group which originally was part of the Mayan family.

#### Somatic Features

When Morley described the physical type of the ancient Mayas, he used as his main basis the investigations that Steggerda had conducted among the modern Yucatecans, deploring the fact that similar studies had not been made among the other groups. In spite of the fact that he noted that "the Mayas of the Highlands have a redder and shinier skin than the Mayas of Yucatan, and, biologically, seem of a somewhat purer lineage", he concludes that "however, if one considers them according to the basic criteria of stature, color, shape of the head, and hair, one can observe that all the groups that speak Mayan seem to have come originally from the same ancestral branch". Strangely enough this conclusion appears a few pages after a comparative table of the distinct somatic elements—stature, cephalic indexes, and weight—, in which not only the difference in stature is very marked: more than 7 centimeters between Chontals and Yucatecans, but also the very striking and significant difference in the cephalic index: 9 between Yucatecan and Tzotzil men, and almost 11 between the women of the same groups. Morley's conclusion is completely incongruent, in view of the shape of the head, stretched or round, one of the most important factors of the biologic difference between these people, and especially when we take into account the notable brachycephalic difference (85) of the Yucatecans and the dolichocephalic difference according to several authors as, for example, Starr and Steggerda, or mesocephalic according to other specialists as, for example, Comas, with reference to some of the people of the Highlands of Chiapas, i.e., the Tzeltals and Tzotzils, and the Mams of Guatemala, with a cephalic index from 76 to 79. Thompson, without a more thorough investigation of this subject, considers the Mayas "sufficiently homogeneous".

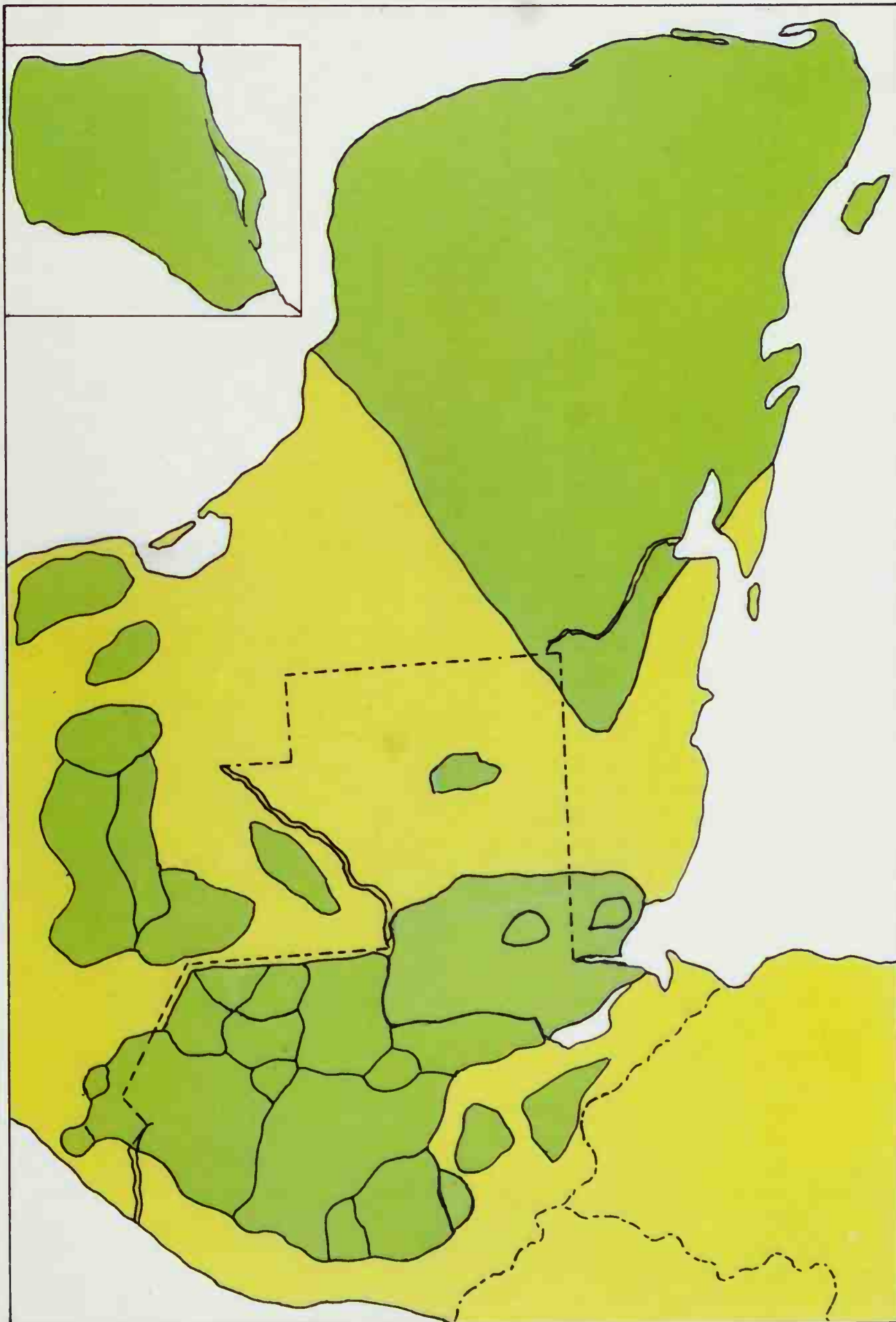
In addition to the aspects we have just presented—stature, and shape of the head—, Comas' study permits us to deduce that there are still other factors that reveal a lack of homogeneity among the Mayans. This has a special value with regard to such facial indexes as wide, average or narrow and nasal; hook-nose or wide nose. In the serologic investigation, the presence of certain antigens in the blood indicates significant differences. In the dermatoglyphic study the digital prints and the lines of the hand disclose differences between the groups of the high septentrional lands and those of the high meridional lands, as is the case

#### CLASSIFICATION OF THE MAYAN LANGUAGE according to McQuown (1956)

- A) HUASTECAN
  - 1) Huastecan of Veracruz and San Luis Potosi
  - 2) Chicomuceltec (extinct)
- B) THE CHOL GROUP
  - 1) Chontal
  - 2) Chol
  - 3) Chorti
- C) THE TZELTAL GROUP
  - 1) Tzeltal
  - 2) Tzotzil
  - 3) Toholabal
- D) CHUH
- E) 1) Yacaltecan
  - 2) Kanhobal
  - 3) Solomec
- F) MOTOZINTLEC
- G) MAMEAN
  - 1) Mam
  - 2) Aguacatec
  - 3) Ixil
- H) QUICHEAN
  - 1) Rabinal
  - 2) Uspantec
  - 3) Quiche
  - 4) Cakchiquel
  - 5) Tzutuhil
- I) KEKCHIAN
  - 1) Kekchi
  - 2) Poconchi
  - 3) Pokoman
- J) MAYAN
  - 1) Yucatecan
  - 2) Lacandon
  - 3) Itza
  - 4) Mopan

CHRONOLOGY OF  
THE MAYAN  
LANGUAGES

- 2600 B.C. Mam
- 1800 B.C. Huastec
- 1600 B.C. Yucatecan
- 1400 B.C. Lacandon
- 900 B.C. Chontal
- 750 B.C. Tzeltal
- 400 B.C. Tojolabal
- 200 B.C. Quiche
- 100 B.C. Kekchi
- 100 A.D. Kanjobal
- 100 A.D. Aguacatec
- 400 A.D. Chol
- 900 A.D. Chorti
- 900 A.D. Pokoman
- 1200 A.D. Tzotzil
- 1200 A.D. Uspantec
- 1300 A.D. Rabinal
- 1450 A.D. Tzutuhil



of Yucatan. In spite of the limited number of series studied, the osseous remains found in the course of archaeological explorations also indicate a degree of variation, especially in the cranial and facial indexes.

Taking those differences into account, it is hardly possible to speak of a unique Mayan physical type for the entire area, completely differentiated from the other Mesoamerican groups. Some Mayan groups have presented and still present some peculiar features, such as the hook-nose, the epicanthus fold of the eye, which covers part of the interior angle, and the Mongol spot or stain at the base of the vertebral column. The last two features are characteristic of the Asiatic people, specifically the Mongols. The slant-eye is another heritage of the remote Asiatic ancestor of the autochthonous American people. The relative length of the arms in comparison to the stature is also noteworthy, as the arms of the Mayan groups are much longer than those of the rest of Mesoamerica.

The greater part of the physical qualities, as a whole, of the Mayas, are those which we already know from the rest of the Mesoamerican people and the others of the Northern, Central and Southern part of the Continent: low stature, dark-complexioned (brown or copper-colored), dark-brown or black eyes, straight black hair; hairiness on the face and body; broad shoulders; large thorax, and muscular legs. Landa describes them as a "comely people, tall (?), vigorous and with a great deal of strength". To that he added that they were "bow-legged" with arched legs due to the way they were carried as children, "astride in the haunch-bones".

In conclusion, we have to consider the Mayas as a part of the Mesoamerican population, including the great ethnic groups, on the basis of their physical characteristics as well as their language. In no way whatsoever can the Mayan be studied as a *Homo Mayensis* with homogeneous somatic features and distinct from the rest of the American people.

### Psychologic Qualities

It seems that only among the Mayas of Yucatan has any attempt been made to define the psychologic personality of the Mayan man through any systematic study. Such a study was carried on in the course of eight periods in the decade of the thirties and in the small town of Pisté near Chichén-Itzá, under the direction of Morris Steggerda and as part of the investigations of the Carnegie Institution of Washington which published the results.

We do not question the seriousness of those who made the investigation, and, since we are not psychologists, we could hardly express any opinion on the work. We are going to restrict ourselves to presenting a summary of the conclusions, taking into account, first of all, the method used. 1) A scale of values which embraces 61 features of characteristics, was turned over to white people familiar with the Mayas in their own environment, who expressed their opinion about the Mayas in general. 2) A similar scale was given to five Mayan men and eight half-breeds, who examined and qualified the other Mayas as individuals. 3) Incidents from the daily life of the Mayas were recalled as well as the reactions to diverse social and psychologic situations. 4) Model tests were given to men, women and children. They all had uniform graphic representations, *non-language performance tests*. Twenty-nine whites, unfamiliar with the Mayan culture but acquainted with the "race" received the first scale of values on different aspects. The themes of these scales were grouped together as follows: 1) potentiality of energy, 2) attitude towards oneself, 3) attitude towards the environment which refers to inanimate objects and people, 4) humor, 5) intelligence, 6) general interests, and 7) pathologic features.

Of the 29 who replied to this scale of values, some twenty were members of the Staff of the Carnegie Institution, and among them some had been missionaries, almost all North-Americans. The second scale was given to five Mayan men who solicited opinions from 34

At the present time the Mayas are face to face with an accelerated transformation which compels them to change their patterns of behavior and their customs. Here, two Quiche women from Guatemala, a country with a highly concentrated Mayan population.





other Mayas, and 8 half-breeds who carried out investigations among 38 Mayas. As for the tests, they measured up to the kind usually given in the United States, in which it is necessary to form into units and put in order geometric figures with the greatest rapidity possible. Steggerda himself points out the inconveniences of applying such *tests* to individuals of a culture so different from that for whom they were set up, and, as a result, such an evaluation for determining the mental intelligence of the Mayas was completely uncertain and doubtful.

In a very synthetic form, the results of the investigation would be as follows: the Mayas are active, energetic, and industrious workers; very orderly and extremely clean since they try to maintain their hovels and clothing always immaculate; frugal, since they carefully guard their harvest and avoid every waste; cruel to animals, and eventually also to human beings when it is a matter of avenging the infidelity of a woman; conservative in their customs and opposed to progress; with no predilection for moving from one place to another, except when there is no other choice; good conversationalists, and sociable; they like to joke and enjoy amusement; confident, unselfish; good-natured and with a great respect for the rights of others; sensitive to poverty, diseases or the misfortunes of others; proud, unaccustomed to beg; courteous and friendly among themselves and to strangers; generous and hospitable; they don't like to dominate others and value their independence as individuals, even as children already; they are completely lacking in a spirit of rivalry, vanity and egoism; they love justice; they are peaceful, not quarrelsome but rancorous and revengeful when they are wronged; honest to the highest point; their family ties are very strong even though they rarely show affection; the paternal authority continues even after the children are adults and they in turn are heads of family; they are only moderately interested or preoccupied with matters of sex; couples separate without any difficulty, and jealousies are relatively rare, although, as already stated, in the case of adultery the revenge of the offended husband can be without limits; they are fatalists and religious, which should better be designated superstitious and adherentes of witchcraft; they are excessive alcoholics which is often detrimental through quarrels, damage to their properties and acts of violence; they are of mediocre intelligence and lack a spirit of initiative; they have a tremendous sense of

History, archaeology and anthropology consider the Mayas "active, energetic, industrious and persevering people", men who, in spite of their actual conditions, are the inheritors of a tremendous cultural wealth.



observation and an excellent memory; they are very imaginative, to the point of creativeness as they have a tremendous sense for beauty.

With regard to the classic *tests* for determining the extent of their mental development, the results were completely unfavorable for the Mayas, that is, for adults as well as children. Their averages were far lower than those obtained by people who were not Mayas, specifically speaking, "the white race". Steggerda repeatedly insists that, as far as he is concerned, these results are due to the use of inadequate *tests*, but, indubitably, there has to be some difference between the intelligence quotient of Mayas and "whites", since the conclusions reached by other investigators among Indians in the United States coincide to the extent of recognizing a lower level of intelligence for them in comparison with the "white" population.

Dispensing with what is disputable about some of the aspects of the method employed, like the *tests* designated by Steggerda himself as inadequate ones and with the fact that part of the investigation was conducted through interpreters and people with little or no knowledge of the Mayan languages and Spanish, despite the fact that they had lived for twelve years in Yucatan and had Mayan employees and workers (bricklayers and laborers), to a greater or lesser degree of cross-breeding, I agree with almost all the conclusions that Steggerda arrived at. However, I don't recall having witnessed any displays of cruelty to animals or people, not even in cases of the infidelity of the woman. As far as sexual relations are concerned, I shall cite a fact which coincides with what Landa mentions with regard to the facility that existed among the ancient Mayas for marriage or separation and what normally takes place in the case of domestic disagreements. The caretaker of one of the archaeological zones under my supervision, whose wife maintained relations, according to the interested party, a bit too affectionate with a younger caretaker, came to ask me in my capacity of Head of the archaeological zone, to remind his wife officially of her unsuited conduct, as I remanded an employee when he did not fulfill his obligations. This attitude diverges considerably from the truculent cases cited by Steggerda of sadistic revenge cruelly realized by the offended husband.

Other conclusions of the investigation resulted in attributing any number of attitudes of the present-day Mayas to psychologic conformity, when they are, in actuality, the logical result of socio-economic situations which have been persisting for centuries. Can those who have always been ordered about and have seen their fellow-men in a position of inferiority where the "whites" are concerned, be inclined to give orders? How could they have a spirit of improvement if they have always known that their fathers and even ancestors had had to put up with a life like theirs, reduced to a miraculous survival, at times, amid privations and poverty? Why say that to continue using their own language, to construct homes as they had done thousands of years ago, and dress, at least to some extent, as they had before the arrival of the whites, constitute negative psychologic tendencies such as opposition to progress?

Steggerda commits a serious injustice, due perhaps to inadequate information about the civilization and Mayan society, when the *tests* primarily rate the intelligence of the Mayas as scarcely average, and, at the same time, insisting on the brilliancy that their civilization had attained before the conquest, in such a strong contrast with their actual lack of scientific knowledge and artistic qualities. Undoubtedly he confuses the extraordinary achievements in architecture, sculpture, painting, writing, the calendar, etc., with what the customary daily life had to be; the intellectual level, the possibilities for the Mayan people to know, create and reap from then on. Imprudently Steggerda deduces that "the modern Mayas do not consist of a people endowed with any great intelligence", comparing the ancient temples with the shambles of today; the astronomic calculations recorded on the monuments, with the illiteracy of the present-day population; the great art displayed in the ceremonial centers, with the poor fixings of the peasants now. We should not be surprised of such a conclusion, especially when we know that the investigation was carried out by an unsuited methodology and, consciously or unconsciously, with a feeling of racial superiority.



# The Technology of the Mayas

The natural environment obviously conditions the riches that man can obtain, but, in itself, only constitutes an arsenal of materials and potential forces which the individual transforms through his work into definitely productive factors. As Gurvich remarks, in the natural environment the human being finds obstacles which he will overcome and favorable factors which, through his actions, he will take advantage of and which result, in turn, in a modification of such an environment, transforming the natural view into a cultural view.

Man's actions, in accordance with the degree of the development in his technology, vary in intensity and efficacy. If we compare the resources that the Mayas had in prehispanic times in their natural environment with what they now actually have in each and every expanse of the Mayan area, certain changes become evident. Cultivations, mainly of coffee, bananas, sugar-cane, wheat and coconut which were unknown on the Continent are now basic in the economic life of Guatemala and in the Southwestern States of Mexico. Cattle-raising, brought there by the Europeans, is in full swing. The minerals from gold, silver, copper, lead, zinc, iron, chrome, etc., are used, but only on a reduced scale. With modern mechanized equipment, wood, which the Mayas have already been utilizing, and henequen from which they manufactured many articles, provide important aspects in the present-day economy. Something similar to that can be said of the chicle and other products.

In this chapter we are going to present some aspects concerning the degree of technology attained by the ancient Mayas, while other aspects, such as housing, dress, transportation, lapidary, feathers, etc., will be dealt with further on. Now we are going to see something of what the Mayas obtained from the products of vegetable, animal and mineral matter.

## Products from Vegetable Matter

From this chapter we exclude the cultivation of plants, regardless of whether they are edible or not, as they will come under discussion in the section entitled "Economic

A profile of the huge masks of *Chaac* in Chicahna, Campeche. There are many today who, imprudently, deduce that the present-day Mayan peasants cannot be the inheritors of those who in the prehispanic epoch were the creators of that cultural legacy.

Activities". At this point we will confine ourselves to the utilization of the trees that grew in wild form.

The Mayas, with their rudimentary lithic tools and with the help of fire, were able to fell trees and extract, even from those with the hardest wood as, for example, the sapodilla, such tools as beams, andirons, cross-bars and posts for their buildings, handles of tools for work and arms; also sticks to help in planting, and canoes.

Paper is made from the bark of some fig-trees (*Ficus*). The bark is first softened by maceration in water, then reduced to a pulp by blows with special hammers, and ultimately agglutinated using a natural resin. The Mayas used paper for the books in which they recorded much of their knowledge and for the ones intended for their ritual purposes.

Roofs for the huts for the common people were usually made from leaves, put out to dry, from different palm-trees, generally known by the generic term *guano*. The reeds and lianas were used to firmly bind the entire framework of the sticks for the dwellings. The palm-leaves were also used for weaving mats and baskets.

By making incisions in the trunks of certain trees, it was possible to obtain many kinds of resin, which by a previous treatment yielded copal (*Protium copal*, "pom" in Mayan), which was burned as incense; the rubber and gum-elastic (*Ficus elastica*, *Parthenium argentatum* or guayule) out of which balls for games, and small idols were made; chicle or chewing-gum from the sapodilla tree, and liquid amber were used for making a perfumed cosmetic.

Some dyes from trees, as the indigo plant (*Indigocera anil Z*), logwood (*Haematoxylon Campechianum*), Brasil-wood (*Caesalpinis brasilensis*) and the *chukum* (*Pithecolobium albicans*) provided the different colors for painting. Black, as a color, was derived from the carbonization of organic materials (from wood).

### Products from Animal Matter

We shall not refer to the use of meat as alimentation, only to the parts of the body of those animals that were used as objects, either in their natural state, or through previous treatment.

The skin of the deer, the jaguar and the puma were used for clothing; necklaces were made from the canine-teeth of some animals; the bones were used to make adornments, musical instruments such as fluted bones and flutes, and different tools such as awls, burnishers, punchers, needles and pins; the horns of the stag were used to drum the shell of the turtle. Black paint was made from carbonized bones. The spines of the ray were used for taking blood in self-sacrifices. Shark's teeth were deposited together with other objects as offerings to the gods. Adornments were made from many mollusks. A kind of earrings, counts and tiles were made by hanging up a complete valve as a pectoral or preparing it with fragments of shell and nacre. Large sea-snails (*Strombus gigas*) served as trumpets, and some of the small varieties as bells in necklaces. On the shore of Campeche, adornments were from the turtle-shells. The plumage from many birds served as decoration on the penaches, capes and clothing, or as embroidery and fringes for cotton-cloth. Because of their beauty, the plumage of the quetzal was especially prized. Feathers were also used for lining shields and making fans.

The Mayas used the secretion from the cochineals (carmine red) for dyeing cloths.

### Products from Mineral Matter

Undoubtedly the most important of all was stone. From limestone rocks were obtained the stones for the construction of their buildings. By burning such rocks lime was obtained, which was mixed with sand, mortar, or the dust from the stones for a number of purposes



The Mayas were masters in the art of working with stone. From the limestone rocks they took out stones for constructions and with the calcareous stones they used to make receptacles, adornments, and sculpture as can be noted in Stela B of Copan (Honduras).



such as making stucco which served as veneer for the walls or floors or for modelling reliefs. Receptacles and small objects for decorative purposes were also made from calcareous stones. Their sculpture (boards, lintels, estelae, altars and statues) is also from this same type of stone.

In Yucatán, beneath the lime cap there is a stratum of calcareous sand, *sahcab* or *sascab* in Maya, which was used by bricklayers without other elements or mixed with lime, for constructing buildings.

With the flint-stone (silex) which penetrated the lime rocks, the Mayas, as all the peoples of ancient times, made every kind of tool, cutting them by percussion and finishing touches. In that way knives, hammers, axes, projectile points, rasps, scrapers, cutting edges of arms, etc., were produced.

The Mayas made mortars, *metates* and three-footed mortars by hand, using the basalt obtained from the volcanic eruptions. The tools made in this way were for grinding grain and whatever ingredients were used for preparing meals. Obsidian or volcanic glass, also volcanic products, were used for many different kinds of objects and tools for work, such as knives, razors, projectile points, ornaments and tiles.

Mayan technology, placed by archaeology in the Stone Age, produced a development that was highly superior to that of other peoples of the same age. This can be seen in the work with obsidian which can be seen in the National Museum of Anthropology.

From harder stones, such as andiorite and serpentine, they made hatchets and chisels: for them the most important stone was jade (jadeite) which they used to make jewelry, beautiful masks, figurines and tiles, and also drills to perforate the needles of the counts and the pectorals.

They obtained the greater part of their colors from certain minerals: red from hematites (sesquioxide of iron) and cinnabar (protosulphide of mercury): yellow from ferrous clay; blue from some mineral similar to the *beidelita*, and dark brown from natural asphalt.

With clay and different materials for removing grease in order to reduce their plasticity (quartz, baked clay, sand, small fragments of calcareous stone, seeds, volcanic dust, etc.), they made many types of vessels for domestic, ritual and funeral purposes: figurines, masks, winches, spherules for projectiles, weights for fishing-nets, etcetera.

In some regions abounding in sedimentary soil in which stone-quarries are not found as in Tabasco, baked bricks were made for constructing the buildings of their ceremonial centers.

Through the technique universally employed of evaporating water from the sea, salt was obtained on the littoral, mainly from the swamp which is parallel to the northern coast of Yucatan from Isla Mujeres almost up to Campeche.

While metallurgy was already known in Peru many centuries before our era, i.e., in the Chavin culture, the technique for working metals reached Mesoamerica about two thousand years later, around the XII century. With the exception of a pair of legs, part of a hollow figurine which had been made in Costa Rica or Panama and found in the late packing of a box of offerings which was linked with a stela from Copan, the greater part of the metal objects encountered in the Mayan area are from the Sacred Cenote in Chichen-Itza. Almost all these objects came from Central America (Costa Rica or Panama) and most assuredly reached Chichen by means of commercial interchanges or were introduced by pilgrims. Quite a number of disks, made from lamina of thin gold present scenes produced by the technique of repoussage; these scenes had to be local productions since they represent battles and sacrifices in which the victims are the Mayas and the conquerors, probably the Toltecs, who ruled approximately between 1000 and 1250 in Chichen-Itza. However, the chemical analysis of the material shows that it is a matter of Centroamerican pieces smelted and converted by hammering into very thin sheets. Almost all of the metal objects discovered in Chichen are decorations, among which there is an abundance of gold or copper bells, holders from gold, perhaps for fans; figurines, masks, bracelets, pendants, a kind of earring or ear-flap, counts, soles for sandals and rings from gold and copper. Small flat axes from copper, which seem to have been used as money in mercantile transactions, and pliers as depilatories as well as some copper hooks are also known from there.

As one can deduce from the data summarized in this chapter, the ancient Mayas, with reference to technology, and applying the classification utilized by the cultures of the Old World, did not go beyond even the Neolithic Age, if we consider that work with metals corresponds to the postclassic period, that is, posterior to what was the authentically Mayan development of the classical period. Within the classic outlines of Morgan and Childe, Mayan culture on the technological basis would remain within the frame of the barbaric stage. How can the Mayans be considered a genuine civilization when they lacked the use of iron and bronze; the wheel and the plow; a phonetic alphabet for their writing, and the existence of actual cities?

We want to anticipate here that the taxonomic criterion results excessively narrow and rigid in order to be duly applied to all the universal cultures and that it is obviously not valid in relation to those of Mesoamerica, and more specifically the Mayan.





# Economic Activities

The economic activities of the Mayan civilization, as occurs in other aspects, have to be analyzed in the light of recent investigations without the fear of facing rotund assertions, which reached the point of a category of dogmas respected for too long a period of time without even the least criticism. The picture we can delineate, in the present, about the economic life of the ancient Mayas results much less simplistic than that which was shown up on the basis of which the cultivation of corn was almost the only activity which pertains to physical work, other than the construction of the ceremonial centers. In the present chapter we shall refer to the different forms in which the Mayas obtained the necessary products for their subsistence.

## Agriculture

The diversity in the soils and climate that the Mayan area presents had to determine a diversity of products and agricultural techniques from which we can only glean a slight idea through the information of the chroniclers of the XVI century and the limited inferences from archaeological data. The temperate lands of the Highlands of Guatemala with its fertile soil in the valleys in which the eroded earth accumulated from the mountains, were most suitable for the cultivation of grains and fruits. The narrow belt of the meridional littoral was adequate for tropical fruits, including the cocoa-bean, just as the littoral of the Atlantic Gulf which corresponds to the present State of Tabasco. The septentrional slope of the mountainous districts provided the earth sufficient irrigation through the many rivers, besides counting on abundant rain precipitation so that there were fertile lands for many kinds of cultivation. The septentrional part of the Yucatan Peninsula without superficial currents but with a fixed and reduced rainfall, and with its soil of limestone poor in vegetal earth, did not enjoy very favorable conditions for agriculture, however much Landa with

When modernization in completely different activities was introduced among the Mayas, many changes naturally were brought about. Yet, in spite of such changes, the Mayas still maintain even now their textile industry as it had been originally.



sufficiently ingenuous enthusiasm tells us that “they plant between and on top of the stones, and the seeds are fruitful, and every kind of tree grows, some very large and beautiful that are a marvel to see”.

Apparently the agriculture of the Mayas can be considered essentially provisional, that is, it was only possible to rely on the natural conditions of the soil, hydrography and climate. As exceptions we shall cite the cultivation of the cocoa-bean on lands irrigated by man on the Pacific coast, which corresponds to Guatemala and probably, according to Palerm, small plots of cultivated land in the Highlands of Guatemala. It is obvious that in the regions of the humid forests, the strong precipitation of rain and the long rainy season took away the danger while in the north of Yucatan, the lack of perfunctory currents created a constant danger. In the Central area it is more than certain that advantage was taken of the humidity of the river margins for cultivation.

In the course of the last twenty years, the problem of artificial irrigation has received much attention because of its socio-political implications. Some investigators are of the opinion that only a “hydraulic society” can attain the level of what is associated with the concept of civilization. Thus, Wittfogel, the greatest adherent to this theory, includes the Mayas of the Lowlands in this “hydraulic society”, although only in a marginal sense. It is clear that he recognizes that the Mayan government did not engage in hydraulic works, but because of the political, social and economic characteristics of the Mayan civilization, it has to belong to the “hydraulic world”, since such characteristics ought to have been introduced by a hydraulic society, even if such qualities among the Mayas were not perfected by irrigation works for the specific purpose of cultivation. We are sufficiently familiar with hydraulic works in various Mayan centers, but with distinct purposes: aqueducts in Palenque to canalize the streets which have streams; gulleys, duly waterproofed by storing the rain-water

The terraces constituted—and constitute—a system of cultivation common to the American cultures. Together with that, and the low and high elevations of the land were taken advantage of, and through the descent of the waters from the rain which ran through the canals, arranged from above to below. This photograph shows its presence in the Cakchiquel zone of Guatemala.



Exchange as a form of economic interchange continues to be in use in some markets of the Mayan area.

arrested in a deep hollow and distribution canals in Tikal; and defensive ditches or storage centers in the environs of ceremonial centers, as in Becan.\*

Once again we are going to return to the hydraulic problem because of its socio-political implications, but that will be in the following chapter.

In so far as the tools which the Mayas were accustomed to use for farm labor, it is certain that they could not have been more than the most rudimentary stone hatchets for cutting trees and the underbrush, and the stick for sowing called *xul* in Mayan Yucatecan (tr. note: also written *sul* pronounced *shul*), a simple sharp-edged piece of wood, hardened by fire to that which it was possible to attach a bag, probably made of henequen, to carry the seeds.

To cultivate corn the system utilized—and also used nowadays—consists in that the terrain which is to be sown, a high woodland or grove of dwarf oaks, is cleaned up, knocking down trees and cutting the shrubs and underbrush, all of which is burned, as soon as it has become dry.

The preparation of the corn-field requires many months, and, after the first rains at the beginning of May, the land is sown, utilizing a sharp-pointed stick to open holes to a depth of 10 to 12 cm, in which various grains (3 to 6) are thrown, frequently together with beans and squash-seeds. The holes are set apart one from the other at some two short steps (1,25 m) and as soon as the grains have been thrown in, the holes are closed by foot manipulations only.

During the growth of the plants one or more weedings has to be made, according to the fertility of the land, in so far as the terrain happens to be in the first year of cultivation or may have been cultivated in previous years. In prehistoric times, the weeding was done by cutting down the underbrush by hand. When the ears of the maize begin to ripen, the reeds are bent towards the ground to prevent the penetration of the rain on its inside, and birds

\* Very recently, by means of air-photographs, a waterway was identified which unites the upper course of the Champoton River with the locale of Edzna. By the same procedure it was possible to recognize the existence of waterways connected with the Candelaria River which would amplify the surface irrigated by this river. In both cases, these works were used for partial or completely agricultural ends.

from eating the grains. One month after the bending of the reeds, which is done in November, the harvesting begins, an operation which lasts until the following spring, in accordance with the amount of corn that will be needed. At present, and this is most assuredly a prehispanic custom, the ears of the maize are stored in the corn-field in some high granaries made in a most rudimentary fashion from sticks, placed vertically and very close together, and with palms for the roofs.

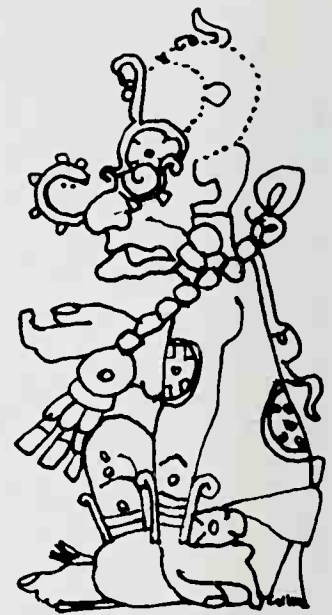
With such a system, a Yucatecan family nowadays needs to cultivate from 4 to 5 hectares each year. The yield decreases rapidly, until such a point that, generally, the same corn-field is not sown for more than two consecutive years, or if by chance three, leaving it fallow for some 10 years. Morley calculated that in this form a family of five persons would need to have an expanse of 30 hectares of land and that in the Highlands of Guatemala, apart from the fertile valleys, that is, in the woody mountainous regions, a family needs from 40 to 80 hectares, and in especially arid or eroded zones, from 200 to 400 hectares. However, on an experimental field, which was set up near Chichen-Itza, upon completing the weeding as in prehispanic times, that is, by cutting down the underbrush completely instead of cutting them with a cane-knife, a regular yield was maintained for seven consecutive years, and, if there was no locust plague, it most certainly would have been prolonged for at least another year. On the basis of this experiment one can assume that the ancient Mayas in conditions similar to those of the modern Yucatecans, did not need to have at his disposal more than 14 or 15 hectares to support his family.

It is likely that in some regions of the Mayan areas corn was cultivated by the system of fallow-land as in the moderate and cold terrains of Mexico. This system consists of cultivating the corn-field for two or three years and then letting it rest for about the same number of years, whereby an average regular yield is maintained. In a Totonacan village of the mountain ridges of Puebla it was established that a family needs to cultivate only two hectares each year, and that in a permanent form, with the rhythm of the fallow system, an expanse of six and a half hectares is enough. Sanders and Price suggested that in certain humid regions of the Mayan area on the slopes of the mountains (the Highlands of Guatemala) it was possible to utilize the same system which served to reduce, perceptibly, the expanse of land that each peasant family needed.

In addition to maize, other grains were also cultivated, such as beans, frequently sown, as it was stated, together with maize, squash and other plants such as the chayote, the chaya (a shrub of Cuba), tomatoes, various kinds of chile and, as seasonings, oreganum; *epazote*; coriander, annatto, pepper, vanilla, etc. Of course the cocoa-bean was one of the most important plants cultivated in hot, tropical and humid regions as that of Tenosique, the coasts of Tabasco on the Atlantic Gulf, Chetumal on the Caribbean coast and Soconusco on the littoral of the Pacific Ocean. Among the very important seeds for cultivation that still have to be mentioned are those of cotton and tobacco.

Another form of cultivation, not through seeds, but by planting stalks and cuttings was utilized to obtain such tubers as the sweet potato, the yucca and the *jícama*. In addition to these comestible plants, henequen was also cultivated.

A cultivation quite distinct, even though it is part of agriculture, is arboriculture despite the fact that it is not possible to specify which trees were planted and which grew wild. In any case, it is more than likely that originally all had grown wild; some were sown near the homes. Among the main fruits, cultivated or gathered, we will mention the following: mamay, avocado, papaya, the cashew, *siricote*, sapodilla (from which chicle is obtained); custard-apple, nanche and guava. Another tree, which still grows in the ancient sites of the Mayas is the browsetree, whose small fruits provided an important food. In another chapter we shall talk again about this tree.



God G, the God of the Sun, according to the *Códice de Dresde* ("Dresden Codex"). The climatic conditions determined the economic activities, and the deification of natural forces was extended and deepened in the Mesoamerican societies.

## Collection

Obtaining vegetable and animal products does not imply either domestication nor cultivation, that is, no form of human labor for the process of growth and reproduction, but only the gathering of these products, that is the work of collection. The primitive peoples were collectors, hunters and fishermen. On becoming civilized through agriculture as the principal means for producing foods, they never abandoned their practise of collection. Irregardless of the high level of their civilization, these people still follow this practise.

We have already mentioned fruits from wild trees, certainly some of them were cultivated as well. Other plants which grew abundantly provided important products for the Mayas, which consist of various palm trees, as, for example the guano, a palm from Cuba, the dry leaves of which were used for the roofs of the huts: the *bayal*, which yielded a fiber from which baskets were made; the corozo palm, whose nuts contain a seed from which flour was made; the dried fruits from the *jícara* were very useful as receptacles; the resin of the *pom* was burned as incense; various kinds of ceiba-tree, *pochote*, yield fruits which contain a substance similar to cotton. Landa states that this substance was a "wool far better for pillows than the burlaps from Alcarria". The bark of the *balché* tree was used for preparing a drink. Some Cactaceae yield the pitahaya fruit; another yields a kind of cucumber, *cat* in Mayan Yucatecan. To this list can be added the names of literally hundreds of plants which were used for medicinal purposes.

Apart from the animals hunted or fished to which we are going to refer to in the following paragraphs, as animal products, the Mayas took from the sea and the rivers, the lakes and lagoons, some species of crustaceans, snails, oysters and other mollusks. Besides eating them the Mayas also used to make adornments out of the shells. They used to pick the cochineal insects from the prickly pears, and when such insects were reduced to dust they provided the *grana* (deying substance), for making paints.

## Hunt

What was previously mentioned with regard to collection is also valid for hunting and fishing, that is to say, that the people never abandon this practise to obtain products which they need, no matter what their level of cultural development.

In the chapter dealing with technology, on referring to products of animal matter, we mentioned some of the animals which were hunted for the purpose of utilizing part of their body to make useful and ornamental objects. Besides the meat which was eaten, the skins, bones, teeth, claws, feathers, shells and corals were made into innumerable objects.

The hunting technique depended, of course, on the animal that was hunted. Using Landa as a basis of information, as well as some of the presentations in the Codices, we can say that they used lances, darts which were hurled by hand or with the *atlatl*; bows and arrows in a late epoch, probably after the arrival of the Mexica mercenaries, two or three centuries before the Spanish conquest at the most; blow-guns to shoot small birds with little balls from mud or clay; slings, lassos tied to branches bent from the trees (*Cf.* several pages, XLIV to XLIX in the *Códice de Madrid*) and other kinds of traps (in the same Codex one sees an armadillo caught in a trap apparently made from sticks with a cover which holds up stones, permitting one to suppose that this contraption ought to have fallen on the animal to ensnare it—pp. XLVIII and XCL—).

Dogs were used for a certain kind of hunt (a fact which Landa mentions in connection with quails). Some presentations in the *Códice de Madrid*, and tripod polychromed plates from Yucatan suggest some forms of hunting artifices. In the Codex there appears a human figure, wearing the mask of a god and covered with the skin of a quadruped of a tremendous

size (p. XXXIX-c); and also how a kind of tail made in the form of a chain with circular links, terminating into a human hand which thrusts a dart into an animal (p. XXXIX-b) comes out of a skin of a stag. In the same Codex the tail of a scorpion, exactly the same as we have just described about the stag, also ends with a human hand which is holding on to a lasso tied to the leg of a stag (p. XLIV-b,c). On a painted plate which seems to present a ritual connected with the hunt, several men covered with deer-skins appear, carrying a shepherd's horn in their mouth. This horn has a hollow stem with which the bellowing of a small stag is imitated to attract the attention of its mother.

The main animals that they hunted were those which we are going to indicate here. Among the mammals, and according to their order, from the largest to the smallest, the tapir, designated *tzimin* (a name which the Mayas of Yucatan gave later to the horse of the conquerors), the deer, the jaguar, the puma, the peccary or wild boar, the monkey among which are a kind of ape or howling monkey, and the mico, the long-tailed monkey; the rabbit, the red coati, the paca, the agouti or *tuza real* and the armadillo. Among the birds can be noted the quetzal, the macaw, the parrot, the heron and the toucan for their plumage; the wood grouse, the pheasant, the *cojolite*, the partridge, the quail, the dove and the duck for their meat. Among the aquatic animals which are not fish, we can mention the turtle not only for its meat but also for its eggs which are deposited on the beach and for its shell, and the manatee, a mammal. The chronicler Landa refers to some of the characteristics of this animal (which is assumed to have provided the origin for the myth of the mermaids), endowed with the sex "of a man and a woman", and "with wings like arms". He also states exactly how they were hunted: with harpoons tied with ropes to beacons in such a way that as soon as the manatee was wounded, it could be followed in canoes until exhausted, being finally eliminated in waters of very slight profundity.

### Fishing

It is very likely that the sedentary life originated among small groups of fishermen and collectors, on the shores of the sea, of lakes and rivers where there is an abundance of alimentary resources which can be used even amidst a low standard of technology. It is the chronicler Landa who again provides ample information with regard to the abundance of fish on the littoral of the Yucatan Peninsula, in the lagoon de Terminos and in the inlets which flow parallel to the septentrional coast of Yucatan. He mentions among the many other species, the river-fish, trout (*uzcay*, Maya Yucatecan), bass, sole, sawfish, sea-fish, sardines, gigantic rays, skate-fish, and sword-fish. Landa also points out that on the coast below Campeche the small fish remained caught in large pools when the tide was low.

The Mayas fished with nets, lances, bow and arrow, and hooks. In the course of archaeological explorations some hooks made of shell and others of copper were found. Canoes were used when they did not fish near the coast. This is depicted in some scenes engraved on bones found in a tomb in Tikal. There are scenes in which the gods are the ones who are fishing, some even taking the fish out of the water with their hands, others carrying them on the shoulders in a kind of cage, probably made from stalks or flexible branches.

Fish were not only eaten fresh but also preserved by different techniques according to the species used. They were salted, grilled or dried in the sun. When grilled, they were preserved for a number of days and could be taken up to a distance from 20 to 30 leagues to be sold. Besides being used as food, the fish-bones from some kinds of fish were used in self-sacrifices for taking blood, and the teeth were used both for offerings and for the points of arrows.

### Domestication

The fact that the bovine, caprine and ovine livestock did not exist in America prior to

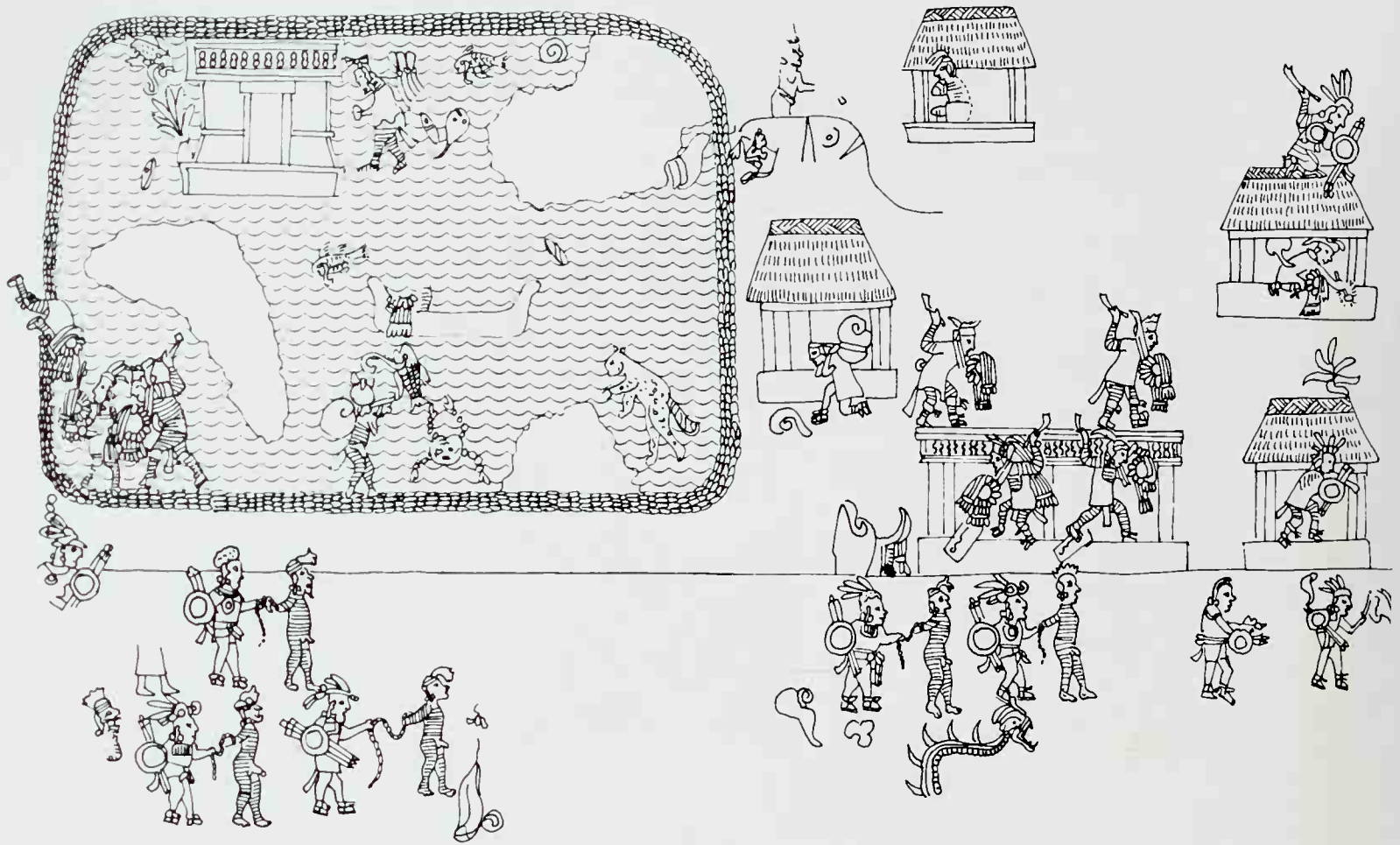


Trade was carried on by means of fluvial, maritime or terrestrial routes. In Yucatan the roads, *sacbeob* in Yucatecan Maya, are known. They used to begin or end in open arcs, or those placed near the architecture, as that from Uxmal to Kabah. Here, the *Arco de Kabah* ("Arc of Kabah").

the arrival of the Spaniards does not mean that the practise of domesticating animals in the New World was unknown in prehispanic times. In the Andean region various Camelidae (the llama, vicugna and alpaca) were used as much as beasts of burden as for providing milk, meat and hair or skins. In Mesoamerica, and more specifically in the Mayan area, a number of species of animals were domesticated.

Some animals were even tamed by women, but that practise did not constitute a system of domestication. That was the case of the red coati or the badger (*chiic*) since, according to Landa, it is an animal "delightfully playful". The Indian women raised them, cleansed them from fleas, and the animals always went to them and were wonderful friends in fun. The deer belong to this group as they were suckled and raised by the Indian women "who made them so tame that they never would escape to the mountains".

The women also raised birds such as a certain kind of duck (*maxix*) for the beauty of its white feathers, and pheasants, doves, partridges and nightingales, just for the simple delight in having them or for their plumage as well.



As a systematic form of domestication it is only possible to consider what is pertinent to dogs, turkeys and bees. The chronicles mention that small mute dogs were raised for food or for the ritual sacrifices. Another species was used for the hunt. Turkeys provided meat and feathers. As for the bees, the women gathered the honey which the wild species made in the hollow trunks or in the cavities of rocks; and they also got honey and wax from the domesticated variety which had small hives. Landa mentions that they did not have honey-combs, only a kind of “*vejiguitas como nueces de cera*, all of them very close together, full of honey”.

#### The arts and crafts industry

When we refer to technology, we are not referring to something new here, as we have already mentioned the different activities involved in transforming matter such as vegetable, animal and mineral into objects such as work-tools, arms, building materials, articles for rituals, receptacles, dress, decorations, musical instruments. In other words we are talking about everything that is indispensable for the material as well as for the spiritual life. For that reason we shall not persist in this phase of economic activities.

#### Commerce

The differences in the various regions that comprise the Mayan area with reference to geologic, orographic, hydrographic and climatologic aspects, determined the remarkable diversity in the natural resources of each one. Although for their subsistence even on a very simple level, the people of the entire area were able to get in any geographic environment the most indispensable for their alimentation: maize, fruits, animals and materials for their housing: wood, palms, reeds. Despite all this, no region was ever self-sufficient in actuality and to a greater or lesser degree the satisfaction for their needs was conditioned by commercial

A battle-scene in the *Templo de los Guerreros* (“Temple of the Warriors”) in Chichen Itza. Battles provided a very important “merchandise”: slaves.



interchange. In addition to a very internal commerce, an important interchange was established with peoples of distinct cultures who preferred articles unknown among the Mayas, these people, in turn required raw materials available in the territories the Mayas occupied. The trading of such raw materials as salt, cotton, cocoa, flint and obsidian was necessary in a general way for the entire population, while the objects they made were almost exclusively on the level of luxury articles for the upper classes.

The products which the principal Mayan regions exported for internal as well as foreign commerce were essentially the following, with the respective places from which they were exported:

From Yucatan: salt, wax, honey, maize, beans, fish (dried, grilled or salted), cotton, henequen, woven blankets, incense and flint as raw materials, or carved objects and feathers of aquatic birds.

From Guatemala: mainly precious woods, furs, cotton, quetzal feathers, incense, liquid amber, jade, obsidian, turquoise, volcanic rock for making metates and mortars; volcanic dust to remove the grease from clay and pottery.

From the Gulf and Pacific Coasts: cocoa and rubber.

From Chiapas: skins, indigo, copper, vanilla, quetzal feathers, amber and red ochre.

From Honduras: alabaster glasses and cocoa.

With regard to the merchandise which was customarily brought to the Mayan area, it came from other towns and peoples. Among their items we can mention jade objects, rock crystal, obsidian, copper, gold and pottery. These objects came mainly from Central Mexico, Oaxaca and Central America (Costa Rica and Panama).

Of course another "merchandise" of great value were the slaves: men, women and children, the greater number of whom came from Central Mexico and the Gulf Coast.

Commercial trade was effected by land, river and maritime routes, and also simple trails in the jungle, mountains or plains, as well as stone-paved roads in low lands which were customarily flooded in the rainy season. Of these roads (*sacbeob* in Maya Yucatecan) many are known in Yucatan: near Coba, from Coba to Yaxuna (100 km), from T-ho (the native name for present-day Merida) to Izamal, from T-ho up to the eastern coast of the Peninsula, facing Cozumel and crossing the entire breadth of the Peninsula; and from T-ho to the northern coast. Another route was from Uxmal to Kabah and from Uxmal to Oxkintok. Cortes, on his voyage to Honduras, followed the route of the merchants from Xicalango, who provided him with a map marked with the roads to Honduras, Nicaragua and Panama.

The Usumacinta, Grijalva and Motagua Rivers with their tributaries were used for commerce, principally between the High- and Lowlands. The Mopan and Belize rivers were also used for this purpose.

The maritime route provided the means for an intense mercantile interchange. The main ports of interchange are known, corresponding to the littoral of the Mayan area: Potonchan, Xicalango, Champoton on the Gulf Coast; Chahuaca on the septentrional coast; Pole, Bacalar, Chetumal on the eastern coast; Nito in Guatemala and Naco in Honduras. It is also known that signals were placed in the trees to facilitate the maritime trade between Tabasco and Yucatan.

We are also familiar with the names of some of the principal markets on the coast as well as inland: the sites already mentioned, Potonchan, Xicalango, Chahuaca, Nito and Naco, and, in addition, Zinacantan in the Highlands; Itzamkanac, capital of Acalan, near the lagoon de Terminos; Cachi and Conil in the far northeast of the Peninsula, and Xoconusco on the Pacific Coast. Of course it goes without saying that Chichen-Itza had to be also a large commercial center.

Land transportation was conducted exclusively by porters who carried the loads on



The rivers were important means for commercial exchanges, principally between the High and the Lowlands of the Mayan area.

their backs, supported by leather bands so that they were able to carry loads of 25 kgs on an average of 20 kms daily. The owner of the merchandise was carried on stretchers, as a painted container from Ratinlinxul depicts.

Canoes from hollowed-out trunks were used for river and maritime transportation. The boatment used wooden sticks as is readily apparent in the mural paintings of Chichen Itza, in the engraved bones from Tikal, in the painted codices, and in gold disks. Christopher Columbus, in his fourth journey in the year 1502, found a huge canoe, eight feet wide, in the Gulf of Honduras, manipulated by 25 slaves. In the middle there was a canopy for the owner.

Although a great part of the mercantile transactions were realized by barter, some products which were considered sufficiently valuable and, at the same time easy to transport, were used as money. Cocoa was the principal product of this category which the mercenaries carried in their pockets. The same purpose was also to be had in colored shells, strung as beads or in net bags; jade counts, small flat axes and copper bells the value of which was determined by their size. With the cocoa-bean as a means of exchange it was possible to buy or pay for anything. Oviedo quotes, for example, the price of a rabbit: 10 almonds; of sapodillas, eight for four almonds; and for a slave, 100 almonds. For the services of a prostitute the cost ranged from 8 to 10 almonds. The same chronicler also refers to the fact that the seller, when receiving the payment in cocoa-beans was extremely careful, counting them one by one, pressing them lightly, since there was no lack of those who "made counterfeit money", filling the almond shells with earth.

In spite of this eventual falsification, there was an atmosphere of honesty and confidence in the commercial relations. Landa is the chronicler who clearly states that "they were accustomed to trust, lend and pay in a courteous manner and without usury". They had no need for written contracts nor promissory notes, according to Cogolludo. The contract was valid while the contracting parties were drinking together in public.

There is no other source of information about the Mayan merchants as complete as that of Sahagun who provided us with details about the Mexica "pochtecas". Nevertheless, dispersed data from historic sources of Yucatan permit us to have some idea, not only of the importance of the business, but also of the position of the mercenary in the framework of Mayan society. Roys, interpreting such sources, distinguishes between the simple professional mercenary (*ppolom*) and those who were at the head of a caravan of slaves, working as porters (*ah ppolom yoc*) and who at the end of a one-day journey were sold as any other merchandise. If, as Landa says, "the position or occupation to which more were inclined was that of the mercenaries", that means that it would have been the most lucrative, at least in Yucatan, at the time of the conquest. Besides, there is no doubt that the mercenary occupied a higher level in the social scale than that of the great mass of workers. Although the status of the mercenary was not a completely definite one, it does seem that instead of forming an intermediary level between the people and the nobility, as was common among the Aztecs, the traders were intimately connected with the latter.

Herrera, for instance, mentions that in Acalan "they used to make a *señor* out of the wealthiest mercenary as exemplified in the case of Apoxpalon (Bax Bolon)", a fact which Gomara repeats. On the other hand, in the *Relación* by Friar Alonso Ponce it is said that "the lords of Chichen-Itza dealt in feathers and cocoa with Honduras". Another fact discloses that the highest personages of the nobility were engaged in business, Landa's narration about the murder of all the members of the Cocom family, who ruled in Mayapan. "The son of Cocom escaped this fate since he was away at that time for his business transactions in the land of Ulua". The powerful connection between mercenaries and regents deduced from this information, whether it was because it ennobled the first, or because the second were the ones who carried on the trade, if it does not indicate any identity between these two, it certainly suggests, as Anne Chapman notes, a trade managed by heads, whether of clans or political groups, and through representatives, plus the existence of warehouses at the ports of interchange.



# Organization of Work

If we compare the information about the division of labor provided by the historic sources from the time of the Spanish conquest, with the ethnologic data pertaining to the modern Mayan groups, then from the conservative nature of the social life of the Mayas it is a simple matter to establish that the present conditions are nothing more than the continuation of the prehispanic way of life. The facts coincide when they are found in both fields of investigative work, from which it is possible to infer that, when they are lacking in the colonial chronicles, those which are the result of ethnologic investigations are generally, if not always, applicable to the period which preceded the conquest.

Anticipating what we are going to analyze in the chapter on the social organization, it is, however, necessary to explain that all the activities which provided the natural resources converted into products used by man, were in the hands of the common people. For the time being we shall limit ourselves to the division of labor within the working class.

## Division according to sex

Sex was, and continues to be, the basic factor in the division of labor. All the agricultural work was for the men. Their activities consisted of clearing and burning in the mountains; sowing, weeding, harvesting, as well as the preparation of the garden and fruit plots; hunting and fishing, apiculture; building homes; getting fire-wood; removing the fibers from the henequen; basketry; extracting salt, and all the kinds of work connected with the construction of ceremonial centers such as getting the stones from the quarries and engraving them; making lime-kilns; felling trees and making them into posts, beams, lintels, and irons and platforms; transporting the soil and other materials; masonry, sculpture, painting, etcetera.

The field of activities of the women was limited to the home and everything dependent upon that. Perhaps the sole exception to that was going to look for water in the natural

Within the division of labor there existed activities that were restricted to women only, as the weaving of cloth. This figurine from Jaina shows a woman with a spun plait in her hand (The National Museum of Anthropology).



springs. Apart from the domestic labors such as the preparation of meals, cleaning the house, washing the clothes, caring for the children, the women also took part in production activities by sewing, weaving and embroidering to meet the needs of the family as well as to provide for the interchange or tribute. The women also took care of the fruit garden adjoining the house, and raised such birds as turkeys, pheasants and doves. Another activity that was part of her chores was that of boiling the honey in the house in order to clarify it. It is also very likely that she assisted her husband in the domestic production of some articles from henequen such as ropes and sacks.

A design on a glass from Nebaj, Guatemala, where commercial activity among the Mayas is represented; one can also interpret this, however, as a scene showing the paying of taxes.

### Collective work

Many of the production activities were accomplished in a collective form, especially the cutting and burning in the mountains. Landa states quite definitely that "the Indians have the good custom of helping one another in all their work. At the time of sowing, those who do not have their own people to do it, are joined by groups of twenty more or less, all of whom do everything together according to their capacity and individual rate of work, but no one leaves until everything is completed". They also were accustomed to hunt in this way, "by groups of fifty, more or less", according to the same chronicler, and the same identical procedure was followed for some kinds of fishing, especially that of the manatee.

The houses were "easily" constructed "since everyone participates equally in the work", as is confirmed by a certain source. The construction of ceremonial centers and public works, as, for example, paved stone roads, was accomplished by diverse forms of manual labor, all the people working simultaneously and well organized.

### Productive work and construction of ceremonial centers

One of the important aspects related to the organization of work is the determination of the time required for the execution of the activities involved in production and, consequently, of the time available for other work, and more specifically, for the construction of buildings in the ceremonial centers. With regard to this point one finds flagrant contradictions, while from the minute investigation of Reina one can deduce that for the present-day peasant of Peten, who uses the machete and the steel ax the work in the cornfield virtually implies full-time dedication, Morley asserts that presently, a Yucatecan peasant does not require more than 48 days of work to obtain the necessary maize for the basic maintenance of his family (excluding what the animals consume, and limiting the purchase of commercial articles to the most essential), leaving him some 10 months available for other activities.

This conclusion of Morley is, however, not in accord with his own calculations when he analyzes the time required for the cultivation phases of the maize, calculations which indicate a period of 190 days per year at the present time. It is obvious that this is based on the moderate expanse which the peasant cultivates today and the yield of which, enables him to assure enough not only for the needs of his family, but also for that of some of the domestic animals such as pig and hens, leaving him, in addition, a surplus with which he can acquire the articles indispensable for his home. With exaggerated optimism Morley asserts

that the Mayan peasant was, therefore, able to devote some ten months of the year to the construction of ceremonial centers. However, he did not take into account, on the one hand, that the work of clearing and weeding without metal instruments required a period of time sufficiently longer than what is actually needed\* and, on the other hand, that the remaining activities connected with production; that is hunting, fishing, apiculture, cultivation of plants completely different from maize, etc., represented a specific time investment. In addition, as Landa specifies, it was, of course, obligatory to support the regents, i.e., the nobles and priests: "people used to make the houses for the lords at his own cost, in addition, there was also the participation of the whole town in sowing the land for the lords who profited from that and gathered in quantity what was sufficient for them and their households; and when they went hunting or fishing, or when it was time to extract salt, they used to give a part to the lord because those activities were all done on a community basis". In fact, the surplus that the Mayan peasant was obligated to produce was, without doubt, much more than what the present day Yucatecan peasant spends for the acquisition of the goods which he and his family consume, and for the feeding of some pigs and hens. Under these conditions, and adding to the 190 days which Morley estimates, perhaps 60 more due to the extreme slowness in cutting in the mountains and weeding the cornfields, because of the lack of metal tools, to calculate two thirds of the year as the time that the Mayas spent in productive labor seems to us a calculation fairly close to reality.

On this basis, they were able to devote only four months to the building of the ceremonial centers, but even this lapse could be less, mainly in the central area, because of the abundant rains during the season of the cold, strong winds coming from the north in winter, the period of less agricultural occupation. The great number of ceremonial centers which were erected in the classical period, the tremendous number of constructions which almost all of them comprise, and the duration sufficiently reduced—three centuries—of the flourishing period of the greater part of the Mayan centers, leads us to conclude that, according to the traditional system of clearing the land, it would not be possible for the working class to have been able to realize in their "free" time the tremendous outlay of energy which the ceremonial centers must have required.

This problem has concerned the investigators. Wolf poses the question: "How can one explain the existence of the many ceremonial centers located in this zone, if we admit that the Mayas of Peten were accustomed to no other system than that of grubbing?" And he replies: "It is very likely that the Mayas did have some knowledge of an intensive system of cultivation in addition to that of the procedure of grubbing. This knowledge would have permitted them to maintain some stable centers of government even when they had to manage a peasant population which was constantly moving from one place to another. Perhaps it was a system of small garden tracts or a procedure similar to that, which made good use of the many lakes and swamps in Peten".

Sanders and Price emphasize the differences in the criteria among the investigators, with regard to the system of grubbing: "Wasteful, unproductive and harmful to the biotic equilibrium, according to some authors; extremely productive, according to others". Bronson suggests that the spectacular development of the Mayan civilization in the Lowlands implied a demographic density equivalent to that which would permit agriculture, as long as there were irrigation, which was possible because of the great caloric yield from the cultivation of tubers. The relation between irrigation and the development of the civilization in Mesoamerica has been grossly exaggerated by many investigators: Armillas, Steward, Palerm, Wolf, and Wittfogel. In any case, in the central and septentrional areas of the Mayan region in which, in actuality, culture flourished in its highest manifestations, the indications of irrigation works are few, and those that have been detected (*Cf.* the chapter, "Economic activities") do not permit the suggestion of the existence of a true "hydraulic society". Besides, there is no need of such works in damp woods where there are also strong precipitations of rain and an abundance of rivers, nor is there any possibility of using them in the dry regions in the north of Yucatan which lack even shallow aquatic currents.

\* According to Sanders (1973), the clearance with stone implements implies four times as much time (4.4 in New Guinea), as with steel instruments.



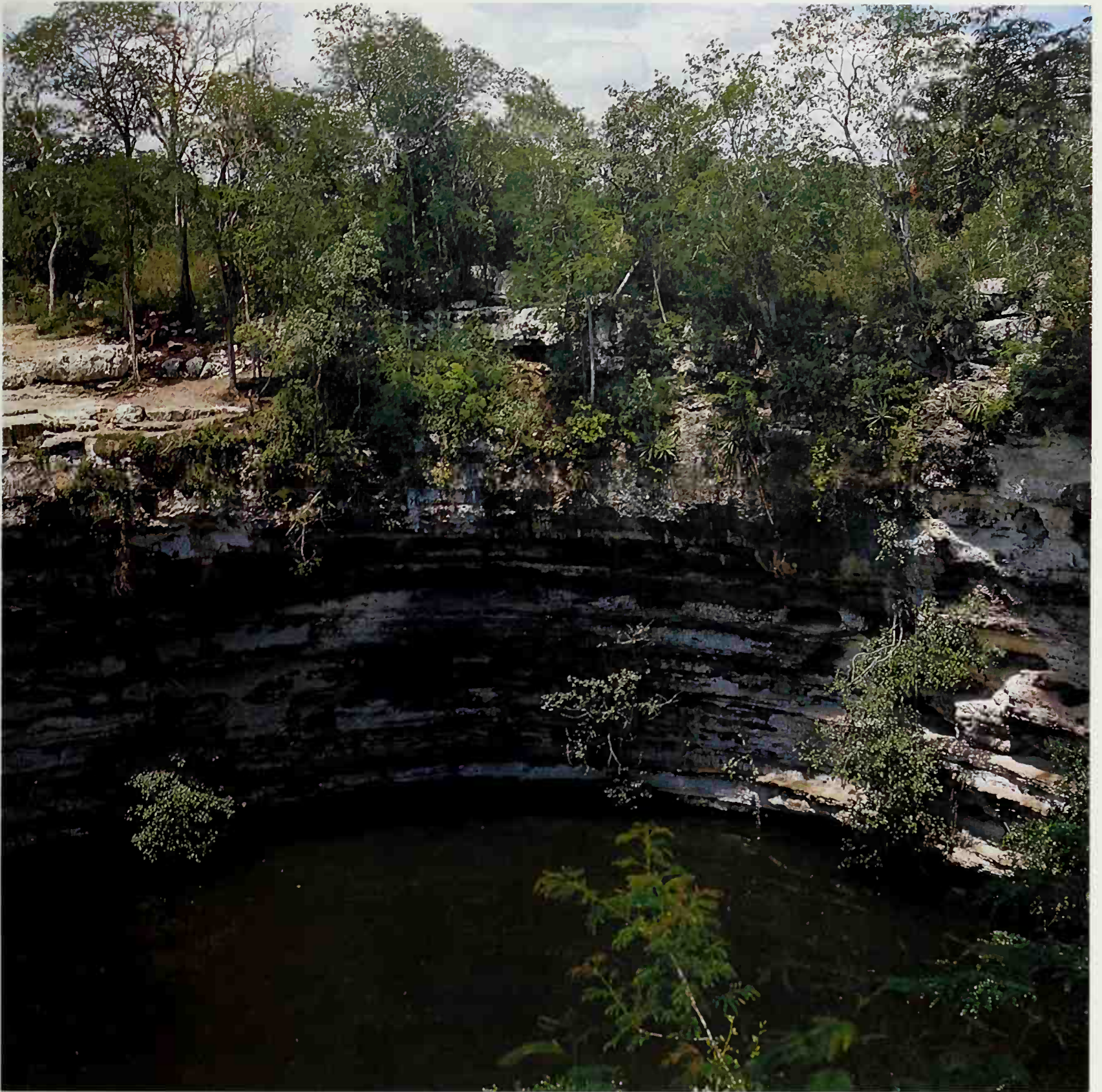
A Catherwood drawing which shows the *Arco de Labná* ("Arc of Labná") in Yucatan. This monument, as all that we have inherited from the Mayas, was the result of communal work. As Landa states, the constructions were "easily" carried on "since all helped each other to make them".

We make no pretensions to solve what specialists in economic and ecological problems have not solved, but it seems to us that the thesis recently presented by Puleston ought to be given serious consideration. If one rejects the possibility that cultivation by grubbing in the jungle may have permitted the development of the Mayan civilization, and having reached the conclusion to the effect that a family in Peten needed, as a minimum, five hectares of good land for maintaining itself—a number that coincides with what Morley estimates for a Yucatecan family—if one further takes into account that the results of the study of the distribution of the population in Tikal shows that for each group of inhabitants the ground available for cultivation rarely extends beyond 1.5 hectares, Puleston proposes the following alternative: Tikal has as many browse-trees (*Brosimum alicastrum*) in the ceremonial center as in the area in which the population settled, as there are also in numerous Mayan centers. A very nutritive food was obtained from the fruits of this tree in periods of a shortage of maize, from prehispanic times up to the present.

It is logical to presume that the browse-trees of Tikal are descendents of those which the ancient dwellers cultivated and that the people used the fruits of this tree as their basic food. Puleston states that the yield of the browse-tree in seeds from which flour is made, is ten times greater than that from maize and in exactly the same size area cultivated. The nutritive qualities of the browse are on a par with those of maize as far as vitamins and iron are concerned, and even somewhat superior with regard to calories and proteins. The cultivation of this tree involves practically no work at all, and the harvesting which requires gathering the fruits that have fallen to the ground, implies a simple work which requires very little time: Puleston estimates that with eight hours work daily, a woman and two children can harvest 3 000 pounds in less than 20 days. The scant humidity which the seeds contain permit storing them for a long period of time, even in subterranean cisterns (*chultunes*), which were used not only for keeping water, but also for conserving food, and in which maize and beans rapidly spoil. There is enough space between the trees to cultivate other plants in such a way that an area from 1 to 2 hectares, planted with the browse mainly, can provide a family with all the food they need during a period of time in which there is hardly any employment. With this type of orchard, the male population would be able to devote almost all of their time to other activities and, most of all, to the building of ceremonial centers.

Summarizing this point, as soon as the possibility of any intensive cultivation by





Water—a vital element for an agrarian society such as the Mayan—was obtained from the *cenotes* and was stored in a number of distinct ways. A partial view of the *Cenote* in Chichen Itza.

irrigation has been eliminated, which is, of course, useless in damp woods and impossible in Yucatan, and of which scant traces were found; or by means of fruit tracts in swamps (many of the ceremonial centers do not have swamps in their vicinity and no source mentions this type of cultivation), we consider the following possibilities:

- 1) Alimentation essentially from maize through grubbing:
  - a) The entire male working population dedicates one third of their time to the construction of ceremonial centers;
  - b) a third of the male working population dedicates almost all its time to such constructions, aided by the other two thirds.

- 2) Alimentation based largely on tubers: more time available so that the male population may devote their labor to sumptuary works.
- 3) Alimentation based fundamentally on the browse: almost full-time dedicated to such work by the male population.

Apart from the form in which the work-time was divided between the production of goods for their own consumption and for the ruling classes on the one hand, and the work for religious worship on the other, we agree with Morley in his conclusion to the effect that "the low class, obliged to work under the goad of the demands of a commanding and exacting class from the priesthood and religion, must have had few hours of rest, very little time in fact that would belong to them", or, in other words, that the functioning of Mayan society evolved around the superexploitation of the peasant class.

#### Full-time workers

It is difficult to say if in the other labor branches the work was performed by specialists on a full or part-time basis. The presence, in all the ambits of the Mayan area, of animals of the hunt permit one to assume that hunting would constitute a secondary activity, the means by which the population was able to satisfy their needs of proteins; consequently, it is probable that there were no professional hunters on a full-time basis. With regard to fishing, we believe that the picture would be quite different in view of the limitations of the natural means; in view of the absolute lack of marine foods in extensive regions and in view of the existence of trade in salted, dried and grilled fish, from the littorals to the inlands. It is, therefore, probable that there had been fishermen on a full-time basis, apart from the peasant population established on the coasts and the rims of lakes and rivers, which could spend part of their time fishing for the normal consumption of their families and for the tribute to the lords.

The extraction of salt from the inlets, which was done at specific times (according to Landa, four to five months after the rains), did not imply continuous work, and consequently we doubt that there would have been specialized workers on full-time for this work. As for apiculture, the system we now know among the Yucatecan peasants ought to have been the same in prehispanic times; without the need of giving much time to this activity, the peasant takes care of his apiary, but the technical operations (the preparation of the honeycombs; harvesting and all the remaining activities) would be in the hands of specialists on a full-time basis who could take care of many beehives. The cultivation of some plants such as cotton, henequen, rubber and cocoa, because of the technique involved which was more specialized, or because of the special importance of its fruits, could well be entrusted to the care of farmers working full-time.

The manufactured articles, which were most certainly the basis of commerce, demanded a production which would exceed the capacity of the work ability of any family, and would imply plants and groups of specialists on full-time. That would be the case for the textile industry—cotton, henequen; basketry; ceramics; the lithic industry, and in more recent times, gold or silver work.

As far as the commercial activities are concerned, one has to differentiate between those which were carried out in local markets with a definite regularity, and commerce on a larger scale between distinct regions. While in the former case the producers were those who directly made the interchange of their merchandise, the latter was a matter for professional merchants, devoted perhaps exclusively or principally to the acquisition, transport and sale of articles and raw materials which they did not produce.

Codz Pop in Kabah, Yucatan. The complexity of the architectonic work which was carried out in the entire area required the presence of full-time workers, especially in certain building activities.



#### Management of labor activities

The general management of farm labor was in the hands of the priests, who through their acquaintance with the rhythm of the seasons decided on the date for the successive activities, mainly the clearing of the trees, the burning and sowing. Commerce at a great distance, appears to have been controlled by the lords of the high hierarchy or by individuals more or less connected with the nobility. It is also possible, although we lack the data for that, that certain arts and crafts were directly managed by the lords.

#### Distribution of the products of work

What we have said about the organization of work leaves no room for doubt with regard to the distribution of the products which were the results of such work. The peasant, besides producing the food indispensable for himself and his family, was compelled to produce whatever the maintenance for the lords and priests imposed upon him, which was more than what the craftsmen and specialized workers in certain cultivations needed; or what the fishermen on full-time, the merchants and loaders, and all those who participated in the construction of the ceremonial centers needed. From their complementary activities, such as hunting and fishing, even part of these products did not belong completely to them, but was used "to give gifts to the lord", as Landa specifies. The same can be said about salt, about wood used in building, about the products elaborated on the level of home arts-and-crafts or in the work-shops of specialists. As the *Relación de Motul* mentions, the products which they gave to the regent in recognition of his position, comprised cotton blankets, "cocks and hens, turkeys, maize, honey and all the remaining objects of value which they did not have but which the region produced".

In a few words, the worker could not aspire to dispose of all his products which were the fruits of his labor, but only the minimal part thereof; of what was the most indispensable for his survival and that of the immediate members of his family.



# Characteristics of Alimentation

In all aspects the information Sahagun has left with regard to the Aztecs is much more complete and precise than that of Landa about the Mayas, in spite of the fact that this chronicler is still our best source of knowledge with reference to the ancient founders or settlers of Yucatan. In so far as alimentation is concerned, Landa speaks about their food and drinks, the dishes they prepare and what they drink, but only in a general form, that is, as if all the components of the population had within their reach the totality of the alimentary products. On the other hand, Sahagun devotes one entire chapter to deal thoroughly with what constituted the meals of the lords, and another one on the banquets of the mercenaries, which let us guess or suppose that in quantity and quality the Mexican working class did not eat as the lords and other privileged members of society.

It is to be presumed that among the Mayas the situation would have been analogous to that, and that the lower strata of the population would not have been able to aspire to delicacies as, for example, foods imported from distant places—cocoa and fish—or those which would have required especially complicated preparation. In point of fact, the chroniclers exaggerate the frugality of the Mayas to the extent that they ate only one meal a day, which was at dusk, and that they did not eat meat except on holidays. Now let us take a look at the data which the chronicles of the XVI century provide for the Mayas of Yucatan.

The historic evidence which shows us something about the foods that the Mayas consumed is indicated especially by those that Landa had mentioned. Among them we note that maize, just as it is in reality, was an essential element in the diet of this people.

## Foods of vegetable origin

In normal times the principal food was undoubtedly maize, which is eaten in solid or liquid form. When the grain is cooked with lime and later ground with the metate, a dough is obtained which, when duly flattened out, is then heated on the *comal* to make the tortillas as needed at meals, since when cold, as Ximenez states, "they are as tough as the sole of a shoe, as well as insipid". The *tortilla* can be eaten alone, that is, with just salt or pepper, or with a stew. Tamales are made out of the corn dough which is filled with pieces of meat;

or some leaves of the *chaya* or beans are mixed with the dough. Ximenez refers to them as "lumps cooked in water, strung up on a rope like black, hard and gruff rosaries". With the half-cooked and ground dough, food is prepared for "the workers, the walkers and sailors, which lasts for some months". This is *posol* from which several times a day "they take a lump and soften it up in a glass made from the rind or shell of a fruit which a tree yields which God had provided them for glasses" (*jícaras*) as Landa tell us.

Ximenez adds that, as far as he is concerned, "the common beverage of the Indians of these provinces, if it is not cocoa, then it is something much stronger". To the ground dough from maize, diluted in water, they add milk and curdle it on the fire; they make porridge from that in the mornings and drink it hot", but here Landa is referring to *atole*. The same chronicler goes on to say "that to what is left over from the mornings they added water to drink it during the day as they were not accustomed to drink water without something else added". Another form of eating maize was in *pinole*. The flour for that is obtained from toasted maize which is then dissolved in water resulting "a very refreshing drink, especially when a bit of Indian pepper (chile) and cocoa" have been infused in that. Without making it more definite, Landa speaks of another drink, "refreshing and tasty" which is obtained "from the substance of the maize ground raw".

With the ground cacao bean, diluted in water and taken hot, they made chocolate, which Landa describes as "a very tasty foam which they use to celebrate their holidays, while for Ximenez it was "a most unpleasant drink for those who are not accustomed to it, but refreshing, tasty and highly esteemed by those who are used to drinking it". The chronicler of Yucatan mentions another drink, "tasty and highly esteemed", for which "a fat resembling butter" was obtained from the cocoa-bean, and this they mixed with maize. Probably he was referring to the chocolate-flavored *atole*.

They ate mainly beans of various colors and kinds—black, red, white; boiled or ground to a paste—as much as other vegetables, stewed separately or with meat. The other vegetables they used were various species of squash, chayotes, sweet potatoes, *chaya*, tomatoes, yucca, *jícama*, avocado and taro (the edible tuberose root of the yam family). In times of extreme scarcity, as when the maize harvest had been insufficient, the fruits of a number of different trees were highly valued. Landa mentions the *cumché* (*kuumché*), whose bark was edible, as the "huge fruit with a very thick rind or shell, soft inside as a fig", which provided both fruit and drink. Some low, spiny palms "carry some large custers of a round, green fruit, as large as the eggs of a dove. When the rind was removed there remained a stone, very strong and tough, from which when broken a round seed, no bigger than a hazel-nut, came out. This seed is very tasty and helpful in times of need. A hot meal is made from these seeds and it was used as a drink in the mornings". We are referring to the cohune palm or *cocoyol* (the corozo palm). In a previous chapter we have already spoken about the browse-tree, the fruits of which Landa considers as very tiny "tasty figs", the seeds of which were eaten, boiled as a vegetable or dried and ground as flour, which served as a substitute for maize.

Their fruits were plentiful. From among them we can mention especially the following: avocado, mamey, sapodilla, the white sapodilla, papaya, guave, nance, pitahaya, the tree cucumber, the *siricote*, the annona, the cashew, various kinds of plums, wild grapes, and unlimited others.

### Foods of animal origin

Some chroniclers are certain that the ancient Mayas did not eat much meat except at parties and banquets. It is probable, in actuality, that the few animals they raised for eating—dogs, turkeys, pheasants, and doves—were reserved precisely for festivities, or to pay tribute and be given as gifts to the lords, or to make offerings to the deities. But, at least,



The nutritional varieties which the Mayas consumed include the badger, the hare, the rabbit, the *armadillo*, and the wild boar.

they were able to eat meat, even though in a reduced form, from what was obtained from the hunt: mammals, birds, reptiles. Among the principal animals the meat of which was used as meat, we can mention the deer, the tapir, the wild boar, the badger, the rabbit, the hare, the armadillo, the wood grouse, a certain species of pheasant, the partridge, the quail and the iguana. The meat was prepared by stewing it with vegetables or separately, or well grilled



directly over the fire, or even in an oven dug out of the earth (for barbecue, *pib* in Mayan) at the bottom of which the fire is made, and when red-hot, the livecoals are covered with stone slabs over which the animal, properly prepared, is placed. Then the oven is stuffed with leaves, branches, and stones.

The people on the coast supplemented their vegetable diet with fish and sea-food. As we already mentioned in the chapter on commerce, they took salted fish, grilled fish or fish dried in the sun, to towns in the interior. The chroniclers mention innumerable marine products such as the fat from the *pez mosquito*, sea-bass, flounder, saw-fish, trout, mojarra, sardine, the ray, the smooth dogfish, which was used for cooking and its meat, when eaten with mustard, was almost as good as beef. In addition, there were mollusks such as the octopus and oyster, and marine mammals as the manatee, according to Landa's statement.

The Caribbean Sea was an inexhaustible source of resources. For that reason the Mayas had been able to develop coastal and deep-sea fishing.



### Seasonings

They used to season their food with salt, pepper, various kinds of chile and a variety of odoriferous herbs: coriander, *epazote*, oregano. In Yucatan the annatto was and continues to be an important seasoning, which, besides giving a special flavor also serves "to give color to the stews as the saffron does, and yet so delicate a color that it stains a great deal", as Landa noted. These seasonings could be used separately or to make sauces, according to the dishes as, for example, the *chirmole* in which were blended the annatto, chile, pepper and tomato.

### Drinks

Apart from liquid foods made mainly from maize and cacao, to which we refer in the section "Foods of vegetable origin", we are now going to mention some of their alcoholic drinks. The basic one was *balché*, which the Spaniards called *pitarrilla*, made by fermenting the bark (or, according to some chroniclers, the root) of the tree *Lonchocarpus longistylus* Pittier) in water and honey. The use of this drink was restricted to religious ceremonies. According to Landa it was "a strong and very disagreeable wine, with reference to its odor". For other ceremonies they used to make another drink with "four hundred and fifteen grains of toasted maize which they call *picula-kakla*". According to Perez Martinez it ought to be written *picul-aqahlá*, the meaning of which is "a drink in abundance". Without greater precision the sources say that they used to make other drinks with broad beans and squash seeds.

### Food customs

When Cogolludo said that the Mayas did not eat more than once a day, an hour before sunset, the same time for making the dinner and supper, one should not assume from that, that a whole day went by without their partaking of any food. The chronicler is referring only to solid foods. In actuality, at dawn, before beginning their work, they were accustomed to take a hot drink, *atole*; during the day, at intervals of a few hours, cold drinks, i.e., *posol* and *pinole*; and only at night the stew with vegetables, with or without meat, generally without, but duly seasoned. Men and women did not take their meals together, as first the women served the men. They used to eat on the ground, or, in any case, seated on a mat. After meals it was customary to wash the hands and mouth. On the occasion of religious holidays they abstained from seasoning their dinner with salt and chile. During some fastings they did not eat meat. The *Nacom*, the military head, was accustomed to refrain from eating meat during the entire three years that he was in command.

### Anthropophagy

Although it is beyond question that on certain occasions the ancient Mayas did eat human flesh, this was a matter of a ritual cannibalism. The human flesh did not form part of their nutritional diet. Even the Spanish chroniclers who were generally eager to find vices and despicable customs among the indigenous, are almost all in accord to affirm that the Mayas did not eat human flesh except during certain festivities. In such cases it is very definite that the parts of the victims were eaten "with great respect, and also with relish and enjoyment".

When Valdivia and some of his shipwrecked companions were sacrificed by an Indian chieftan from the Caribbean coast of Yucatan, "banquets were made for the people from the victims", but as something exceptional. In Guatemala anthropophagy was also a ritual: "The bodies of the sacrificed victims were cooked and eaten as sanctified meat", as Ximenez tells us. He adds that the meat was offered to the high priest, the king and other priests and dignitaries, but not even a "mouthful reached the people".



# The Different Types of Housing

In this chapter we shall deal with two aspects of the housing problem of the ancient Mayas: 1) the location of the population and the town, and 2) the housing itself. Both aspects are of interest to us not only as parts of the cultural picture, but also because of their implications for the understanding of what Mayan society was. The historical sources provide us only with some very simple information on these points, but archaeology and ethnology, at least to some slight extent complete that.

## The location of the town

It is obvious that until now, archaeology has given very partial attention to the ceremonial centers on the one hand, and to the general centers for the town and the population, on the other. A number of reasons explain this situation but none of them justify it: the spectacular of the explorations in the buildings dedicated to religious worship, together with the valuable findings in sculpture, paintings and objects of artistic and cultural importance which usually accompany them, and, in contrast, the unrewarding work of first detecting, and exploring afterwards, the modest vestiges of the common dwellings. Besides, in Mexico there is the obligation on the part of the archaeologist to restore, or at least to consolidate the ceremonial constructions which constitute an important part of the national patrimony, a work which is frequently indispensable but which exhausts the resources, limited from the very beginning, that are made available to the investigators.

However, in the Mayan area the exploration of zones occupied in prehispanic times by the population has been realized in many different places, but especially in Kaminaljuyu, Uaxactun, Tikal, Peten, Mountain Cow and Valle de Belice, Mayapan and Dzibilchaltun.

The study of the Mayan archaeological places has raised diverse important problems, starting first with the need to ascertain if such places were simply ceremonial centers or if it is possible to consider them as urban centers. In order to establish such a definition it is,

A view of the *Cuadrángulo de las Monjas* ("Quadrangle of the Nuns") in Uxmal, with the temple of the *chenes* of the *Pirámide del Profeta* ("Pyramid of the Prophet"), in the first place. The study of the Mayan archaeological sites has raised a number of problems, among them to determine if these had functioned only as ceremonial centers or if they can also be considered urban centers.

however, first of all essential to clarify what is an urban center. Some Mayists, as Morley, are inclined to consider as authentic cities the ancient ceremonial and administrative centers, generalizing the description which Landa offers of a Mayan city: "...In the center of the town or village were the temples with their beautiful squares, and the temples in turn were the homes of the lords and the priests, and then for the people as a whole. In this way the richest and most highly esteemed were closer to these squares, and finally, at the outskirts of the town were the homes of the lower classes". It is certain that Morley is pointing to the fact "that the Mayan centers of population were not so concentrated, not so densely compressed in blocks of buildings close together as occurs with our cities and modern towns, but rather they were scattered over extensive suburbs, inhabited in greater comfort, spread out in a continuous series of small farms, a kind of population which has greater resemblance to a suburb than to a concentrated urban center".

In view of this concept of cities or suburbs less densely populated than our cities, and as a result of the investigations carried out after the works of Morley, most of the Mayists disagree with this opinion. William Coe, for example, believes that a city implies "the permanent residence of a *relatively* large number of people, with a good organization and multiple functions through administrators, priests, businessmen, artisans, peasants, etc., who live *relatively* near one another, with a grouping sufficiently close to provide a basis for the demarkation of the community". On the other hand, a ceremonial center can be defined "as a concentration of temples and palaces, basically a religious center, with a fixed population made up of priests, assistants, administrators of the high hierarchy (if not the same priests) and specialists for the production of the objects needed for the ceremonies..."

Borhegyi, using the suggestion made by Sanders for the Center of Mexico, calls the village "a community or center formed by the conglomeration of groups of houses or hamlets, in a grouped together or scattered about form, socially homogenous, whose population may be of several hundreds of people of which 75%, as a minimum, devotes 75% of their time to a farm work". A town would be "a rural community or center formed by the conglomeration of villages, socially homogeneous, in which the bulk of the population also spends its time in farm work, but in which commerce and craftsman specialization constitute secondary activities, thereby reducing the percentage of the population dedicated to agriculture to less than 75%". With reference to a city, he defines it as "a community socially heterogeneous, economically interdependent, in which more than 75% of the population may devote more than 75% of its time to activities other than agricultural". His definition rejects that of other investigators who define cities according to: 1) the size and expanse of the place, 2) the volume and density of the population, 3) the standard or level of technological and economic progress of the residents, 4) the size and number of the public buildings, and 5) the standard of intellectual arts which is attained by its inhabitants.

Willey and Bullard accept, in principle, Borhegyi's attitude and, desirous of making more specific what ought to be considered as a city, have recourse to Childe, and recall that the Mayan society of the classic period had all the elements which, according to their author, are part of an urban society, that is, a vast number of public buildings stylized by a higher art, a formalized religion with cemeteries for the gods and priestly hierarchy; interregional commerce; division according to classes of society; writing and beginnings of a true science, but which lacked the factor which is the most diagnostic: large dwelling units which reflect the essential characteristic of a city, that is, the large number of fulltime specialists who do not devote their time to the production of basic alimentary products.

### The Highlands

The conclusions which Borhegyi arrived at for the Highlands of Guatemala seem to us

very clear. He differentiates two fundamental types of population and towns: that which has to serve as dwellings, and that which has to constitute the center of civil and religious administration. While the first takes cognizance of the physical needs, it is established near arable lands and sources of water, and presents a domestic architecture which uses perishable materials; the second answers the call of the cultural forces, it is centralized in places considered sacred or strategically situated, and provides pyramids and monumental buildings constructed with durable materials. On the basis of the size, expanse and means of life, Borhegyi subdivides the first type into three subgroups: 1) hamlets or small clusters with orientation and local alimentary resources, and composed of from 5 to 20 houses; 2) farming villages or minor aggregate clusters from 50 to 100 or more houses, with orientation and local alimentary resources, and 3) satellite farming villages or major aggregate clusters of 100 and more houses, with orientation and regional alimentary resources, and depending on a ceremonial center—smaller or larger—or of a “national capital”.

In so far as the second type is concerned, he subdivides that into two subdivisions: 1) ceremonial centers with smaller administrative centers composed of 10 to 30 buildings, forming units of villages with small central squares for communal activities and with orientation as well as local alimentary resources, and 2) greater ceremonial centers or vacant towns with 50 or more buildings, central squares well delineated, of great importance for reuniting multitudes for religious purposes such as pilgrimages, for secular purposes such as defensive places, and for general communal purposes.

#### **The Lowlands of the Central Area**

For the Lowlands of the Central Area (Peten, Valle de Belice), Willey, Bullard and other investigators provide us sufficient data to enable us to understand the matter of the location of the population. It is quite logical that the people chose places favorable for settling, that is, near natural sources of water supply (shores of rivers, lakes, lagoons, or when less watery or “low” in sufficient water in the rainy seasons) and also near arable lands. To avoid the harm that the swellings of rivers could cause or, in general, the rise of the level of the water during periods of heavy rain, they chose terrains slightly elevated and with good drainage facilities.

Such natural factors—water resources, proximity to arable lands—and the topography of the region conditioned a scattered type of population. The aforementioned authors recognize, on the basis of the degree of importance, the following subtypes: 1) clusters from 5 to 12 houses in which a great part of the population would be related by marriage: at times with one building which would serve as a place of worship or altar, or for some specialized function within the community; 2) zones or units of clusters consisting of from 50 to 100 houses, not grouped together in any compact form, but rather scattered, with a smaller ceremonial center for the entire zone for their ritual and civic needs; and 3) a district or unification of zones which embraced a territorial expanse in a scattered form, with a larger ceremonial center in view of its size, because of its importance with reference to its buildings (in number and tremendous size) and of the presence of steles and other manifestations of major art.

Referring specifically to Valle de Belice, Willey and his collaborators set up distinctions based on the following: platforms for one or more houses; the “small squares” on which the houses, more finely constructed and belonging, undoubtedly, to the inhabitants of the highest social rank, compared to those of the simple dwellings on individual platforms, surround a central yard; a smaller ceremonial center with a pyramid, small knolls and generally a larger one which had to maintain a much larger building for collective purposes:

the large ceremonial center, habitually built on elevated hills which dominate the valley, consisting of many buildings for religious worship and civil activities and which controls a zone of small centers of population with its modest ceremonial buildings. In this hierarchy of communities the scattered nature of the dwellings and groups of dwellings predominate, and reflects the form of life essentially agricultural of the masses of population.

Tikal seems to present a greater degree of urbanization than the other ceremonial centers of Peten, with innumerable domestic units. Coe cites the topographic factor as the impediment to a methodical distribution of habitations in Tikal. They form scattered groups in places with a slight elevation, around the squares with four to five houses and with some annexes. Coe concludes that Tikal is "something more than a ceremonial center. Its characteristics were not so markedly urban as those of Tenochtitlan, but Tikal had many elements of an urban standard of living". Although the explorations revealed that there are many knolls or hillocks with dwellings near or far from the major nuclei of the ceremonial buildings, they do not form dense concentrations but rather, quite the opposite, they are found scattered throughout the entire area.

#### Yucatan

Our information is extremely limited for Yucatan: scanty with regard to almost all of the known centers; provisional and incomplete for Dzibilchaltun, but more ample and precise for Mayapan. Ruppert and Smith, through a short examination in the region of Puuc, inform us about the types of houses found there, but tell us little with regard to their distribution. Some houses in Uxmal appear to be part of the ceremonial groups, on the same terraces that support the buildings, or in the yards. Others are found at a certain distance, generally on small elevations, with one or several subterranean cisterns (*chultunes*) and a small pyramid. A similar arrangement is seen also in Kabah and Sayil. In Chichen-Itza there are groups of houses near the ceremonial buildings, although they are not the main ones; the greater part is found on both sides of Scabe Number 7, that is, in the southwestern section of the part referred to as Chichen-Viejo (Old Chichen). As a rule, the houses are on ample platforms of some slight elevation, and are either isolated or in groups.

In Edzna, George Andrews investigated a sector in which there are the principal ceremonial buildings, grouped together, and one or two particularly residential buildings, with hillocks of dwellings without any apparent order; the part with the greater number of habitations is sufficiently far from the civic-religious center. With great reserve, due to the fact that the explorations were not carried out, only a simple examination made of the place, Andrews emphasizes the presence of many low platforms in the proximity of the main buildings, platforms which perhaps supported the houses made of perishable materials, but in no case could they serve to concede an urban character to the ceremonial center. Besides, the author believes that the great number of *tepalcates* which appear all along the rims of a "low-lying land" suggests the probable existence of numerous houses constructed directly on the level ground.

#### The east coast

On the east coast of the Yucatan Peninsula, Sanders examined many kinds of towns. The most common of which, as he states, being thousands of them in the actual State of Quintana Roo, is the Farming Hamlet with six to twelve platforms for houses, frequently connected with a pyramid. Another type, which he assumes has a connection with the residences for the merchants or fishermen, consists of a small isolated sanctuary, a short



A view of the *Castillo* ("Castle") and *Templo del Dios Descendente* ("Temple of the Descending God") in Tulum. Sanders recognized different kinds of population on the eastern coast of the Peninsula of Yucatan, of which Tulum presents one of the special types.

distance from the sea-shore, composed of one or two temples or of a temple and sleeping-quarters. Another type, of greater importance, comprises one or several squares surrounded by ceremonial buildings, and, in addition, several buildings for religious purposes, or small scattered groups at some distance. A limited number of platforms for habitations complete the unit; the extended platform which had to support a collective sleeping-quarter is frequent. Last of all, the scarcest type is the one characterized by Tulum, with residences from stone with dome roofs within a unit surrounded by a wall in which the central part is occupied by ceremonial buildings; traces of common houses show that the population, in spite of having been united in a form more compact than that of the other types, was not very numerous.

#### Dzibilchaltun

We noted previously that our information with regard to the type of town of Dzibilchaltun was scanty and incomplete. According to Andrews it was the greatest urban center of the entire American Continent in prehispanic times, with an expanse of some 50 square kilometers and a density of occupation which was in the vicinity of 1 000 structures for each square kilometer. The unit would be formed by a series of ceremonial centers grouped in a more or less dense form, surrounded by concentrations of hillocks of dwellings. According to the calculations it was considered that half of the domestic structures did not have platforms and did not leave any traces on the ground. The lack of precision with regard to the topographic distribution of the groups of dwellings, the lack of published maps and especially their location concerning time, prevent us from forming a clear idea of the type of town that Dzibilchaltun was, which seems to constitute an exception to the scattered type of the classic period.



## Mayapan

The place which with absolute certainty constitutes an exception for the precise delimitation of the urban zone and for its obvious character as a city, is Mayapan. Surrounded by a wall 9 kilometers in length, provided with 12 entrances, the city encloses almost 4 000 structures of which only 3.5% are ceremonial buildings, that is, approximately 140, and the rest are houses, the most part grouped together, showing differences in dimensions and quality and a construction which corresponds to distinct strata of the population. The better buildings are, of course, found on small natural elevations on a rocky ground, and the poorest are in the low sections. Groups of three or more structures present a rectangular arrangement around a small yard. The houses were surrounded by sections of dry rocks. There were 29 *cenotes* within the wall. The city does not have any form of planning with the exception of the greater concentration of ceremonial buildings which are in the center; around this central section one finds grouped together the units of the more elaborate dwellings, that is, the residences of the members of the ruling class. The common type of dwelling was set up without any definite order because of the irregularity of the terrain. Outside the wall there are diverse groups of habitations, usually in pairs.

## Process of urbanization

If one studies the types of settlements over the course of time, one can perceive that as the population increased (with a corresponding increase in the surplus of products, which in turn, augmented the power of the lords), the bureaucracy increased there through which such power was exercised. That also intensified the arts and crafts industry with probable specialists on a full-time basis, and stimulated commerce. Concomitant with these developments the ceremonial centers were increased in great number, making them more extensive,





The *Palacio de Sayil* ("Palace of Sayil"). There were various forms of dwellings in the Peninsula of Yucatan, among which are the "palaces". They seem to have been used as lodgings for the ruling class. The Palace of Sayil consists of three storeys and more than sixty rooms or dwellings.

more complex and more densely populated. Towards the end of the classical period, the sites of Peten, in particular, but also others such as Dzibilchaltun, show a growing tendency towards concentration, perhaps "towards an urban planning and a more heterogeneous society", as Willey remarks.

This concentration becomes more manifest during the postclassic period in the Highlands of Guatemala and in the north of Yucatan when, partly out of the need to protect the population, the ceremonial centers were established in strategic places, i.e., on the tops of mountains and surrounded by ravines (Altos de Guatemala) or by walls (Mayapan, Tulum, Xkaret, Ichpaatun, etc., in the Peninsula of Yucatan). However, with regard to the classical period, Tikal and Dzibilchaltun are examples in which an evident human concentration is manifest. It is not a matter of cities with cross-sectioned streets, as it was in part in Teotihuacan and later in Tenochtitlan, but rather the modern type of "city-garden", in which the buildings are adapted to the topography and have respect for the natural landscape, as in Tikal, or in small satellite cities which depended on a larger city until it attained the level of a "main city", as Mayapan.

### Types of dwellings

In treating the housing itself now, it is indispensable to stress the difference that existed between the homes of the lords (the priests, civil heads, and rulers in general) and those of the common people. Landa describes this difference in detail when he states that "...where they settled they always were accustomed to build again their temples, sanctuaries, and houses in their manner for the lords, while the common people had only used homes from wood covered with straw". Archaeology has confirmed this and given the name of "palaces" to the buildings which were probably the residences of the ruling class and which can be

clearly distinguished in the ceremonial centers from the buildings dedicated to religious worship (temples, portable altars, platforms for dances or ceremonies, etc.). For this reason we shall consider first these palaces and afterwards the common homes for the great mass of population.

### Palaces

We have already mentioned the location of the dwellings of the lords: the very ceremonial center. And when, in the case of Mayapan or in the city which Landa describes without naming it, the common people live in the same urban unit as the lords and priests, the living quarters of these are "around the temples", and near them, but remote from the ceremonial buildings, "the most important people ...the richest and most esteemed", while "at the end of the town were the houses of the lower classes".

Another fundamental difference was in the material used for the construction: lime and stone for the houses of the lords, "painted with much elegance", as Landa describes, and wood with straw roofs for the homes of the common people.

The palaces are almost always constructed on top of a terrace or platform which have staircases; they can be of one or several storeys; and the number and arrangement of the rooms varied a great deal, from several rooms in one single line, up to fifty and more in various lines or grouped together around a yard. By way of example we shall mention some of the distinct sites. In Uaxactun a small building composed of three rooms in one line would correspond to the simplest type of building; the arrangement in double line is frequent with six rooms, with another in a transversal position at each end. In Tikal there are a great many different kinds of palaces in which the rooms form two, three and four lines, in addition to two or three transversals at each end (in all, some 20 to 30 rooms in each building); another building with a total of 16 rooms in double line or transversals emerges as a triangle; still another, probably with 50 rooms at a minimum forms a quadrangle around a yard, or with dwellings arranged in double line. In Tikal there are also palaces of several storeys, from one small one with nine rooms, six of which are in double line on the first floor, and three others in a single line on the second floor; the larger one had to have more than 30 dwellings, divided into five floors and in double line; it is necessary to explain that the five floors are not found superposed in one and the same building but in two: one further behind than the other, taking advantage of a depression in the terrain, although straight ahead the façade forms five floors.

We also know about palaces of several storeys in Yucatan; another in Kabah of some 20 rooms on two floors (in the same site, Codz-Pop ought to have 30 rooms, but on one single floor); another in Labna, of two storeys, with a complex composition—buildings forming a triangle with others—and whose number of dwellings cannot be determined because of the state of deterioration in which they are found; in Sayil, the beautiful palace of three storeys ought to have more than 60 rooms in double line on the first and second floors and in one single line on the third, with entrances on four sides.

The "Palace" of Palenque with its galleries which open as much towards the outside as towards the yards does not seem to be a building very suitable for occupation, that is, for living purposes. In addition, the yards and galleries suggest a ceremonial use rather than a residential one. However, during one late period these galleries were divided into rooms by thin walls, and one of the yards (the southeastern) consisted of several small buildings. In another yard they had built a steam-bath and at the foot of the tower, various sanitary installations (latrines). We believe that, in principle, the dwellings in these palaces were exclusively lower galleries (now designated "subterranean"), which form three parallel lines

and which communicate with the ceremonial part of the palace by means of three staircases inside. In Palenque small rooms situated at the sides of the sanctuary ought to have served as the cells for the priests.

The so-called Palace for the Governor in Uxmal has 24 rooms of which ten are in double line in the central section (of which two form large drawing-rooms), five on each side section and two built later in each one of the domed corridors which separate the central part from the annexes. The Quadrangle of the Nuns comprises a unit of 80 rooms.

The building also designated "The Nuns", in Chichen-Itza, the result of a number of superpositions, has many rooms on different floors and in its annex. Likewise in Chichén the Akab-dzid is composed of a number of rooms (18) arranged in one, two and up to three lines in the four façades.

In Tulum, it is possible that the buildings which consist of a portico, sanctuary and one or two side rooms may have been the residences of the hierarchies with their special portable altars, or even temples with dwellings for the priests.

In Mayapan some 50 buildings seem to correspond to units for dwellings for high personages, almost always located near the main ceremonial center. The palace which, in view of its being the most elaborate, was presumably the residence of the Cocom family, consists of houses provided with porticos which have columns around the yard, and with temples and kitchen as well.

Quite different from all the buildings that we have discussed until now, are those of Mayapan (as also those of Tulum) which had flat roofs of beams and high terraces in place of the typical Mayan dome with its protruding stones.

If the Mayan palaces are compared with those of the Romans or the Aztecs which the chroniclers of the conquest describe, it is evident that they are very slightly comfortable even up to such a point that some authors hesitate to accept that it is really a matter of residences for the members of the ruling class, that is, the civil and religious dignitaries. It is certain that the rooms without an entrance over the façade—and arranged in double line was the most usual—received very little light and air. And, of course, the situation was still worse where there was a third or fourth line, in which case the rooms were situated more in the rear, and completely lacked natural light. The buildings with windows or rather even with something resembling port-holes are very few; the larger openings are in the *Templo de los Siete Muñecos* ("The Temple of the Seven Dolls") in Dzibilchaltun; in Palenque the rectangular port-holes or openings in the form of the sign IK (air, wind) are many, and the large openings in the domes of the outside walls which separate the portico from the rear corridor assure a cross-ventilation for the rooms and the inside galleries. However, when one takes into consideration that these buildings are located in regions of an extremely hot climate, it is readily comprehensible that the shaded dwellings, isolated from the outside by the thick walls, provided a suitable or, at least, a tolerable temperature. Another problem that the Mayan builders seemed to have worked out easily enough is the means of closing the entrances to prevent the penetration of the rain and protect from the severe cold in the winter nights.

In almost all the Mayan buildings, whether palaces or temples, at both sides of the entrances, in the rear of the thick outside walls, one can see in sections of wall or columns a kind of hoop made in many forms (a piece of stone slab embedded in the edges of a small cavity in a stone of the thick outside wall, a small cylinder of stone embedded vertically in the hollow left between rocks forming a niche). These hoops were used to tie cords with which curtains would be hung up, since real doors did not exist. The closing of the entrances was by means of lintels from stone or wood. When they were of wood, they used to form a number of beams from the sapodilla tree and could be cut or engraved as those of Tikal and a few in Chichen-Itza.



The houses where the common people lived were similar to those which are still used as dwellings for the peasants of the Mayan area. The buildings have walls from wood and straw roofs. The main floor was almost always rectangular, but it could also be apsidal with rounded ends. In this photograph one sees a Tzeltal house in the municipality of Ococingo, Chiapas.

To prevent the rains from penetrating the inside of the buildings, in addition to the use of curtains at the entrances, the people of Palenque built the architrave in the form of strong projecting eaves and at their end they placed a small slab plastered with mortar in the oblique corner of the molding, going beyond and below the molding to form a water channel; in this way, the rain, gliding through the inclined wainscot, fell on the eaves without reaching the outside walls or the columns which were adorned with reliefs from stucco.

One can frequently find in the inside of the Mayan palaces some low, narrow platforms, set up on the walls, which form stools and which were used as seats and probably even as beds. Although the hammock, in the present, provides the preferred means for sleeping in the Mayan area, it does not seem to have been known before the Spanish conquest and it is assumed that it came with the conquerors who were from the West Indies where, as in South America, it had actually been used in prehispanic times.

From archaeology we know that the buildings annexed to the residences of the lords and priests contained steam-baths, whose use, more than hygienic, probably would have been therapeutic and ritual. We have already mentioned the latrines in the Palacio de Palenque which consisted of stones provided with a hole, placed on the ground and on top of a drain or sewer. We have already referred also to the existence of a portable altar or an altar which was part of the homes of the privileged in Mayapan and perhaps also in Tulum. In one of the *Relaciones de Yucatán* reference is made to the existence of buildings of rubblework with large granaries for the purpose of storing maize, as well as also cisterns to pick up and guard the rain water, all of which was extremely well constructed. As a rule, the homes of the lords were near the *cenotes* or at least the *chultanes*, open cavities in the ground, made smooth on the inside with stucco, and the opening of which, in the form of a narrow neck, could be closed with a stone. The *chultanes* were used as cisterns and also to conserve food: maize, for only a short time, and seeds of the browse-tree for a long time. In Mayapan, in particular, tombs were found under the floor of the residences which confirms Landa's hypothesis with reference to the burial of the residents in their own home.

With regard to the household furnishing of the homes—the same for those of the lords as for the common people—the references in historic sources are very limited and treat only utensils made primarily from organic material; archaeology has not been able to add any further information on that subject. It is more than likely that the furniture consisted only of small wooden stools and beds from rods or cords on a frame of wood maintained by poles. We believe that the crossbars embedded in the domes or in the upper part of the thick outside walls, in addition to their architectural function to protect the dome from the

pressure of the sides, were possibly used to hang up objects of the home, such as clothes, etc., as is still done in the huts with the beams of the frame. The cooking-stove of the kitchen would consist of three stones placed on the ground, as is traditional in Mesoamerica. *Metates* and stone mortars, bowls from baked clay, gourd cups and dried calabashes used as bottles or bowls, woven baskets and mats would make up the entire household furnishings.

### Huts

As Landa indicated, the homes of the common people were "of wood covered with straw", that is to say, huts similar to those we know today in the entire Mayan area as the abodes of the peasants. We have already made reference to the usual location of the homes of the people: at a distance from the principal group of religious or civil buildings when they are found within the confines—vague except in the cases of the walled cities such as Mayapan, or surrounded by ravines as in the Highlands of Guatemala—of the ceremonial center, or forming hamlets, villages and towns in a spread out arrangement around a ceremonial center of lesser or greater importance. We also mentioned that the dwellings of the common people always occupied less suitable places according to the topography of the place and which frequently were set up directly on the level ground or rather on a slightly elevated platform. These dwellings could be delimited by a stone or brick railing from rubblework or through a simple row of coarse rocks; the floor would be of earth, pounded down, or with a smoothing from lime. The floor was generally rectangular, but it is also found in an apsidal form with rounded ends. The walls were made of wooden posts stuck together, one to the other, and tied with reeds. Four wooden columns held up the beams and horizontal cross-bars on which the framework of the roof rested. This could be covered with dried palm leaves used for thatching, or with hay to form two slopes, but it generally consisted of inclined planes on the four sides. The roof was finished off with a ridge from which the slopes were sprung.

A house could consist of just one room or several (two, three, four) in a single line, and in Yucatan it was often that it had an open portico in front. A wall separated the portico from the rooms, but there was one door which served as an entrance to each room. This arrangement coincides with the description that Landa offers: "...they present a wall in the middle and lengthwise which divides the entire house, and on this wall they leave some doors for the half which they call the back of the house, where they have their beds, and the other half they bleach with a very fine whitewash ... and this half is the reception-room and lodgings for the guests; there is no door so that everything is open to the entire house..." The beds were made from rods and on top of them they put mats and covered themselves with cotton blankets. Stools can frequently be found in the rooms or in the portico, which were also used to sleep on in summer.

It has been established that the greater part of the homes were set up with the façade to the East although there are also some which face the North and South; very few remain which faced the West. In Mayapan many dwelling form, along with an annexed terrain—probably a fruit or vegetable garden—a piece of land enclosed by thatches of coarse rocks, without mortar. There were some paved streets and footpaths of irregular form between the houses. In different places it has also been confirmed, according to the information of the chronicler, with reference to the manner in which they buried their dead, that is, "within their homes or at the back of the house" and that "they commonly abandoned the home and left it uninhabited after burials". The kitchen would probably be a small construction of wood with a straw roof, close to the dwelling or a few meters away from it.

Three or four houses together would probably correspond to a family housing unit.



# The Characteristics of the Clothing or Dress of the Mayas

In this chapter we shall treat not only the theme of clothes and adornments which the ancient Mayas used, but all the changes as well that they had effected on their own bodies through paint, tattoo, deformations, and mutilations, the purpose of which being to complement their attire.

On comparing the information from the chroniclers of the XVI century with the detailed data provided by iconography, their veracity is thereby confirmed while, concomitantly, their limitation is also established. But between such forms as the historic narrative and the analysis of archaeological testimony, there are innumerable and very ample sources which permit us to clearly express what we feel we really know about this phase of life of the Mayas.

After the first four or five years of life in which the children of both sexes were accustomed to go around naked, there began a distinction in dress: the boys were given "some streamers *to make them as decent* as their fathers, and the girls began to cover themselves from the waist down", as Landa affirms. He further goes on to mention, but without making it clear whether it was the lords or the common working men who used "the large square blankets ... which they tied around their soulders".

## Social differences

Continuing with the cronicles we see that the lords and the common people did not dress in identical fashion. In *Relación de Valladolid* it is specified that "the lords used to wear *xicoles* made of cotton and feathers woven into a kind of multicolored jacket; they also used the *mastil* (*maxtlatl*, that is, a loincloth) between their legs. It was a long narrow strip of woven cotton cloth, girded around the abdomen, going around several times, covering the privy parts, with two long points decorated with a feather hanging in front and in back". But the same *Relación*, on the other hand, affirms that "many Indians went about

The richness in attire continues to be one of the most remarkable legacies that one still finds today among the different groups in the Mayan area.

naked with only the long narrow strip of cloth. This was generally the custom in all the provinces of Valladolid". Likewise, in referring to the common people, Landa mentions that the buildings were constructed by naked Indians "dignified only by some long streamers which they call *ex*". The clothing that Jeronimo de Aguilar wore when he presented himself to Cortes, consisted precisely only of these streamers.

Through the Mayan iconography—painting, sculpture and ceramics—this difference in the manner of dress between the personages who pertain to high society and the men of a socially lower class is confirmed and made precise. In the murals of Bonampak the prisoners or those who died in battle, as also the victims sacrificed after that, all appear naked or only with the loincloth, and without headgear or any adornments. However, in the same frescos, individuals who ought to be the servants, judging by their attitude and activity (dressing the chiefs, presenting tiger skins or jewels, kneeling before the family of the *halach uinic*, and carrying a child), use decorated cloths for the hips and headgears similar to turbans. Perhaps some of them were merchants or, on the basis of their serving in the court of Bonampak, would have the right or the obligation to present themselves dressed with greater refinement than the peasants and other workers. Dressed in similar fashion the musicians were presented with headgears of phantasy, some very elaborate and with earflaps from shell, and necklaces from the canine teeth of animals. Among those whom one can assume were servants, we see that some wear earflaps, and those who because of their place in the pictoric composition, which is on an intermediate level between the low class and the lords, and because they are displaying valuable merchandise while holding a fan in their hand, we assume that they are probably merchants; they too are wearing turbans and at least one of them, a pendant and jade earflaps.

The warriors in those same paintings undoubtedly belong to distinct hierarchic levels. In the judgement scene, in the torture and sacrifice of the prisoners, a group of warriors is placed at the same level as the highest personages, i.e., in the upper part of the composition, while others are on the lower plane. The difference in attire is clearly notable: all those who are higher in the scale wear small, highly adorned capes while those who are lower are stripped to the waist; the hip cloths are also more costly for the former than for the latter. However, both groups use identical helmets with the heads of animals, an usual artifact among warriors to instil the enemy with fear.

The lords of high rank are recognizable by the elevated position in which they appear in the distribution of the different levels and by their costly attire: highly elaborated headgears, some with quetzal feathers in the form of a crest; diadems with jade beads; necklaces and bracelets from the same gem; long, wide cotton capes; hip cloths and loin cloths embroidered in attractive colors and designs, and in addition, they are wearing sandals. The copies made of the mural paintings do not always show if they are wearing shoes or not.

Three personages are distinguished among the lords and most assuredly they are all high dignitaries, the *batabes*, according to Thompson. They appear twice in the first room: on top, getting ready for a ceremony and attended by a number of servants who are putting large crests on two of them, while in the third they are painting their body. Below, the same personages, already perfectly attired take part in the ceremony which the musicians and dancers are performing. Their dress is also very elegant and luxurious: we have already referred to the enormous crests of large green feathers; a tiger skin hanging from the waist, open in front and disclosing the rich embroidered loin cloth; they are wearing diadems, earflaps, huge necklaces of many strands of beads, pectorals, bracelets and anklets, all of jade. In the fourth central mural they are near the principal personage who is passing sentence on the prisoners who are in the upper level; they are all attired in tiger skins which seems to serve as capes, with helmets made from the heads of jaguars in two of them, while





Among many of the daily activities, the fabrication of cloth was practised in all of Mesoamerica and was accomplished by the most traditional method, that is, it consisted of a loom attached to the waist.

the helmet of the third appears to be the head of a lizard which terminates with the foot of a jaguar. In the battle scene of the same central room they are all recognizable by their jackets (*xicolli*) which are short and sleeveless, from tiger skins.

As far as the main personage of these mural paintings is concerned, i.e., the probable *halach uinic* of Bonampak, his importance can be deduced from the contents of the paintings, particularly in the judgement scene, the torture and sacrifice of the prisoners, in which he occupies precisely the central part of the upper level; in the vertical axis of the composition, the activities of those who are accompanying him, converge towards him. In this representation he is wearing the tiger skin jacket with fringes, a headgear of large quetzal feathers which are emerging from something made from the skin and feet of the jaguar. In contrast to all the other personages who are barefooted, he has costly sandals from the same skin; his spear is likewise lined in part with the skin of the jaguar. He is distinguished from the *batabes* not only by his central position, by the feathers in his headdress and by his sandals, but also by the jade jewels he is wearing; earflaps, necklace, an enormous pectoral and anklets.

In synthesis, the social differentiation that these paintings disclose, through the composition itself, through the significance of the scenes and the attitude of the participants, is further reflected by the ostentation which goes from the very expensive attire—dress and jewels—of the *halach uinic* to the almost complete nudity (some of the vanquished in battle seem to lack even the cotton streamers of the loincloth), passing through the following levels from top to bottom: the *batabes*, the lords of the court, the military chiefs, the warriors,

the merchants and the musicians (all in one and the same grade) and the servants. From the last room we exclude the dancers from this hierarchy in dress, whose extremely expensive attire corresponds to a very special ceremony, most assuredly used only on very special occasions by the dancers, and without any implications of social standing.

In the sculptures, where only one single personage appears, his luxurious dress shows that it refers to a hierarchy of the highest category. (In the scenes in which a number of individuals appear it is obvious that one of them is member of the highest rank of society, i.e., the *halach uinic* or the highest priest.) The headdress can be an enormous bejeweled helmet (as in the lintel of Tikal); a set of superposed masks (Quirigua); a tiara of discs of jade, terminating in a crest of feathers (Palenque); a helmet from the head of a bird with quetzal feathers (Palenque); a tiara with crests on top and in back (Yaxchilan) or a most complex set of superposed masks and feathers (Copan). The torso can be covered with a small, short cape, made from jade insignia and with feather fringes (Tikal, Palenque); from the waist down, the lords wear loincloths, most elegantly embroidered (this pertains to all the towns mentioned), or hip cloths made from tiger skin (Palenque), or skirts decorated with rhombs of large tubular beads sewed on the cloth, and generally with feather fringes (Copan, Palenque). It is also customary for them to wear a colorful belt adorned with three human faces, probably made in jade mosaic, as those which we found on the tomb of the *Templo de las Inscripciones* ("The Temple with Inscriptions"), in Palenque; three oblong tablets, hang from each one of these faces; the faces appear in profile at the ends of the belt, and in front in the middle (Palenque, Yaxchilan, Piedras Negras, Copan, Naranjo). The sandals seem to be made of, or consist of, only a sole from untanned leather or henequen, provided with a leather strip which slides between the fingers and is tied around the ankle; they can also have a heel which covers the upper part of the ankle, almost always of leather and beautifully adorned with symbolic motives or with masks of the gods (Copan, Coba, Naranjo, Tikal, Calakmul, Quirigua, Seibal). Above the instep the more costly sandals have a curious feature: a kind of tassel which can terminate in feathers. In the scenes in which the individuals of a lower social rank appear, as the slaves and prisoners, these ones are barefoot. In Palenque and Bonampak, the important personages also appear without shoes if they are sitting, instead of standing. The Mayan lords represented in the sculptures are usually wearing between the knee and the ankle some crossed narrow strips, probably of leather, which would serve to tie the sandals (Palenque), or also a kind of spat or leggings in which the strips are crossed various times around the leg (Edzna, Yaxchilan, Palenque, Seibal, Oxkin-tok) or they form horizontal bands tied together (Chichen-Itza).

In the figurines of Jaina the most remarkable and noticeable part of the attire appears to be the headdress. The variety of forms, materials and composition is infinite: turbans, diadems, tiaras, twisted or plaited bands, crests and even hats with wide brims. However, even when the personages may be almost naked, the headdress can still be luxurious and complex. Many figurines present men and women who have only the lower half of the body covered with either loincloths or skirts, according to the sex and, in any case, this does not have to be a matter of individuals of the lower social class, since they almost always wear a necklace of heavy beads, frequently bracelets of various strings of beads, a large shell as a pectoral and the gawdy headdress. The loin cloth is generally very wide and can also be painted. The individuals who appear to be males wear huge capes which come down to their feet. In some instances it is also a very large, long coat but with short sleeves.

### Feminine clothing

With reference to women, Landa informs us that "the Indian women of the coast of the provinces of Bacalar and Campeche are extremely decent in their dress; besides the covering they were accustomed to wear from the waist down, their breasts would be covered by tying a folded blanket around them from below the armpits; all the others did not wear anything except something similar to a large, wide jacket or sack, open on both sides, reaching to the hips; they were held tight by the same width and had no other clothing than the

Bas-relief in Palenque. The attire, ornaments and attitude of the personage reveal that he had to be a hierarch of high category. *Lápida de Madrid* ("The gravestone of Madrid").



blanket which they also always use for sleeping, and when they went on the road they were accustomed to wear them as a cover, folded or rolled up”.

However, apart from some few exceptions, the dress of the women, as can be observed in the mural reliefs and figurines, does not correspond to the description given by the chronicler. The most common is the long tunic which strongly resembles the present day *huipil*, whether all white or with a green edge on the rim (in the central and western rooms of Structure I in Bonampak), or also yellow (in the eastern room of the same building); it is elegantly embroidered in the reliefs in Piedras Negras, Yaxchilan and Bonampak, in which they can be seen would around a long skirt, which still permits one to see the embroidered sandals also. In the reliefs in Palenque the women wear a short, small cape adorned with tubular jade beads and fringes from feathers, with a long skirt which is also adorned with jade beads. In the figurines in Jaina, what is most frequently seen is a long skirt and a *quechquemitl* with circular points. It is not possible to determine the ranks of the greater part of the women represented in the mentioned figurines of Jaina since the *quechquemitl* has no adornments, and besides they were even used by the simple women weavers; on the other hand, almost all the women used to wear necklaces and earrings. Some women show only a skirt as in the case of one an old one, and a hip cloth worn by an old, blind woman.

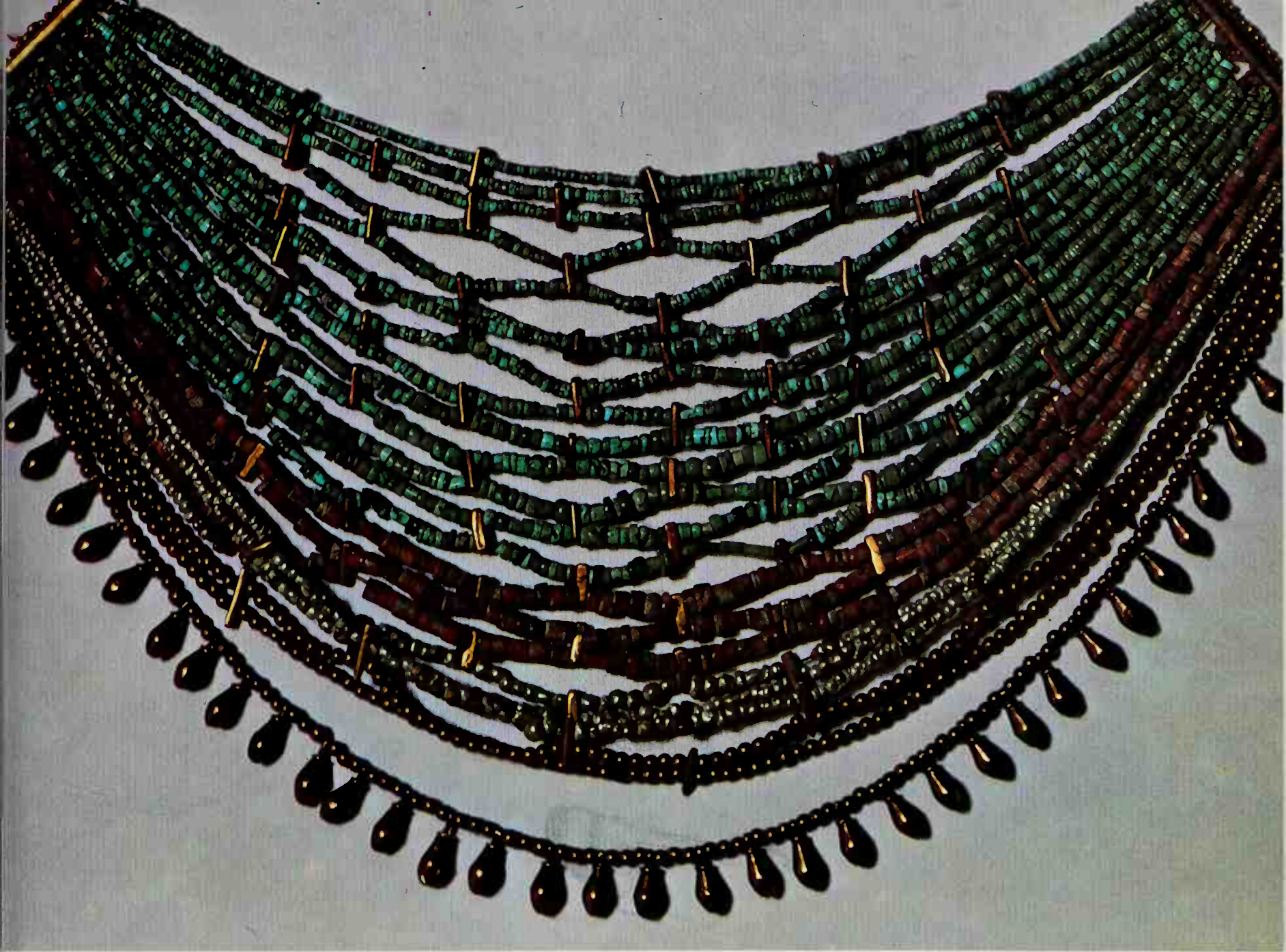
### Jewels

Both men and women of high rank used to wear many jewels, almost all of them of jade. However some were also of obsidian, shell or bone. Such jewels were comprised of the following: diadems of inserted discs, or sewn on a strip of cloth; locks of hair or flowers in the hair (Palenque); round, square and complex earrings forming various floral designs (individuals of apparently lower social rank are accustomed to wear a strip of cloth which crosses the lobe of the ear); tubular nose rings or those made with buttons on both sides, or a small tablet hanging from the tip of the nose; mouth ornaments were composed of four elongated tablets which form a rectangle with a small disc at each right angle, the set of which set off the mouth (personages in stucco on the crypt of the tomb of the “Temple of the Inscriptions” in Palenque, a personage buried there and a figurine of Jaina); rings worn on the lower lip made of jade or shell; necklaces of a single strand of spherical beads with or without pendants (hideous masks, lockets); necklaces from a number of concentric strands, generally of tubular beads; pectorals; bracelets of various rows of beads; rings and bangles also of various rows.

### Care of the body and adornments for the body

Landa has provided us with much valuable information on the subject of the care of the body that the Mayas of Yucatan had practised. The chronicler was amazed at the frequent baths both men as well as women used to take, with cold water or steam, in small buildings expressly constructed for such purposes. He also refers to the fact that the children became dark-skinned from very many sun baths, and he disliked that the women bathed together with the men, “with slight morality since it was customary to undress and be stark naked in the well where they used to go for water”. With regard to the steam baths, he assumed that they took them not as much for hygienic reasons, but rather for health.

To beautify themselves, since they had it for the so-called “full dress”, they painted the body and face red, as Landa informs us. He also assures us that they daubed themselves in black until they married. Herrera makes it still more precise, when he states that they painted themselves with a certain resin, the color of red ochre, which, incidentally, was also useful against mosquitos and the heat of the sun. The color varied, that is, black during fastings, blue for the priests, and black with red for the warriors. The women, according to Landa “anointed themselves with a colored unguent, and those that had the means, were accustomed to use a certain aromatic concoction, but which was very sticky. I believe it was liquidamber and was there called *iztah-te* (*itz-tahté*). The same chronicler mentions the special liking that the Mayas of Yucatán had for agreeable odors, using “bouquets of flowers and odoriferous herbs” to perfume themselves.



Men and women of high rank used a great deal of jewelry, and almost everything was of jade. However, they could also have been of obsidian, shell or bone. The necklace shown here is in the National Museum of Anthropology.

### Tattoo

For the Mayas, tattoo through scarification was an important part of body adornment. The chroniclers mention that, and innumerable sculptures and clay figurines confirm it. The type of tattoo in which the cicatrices had resulted from cutting the skin previously painted, form every conceivable kind of design, geometric and symbolic, and was the stamp of pride among the men, since the greater the tattoo on the body, the more courageous and valiant were they considered since the operation involved was extremely painful. They derided those who were not tattooed. In any case, the tattoo could also be imposed as punishment even for thieves of high social rank. In such instances their faces were worked over "on both sides, from the beard till the forehead". The women were also accustomed to tattoo their bodies "from the waist upward, except for the breast since it was needed for feeding", with "more delicate and beautiful work than for the men". The young men, while they were still unmarried, were not tattooed or they did it very lightly.

### The hair

Among the men as among the women, the hair was customarily worn long. For the former Landa makes it definite that "on the top they cut it as a crown and thus much of it grew from the bottom; what appeared to be the crown, remained short. They made braids and formed them into a garland around the head, leaving a very small pony tail in the back like a tassel". It is understood that, apart from the special kind of hair cut, the rest of the hair was very long. In the reliefs in Palenque the hair cut seems to be limited to the back part of the head. There, and also in very many figurines of Jaina, the hair appears to be



trimmed over the forehead, giving the form of a step on both sides of the face. In Palenque one can also see what we have referred to as tufts or locks of hair with tips of jade separating the hair. The women, when they appear in the reliefs, wear their hair much longer than the men and without cutting it, letting it in the back. Landa mentions a feminine hair-do, parted in two, forming a “gallan” headdress; it was also used in braids or forming something that resembled two or four horns. It is said that there is a difference in the hair-do for the unmarried women, but thus far no one has shown what the difference was.

#### Facial down

The chronicler of Yucatan informs us that “they did not grow beards and they use to say that their mothers had burned their faces as children with hot cloths so that they could never grow beards. But now they do grow beards although they are very gruff and rough, like horsehair”. The presence of beards and moustaches is, in actuality, sufficiently rare in Mayan iconography, but it can be noted from time to time. Apart from the representations which correspond to the period of Toltec occupation in Chichen-Itza, we know of men with beards in reliefs in such places of the central area as Copan, Quirigua, Seibal, and principally in Palenque as well as in the figurines of Jaina which date from the classical period and in no way refer to the foreign invaders. Mention is made of the use of tweezers in Yucatan, most certainly from copper and gold, as a depilatory, and some samples of these have been found. It is possible, although no historic source mentions it, that the use of the beard, as that of certain jewels among the Mexicas, depended on definite rules of the hierarchy, and that only the lords of high rank had the right to have a beard. That would explain, on the one hand, their presence in sculptural representations, associated with

A ceramic piece from Jaina. The hairdress or hair-do differed according to the sex, age and status. On that basis archaeology has been able to elaborate pictures of social stratification considering all the elements which the different constituents of this culture were accustomed to wear.

important personages; and, on the other hand, the custom which Landa refers to, which was probably valid only with regard to the common people.

#### Deformations and mutilations

As a mark of beauty, which is, of course, difficult for us to understand, Landa mentions also strabismus provoked artificially in children, "by hanging their in their hair ... a small object which reached the middle of their eyebrows; as it moved around they tried to see it constantly and that made them cross-eyed". Do not forget, however, that the solar gods appear with huge eyes, generally cross-eyed. We also have to mention the perforation of the lobe of the ears for the ear-rings, the diameter of which was between 2 and 3 centimeters; that of the nasal partition or of the sides of the nasal openings to hang up the nose rings, and the cleft below the lip for the ring to pass through in the lower lip.

The ancient Mayas, as all the other Mesoamericans and some of the people of the Continent as well as of other parts of the world, used to practise cranial deformation. Landa explains how the child, was stretched out on his small bed of sticks, the head placed between two small boards, one in front and the other in the back part, pressed with great force "until several days had passed which left the head flat and molded, as all of them used to have". Besides this kind of frontal occipital deformation, others were also made, which can be observed in skulls found in archaeological explorations in a circular form (this resulted from a bandage very tightly tied around the head), in an occipital, frontal, posterior-vertical, frontal-vertical-occipital, lambdoidal form, etc. Torquemada, in referring to this practise, points out they had told him that the gods had given it to their ancestors and that it provided them with a noble aspect, besides making their heads better adapted to carry loads. It is known, through the archaeological finds, that the cranial deformation was not limited to the upper classes of society, which coincides with Landa's information in the sense that it was practised by all.

Although the historic sources only mention the dental mutilations among women, which they "had out of elegance", leaving the teeth "like the teeth of a saw", a form of operation which the old women performed "by filing them with certain kinds of stones and water", according to Landa, we also know, from the study of many skulls found in archaeological explorations, that the men also practised this form of physical "embellishment". The sources, however, do not mention the incrustations which, alone or combined with dental cuts, the ancient Mayas used to make. The cuts took on distinct forms and were carried out in the incisors and upper and lower canines and, as a rule, although probably not in an exclusive form, with symmetric patterns. The most customary—according to actual data which comes to us principally from Jaina and Palenque—was the B2 type (Romero), in the form of a lateral notch or groove in one of the lower corners of the tooth. Frequently type C6 follows that with a notch on each side of the tooth. There are some cuts which form sharp points, while others, blunt ones. However, the most frequent in the Mayan area was the incrustation, also in incisors or upper and lower canines, of a circular fragment in the center of the face in the front part of the tooth. The material incrustated was usually jade, but also obsidian, pyrite or hematites were used. The archaeological findings disclose that, contrary to what was usually presumed, the practise of dental mutilations was not limited exclusively to the upper strata of society, since they have been encountered in osseous remains which correspond to the poor people (who had been buried without the benefit of architectonic structures, apart from ceremonial buildings, without funeral offerings or with a poor offering). The mutilation in such cases can still be noted, while personages buried in what is the equivalent of very expensive tombs, in buildings of the ceremonial center and with valuable objects as offerings, can also not present the feature referred to.

In summary, it seems that while the dress and adornments undoubtedly had a social significance, which hierarchical or economical character we cannot establish, the physical deformations lack meaning as a means of differentiation between the various classes of Mayan society.





# The Social Organization of the Mayas

## Economic basis

The picture presented by the social organization of any human group, at a definite time, is neither casual nor attributable to the desire of any person, group, or even the totality of the members of such a group.

A society is made up of a system of relations which functions as any structure with juridical, political, cultural and ideologic implications, and which is set up on a standing economic basis, in any specified time, during the historical development of such a unit. Therefore, the society "ultimately" results from the economic organization, and whatever change arises therein has to have its repercussions in its actual functioning.

The economic organization, in its turn, is constituted by the entirety of the relations established between the men of one and the same society in an imposed way, independent of their will, within the process of production. Such relations become more complex in proportion to the rate of development of the productive forces.

These forces, which allow the production of goods that men use, comprise: the same men as the potential of work, the natural resources which are found within their reach, and the technical instruments which they have created with which they transform these natural resources into products of consumption.

The relations which the men maintain among themselves in the process of production of goods determine the system of ownership, distribution, change and utilization of such goods; and establish the fundamental differences between groups of human beings, differences which bring about a division of classes of society.

Our information on the subject of Mayan society rests on two kinds of sources: the Spanish chronicles of the XVI century and the results which can be deduced from the archaeological materials. The former refer to the conditions at the time of the conquest and cannot be applied retroactively in any absolute form to the classical period, in view of the

Within Mayan society this ball-player was very likely considered a privileged individual, this placed him in the upper spheres and he was able to participate in the feasts and special religious rituals.

fact that the Mayan area, over a period of centuries prior to the arrival of the Spaniards, was dominated by groups which had come from the central region of Mexico. In many aspects and forms they imposed new norms on the life of the Mayas. However, the interpretation of the archaeological data associated with the classical period does not seem to contradict the historic information, at least fundamentally, in so far as the social organization is concerned.

### Land tenure

Since the basic occupation of the ancient Mayas was agriculture, an important element, therefore, for the definition of that society; in the first instance of its economic organization the problem of land ownership appears.

It is obvious that so rotund an assertion as that of Landa, when he says that "the lands are now common property, and thus the first one who occupies it, is the owner", does not precisely define the system of land tenure in Yucatan. Cogolludo refers to it in a less simplistic form, but, in actuality, he is only reproducing the information of Gaspar Antonio Chi: "The lands were common property, and thus among the people there were no limits or boundaries which could divide them, although it was that way between provinces during wars, except for some seedbeds for sowing fructiferous trees and lands, which might have been bought on some such basis as general betterment".

Villa Rojas, relying to a great extent on the ethnohistoric and ethnographic investigations of Ralph Roys, presents many forms of land tenure which we shall summarize briefly at this point.

### Lands of the State

At the time of the conquest, Yucatan found itself divided into 16 small states or provinces, each one of which had its own autonomous government. The territory of each state was duly delimited as is confirmed by Chi's information. Some documents give the impression that the governor considered the land his which corresponded to his State and that he was able to dispose of them "for the general benefit of the community or for the members of the nobility". Actually, the fact that the Head of State regarded himself as owner of the lands under his jurisdiction, and that he could make whatever decisions he wanted for its utilization, does not imply that he would have had, under all circumstances, the full ownership of these same lands.

### Land pertaining to the people

Each town or village had its own land which, in contradiction to the data provided by Chi, seems to have been delimited. These towns comprised a capital and distinct sites or dispersed hamlets. The lands belonged to all, were distributed among the inhabitants for their usufruct, and the people were able to acquire private property which was not transferrable to those of another community or town.

### Lands of partial ownership

The towns were divided into districts or groups of partial ownership, referred to as *tzucul* in Mayan, which is equivalent to the Aztec *calpulli*. It is a political and religious subdivision, since each partly owned land had its ruler and its own special deity. It has been assumed that this type of division could have been brought to the Mayan area by the Nahuatl invaders at a fairly late date, although it is more readily acceptable that the normal growth of the towns, associated with religious concepts, such as the quadruplicity of deities and other elements situated in cardinal points, would have determined the division of the



Land tenure is a factor which shows us with sufficient clarity the type of society that the Mayan had been. Here, in this partial view of Uxmal, we see several Mayan men working on what, in a certain period, were the lands of the State.

towns into four or more districts from the classical period on. These districts would have served as the owners, for communal use, of the specific lands within their domain.

#### Lands through lineage

Within each partially owned regions, the lands were divided into lots for family groups of patrilineal lineage, apparently through ownership and inheritances. In some of the documents of the XVII century, *Títulos de Ebtun* (the "Titles of Ebtun") it is quite clear that the lands of a certain lineage corresponded to the "mountains ... opened up by their ancestors", and it is emphasized that they were clearly delimited and measured out.

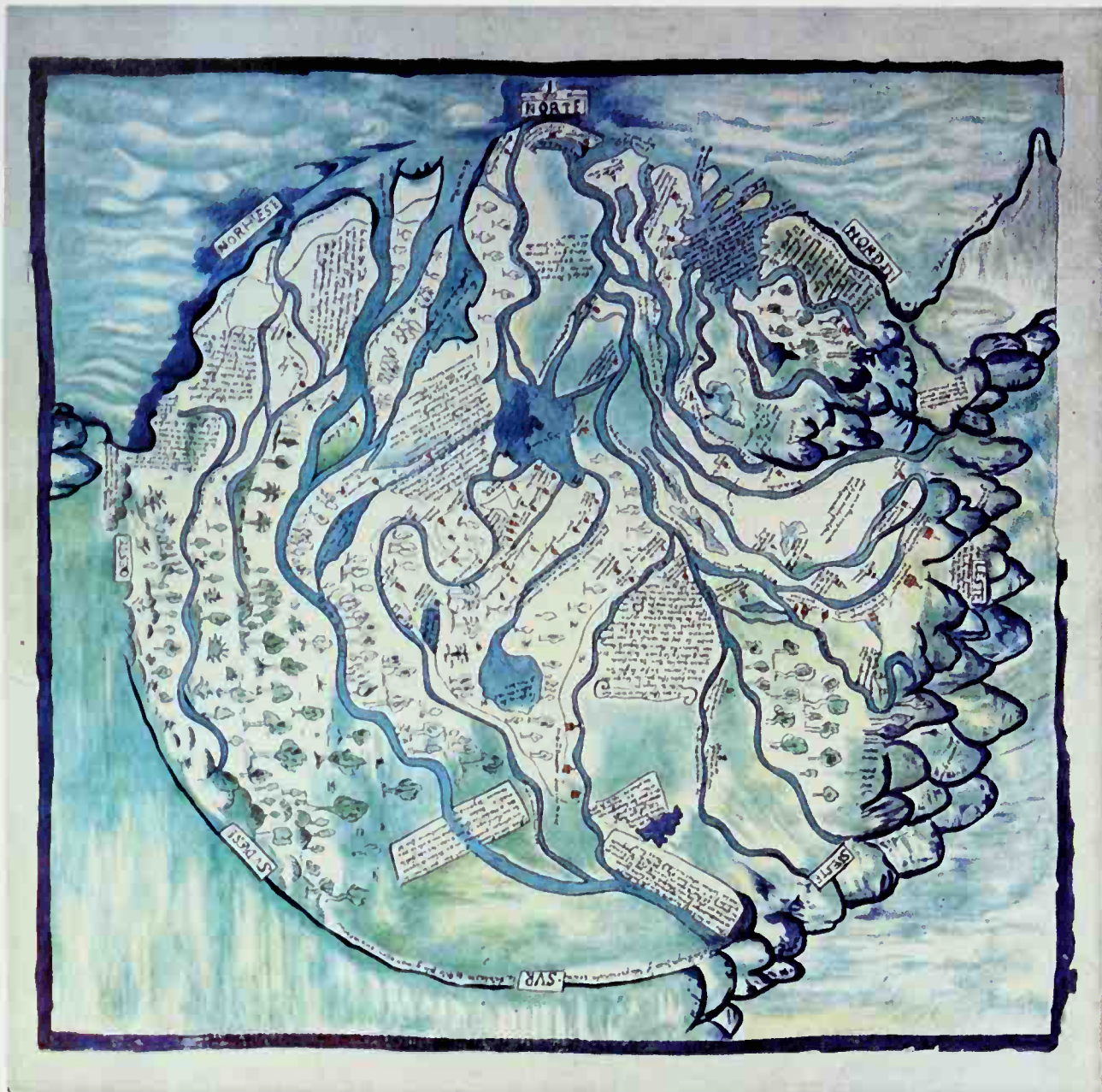
#### Lands of the nobility

The nobles were accustomed to consider as their lands "by the will of the gods, who distributed them", the actual land of the people. By belonging to the nobility the governors of political entities (State, larger or smaller towns, districts), and taking into account that the lineages possessed lands, it is natural that the principal ones, from the ruling line up to those of the rulers on different levels, had lands as their own property. They were able to obtain them through inheritance, purchase, presents or concessions from the highest ruler.

#### Special lands

Special lands belonged to the nobles or to the rich. This had come about from personal efforts or from the investments of capital. These lands were used exclusively for the cultivation of cocoa bean, cotton and some fruits, and represented genuine wealth. The ownership of such lands was absolute for the owner, but it was obligatory to give preference to members of his lineage or to the authorities of the town in case of putting an axis on them, for the purpose of making certain that they would not be burned over to the heads of other towns or villages. They were inherited only through the patrilineal line to the male children.

Although with reference to the Highlands we lack enough information, such as we have



A map of Tabasco drawn by Melchor de Alfaro Santa Cruz in 1579. This map accompanies a geographic kind of description in which the distribution of the lands is shown.

for Yucatan, the data available calls up a picture more or less comparable to that which we have just presented on the subject of land tenure. It is entirely possible to affirm that, at the time of the Spanish conquest, there coexisted two forms of land ownership: collective ownership (lands held in usufruct by the peasants of the village, and of the partially owned lands which were sectioned off), and special or private (the lands of the State over which the highest ruler had complete right of disposal; the lands belonging to lineages, originally opened up for cultivation to their ancestors; the lands of the nobility in the hands of political heads at different hierarchic levels; and the lands which belonged to the rich people).

It can also be assumed that at the time of the classical period there existed two forms of land tenure, but that the private ownership was probably more restricted than the collective one. In point of fact we ought to remember that the Mayan area had been dominated over a period of five or six centuries by invaders who came from the Western frontier, and ultimately from the central region of Mexico, and that the military conquest must have determined the concession of lands in ownership and inheritances, to many of the warring chiefs and civil as well as religious authorities of the conquerors. The communal lands probably constituted the greater part of those that were exploited during the classical period, within a conservative system still unchanged even by the intrusion of alien peoples and before a militarism was imposed which favored, as has always been the case, the transference of the land from the vanquished to those who had distinguished themselves in battle.

#### Usufruct of the products

In any case, the tenure of land in itself does not fully explain the process of production

and distribution of the goods obtained by means of the exploitation of the land. Who did the work on the land and who were the ones to take advantage of this work? To these questions we find answers, in a more or less unanimous form, in the chroniclers of the XVI and XVII centuries and in the modern investigators. In one of the previous chapters ("Organization of work") we anticipated something along these lines. All production work, especially agricultural, was turned over to the common people and was accomplished under the management of the priests, who were accustomed to monopolize the astronomical and calendaric knowledge. Landa states with absolute assurance that "the town or the people had their sown lands, but only for the lords". Cogolludo affirms that the articles of subsistence and luxury arrived to the city "from the vassals to the princess", that is, in the form of tributes.

From the statements of the chroniclers one can deduce that the peasant was able to keep, from what he produced, what was hardly sufficient to meet the most basic needs for himself and his family, and that the greater part of what was exacted with great effort from nature served to maintain the hierarchy of the lords and the priests. From the existence of hundreds of ceremonial centers, which surround thousands of buildings used for religious worship and for the residences of the ruling class, it is deduced that a great part of the surplus produced by the peasant served to provide alimentation for thousands of men who worked, temporarily or permanently, on the construction of the buildings referred to. Besides, a certain class of workers, such as the artisans, the loaders, the cultivators of some specific plants such as cocoa bean, henequen, and cotton, and others who were not producers of food products, would have to count on part of the products produced by the peasant. The development of commerce, especially in the postclassical period, would imply a heavy load for the man of the field since the businessmen, as those who extracted natural products such as salt and fish, or who made products intended for an interchange on a large scale, would have been devoted to their activities on a fulltime basis and would not produce their own food.

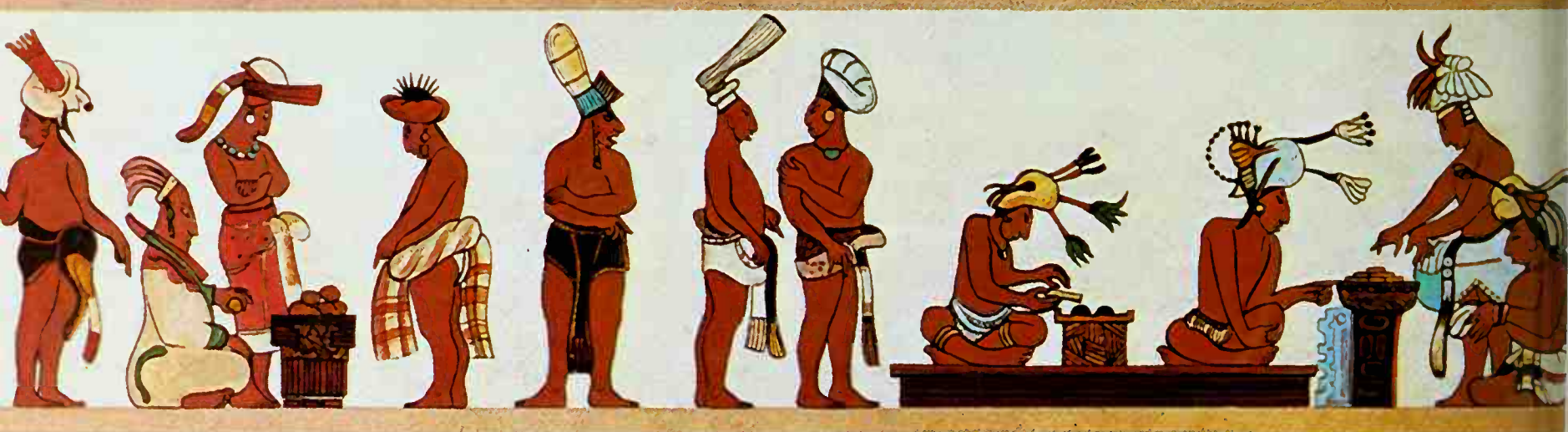
From the historic information available, one can infer that the transfer of good produced by the common man for the rulers and those who were accustomed to devote some or all of their time to the building of monuments or to obtain merchandise for the benefit of the lords, priests and merchants, not only affected the agricultural production, since, under the form of tribute, a large part of what was obtained from the hunt, fishing and collecting was transferred also to the lords and priests.

### Social stratification

What kind of social organization could be set up on an economic basis such as we have outlined? Obviously, a society divided into classes which had not only different but actually antagonistic interests. The social stratification was explicitly presented in the chronicles. Landa describes a Mayan city at the time of the conquest (*Cf.* our chapter "Diverse types of dwellings"), which explains how the distribution of the population around the ceremonial buildings was ruled by social differentiation to the extent that the greatest proximity to the center was in direct relation to hierarchich preponderance.

The same chronicler refers many times to the existence of slaves (sacrificed in the Sacred Cenote), common people (whose homes were constructed—and under which they were buried—"for the benefits of the town"); lords (for whom the lands were sown, their homes being built near the ceremonial buildings and their ashes being deposited in urns inside the temple), and the main people (whose homes were located between those of the lords and priests, on the one hand, and those of the common people, on the other). Others chroniclers, such as Cogolludo and Pedro Martir, also make reference to lords and slaves.

In the light of our present knowledge, we can assert that Mayan society was composed



of four classes, keeping in mind the relations that existed between the various human groups within the process of the production and distribution of goods.

At the top of the social pyramid one would find the nobility, to which the lords as well as the priests belonged, respectively designated in Yucatan, *almehenoob* (that is, those who have a mother and father), and *ahkinoob* (that is those of the Sun). Although we cannot establish more precisely how this nobility was formed, we can assume that a great part of it, at the time of the arrival of the Spaniards, had their origin on the basis of what they had won in war. One has to remember that many of the Mayan rulers, both in Yucatan (Xiu, Itza, and Cocom) as well as in Guatemala, were proud of their possible Toltec or Mexica origin, that is, that the Mayan nobility, in a great part of the global area, came from foreign invasions. The Mayan name *almehenoob* came to be semantically equivalent to the Spanish term *hidalgo* which implied knowledge of one's ancestors and the awareness of being part of a lineage. It is further essential to remember that the quality of a noble was hereditary. To the nobility corresponded the charges as civil leaders; the practise of the priesthood; the high bureaucratic standards; the possibility of devoting oneself to science, whether mathematics, astronomy or medicine, to the handling of the calendar, and to the knowledge and use of writing. Ultimately, this class directed the agricultural activities, determining the time most suitable to prepare the land, to sow, and the rest of the tasks, but without participating directly in them nor in any productive activity. Their standard of living was far superior to that of the other classes, since they were accustomed to make use of what resulted as surpluses obtained from the work of the common people who, of course, constituted the vast majority of the population.

One group for which we do not have enough and exact information, a lack which leads us to doubt its existence as a separately differentiated class, is that of the merchants. In Mexica society it seems that the *pochteca* could be considered as a member of an intermediate class clearly defined, between the nobility and the *macehuales*. When we discussed commerce in a previous chapter, we mentioned the existence among the Mayas of the plain professional merchant, probably on a regional (*ppolom*) scale, in contrast to the owner of a real commercial enterprise (*ah ppolom yoc*), with caravans for interchanges that were interregional and even up to very great distances; and that they also utilized canoes, as Columbus had found along the Eastern coast of Yucatan. It is possible to mention also barter, but on a small scale, directly among the producers in local *tianguis*. The professional traders seem to have enjoyed a much higher economic and social level than the common people, but to judge by the contents of historic information, more than integrate a socially differentiated class, they would form part of the nobility; they would be the nobles devoted to mercantile activities or rich merchants who had become members of the nobility (one should not forget the cases of Apoxbalon, of the lords of Chichen-Itza and of Cocom's son). This group, being or not a separate class, was not accustomed to participate, of course, in the production of goods, but rather only in its interchange. It is highly possible that in this sector of society one would include the owners of cocoa bean plantations which were limited in their geographic distribution—Tabasco and Soconusco—and of a special character due to the use of cocoa bean as currency. It is hard to think that the cultivation of cocoa bean would not have been controlled and monopolized by the nobility or the merchants, just as it is not conceded in our society that money can be fabricated privately.

The great mass of the population constituted the plebeian class of the *ah chemhal uiniccoob*, the "lower, vulgar and coarse men", also referred to as *membra uniniccoob*, "the workers", and *halba uiniccoob*, "little men, common people, plebeians", and through Nahuatl influence, the *maze-hualoob*. These men were responsible for all the production work in the field of agriculture, hunting, fishing, collecting, salt extraction; apiculture and all the other

A drawing inspired by the figures of the *Templo de los Frescos* ("Temple of the Frescoes") of Bonampak in Chiapas, in which the social stratification of the prehispanic Mayas is shown. At the head, the *Halach Uinic* ("The True Man"); below him, the nobles, the families of the nobles and the warriors, the artisans and the merchants and, finally, the peasants (National Museum of Anthropology).



activities involved in production, in a permanent or temporary form, as that of the sumptuary works involved in the construction of monuments for ritual purposes, or as residences for the members of the ruling class. As men legally “free”, they would enjoy some rights, among which were the usufruct of some lands, and individual rights concerning their personal and family life. As far as the goods they produced, we have already stated that they were accustomed to keep only the most indispensable to assure their own survival and that of their families as well, in order to continue producing the goods that the socio-economic system demanded of them.

At a still lower level than that of the previous class, there was the one that had to share the load of production, although their participation was undoubtedly less than that of the common people. We are referring to the slaves, the *p'entacoob*. The chroniclers explain the circumstances under which slavery had come about: the commitment of penal crimes;

The Baroque qualities of the clothing and the attitude of the personages demonstrate the high social rank which they had in society. Lintel 26 of Yaxchilan, Chiapas.



debts; being prisoners of war; to have been born to parents who were slaves; to have been bought by a merchant; to be an orphan intended for sacrifice by his guardian. The slave did not enjoy any rights; he was compelled to work on specifically owned lands, that is, that of the nobility and the rich; and he was the most likely victim, always available for human sacrifices. He used to take part in the production, but whatever he would receive would only be for a precarious survival since he was always threatened by his own state as a potential victim.

Therefore, on the basis of historical sources we can affirm that the Mayan society was divided into differentiated classes, with the exception which we previously pointed out, as regards the merchants. The antagonism of interests between these classes was evident even though it was not manifested in the form of a class struggle.

#### The hypothesis of an organization without classes

In spite of what we consider self-explanatory, some investigators have expressed their doubts about the social stratification among the ancient Mayas, and have suggested the existence, in the classical period, of a social system without any class distinctions.

The hypothesis of a group of investigators such as ethnologists and archaeologists of Harvard University and other North American institutions, is based primordially on the conclusions which were reached from the ethnologic investigations in Zinacantán, a town in the Highlands of Chiapas, the language of which is Tzotzil; and also from archaeological explorations carried out principally in Belize.

One can summarize the main points of this hypothesis in the following manner:

a) At present the population lives in villages and in scattered hamlets. They come together in Zinacantan for political, religious and commercial matters. In the classical period the population used to live in scattered communities, but they recognized one ceremonial center for their reunions and, essentially, for the purpose of fulfilling their religious obligations.

b) The small towns of the classical period had smaller ceremonial centers which consisted of several small buildings. In these towns the priests and the common people used to live together on the same economic and social level.

c) In the same way in which the political-religious obligations are discharged by the peasants appointed for one year, in ancient times the common people would have opportunities to positions in a revolving and temporary form.

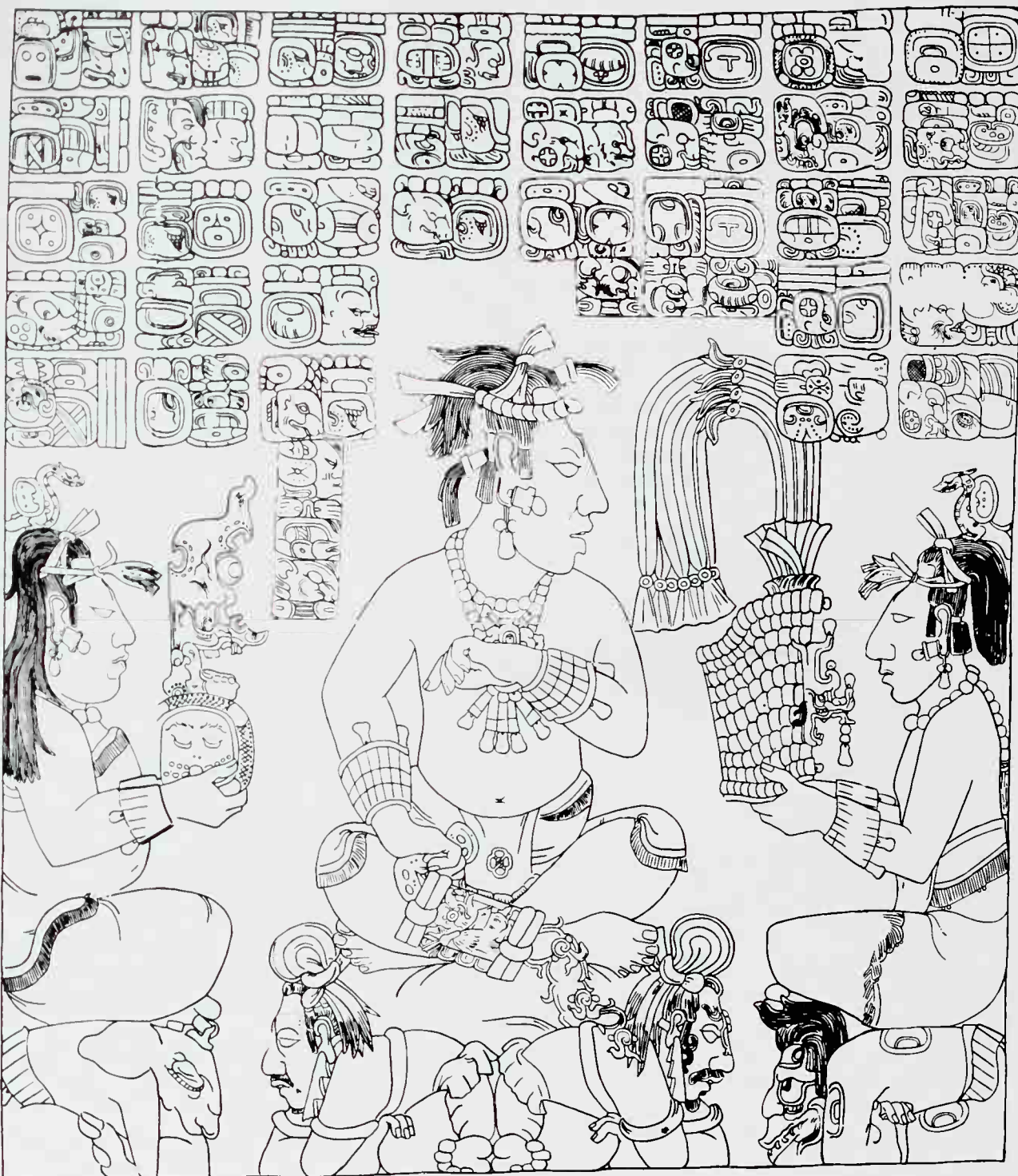
d) The Tzotzil peasants of today are being promoted, little by little, in the hierarchy of the posts, alternating their fulfillment with their normal activities as agriculturists. It can be assumed that the same would have taken place in the classical period and that the promotion would comprise the passing from minor centers to increasingly more important ones.

e) The peasant origin of the civil and religious leaders, their provisional return to the work in the field, as also the fact that when they were given directive posts, that did not free them from their social stratum, would explain the fact that the building of the ceremonial centers; the obtaining of the necessary workers; of the food to maintain the builders and the beneficiaries of the centers; and the absolute conformity of the population to devoting part of their time to such work, did not present any difficulty since the builders and the usufructuaries were in actuality the same peasants.

f) Besides, the peasant population needed only a part of their time to meet their own special needs and much time was left over to them to work on such buildings and to produce alimentary surpluses which allowed them to attain a standard of living more or less similar to that of the other social groups, so that they were able to acquire non-essential goods and even luxuries.

g) The knowledge demanded of the Mayan priests of antiquity was not superior to what is required of the Tzotzil peasants for fulfilling political and religious posts.

h) One should not regard Mayan society as stratified into hermetic classes in which the nobility, that is, the civil and priestly leaders, dominated and exploited the great masses of peasants.



Referring first to the points based on archaeological explorations, we have no objection to *a)*, but only if it is for the interpretations presented in *f)* and *h)*. As a matter of fact, the presence in small communities of some modest ceremonial buildings only means the realization of ritual acts on the level of a village, but does not imply that all the inhabitants were able to have the same wealth in goods and had the same social standing. The findings in small centers in Belize of platforms for dwellings with stucco floors instead of pounded down earth, and of retaining walls well constructed, as well as also some jade objects and ceramics decorated on the tombs which are assumed to have been of the common people, does not provide any basis for the hypothesis that the lower classes did not have a standard of living which differentiated them from the higher classes. On the one hand, the buildings used as dwellings could have belonged to a specific lower hierarchy, whether civil or religious, emphasized by a higher order in the village in the representation of more important leaders, and the same could have taken place with the tombs and the offerings which were more costly than usually. On the other hand, a funeral offering of a specific value can

A drawing of the tablet of the slaves in Palenque. The stratified Mayan society glorified and exalted the priests and military leaders on the gravestones, steles, lintels and sculpture.

eventually accompany a common burial since it is a frequent occurrence among the people of antiquity, as much for the Old World as for America, that the relatives of the dead make a sacrifice and give a gift for their eternal stay in the other life with some purpose they would never have been able to acquire and use in this life.

With reference to the alleged "free time" of the peasants, we have treated this problem in the chapter dealing with the organization of work, and we doubt very much if this factor, that is, "leisure time" had ever actually existed. With regard to the free disposal of the surplus of products created during this hypothetical "free time", we dealt with this aspect in the same chapter and at the beginning of the present one. With absolute certainty the Mayan peasant in prehispanic times, with "leisure time" or without it; the producer of surpluses through his forced labor, with the limited technologic means still inferior to those of our time, would have encountered any number of difficulties to attain a standard of living higher than what it is with reference to the Mayan peasant of today.

To antedate to the classical period the rotating system of existing offices or posts in the present day Mayan population in the Highlands of Chiapas, even assuming the promotion of the peasants to higher levels each time in the civil and religious hierarchy during that period—points *c*), *d*) and *e*)—does not go beyond a hypothesis in which all the historical data which we have treated in the present chapter are opposed, and the archaeologic data as well (*Cf.* the chapter "The art of the Mayas"), which we make use of.

It is certain that for some investigators, among whom are the advocates of the hypothesis under discussion, the historic information of the XVI century has to be considered with much reserve and even up to the point of discarding it in order to appraise the situations which correspond to the classical period. They consider it in that light for the simple reason that the invasions which had emanated from the center of Mexico, and the domination, in great part, of the Mayan area during the centuries prior to the arrival of the Spaniards, altered the forms of life and the organization of the Mayan society to such a point that nothing, as presented by the chroniclers, should be accepted as valid for the classical period.

Well then, the results are now absolutely contradictory. On the one hand, when the socio-political picture as presented by the chroniclers of the XVI century is rejected on the basis of not being applicable to that period, due to the changes that had taken place during the five centuries prior to the Spanish conquest, and, that on the other hand, the present day system may be suggested as an outline of ancient Mayan society, forgetting that what had occurred from that time on, that is, from the 10th to the 16th centuries took place not only in the form of changes already referred to, but also the tremendous impact from the conquest, the three centuries of colonial domination and more than a century and a half of acculturation during the republican period. In point of fact, one ought not automatically apply, nor reject in a categorical manner, the information from the XVI century that belongs to the end of the postclassical period when it is a matter of necessity to evaluate the classical period. It is not possible to bring up the changes in certain aspects of the religious life, of the organization of society, of the aesthetic norms and others, but, most definitely, the secular conservatism of the Mayan people and the complete stability of their daily life (which is still encountered today in many aspects), have to considerably hold in check the attempts at their transformation. Or rather, the last phase of the postclassical period shows a return to the architectonic, sculptural and ceramic patterns, technically and thematically, which had predominated in the classical period and which seems to be the reflection of a process of Mayanization of a culture which only in its highest manifestations, bound to the civil and religious pinnacle of society, had become into a hybrid form, that is, the Mayan-Toltec or Mayan-Mexica.

The hypothesis which we are discussing was criticized (Proskouriakoff, Haviland,



W. Coe, Ruz) and later the authors of these criticisms introduced some important exceptions which changed the more rotund conclusions. On the one hand, it was suggested that the promotion, in a rotating form, of the peasants in civil and religious posts would not reach the point of covering more than the positions of inferior categories, while the high hereditary posts were retained completely for members of the higher classes of society (Vogt). It was further suggested that the present day organization in Zinacantan would correspond more appropriately to the preclassical period prior to the complete development of the Mayan classical society, and which would return to rule again after its decline and the influence of foreign groups (Bullard).

The tendency to deny the existence of differentiated and antagonistic classes among the ancient Mayas, is sufficiently widespread among the Mayan investigators. We ask ourselves if this is not due to an ideologic attitude—whether conscious or unconscious—of the refusal to recognize the existence of classes and their struggles, as a definitive factor in

A numeral glyph. The totemic origin of the clans is inferred from the numerous surnames which correspond to names of animals. These family names are still used in the zone. One can assume that in many cases the common ancestor would have been an animal, such as the *Balam* (jaguar), *Chan* (serpent), *Pech* (tick) or *Pek* (dog).

the historic process of societies, struggles which are developed among them and which culminate in radical transformations, generally attained through violence. To deny this for the past is a form of denying that for the present and immediate future in a kind of tranquilizing exorcism. That is the attitude which one attributes to the ostrich when it tries to escape from the dangers which threaten it.

### The tribal system

It is highly probable that in a previous stage of socio-economic development before there were class distinctions, the Mayan groups would have been organized in a tribal system, according to clans, as is well known, to have occurred on a universal level. Various authors have suggested the survival of such a system within the framework of the classical Mayan society, and in coexistence with stratification according to classes. For some, as for example Morley and Brainerd, only specific traces can be detected in the classical Mayan society; for others, as for Haviland, the system of clans would function in the course of the early classical period and would disintegrate without disappearing completely, during the late classical period under the pressure of a strong development and of the diversification of the economic life.

The data which permitted the elaboration of this hypothesis are, to a great extent, from the information of the chroniclers of the XVI century, although only in the form of indirect inferences, since the clans had by then already virtually disappeared. The terminology employed in kinship terms and the existence of some precise taboos with reference to marriage, between kin individuals are the elements which served as a basis for the hypothetical reconstruction of the system.

The most generally accepted attitude is that the clans were patrilineal, exogamic and probably of a totemic origin. Their patrilineal nature is inferred from the norms of ancestry and inheritance, although some features suggested a parallel matrilineal system. In fact, it seems that in Yucatán patrilineal lineages (*chibal*) and matrilineal (*czacab*) had existed. In addition, the residence of the newly married couples can be matrilocal for a number of years, or patrilocal, which certainly points to the ambivalence of the system. However, the great number of taboos in marriage which pertains to the paternal line in comparison with that of the maternal, which are restricted only to the maternal aunt and her daughter, leads one to think that the clans were fundamentally patrilineal. Haviland believes that the twofold ancestry implicit in the name that was given in Yucatan to the member of the nobility, *almehen* (who has both a mother and father), could rule only in the upper class of society, but he considers that questionable.

Exogamy is manifested in the taboo which prohibits marriage between individuals who have the same family name even though they have no ties of blood relationship. The fact of having a common family name indicated that they belonged to one and the same clan, that is, the origin of a common ancestry through which an endogamic marriage constituted a form of incest. This taboo still exists among the Tzeltals and Lacandons.

With regard to the probable totemic origin of the clans, it is inferred from the innumerable family names still used, which correspond to the names of animals. One can assume that in many cases the common ancestor would be an animal. Among the family names of this kind we can recall the following: *Balam* (jaguar), *Chan* (serpent), *May* (young deer or doe), *Pech* (tick), *Uk* (louse), and *Pek* (dog).

The existence in the Mayan classical society of traces of a tribal system does not invalidate the fact of the division into classes with different and antagonistic interests. The historic information of the chroniclers of the XVI and XVII centuries, the investigation of documents from the civil or parochial archives, the archaeological evidence and the iconographic analysis, all concur in making evident such a division. It is obvious that at the top of the Mayan society there was a minority which exercised the economic, social, religious and political power, a class, economically parasitic which absorbed, in the form of tributes and labor force, the surpluses produced by the tremendous majority of the population.



# Political, Sacerdotal, Judicial and Military Organization

## Mesoamerican empires

From studying the history of the main Mesoamerican peoples, it was possible to arrive to the conclusion that some of these had come to constitute actual empires. That is the manner of referring to an Olmecan regime, to a Teotihuacan regime, a Toltec regime as well as that of the Mexicas. Certain factors are considered essential to qualify the designation of an empire. Among such factors or elements are the dominion exercised by a metropolis over an ample territory and even remote regions, occupied by States which lost their independence or their autonomy in part, when they became dependent States particularly in the political aspect, but also in the military and economic ones as well. A regime or empire implies the existence of an army sufficiently strong and organized to be able to conquer new territories and control those already vanquished. Another quality or characteristic of an empire is the dominion of the metropolitan people over distinctly different ethnic and linguistic groups. Other elements which determine an empire consist of commerce, carried on over great distances; the acquisition of "exotic" products and the imposing of the religion of the imperial center as well as of the stylistic patterns in general.

In spite of the fact that these characteristics cannot be applied to the Mayas, and much before one even thought about the Olmecan, Teotihuacan, Toltecan and Mexica empires, the existence not merely of one, but of two Mayan empires separated geographically, temporally, had already been assumed, that is, an Old Empire, located in Peten of Guatemala and the neighboring regions of Usumacinta and Motagua, and a New Empire, which followed it in the Peninsula of Yucatan and which had resulted from the fusion of Mayan and Toltecan cultures. The transfer of the concepts of the Old and New Empires of Egypt to the Mayan area, Morley's fiction, maintained by him until his death, despite the archaeological evidence each time more definitely negative, had been converted into a dogma and is still conserved in that form in many manuals published on the subject, and even several times in

By means of different symbols the architecture of Chichen Itza shows the social and political hierarchical organization of a people wrapped up in religion and mythology. The *Templo de los Guerreros* ("Temple of the Warriors"), in Chichen Itza.

an implicit form in the minds and writings of present day investigators. However, it is obvious that a Mayan Empire had never existed.

### Autonomous States

From the historic sources we know that at the time of the Spanish conquest the Mayan area was occupied by autonomous States. We know the names of those which constituted a great part of the Peninsula of Yucatan and the Highlands of Guatemala, and we can well assume that in the classical period the situation was more or less the same. If we consider the entire Mayan area as one unit, we note that in one and the same period, people on an equal technologic and cultural level, who had the same knowledge of mathematics, astronomy and the calendar; the same hieroglyphic writing, the same beliefs and the same gods and rituals, manifested their creative spirit in the form of architectonic conceptions and distinct sculptural styles to such a high degree of differentiation that it is impossible to attribute a temple from Tikal to the builders of Palenque and viceversa, or to confuse a stele from Copan with one from Piedras Negras or Yaxchilan. This stylistic diversity which the different regions of that central area, that is, Peten, Usumacinta and Motagua present, has to be a reflection of a territorial division in the form of provinces or autonomous States.

The historical data which we have with reference to the political organization of Yucatan deal, of course, with the conditions that existed when the conquerors arrived, and can be considered valid for the earlier centuries which constitute what we designate the postclassical period. With regard to the classical period we lack documentary information and can only deduce the results from the archaeological monuments and their iconographic contents. The patterns of settlement; the diversity or uniformity of the types of dwellings on the different levels of rural, semiurban and urban concentrations; the distinct types of burials, and further data, which come to light from the archaeological explorations can help us, up to a certain degree, to reconstruct schematically the political frame in which the classical Mayan society functioned.

In speaking of the social organization in the previous chapter, we emphasized the attitude of some investigators who are disposed to accept for the classical period, the historical information which we have available for the postclassical, expressing their opinion to the effect that the invasions which marked the end of the classical period totally altered the norms of life of the Mayas and especially their political and social structures. Without denying that such invaders as the Chontals, the Toltecs, the Pipils and Mexicas ought to have changed the Mayan institutions, concomitantly one should not forget that these foreigners had also belonged to the Mesoamerican culture and that they were, basically, accustomed to participate in their systems, ideas and general ways of life. It could perhaps be said that in the postclassical period, with the invasion of a more virulent militarism and with the increase of commerce, the society was, on the one hand, more complex than during the classical period, and, on the other, less homogeneous, their political organization being more ramified although within some structural patterns common to Mesoamerica.

### Political organization

According to the historical information on Yucatan, each State was governed by a *halach uinic*, that is, "a true man", also called *ahau*, "lord", who belonged to the nobility and whose post was hereditary. His eldest son succeeded him on his death, and in the event of the lack of male descendents or of the age to rule, the throne was given to his older brother. He enjoyed a wide range of powers as much on the civil ground as on the





The distinct historic evidences confirm for us that "the priests were the lords, the heads and superior to all..." This drawing of a personage is beautifully sculptured on the grave-stone of the *Templo de la Cruz* ("Temple of the Cross") in Palenque, and presents a priest smoking a huge pipe.

religious. He was accustomed to rely on the advice of a Council of State, called *ah cuch cab*, "the ramrod of the people", which was made up of priests and heads from the highest ranks of society. The *batab*, appointed by the *halach uinic* and frequently a relative of his, governed the satellite cities. The *batab* fulfilled civil, judicial and military functions: he collected taxes for his governor, administered justice and was the military chief of the unit he was born in. A local council assisted him, and he also had several *ah kuleloob*, aids who transmitted and executed his orders, and the *ah holpopoob*, "those who are at the head of the mat", who had such obligations as the management of the *popolna*, "the house of the people", a place of reunion for the men to discuss their business, to arrange the ceremonies, and to organize the dances and songs. The *ah holpop* was the chief singer, the head of the musicians and in charge of the musical instruments; the *tupil*, on the lower level in this bureaucratic hierarchy, was entrusted with fulfilling the orders which come from his superiors. In spite of the fact that the *batab* exercised military power, in case of war the effective command rested on the *nacom*, the expert in war activities.

It was assumed that during the classical period the concentration of power was greater than in the postclassical. The basis for this was the fact that along with the dynamics typical of the development, each time more complex, of this society, there would have been a need for a specific division in the management of the civil, religious, military, judicial and mercantile activities, although the rigid stamp of an autocratic government would, of course, continue. The fact that important personages who appear on the steles, lintels and panels of the classical Mayan monuments may be holding objects which have a religious connotation (a scepter with a serpentine handle, which culminates with the mask of a god, probably the rain god; a ceremonial bar with signs which represent celestial bodies and which terminates at both extremities with heads of serpents, and which supposedly symbolizes the heavens; a circular shield with features of the Sun god) seems to indicate that the governors used to exert, besides, a priestly function, that is, their political power emanated from their ecclesiastic state as agents of a deity.

In a magnificent sculptural work, stele 11 of Yaxchilan, this duality of power in the hands of the Mayan ruler is clearly expressed: with his head raised in front of various subjects or kneeling vassals, the ruler hides his face behind a mask of the solar god. The personage who imposes his power in this scene is, for those who are inferior to him, no less than a god.

#### Sacerdotal organization

The preponderance of priests in the power structure even during the period preceding the conquest, is confirmed by the chronicler Diego López de Cogolludo when he states that "the priests were considered as lords, the heads and superiors of all the people, and were the ones who meted out punishments and made awards, being obeyed with great respect". Their field of action, of course, went beyond the purely religious, as it embraced also the political and judicial. Besides, the priests monopolized the scientific knowledge in the fields of astronomy, mathematics, the calendar, writing, and history; whereby their dominion over the individual and the group as a whole was absolute.

The information which Landa provided pertains to Yucatan, but only to a late period. However, one can assume that the organization of the priesthood in other regions of the Mayan area and during the classical period did not differ to any great extent from that one presented by the chronicler. A generic term designated all the priests, and when the Spaniards arrived, the same name was used by the Mayas to designate the friars: *ahkin* (plural, *ahkinoob*). The meaning of that term, "he of the Sun", indicates the great importance of solar worship, or that in its origin the priesthood would have been specifically associated



with such worship. (In a preceding paragraph we mentioned that the Head priest wore the mask of the solar god of Yaxchilan.)

The highest priest, according to Landa, was called *Ahuacan May*, but it is highly likely of this information to be related to a certain individual whose family name was *May*, which is still frequently encountered, and so, therefore, that the title was only *Ahaucan*, that is, "the serpent's lord". The scepter to which we refer as characteristic of many personages in the monuments of the classic period, with its handle in the form of a serpent, suggests that the title would have been very widespread over a great part of the Mayan area (Petén, Usumacinta, and Motagua) in that period.

The great variety in the functions of the priests would most certainly imply very specific positions and we do have some knowledge about them from the chronicles. Besides, there were distinct levels in the ecclesiastic hierarchy as in the civil one, in accordance with the importance of the centers. Of greatest importance was the function and position of the *chilam*, the prophet or seer, highly venerated by the people, who carried him on their shoulders when he was presented during public ceremonies. A connoisseur and interpreter of the books in which were recorded the historic events and all happenings such as the astronomical, meteorologic, etc., which called their attention, the *chilam* used to announce of forebode their repetition in accordance with the cyclic recurrences of the calendaric periods.

Another important position, although not very esteemed by the people, was that of the *nacom* who was in charge of human sacrifices. While it is assumed that all the other positions of the priests were hereditary, the *nacom*, however, was elected and on a lifetime basis. In order to affect the sacrifice it was customary to open the breast and take out the heart of the victim, in which act the *nacom* was assisted by four venerable old men, chosen for each ceremony. Their mission was to hold down the arms and legs of the victim when he was placed on the stone that was used for making the sacrifice. Such venerable old men were called *chaacoob*, a word which has a completely different meaning as it signifies the god of rain. They, i.e., the *chaacoob* also helped in other ceremonies, as, for example, that of puberty, that of the new fire in the month of *Pop*, with which the civil calendar was initiated, and also in some others related to specific holidays on the calendar, in the rituals of apiculture, and probably still others.

On the lower level of the priestly hierarchy one finds the *ahmen*, "the one who knows", the one who had more contact with the people, since he was accustomed to participate in the indispensable agricultural ceremonies at the time of sowing and harvesting or during prolonged periods of drought which made it necessary to pray to the rain god *Chaac* during the ceremony of the *cha-chaac* for the rain that was lacking. The *ahmen* was, in addition, the sorcerer and witch doctor, that is, the one who had the power to provoke illnesses and detriment, but who was also able to provide the remedy for them. It is precisely the post of *ahmen*, of all the diverse religious posts, the one that has survived till now.

### Judicial organization

The chronicles that provide the data for Yucatan are in accord, to the extent that the Mayas were regarded as peaceable and "were governed by laws and good customs", which we can readily accept since there is confirmation of that in the present Yucatecan population which still is respectful of the laws and has a profound feeling of justice. More difficult to accept is Landa's statement to the effect that "these people lived so peacefully that there were never any disputes among them". The chronicler obviously contradicts himself since he also refers to the violations and crimes for which corresponding adequate punishments were indicated. We have already stated that the civil chiefs and priests, apart from their specific functions in their respective offices, also exercised judicial powers. That specifically

The Mayan pyramids erected so as to be nearer to heaven—as that of Tikal, Guatemala—were also intended to be separated from the ground so as to invoke the divine forces on high.



On this lintel from Yaxchilan, Chiapas, there appears on the right, the *Halach Uinic*, completely attired with a miniature sceptre which handle terminates in the head of a serpent; on the left, another personage, but of lower rank, who is carrying an offering in his hand.

applies to the *batab* in the town under his jurisdiction, who resolved a number of problems, particularly when they concerned the community as a whole, as, for example if the detriment affected an individual of another town, then, in order to avoid still greater conflicts, which would disrupt the good relations with the town of the guilty, the *batab* of the latter gave satisfaction to his colleague, but only provided that the detriment was the result of an involuntary fault or offense.

But from the chronicles one can actually infer the existence of actual judges, functionaries "to hear the complaints". Cogolludo makes it quite definite that "other ministers were designated who were in the capacity of lawyers and magistrates and were always ready to assist in the presence of the judges". This statement suggests different functions, and probably even levels, in the judicial structure. The judicial functionaries received gifts from the contending parties which were referred to as retribution for the exercise of their duties.

A clear distinction was established between involuntary and voluntary offenses. Among



In the general picture of a society set up on the basis of classes in which a ruling minority enjoyed all the privileges, the extraordinary architectonic works expressed the glorification of a social world dominated by religion. The *Palacio del Gobernador* ("Palace of the Governor") in Uxmal, considered by many as the most perfect work of Mesoamerican architecture.

the former are cited accidental homicides, the suicide of a man or woman because of the guilt of the spouse; the accidental fire in homes, beehives and granaries, which occurred with a certain degree of frequency when the brush was burned before the sowing. In all such cases judgement was passed with definite kindness, and if the guilty party lacked the economic means to pay for the damage, then his friends and relatives were allowed to give him the necessary help. On the contrary, as Landa makes very definite, "the other offenses committed with malice of forethought, always had to give satisfaction through the shedding of blood and through blows". As one can readily perceive from some examples, justice among the ancient Mayas was severe, inflexible and without appeal. Intentional or accidental homicide was punishable by the death penalty if the relatives demanded that, or paying with a slave for the dead person. When the murdered was still a minor, he became a slave. Thievery, even though it was of less gravity was punished by slavery, which lasted for the time it was considered necessary to pay for what had been stolen. If the thief could not pay the full value of what he had misappropriated, he remained a slave for the rest of his life. Adultery received an exemplary punishment, but the offended husband had the prerogative of pardoning the guilty, who was then set free. When pardon was not granted, the form of the punishment was a disgraceful death at arrow wounds, or with the head crushed by a huge rock, or it was even possible "to order to take out the guts through the navel". An adulterous woman could also be condemned to death, but as a rule it was sufficient to expose her to public disgrace. The rape of a virgin or married woman was also paid for by the death penalty. Among the *Xius* sodomy was a serious offense and the guilty were burned in an oven. We do not know if the other Mayan groups meted out a punishment similar to that. Landa affirms that he did not found such practise in Yucatan. A traitor to his master, as also anyone guilty of arson, was punished by the death sentence. When a debtor died without having liquidated his debt, his wife and children had the obligation to pay that, and in the event that they did not do so, became slaves until the full value of the debt had been paid for.

Within the general picture of a class society in which the ruling minority were the lords, priests, rich merchants, functionaries and war chiefs, who enjoyed economic, political and social privileges, it is strange that, according to what the chroniclers state, justice was applied



with the same degree of severity to the nobility as to the plebeians. Landa asserts that lords guilty of some offense had their faces carved from the beard to the forehead on both cheeks, whereby they retained for all times the mark of their infamy. Besides that, if their crime or offense deserved the penalty of death, it was inflexibly applied. A number of concrete cases are cited with reference to rape of virgins, one of which was perpetrated by a lord from Mayapan, for which her brother "had him killed in the most insulting fashion", and another by the brother of the lord of the *Tutul Xiu*, whom the governor condemned to be lapidated and then abandoned under a huge pile of rocks. If this information is accurate, then it implies a profound sense of equity among the Mayas of Yucatan, a feeling so strong and deeply-rooted that it was imposed indiscriminately, that is, without giving any special consideration to the social level of the delinquents and criminals.

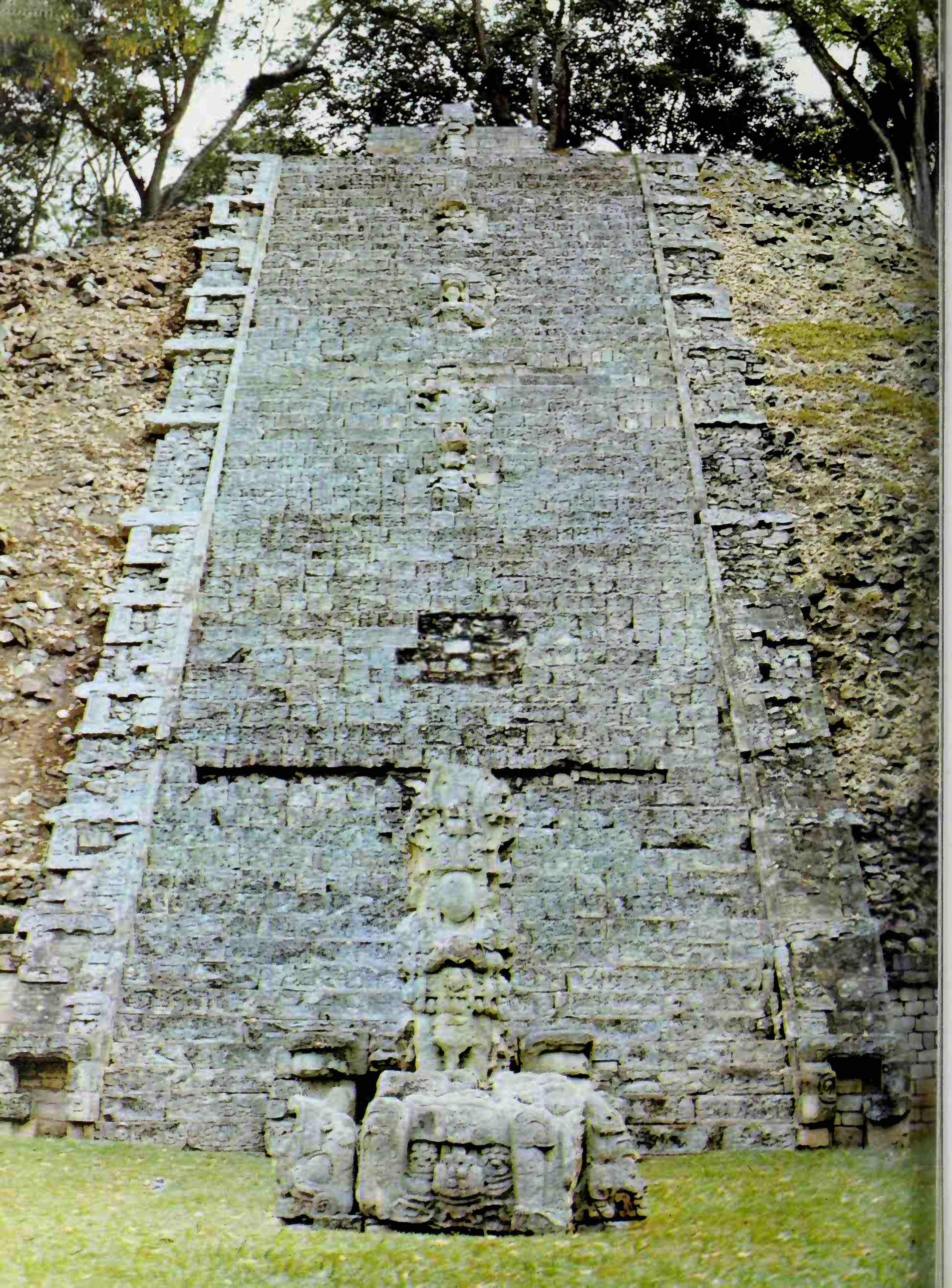
### Military organization

Idealizing the ancient Mayas, it was affirmed over a very long period of time that they were a peaceable people, and that the bellicose conflicts arose as a result of several invasions which proceeded principally from the center of Mexico. First the Toltecs, later the Mexica mercenaries, all of whom would have introduced warriors, new weapons, military orders and a militaristic organization which would have clashed with the atmosphere of peace of the classical period. It is evident that, independently of the fact that the complex warrior in the postclassical period imposed many of his norms and thereby changed the theocratic regime of the earlier periods, the Mayas were also familiar with war, arms, armed groups, tactics of combat, rules of attack and defense, and a specific manner of military organization. As eloquent proof of that we have the innumerable monuments of the classical period, primarily from the region of Usumacinta (the steles, the lintels, the slabs, and the mural paintings) which depict armed chiefs and bellicose scenes. The conflicts could have arisen between hostile Mayan groups in matters of territorial limits or through exploitation of natural resources; between the Mayas and neighboring communities, ethnically distant since they exercised pressure over the former, or by attempts to extend some Mayan faction. One should not disregard the use of the militia to maintain the internal order, supporting the regime, including the possible repression of rebellion outbreaks as Alejandro Lipschutz has suggested with regard to the mural paintings of Bonampak.

Upon invading the Mayan area, the Spaniards had to engage in combat with the natives, who in some instances inflicted heavy losses upon them. According to the information of the chroniclers, the *batab*, in addition to his civil and judicial functions as already mentioned, was the head of the armed forces within his jurisdiction; his position was for life and hereditary as well. However, in time of war, an authentic military commander was elected, the *nacom* (although the title may have the same form as that for the sacrificer, it was not a matter of the same person), who was in charge of this office for three years. While he was in charge, this war chief was compelled to follow an ascetic life, which included abstinence from sexual intercourse and adherence to a severe diet. Under his command were the mercenary soldiers, the *holcanes*, who received emoluments only in time of war. In accordance with the necessities of war, the *nacom* was able to recruit men from the populace.

Summarizing the data which we have at our disposal on the political, priestly, judicial and military organization, it is possible to affirm that among the ancient Mayas (not only those of the postclassical period to which the colonial sources refer, but also of the classical period which can be deduced from archaeological and iconographic testimonies) prevailed an organization which pertained to the State and amalgamated the civil, religious, judicial and military powers, and functioned through an authentic bureaucracy divided horizontally into corresponding branches of activities, and vertically into hierarchic rungs. Their efficiency can be evaluated by taking into account the centuries of apparent sociopolitical stability which represents the classical period from 300 to 900 A.D., and, although less stable, several centuries of the postclassical.

A ceramic piece from Jaina which represents a warrior (National Museum of Anthropology). The military class played an overwhelming part in Mayan society as it had constituted the sustenance of the priests as a class.





# The Socio-economic Qualities of Mayan Society

## Universality and singularity

When it is a matter of describing an ancient society which does not have available written sources or, whose existent sources lack sufficient information, the investigator can be tempted to adopt one of the two opposed positions: to include it globally, while omitting particularities within universal schemes or, on the other hand, to exaggerate the particularities by considering them unique and denying their possible integration into a universal model. In our opinion, both positions are erroneous because of their excessive simplification of a complex problem.

On the one hand, it is beyond discussion that it would be difficult to find two human societies exactly the same, since all are the result of an infinite number of causes of ethnic, geographic, ecological, technological, chronological, historical and ideological origin, in which internal forces of development and external pressures are at work.

On the other hand, all human societies have to solve the same fundamental problems: adaptation to determined natural environments and the changes to which they were subjected; exploitation of animal, vegetable and mineral resources for their survival and development; creation of technical means to dominate nature; organization of human groups to assure their existence; explanations of the forces and phenomena of the universe and life; search for a better way to use in an advantageous way these forces and phenomena; improvement of the social mechanisms at the same time as societies progressed materially and became more complex in their operations, etcetera.

To generalize about an extremely technological basis leads to unacceptable conclusions as would be the case if one were to define Mayan culture as neolithic, in accord with the designated law of the three ages, because they had not had any acquaintance with either the bronze or the iron age, and because they had not emerged from the techniques of polished stone to make their utensils and tools. The application of Morgan's concepts to the

Enigmatic front steps in the hieroglyphics, integrated with thousands of written symbols, Copan, Honduras. This is an example of the fact that the Mayas knew how to solve problems in a unique manner, problems which the physical medium raised for him, showing more and more material progress and the development of a complex culture.



development of Mesoamerican and Mayan culture, in particular, arouses perplexities and doubts: in some aspects it is unquestionable that it is integrated with the period which he designated civilization, but, according to him, this ought to imply the invention of a writing with a phonetic alphabet; the use of metals; the utilization of wheels for transportation; and the use of the plow, knowledge which neither the Mayas nor the other peoples of Mesoamerica had attained. From here on there is the danger of generalizations on a universal level. However, the comparative study of a specific society with others which present similar characteristics, not only technologically but also in the very foundation of its economic life, in the organization and functioning of its social body, in its mechanisms of power, and even in its ideological concepts, can lead to the integration of the society in question within others, perhaps better known, with the possibility of finding in them an explanation for phenomena difficult to understand within the specific context of that society.

#### Economic substructure

We believe, that in order to reconstruct for ourselves the image of any society whatsoever, it is imperative to begin with whatever had permitted it to attain the point which was the very basis of its economy and social structure. To consider only the technological, aesthetic, scientific, religious and ethical elements of a culture without trying to explain the society which created them is akin to describing the wearing apparel of an individual while ignoring the man himself.

Concretizing the theme of our work, which is the Mayas, we have confirmed that the

A partial view of the city of Tikal in Peten. Several particular elements of Mayan culture have led to dangerous generalizations such as those which attempt to identify Mayan architecture with that of Southeastern Asia.



The difficulties from the geographic environment were not an obstacle for the creation of a vast zone of Mayan influence. A panoramic view of the Usumacinta River in the present day State of Chiapas.

investigators in the field of Mayan studies have shown very slight interest in the economic problems; and with regard to the social and political organization, the greater part of them limited themselves to repeat the scantiest references which historic sources have made thereto. Morley does not present any sociologic aspect; Thompson treats virtually nothing with reference to the economic life, and attributes all the attainments achieved by the ancient Mayas, to spiritual values; Brainerd tries to correlate the artistic and intellectual accomplishments with the economic development, but always only in order to come to the conclusion that the Mayan phenomenon constitutes a unique exception in the universal picture, since religion was far more fully developed than economy, and the intellectual progress did not respond to adequate material conditions, as in the Old World.

#### The contradiction between the substructure and the superstructure

Brainerd and other Mayan specialists posed a question with respect to a possible contradiction between the low technological, economic development and the impressive cultural development of the Mayas. For some investigators, as, for example, Sanders, Price, Wolf and Palerm, who are not precisely Mayan specialists, but who had given their attention to the problem of the Mesoamerican societies, and among them the Mayas, from sociological, ecological and economic angles, the answer to this question would be that Mayan agriculture was not based on an elementary technique, incapable of producing the necessary surpluses to maintain a complex social structure, as the form of cultivation designated grubbing is, but rather fundamentally, such as if happened in Egypt, Mesopotamia, Indochina,

Cambodia and China, and that a more intensive cultivation would have existed which made use of important hydraulic works, of which until now, archaeology has only detected some slight and isolated evidence.

In their socio-historical interpretation of the prehispanic Guatemalan society, Guzman and Herbert treat the Mayan postclassical more than the classical period, and, in addition, exaggerate some features such as the development of private property, the existence of slavery and the militaristic domination. Likewise, they consider an "exaggerated Utopian socialism" the statement that there existed "collective forms of tenure and use of land" and they characterize that society as one basically mercantilist and highly civilized, in spite of the fact that in the technical aspect it fell within a "superior neolithic period" and that in certain aspects it continued to be "primitive because of the vices or bad habits of tribal organization".

Of course it is not easy to understand how a society of the kind that the Mayan was, constructed on a limited economic substructure and dependent on a rudimentary technology, was able to achieve impressive intellectual progress in the fields of mathematics, astronomy, the calendar, writing and art. To justify such advances on the basis of the supposed predominance of spiritual values over material considerations and necessities as Thompson does is not convincing, since there would be lacking the explanation as to how they were able to have developed these spiritual values and why only a small minority had them and derived benefits from them.

We ask ourselves the same question, but we resist the temptation of accepting the proposed uniqueness of Mayan society within the universal whole of ancient societies. We are convinced that the history of these people, their economic, social and political development were not attained by chance in any anarchical form, but rather in accordance with general laws; although we recognize that some factors, including the human aspect under the form of personalities, who in any determined moment may impose a different course of events, can accelerate, restrain or "temporarily" hold in check the march of history. We underline the "temporarily" since the parenthetical statement that can signify the outbreak of some of these human factors, besides the fact that their possibility falls within the framework of historic laws, is generally closed in a short time and the dynamics of the historic occurrence returns to its own rhythm and course.

### Modes of production

According to the Marxist schemes of evolution of precapitalistic societies, we find an answer to the problem which Mayan society presents with reference to the contradiction between their economic substructure and their cultural superstructure. This reply is contained in a set of concepts which integrate what has been designated as the "theory of the Asiatic mode of production", concept implicit in a number of texts by Marx which were analyzed, commented on, and enlarged upon by a number of sociologists in France, for example, Godelier, Chesneaux, Vidal-Naquet and Terray, and by Bartra in Mexico.

According to this point of view, the development of societies is based on the form of production which embraces the productive forces (natural resources, human groups, technology), and the relations to production, that is, the form in which the goods produced by a society are distributed among its members. On this basis, i.e., the economic substructure, the social structure is erected out of which the superstructures will emerge which may be cultural, political, juridical or ideological. These, in turn, assure social cohesion, the functioning of the whole, the acceptance and conservation of ethic and religious norms, etcetera.

On this contextual basis, and limiting ourselves to precapitalistic societies, we are

Mayan society was organized along the lines of a productive system, designated Asiatic, which allowed, through the collectivization of work, the construction of large urban centers.



going to consider the following stages of development, or, rather, the following models, since it is not a matter of forcibly treating successive phases along one and the same line, but rather the diverging possibilities out of which some, under definite conditions and in some specified times, can constitute a sequence:

- 1) *A primitive community*, divisible into two aspects:
  - a) a natural nomadic community based on hunting, fishing and collecting, with a simple domestic organization, i.e. tribal or vaster groups;
  - b) a primitive agrarian community based on agriculture with collective property and exploitation of the land with tribal organization.
- 2) *The Asiatic mode of production* with a coexistence of village communities and an incipient State which join together the economic, political and spiritual power.
- 3) *The ancient classical mode of production*, based on the coexistence of limited ownership by peasants, and communal ownership; and also based on the grouping together of the greater part of the population in cities.
- 4) *The slavery mode of production* based on private ownership of land and of the slaves who work on them. Such slaves were regarded as the chattels of the master.
- 5) *The Germanic mode of production* based on rural dispersed communities, small independent land owners and some communal lands such as forests, pastures and enclosed lands for hunting to complement the private ownership.
- 6) *The feudal mode of production* based on the exploitation of private properties of the feudal lords, the vassals of the monarch and through the serfs bound to the sod as part of the feudal system.

#### Asiatic mode of production

If we compare the characteristics of these different models with those of the pre-hispanic Mayan society, we find very many similarities between this one and those which in the Old World were based on the so-called Asiatic mode of production. It is clear that not all the features which are attributed to this kind of production are found in the society referred to, but that as an abstract model elaborated on the existence of concrete elements in distinct universal societies, it resembles them to a great extent, coinciding almost exactly with the general economic, social, political and cultural picture of the Mayan civilization and, of course, much more so than any of the other models. But let us see how, taking into consideration the general concepts of Marx on this theme and the corresponding commentaries together with the propositions of the authors already cited, we can summarize the characteristics of the Asiatic mode of production, also designated despotic-village or despotic-communitarian and, more recently, tributary.

The contrast between the low technological level and the relatively high productivity is worthy of note. This productivity, which is due to the organization of work, is, to a great extent, collective and under institutionalized and centralized management. The manual labor is controlled not only for the agricultural operations (such as the clearing and burning of the woods, rotation of cultivation, and fallow, and hydraulic works), but rather for more important public works as, for example, the ceremonial centers, roads and defense.



The *Palacio de Labna* ("Palace of Labna"), built during the late classical period and in the Puuc style.

The communal form of land ownership predominates although there may exist spurts of private ownership as a result of eventual donations to high functionaries, aristocrats, and distinguished warriors for the construction of temples. The rights of the individual over the land are practised in an usufructuary form through the rural community.

Together with the rural communities there is a higher unit which pertains to the State and that directs and exploits them, appropriating for itself the surpluses which the communities produce by means of imposing taxes in kind, or utilizing the work of the members under the heading of "payment for services".

The appropriation of the surplus goods from the rural communities is carried out by means of a bureaucracy hierarchically arranged and only for the benefit of the representatives of the State. The producers of these goods can keep only the most indispensable for their own survival and that of their families, and for the assurance of the continuation of the system. The exploitation of the individual is accomplished while the group which exploits may not necessarily have land tenure or, having it only partially.

The vast majority of the population integrates the peasant communities, established in dispersed villages. Cities play no important role in the economic sense; the function of the city as such appears to have only a secondary value.

The minority, made up of representatives of the higher level of the community, that is, of the State, forms hierarchical groups which are differentiated on the basis of their functions: civil, religious, administrative, and military ones; their geographic location (regional or local groups); and their levels of importance; all of them acting coordinately among themselves.

In exchange for their supposed intervention for help from the gods, this minority exploits all of the communities, forming what has been referred to as "generalized slavery", in contrast to individual slavery which was the slavery mode of production.

The Asiatic or tributary mode of production is a transitional form between a classless society and a class society, since there village communities coexist and, on a higher level, it is a form pertaining to the State whose members integrate the higher privileged class.



The power, which was justified in itself and for all the others as a means of realizing operations with a common interest (economical, political and religious), was gradually becoming into a power to exploit, but without forfeiting its quality as an operational power.

The sovereign represents unity, cohesion and permanence of the community; he assures the functioning of the social organism through traditional institutions, in an absolute form, by means of the whole hierarchy. He is considered a divine being and, together with the diversified and hierarchized bureaucracy which operates in its surroundings and which depends upon him, is presented before the populace as a higher entity, the symbol of the unity of the village communities.

To strengthen in individuals the confidence in the unity and permanency of their community, considered as of divine nature, some rituals are celebrated in a constant and absorbing form, among which are the periodic holidays; imposing monumental works are constructed for greater glorification of the gods and for their representatives on Earth. However, only the members of the highest levels have access to the temples in which the sacred ceremonies are celebrated in the presence or in contact with the deity. An immutable order rules the cosmos and all the Land: the image of a society strongly organized in which man is not important.

On the whole, the Asiatic mode of production corresponds to the age of metals: the domination of man over nature; the invention of new forms of cultivation; the development of architecture; the use of calculations and writing; commerce and the use of money; the application of law, etcetera.

### The mode of production among the Mayas

We have already made clear in this chapter that we believe that the mode of production which existed among the ancient Mayas, was the one referred to as "Asiatic", or despotic-village or despotic-communitarian or, still simpler, tributary.

In the following lines we shall determine very precisely the features of Mayan society which coincide with those of the model cited and those of a few others which differ from it.

In previous chapters we also mentioned the low technological level of the Mayas since they had no knowledge of metals, the wheel, the plow nor of animals for teams nor as beasts of burden, and that their only tools for agricultural work were the stone axe to cut

Detail from a glass from the South of Campeche, corresponding to the late classical period (800 A.D.), the realism of which reflects the arrangement of their society into hierarchies.



down woods and the stick to plant for sowing. Yet, the agricultural productivity had to be high in order to assure food, not only for the producers, but also for the ruling class and for the other groups of the hierarchy such as the merchants, artisans on a full-time basis, the workers who took part in the construction of the ceremonial centers, etcetera.

We know that many agricultural tasks were collectively done and that the priests, through their manipulation of the calendar and their knowledge of the seasons, especially the approximate date of the beginning of the rainy season, directed agriculture in the highest conceivable form of collective living. The great mass of the population was controlled in this manner, not only for agricultural work, but also for other important works of public nature.

During the classical period, land tenure would have been much more communal than private, the latter being limited principally to certain cultivations such as cocoa bean, perhaps henequen, and fruits in some cases. The peasant was usufructuary of the land which belonged to the community. During the postclassical period, as a result of the arrival of the invaders, of an atmosphere more bellicose than during the classical period, of the increase in militarism, and of the struggles and conquests, private property ought have increased considerably. However, the greater part of the land continued to be retained as communal property.

The chroniclers clearly mention the payment of taxes to the lords on all of the goods the lower classes produced. These taxes were not only payment in kind, but also in the form of services, through more than ample participation which was absolutely obligatory for thousands of men who worked on the ceremonial centers. It is evident that in spite of the fact the ruling class did not have land tenure or, if they did have, they were only partially owned, that group did appropriate the surpluses of production.

In the chronicles we also find some information on the forms in which the appropriation of goods was effected through the functioning of a bureaucracy, both specialized and in the form of a hierarchy within the framework of an autocracy.

The peasant population, by far the majority within Mayan society, lived in hamlets, villages and dispersed towns which formed satellites around the ceremonial centers, and the partially urban ones on which they depended. In the last few years the concept of a ceremonial center has been modified, due, to a great extent, to the explorations in Tikal and Dzibilchaltun, and nowadays a process of urbanization is recognized for the late classical period, mainly in which within the ceremonial centers are integrated, not only the dwellings of the rulers and their workers, but also probably those of the merchants, functionaries of different ranks, and the artisans on a full-time basis, a grouping which seems to resemble what Landa describes for a postclassical site, apparently Mayapan.

The ruling class with its *halach uinic*, its *batabes* in the towns, its advisors, the *ah popoloob*, the *tupiloob*, and the remaining civil and religious functionaries, their judicial organization, their militia and administrators, form in actuality an State organization centralized and arranged hierarchically, with a division among its members on the basis of their functions, who devoted their time to specific activities which embraced all the social needs and all levels.

Since the advanced preclassical period, that is, for many centuries before and several after the beginning of our era, some important personages appear on the Mayan monuments who are not deities that have been changed into humans, but rather probably governing priests within a theocratic system. These presentations already reflect the very existence of individuals politically powerful, who have at their disposal the material and human means for their self-glorification and who since then have constituted a privileged minority.

This minority had to have its remote origin in the sorcerer. He was naturally endowed



with supernatural powers that enabled him to attract the beneficent forces of nature and to counteract the evil ones. At the outset he would act as a simple intermediary between men and the forces which were not as yet embodied into gods. His power was functional but it was practised through magic. With the development of society, magic was converted into a religion. The magicians, isolated, formed a body of priests and, for their sustenance and for the construction of hundreds of centers dedicated to religious worship and thousands of monuments built to honor the gods, their functional power acquired the right to exploit. The division which was started in the preclassical period culminated in the classical one with a marked separation between the ruling, civil and religious class, and the great masses of the population.

Within this regime the highest priest was simultaneously the sovereign ruler with absolute power; although he had his advisers, he was considered of divine essence, or rather a divine being (let us again remember the personage on stele 11 of Yaxchilan with his mask of the sun god).

The great number of deities, the celebration of frequent ceremonies and religious holidays, and the vast proliferation of buildings for rituals reveal that religion served as the binding principle of Mayan society and as an instrument for domination in the hands of the higher class. The Mayan man, as an individual and as a part of the community was looked upon, from the moment of his birth to his death, as imprisoned by a world which had meaning only through religion, a world in which health, prosperity and survival were within his reach, but only in accordance with the extent of his faith and his inclination to serve the gods through their representatives on earth. That was the reason of their absolute surrender to religion and of their submission without reserves to the priests.

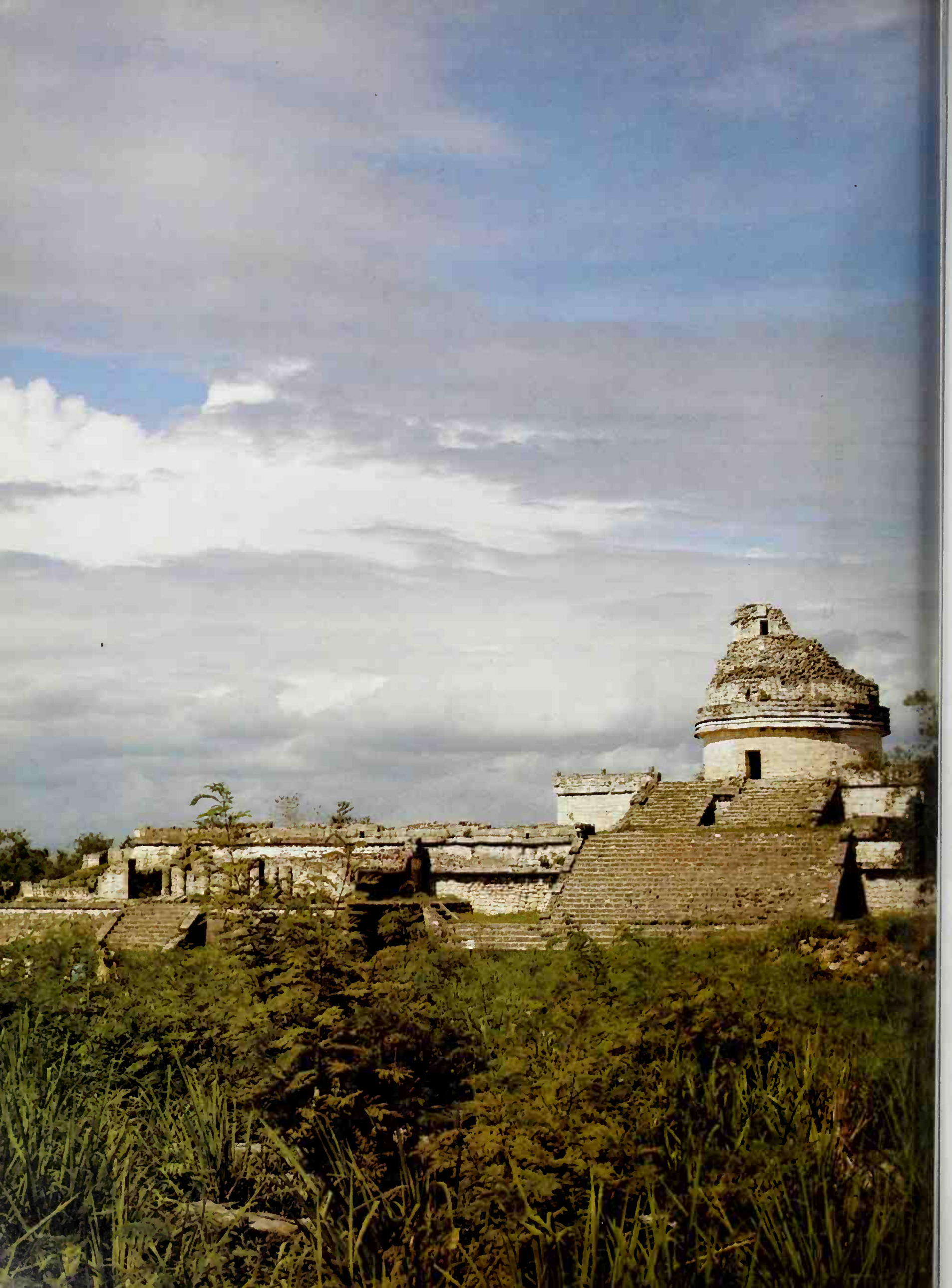
Everything in the universe and above the ground was wisely ruled by gods: the course of the stars, the repetition of the seasons in which there were periods of drought and of rainfall; the phase of life on the plants, the animals and men; the successive steps in agricultural labor; the passing from one generation to another; the entry and the disappearance

Scene on a glass from Campeche where a governor appears, relating with men who belong to an ethnic group whose appearance is clearly distinct from that of the Mayan (late classic, 800 A.D.).

of the rulers. Everything functioned only thanks to the gods and everything would continue to function while men respected and served the gods. Man, in himself, was a void, absolutely nothing. To complete the comparison between the characteristic features attributed to the Asiatic mode of production and those which form the Mayan society, we can recall that the greatest difference arose from their lack of the use of metals for production. Metal appears during the postclassical period but it was used almost exclusively for ornamental purposes. Although more limited than in the other countries in which the use of metals is recognized already in the past in the cited form of production, the dominion of the Mayas over nature is obvious since without it they would not have been able to attain the level of civilization that they had; they were able, in actuality, through their organization and the efforts of their people, to surmount their technological deficiency, i.e., the lack of metals, the wheel and the plow. In the course of their development, Mayan society ought to have created cultivations, as that of the browse tree, and to have invented new techniques for agriculture such as that of the irrigation, although limited and little known until now. Their mathematical, astronomical and calendaric knowledge, their writing, the diversity and extent of development in their architecture and the quality of their artistic attainments, sets them up on the highest level of civilization in universal antiquity. In other chapters we have referred to commerce, which came to be of great importance for the Mayas above all in the postclassical period, and which comprised the use of certain objects such as coins. We also saw that in their standards of social living, law received complete attention and was applied with great equity. In summary, we believe that the problem which has troubled many investigators with regard to Mayan society, in the sense of an inexplicable contradiction between their low technological level and the rudimentary basis of their agricultural economy on the one hand, and their scientific and aesthetic attainments on the other, or, stated in other words, their economic substructure and cultural superstructure. This contradiction can be understood and explained by focusing on the Asiatic manner of production. In point of fact the contradiction results from their peculiar socioeconomic structure which corresponds to a stage of transition in which simple forms of social organization coexist, as are the peasant communities with their primitive means of production in which the kinship degrees determine the uncultured relations, and those dominated by the religious faith; and, on a higher level, the beginning of the formation of a State in which the representatives, released from the productive work, are responsible for collecting taxes and channeling them towards the glory of the State; for directing vast public works, whether of material interest for the population or for those of a luxurious nature for the benefit of the ruling class; supposedly for interceding with the gods to assure the well-being of the people, and devoting themselves to scientific works (mathematics, astronomy, and the calendars), historic works (such as recording important events concerning their rulers), and artistic ones.

The supposed contradiction which, according to Thompson, was explicable on the basis of the greater importance which the Mayas gave to spiritual values than to material advances, and which Brainerd, dispiritedly, felt himself incapable of justifying since it is a matter of treating an exceptional fact without precedence in the history of the people, is, after all, the consequence of the mode of production. That mode of production in which the vast masses as producers lacked any advanced technology but were, by their efforts and sacrifice, able to create the necessary goods for the aristocratic minority which directed and exploited them, in order to attain a much higher standard of living and to have at their disposal sufficient time to achieve the great cultural creations which are so astounding.

The brilliancy of the Mayan civilization does not constitute a miracle nor was it a gratuitous gift from the gods: the Mayas payed for it with the excessive exploitation to which they were submitted, their ignorance fed by religious dogmas, their agony over the centuries.



# The Scientific Knowledge of the Mayas

While treating this subject, the majority of the authors limit themselves to present the accomplishments of the Mayas in astronomy, mathematics, the calendar, and writing, being not concerned with providing an explanation for the conditions which motivated them, or made it possible for them to reach such heights or attain such knowledge, nor with the use that they made of it, the benefits or advantages which they derived and those who impeded them or took advantage of such factors. Another criticism, which occurs to us, is that many Mayan, specialists in their keen desire to idealize the Mayan civilization, exaggerate in a glaring manner the level of their scientific knowledge while they forget about the advance attained by other peoples of antiquity both in America and in the Old World.

We have to recall that Morley, for example, describes the Mayan civilization as the "most outstanding on the planet", and maintains that a brilliant mind had one day invented the complex calendar in El Peten, basing it, most assuredly, on astronomical observations from many earlier centuries. Copan has also been mentioned as the place in which the calendar was invented. These rotund statements, however, omit Mesoamerican antecedents of monuments dated many centuries prior to the first Mayan dates, and which correspond to the cultures we designate "Olmecan" and "Zapotecan".

Without wanting to depreciate or lessen the merits of the ancient Mayas who, without doubt, rediscovered astronomic and mathematical laws, invented a hieroglyphic writing, and elaborated a complex calendar as they perfected the mathematical and astronomical knowledge of other peoples of Mesoamerica, one ought not to place them on a scientific ground higher than that of the Chaldeans, the Chinese, the Egyptians and the Greeks, who attained very similar knowledge and perhaps even greater, many centuries and thousands of years before the crystallization of the Mayan civilization.

## The need for scientific knowledge

The main scientific knowledge of the Mayas in astronomy, mathematics, writing, and

Ruled by natural cycles, the Mayas created a set of scientific data which served them in deciphering the occult mechanisms of the cosmos, thereby attaining the adaptation and transformation of nature. A view of the architectonic whole in which *Caracol* ("Snail") of Chichen Itza is found, where astronomical observations were carried out.

the calendar is closely knit among itself as it was among the other advanced peoples of antiquity. It is highly likely that since very remote times men may have had interest in observing the firmaments during the day and the night, paying attention to the path of the sun, the phases of the moon and the position of some of the stars. Such observations would be very useful to the nomadic people for their travels and for the sailors on the high seas.

But, undoubtedly, it was the agricultural people who systematized the observations, repeated them untiringly, recorded them, and gave them every consideration in many aspects of their material and spiritual life, despite the fact that they did not know the causes of the phenomena they were observing. Since the first half of the third millennium, the Chaldeans had recorded astronomical observations, including solar eclipses, on which they used to base their astrology. According to Montet, among the Egyptians the hieroglyphic of the year represented a young sprout with a bud, since the year did not signify the duration of a solar revolution, but only the time that was necessary for obtaining the wheat harvest.

The astronomical observations, recorded through writing and bound to their sequence and periodicity through mathematics, enabled them to foresee the relative positions of certain stars on determined dates. Among the Egyptians the harvest depended upon the flooding of the Nile, and it had been observed that the river began to rise on the date that Sirius, the most brilliant star, returned to appear for one moment in the East, precisely before the sun rose, after a prolonged disappearance. Both phenomena remained associated in their mind and thus the day of the appearance of the star was decided upon for the beginning of the year.

Based on the agricultural necessities, on the imperiousness of knowing with exactitude the most propitious moment for sowing, the agricultural people paid attention to the succession of the seasons and related them to the movement of the stars which it was possible to learn about, recognize, and record. Astronomy was for them the first step in scientific knowledge, and the obligation to accumulate knowledge to measure periodicity of the seasonal changes and the rhythm of the coinciding celestial movements led them to handle quantities which, in turn, brought them to the field of mathematics. From here on they proceeded to establish the calendar, probably the lunar one first, since it is easy to observe the phases of the moon before those of the sun. The study and record of the celestial happenings and their association with the calendar implied the use of symbols, which, in other words, means a form of writing.

Berthelot referred to this phase of the development of scientific spirit as *Astrobiologie*; this corresponds to the period in which an organized and advanced agriculture began, which was the basis for a sedentary and stable society. It constitutes a system of ideas in which the march of the stars and the growth of plants complies with the laws associated thereto: the laws of nature and the laws of the universe; what occurs above ground and in the firmaments; the life of man, and the cosmos. As this author states, "in astrobiology there is a reciprocal penetration between the idea of an astronomic law and the idea of vegetable or animal life. Everything would be living on the one hand—the heavens and the stars—and on the other, everything is subjected to numerical, periodic laws, in turn to the laws of necessity, of harmony and stability which govern the periodic movements of the celestial dome, the regular alternation of the seasons, the annual reproduction of plants". According to this same author, this concept would have originated in Chaldea, going later towards the East to China, and towards the West to Greece, contributing in creating the intellectual frame of the Chinese empire, and the science of mathematics in the school of Pythagoras and the medical science of the school of Hippocrates. Astrobiology would then be the transition between the beliefs of the uncultured peoples and modern science. The ancient civilized peoples of America, that of Mesoamerica and the Andes, took part in it.

The application of the periodicity laws, which rule the celestial movements, the natural

phenomena (meteorological and biological), and the human life, individual as well as collective, would provide a place for astrology and history.

### Astronomy

The means that the ancient Mayas used to make their astronomical observations were extremely rudimentary being impossible to compare with those of Mesopotamia, Egypt, China and Greece many centuries before our era. As a matter of fact, the scholars of the Old World had already made use of the sundial and the water-clock, the former for determining on a horizontal plane, the solar azimuth, that is, the height of the Sun in accordance with the direction and longitude of the shadow projected on that plane by a vertical needle; the second apparatus was a genuine water-clock which provided the means for determining the hours of the day and of the night, giving greater exactitude to any measurement whatsoever.

Possibly the Mayas were able to ascertain the path of the Sun around the zenith by the very procedure on which the sun-dial is based: through a stick placed vertically in the ground, which does not project any shadow when the Sun passes around its own prolongation. They also would make use of two rods or crossed threads, forming an X, to trace or draw the lines of vision at the points of astronomic interest, that is, the rising or setting of the Sun, the Moon and Venus in distinct periods of the year. This procedure clearly appears in the Mixtec Codices which depict a face or an eye behind the crossed sticks in the interior of a sketched temple.

Various buildings constructed in the Mayan area were intended for astronomical observations. Among the former we know about the one designated *Caracol* (snail) in Chichen-Itza, and another with the same name, still not yet explored, in Mayapan. The arrangement of the building in Chichen, with its observatory in the upper part to which there is access through a narrow staircase like a snail beginning at the floor level of the arch of the interior concentric gallery, providing absolute and adequate isolation for the astronomer at work, and the small windows which open to the cardinal points and at intermediate directions, denotes that it is an actual observatory. This is confirmed by numerous astronomical observations carried out by specialists in recent times.

The Tower of the Palace in Palenque was probably used for the same purposes, in spite of the fact that the top floor seems to lack the characteristics which the *Caracol* has, except that the astronomer from Palenque would be relatively isolated. We would even be able to say that he was separated from the earthly plan in the same way as his colleague in Chichen-Itza, since the interior staircase which leads to the top floor does not begin at the base of the tower but at the elevation of the first floor. In both cases a hand ladder would be necessary which would be put up and removed at will for going up to the observatory. From the higher floor of this tower the horizon of the plain can be perceived at an approximate extension of  $180^{\circ}$ .

In Uaxactun a set of buildings from Group E is also regarded as having been intended for astronomical observations. It is composed of the pyramid E-VII and an enlarged platform on which the foundations of three temples rest. From a point in the axis of the stairs, the lines of vision directed towards the center of the central temple E-II, and to the southwestern corner of the temple situated more to the north E-I, and to the southwestern corner of the temple more to the south E-III, indicate respectively the true East, that is, the point of the rising of the Sun in the spring and autumn equinoxes, the rising of the Sun in the summer solstice and the rising of the Sun in the winter solstice. Some twelve to eighteen similar observatories were identified in two localities of the Mayan area.

In Copan, Stele 10 and 12 rise, one facing the other, separated by more than 6 kilometers between them. The first is located to the west of the ceremonial center, the second

to the east, and both in mountainous country which surround the valley. It has been noted that, seen from Stele 12, the sun sets exactly behind Stele 10 on the 12th of April and the 7th of September. The first date coincides with the period in which the fields are burned before sowing, which leads one to suppose that the position of these monuments has the purpose of determining the date of one of the most important works in the agricultural process. The use of natural aspects (such as the tops of hills, boulders which emphasize the horizon, the wall of a cliff, etc.), as references to these activities associated with the movements of certain stars, principally the Sun, Moon and Venus, would be frequent among the Mayas within the astrobiological system which we have already elucidated upon.

With these rudimentary procedures, Mayan priests expressly prepared by those more advanced in age and with more experience, succeeded in defining with amazing precision and accuracy the lunar, solar and Venutian cycles and the conjunctions of the celestial bodies which especially interested them. The results achieved can only be explained on the basis of repeated observations, day by day, in the course of generations of astronomers, meticulously recorded and corrected when errors were recognized; in other words, the technical deficiency was surmounted through untiring, constant and careful work to the utmost, accomplished with devotion and precision by those who deserve to be acknowledged as genuine scientists.

From the astronomical knowledge acquired by the Mayas let us remember their respect for the solar cycle, which, in accordance with the calendaric corrections as recorded on some inscriptions, would be of 365.2420 days, while according to our Gregorian calendar there are 365.2425, and in actuality there ought to be 365.2422. These calculations show that the marking of the solar cycle by the Mayan astronomers was obtained with a difference of only 0.0002 days each year instead of 0.0003 days in our calendar, or, a more exact approximation is reduced to an error of one day every 10 000 years.

Their marking of the lunar cycle, calculated between a new Moon, easy to recognize, and the following one, would amount to 29.53086 days according to the Dresden Codex. In accordance with modern calculations, one lunation, on an average, corresponds to 29.53059 days, but, in actuality, as Teeple states, one *genuine* moon can differ from this number by a few points in the first decimal place..., but, if our average is correct, the difference is not cumulative, and at the end of a thousand years we will still see that the observation agrees with the computation, presenting only a discrepancy of a few days in whatever sense. Therefore, the marking of the lunar cycle as calculated by the Mayas can be considered correct.

From page 24 and pages 46 to 50 in the Dresden Codex we know that the Mayas had a knowledge very similar to ours on the basis of the cycle of Venus. In a uniform manner they used to reckon it on 584 days while in actuality their revolutions varied from 580 to 587, and from 583 to 587 days, although it was repeated in series of five and with an average in each series of 583.92 days.

The division they made of a synodical revolution differs from the modern as the following table readily discloses:

Phases	Mayan	Modern
Venus as a morning star	236 d.	240 d.
Disappearance in a superior conjunction	90	90
Venus as an evening star	250	240
Disappearance in an inferior conjunction	8	14
Total	584 d.	584 d.

In point of fact they well knew that the revolution of Venus was not precisely for 584 days, and through corrections which they recorded in the mentioned Codex it is seen that





Mayan writing continues to be, even today, a mystery almost beyond comprehension in spite of the vast number of studies carried out by Soviet, German, Japanese and Mexican scientists.

they used to calculate it for a little less than 583.935 days, instead of 583.920 days. Teeple believes that they used to strive for phases of its division so that they were much closer to 8.3 and 8.5 lunations, plus 8 days, and that it would be possible to make the beginning of a Venutian year coincide with that of a vague year, counting five Venutian cycles which is equal to 8 vague years which is equivalent to 2 920 days. It can, therefore, be asserted that the evaluation of the cycle of Venus as measured by Mayan astronomers was very exact.

It is highly likely that they also knew about other planets and that they would have recorded their synodic revolutions. Förstemann, Willson and some other astronomers have tried to interpret some of the tables of the Dresden Codex as calculations related to Mars, Jupiter and Saturn. However, since their conclusions are all different, we discard their opinions. Teeple himself, who studied with great meticulousness the astronomical recordings in the Codices and inscriptions on monuments, concludes that he has not been able to be convinced of the existence of such tables and in the event that they really exist, he would not know how to use them. On the basis of a number of references in historic sources, it is deduced that the Mayas were interested in innumerable stars and constellations. Among them the Polar star, which they called the "great star" *Xaman Ek*, which they were accustomed to use just as the peoples of the Old World had, that is, as a guide for travelers and merchants; the Pleiades which they called *Tzah*, that is "bells", as they looked upon them as something similar to the rattles in the tail of the serpent; Gemini, which they called *Ac*, "turtle", probably because they saw some resemblance between them. The possibility was also suggested that they had had some conception of a zodiac which they consulted for astrological practises; some representations of precisely that, would be on pages 23 and 24 of the Perez Codex, concretely in the form of animals hanging from the firmaments.

The Mayas, with surprise and fear, used to observe that certain days of the Solar Year would remain partially obscure for some time, and that at times the Sun even disappeared completely. For them that signified that a beast in the sky was trying to devour it. The priests took advantage of their panic, when they were faced with such a perspective, which

could only mean the end of the world. With such a terrible threat in the offing, they were able to receive greater submission and even human sacrifices. These same priests, although they perhaps were unable to explain this phenomenon scientifically, did know through their astronomers that such an event was a recurring one and that the darkening of the Sun did not imply its destruction, since the duration of such an occurrence was limited. The study of the tables on pages 51 through 58 of the Dresden Codex, which Teeple, Förstemann, Thomas, Bowditch, Meinshausen, Willson and Guthe had carried out, has shown that these tables deal with the record of 405 consecutive lunations set up in 69 groups, consisting of 5 or 6 lunations in each, and which embrace a period of 33 years. The arrangement of these groups suggests, according to different authors already mentioned, that it was intended for establishing a table of ecliptic syzygies (the conjunction and opposition of the Moon and the Sun) and that each one of these lunar groups would finish on a day of a possible eclipse, visible from some place on Earth. Teeple considers that the table is not the record of the eclipses which had occurred when the Codex was made, but rather the predictions of possible eclipses. Comparing that with Oppolzer's list of eclipses, one notes that discrepancy between the latter and the former does not exceed more than one day, except in the case in which he probably did not record an eclipse which would not be a total one in any part of the globe.

Of the 69 eclipses announced in the Codex only 18 were visible on Mayan territory. However, the very fact that a table of predictions had been set up, seems to indicate that the Mayan astronomers had observed that the trajectories of the Sun and the Moon crossed in the heavens twice a year and they had probably perceived intuitively that the temporary darkening of the star on certain dates was associated with this crossing ("the node" as it is designated by modern astronomers). To dominate the people still more it was preferable to threaten them with the idea that a voracious beast would devour the Sun if the priests did not intercede to impede that. Thus, when the phenomenon actually occurred, their power became still more indisputable since they had, in the first place, advised of it and then were apparently able to control it.

At the end of this chapter it is worth repeating Teeple's words on the achievements of the ancient Mayas in the field of astronomy in which their irony is transparent when, on the one hand, they describe these achievements, and the inhabitants of the Old World on the other: "This is rather a stupendous apparatus of astronomic data for some barbarian Indians to possess 1 000 or 1 500 years ago, who were completely isolated from the civilizations of the Old World; actually it may probably be far more advanced than what our noble ancestors possessed in that time".

### Mathematics

The need to count, whether things, animals, individuals, distances, or time, etc., is inherent in any human group and had to be solved even in societies on a very low cultural level, probably having to recourse to their fingers as numeric markers. In later periods, and due to the need for solving practical problems in every day life, it was definitely indispensable to invent signs to represent quantities. The arrangement of numbers passed from an empirical to an intuitive system and gave rise to mathematical analysis. For many millenia prior to our era, in India, China, Mesopotamia and Egypt, different types of numeration with which elementary operations were carried out were in use. It was the Greeks who for some 600 years before Christ had rationalized the mathematical knowledge inherited from Asia and Egypt, and introduced the deductive method whereby mathematical science attained great heights of development, the principal representatives of which were Thales, Pythagoras, Democritus, Hippocrates and Archimedes. Much later, from 300 to 1200 A.D., the Hindus and Arabs improved upon mathematics and invented the "zero" which the former passed to the latter who, in their turn, conveyed it to the Occidental civilization and elaborated the treatises on algebra and trigonometry.

Morley referred to the Mayas as the "Greeks of America" more through a collation on a continental level by comparing them with other American peoples, than on an universal

basis, and contributed much to what we consider an idealization of Mayan culture, since he attributed to them the inventions which other peoples had made before, and exaggerated their scientific knowledge. This is precisely the case with regard to mathematics. On this subject we could also say something very similar to what we have affirmed with reference to astronomy, that is, that the amazing aspect is the fact that with the rudimentary means with which they counted had, nevertheless, obtained such outstanding results. In reality, on a very limited scientific basis, departing from theoretical knowledge that was practically nil, but through constant observation; meticulousness in keeping records of that; intelligence and ability, and through generations of specialists devoted to their studies, the Mayas attained such noteworthy results in the field of mathematics.

What, in point of fact, was their mathematical knowledge? Simply an ingenious numerical system in its simplicity, on a vigesimal basis in which the value of the signs varied according to their position, with a special sign which corresponds to our "zero" to indicate the lack of unities in whatever order. But we ought not to forget that, many centuries prior to the Mayas, the people on the Atlantic Gulf coast whom we call "Olmecans" and "Zapotecs" from the earliest periods of Monte Alban in Oaxaca, had used the same system in their inscriptions when recording dates. The difference between these inscriptions and that of the Mayas is based on the fact that in the latter the sign "zero" had been identified, while among the others such sign was not known, although a numerical system with a positional value for the numerals implies the need of a symbol which can indicate the absence of units in a certain position.

To write their numbers the Mayas employed several systems, the most simple being what they had inherited from the peoples whom we have just mentioned. This systems consisted of the numeration of bars and points with a value of 5 and 1 respectively, to which they added the "zero", representing it by a small sea-shell painted on the manuscripts and by a kind of four-petalled flower or the Maltese Cross on the stone monuments. With these three signs they were able to record quantities which reached millions of units, and this was more readily done than with the use of the Roman numeration which consists of seven letters. The operations implicit in the numeration of points and bars are addition, subtraction and multiplication. This system is further adaptable for divisions with relative facility.

Another system of writing numbers is encountered in the use of human heads with specific details, which differentiate each one and which correspond to the numbers from 1 to 12, but not zero. For the numbers from 13 to 19 the heads from 3 to 9 are utilized, but with the jaw from which the flesh has been removed; the symbol for 10 is represented by a skull. The variations in the heads correspond to the patron deities of the zero and the first 12 numbers. These, however, are less utilized than the points and bars.

In very exceptional cases the Mayas probably represented numbers by means of human figures, which on some part of the body bore the symbol indicative of the cipher. In the following illustrations we present the numbers by points and bars up to 19 and also some examples of greater amounts as well as arithmetic operations. In the same way the variations of the heads from 0 to 19 and the glyphs of the entire body are also apparent.

Since the basis of the numeration is vigesimal, when a numeral passes from one position to the next, its value is always multiplied by 20. However, in the calendaric calculation the third position implies a value of 18 times of what corresponds to the second position, so that the unit is an approximation of the duration of the vague year of 365 days ( $1 \times 20 \times 18$  is equal to 360 days).

On the inscriptions, the order of reading the quantities is from left to right and from top to bottom, the larger units being at the beginning of the inscriptions and following in decreasing order to their value. The arrangement in double columns is also quite frequent, in which case the horizontal reading does not embrace more than the signs of the two columns and continues with those which follow in the immediate lower line or space, and so on and so forth.



## Writing

We believe that it is possible to feel certain about the ancient Mayas having elaborated a system of writing which is the most advanced in all prehispanic America.

The existence of the beginning of writing on the most ancient sculptured monuments within the Mayan area and bordering territories, i.e., the Gulf coast and Oaxaca, ought to have served as the initial stimulation, and besides it is also likely that some of the Mayan hieroglyphics are derived from Olmecan and Zapotecan signs. But the texts discovered in Mesoamerica outside of the Mayan area do not go beyond the pictographic form to express certain facts and concepts (dates, personal names, toponymics, conquests, birth, marriage, death, sacrifice, ancestors or offsprings, rites, etc.). It is known that pictography did not

The Mayas elaborated the most advanced system of writing in all of prehispanic America. The glyphic inscriptions are found in codices, on stone, ceramics and stucco.

exclude the use of some signs with phonetic value, as occurred in the Aztec "writing". Apart from Mesoamerica, another form of writing had been developed which has only begun to be detected and studied in the last ten years and which is still not very well known: that of the Peruvian civilization as appears on "sieva beans", textiles and *keros* (glasses).

The knowledge which we actually have about the Mayan writing has its origin, as a last recourse, in the twofold information which the chronicler Diego de Landa has left us. As a matter of fact, in his valuable *Relación* he affirms, on the one hand, that the Mayas had books "written with characters or letters" and completes his information by supplying what he designated "their alphabet" which consisted of 27 signs. Landa developed, on the other hand, a calendar of 365 days, which apparently corresponds to the year 1553, for which he provides the names and hieroglyphics for the 20 days which continue to be repeated and of the 18 months of 20 days each, with the 5 complementary days which integrate the vague year.

With regard to the "alphabet", Phillip Valentini demonstrated, more than a century ago, that what Landa had actually acquired was not a Mayan alphabet, but rather an approximated glyphic transcription of the Castilian alphabet which an informant tried to represent by means of signs that really existed in the Mayan writing or in the pictograms, that is, the phonetic value of the Spanish letters. In this way he drew for the letter *a* a head of a turtle (*ac*); for the *b*, a footprint which symbolized the road (*bé*); for the letter *c*, the sign of the month *Zec*; for the *l*, a possible leaf (*le*); for the *n*, a tail of a monkey (*ne*), etc. Besides, it is obvious that if the 27 signs of Landa constituted the Mayan alphabet, no other sign would be encountered in the inscriptions and Codices, but only all of them and no others. However, some of these conjectured letters never appear in the hieroglyphic texts and various hundreds are known which completely and indisputably lack the elements expressed by the chronicler.

### The phonetic school

The information that Landa has provided us with, has given rise to what we would call the "phonetic school", which was started as a result of the publication of *Relación de las Cosas de Yucatán* and which has continued until the present time. We shall mention only some of the individuals who followed this line of investigation. The first was Basseur de Bourbourg, who discovered Landa's manuscript and wanted to use the "alphabet" mentioned to interpret the text of the Troy Codex, which he had also discovered. In his opinion this document referred to the disappearance of Atlantis, an extremely popular theme in the second half of the past century; but, when years later it became possible to establish by means of the development of the calendar that accompanies the text, the order for reading the Codex, it was proven that the abbot had "read" it in reverse.

A number of investigators, mainly French, were interested in epigraphic studies and tried to decipher the hieroglyphic texts of the Codices and some inscriptions on monuments, especially that of Palenque, made known by some travelers of the XIX century, among them, Dupaix, Waldeck, Charnay. For their investigations they tried to utilize Landa's "alphabet" and to attribute a phonetic value to the hieroglyphics. Intuitively some perceived that the texts in the Codices have to be related to the illustrations and tried, at times with complete success, to identify the corresponding hieroglyphics with some concrete figurative representations, such as those of animals like the turkey, the macaw, and the turkey buzzard, or with identifiable concepts such as the cardinal points and the colors associated with them.

Among the principal representatives of this school we can mention Leon de Rosny, Hyacinthe de Charencey, F. Aymar de la Rochefoucauld, Hillborne Cresson and Cyrus

Thomas, of these the last two are Americans. Until this time some of the interpretations presented during the second half of the 19th century, still continue to be accepted.

Some of these works are after the date of publication of Valentini, which makes it more than definite that the nature of the 27 signs presented by Landa is not alphabetic. In the course of our century, the phonetic school still continued to be active, except for a period of 40 years of inactivity from 1893-1933. In some cases it was recognized that not all of Landa's signs were really letters, but that, at any rate, they could be associated with phonemes of the Mayan language. Benjamin Whorf, departing from this premise, tried to identify verbal glyphs which could correspond to actions represented in the scenes accompanying the texts and had only limited results, but they were not accepted.

In other cases a phonetic value was attributed to some hieroglyphics in a completely arbitrary manner. With greater daring, giving free reins to their imagination, the authors of these supposed "keys" for deciphering the Mayan writing "read" the Codices so that the results coincided with what they had aspired to. It was in this way that Werner Wolff utilized the hieroglyphics of the 20 days of the ritual calendar, deciding that the Mayan language possessed only 20 phonemes and that they represented the first letter of the name for each day, choosing as they pleased from among the names of these days in the different Mayan languages. In the text "read" by Wolff the name "Aztec" appears a number of times, but that is something which could have envisaged only with difficulty by the Mayan authors of the Codices during the XI or XII centuries of our era.

More recently, Héctor Calderón, relying upon Landa's "alphabet" and previous statistics of the occurrence of the Castilian phonemes in the names of the hieroglyphics for the days and months of the Mayan calendar, finds in these signs "the intention... to give to the forms a pictographic design, more or less faithful to the buccal organs used in pronouncing them". For example, the sound "A" would be represented by an open mouth, as, according to the author, appears in Landa's "letters". With a tremendous power of imagination he identifies, in the known hieroglyphics, in the names of which the phoneme "A" is contained (Akbal, Kan, Manik, Lamar, Caban, Etnab, Cauac, Ahau, etc.), some line which can possibly be interpreted as the basis for the open mouth. As the glyphs for the days and months are most assuredly ideograms and not integrated with phonetic elements (the name contained in the composition of the month Yaxkin would be an exception), the author has to make up for the lack of scientific seriousness in his hypothesis through an extravagance of phantasy.

Another discoverer of the probably in-existent key to Mayan writing is Wolfgang Cordan, the inventor of the "Merida System", as he had lived in Merida for some time, apparently while he was affiliated with the University of Yucatan there. In his opinion, one hundred "key words" make it possible to decipher thousands of hieroglyphics and, it goes without saying, that he came to know the meaning of these "key words", utilizing dictionaries in almost all the Mayan languages and handling at will the great variety of meanings which the dictionaries give for each word. Besides, he went outside of the Mayan field when, for example, he explains the sense of his glyph 28 in the form of "the head of an elephant" which, according to his statement, appears also in the Stelae of Copan. The word in Sanskrit is *hat* which he associates with the Mayan terms *at* and *ach*, which, however, mean the sting of an insect and virile organ. In this case he wanted to say "to make something get across by means of a river", which is precisely presented in the illustration of the Codice associated with the glyph referred to. He considered Mayan writing "highly phonetic", the contents of the Codices closely bound to the conceptions in the *Popol Vuh* and "proved" that these Codices can be read "with almost the only help from a Cakchiquel-Spanish dictionary..." One has to remember, however, that in the Cakchiquel regions no hieroglyphic inscriptions have thus far been found.

In the rather dangerous and slipshod manner for deciphering, which was, of course, based on phantasy, Antoine Leon Vollemaere is the most recent example of the "discovery of the key to Mayan writing". He affirms that "After having demonstrated the extraordinary polyvalence of the Mayan glyphs and after having proven in detail their phonetic nature, the author now adds the last key which permits one to conclude, with every customary reserve, that Mayan writing is virtually deciphered". His attempt is completely devoid of any scientific value.

### Soviet Investigations

The subject of decipherment by means of phoneticism is entitled to a chapter in itself, apart from the works of the Soviet investigators and some of the others who have derived something from them. It is not a matter of, as in the previous cases, attempts carried out by self-taught individuals with all good intentions or, at times, even by charlatans, pure and simple, since these authors are true scientists although not precisely linguists or epigraphists.

The news of what the Soviet ethnologist, Yuri Knorozov, had accomplished, awakened much expectation in the world of investigative work. He had succeeded in finding "the key to Mayan writing". This author showed that Mayan writing contained ideographic, determinative and, mainly phonetic, hieroglyphics. The ideographic hieroglyphics correspond to words, the determinative to concepts, and the phonetic to sounds. Besides, Knorozov, considers Landa's signs "as containing, in effect, the phonetic value which he had attributed to them", although this "he does not want to say, nor much less, that these signs may not have any other value, nor that the Mayan writing may have been completely phonetic. Furthermore, he has no desire to say that with these signs the relation of the phonetic symbols of Mayan writing is entirely exhausted. On this basis the author presented his interpretations of words of the Codices and much later complete phrases or sentences, establishing that the meaning of the words read would have been confirmed by the illustrations which accompany them. With a great deal of optimism he asserted that "From now on, the work will not consist of deciphering", and that with his discovery of the key to Maya writing "the history of the peoples of Central America can be studied from its written sources". But, unfortunately, more than 20 years have elapsed since then, and very little has been achieved through his system.<sup>1</sup>

Knorozov's theory received strong criticisms, especially from Thompson and Barthel who found in his readings repetitions in what had been deciphered of the words presented at the end of the past century by the representatives of the "phonetic school", among whom are Cyrus Thomas and the French investigators already mentioned. Thompson reproached Knorozov, above all, for the excessive margin of phonetic values which he attributed not only to the vocalic glyphs but also to those which it was assumed were used to represent consonants. In addition, he found fault with him for the variable order of the reading of the elements in the composed glyphs and the invention of supposed meanings for Mayan words which, recognizing that they were not completely incorrect, but still they hardly maintained relations with the actual meaning. Barthel criticized the insufficiency of the linguistic sources which Knorozov had made use of as a basis, and summed up his analysis of 150 examples provided from that, asserting that 30 were derived from Landa's work; 50 repeated the readings of Cyrus Thomas; 30 from other authors of the phonetic school, and that the greatest number of the 40 remaining were questionable, and only possibly five correct with only one probable.

David Kelley, however, supports in part what the Soviet investigator had focussed on as well as some of the interpretations; on the other hand, heas Barthel, reproaches defective erudition and, in addition, the fact that he had presented the supposed discovery in a highly pretentious form and was even aggressive towards those who had contributed or attempted to

<sup>1</sup> Quite recently, in February 1976, the press mentioned again that Knorozov's had deciphered the Mayan writing. On the basis of the simplicity of the information we believed that the Soviet ethnologist had finished the reading of the Codices, i.e., the three known, plus a fourth which had appeared some years ago but was probably false and without a legible text since it is a table of the planet Venus of which for more than twenty years it had been possible to read only a few words and phrases.

contribute something leading to the solution of this important problem before he had. Some words suggested by Knorozov are eventually mentioned in epigraphic works, but his investigations have not facilitated nor made any perceptible advance in the decipherment of Mayan writing.

Approximately 10 years after the news about Knorozov, another bit of news was also reported in the Soviet Union on the same subject which provoked a strong impact among the Mayan investigators. In point of fact, World Press announced then, that is, in 1961, that some mathematicians of the Siberian branch of the Academy of Sciences (E.V. Evreinov, Y.G. Kosarev and V.A. Ustinov), utilizing electric computers, had deciphered the greater part of the three Mayan Codices. The programming was done by phonetic focussing, supplying the computing machines with the hieroglyphics from the Codices; many words from Maya-Spanish dictionaries, and others from written documents in the Mayan language with characters from the Spanish alphabet; and also the pictoric elements of the above mentioned Codices. Establishing the concordances between the hieroglyphics and the known Mayan words through the colonial texts and the components of the illustrations associated with the glyphic texts, the computers provided a kind of reading of the Codices which, to all intents and purposes, was coherent.

The Mexican philologist and linguist, Alfredo Barrera Vasquez, the greatest authority in the field of the Mayan language of Yucatan, criticised the results obtained since he considered the lexicographic sources insufficient and deficient in view of the fact that the meaning of many words had been misunderstood and that the composition of a number of words was not only incorrect, but actually impossible as far as the Mayan language is concerned. But the harshest criticism came from Knorozov who, although he recognized the interest in using computers for linguistic works and for trying to decipher Mayan writing, came to the rotund conclusion that his Siberian colleagues had not progressed even one step on the road to the decipherment of this writing.

### The calendaric school

If the phonetic school, which had originated with Landa's "alphabet", gave rise to innumerable decipherment attempts in which imagination played a more important part than scientific rigor, and resulted in many alleged "keys" with few acceptable readings, then the calendaric school, on the other hand, based on some information of the chronicler relative to the succession of the months and days during a year of 365 days, had very fruitful results and led to a more or less exhaustive knowledge for reckoning time among the ancient Mayas.

In his informative material Landa blends the elements of two calendars, adding every 20 days of the esoteric cycle the name and hieroglyphic of a month of the civil calendar. In actuality, the chronicler did not understand the mechanism of what he referred to as an "embarrassing count". Ernst Förstemann, in the last decade of the past century, not only explained the existence and related function of both calculations, but also understood and elucidated the series of cycles, which conform what we refer to as the "long count", and calculated the initial date of this series. He identified the tables of Venus and the lunar series in the Dresden Codex, and grasped the meaning of the role of the series known as secondary in the inscriptions. He recognized the signs which correspond to "zero" in the Codices and monuments, as well as the numeric value of the hieroglyphic for the Moon and the signification of other glyphs in the Codices, such as of Uinal, Tun and Katun; and Baktun in the inscriptions on the monuments. In short, Förstemann clarified many of the basic aspects of the Mayan calendaric system at the same time that he deciphered the chronologic hieroglyphics.

Around the same period, and apparently making use, to a great extent of the works of

Apparently Mayan writing was practised only by specialists. It reached an enormous degree of complexity and it was probably understood only by a very limited number of people. A beautiful ceramic piece from Jaina which shows a Mayan with a codex (National Museum of Anthropology).





Förstemann, J.T. Goodman identified other calendaric glyphs which indicate the half and fourth part of the Katun, and, principally, almost all the numerals in the form of human heads. In addition, he established chronologic tables which were very useful for the calendaric calculations, and was the first to have suggested the correlation between the Mayan and Christian calendars, which later, with minor modifications, still continues in force for the majority of the investigators. At the beginning of this century, Charles Bowditch read chronologic inscriptions on monuments from several Mayan cities; definitely established the value of the sign "zero", and analyzed glyphs associated with the designated "dates at the end of periods". He also prepared a compendium of what was then known about numeration, the calendar and the astronomy among the Mayas. The contribution of Hermann Beyer to the decipherment of writing was also of importance. Among other things he explained the meaning of the variable elements contained in the introductory glyph which indicates the beginning of the date of an initial series or a long count, an element which, in point of fact, points to the month in which the date occurs. He identified the hieroglyphic of the eighth lord of the night in the supplementary series (Glyph G-8) and proved the application of the lunar glyph as a number in the secondary series. In addition to that, he analyzed the use of the affixes in the hieroglyphics and interpreted a set of dates abbreviated in Chichen-Itza.

William Gates took a lively interest in collecting innumerable manuscripts, grammars and dictionaries which had materials pertaining to the Mesoamerican, and particularly the Mayan, cultures. He also had copies made of the three Mayan Codices, although altering the forms of the hieroglyphics, making them uniform and making their outlines geometric. He presented a study of the Paris Codex and published the first dictionary of Mayan hieroglyphics. Within the framework of chronologic interpretations, Richard Long contributed data of great interest; he completely clarified the meaning of a number of glyphs, as Pictun; he explained the dates contained in the *Annals of the Cackchiquels* (*Anales de los Cackchiquels*) and the calendaric contents of the frescoes of Santa Rita.

Undoubtedly one of the most diligent investigators in the archaeological and epigraphic field in Mayan studies was Sylvanus G. Morley. He not only discovered but also made known a great number of monuments with hieroglyphic inscriptions which he interpreted with reference to their calendaric contents, considering that these texts dealt exclusively with chronologic, astronomical matters and with religious connotations. As personal contributions of his own to decipherment, we mention his confirmation of the identification of the glyphs which indicate the half and the fourth part of the Katun, i.e. *hotun* and *lahuntun*, as Goodman had previously already suggested. In addition, he determined the significance of the glyph at the end of the Tun, and with the collaboration of R.K. Morley as well as that of Robert W. Willson he basically established the lunar nature of the supplementary series.

Having come to Mayan culture through aesthetics, Herbert J. Spinden later became especially interested in the chronology and astrology of the Mayas. In accordance with this aspect he interpreted many inscriptions and presented a correlation quite different from that of Goodman, making all the dates more ancient, close to 260 years, a correlation which some investigators actually prefer. In spite of not being an astronomer by profession, John E. Teeple devoted much of his time to the study of Mayan astronomy and discovered the exact signification of different signs in the lunar series. In this way it was possible to calculate the age of the Moon at a specific date, that is, in which month of the six-month period it occurs, if it is a matter of a month with 29 or 30 days, and how many days had elapsed since the last New Moon.

We are indebted for some contributions concerning chronological hieroglyphics to such investigators as Edward W. Andrews, Enrique Juan Palacios, Cesar Lizardi Ramos, Heinrich Berlin and Linton Satterthwaite, but it is beyond doubt that it was John Eric Thompson, now deceased, who had acquired the greatest knowledge on Mayan writing. Among his most important contributions to decipherment the following merit mention: precision of the meaning of the sign "zero", which he does not regard as an absence of value in some orders

of units, but rather as the perfecting of such units as 20 or multiples of 20 which were thus converted into units of a higher order; he discussed and refuted the interpretations presented by other authors, as, for example, Seler, with regard to the meaning of the names of the days and months, since his interest embraced the religious as much as the chronological aspect. He also studied and fully explained the function of the glyph "G" in the supplementary series, which symbolizes one of the nine nocturnal companions associated with each day. He also identified the glyphs which precede what we refer to as the secondary series and which he designates "distance-numbers": these glyphs indicate if the lapse implied in such "distance-numbers" have to be added or subtracted from the date immediately before, that is, if it has to be counted from before or after that in time. Thompson also discovered in the Mayan inscriptions the existence of a chronological cycle of an esoteric nature composed of 819 days and which would be the result of the multiplication of  $13 \times 7 \times 9$ , numbers which correspond respectively to the celestial, terrestrial and subterranean deities. In spite of having shown that he was opposed to the phonetic interpretation of the glyphs, he offered interpretations of some sets of glyphs in the Codices which dealt with prognostications (good or bad harvest, the forewarning of droughts or abundant rain, sicknesses, possible plagues or epidemics); the reading of which, based on the formation of riddles (rebus) implies that the signs are to be interpreted not according to what they actually represent but rather to the phonetic value of the words which they designate. To this writing, used for graphic divinations, Brinton gave the name of "iconomatics". For instance, to show the word *caracol* (snail) a *cara* (face) followed by a *col* (cabbage) would be presented.

The masterpieces of Thompson on Mayan writing such as *Maya Hieroglyphic Writing: An Introduction*, and *A Catalog of Maya Hieroglyphs* present a summary of his knowledge and provide the most extensive and serious basis for epigraphic investigation.

#### The ideographic school

The works related to the chronological contents of the writing (constituents of what we refer to as the "calendric school") form part of a field of more thorough and comprehensive investigations, that could be referred to as "ideographic", since the glyphs for days, months and the other calendric periods do not seem to have been worked out on any phonetic basis, but rather on a conceptual one, which in many cases is expressed by the combination of various glyphs (*Yax-kin*) with an ideographic or mixed value, that is phonetic and ideographic (*Ka-tun*). Some investigators have worked on the ideographic aspect but not on the chronologic, but Thompson, on the other hand, directed his efforts to both these fields.

Among the first we shall refer to Paul Schellhas who, at the beginning of this century, identified the gods represented in the Codices, taking into account the information of the chroniclers who dealt with the functions of each deity; the iconographic interpretation and the hieroglyphics associated with the text which accompanies the figures. In this way he was able to recognize the glyphs which undoubtedly correspond to each god, but he had the prudence to suggest only which could be the name according to the data provided by the historic sources; and besides, he preferred to distinguish them with letters of the alphabet. Half a century after he had completed his investigation, he expressed a pessimistic attitude with regard to the knowledge of Mayan writing, considering it beyond decipherment.

Günter Zimmermann, over a period of many years, worked on Mayan writing, mainly with the Codices, trying and, at times, succeeding in determining the meaning of certain variants of the hieroglyphics which represent the deities. In addition to that, he further elaborated a catalogue of hieroglyphics which was much more complete than that of Gates, with a very careful classification in which the principal glyphs are separated from the affixes and in which each one of the signs is numbered and facilitates any reference to them. T. S. Barthel also took a keen interest in Mayan epigraphy, especially in ascertaining the meanings of the affixes used in the Codices. He prepared a catalogue of them with all the different meanings which the investigators, who had tried before to identify them, had given them.

More recently, Mexican investigators of the National Institute of History and Anthropology and from the Center of Mayan Studies, formerly known as the Seminar on Mayan Culture and the Seminar for the Studies of Mayan Writing, investigated a number of aspects related to decipherment: the structure of the *cartuchos* and glyphic phrases (Roberto Escalante, Juan Jose Rendon) and the relations between the texts and drawings in the Codex (Maricela Ayala), or between the colonial texts and the glyphic ones (Maria Cristina Alvarez).

### Historic content of the inscriptions

A transcendental step in the history of the decipherment of Mayan writing was the recognition of the fact that the contents of many inscriptions on the monuments were of a historic nature. This conclusively disproves the belief that only calendaric matters were dealt with, which were related to astronomic phenomena and religious connotations. The process began with Heinrich Berlin, who in 1958, suggested that in each city some glyphs associated with the city were included in the inscriptions and that these glyphs served to designate the name, the protective deity of the place, the ruling dynasty or some other element that characterizes it. He gave the name of "emblem-glyph" to these signs, since it was impossible to define their actual meaning with more exactitude. Then he interpreted as nominal glyphs those recorded on the sides of the great sarcophagus in Palenque, together with human representations which he supposes are members of the buried personage's family. Much later he found on a tablet in Palenque, the probable names of different lords whose history ought to be linked with that place. With that, the taboo maintained for almost half a century, according to which the Mayas never wrote the name of any person on their inscriptions, had been broken.

Tatiana Proskouriakoff continued along these same lines. She very carefully analyzed the inscriptions of Piedras Negras and Yaxchilan, and was able to explain the meaning of some glyphs which have to do with the life of a number of rulers of these cities: birth, enthroning; the capture and sacrifice of prisoners; and the names of the personages. These facts together with the scenes presented on the monuments allow her determine the dynastic history of some of the heads, finding additional support in the dates associated with everything, from their birth to their death, including also their ascension to power, their struggles against enemies, the possible alliances of lineages, the matrimones, the mention of the ancestors and descendents, etcetera.

David Kelley presented some information with reference to Quirigua about a number of rulers of that place: the women connected with their life, and other data, such as the probable political dependence of that city on Copan. More recently, Thompson, who during almost all his life refused to accept the possibility that the Mayan inscriptions contained historic facts, suggested that the calendaric glyph *Cipactli*, of Nahuatl origin, which appears on one of the stele of Seibal with a presentation of a personage whose features are not Mayan, would be the name of the family *Cipaque*, who, according to historic sources, ruled in the region which was inhabited by the *Putunes*, probably the invaders of the cities of Peten at the end of the classic period.

We have personally interpreted the inscription sculptured on the gravestone which covers the sarcophagus of Palenque in a historic sense in which we consider that some of the biographical material pertains to the personage buried there are mentioned: the date of his birth and his calendaric name; the date of his enthronement; the acquisition of certain hierarchical titles; perhaps even the name of his predecessor; his marriage, and possibly the lineage of his wife, and the mention of probable members of the family and relations with another lineage (from Yaxchilan?), until his death with the date thereof. To our way of thinking this last date would correspond perfectly to the age that the skeleton reveals.

When anyone tries to interpret the inscriptions historically, it is obvious that the investigators have to curb their imagination and not fall into phantastic lucubrations, as had occurred with reference to the personage of Palenque to whom we have just referred. Without any reserve whatsoever, one attributes to him a name which can only be hypothetical

According to the different schools of interpretation of Mayan writing, their signs can have phonetic or ideographic values. The glyph on the high relief known by the name of *Ahau* or lord (Museum of Palenque, Chiapas).



as well as an age for the time of his death; a defect in one foot and a height, which in no way correspond to his skeleton. And to explain the supposed anatomic deformity, the affirmation of consanguineous and incestuous marriages between members of the Palenquen dynasty, is thrust forward gratuitously. Through such a dangerous road of phantasy one would easily arrive to the version of what is known as "science-fiction", widespread in books, illustrated short stories and television programs, in the sense that the person buried in the sarcophagus was an extraterrestrial being, depicted on the gravestones as he handles the controls inside of his space capsule.

In summary, we can say that Mayan writing, being hieroglyphic, comprises signs which represent objects, actions, historic names (whether of personages, cities or lineages), and of deities, celestial bodies, calendaric periods, mathematical values, rituals and ceremonies, auguries, important events in the life of the rulers, reference to esoteric concepts, etc. These signs can, of course, have ideographic or phonetic value. However, we believe that the complete decipherment of Mayan writing does not depend on the sudden finding of a supposed "key", but rather, step by step, with probable periods of standstill and even of retrogressions, through the medium of linguistic studies, comparisons between the glyphic and literary texts, analysis of the structure of each hieroglyphic and also as sets of them, and the use of statistical computational techniques, one will arrive at the point of completely understanding all the Mayan inscriptions as the point of full comprehension of other writings of antiquity, such as the Egyptian and "Pumer" among others, was attained.

### The calendar

*Antecedents.* The very needs of agricultural peoples determine that in the course of their natural development, they may have been compelled to invent or adopt a calendaric system. Based on the knowledge of the periodicity of the agricultural cycles and wanting to know with exactitude the time of the year in which one ought to plant in order to derive the full benefits of the rainy season, they had to make observations of celestial happenings to discover, in their perfect mechanics, some facts which coincided with the change of seasons. We dealt with this particular point at the beginning of the chapter, when we refer to the concept of "astrobiology" which Berthelot presented.

The Mayas, when they started their own culture, which was clearly differentiated from all the other Mesoamerican cultures, had already inherited the calendaric knowledge which other peoples had acquired centuries before, and added to them concepts or new inventions, thereby elaborating a complex calendaric system.

The builders of Monte Alban in Oaxaca, in its first period, and those designated "Olmecans" on the coast of Veracruz and Tabasco, recorded dates which substantiate the affirmation that between the year 500 B.C. and approximately at the beginning of our era, two of the calendars which the Mayas had adopted at the end of the third century A.C., having one calendar of 260 days and another of 365 days, were used.

Following this, we shall present a summary of the distinct mechanisms which integrate the Mayan system for computing time: calendars of 260 and 365 days; the calendaric wheel; the supplementary series; the lunar count; the esoteric cycles of the nine lords and of 819 days; the long count; the ends of periods and the short count.

### The ritual calendar

One could assume that the first calendar which the Mesoamerican peoples invented was the lunar one, in view of the fact that the phases of our satellite are easy enough to observe. However, there is not the slightest trace of its use on the inscriptions of the Olmecans and Zapotecans. On the contrary, the calendar of 260 days seems to have been utilized from

earliest times. We know that it is the result of the combination of 20 names and numerals from 1 to 13. The meaning of the names coincides, in part, within the different cultures, which comprise the names of animals (tiger, serpent, dog, monkey, lizard, rabbit, deer, eagle and turkey buzzard), of plants (flowers—without specifying them—maize, harmful herbs), of natural phenomena (wind, night, rain, water, earthquakes, and death), and of some material things (house, flint knives). If one compares, for example, the *tonalpo hualli* of the Mexicas and the so-called *tzolkin* of the Mayas, one can immediately perceive that approximately half of the names have a correspondence and that they occupy an identical position in each calendar.

Attempts have been made in vain to explain this calendar in terms of some natural cycle, making reference to the cultivation of maize, from the moment in which the ground is prepared by stubbing until the end of the harvest; reference has also been made to the duration of gestation of a human being. There is, however, no scientific argument which could support these hypotheses, besides, the relation between the calendaric (very exact) cycle and the vegetal and human gestation cycles which are variable, is vague and difficult to maintain.

Attempts have also been made to attribute an astronomic origin to it. When Teeple asserts that “the numbers 13, 20 and 260 are completely arbitrary, since they have no relation whatsoever to any natural phenomenon”, he thereby suggests “that two *tzolkines* [520 days] are almost equal to three ecliptic periods”, but he concludes that “this correspondence is accidental, not intentional”. With reference to the possible astronomic origin of this calendar, Lizardi Ramos adds a note to the translation he had made of Teeple’s work, in which he quotes three authors who had referred to this point. According to him, Ludendorff believed that “it would be possible to have been adopted as a mean of the ecliptic periods”, which seems to correspond to the same suggestion of Teeple already mentioned and discarded by the latter. Zelia Nuttal “makes it obvious that the same Mexicans assigned an astronomic origin to the period of 260 days and finds support for that argument in a passage of the *Tratado relativo a la observación del Planeta Venus*. For us it is, however, difficult to imagine that the Mexicas had knowledge of the origin of a calendar which would have been in use for some two thousand years earlier. As far as Ola Apenes is concerned, Ramos refers to the fact that “the author makes it clear that the two successive passages of the Sun through the zenith of a place, located between the tropics, are produced at intervals of 260 days, in a latitude of 14 degrees and 7 minutes, very close to that of Copan. In fact—he states—precisely around the year 1000 B.C., the latitude of the place ought to have been 14 degrees 9 minutes, in order that the interval between two passages would be 260 days”. The hypothesis of Apenes is interesting, but it would be extremely difficult to associate Copan with a region where the *tzolkin* had originated on a supposed astronomic basis due, on the one hand, to the distance of the places in which the most ancient inscriptions were found which record the use of this calendar and, on the other hand, the fact that some 1 500 years had elapsed between the time in which the observation of an interval of 260 days had been made between two consecutive passages of the Sun through the zenith of the place and for the first date recorded there. It has to be a matter of an intellectual invention in which the preexistent vigesimal numeration and the magic value of the number 13 were the bases which served for the elaboration of a system destined for esoteric use. Berthelot considers that its origin may have been pre-agricultural and pre-astronomical.

In point of fact its function was exclusively of an “astrologic nature”, even if the course of the stars would not intervene in their creation. Manipulated by the priests it was consulted to give the new born its first name—that of the day corresponding—and to establish what could be termed its horoscope. Many of the *Books of Chilam Balam* (*Libros de Chilam Balam*)



provide the prognostications associated with each one of the 20 days which follow one another with different numerals, until the cycle is completed. It is in this manner that the nature of the new being was advised of the future: he would be wise, an assassin, bad, meddling, dishonest, a “devourer” of his wife and children, an adulterer, stupid, judicious, generous, a thief, courageous, imaginative, noble, undecided, lascivious, according to what the day might be and thus portend. Furthermore, his activities could be anticipated or perhaps it would be possible to orientate them from birth: he would be rich, poor, a master of all the arts, a merchant, a healer, a carpenter, a weaver, a hunter, someone with a brilliant future or with absolutely nothing. Taking into account that a great number of the days exercised an unlucky influence, certain arrangements could be made with the priests so that the exact day of the birth was overlooked and in its stead was the day of their presence in the temple.

*Pirámide del Adivino* (“Pyramid of the Prophet”) in Uxmal. Mayan scientists established the duration of the solar year with far greater precision than that which is found on the Julian calendar.



### The solar calendar

The calendar of 365 days, or *haab*, is of an astronomic nature and related to agricultural activities, that is, invented by sedentary people who lived from organized cultivation. The observation on the rising of the sun on the horizon, the site of which is shifted from North to South and afterwards from South to North until it reaches the point more to the north in the summer solstice and more to the south in the winter solstice, enabled one to determine exactly the duration of the solar cycle. Considering the 365 days that elapses between two consecutive repetitions of the same extreme position of the Sun at the break of day, the ancient Mesoamericans conceived a division of this lapse which is more logical than ours: 18 months of 20 days, plus 5 days "left over"—considered unlucky—instead of our months of 30 and 31 days, which ought to alternate but which do not do so twice a year, and a strange month of 28 days which every 4 years has 29 days.

The Mayas knew that the duration of the solar cycle lasted more than 365 days, but they did not correct their calendar to insert one day every 4 years. As soon as they recorded a date on some inscription, they used to announce that it was necessary to add a certain number of years, months and days to that date in order to compensate the accumulation of the fraction of the annual day not computed since the date on which their calendar was initiated until that moment (the secondary series). According to the calculations of specialists, the correction in this calendar which the Mayas made, was more exact to the ten-thousandth of a day each year than that of our calendar with the insertion of a leap year.

### The calendaric wheel

The learned Mayas realized that it was feasible to integrate the religious calendar of 260 days with the civil of 365, in view of the fact that 73 *tzolkin*es (260 x 73) resulted in the same number of days as 52 civil years (365 x 52), that is to say, 18 980 days. It was necessary that this lapse of time would occur, so that the correspondence of one day determined by the *tzolkin* with a day also determined in some of the months of the *haab* would continue to repeat itself. It is not known what the name of this period was, but the Mayan specialists designate it "the calendaric wheel". Other Mesoamerican peoples, including the Mexicas, used to consider it as the greater cycle, believing that the world could end when that arrived at its time limit.

The Mayas had a very different concept of time, of an abbreviated form of 52 years. They were able to envisage periods of thousands and millions of years, virtually the eternity of time, through the use of the system that we refer to as the *long count*. It is very likely that they inherited such a system, since Stele "C" of Tres Zapotes in the Olmecan area records a date of the long count more than three centuries before the most ancient Mayan stele (Stele 29 of Tikal) with the same manner of recording time.

The long count is formed by a series of cycles, the basic unit of which is, naturally, the day (*Kin*):

Uinal	=	20	kines	20 days
Tun	=	18	uinales	360 days
Katun	=	20	tunes	7 200 days
Baktun	=	20	katunes	144 000 days
Pictun	=	20	baktunes	2 880 000 days
Calabtun	=	20	pictunes	57 600 000 days
Kinchiltun	=	20	calabtun	1 152 000 000 days
Alautun	=	20	kinchiltunes	23 040 000 000 days

The Alautun represents approximately 63 millions of years. It is clear that its use could only refer to mythological periods. All the dates recorded in the system of the long count



refer to a date-period, which marks the beginning of its calendar. With the correlation more generally accepted by investigators, between this calendar and ours, this date would correspond to the 12th of August of the year 3113 B.C. (13.0.0.0, 4 Ahau 8 Cumhu). On the inscriptions, the initial series, the name by which one frequently refers to the long counts by their position at the beginning of the hieroglyphic texts on the monuments, usually do not indicate periods of time greater than the Baktun.

#### The supplementary series

After the initial series a variable number of glyphs usually follow (eight as the maximum). They constitute what we are accustomed to refer to as a supplementary series, and which are known by the following letters: G, F, E, D, C, X, B, A. They appear in the order shown although at times some can be lacking. The supplementary series comprises an esoteric cycle and the lunar count.

The glyph G, of which nine forms exist, each one with a number of variants, which are

The Tower of the Palace in Palenque is another example of the buildings given over entirely to astronomical observations. It is believed that the upper part was utilized to isolate the astronomers.

designated as G1, G2, G3 ... G9, corresponds to the nocturnal deity of the day recorded. This series of nine symbols has to be equivalent to the series of nine deities which accompany the days on the Mexican calendars (*tonalpohualli*) and which one assumes are the Nine Lords of the Night, probably with esoteric function. Each deity exercises an influence on the auguries associated with the day. The nine glyphs always follow each other in the same order and without interruption, in the same way as the seven names of the days of our week, and in the beginning they alluded to natural influences on them. It is not known just what the glyph F actually means, which immediately follows G, and which is frequently fused with it. It is possible that both are terminated in order to make definite the meaning of the function of the nocturnal "companion" (Caso refers to this as "accompanied") of each day.

The lunar count is expressed by means of a number of glyphs. The signification of the principal ones is interpreted with absolute certainty. When we refer to the astronomic knowledge of the Mayas we are recalling that, according to the tables of the Dresden Codex, the lapse between two consecutive new moons had been estimated by them as having been 29.53086 days. Presently we deduced this theoretic estimate, but in practise the computation of the lunar cycle was obtained in a very simple form. Since its duration is for somewhat more than 29 and a half days, it created the need of alternating one month of 29 days with one of 30, and when it was noted that the calculated date did not coincide with the real phase of the Moon, that led to a succession of two months of 30 days each. The lunar series was recorded in the following manner: glyph D was used as the coefficient up to 19 when the age of the Moon, during the month of its course, did not reach 20 and in its place the glyph E was used with the coefficient of 0 to 9 for more than 20 days. With glyph C (a possible numeral from 2 to 6) the lunar months were indicated which had elapsed in the six months' period, since the lunar month was divided into two semesters and each month was reckoned from the beginning of the new moon. The glyph A (with the numeral from 9 or 10) was used to show if the lunar month in force had 29 or 30 days. With regard to the glyphs X and B it seems beyond any doubt that they were related to the lunar computation, but their specific meaning remains unknown.

As for astronomy, we mentioned the knowledge that the Mayas had about the cycle of Venus and the form in which they divided it, in so far as it is possible to appraise that from the tablets pertinent to this planet which form part of the Dresden Codex. Although some glyphs of Venus may appear in the inscriptions recorded on the monuments, it is not possible to speak of their use on any calendar pertaining to Venus, but rather of possible references to "points of greater brilliancy or greater elongation" as Teeple suggests.

#### The cycle of 819 days

When Eric Thompson analyzed many monuments with hieroglyphic inscriptions, he recognized the existence of an esoteric cycle of 819 days which could have originated from the belief in seven terrestrial deities, nine from the infraworld and thirteen celestial, since 819 equals  $7 \times 9 \times 13$ . The allusions in this cycle for a determined date would pretend to define the combined influences of the deities in that moment.

#### The ends of the periods

Although the dates recorded on the monuments do not correspond to a calendar that differs from those we have mentioned, they can appear in an abbreviation of the system of the long count. These dates are known as "ends of the periods". When it is shown that it is a matter of an end of a Katun, of which the numeral is mentioned and which is accompanied by the calendaric wheel of the day recorded, such a date does not occur before 949 Baktunes

have elapsed, that is, some 375 000 years. When in a date which coincides with the end of a Katun, the numeral is not precisely indicated, that is, its position within the long count, the recurrence would be at the end of 949 Katunes, which is approximately 19 000 years. As one can judge, these dates of the ends of the periods, although abbreviated, have a tremendous precision for the express purpose of placing the events within the historic framework of the ancient Mayas.

#### The short count

At the end of the 9th century of our era much later dates are recorded by means of the system of the long count. At this time the decline of Mayan culture is placed in the central area at the time of the arrival of foreign invaders. As a result, much of the knowledge which applies to the complex calendaric system is lost. We have no record of the dates over a period of some six centuries although the Mayan priests continued computing the passage of time in a very abbreviated form, as it is revealed in the *Libros de Chilam Balam*, Landa's *Relación*, and other documents of the XVI century. The system which the Mayas used to refer to as *u Kahlay Katunob*, we designate as the "short count", but for them it was "the count of the Katunes". A cycle or "wheel" of a Katun consisted of only 13 Katunes, for which a specific date was repeated when this series of 13 Katunes was over, that is something more than 256 years. The Katun was named for the day *Ahau* on which it customarily terminated.

#### The Maya-Christian correlation

The loss of the use of the long count for many centuries before the Spanish conquest has rendered extremely difficult the possibility for correlating, with any degree of certainty, the Mayan calendar with ours. In point of fact, some events mentioned in Landa's *Relación* and in other colonial documents refer to Mayan dates within the system of the short count and in some cases the Christian year is indicated, being feasible to place them within our calendar. Besides, some contradictions in a number of sources make the problem still more arduous. Various correlations between both calendars have been proposed. Some are based on astronomic data, which are supposedly associated with the dates, but which leave out historic information. Until now the correlation most accepted by the Mayan specialists, which regards historic data and possible astronomic associations, is the one which Goodman first proposed and which Martínez Hernández later modified to three days and which Thompson finally left to one day. Nevertheless, other investigators prefer the one that Morley had offered in the very beginning and which Spinden had improved upon. Between the two correlations there is a lapse of about 260 years, for which the possible verification of a date through the C14 test of materials related thereto (proof which implies a margin of plus and minus from  $\pm 50$  to 100 years, that is, from 100 to 200 years), does not yield any definite result. In this way, some lintels of wood from Temple IV in Tikal, which bear dates, gave Spinden recognition for his correlation by a first test, while some time later a tenth of tests on lintels from the same temple coincided with the dates recorded according to the Goodman-Martínez-Thompson correlation.

It is deplorable that the problem of Mayan-Christian correlation has not been able to be solved in a satisfactory, certain form, and that the Mayan dates, so exact within the framework of Mayan time, cannot be placed in our computation of time with the same precision.

#### History

The complexity of the Mayan calendar, its incredible zeal for accuracy, its scope of thousands and millions of years in the past, led investigators to the conclusion that it was a matter of a unique invention in the history of the peoples: the creation of a most complicated instrument for spiritual and metaphysical purposes.

At the beginning of the century, Charles Bowditch had logically felt when he was in

front of Stele number 1 of Yaxchilan, that its contents had to be of a historic nature and that the inscriptions provided the data on the life of the personage represented there, such as the date of his birth, of the beginning and end of his initiation, of his ascension to the throne and of other high points of his reign. Morley, on the other hand, when he began to decipher the Mayan inscriptions, maintained that their contents were fundamentally historic and that the greatest number of the dates had to correspond to actual facts. However, as he was unable to decipher something more than the dates and calendaric calculations, he drastically changed his opinion and emphatically affirmed that the Mayan inscriptions never recorded anything connected with historic happenings.

On the basis of the inability to comprehend even the calendaric aspect, it was decided that everything was relative to the passage of time, and it was invented that the ancient Mayas used to practise a singular philosophy of time. For that reason Morley was able to establish that the inscriptions "did not contain in any form the glorification of a person ... no reference is made to actual conquests, nor do they record the progress of an empire; they neither extol nor do they exalt, nor glorify anyone: they are so impersonal, not individualistic, that it is possible that no name of a man or woman may ever have been recorded". Spinden, with the same criterion, affirmed that "not even the name of one place or one person has been definitively recognized and translated... we don't know—among the hundreds of glyphs of Copan and Palenque—the actual names of these cities, nor even their symbols". Thompson, who elaborated the idea of the philosophy of time among the Mayas, said that "as far as our knowledge reaches out, the Mayan monuments with their inscriptions deal exclusively with the passage of time, with data about the Moon, about the planet Venus, about calendaric calculations and references to the gods together with the rituals associated with these problems". And, in order to understand with greater clarity the attitude of the Mayas faced with the events of time, Thompson himself explained that it was "as if we would erect a monument every five or ten years, and that we record on that the corresponding date, as, for example, Sunday, December 31, 1950; Saturday, December 31, 1951; etc., with the information about the position of the Moon and the deities associated with it".

By idealizing the Mayas in attributing to them a special cult or worship of time, it was denied that they had had any historic conscience, or any concern with recording facts which they considered important in the course of their life. However, their actual concern for history is unquestionably beyond any doubt, as there are more than enough manifestations of that. The Spanish chroniclers as Landa, Lopez Medel, Ciudad Real, Lizana, Cogolludo and others, in referring to their "books" written with letters or characters, specify that, among other things, they contained "their histories". It is, however, certain that the content of the three only Codices which escaped the religious fanaticism of Landa has nothing of a historic nature, but rather only ritual, calendaric and astronomical. In any case, the assertion of the chroniclers is still, of course, authentic. Its veracity is established by the chronicles which, in different Mayan languages, were written by cultured people after the conquest, when the friars had taught them the Castillian alphabet. In some cases, too, as with reference to the *Popol Vuh*, the author specifies that whatever he is referring to "was in an original work written in ancient times, but its vision remains obscure, without understanding for the investigator".

In this way, in *The Books of Chilam Balam* of Mani, Tizimin, and Chumayel, certain facts pertaining to the groups that invaded and settled in Yucatan, are recorded in a very simple, unadorned form and with chronologic references (Katunes), which could be placed in our calendar. The history of the *Xiu* embraces two and a half centuries, from 849 to 1106; that of the *Itza* is a little more detailed and extensive, covering a period of almost six centuries, from 415 to 987, and it relates their presence in Bacalar; the discovery and establishment in Chichen-Itza; the abandonment of the place; the journey to Chakanputun, and the return to Chichen-Itza. With reference to the later period, from 987 to 1520, mention is made of the supposed Mayapan Alliance with the *Xiu* who occupied Uxmal, the *Itzá* of Chichen and the *Cocom* of Mayapan; and in similar fashion the struggles between these



The hieroglyphic inscription on the perron of one of the courtyards of the Palace in Palenque, Chiapas. Calendric signs which refer to the months and days appear on that inscription.

groups, with the destruction of Chichen and much later of Mayapan. Finally appear the Spanish conquerors, and the authors of these documents express their anger and animosity for the repression which the Mayas had been subjected to, and the state of submission which was imposed upon them. Some of the happenings of the colonial period were recorded later, the last one going back to 1610.

The *Manuscript (Manuscrito)* or *Chronicle of Oxkutzcab (Crónica de Oxkutzcab)*, although written in 1685, by a member of the Xiu family, is a copy, according to the author's statement, of "an ancient book, principally in characters which is called *Anares*" (it ought to be *Analtes*, as they called the Codices). The historic information, associated with the dates of the Mayan calendar and the Christian years, narrates events which had taken place there, such as illnesses; massacres of those "who made the offerings of water", among whom there was a *Tutulxiu*; hurricanes; the foundation of Merida; the battles against the Spaniards; the beginning of Christianity, etcetera.

In the *Popol Vuh*, after the mythological stories of the creation of the first four men, mention is made of their children and descendents, the foundation of towns, the struggles with other groups, the power of the Quiche reign, the names and posts of the principal heads, and the ancestry of the Quichean kings by lineages, including those who were ruling at the time of the arrival of the Spaniards and those who later bore Spanish names and surnames. The list of these lords extends up to the fourteenth generation for the descendents of *Balan Quitzé*. The historic facts or events are not correlated with chronologic references.

A large part of the *Memorial de Sololá* or *Anales de los Cakchiqueles* deals with the history of this people. It tells about the migrations, indicating many of the places through which they passed; the names of kings and their own chiefs or enemies; the rivalry and wars with the Quiches and other groups; the conquests; the revolts of the Quiches; epidemics; the succession of their kings; the arrival of the Spaniards; the murders of their governors by the Spaniards; the plundering and cruelties of the conquerors, and the complete vanquishment of the country. For more than a century, from the end of the XV to the beginning of the XVII, the events are dated in the Cakchiquel calendar (the name of the day) and with the day, month and year which correspond to our calendar. The information pertinent to the last 50 years has an increasingly local and familiar color, as it is restricted to the mention of marriages, births, deaths, incidents and quarrels of neighbors, even including adulteries and drinking bouts with their respective punishments. The histories which the ancient Mayas wrote after the conquest, recording an infinite number of facts, an innumerable number of names of personages and places, and, in some chronicles, dates, could hardly have been retained solely through oral tradition. They must have been recorded in prehispanic times, as some of their authors clearly specify: in painted books and sculptured monuments. From them till now it would seem to us incredible how the historic contents of the inscriptions could have been denied and ignored for such a long time. In treating the problem of the decipherment of Mayan writing we have mentioned how the antihistoric dogma had been attacked and destroyed by Heinrich Berlin, Tatiana Proskouriakoff and David Kelley among such, and by the one who signs. Contrary to what was maintained during almost half a century, it can be affirmed that there are concrete references to the Mayan centers (glyphs- emblems) in some forms; to the names of the principal figures; to the dates of their birth, enthronement, and death; to the events during their reign, such as wars and conquests; to kin alliances, marriages and lineages; to ancestors and descendents; to posts and hierarchical titles, etc. The names of *Escudo-Jaguar* (Shield-Jaguar), *Pájaro-Jaguar* (Bird-Jaguar), *Cráneo Enjoyado* (Jewelled Skull), and *Ahau* for Yaxchilan; or a possibly dynasty *Caan* in Quirigua and of *Uöxök Ahau* in Palenque, if they do not correspond exactly to those which the alluded rulers to had, at any rate, offer a high degree of verisimilitude. Of course, in this interpretation one should not discard either the information or the hieroglyphics, that is, the iconographic interpretation associated with it. One should also not ignore, as in the case of the man buried in the tomb of the Temple of the Inscriptions in Palenque, the material remains of the individuals whose history is intended to be deciphered, and the analysis of which ought not to contradict the reading of the glyphs.

The substantiation of the existence of a true historic conscience among the ancient Mayas coincides with what we know of the other Mesoamerican peoples. To cite only a few examples, we can recall the existence in Monte Alban (Building "J") of stones which refer to historic events, probably conquests of peoples by those of that locality. In this same manner, a number of Mixtecan Codices of Oaxaca narrate in pictographs and with precise dates, the history of various dynasties for a period of ten centuries, mentioning the date of birth, the names of the fathers and the descendents, marriages, political alliances, struggles, conquests, enemies who were taken prisoners, together with the date and circumstances of their death. From the Mexicas we have knowledge of the so-called *Tira de la Peregrinación*, with the place of origin and the stages of Aztec migration up to their arrival to Chapultepec.

The obsession of the Mayas for recording the passage of time has no bearing on metaphysics. They did not endeavor to render homage to time itself, but they most definitely did want to construct a system which could assure the maximum exactness in the computation of time, which is precisely what they did accomplish so that the data of their history, fixed in form, remained so precise that not the minutest possibility of error was left.

While to us such zeal may seem exaggerated, it can be explained through the outlook they had of everything in the world and on life. In Berthelot's conclusions on what he designated "astrobiology", he analyzes a universal tendency which occurs "between the neolithic and the recent triumph of modern European science", and which he considers as characteristic of the Asiatic thinking, associating it with the development of an advanced agriculture. In the astrobiologic conception the "vital action" (the biologic phenomenon) and the "mathematical regularity", which is based on the laws of the movements of the stars, are fused. In this conjunction, knowledge still in its incipient stages, with regard to astronomy and botany, intervenes, wherein observation can readily corroborate the numerical and chronological regularities. Within this conception which embraces space, time and all the terrestrial phenomena, everything is organized with relation to the calendar: the movements of the stars, terrestrial phenomena; human, animal and vegetable life; and the succession of historical facts. Such a way of thinking, applied to the history of man, tends to raise this above the myth, and to transform it into chronology and science. In the conglomeration of this cosmogony, the course of the celestial bodies in the heavens, the vital development of plants, the existence of man and the historic happening follow fixed rhythms from then on and for all times. If the deeds which affect a community have to be repeated in an implacable form at definite periods of the calendar, then it is necessary to be able to propitiate them if they are favorable and try to avoid or reduce their effects to a minimum if they are detrimental. Through the mediation of the priests it was feasible, at the very least, to cherish the hope that the gods take part in these events which the march of time reproduced at definite intervals. For that reason, the imperious necessity of knowing the date of its advent, and thereby, to know with the greatest exactness when they had occurred in the past, were all that mattered. The conjunction of the astronomic calendars (that is, the solar, lunar and Venutian), and the rituals (*Tzolkin*, the series of the nine nocturnal companions, the cycle of 819 days) of the long count and later of the Katunic wheel, were the means for providing the priests with the chronological and necessary esoteric elements so that the inevitable repetition of the events would have a more benevolent aspect, the least fatal for the population.

### Medicine

For the ancient Mayas the causes of illnesses could be either natural or supernatural. It was customary to treat the first type by means of applying empiric knowledge, which they had as far as the curative effects of plants are concerned. But in the event that they had been caused by "bad winds", or sent by enemies, or provoked through errors committed by the lack of fulfillment of religious obligations, or if they had whatever other miraculous origin, they pertained to the dominion of magic and had to be cured only through witchcraft.

Landa observed this dichotomy, but without having been able to differentiate between the scientific and the magical, for which reason he combines what pertains to both when reference is made to "surgeons, more accurately called sorcerers, those who cure with herbs and many superstitions", and also "...the priests, the doctors and sorcerers who were all one and the same". The chronicler mentions the practise of bloodletting in the aching parts of the body, still accepted by medicine today (phlebotomy); the use of massage and steam baths; and further provides some curative prescriptions made of *balché*, many different kinds of herbs, leaves, fruits, sap of plants, and also medicaments from such animal matter as the fat from some birds and the excrements of the iguana. Numerous treatises on this subject are known dated from the XVIII and XIX centuries, but some have to be late copies of more ancient documents. The so-called *Libros de Chilam Balam* by Ixil and Kaua include medicinal texts. Many manuscripts are completely devoted to the presentation of prescriptions for alleviating and curing illnesses, and, although it is possible to observe the contribution from Europe, the greater part is of indigenous origin. As a matter of fact, the Spaniards were amazed at the effects of the plants, and introduced many of them into the European pharmacopoeia.

Among the principal texts we will recall some that Tozzer mentioned, such as the





Page VI of the *Códice de Dresde* ("Dresden Codex"). It contains *tzolkins* or calendars of 260 days; counts of 365 days for the divinations and worship, tablets pertaining to the eclipses, to the cycle of Venus and to the prophecies for the year and the *katún*.

famous *Book of the Jew* (*Libro del Judío*) which is attributed to Ricardo Ossado, who would also write *Herbs and Sorceries of Yucatan* (*Yerbas y Hechicerías del Yucatán*); the manuscript of *de Vidales*, which would be the most ancient that is known thus far (XVII century); others are anonymous, as the *Book of the Jew from Sotuta* (*Libro del Judío de Sotuta*), *Mayan Medicine* (*Medicina Maya*), *The Notebook of Teabo* (*Cuaderno de Teabo*), *Notes on Various Plants* (*Noticias de varias plantas*), and *The Book of the Doctors* (*Libro de los Médicos*). The manuscript of Pio Perez, entitled *Indian Prescriptions in Mayan, Indexes to Medicinal Plants and the Diseases they Cured* (*Recetarios de Indios en lengua Maya. Índices de plantas medicinales y de enfermedades coordinados*), is a most important work.

*The Ritual of the Bacabs* deserves very special mention. It is a Mayan text and an English version of a manuscript which mentions one date: 1779, but which must be considerably more ancient. Ralph Roys, who made it known, has suggested as a possible date that of the beginning of the XVII century or perhaps even earlier. This work confirms the dual vision or attitude that the ancient Mayas had with regard to diseases and, consequently, of the manner and means for curing them. In this text the magical invocations and medical prescriptions are mixed, integrating an "empirical and magical therapeutics". It becomes more than evident from all this literature that the *curanderos* established an authentic symptomatology of diseases according to which they prescribed remedies of vegetable and animal matter, prepared by infusions, decoctions, cataplasms and ointments, the effectiveness of which had been empirically established as well as confirmed. The *curanderos* frequently applied a therapeutics based on an elementary principle, actually ingenuous, parallel to the *similia similibus curantur* of homeopathy, that is, to cure the similar with something similar, but for the Mayas the similitude was superficial, since actually it was a matter of comparing the color which could be associated with a specific symptom, with that of the plant to be used for the cure. Thus, yellow flowers were utilized against jaundice or bilious extravasations, and red flowers for hemoptysis or dysentery. Some other examples, still in practise, which Roys presents in his extremely valuable work, *Ethno-Botany of the Mayas* (with 437 names of medications and their corresponding applications), have to be of prehispanic origin. From among these we will quote the use of nests of wasps pounded into some skin eruptions similar to the sting of a wasp, and of some grapevines with extensive ramifications which suggest serpents, against snake bites. The work of Roys is completed with lists of Mayan names of plants and animals and of their equivalents in the scientific nomenclature and in the popular language as well. Among the prehispanic *curanderos*, the same as among the present day practitioners of this category, there existed a specific professional differentiation according to specialities, as it can be perceived from the following: the bone specialists treated every kind of contusion, dislocation and bone fractures; the midwives attended to childbirth with the help of idols connected with the goddess Ixchel, the patroness of medicine. The surgeons, whom Landa affiliated with the sorcerers, were capable of undertaking difficult operations, such as that of trepanation; although they were not always successful according to the archaeological evidence. With regard to the "suprainiana" lesion localized in the occipital bone, for some authors that would be the result of surgical intervention in the form of the scraping of the bone, that at time would reach the point of perforating it, perhaps to remedy "a dissection of the osseous tissue in the area affected by the deforming pressure". Its association with the craneal deformations seems proven; but some authors, like Carlos Serrano, do not believe that it was intentional, but rather produced by the osseous irritation and the necrosis during the deforming process.

#### Utilization of scientific knowledge

With the exception of medicine, as much in its empirical as magical aspect, which

Mayan writing, dispersed in codices, steles, gravestones, sculptures, ceramics, perrons, buildings, etc., has until now not yet had its "Roseta Stone", which may provide the key to the understanding of this society.



applications were intended to benefit the population at an individual level, the other sciences of the Mayas monopolized by the ruling class, ultimately constituted a form of power to assure the functioning of society, the preservation of the collective established norms, the continuity of the system and the domination of this class on the great masses of the population. Integrated into a global vision of the cosmos and life, these sciences demonstrated that the universe, created by the gods, functioned in perfect and unalterable order. The movements of the stars in the heavens, their conjunctions, appearance and disappearance, yielded to precise rhythms, and the succession of the seasons and the corresponding agricultural labors gave way to this mechanics. Mathematics permitted the priests to make the calculations which provided them with the necessary information to announce celestial phenomena. Everything known was written in hieroglyphic texts, but only the select specialists among the priests were able to interpret them.

The calendar, a complex result of astronomical observations and esoteric lucubrations, served as the pivotal axis around which all the celestial and terrestrial beings revolved, in exactly the same way as the natural phenomena; the life of the individual and that of the collective unit; the appearance of favorable periods and cataclysms, and the happenings already experienced in the past. The knowledge of the calendaric system and its manipulation by the sacerdotal class assured a restrictive power that had no limitations or bounds. The priests "knew" everything that had occurred and would recur again and again. They also "knew" how to obtain from the gods what is good and how to try to avoid what is evil. They were the only ones able to implant hope and fear. To be in the good graces of the gods it was indispensable that the people fulfill their obligations to them, so as not to alter the worthwhile progress of that mechanism which had been created by the gods and entrusted to the priests which enabled them to exact complete, absolute submission of the people.

And the populace, desirous of a life free of cares, in which nothing essential and indispensable for their existence would be lacking, was disposed to accept all the orders of those who interceded with the divine beings "to give them health, life and maintenance".



# The Religion of the Mayas

If in our time, that is, the XX century, in spite of the outstanding scientific knowledge that man has attained, no less in the immensity of the heavens than in the most infinitesimal corporal particles, religion still continues to play an important role in the life of the people, including those among whom even atheism has an official character, it is not difficult to understand what it would have meant in some periods of time which we could regard as prescientific.

There is no doubt that the Mayas knew how to calculate the cycles of the stars, but for them the astral bodies were supernatural. Through experience they knew the effects that the sun, the rain and the wind produced on their sowing, but they regarded those phenomena as deities. In addition, the very earth, the plants they were accustomed to cultivate, the animals they used to hunt or domesticate, all had a divine aspect.

Through religion everything was made comprehensible, that is, the universe in its totality of celestial bodies, the natural forces, beings and things. And, in as much as everything was ruled by the gods, since everything, good and evil, that happened was sent by the gods, and since it was feasible to obtain their favor through obedience to their representatives on Earth and through the ceremonies and rites which they taught them, the Mayan, with fervent faith, surrendered himself completely to religion.

The Mayan religion, as could be anticipated, had many points in common with the religion of the other Mesoamerican peoples, since all of them were integrated into one and the same basic culture and were found at a level of development more or less identical. The bonds that united the faiths of those people embraced not merely general concepts but also specific deities, practises and rituals. It is in this way that all or almost all of their religions had a pantheon integrated with numerous gods; some of them were benevolent to man, others hostile, but this dualism was able to exist in one and the same deity. The distinction of the cardinal points determined the possible division of one divinity in four likenesses, each one associated with a color suited to each direction, which did not always have its correspondence

Mayan religion played a very essential role in the life of this people. The Mayas, scientist and priests, knew the effects of the natural forces and, in spite of that, they deified almost everything that pertains to nature; the sun, the rain, the wind, the earth, plants and animals had a divine nature.

in the different cultures; the natural forces, obviously the same for all these peoples, created parallel gods with an analogous cult and at times with similar representations. The existence of deities who were the patron saints for the principal posts is another feature common to the Mesoamerican religions. However, there is no doubt that Mayan religion created many aspects that were peculiar to general concepts, as well as to the deities of a very specific nature within the frame of their material and intellectual needs.

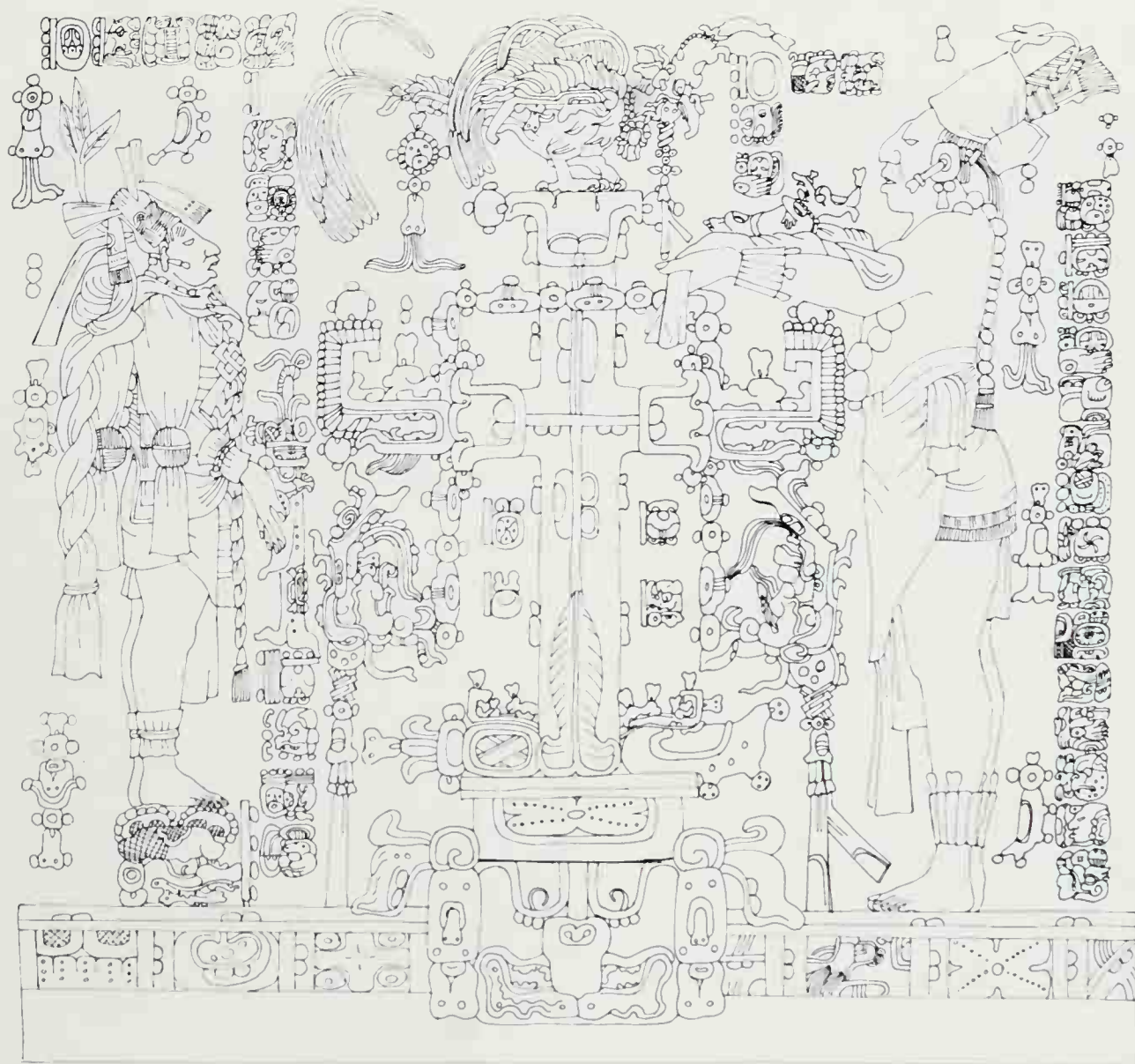
The religion that a people elaborate reflects not only the physical medium which serves them as environment and from which they live, exploiting their natural resources, but definitely also the social medium from which it stems and over which it acts. In the previous chapters we emphasized the classicist nature of Mayan society, its division in groups differentiated not only with regard to the production and distribution of goods, but also, and consequently, with reference to the standard of living, of activities, of access to political power and cultural acquisitions. Two fundamental strata can be considered by simplifying the social picture: the great mass of the producers—"free" and slaves—and the nobility—lords and priests—. We are going to find in the Mayan religion two levels well differentiated, in its conceptions, in its pantheon, in its practises of worship and among the priests: that of the common people and that of the ruling class.

#### Popular deities

The peasant, at the popular level, believed in many gods which personified the basic elements of his existence, that is, his most vital products and the natural forces which had an influence on his acquiring them. The Earth was a deity with lacking flesh features, associated with death, as among the peoples of the Mexican *altiplano*, despite the fact that life also sprouted from it. Its macabre aspect was due to the fact that her bosom embraced the infraworld in which not only the bodies of the deceased, but also of the astral bodies, such as the Sun in the late afternoon and the Moon and the stars at the break of day, were going to stay there. Thompson believes that Earth is represented in the Codices by the god which Schellhas designated *F* and to which Thompson himself put the letter *R*. He likewise considers the deity of numeral 11 as corresponding to that, since both bear the sign on their face, that is, the form of a curl which characterizes the glyph for the day *Caban*, the symbol for Earth. On the monuments it is very likely the god of Earth which is found on the lower part of Stele 40 in Piedras Negras, receiving grains of corn which a priest is scattering; in like manner his hideous mask without flesh, which in Palenque serves as a pedestal for the stucco figures on the pillars of the facade of the Temple of the Inscriptions, and which is also the cruciform motif on the tablets of the Temples of the Cross and the Leaf Cross. The seat on which the person sculptured on the sepulchral stone is reclining, in the crypt of the mentioned Temple of the Inscriptions is simultaneously the same hideous evocative mask of Earth.

The Sun, *Ah Kin* or *Kinich Ahau* (Lord Countenance or Solar Eye) or also *Kinich Kakmoo* (Macaw, the Solar Countenance of Fire), is probably represented in the Codices by the God *G* of Schellhas; it is also the deity of the numeral *A* on the glyphs which represent variations of the head. His symbol is a four-petalled flower which the said deity can show on the forehead and which, generally, accompanies it in the glyphic texts of the Codices. On the monuments it is represented frequently adorning the shields which important personages are carrying; by an old man with large oval or square eyes, whose pupils are, at times, in the inner corners, above or below the eyeball, to give the impression of strabismus; the upper incisors—the only dental pieces which due to the well advanced age are conserved—are cut down in the form of the glyph for the day *Ik*; a spiral wound around the nose and in somewhat like a hook form which emerges from it from the corners of the mouth, complete the characteristic features of the solar god. At times he can also appear like a young man, personifying the glyph of the day *Ahau*. Although venerated for being indispensable for the growth of plants, it seems that he was more feared than loved, since the droughts which he was able to provoke in case of a lack of rain were fatal to the harvests and, eventually, also to the survival of the population.

The Baroque style of the symbols on the stelas has provoked many difficulties for the understanding of the contents of these stelas. However, we do know that hundreds of elements formed part of the religion which was handled by a cultured political élite, such as the priests, who appear on the grave-stone of the *Templo de la Cruz* ("Temple of the Cross") in Palenque.



On the following page, the head of a serpent—one of the animals most venerated in Mesoamerica—which is found at the foot of one of the beams of the Pyramid of Kukulcan in Chichen Itza.

Rain was of tremendous importance for the life of the Mayan peasant, above all in the septentrional area when the rain is very limited in its period of duration and low in precipitation. For that very reason the god *Chaac* is the most represented in the Codices and on the monuments in Yucatan. He is the god *B* of Schellhas and is characterized in the Codices by his long, hanging nose, his eye surrounded by a spiral, the pupil in the form of a comma as it has a volute around the nose, the toothless mouth or with only one upper incisor, and frequently with a hook which protrudes from the mouth towards the front and another towards the back, since the juncture is visible in profile. He can be represented in the form of spurts of rain or navigating in a small canoe or emptying out a bowl of water. He usually carries a stone ax in one hand, possible symbol of the thunder, and, at times, a torch (a thunderbolt or a threat of a drought?). On the monuments of the central area he constitutes the scepter what personages of importance in different localities are carrying as a symbol of their hierarchy, as in Palenque, Yaxchilan, Tikal, Xultun, Quirigua, etc., one of his legs turning into a serpentine handle of the insignia. In the buildings of the septentrional area the mask of a huge nose, similar to a question mark (which travelers in the past century had confused with the snout of an elephant), with its mouth together with its threatening canine teeth; the pupil marked by a square eye and the very adorned earflaps constitute an omnipresent motif, and still in many cases only a mere decoration of the friezes and crestings. In

some cases in Kabah, hundreds of masks decorate the façades; in others, as in the Rio Bec and Los Chenes, the enormous mask occupies the central part of the same façade and its mouths provides the entrance to the temple.

Animals, such as the frog and the turtle, were associated with the god of rain; the former because it announced the rain through its croaking, and the latter because it was assumed that its crying provoked it. The Mayas believed that there was a *Chaac* in the firmaments for every cardinal direction and of a determined color: *Chac Xib Chaac*, the red man of the rain, in the East; *Sac Xib Chaac*, the white man of the rain, in the North; *Ek Xib Chaac*, the black man of the rain, in the West, and *Kan Xib Chaac*, the yellow man of the rain, in the South. In Yucatan the Mayas further believed that the god lived at the bottom of the *cenotes*, and for that reason, to obtain his favors, they used to throw in offerings and sacrificed human beings (children, by preference, since they perceived a relation between their sobbing and the rain). Another magical means to call forth rain was to produce abundant black smoke by burning rubber or powder, since that was similar to the dark clouds that were loaded with rain. In the Highlands of Chiapas and in Guatemala, the god of rain and his servants, the flash of lightning and thunder, used to live in the caves in the mountains. In the classical period, in some large important centers, *Tlaloc* the god of rain, appears, proceeding from the Mexican altiplano (Tikal, Copan, Uxmal), as a probable influence from Teotihuacan in the high priestly spheres, but which did not reach the vast popular strata.

Phenomena less linked to rain are wind, lightning and thunder, which can accompany the rain although that is not necessary. Some historic sources mention the *Pauhtunes*, which sent the winds from the four cardinal points, each one related to the color that corresponds to its direction (*Chacpauhtun*, red, to the East; *Kanpauhtun*, yellow, to the South; *Ekpauhtun*, black, to the West; and *Sacpauhtun*, white, to the North). These supernatural beings would live below the earth and seem more likely to have been the servants of the *Chaacoob* than autonomous divinities or even appellations of the gods of rain, since, according to the beliefs of the Mayas the winds are produced by the rain. Special rites were carried out when the underbrush was burned in the preparatory step to get the earth ready for planting, so that the wind would help and not cause detriment extending beyond the fire that had been foreseen. We have no knowledge of any representations of a god of the wind either in the Codices or in the monuments, but in the glyph for a day of the religious calendar, *Ik* does mean "wind" and, by analogy or extension, also "air" and "spirit". Besides its use on the Inscriptions, this sign was also utilized in the architecture of Palenque, precisely to give form to small openings in the walls of the buildings, perhaps in the belief that the glyph would bring about a greater amount of air that would then enter the inside.

It seems that no specific deities for lightning and thunder had also existed, but they would rather have been envisaged as powers emanating from the *Chaacoob* or perhaps regarded as simple instruments or tools of these powers. The ax which the *Chaac* frequently wields in the Codices, through the blow it produces when it is applied, would symbolize thunder, and through the sparks which are provoked by striking another stone would thereby represent the lightning. In the same manner, the drum which the *Chaac* sometimes plays in the Codices may probably allude to thunder.

The goddess *Ixchel* occupied an important place in the Mayan pantheon because of her multitudinous functions and through her connection with the vital aspects of the activities of the people. In the Codices this goddess is designated the goddess *I*. Fundamentally, she represents the Moon whose name was *U* in the Mayan language of Yucatan. In the series of numerals of the head in the calendaric inscriptions she would be the young goddess of *1*, and her hieroglyphic is frequent since the dates recorded used to involve the lunar calendar. She was looked upon as the wife of the Sun and was considered to have had a sensuous







temperament which led her to commit adultery with the planet Venus; her conjugal conflicts provoke the eclipses, according to modern popular beliefs. A sanctuary dedicated to this goddess is known to exist in Cozumel, and it is possible that Tixchel (the place of *Ixchel*) in the region of Acalan would also have been consecrated to her.

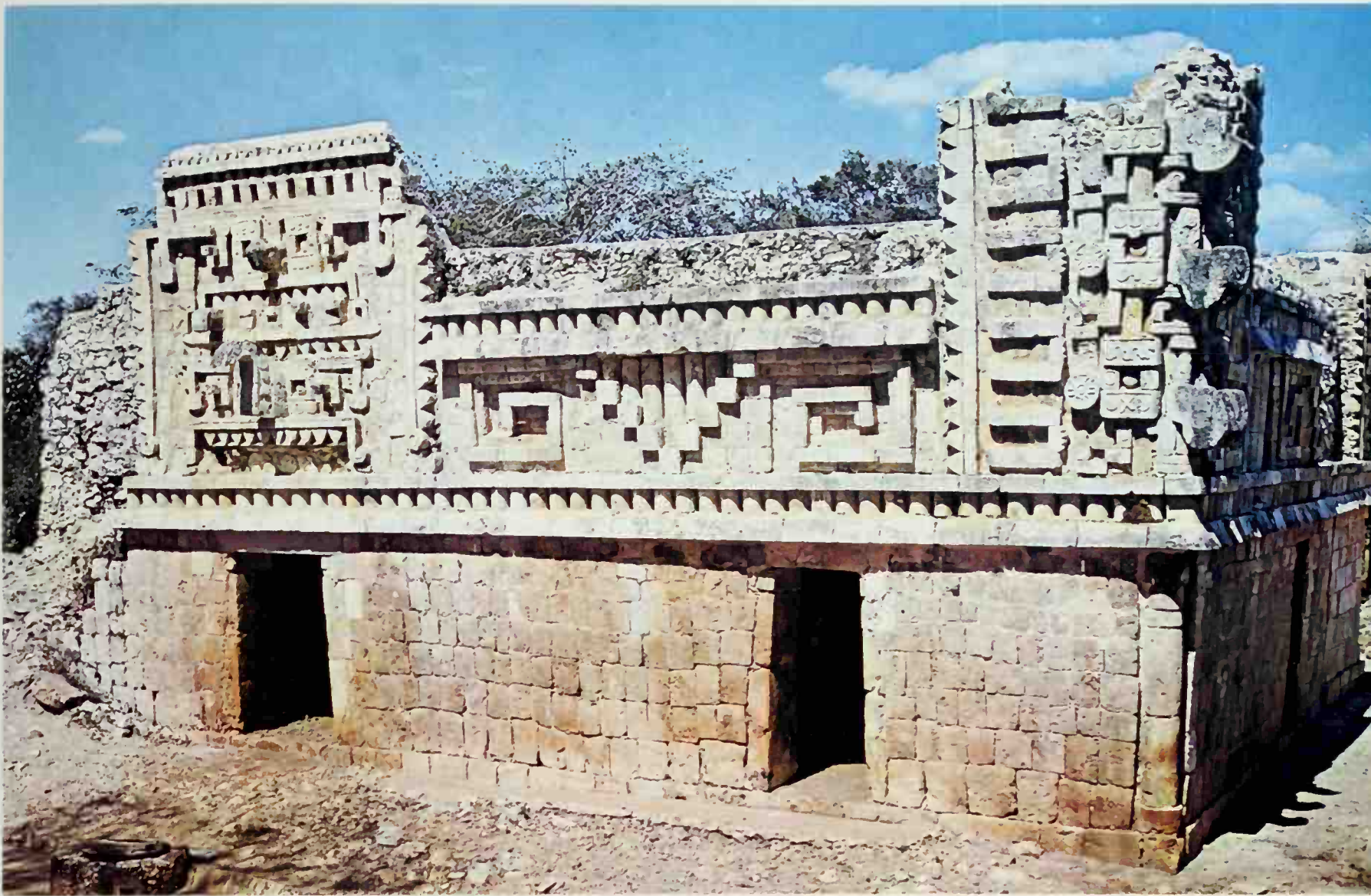
The interest in the Moon was not determined solely by the nature of her astral brilliancy, but because of the influence which it was supposed that she exerted on the growth of plants and the health of the people. For that reason she was also the goddess of medicine, apart from the fact that she could also provoke certain types of diseases. Possibly because of the licentious temperament attributed to her, she was associated with procreation in its different phases, i.e., sexual intercourse, pregnancy and parturition. An idol which represented her, was placed under the straw mat of the woman in labor to facilitate childbirth. This goddess was also the patroness of weaving. In reality, *Ixchel* can be considered, in general, as a divinity associated with women in their physiologic life and principal activities.

In some form, the goddess was also linked with water and, independently of her nocturnal journey through the firmaments, was present in the natural deposits of water, that is, lakes, lagoons and *cenotes*. In the *Ritual de los Bacabes*, which text appears to be dated from the colonial period, but that most definitely has to be based on some information collected originally a little after the conquest and, therefore, with prehispanic concepts, reference is made to four goddesses *Ixchel*, linked to the four colors of the cardinal directions. Thompson believes that *Ixtab* (that is, that of the cord), the goddess of those who committed suicide, who appears to be hanging on the tablets of the eclipse in the *Dresden Codex*, would easily be able to be not merely one specific goddess, but a possible appellation of *Ixchel*.

The intimate relationship which unites the Mayan goddess *Ixchel* to the Mexica goddess *Tlazolteotl* (*Toci*) is obvious. Both goddesses are linked with the Moon, medicine, weaving, sexuality, pregnancy and parturition, a set of concepts most assuredly very ancient in the religious way of thinking among the Mesoamericans.

Another goddess who, according to Thompson, would be designated *Ix Chebel Yax* (the goddess associated with paint brushes), and who would be very closely aligned to *Ixchel*, on the basis of her aspect in the Codices and because of her function, would be the goddess *O* in the classification presented by Schellhas. Her glyph is the same as that for *Ixchel*, except for the fact that her face has many wrinkles and, at times, she has only one tooth to indicate her old age. The same author believes that she would be the wife of *Itzamna* and the mother of *Ixchel*. Being associated with the *Chaacob*, she can be represented pouring out water from a jar or even urinating while standing. Just as *Ixchel*, she too would be the patroness of weaving, of painting and of embroidery. On the last page of the *Dresden Codex* she appears in a malign form, with claws on her feet, a skirt adorned with crossed bones and a serpent tied around her head; she is seen contributing to the inundation caused by a flood which gushes forth from a celestial monster, while she personally is pouring out water from an upturned receptacle. The sign of *Caban* on her glyph, as on that of *Ixchel*, indicates that both goddesses, in one form or another, were associated with the Planet Earth.

Maize, the basic alimentation for the Mayas and, according to the *Popol Vuh*, the flesh of the men who had been formed by the gods to give body to an ultimate humanity, necessarily had to be deified. This corresponds to the god *E* of Schellhas in the Codices. There he is represented as a young, handsome man, whose head is extended to form an ear of corn or it is seen surrounded by the leaves from the maize. He frequently appears actively engaged in some form of agricultural work. In spite of the fact that a number of authors have given the name of *Yum Kaax*, the Lord of the Brush, to the maize deity, Thompson questions the authenticity of this designation and asserts that, on the basis of several sources, the god would be called *Ah Mun* (the-tender-corn). Other names are given to the plant in the chronicles, such as *Kauil* (probably from *Cauil*, the second harvest of maize), which Thompson interprets as "abundance of sustenance". The deity is the patroness of the numeral 8, which in



The Temple of Xlabpak, Yucatan, decorated with huge masks of the god of rain, *Chaac*. The inhabitants of the Peninsula of Yucatan reached a point in which they had made a cult that was almost an obsession with regard to this divinity.

the various forms of the head is presented having the face of a young god. The day *Kan* is also associated with the plant since the name means "ripe maize", and the hieroglyphic for this day is considered as a symbol thereof. One of the rites of human sacrifice, that of decapitation, would be linked to the worship of maize, as it was among the peoples of the Mexican altiplano according to the chroniclers. In a scene from the *Dresden Codex*, a decapitated head to which homage is being paid is precisely that of the god *E*; the decapitated heads which bear, instead of ears of corn, the cruciform motif between leaves from the maize—this motif is from Palenque and is known as the *Cruz Foliada* (Foliate Cross) being designated in this manner in the temple—seem to refer to the same practise.

#### Deities of the *élite*

Another plant that was deified was cocoa, but we do not know if the adoration of this would correspond to the common people or to a higher social level. It is, however, well known that the cocoa bean was used as money, and it is highly possible that its cultivation would have been in the form of a monopoly, up to a certain point. *Ek Chuah*, the god of cocoa, the god *M* in the classification of Schellhas, depicted with the body painted in black, the mouth red and a long horizontal nose, frequently carries a load on his shoulder and a cane in his hand, signs which identify him as a merchant since he was the deity of this type of work. The merchants, as we explained in a previous chapter, used to belong to the nobility or were closely aligned to it. Therefore, the god *Ek Chuah*, in order to represent money as much as a socially privileged group, as far as worship is concerned, would probably be quite far removed from the popular class, honored only by the owners of cocoa plantations and rich traders.

Thompson thought that *Itzamna* would have been a deity venerated by the hierarchs, as being superior to all the others; he was, in addition, the creator of everything in existence,

that is, of the gods, the heavens and all contained therein: the stars, earth and all the beings who dwell there, as well as of all knowledge and of the matters of man. However, this deity seems to have been very popular, at the very least in Yucatan, for his favorable disposition to man in all his different aspects.

His importance and complexity is firmly established through the countless references which the colonial sources provide. Besides being the maximum creator and celestial god, whose representation would correspond to the god *D* in the scheme of Schellhas, he was very closely bound to the vegetal life and to the phenomena which affect it, an aspect in which he would be identified with the god *K*.

In his quality as a universal creator he would be the same *Hunab Ku* or his son as some authors consider him to be. During the postclassical period *Hunab Ku* (the only god) seems to have been for the priests of high rank, a metaphysical concept more than a concrete deity, since, according to the information of the chroniclers, no temple had been constructed in his honor nor was homage paid to him, which has been interpreted—erroneously—as a monotheistic tendency. Thompson even suggests that the Christian influence, from the time of the conquest on, would not be far removed from this interpretation.

Fundamentally, *Itzamna* was the god of the heavens; he represented the firmament in its immensity and eternity, and the heaven of the day and night. His name would mean “the house of the iguanas”, which Thompson, amplifying the meaning of “iguana”, assumes that it refers, in general, to celestial monsters and to such reptiles as lizards and serpents which had lived in the heavens and on earth. The terrestrial surface would constitute the floor of the house and the sky would form the walls and the roof. Eventually everything which proceeded from the sky, depended upon *Itzamna*: that is, solar heat, for which he is linked as the lunar influences, which would take effect through his wife *Ixchel*; the rain directly provoked by *Chaac* (Cogolludo states that *Itzamna* claimed to be “the dew of heaven”), and, as a result of such natural forces, the harvest.

As a celestial god and creator (*D*), he was presented as a toothless old man and as a deity who regulated vegetation (*E*); its hieroglyphic shows some leaves which sprout from his forehead; in the Codices they form part of a complicated and very adorned nose. *Itzamna*, symbolizing the sky, is the bicephalic monster (lizard) of the *Dresden Codex* (IV-V), the serpent with the head of the same god in the *Códice Trocortésiano* (XXXI), the bicephalic serpents on the monuments of Palenque (the board of the Temple of the Cross, the sepulchral gravestone in the Temple of the Inscriptions) and the geometric stylization of these same bicephalic serpents, known as “ceremonial levers” which important personages on the classic monuments of various places (Copan, Yaxchilan, Naranjo) are carrying. For Thompson the bands with the signs of celestial bodies (the Sun, the Moon, Venus, and probably other planets) would be additional representations of *Itzamná*, which serve as a setting for the personages or scenes modelled in stucco on various buildings in Palenque; each setting would eventually be a synthesis of the cosmos, the earth and the sky integrated, forming a quadrangular area: the “house of the iguanas”. The same author presents the bicephalic lizard of Altar *D* of Copan as the naturalistic representation of *Itzamna*, regarding the lizard as a species of iguana (*itzam*).

As is fitting for a deity with multiple attributes, *Itzamná* was frequently invoked to prevent collective calamities and, on fixed dates and in the course of several months, to assure rain, to moderate the solar heat and provide good health. This god is referred to by many names in the colonial sources, and these very names allude to his universal functions.

The celestial pantheon of the Mayas comprised other gods, whose worship cannot always be specifically determined, that is, if he pertained to the ruling class or to the people as a whole. One of them is the god *a Chicchen*, the god *H* of Schellhas, the patron of the

numeral 9, whose glyph represents a young man (in the Codices he also appears as a woman): and eventually, with feline features (the very spots on the skin of the jaguar around the mouths, the whiskers of the jaguar). This deity was associated with the rain, that is, closely related to or subordinated to the *Chaacoob*. For this reason it is more than likely that his worship was of the popular kind, as still continues to be in actuality that of the gods *Chic-chanes*, the serpents who provide the rain according to the beliefs of the Chorti.

With more certainty one can consider the *Lahun Chan* (the Ten Heavens) as a divinity revered by the priestly class. This deity personalizes the planet Venus. It seems that, in actuality, there were five gods corresponding to Venus, and *Lahun Chan* was only one of them; another would be the black god *L* in the classification of Schellhas. His presence in the *Dresden Codex* was linked to the tablets pertaining to the planet when, according to Thompson, he comes back to appear in the heavens after a nether conjunction with the Sun. He is represented as aggressive, armed with darts and a shield, and his victims are the gods *K*, *I*, a jaguar and a turtle, which suggest elements beneficent to man threatened by the apparition of Venus upon leaving the world of the dead; the glyphic text appended hereto would comprise, according to Thompson, unfavorable prophecies.

Another deity, probably not of a popular nature, would be the god *C* of Schellhas, frequently represented in Codices and on the inscriptions of monuments, but without being able to arrive at its original meaning with any degree of exactitude. In fact, his functions were diversified. Morley calls him *Xaman Ek*, the name of the polar star, perhaps because of its relation to the North. Schellhas, however, was of the opinion that it was more likely to be the Osa Minor, since its glyph seems to be the pugnosed face of a monkey. The constellation would have been envisaged as the figure of a monkey whose prehensile tail would be attached to the Pole, making it possible for the constellation to rotate around a fixed point, which would be the Polar Star. In such a case the merchants would render homage to the god *C*. Thompson accepts his association with the North, but recalls that he can be represented with the signs of the four cardinal points, which makes the interpretation that unites it exclusively with the Septentrion more doubtful. On the calendaric inscriptions he is the first companion (glyph G1) of the series of the Nine Lords, and besides, he is part of glyph *X* of the lunar series. In other hieroglyphic contexts, the god *C* seems to be closely allied to water and the Sun.

To conclude with the deities who lived in the heavens or were connected with it, we will recall the existence in the Mayan pantheon of the *Oxlahun-ti-ku*, "the thirteen gods", who would have occupied the thirteen levels. It was assumed that the heavens had been divided into that many levels. Thompson believes that they were the patrons of the numerals from 1 through 13, the function of which on the ritual calendar of 260 days reveals their importance; their association with the thirteen basic numerals of the variants of heads is also feasible. It is fitting to suppose that the worship of thirteen celestial gods would, however, be restricted to the priestly class only since, besides their function, pertinent to the numeration and the religious calendar, their mythical character and their participation in cosmogonic struggles would have kept them far apart from the concerns of the people as a whole.

Their antagonists were the *Bolon-ti-ku*, "the nine gods", who dwelt on the nine levels which made up the infraworld, a place in which the mortal enemies of man lived (those who made diseases and caused death), and where the deceased were accustomed to go to stay there. Their malign influence on life and human acts would be manifested through the calendar by means of the series of the nine nocturnal companions expressed by the different glyphs for *G*. In the books of *Chilam Balam*, the rivalry between the *Bolon-ti-ku* and the *Oxlahun-ti-ku* culminated in the victory for the former, the provokers of a cataclysm which would mark the end of one of the humanities successively created by the gods. As that of the thirteen celestial gods, the worship of the nine subterranean gods would form part of the concerns of the hierarchy which manipulated the cosmogonic beliefs.



### Calendric relation between the deities and the prophecies

Other religious concepts which did not reach the common people were the ones related to the deities, in regard to numerals and chronologic periods. In treating some deities we have referred to their possible association with numerals and days. Thompson, far better than anyone else, established these relations very definitively, basing his ideas, in part, on the work of other investigators. At this point we are going to make a resume of his ideas in the form of a graphic picture, with some minor modifications:

A bas-relief of one of the footways to the ball-game at Chichen Itza, in which is presented the decapitation of a personage from whose neck spring serpents, in the form of lines of blood.



Numerals	Days	Gods	Concepts associated with them
1	Caban	Ixchel (I)	The Moon and the Earth
2	Etnab	(Q)	Human sacrifice
3	Cauac	Itzamná (K)	The wind and the rain
4	Ahau	Ah Kin (G)	The Sun and the day
5	Imix	Mam (N)	Earth
6	Ik	Chaac (B)	Rain and vegetation
7	Akbal	Jaguar	The night and the infraworld
8	Kan	Ah Mun (E)	Maize
9	Chicchan	Chicchan (H)	Serpent
10	Cimi	Yum Cimil (A)	Death
11	Manik	(R)	Mountain, deer and hunting
12	Lamat	Lahun Chan	Venus
13	Muluc		Serpent and Water
14	Oc		Dog of the infraworld
15	Chuen		Monkey and handicrafts
16	Eb		Destructive rain
17	Ben		Tender maize and food
18	Ix		Jaguar
19	Men	Ix Chebel Yax (O)	The Moon, weaving and the deer
20	Cib		

When we talk about the ritual calendar we mention the fact that for each day there was a corresponding prediction. Barrera Vazquez and Rendon, utilizing the contents of various chronicles, present a relation which provides the names of the animals, plants and specific attributes associated with the twenty days of the religious calendar, besides the auguries for each one of these days. At this point we are going to summarize this data, but we will deal only with the prediction related to a specific day:

KAN	Rich, master of all the arts, learned.
CHICCHAN	His spirit is full of fire, his destiny is bad, assassin.
CIMI	Assassin, his destiny is very bad.
MANIK	His hands are full of blood, he too is evil.
LAMAT	Drunk, meddlesome, gossipy, insincere in what he says, one who sows discord.
MULUC	Devourer of his children and his wives, he also kills opossums, rich.
OC	Adulterous, without common sense or judgement, also a sower of discord, lacking in understanding.
CHUEN	Skilled worker with wood and in weaving, master of all the arts, very rich all his life, everything he would do is good, sensible.
EB	Rich, his riches are within the community; good rich; his property is from the community, generous, a good man, he will not be niggardly, very good.
BEEN	Wretched, plebeian, poor.
IX	Ferocious jaguar, his mouth is bloody, his claws are bloody, a butcher, devourer of meat, assassin.
MEN	A master of all the arts, very good, he will speak soon, the holy word for him.
CIB	A thief, the temperament of a hunter, brave, but also a murderer, without a good destiny, evil.
CABAN	Learned and prudent in business, bloodletter and healer, healthy, brave.
EDZNAB	Bloodletter in fevers, bloodletter and healer, healthy, brave.
CAUAC	Very imaginative, noble.
AHAU	Rich, judicious, brave, good.
IMIX	Libidinous sinner; dishonest, the most wicked of men, indecisive, hesitant.
IK	Dishonest, very lascivious man, a bad destiny.
AKBAL	Wretched, plebeian, without a future, poor, hunter.

The influences of the days of the ritual calendar on the individual destiny also had their effect, in some form, on the destiny of the community, that is, that certain signs were favorable for determined activities, or, on the other hand, were dangerous or detrimental.



But the action of the passage of time on beings and events was not limited to the day only. All the calendaric periods contributed to interweave the most complicated net in which the destiny of each one and of all was trapped.

The day of the ritual calendar (which had 260 days) on which the civil year began, was of great importance in determining what could be expected or feared during the 365 days of that year. That day, which in the course of time could not be more than one of four (*Akbal*, *Lamat*, *Ben* or *Etnab*) which followed one after the other indefinitely, was called by the Mayas *Ah Cuch Haab*, "The Year-Bearer". For reasons which we do not know as yet, these "bearers" were changed, and immediately after the conquest they were designated *Kan*, *Muluc*, *Ix* or *Cauac*.

The last days of the *Tuns*, *Katuns* and *Baktuns* also signified something—or much—for which the priests established their prophecies. The most important was the day on which the *Katun* ended and which provided the denomination for it, day which was inevitably *Ahau*, and whose numeral changed in a descending order: 13, 11, 9, 7, 5, 3, 1, 12, 10, 8, 6, 4, 2, 13, 11, etc. *Los Libros de Chilam Balam* ("The Books of Chilam Balam") provide us with a katunic series with their corresponding prophecies, not always intelligible to us, since they are expressed in the metaphoric language used by the priests. Apart from some propitious katuns, the greater part of them presage misfortunes such as droughts, plagues, misery, wars, carnal sin, shame, etcetera.

#### The deity of death

We have attempt to classify the deities into two forms: the popular and those of the *élite*. However, one of them provoked, doubtless because of the tremendous terror it inspired in all, irregardless of their social class, a generalized attitude of repulsion, and that deity was the god of death.

He appears as one of the most represented in the Codices and is also present on many monuments. According to the classification of Schellhas he is the god *H*. He is known by diverse names in different historic sources: *Cizin*, which Thompson interprets as "stench", but which could more appropriately signify etymologically, "to make very stiff" (?), according to the linguist Maria Cristina Alvarez; *Uac Mitun Ahau*, which Landa cites, the literal translation of which is "the lord of the seventh wheel" (that also coincides with the idea of the linguist just mentioned), seems to suggest one of the circles or levels of the infraworld, which Thompson, however, assumed was erroneously transcribed by the chronicler for *Chac Mitun Ahau*, and which, according to him, would be equivalent to "a great infernal putrefaction"; *Hun Ahau*, the calendaric name of "I Ahau" with which Venus is frequently mentioned, considered dangerous for all when it appears from the world of the dead after having disappeared from heaven for some time and who, in addition, was in Landa's opinion, the "prince of all the demons"; *Ah Puch*, whose authentic name could be *Ah Pucuh*, "the Lord of Hell" in the Tzeltal, Tzotzil and Tojolabal languages according to Thompson, but which could also be written *Ah p'uch*, "the one who strikes hard things", or *Ah puch* "the one who crushes, breaks soft things" according to Alvarez; in both cases reference is made to the destructive action of death. Finally, *Yum Cimil*, "the Lord of Death" and he is still designated in this form in Yucatan.

His identification in the Codices is so exact that there is no room left for errors. The body is generally naked; the vertebral column visible and the apophysis exaggeratedly projecting, with the skull and black points from decomposition spread over the whole body. Among the elements of their dress the most constant are some probable bells similar to those from metal found in the *cenote* of Chichen Itza, and which can be worn in the hairdo, on a *golilla* (collar) and, mainly, on the ankles and wrists; at times they emerge from his

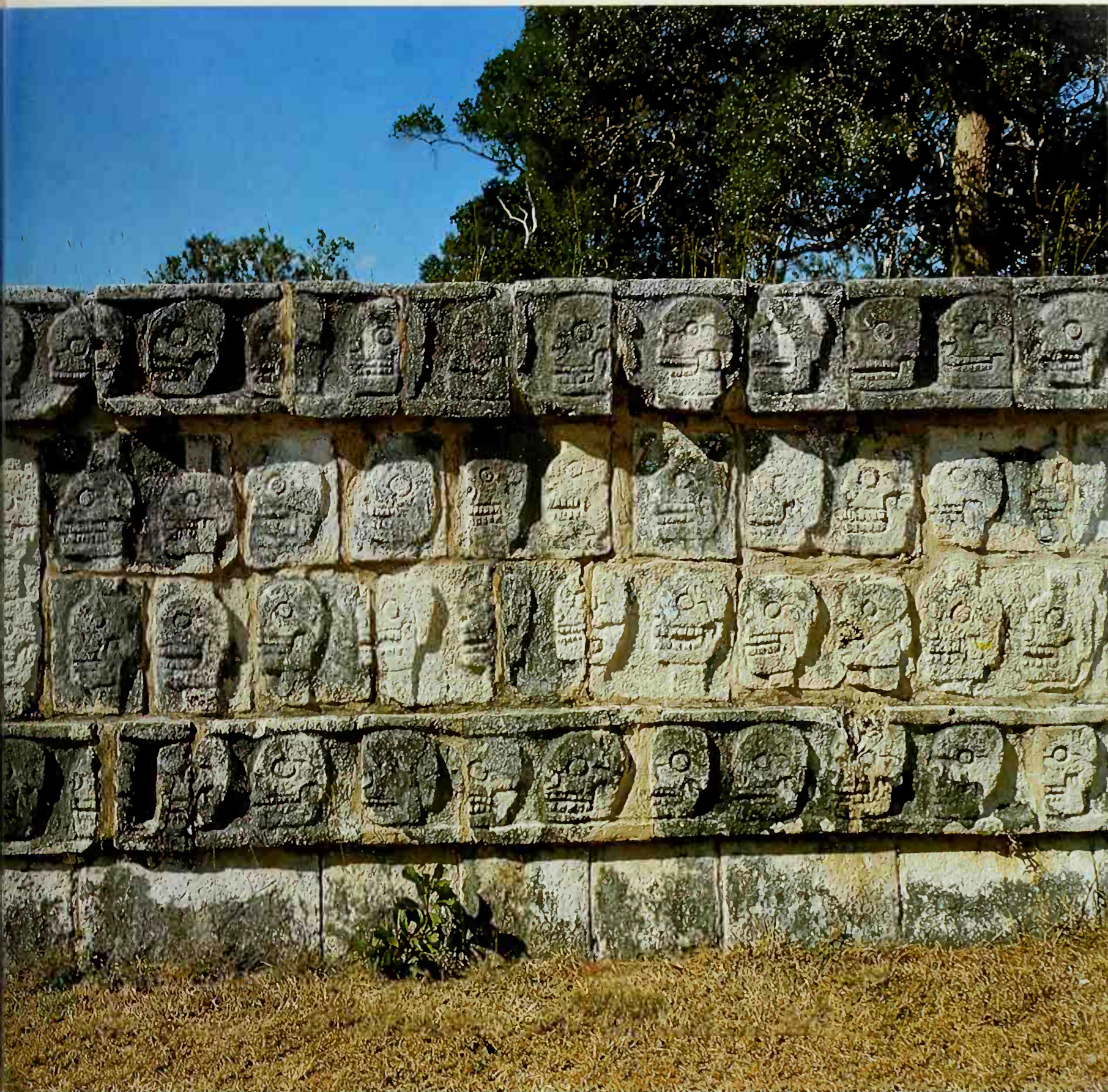
mouth as well. As earrings he customarily uses a large bone; the hair-do was arranged like a halo of light material (cotton?) with bells, or it can be a head of an animal which can be hardly identified and which Schellhas assumed represented a snail. When wearing some article of dress such as a skirt or cloak, he displays ornaments from crossed bones. The deity is associated with the numeral 10 and the day *Cimi* which signifies "death"; in both cases the hieroglyphic reproduces the face of a dead person, with lean features and at times with a sign which seems similar to our % on the cheek or in place of the skull. In one case limited to the *Dresden Codex*, the deity is female.

In the Codices the connection of this deity with the god which Schellhas denoted as *F*, is frequent. This latter is associated with war and a violent death in the form of sacrifice, and who, according to Thompson, was a god of Earth, to whom he affixed the letter *R*. At times, the god of death goes about accompanied by a dog, which assisted the deceased in the journey to the infraworld, according to Mesoamerican beliefs, and by an owl, whose nocturnal cry is considered an unpropitious omen everywhere in the world. The attitudes and activities of this god are very varied throughout the pages of the Codices: he can be alone, grasping with his hand some object (a bag, a lance, an offering in a receptacle, the hieroglyphic *Kan* for corn or the glyph for the Sun, or the glyph for the day *Ik*); doing some kind of work such as weaving with a hand-frame or with a loom attached to a tree; offering a decapitated bird and grains of corn to a deity in the form of a serpent; falling from the sky with some of his limbs ended in vegetable matter; seated in front of a fire-place, or inside a temple, or on top of a throne made from large bones, or also on the hieroglyphic for *Tun*; lying down on the hieroglyphic *Caban* (Earth) and smoking; cutting down a tree with his axe; motionless under the rain with his huge axe in his hand; holding up with his hand a trap which closes, as a roof, a kind of sepulcher; breaking either a forked prop planted in the ground, or a cord; grasping the head of a deceased; wetting the point of a stick in a receptacle which perhaps contained paint; burning a bee or threatening a deer with a burning torch. We have already mentioned his association with the god of war and death in sacrifices, which is manifested by the presence of both gods in the very same scenes, at times they are seated facing each other, and in one case present at a human sacrifice; in another case the god of death is associated with four representations of the god *F*, all of whom are taking hold of god *K*; in another scene, the god *F* appears disguised as god *A* and is destroying a temple. We are also acquainted with a scene in which the god of death is transporting god *B* (*Chaac*) in the rain, seated on his throne. Finally, the deity of death appears with some woman, since he is sitting in front of a naked, dead woman, also seated; or on the shoulder of a woman who can be the goddess *Ixchel*, a scene which is repeated a number of times.

On the Mayan monuments the allusions to death or to the god which symbolizes it are not many, except on the calendaric inscriptions, in which, as we have already said, one of the days of the *tzolkin*, *Cimi* (death) and the numeral 10 are very frequently utilized, especially the second which, in addition to its own numeric value, enters into the composition of the ciphers from 13 to 19 in the variants of heads. We also have to make mention in this way, of the emblem-glyph of Palenque, a skull, which is present in almost all the hieroglyphic inscriptions of this place.

For representations with the actual feeling of death we can recall only the following: Altar 5 in Tikal on which between two priests kneeling on both sides of an altar, a bare jaw is lying on several tibias, and this jaw is apparently holding up what seems to be a cranium of an animal; Monument 1 in Bilbao, in which death appears associated with the ball-game and the human sacrifice by decapitation, which is also expressed in Monument 3 of the same place, although in a somewhat different form, and perhaps on Monument 13; the Column





A platform with rows of skulls in bas-relief, or *tzompuntuli*, located in Chichen Itza. The Spanish chroniclers tell us that above that were placed—incrustated on pickets—the heads of those who had been conquered in war.

of the arcade in Temple XII of Palenque in which the bare mask would serve as a pedestal for some figure made out of stucco, disappeared by now; the Boards of the Cross and the Foliate Cross in Palenque, in which the huge mask of the god of the Earth and of death supports the central element of the composition, the cruciform motif, carrying out thereby the symbolism of earth-maize or death-rebirth; a similar representation, although more emphatic is the large mask on which lies, presumably falling backward, the personage of the sepulchral grave-stone in the crypt of the Temple of the Inscriptions of Palenque, the huge mask in which a second jaw without flesh, provided with large lateral branches which

are extended upwards, encloses not only the effigy of the deity of death and earth, but also of man, aesthetically trapped by death.

The god of death in the Mayan beliefs dwelt on the lowest level of the infraworld, the *Xibalba* or the *Metnal*, according to the different groups. The second denomination has to be a late one, since it is made up of a deformation of the Nahuatl word *Mictlan*. It was a gloomy place in which one came after traversing a long and arduous road full of dangers. We do not know what vision the Mayas of the classical period may have had of the life beyond, and the historic information which is at our disposal is not necessarily valid for that. In actuality, the picture which the chroniclers present us implies the probable action of a double syncretism: the intrusion of concepts pertaining to the world of the Nahuas from the beginning of the X century, and of the Christian beliefs six centuries later. Through the Toltec invaders the idea of a paradise for those who were sacrificed had possibly originated, and from the Spaniards the notion of a heaven for the good and a hell for the evildoers. With reference to the supposed paradise for the warriors who had died in combat and the women who had died in childbirth, which some distinguished Mayists attribute to the way of thinking of the Nahuas, we do not find in any historic source any information to support such an existence. Homage was not rendered to the god of death, but the other deities were implored to put off their inevitable arrival for as long as possible.

#### Guild and animal deities

While the agriculturists, in order to obtain the supernatural help that would assure them good harvests, venerated innumerable deities capable of controlling the elements, that is, earth, water, sun, moon, wind, rain, maize, etc., those in other occupations sought protection through other specific gods. In this manner the hunters paid homage to *Zip*, the deer; the fisherman to *Kak Nexoc*, "the shark with a tail of fire"; the apiculturists to *Hobnil*, one of the Bacabs; the weavers to *Ixchel*; the merchants and owners of cocoa plantations to *Ek Chuah*; the *curanderos* (healers) to *Ixchel*, *Itzamna* and *Kinich Kakmo*, and the warriors to *Cit Chac Coh*, "red puma father", and to *Kakupacat*, "the look of fire".

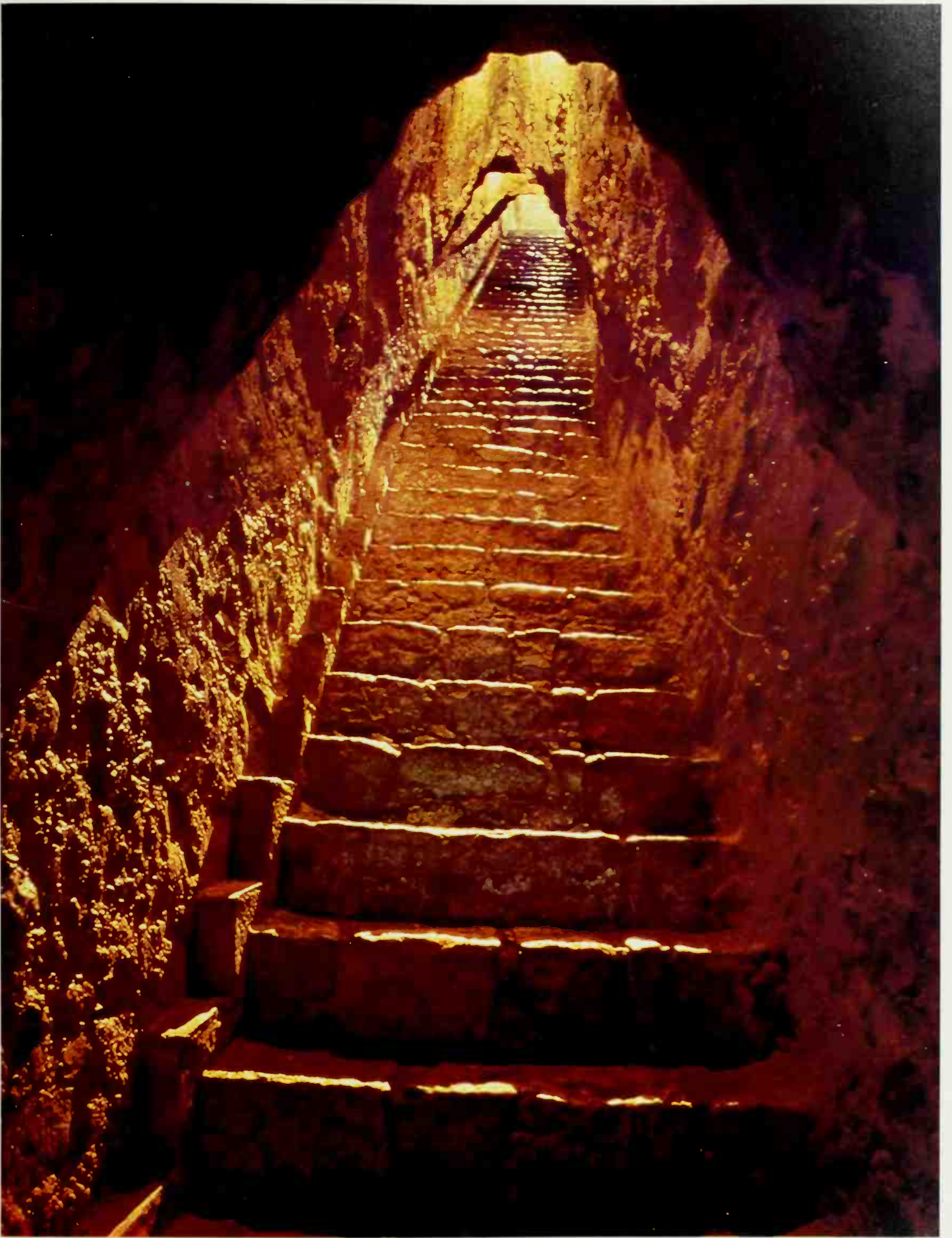
In the course of this chapter we have mentioned some animals to which the Mayas rendered homage, but there are many others which, in some form or other, were linked with religious, mythological and astronomical concepts by way of deities or representatives of them. These animals also appear as objects of offerings, sacrifices or propitiatory rituals, or as images which—entirely or only partially—were elements of the hieroglyphic writing. Among the main ones we can refer to the following: the jaguar, the serpent, the owl, the quetzal, the vampire bat, the macaw, the vulture, the turkey, the heron, the dog, the monkey, the deer, the peccary, the puma, the armadillo, the lizard, the frog, the iguana, the turtle, the fish, the oyster, the snail, the spider, the bee and the butterfly.

#### Cosmology

The Mayas were accustomed to represent the earth as a square surface, sustained by an aquatic monster which floated on the waters. The firmament was supported by the gods, *Bacab*, at the cardinal points or in the corners of the earth. Each *Bacab* was accompanied by a tree and a bird and had a specific color associated with him (red for the East, white for the North, black for the West and yellow for the South). They also conceived of the firmament as a bicephalic dragon or a colossal iguana (*cf. Itzmana*). It seems that the thirteen layers which constituted it were not found superposed, but rather formed steps which went up as far as the seventh and then went down to the level of the ground. In the infraworld the arrangement of the nine layers was similar: they went down in stairs or steps until the fifth then to return and go up again to the surface of the earth. A ceiba tree would indicate the fifth direction.

The ideas of good and evil were associated, respectively, with the heavens and the infraworld; on the other hand, the heavens were considered on the level of a masculine being and the earth pertained to the feminine sex.

A perron which provides access to the sepulchral room of the tomb of the Temple of Inscriptions ("*Templo de las Inscripciones*") in Palenque. The discovery of this sepulchral space was made by Dr. Ruz and resulted in a tremendous contribution for the future of archaeological investigations which are being carried out in that area.



## Cosmogony

If one makes a comparison between the data contained in the indigenous chronicles and the Spanish ones of the XVI century, which deal with the concept that the Mayas had with regard to the creation of the Earth, of the celestial bodies and the appearance of man, with those that the historic sources of other Mesoamerican peoples provide, and more concretely those of the Mexicas, the cultural relationship that existed between them is absolutely confirmed. Many such concepts reached us directly through the myths.

Although with some variations the versions which the *Popol Vuh* of the Quiches offer, the *Anales de Sololá* of the Cakchiquels and the *Books of Chilam Balam* of the Yucatecans, which deal with the creation of Earth and man, all are sufficiently similar. The successive attempts of the gods to create beings capable of sustaining and worshipping them failed until maize appeared. Only with the mass of maize did the creators succeed in producing a humanity which would respond to their designs. Men would be able to live and reproduce to the extent that they would fulfill their obligations, that is to say, to provide food for the gods, to render homage to them, to offer them their own blood or that of the victims sacrificed to them and to completely obey their representatives on earth. The discovery of maize also gave place to parallel myths: hidden under a rock, it was known only by the ants which, between the crevices reached the grain, until a fox became aware of their secret which, much later, other animals also discovered, and finally, man himself.

The birth of the Sun, the Moon and Venus, and their adventures, constitute a great part of the Mesoamerican mythology. The solar star is presented as a cultural hero who participates in the struggle against the forces of evil and death. He dies, he is resuscitated and finally turns into the Sun. His twin can be Venus or the Moon, and among many peoples the Moon is the wife of the Sun and her licentious nature leads her to commit adultery with her brother-in-law.

## Ritual

The information of the chroniclers as well as the representations in Codices and on monuments, as also the archaeological findings, enable us to reconstruct something of the ritual through which religious beliefs were manifested. It is known that to obtain food and long life (their vital concerns) they were able to celebrate different kinds of ceremonies, some individual, others communal, the gradation of which would be adapted to the circumstances. These rites were as follows: fasting and abstinences; prayers; offerings to the images of the divinities, offerings which could be in the form of flowers, fruits, foods prepared from vegetable or animal matter, live animals or those that had just been sacrificed; incense burning; self-sacrifice in which the individual drew drops of blood from himself, primarily from the ears, the tongue or the sexual organs; and sacrifices of human beings. The sacrifices were made in accordance with distinct techniques, which were also practised in the rest of Mesoamerica and some which perhaps came from the Mexican altiplano: *flechamiento* (death by arrows), decapitation, skinning, hurling from a height, immersion in *cenotes* or lakes, and cutting out of the heart.

Ceremonies of a religious nature accompanied all the activities of the community and the important moments in the life of each individual. The agricultural labors, in their principal stages, motivated such rituals (burning, planting, and harvesting); others were related to the existential cycle (*hetzmek*), for example, when for the first time the child was carried astride on the hips when he was three or four months old; another ceremony when he was four or five years old consisted of putting a bead or a shell as a sign of purity; still another was at the time of reaching puberty, which consisted of removing these objects and, of course, there were others for matrimony and, finally, death.

In the funeral rituals, the chronicles reveal a differentiation in the treatment which is given to the corpse, according to the social category of the individual: incineration for the lords and important people whose ashes were kept in earthenware urns or in wooden statues;

and a simple grave, below or in back of the hut for the common people. Archaeology has succeeded in defining an entire scale of values for the different kinds of burials, in accordance with the level which the deceased occupied in society: a simple burial in an open grave in the ground, a grave lined on the inside with stone slabs and closed with a stone and a chamber with walls and a domed roof. The grave can be found below the floor of a hut, inside a platform or inside a civil or religious structure, or in the interior of a mound built with funeral ends; some were decorated with mural paintings. The burial could be individual or communal, and in the latter case it is easy to recognize the remains which correspond to the principal personage and those of his companions, the victims sacrificed to attend him in the beyond. The number and quality of the objects deposited as offerings vary also according to the same scale. The maximum funeral construction that we know in all the American continent is, beyond any doubt, the impressive crypt constructed on the inside of the Temple of Inscriptions in Palenque, which contains a colossal sarcophagus of stone covered with low reliefs which provide indications of the lord buried there. The richness of the architectonic unit, of the grave and offerings, throw light on the political, social and religious importance that he would have had.

Religious festivals were celebrated for the New Year, in the course of which the image of the god who was the protector for the previous year was substituted for the year which was just beginning; others took place each months, in honor of the patron saints of the diverse occupations (such as that of the doctors, the priests, the hunters, the fishermen, the papiculturists, the warriors, etc.), or associated with certain activities (such as the renovation of domestic equipment, the fabrication of idols, diversions, etc.). The end of some periods of greater importance—the *Katun*, for example—was celebrated in an unusual form. On the whole all these celebrations included dances and usually finished in drunken brawls throughout the community.

### The role of religion

As we have already remarked in previous chapters, while describing the Mayan society and emphasizing the utilization that the ruling class gave to the scientific knowledge which it monopolized, it is obvious that religion fulfilled a powerful and specific role among the ancient Mayas.

All the questions that the people were able to ask themselves with regard to the world which surrounded them, the earth and the sky; the natural phenomena (of which they were the spectators or the victims); the biologic processes that they observed in plants, in animals and in themselves as well; the existence of the universe and their own personal experiences, all their concerns found the replies they sought in the beliefs, in the dogmas and in the myths.

On the other hand, the priests, although not retaining the political power in some exclusive form, always constituted the prevailing authority in the exercise of their profession, and thus religion worked as a decisive weapon. We have already seen how, through the calendar of 260 days, everything was precisely determined, from the name of the individual up to the work which he ought to do; which rites and ceremonies accompanied him in the fundamental stages of his vital cycle and in his daily occupations; what his domestic life was like, regulated by unbreakable religious practises; what the agricultural labors were, which were associated with the civil calendar, and the cyclical concept which the priests applied to the historic development, implied the possible repetition of mishaps which had occurred long before, that only their intervention could avoid or, at least, reduce to a minimum whereby their eventuality served as a constant threat to make the populace accede to complete submission. The construction and functioning of hundreds of ceremonial centers, of thousands of buildings destined for religious worship and for the dwelling place of the gods and their representatives, signified permanent and total control over the entire population. The payment of a tribute in every class of products completed, in an implacable form, their dependency with regard to those who governed, supposedly in the name of the gods, and so the people was entrusted to serve them and obtain their compassion.





# The Art of the Mayas

## Generalities

A little more than twenty-five years ago, we wrote the following in a short article: "Among all the human phenomena refractory by their very essence in the inflexibility of the classifications and in the dogma of theories, art may perhaps be the most remote. To catalogue artistic manifestations always involves an act of forcing through excess of simplification or of comprehension when it is not through an actual mutilation. Fluid and complex, that product of the most intimate vibrations of man flees in front of every explanatory intent and succeeds in escaping amid the networks of the most rational theses".

After such an elapsed period of time, and with a more ample personal perspective, as well as a more precise focussing, we believe that we now understand the artistic phenomenon much better but without disregarding the perception of its complexity. This is due to the fact that art is the product of a unit of complex factors which embraces the historical, the social, the cultural and the geographic aspects as determined by each people. With regard to the individual contribution to the artistic fulfillment or execution, the creative disposition of the artist is not born from nothingness nor is it of divine origin, but it is rather conditioned by the circumstances in which the artist has had to live. With difficulty will it be able to be manifested, only in the quality of the work, and that in spite of the norms, the pressures and limitations which are imposed upon him.

The different factors which determine the aesthetic phenomena do not work on the same level nor with the same intensity, nor even simultaneously. The last takes place when, for example, in a certain period some forms which correspond to a historic event from earlier centuries and which are copied or synthesized are used. The geographic means alone provides directly the materials and occasionally the landscape, the flora and fauna as models or climatic conditions which are favorable to certain motivations. There is no doubt at all that historic conditions, more than geographic, influence the artistic creation, but as Bastide says, in the event that a determinism would exist, this is the sociologic one.

The Mayan-Toltec style which was the result of a fusion of techniques, architectonic conceptions, ideas and artistic sensibilities of ethnic groups clearly differentiated, is presented in the clearest and most brilliant manifestation in Chichen Itza.

### Art as a social product

It goes without saying that it is not possible to deny a certain margin of autonomy to art which, without being the exact reflection of a society, is, nevertheless, immersed in it. Above all it is a social product, the result of the action of the entire society through its economic, political, religious and cultural mechanisms. But, at the same time that the result is also the cause, their effects contribute to the functioning of a society from which it is derived, fulfilling the needs of the community. An individual creation has meaning in itself and is practicable within a specific social context, without its having to imply any limitation in its genesis to the simple social conditions or omitting what could be equivalent to a historic moment, the cultural scope or extent, the geographic frame and the very own creator impetus of man.

Intimately linked to society, art will manifest itself in works which concern the whole global humanity in which it is born, if it is a matter of a community of a tribal level on which a social stratification may not as yet have been developed. It is the case of rupestrian, paleolithic art: the paintings express, through the medium of beliefs in magic, the concerns of all, which gyrate around the problem inherent to the common survival through hunting.

### Art for serving the dominating class

In a more advanced society as for the socio-economic aspect, in which groups exist that are differentiated among themselves by definite relations which bind them to the process of economic production, that is to say, classes with interests that are not only varied but also antagonistic, since the majority of the population has to produce an excess of materials in order to maintain the minority which directs, exploits and oppresses them, art will respond fundamentally to the aspirations and conveniences of the minority, and, in the second place, to those of the majority of the social conglomerate. Thus, the artist is utilized by the ruling class so that he may contribute to the maintenance of the system and to the intensification of its power.

In describing the qualities of Mayan society which we presented in an earlier chapter, we determined that such a society could be considered a transition between a communitarian organization which survived in the peasant population, and an organization with definite classes in which there already existed a centralized, aristocratic power which, at the same time, dominated the economic, political, social, religious and cultural aspects. This power was in the hands of the priests, in a form which was most probably absolute over a long period of time and later perhaps would have been distributed or shared between the priests and civil heads, intimately related among themselves through their social origin and their interest, while the community was increased and diversified. This means that the Mayan rulers made up a theocracy which had its origin in the class of the nobility, to which the clerical high officials as well as the lay officials belonged, and it was assumed that their authority proceeded directly from the gods. They were, in actuality, the representatives of the divinity on earth, the intermediaries through whom the relation between the people who supplicated them, and the divinities who made the decisions was established. Their dominion over the population was effected in the name of the latter, as Stele II of Yaxchilan, to which we have already referred, expresses in a very aesthetic form in which the individuals of lower rank, prostrated at the feet of the ruler, do not see the human face, only that of the solar god molded into the mask which he wears.

The worship of the gods and the chiefs is one sole adoration. Temples and palaces were constructed for both of them in the ceremonial centers. These buildings were adorned in such a way as to get into the good graces of divinities and to extol the chiefs. That is the reason

why Mayan art is both religious and profane at the same time. The themes which it treats embraces the images and symbols of the supernatural beings who direct the elements and also the effigies of the rulers, following norms which they impose upon the artist to emphasize their dominion: in order to appear luxuriously attired and adorned, with a majestic air, but frequently besides a slave or a prisoner, or receiving vassals, prisoners and slaves from his throne, or merely witnessing the humiliation, the punishment or torture imposed on enemies. The purpose is obvious: the self-glorification of the ruling class.

It is easy to imagine the feelings of the common populace on finding itself in the midst of a ceremonial center for the celebration of important rituals on determined dates, advancing between grandiose buildings, spiritually overwhelmed by the imposing architectonic masses, by the colorful masks, by the vibrant ornamentation of colors. The spectacle in which lords and priests, brilliantly decked out used to participate, would convince the peasant masses of the superiority of the former and the latter, of the divine essence of those who used to live together with the gods, of those who were their equals and were considered divine beings.

But the socio-political factor was not only a determining factor with regard to the thematic that the ruling class imposed on the artists, but it was rather implicit in the nature or character of the expression, in the form itself. It was necessary that the artist followed the tradition established in the principal centers of the different states in which the authentic regional schools were founded. The aesthetic conservativeness is so evident that it is much easier to classify Mayan art by provincial styles than by chronologic stages, in spatial rather than temporal terms. Each one of these styles establishes and respects through the time, a certain aesthetic language, rigid formal conventionalisms. When in some place the historian of art believes that he recognizes a certain tendency to successive changes, up to the point in which he tries to define or set up a stylistic evolution, the features that offer possible modifications are, in reality, of slight importance, and the traditional continues, predominating throughout the centuries.

#### Stylistic differences

The political division of Mayan territory in autonomous states explains the stylistic differences to which we have alluded. Generally, in an empire, the metropolis imposed its criteria in all aspects, including art, while the picture which classical Mayan art presents in the central and septentrional areas are of a manifest diversification in the thematic and still more especially in the formal expression. A stone slab from Palenque, a lintel from Yaxchilan, a stele from Piedras Negras, from Tikal or Copan, are readily placeable within the regional style which corresponds to them.

#### Historic factor

It is obvious that it is not possible to dispense with the historic factor to explain the genesis and the development of Mayan art. Long before Mayan civilization was integrated as such, during the preclassical period diverse elements reached the Mayan area coming from the South of Veracruz and the North of Tabasco, attributed to the Olmecan culture, among which are the construction of steles, the association of steles with altars and the theme of the jaguar. Probably from Oaxaca the practise of keeping chronologic records was spread to the Mayan area, even many centuries prior to the classical period, as also the idea of a hieroglyphic writing and its use to commemorate historic events. Much later there came to the central area just as to the North of the Peninsula of Yucatan the objects associated with the religion of Teotihuacan, more specifically the effigy of the god Tlaloc and the so-called "sign of the year", without this intrusion appearing to have influenced profoundly



A disk made from a mosaic of turquoise, shell and flint which forms part of the great quantity of objects found in the *Cenote Sagrado* of Chichen Itza.

the thematic aesthetics, nor probably the essence of the autochthonic religion and culture. On the other hand, in the meridional area and especially in the important site of Kaminaljuyu, the presence of techniques, motifs and styles of Teotihuacan is very strong and persistent, which thereby suggests the presence of leaders from the great metropolis of the Mexican altiplano, or at least their political dominion associated with the economic and ideologic ones.

For the same reasons of a historic nature, Mayan art of the postclassical period was subjected to influences which came from the incorporation of foreign personages in the representations of sculpture typically Mayan (the Putun heads in Seibal), up to their global utilization by invaders (the Toltecs, the Pipils and the Mexicas) to express concepts and themes remote from the Mayan culture, and, in addition, to impose their own styles.

#### Geographic factor

At the beginning of this chapter we stated that the geographic medium only provided the artist with materials with which he had to express himself and occasionally with motifs inspired and taken from the landscape, the flora and the fauna; but this environmental factor can, in addition, act indirectly, as in the case of the classic decorative art from the North of the Peninsula of Yucatan in which the profusion of masks of the god *Chaac* on the monuments, is due to the importance of worshipping him to compensate the scarcity of pluvial precipitation and the almost non-existent hydrography in that region, in contrast to that which occurs in the central area, of humid climate and land rich in aquatic currents.

#### Mayan and Mesoamerican art

Mayan art, in many of its manifestations, shows that it is not possible to separate it from the art of Mesoamerica, and that obviously did not have its origin nor was it developed in an airtight frame, as Morley had supposed. It is part of the Mesoamerican culture and as such expresses concepts which are common to all the peoples that had taken part in that culture, and it reflects social and political conditions that existed in a similar form also among the peoples referred to.

But it is also evident that Mayan Art presents characteristics that are completely their own and which easily distinguishes it from the art created by other cultures. By examining their architectonic, sculptural and pictoric modalities we will try to synthesize the elements which constitute their individuality or singularity, within the multiplicity of styles which characterize the different regions of the Mayan area.

## ARCHITECTURE

### Generalities

The basic principles of Mayan architecture are found in the housing of the peasants: the hut, which in the course of thousands of years had remained fundamentally unchanged, previously described in the chapter that dealt with the subject of housing. The hut is erected on a low platform to avoid the effects of inundations in the rainy periods, and a few steps protect the difference in the levels between the ground and the floor of the hut. The latter can be simply from packed down earth or smoothed out stucco. The floor plan of this type of housing is generally rectangular, but in Yucatan it can also be elliptical with only one door in the front and without any windows nor openings on the roof. The walls are from posts and are interwoven with reeds; they are coated with clay and frequently whitewashed outside and inside. A strong frame of beams, crosspieces and pebbles support the roof which is made from dried palm leaves and hay, provided with two longitudinal slopes that are somewhat more than a 60° gradient, and two slopes still nearer to the vertical on the sides corresponding to the width of the hut which becomes semiconical for the elliptical designs. The space inside, due to one single narrow door and the lack of other openings, is very enclosed and obscure with a predominance of height over width. These conditions and the fact of having to count only on a roof from vegetable material sufficiently compact to prevent the intrusion of the rain, and at the same time light and not airtight, assure a freshness in the dwelling so that it is neither too hot nor too cold.

The first Mayan constructions for ritual purposes or as homes for the priests and governors were also simple huts but their size varied; also on platforms which varied in height and the masonry of which were coated with stone and mortar. In the upper preclassical period the bases were transformed into pyramids with steps, the result of the superposition of a number of platforms. The building E-VII-sub of Uaxactun, in spite of its rich decorations of huge masks out of stucco, supported a temple which did not exceed the size of a hut.

Subsequently, having learned how to make walls from rubblework, but still not the dome, the Mayan builders continued to make the roofs from palms as can be confirmed by building K-5 in Piedras Negras.

### The Mayan dome

Finally, to complete the transition from the hut to the architectonic type of building, the Mayan constructors decided to replace the palm roof with one of stone, inventing the dome which has been designated false, salient, or simply Mayan. Similar domes were also invented by peoples of the Old World several thousands of years before (mycenaean), and several centuries after the mayas (khmers).

The Mayan dome is made by surrounding the walls at a specific height (directly on top of the lintel of the doors), superposing rows of stones in such a way that each row may jut out from the one immediately below, until a small space is left in the upper part, that space being closed with a small tile or slab. This type of construction resulted in difficulties since, if the incline was excessive, the dome, through the force of gravity, could collapse. For a long time—the greater part of the early classical period—use was made of large stone slabs, superposed, strongly or firmly built into the nucleus, and from which only the end projected. With time, however, they utilized shortest stone slabs, then blocks of stone lightly carved, until they reached the stage of ashlar, sufficiently small, of short parts of blades in the form of a boot and with a face beveled to form the oblique plane of the surface of the walls through simple superposition. The factor which allowed functioning of this kind of

On the following page, an aerial view of the city of Palenque. Within the diverse architectonic styles that can be found in the three areas of the Mayan region, Palenque is one of the few which actually has a style of its own, designated as that of Palenque, the influence of which reached other places located in the same geographic basin, from the Usumacinta River to the East, until much beyond the Grijalva River, to the West.





dome was the knowledge of lime mortar already used in the walls which gave cohesion to the nucleus and made possible the adherence of the stones in the decoration.

The roof thus obtained was similar on the inside to that utilized for the hut, and determined a transversal court in the form of a triangle or trapezium. But the phantasy of the Mayan architects led them to conceive variations such as the curvilinear dome which in some cases came to be almost comparable to the Romanesque, the inverted form of steps, the arch in the form of a bottle, etcetera.

One has to remember that although the use of the dome in temples and palaces marks the beginning of the classical period, some cases are known in which the same method of construction had already been utilized many centuries before in preclassical tombs, with the very important difference that it had been a matter then of covering spaces of reduced widths from 50 to 60 centimeters, and that were easily closed with three or four rows of tiles. In any case, such attempts were based on the same principle.

The Mayan dome, which the other Mesoamerican peoples had no knowledge of, was, without doubt, the most suitable solution for Mayan buildings, of greater duration than the level roof of the flat roof on top of beams and pebbles, since wood does not last for any long period of time in a humid climate in low tropical lands, and does not resist the destructive action of termites. Besides, the greater height of the inner space and the thickness of the roof assured a temperature sufficiently fresh and invigorating.

There was, however, some inconvenience in this since it enabled the roofing only over narrow spaces, as for rooms of greater breadth the necessary height to guarantee the stability of the dome would have been excessive. However, in some special cases, this was done as in the funeral crypt of the Temple of Inscriptions in Palenque, and in the transversal passageways that separate the central building of the Governor's Palace from their lateral annexes in Uxmal.

### The pyramids

At the beginning of this chapter we referred to the step, from the simple platforms for the huts and afterwards for the first temples, to the so-called pyramid, which came about from the superposition of various platforms, that is to say, from trunks of the pyramid without ever terminating in a geometric volume really pyramidal, as had been the case in Egypt with the exception of that of Sakara. The idea of the natural hill as the place for the origin of the rain, the wind, the rivers, in other words, as the dwelling-place of the natural forces which had been deified, ought to have been present in the minds of the Mayan constructors who had conceived the pyramid. Fundamentally the function of this is to serve as the base and pedestal of the temple, thereby getting nearer and nearer to the firmaments; but it also had a funeral function, generally of secondary importance and as a subsequent use, although in the case of the Temple of Inscriptions in Palenque the purpose was to convert the pyramid into an imposing mausoleum, at the same time that it was also a base of the temple.

### The temple

The temple is quadrangular in shape with vertical walls having one, three or five entrances which lead to one or many rooms, whether directly or first through a portico, when there are a number of doors. The entrances were closed by means of curtains or draperies or rush-mattings tied on the inside to some built-in rings, three at each side of the entrance. On the whole, the temples lack windows, but in some cases they were able to have small openings in a rectangular form or imitating the sign *Ik*, which means "air". There was a great deal of difference in the inner space of the temple, from that of the very small sanctuaries of Peten to that of the greatest amplitude in Palenque.



This difference is due principally to the crestring which consists of a tall building set up on top of the roof of the temple. The greater part and, some times, the entirety of the decorative symbolic elements is added to the crestring. The interior space extremely reduced in size is due to the thickness of the walls when they have to support the tremendous weight of a solid crestring which is very tall and with a wide base. On the other hand, when the crestring is made from one or two limestone walls, the weight is much less and the space on the inside is considerably more ample.

When the temple contains various rooms behind the portico, the central part is the sanctuary and the lateral parts must have been the cells for the priests. In a number of regions a sanctuary was built in the central room, being provided with walls, roof and an

Two styles are distinguishable in Chichen Itza: the Puuc and the Mayan-Toltec. In the *Templo de los Guerreros* is found an example of the latter in which one becomes aware of the presence of the serpentine columns with the raised rattlesnake, and the walls made on an incline and a projecting panel.



entrance whereby greater importance was given to the core of the temple, in which the deity was represented, in the form of bas-reliefs.

### **The palace**

Without being able to establish with absolute certainty the function of the buildings which were not for religious worship, and which in their generic form are designated "palaces", it is, however, probable that they were used as dwellings for the priests and lords, perhaps also for the functionaries of a certain category and for important merchants; it is also possible that some were used as administrative buildings and storehouses. They were, for the most part, situated on top of a platform and could consist of one or more rows of passages, divided by transversal walls into extended rooms. Some of them form buildings of several storeys. We have already referred at greater length to the "palaces" in the chapter entitled *Housing*.

The steam-baths, integrated with the buildings for housing, or as independent buildings, are found provided with drainage and in some cases with furnaces to burn fire-wood in the interior of the steam room. We also know about some buildings for sanitary purposes with perforated stone seats and drainage.

### **The field for the ball-game**

The greater part of the places had one or more ball-games. The classic Mayan game was made up of two extended and parallel platforms, in the middle of which the match took place; sculptured elements such as disks or heads of animals would perhaps constitute the goal to be touched with the ball. The rings seem to be a Toltec contribution. On their inner façade the platforms had a kind of footway, a more or less inclined slope which formed part of the field.

### **The observatory**

In quite a number of centers, observatories in the form of towers, of circular or rectangular floors, have been found which were provided with an inside stairway leading to the observation-room. The staircase can ascend in a spiral as in Chichen Itza and Mayapan, or can form straight flights of stairs as in Palenque. In Uaxactun the arrangement of various buildings of Group E suggests the intent to determine lines of vision, which correspond to the points of the horizon through which the sun emerges during the solstices and equinoxes.

### **Funeral architecture**

The funeral type of architecture presents variants which comprise the following: an irregular cavity delimited by stone tuffs (*cista*), without any upper protection; a rectangular pit or tomb coated on the inside with stone slabs and covered with one or more tombs; a room with walls and domed roofs which eventually were decorated with mural paintings or stucco reliefs; a mound apparently built to enclose one or more tombs of the kinds already mentioned; an unusual unit such as the tomb-pyramid-temple in Palenque.

### **Orientation**

The orientation of the buildings in the Mayan area during the classical period tends to coincide with the cardinal points, but due to the irregularities of the terrain, occasionally brought about by the course of the rivers, the topography in which low mountainous country and ravines abound, many architectonic units had to be adapted to these accidents.

## Classic style

We have assumed that the diversity of styles offered by the Mayan area in regions which flourished simultaneously, with its apogee in the late classical period, has to be interpreted as a consequence of a territorial division into provinces or autonomous states. It is believed that during this period the Mayan centers of the central and septentrional regions could be grouped on the basis of style in the following regions: Peten, Motagua, Usumacinta, Palenque, Rio Bec, Chenes and Puuc.

### Peten

Located in the North of Guatemala and extending up to the meridional tip of the Mexican States of Campeche and Quintana Roo, this region comprises many sites, among which we will mention the following, enumerating them from South to North: Ucanal, Yaxha, Uolantun, Naranjo, Nakum, Tikal, Holmul, Uaxactun, Xultun, La Honradez, Naachtun, Balakbal, Uxul, El Palmar and Calakmul. Some were occupied since the preclassical period and during the early classical period, but all had at some time experienced the greatest brilliancy of the late classical period. Their capital could have been Tikal, a place which has the tallest pyramids and temples in all the Mayan area, vast building-units, an ample expanse, and a semiurban character.

Temple IV, for example, extends up to some 70 meters from the base of the pyramid to the top of the cresting, somewhat taller than the Temple of the Sun in Teotihuacan and the "Templo Mayor" in Cholula, with a much greater verticality since the Pyramid which sustains the Temple of Tikal has only 59 meters on the side, while that of Teotihuacan has 225 meters and that of Cholula 320. The stairway of the temples of Peten had to be extremely elevated, exceeding a 60° gradient in Temple V.

The solid crestings, reclining on the upper half of the temples needed an excessive thickness in the walls, as much as 7 meters, in order to support the tremendous burden, and leaving a minimum space, completely out of proportion with the entire volume of the structure of something hardly more than a meter in width for the sanctuary. The results is an architecture which can be designated of frontage, functional for the goals intended, since it was a matter of impressing the populace that came together at the foot of the temples but never entered them.

In a previous chapter, *Housing*, we mentioned the great variety in the arrangement of the rooms in the palaces of Tikal. One single building could contain as many as 50 rooms, spread out in parallel corridors or around a yard; some are of several storeys.

Certain details characterize the architecture of Peten: the corners of the pyramids are inserted in relation to the face or surface of the buildings, the walls of the temples with protruding sections and others recessed; the profile of the building of the pyramid formed by a small incline at the base, a narrow space, and a greater incline above.

### Motagua

The principal sites of this region are Copan in Honduras and Quirigua in Guatemala, contemporaneous centers and possibly politically connected, but the second depending on the first.

The architecture offers a noteworthy contrast with that of Peten, as it lacks the tall pyramids and the raised temples with enormous crestings to which we have already referred. However, Copan has an imposing acropolis, made up of various pyramids, platforms, terraces,





Codz Pop In Kabah, Yucatan, the footing, walls and frieze are covered with presentations of the huge mask of the god of rain, *Chaac*.

temples and yards, grouped together, so as to result in numerous superpositions. Access to the acropolis was possible through the ample steps of Temple II or by a ladder of 63 sculptured steps which gathers about 2 500 hieroglyphics.

Strangely enough, some features show similarities to the Puuc style of construction in the North of Yucatan, as, for example, the use of ashlar very well carved on walls and domes, as well as the huge masks of the god of rain placed in the corners of Temple 22 and obtained through elements independently built in the nucleus of the rubblework.

In the small Ball Game in Copan, the heads of the macaws built in the slopes would



perhaps have served as goals for the game. Below the visible structure are two other more ancient buildings; the second bears a date which pertains to the beginning of the sixth century A.D., for which reason it is more likely that the first was of the fifth century since it is the most ancient game known until now in the Mayan area.

In Quirigua the buildings appear to have been of the same style as those of Copan, although with smaller dimensions and with much simpler decorations; the architecture of both places, however, with more ample space in the interior than those of Peten, was utilized for more human purposes than in this region.

Next to the *Templo de los Guerreros* ("Temple of the Warriors") in Chichen Itza, there is a building which also is part of the Mayan-Toltec style, that is the *Templo de las Mil Columnas* ("Temple of the Thousand Columns").

### Usumacinta

The region surrounded by the Usumacinta River and its tributaries extends for more than 400 kilometers in a Southeast-Northwesterly direction, and was probably divided into various autonomous states, the capitals of which could be Yaxchilan, Piedras Negras, Tonina, Palenque and Comalcalco. Cities dependent upon them would have been Chinkultic, Seibal, Altar de los Sacrificios, La Mar, Bonampak, Pestac, Chinikiha, Chuctiepa, El Tortuguero, Reforma, Balancan, Jonuta, and many more.

It seems that the region, regarding architecture, came under the influences of Peten, but, on the other hand, one of its centers, Palenque, radiated its own stimuli. In Piedras Negras, for example, as some of the features from Peten, we can refer to the pyramids with the inserted corners; the profile of the corpus with a lesser and greater incline, both separated by a space between the two moldings; the solid crestings which rest on the upper part of the temples and which determined the extreme thickness of the walls, which was at the expense of the space intended for the sanctuary. However, these features can be combined with a portico having three entrances, which could have originated in Palenque. In Yaxchilan the elements of Peten have almost completely disappeared and are more similar to the style of Palenque, such as the *calada* crestings of a very reduced weight which rest on the middle part of the roof whereby the inner space of the small temples is augmented. In any case, the builders of Yaxchilan failed to put up their cresting in the center of the dome in a number of buildings of a single bay, and had to add, on the inside of the sanctuary, crude columns in the form of buttresses to withstand the burden at the weakest point of the roof.

### Palenque

Although Palenque probably belongs to the Usumacinta basin, we believe that it deserves to be treated as the center in which an architecture with very distinctive features of its own was developed, features which reach, global or partially, to other places fairly distant, but within the same geographic basin from the Usumacinta River to the East, beyond the Grijalva River to the West.

The principal characteristics of this architecture are a portico with three or, under special circumstances, five entrances through the construction of wide columns; a small sanctuary within the central rear room which forms an architectonic unit of its own with its walls, entrances and roof, the function of which was to guard the symbol of the worship to which the temple was dedicated; small lateral rooms probably used as cells for the priests; the roof and wainscot inclined; the architrave forming very projecting eaves and with a water channel to prevent the water from penetrating the stucco reliefs in the façade; the cresting made up of *calado* walls which become closer in the upper part and adorned with stucco reliefs added or built in; openings in a variety of forms (trapezoidal, like the eye of a lock, or trilobate) on the inside surface of the domes, to provide better ventilation for the back rooms; small rectangular openings in the form of a "T" (the hieroglyph *Ik* which, as we have already said, signifies "air") in the posterior and lateral walls, forming very effective ventilations; abundant use of stucco reliefs in the adornment of buildings.

### Rio Bec

This name has been given to the region located towards the South of the States of Campeche and Quintana Roo, since it is one of the centers with which it is integrated. The main regions, besides the Rio Bec, are Becan, Chicanna, Cojunlich, Xpuhil, Culucbalom, Payan, Pechal, and still others. Because of their geographic location, this region came under

the influences from the South (Peten) and from the North (Chenes).

As features characteristic of Peten the following can be noted: the solid crestings on top of the back part of the temple; inside walls made of unpolished stone slabs; elevated staircases; an imitation of the temples of Tikal, in the form of solid towers situated at the ends of the façade and occasionally in the posterior part, provided with an almost vertical stairway, that is in the form of very narrow stairs leading to a solid construction which is a complete reproduction of the façade of a temple for purposes which cannot be more than decorative. Elements originated in the region of the Chenes would be the use of ashlar, well carved, on the outer walls; vertical instead of oblique friezes; the decoration on the façade resembling many of that region. Other characteristics or features which are found in the Chenes ought to have had their origin in the Puuc region, to which are attributed the columns and small columns used as support or merely as motifs in the decoration.

### Chenes

The designation for this region can be attributed to the fact that many people have names which end in the word *chen* which means "well", to indicate the presence of wells in a zone in which water is found only at a sufficient depth. It is located at the borders between the States of Campeche and Yucatan, and comprises, among other centers: Hochob, Dzibilnocac, El Tabasqueño, Santa Rosa Xtampak and Dzehkabtun. Their geographic position explains the interrelation of the features common to them and the Puuc region, although it is not possible to determine the exact line of the influences since both zones were contemporaneous.

As characteristics of their architecture we will mention the scarcity of crestings; vertical friezes; walls made from well carved ashlar; small columns at the footings of the buildings although the column, as support or frequent of the decoration motif does not appear. The peculiarity which especially arouses attention is the utilization of the central door of the temple as the mouth of a huge mask, an innovation which may have originated in this region and then went over into Rio Bec region, and ultimately to Puuc as well.

### Puuc

In Yucatecan Maya this name means "mountainous country" and refers to the area of hills which cut through the peninsula at the borders between the States of Yucatan and Campeche. Some of these main centers are Edzna, Uxmal, Kabah, Sayil, Labna, Xlabpak, Chacmultun, Holactun, Xculok and Kiuic.

The actual Puuc style ought to have been developed over the course of a number of centuries. The first stage, that of the seventh century A.D., should correspond to Edzna and to the oldest buildings in Uxmal, Sayil, Labna, and Kabah, all of which are provided with crestings above the central wall or which is a prolongation of that of the façade but with very little decoration. In a later stage, that of the eighth and ninth centuries, there flourished the style with sumptuous decoration on the friezes and the disappearance of the cresting; the final stage, began in the tenth century, with the intrusion of some Toltec decorative elements.

As characteristic elements of the Puuc architecture one can take note of the following: buildings in which horizontal lines predominate over vertical ones; walls of ashlar well carved and well joined, which hardly penetrate the nucleus of the rubblework, forming a kind of overlay; domes of beveled stones; smooth walls for the façade with decorations only in the form of friezes; a vertical entablature in which the frieze is delimited downwards (architrave) as much as upwards (cornice) through beveled moldings and a listel in the middle; a footing which surrounds the base of the buildings frequently decorated with colonnades; the use of the column—monolithic or with sections of drums—provided with the capital of a column of a square section, in order to divide the bays from the entrances or to form porticoes.

One of the principal characteristics of the style of Palenque is the presence of a portico which usually has three entrances, but under exceptional circumstances has five, as one can see in the *Templo de las Inscripciones* ("Temple of the Inscriptions").



The Puuc style did not remain restricted to the region to which it owes its name, since contemporary buildings with some of these same characteristics are found in Chichen Itza [Akabdzib, *Templo de Tres Dinteles* ("The Temple of the Three Lintels"), Chicchan-Chob, *Las Monjas* ("The Nuns"), *La Iglesia* ("The Church"), and Dzibilchaltun], and existed in Mayapan prior to its late blossoming.

### Postclassical styles

In the course of the tenth century A.D., foreign groups came to the Mayan area. The first to arrive in the septentrional area were the Putuns or Chontals from the Gulf Coast, during the first half of the century, and the Toltecs towards the end of the same century. In the meridional area were the Pipils, the bearers of the Toltec culture, and much later the Mexicas. These invasions left their impact which gave birth to a hybrid culture which characterized them for almost six centuries before the conquest by the Spaniards. We will treat briefly the results of such influences on Mayan architecture while limiting ourselves to some of the main centers in which they are more easily appreciated, that is, in Chichen Itza, Mayapan and Tulum.

### Chichen Itza

If the first surges of non-Mayan people to the Peninsula of Yucatan, whether the Xius, Itzas or Putuns, only served to introduce symbols of their religion or figures of their military caste on the friezes in Uxmal and some buildings in Kabah and perhaps to construct the *Caracol* (snail) of Chichen Itza, the great tide of invaders coming directly or indirectly from ancient Tollan (today Tula, in the State of Hidalgo) served to transform Mayan architecture in the course of the eleventh and twelfth centuries.

The Toltecs brought new techniques in construction, spatial concepts and forms, but the architects, probably Mayas, adapted them to their own ideas, attaining an extraordinarily fructiferous fusion. Among the new elements we can mention the following: orientation of the buildings with a deviation at an angle of  $17^\circ$  to the East, from the astronomic North; the use of the ashlar and the projecting panel for the decoration on the bases and pedestals, as well as on the pyramids; the use of decorations on the roofs, erroneously designated "merlons"; hypostyle vestibules at the foot of the pyramids which formed galleries parallel with the arched roof resting on wooden beams supported by columns or pillars; columns on the inside in which were also combined the Mayan dome with the columns and beams which had served in the altiplano to support a flat roof; the field for the ball-game closed at the ends and with rings; the extended base of the walls forming the ashlar; footways and altars with completely inclined decorations for the cornice; square platforms with a stairway on each side, the decorations of which form the ashlar and the projecting panel; round buildings; the floor of the principal temple of Tula reproduced in the Temple of the Warriors.

The techniques continued to be Mayan with regard to the construction of walls with ashlar well cut and joined together, and the beveled stone domes, the practise of delimiting the frieze by means of an architrave and a cornice of three splayed moldings and a flat listel.

### Mayapan

In the second half of the postclassical period (from the thirteenth to the fifteenth centuries), after the apogee of Chichen Itza flourishes Mayapan, where the Toltec constructions of that center were reproduced. But although the form was given every consideration and although it was faithfully copied, the technique is most certainly inferior and the result quite mediocre.

A distinguishing element in the Puuc style is the presence of columns. These can be found in the corners of the walls, in the entrances to the temples, or the smaller ones in the footings, cornices and friezes, with single, double or triple links or even without that, as in the Palace of Sayil.







In view of the inferior style which one can observe in the buildings in Tulum, the style of this center has been rated decadent.

Enclosed by a wall of more than 8 kilometers in expanse, the site of Mayapan was really a city, and the arrangement of approximately 4 000 buildings conform to the letter to the description which Landa gives and which we reproduced only in part in our chapter on *Dwellings*, while talking about the location of the population. Approximately two thousand buildings correspond to the huts of the common people; a little less in stone buildings—the homes of the lords and those of a sufficiently high status—and a hundred buildings for worship. Twenty *cenote*. provided all the needs for water for eleven or twelve thousand inhabitants. Irregular paths and narrow paved streets made possible both the circulation around the temples and the access to them.

As an imitation of the buildings of Chichen Itza we will refer to what was probably the major temple, known as *El Castillo* as the one which served it as a model. The pyramid has the same number of parts, a stairway on each side, and the floor of the temple, identifiable despite the fact that the building itself was destroyed, coincides precisely with the construction of Chichen. In Mayapan there is also a round building, apparently similar to the Observatory (*Caracol*) of Chichen Itza, apart from a number of small circular portable altars. The porticoes with colonnades recall the hypostyle galleries of the so-called *Mercado* (Market).

However, the materials employed, the very deficient techniques for the masonry, the mediocre mortar of the limy sand (*sascab*), were responsible for the inferior quality of the buildings, the defects of which were concealed under the thick layers of stucco and which now stand out since the coating has disappeared. For example, the flat sections of the columns are stone slabs which do not become circular and are barely smoothed. The roofs were almost all flat and, of course, have disappeared for quite some time. To justify the state of deterioration in which Mayapan is found, one has to remember that it was razed in 1441 A.D.

### Tulum

The center of Tulum on the East coast of the Peninsula of Yucatan is also fortified with walls, but it has a much lesser expanse. The fortification surrounds it on three of its sides, since the fourth is formed by the cliff on the coast. The expanse of the center is 380 meters from North to South and 165 from East to West.

In spite of the fact that Tulum is contemporaneous with Mayapan and that it also presents imitations on the Mayan-Toltec of Chichen Itza, Tulum and other places on the coast have a style of their own and are distinguished from all the others reached by the influence of the Mexican altiplano.

As typical characteristics of its architecture we can mention the coexistence of flat roofs and domes which frequently have the shape of the neck of a bottle, and can begin from the base of the wall; reinserted lintels; friezes delimited by flat moldings although they can ultimately be used as beveled moldings with the central listel as in the Puuc style; substitution of the Puuc frieze by an entablature which adopts the profile of the architrave or of the cornice in that particular style; the frieze cut to half the height by a flat molding; walls deliberately made to lean or lose their vertical position towards the outside, and trapezoidal entrances; small sanctuaries, constructed as in Palenque, form an independent unit within the structure; shrines which ought to have been used for the safe-keeping of the sculpture that would be venerated from outside, in view of the fact that because of their dimensions they did not give the people access thereto; porticoes with columns made from rubblework and coated with stucco.

#### The meridional area

For many Mayan specialists, among whom are Kidder and Morley, the Highlands of Guatemala and the littoral of the Pacific do not form part of the area that can be adequately designated Mayan, since they lack what are considered distinctive elements of Mayan culture, namely, a calendar completely developed, a precise hieroglyphic writing and the use of the dome known as false, salient or simply Mayan. Personally we accept the more ample focusing of Eric Thompson and do not exclude the meridional area from our study. There is no doubt that, in the course of centuries, the culture that had been developed in these regions at the level of ruling hierarchy, never had the characteristics mentioned, because of the fact that its population, unquestionably Mayan, was apparently constantly dominated by outside groups, the bearers of different cultures: Olmecan, Teotihuacanian, Totonacan, Toltecan and Mexican. But it seems to us rather unfair to disregard from the cultural Mayan area, the peoples who not only spoke Mayan languages but who have actually left us many valuable cultural proofs as means to comprehend Mayan thinking, such as the *Popol Vuh* and the *Anales de los Cakchiqueles*.

In referring to the architecture we have to take cognizance of the fact that during the preclassical period important centers had flourished, to mention only a few as Kaminaljuyu in the Highlands of Guatemala; Monte Alto, Bilbao and Abaj Takalik on the littoral of the Pacific of the same country; Izapa on the coast of Chiapas, and Chiapa de Corzo in the central depression of Chiapas. The architecture comprised funeral mounds, extended platforms, altar-platforms, pyramidal bases and pedestals to support the temples made of materials which readily deteriorate (wooden sticks, *bajareque* and palm roofs). The nucleus of the structure consisted of earth plus round, smooth pebbles with a coating from mud. Ramps or stairways provided the means of approach to the upper part. During the early classical period some of these centers continued to be important as, for example, Izapa, Chiapa de Corzo and Kaminaljuyu. This latter, situated on the outskirts of the city of Guatemala, ought to have played an important part in the Highlands. It had platforms and pyramids coated with sun-dried clay bricks or pumice stone, with a profile which, in some cases, coincided with the classical Teotihuacanian combination of the slope and the projecting panel, the latter ultimately decorated with painted motifs; funeral mounds built from earth or the dust from white rock and sand; temples with sun-dried clay brick walls and possibly also from rubblework, and with palm roofs.

It is possible to recognize a number of sites for the postclassical period in the Highlands of Guatemala, which present architectural elements from the center of Mexico (Tula, Xochicalco, Tenayuca, Tenochtitlan-Tlatelolco): pyramids supporting twin temples and provided with a double ladder; stairways with beams which end vertically in the upper part; use of pillars and columns; walls with an inclining foundation; temples with flat roofs, or palm roofs; extended buildings with numerous entrances formed by pillars; fields for ball-games enclosed on one or both sides. As one can readily perceive, the architecture shows many elements which have their origin in the altiplano, differing completely from the classical Mayan period.

## SCULPTURE

### Generalities

If architecture suggests enough for us about what had been the structure of society in which it was born and developed, then the fine arts, and especially sculpture, provide us with the image or portrait, set for eternity, of important aspects of that society. Through the analysis of Mayan architecture, in its civil and ceremonial aspects, we are able to confirm the tremendous role that religion had played, as the fundamental stimulus and primordial goal for constructing thousands of ceremonial centers. That analysis also enlighten us about the division into social classes that were well differentiated, with a majority exploited, whose dwellings or materials that deteriorate rapidly did not even attain the architectural level and a ruling minority that had built residences which to our way of thinking were far from comfortable, but very impressive ones.

Sculpture makes it possible for us to attain an enfocussing of greater clarity and profundity with regard to the different planes which composed the Mayan society. Its study, in replying to our questions of what, how, why and for whom was this art, offers us a series of pictures of authentic exactness of the society which created it, such as the promoters and executors of the same had perceived it.

### Techniques

To a higher or lesser degree the Mayas knew and made use of all the techniques of sculpture: incision, engravings in bas- and high-reliefs, round and molded busts. To make small objects of the kinds that we will speak about in treating the art of making gravestones, they employed obsidian, silex, jade and other hard or semi-precious stones, the shell and bone. In their principal works of sculpture they used especially calcareous rock and eventually wood. Their instruments were of hard stone with which they traced, cut, carved and perforated. The gloss was obtained by abrasion which resulted from the use of powder or dust from stones, and sand as well as water. Many of the sculptures, if not all of them, were painted in different colors, of which vestiges are still found.

The sculptured pieces, such as the slabs, the tablets, the lintels, the jambs, the columns, the stairways, could form an integral part of the buildings or constitute units, the functions of which were closely bound to the constructions themselves, that is, as altars, sanctuaries, thrones and tables, or even to be associated in an isolated form with architectonic wholes such as squares, platforms and temples (stelae).

### Themes

The product of a socially stratified structure, directed by the ruling class—a religious and civil entity—sculpture had to materialize some themes for the purpose of strengthening the system in force: the omnipotent existence of the deities which created it and were accustomed to keep a vigil over it for their adequate functioning; the might of those who supposedly were the representatives of these same deities and were directly responsible, apart from the beneficiaries, for the fulfillment of the obligations of all to assure divine benevolence.

The gods—abstract beings—were symbolized in diverse ways: anthropomorphic, zoomorphic, phytomorphic, geometric, hieroglyphic, or by a combination of such elements. One of the most frequent forms used to represent them was that of the huge mask in which human and animal features were conglomerated, made of stone or more commonly from stucco. The huge mask was integrated with the decoration on the temples in the sites of the greatest splendor: the cresting, the frieze, the corners of the façade above the entrances. But

The Mayas knew and made use of a great variety of techniques in sculpture, which they did with taste and refinement. The objects which are still conserved express not only a well-established artistic quality but also the concept that this people had had about themselves and their universe. There is a Mayan urn in the Archaeological Museum in Villahermosa, Tabasco.



one also finds them on altars, on the base of the stelae, on the inscriptions, or decorating the apparel, or as the attributes of the personages.

The ruling caste showed their dominion in the stelae, the stone slabs, the lintels and other structural forms. If the monument represented only one personage then possibly his duties were idealized and he was always dressed in a very sumptuous fashion. If the scene dealt with several participants, the most important one was set up at a greater height than the others, frequently standing or seated above some subject or prisoner, and his attitude obviously gave proof of his superiority.

It is highly probable that not always did one seek to particularize some priest or other, or lord, but to glorify the ruling class, although we believe that many of the sculptured figures on the monuments or many of the faces modeled in stucco must be the portraits of hierarchs who really existed and whom they had to resemble. With regard to the common people, the slaves and captives, the meagerness and simplicity of their clothing as also their very posture, as the artist had meted out to them, clearly reveal, without any room for doubt, their inferior condition and position.

### **The classic styles**

The dual character of Mayan art reflects its socio-political structure in which a theocracy dominated combining the civil with the religious powers, along with the geographic, historical and political factors, in particular, the territorial division into autonomous states; they are the justification for the differentiation of the styles which were developed in the Mayan area but with predominance, in accordance with the regional traditions, of the aesthetic or the dynamic, the symbolic or the historic, the geometric or the realistic, the divine presence or the man.

For the study of sculpture we shall follow a route similar to what we had utilized for architecture, namely, for the classical period in the central and septentrional areas, the styles of Peten, Motagua, Usumacinta, Palenque, Rio Bec, Chenes and Puuc. Then we shall treat the postclassical styles in the septentrional area and in a separate section, in view of its very special conditions, the meridional area.

### **Peten**

From the end of the preclassical period we know the building E-VII-sub in Peten from Uaxactun, the corpuses of which, arranged at regular intervals, were decorated with huge masks out of stucco. These, in the form of heads of serpents and jaguars, symbolize some deities. During the entire classical period the religious themes, always molded in stucco, constitute the decorations on the friezes and crestings.

Since the beginning of this last period, the governors of Peten were represented by a hieratical attitude, luxuriously attired and the elements of their dress and the importance of their positions within the hierarchy carefully detailed. In the most ancient stelae the whole body is seen in profile, then the legs and the face, and ultimately only the face. The lintels from wood in the main temples present the same theme of the self-glorification of the rulers, attained in an extraordinary manner. Hieroglyphic inscriptions accompany the figures, which undoubtedly refer to the name, the title, the date of birth and the most important events of their reign. Some Teotihuacanian motifs as that of the face of the god Tlaloc and the sign for the year appear as decorations around the fifth or sixth century A.D. When we discussed architecture, we already mentioned the names of the principal centers of Peten.

### **Motagua**

Within the framework of the different Mayan classical styles, that of the region of the

Motagua River is particularly distinguishable from all the others. Its representative center is Copan and the numerous sculptured monuments which it has conserved correspond, almost in their entirety, to the late classical period and constitute a magnificent collection of examples.

Analyzing these monuments, many of them dated by means of calendaric inscriptions, Tatiana Proskouriakoff established a stylistic evolution in different stages, but independently of this evolution, the sculpture of Copan demonstrates a strong tradition which is maintained throughout centuries, and the changes which are observed in the technique utilized do not modify the thematics nor do they alter the fundamental characteristics of the style.

The personages represented on the stelae had to form part of the highest hierarchy and although their faces, like masks, monotonously repeat a solemn and placid indifference, many of them have distinguishing features which suggest the intent of perpetuating individuals who had really existed. The aesthetic attitude follows a hieratical pattern in which the bodies are seen from the front, covered by an overdressed attire which leaves only the legs and face uncovered, the latter in high-relief.

The most important change depends on passing from the bas-relief to one which is each time more profound, in an effort to arrive at a round bust which is almost attained in the ultimate stelae in which the personage appears as though placed against the block of stone from which it was almost completely released. In this way it is possible to see as much of the profile as of the front and there is an attempt to present the feet in an oblique position. The arms are folded over the chest with the forearms almost vertical in the oldest sculptures and later horizontal, always maintaining the hierarchich attribute of the ceremonial bar, the symbol of heaven which terminates in the head of a serpent at both extremities. This attribute is hanging in the most ancient stelae thereby suggesting a flexible material, which became rigid and horizontal in the following phases.

The vestuary is rich beyond all description, and the sculpture has reproduced it with preciousity up to the minutest details. Enormous headgears stand out, decorated with a feline mask or the superposition of various masks. Secondary elements complete the attire, executed with incredibly minuteness in a genuine horror in vacuo, some of them hanging in an absolute separation from the surface of the stone block. Very frequently one can note that the stelae, in all the faces which represent personages, are sculptured on the largest surfaces while the hieroglyphic text is on the edges of the stone.

Numerous zoomorphic altars with serpents, felines, turtles, or heads of mythological animals and motifs integrated with the architecture, complete the rich sculpture of Copan. The Teotihuacanian factor in the mask of the god Tlaloc can, in some cases, adorn a head-dress or what is hanging from a loincloth.

Quirigua, a center more than likely dependent upon Copan, developed a style reminiscent of that of this last site, at least with regard to the thematics and the composition, but not in the technique since it is limited to the bas-relief with the exception of the faces of the hierarchs, and never attempted to attain the round shape, with the exception of the zoomorphic altars. The faces show features which differentiate one from the other. The ceremonial bar was generally substituted by the scepter of the god of rain and the solar shield. Worthy of note are the zoomorphs and some altars associated with them, such as the altars of the zoomorphs referred to as *O* and *P* which reveal a remarkable dynamism in the extreme richness of their decoration.

#### Usumacinta

While in Peten and the valley of the Motagua river the sculptured works glorify the rulers only through their effigies, executed in a serious hieratical pose in which the finery of their attire is emphasized as a sign of their high hierarchy, in the Usumacinta basin a new







Left: the representations of the sculpture of the Usumacinta style show an element which is new in the central area; the presence of objects and activities which exalt a bellicose spirit. On the page: the sculpture in miniature generally made from clay, was elaborated with realism and faithfulness to the physical characteristics which show the ordinary daily aspects, as in this figure which is from the Isle of Jaina where a woman is weaving with a loom around her waist (The National Museum of Anthropology).

element comes to the fore which adds to the figures of the chiefs, sufficiently imposing in themselves, the obvious manifestations of their vast power in a historic context, generally with a bellicose significance.

One can assume that this region at the Western border of the Mayan area would have been more subject than others to violence, and that its centers would have had to be defended against the neighboring invaders. But the war could also have been the consequence of rivalries between lineages, or have a repressive character in order to dominate internal disturbances. These different alternatives all seem probable, and the fact is that the sculpture serves to record frequent scenes of war in a realistic and dynamic manner.

Despite the fact that the personages are so richly attired, nevertheless the silhouette of their bodies is clearly visible. They are animated, engaged in dialogues with their equals or giving orders to subordinates; they threaten, struggle, take prisoners and pass sentence on them or kill them; they receive objects from the hands of their women; they sacrifice themselves and live before our very eyes in their role as omnipotent chiefs and conquerors.

The technique employed is always the same, that of the bas-relief. The stroke is decisive and vigorous; the bodies well delineated; the composition of the groups very well achieved, yet the movement is hardly expressed with genuine realism.

Piedras Negras, Yaxchilan, Bonampak, Jonuta, Balancan, Morales, El Caribe, La Amelia, La Florida, La Mar, Altar de Sacrificios, Seibal are the principal localities which correspond to this region. In some of them the elements from Teotihuacan, the presence of which we already showed for Peten and Motagua—the masks of Tlaloc and the year-bearer

sign—also appear as adornment for headdresses, shields, and loincloths. In Seibal, the foreign element is clearly perceived in some late stelae in which the physical type of the personages, while clearly not Mayan, continue to dress in that fashion; the Mexican calendaric hieroglyphic *Cipactli* associated with one of them suggests the name of the *Cipaque* family which, according to historic sources, ruled in the Chontal region in which groups of a hybrid culture, Maya-Mexica, invaded a large expanse of the Mayan area at the end of the classical period.

### Palenque

As we have already stated when we analyzed the style of architecture of Palenque, this center, in spite of the fact that it is in the Usumacinta basin, created an art of its own, different in many respects from what was developed in the rest of the region, in the sculptural as well as in the architectonic aspect, for which reason we are treating that separately.

The artists from Palenque worked the calcareous stone into a flat relief, with very little depth, and besides they had a special interest in molding stucco, a plastic material which, because of its excellent qualities, was particularly suited to a refined sensitiveness of expression. On the other hand, they feigned ignorance of the round form for which we know only some limited fragments of the pieces in stone or stucco.

Furthermore, they had no concern for producing stelae or other special monuments such as altars, except for some rectangular or circular tables. Their bas-reliefs from stone formed slabs, panels, gravestones, affixed to their buildings, principally to the inside walls. The stuccoes were also integrated to their buildings, externally decorating the bases and pedestals, the pillars, the friezes, and crestings and the walls inside. Small gravestones, beautifully carved with a sharp point, probably from obsidian, show images of deities and hieroglyphic inscriptions, delicately traced with cursive lines.

In stucco the bodies were modeled in the nude, and the scanty clothing together with the adornments were applied afterwards; finally they were painted in different colors, those of which traces have been found are red for the body and the face; black for the hair, and blue for ornaments and attributes.

The themes treated comprise, in the main, compositions of groups; although individual personages are also found isolated on the top of pillars and heads on the inside of medallions. The scenes depict the enthronement of the ruler, the veneration of personages or of religious symbols, a series of vassals, a possible ritual dance, human sacrifices, symbolic compositions alluding to death and resurrection, religious and astronomic motifs, hieroglyphic texts, the contents of which is calendaric and historic. The heads out of stucco which ornamented friezes, crestings and walls, undoubtedly record with stupendous realism the characteristics and features of individuals who had played an important part in the political and religious life in Palenque.

The sculptors of Palenque were distinguished by their great technical mastery, their fine sensitivity, the moderation and elegance with which they handled the themes assigned to them. Here we feel that we are in an artistic environment very distinct from that of Copan, Peten and even the rest of Usumacinta. The human body which captured the attention of the artist, stands forth almost nude, naturally presented, whatever its posture may have been: standing, seated, kneeling, sitting on his haunches, in profile, the body or only the face. The attire is usually limited to a simple loincloth, elegant headgears which can be panaches fluttering with a light movement, or floral motifs; slightly elaborated necklaces; a special type of earrings and bracelets. Some wear cloaks from feathers or from jade plaques; skirts only suggestive by the rhomboidal motifs which ornament them, but the body is always visible, almost completely, which gives an air of realism and naturalness to the individual and the scenes in which they figure.

The facial features show simultaneously the intent at faithful reproduction and a stylistic tradition which induces to exaggerate, for example, the cranial deformation and to turn the knitting of the eyebrows into an artificial line of the nasal arch which is extended over part of the forehead. The human figures are graceful, well proportioned, and even in the more static scenes the position of the arms, a certain flexion in the legs, a light inclination of the head, break every aspect of affectation of solemnity or pompousness.

It is possible to summarize the art of Palenque with only a few words: equilibrium, naturalness, realism, discreet dynamism, moderation and refinement.

### **Rio Bec-Chenes**

For these regions we have put together in one single section what we handled separately in the chapter on architecture, but which integrate one and the same stylistic region as far as the sculpture is concerned. We have already referred to the principal centers of the Rio Bec: Chicanna, Xphuil, Becan, Rio Bec, Hormiguero, Culucbalom. Of the Chenes we can mention Hochob, Dzibilnocac and El Tabasqueño.

Both regions are characterized by the almost absolute lack of special sculpture. We have found reference to only five or six stelae in Rio Bec, Pasion del Cristo and Pechal, which were very eroded and apparently belonging to the tradition of El Peten.

On the other hand, sculpture had a function closely associated with the buildings and therefore it is found integrated with architecture. In the decoration on the façades of the temples which in Hochob attained a tremendous overload, a combination of stone and stucco was utilized, completing the motifs formed by carved blocks with a thick layer of stucco which not only covers the rock-like frame but even adds details and provides a definitive finish. The fundamental motif is the huge mask of the God of Rain, the presence of which on the façades is closely associated with the lack of superficial water and the scarcity of a pluvial system. The huge mask can occupy a large part of the façade in all its verticality, with the mouth sufficiently open to provide the entrance. Very large eyes surround the nose which is suspended above the lintel, and the ferocious or canine teeth come down vertically, parallel to the jambs so as to extend on the base and constitute a threatening law.

Decoration is completed with huge masks of the front and profile arranged in columns in the corners, stylized serpents, spirals, simple and complex frets, lattice-works, small columns, peasant huts, and finally human presentations in the form of masks out of stucco or rows of bodies also molded in stucco, which are superposed to constitute the cresting, as in Hochob.

We are acquainted with this aspect of the huge mask covering the entire façade and the mouth of which is the entrance to the temple, exceptionally related to the Puuc style (Uxmal and Chichen Itza) and in Copan.

### **Puuc**

The region so designated embraces approximately the Western half of the State of Yucatan and the septentrional part of Campeche. It comprises a number of centers of which we can mention Edzna, Uxmal, Kabah, Sayil, Labria, Xlabpak, Xcalumkin, Xculoc, Oxkintok and Chacmultun.

The tradition of erecting stelae continued in Puuc while, as we have just seen, it remained virtually discarded in Rio Bec and Chenes. Important personages, very attractively attired, were represented in these places, mainly toward the middle and end of the late classical period. Proskouriakoff has suggested the possibility of a regional style thus far little studied or known. Many of the open pieces were found in the worst possible conditions, eroded by the natural elements or through the burning of the fields.



In addition to the stelae, columns, pillars, jambs and lintels were also sculptured, generally in bas-reliefs to glorify the rulers. The much later monuments disclose a definitely decadent style, with the figures crudely delineated, improperly proportioned and anatomically distorted; the composition rigidly or crudely attained, the intent of which had been to indicate movement. The stroke is uneven, and many of the smaller motifs of attire were marked by cut lines, not in relief, with a prevalence of straight over curved lines. Toltec features are apparent in Uxmal and Kabah as an evidence of the first invasions during the course of the ninth century.

This tradition of free sculpture does not characterize the Puuc style; the architectonic sculpture confers its special stamp on the region, which is, concretely in the form of ornamentation on the façades. These show a perfect equilibrium in the contrast between the flat surfaces of the walls and the exuberance of the friezes. While in other regions such as Peten, Usumacinta or Palenque, only some huge masks out of stucco used to ornament the upper part of the façade, in the Puuc style the frieze became a stone mosaic of the richest form, the composition of which was ingeniously conceived by an artist, and the execution of that was attained through the collective work of the community, since the intent here was not to glorify the individuals of the ruling class, but rather the God of Rain whose importance, it was supposed, was definitely that of remedying the lack of superficial currents of water and the limitation in time and volume of the rainy season. However, it is absolutely certain that as a last resort it was the minority of the ruling class which benefited most from the gifts from heaven.

The effigy of Chaac in the form of a huge mask, repeated thousands of times with a minimum of variations, is basically characterized by his long nose which projects like a horn, hanging or straight; it appears above the entrances, in the corners, and on top of the friezes, and the obsession in representing that reaches its climax in a building in Kabah where the façade was completely covered with hundreds of such masks from the footing to the cornice.

Other motifs, all of them geometric, such as the lattice-work, the simple or complex frets, the very small drums, the small columns, smooth or with fastenings, broken and serrated sashes which can form rhombuses, corrugated serpentine bands complete the ornamentation. These elements are harmoniously combined, serving as the background to highlight the God of Rain, at times crowning the huts of the peasants. Human representations are rare except when they correspond to later intrusions from a foreign source.

The Puuc style is manifested outside of the region, up to the septentrional end of the peninsula (Dzibilchaltun) and sufficiently to the West (Chichen Itza); in the same period, that is, the late classical, it was also followed in Mayapan. The sculptural art of Puuc, an integral part of the architecture, of an abstract contents and geometric expression, is unquestionably a religious art in which the individual cedes his place as such in favor of the deity.

A ceramic polychrome piece from Jaina. The clothing, the headdress and the jewels make it clear that she is a woman of high social rank; in addition to that, it is also an artistic piece of work which we would be able to classify as perfect and even exquisite (The National Museum of Anthropology).

#### Postclassical styles

In dealing with architecture, we referred to the arrival in the Mayan area of foreigners who succeeded in imposing their domination, displacing the Mayan hierarchy at the end of the tenth and beginning of the eleventh century, preceded by a former surge the imprints of which we already mentioned with regard to Uxmal and Kabah in our previous statement about Puuc, that is, the plumed serpent on the frieze of the western building of *Las Monjas* and on the surfaces of the field for the ball-game in Uxmal, and the Toltec warriors on the jambs of the rear façade of Codz-Pop, of Kabah. The culture which the invaders brought was undoubtedly Toltec which, in being combined with the Mayan gave rise to the creation of a



A relief on stone which shows the distinctive physical features of the Mayan. A description of the social, religious and political phenomena have come down to us through such sculptured representation.

Mayan-Toltec style which persisted until the arrival of the Spaniards, although each time more fused with the native culture. We will analyze in a rapid manner the sculpture of three places which characterize the septentrional part of the Peninsula of Yucatan in the course of the postclassical period: Chichen Itza, Mayapan and Tulum.

### Chichen Itza

The occupation of Chichen Itza until the middle of the thirteenth century by invaders with a Toltec culture is still more evident in the sculpture than in the architecture. It cannot be asserted that in the sculptural art of that period the Mayan form would have disappeared, as it did not even disappear in the form of construction; it was not a matter of a substitution of styles but rather a fusion of them. Certain specific features were recognized by Proskouriakoff, which are reminiscent of the details of the classical monuments, especially in what was designated "The School of Oxkintok", as, for example, some types of tufts of feathers on the headdresses. The presence on the Toltec buildings of the huge masks of Chaac, which are identical with those of the Puuc style, enlightens us about a political situation in which the invading minority that took over the helm, nevertheless realized that it was obligated to respect the creed of the immense Mayan majority.

Apart from the fact that the themes which were dealt with in Chichen Itza were inspired by the Toltecs, the hand of the Mayan artist that executed them is evident, and gives an unmistakable stamp to the work in its superiority over that of the sculptor of Tula. In Chichen Itza the very same representations of a jaguar, an eagle, a chac-mool or a warrior acquired a special quality through a greater technical perfection and a more refined sensitiveness which were not typical in its place of origin. Some of the sculptures in which the difference is more impressive are the sculptured warriors on the jambs of the *Templo de los Tigres*, in the *Juego de Pelota*, the faces of which show a modeling never attempted even in Tula.

In contrast to the styles of the central area, one of the features of the Mayan-Toltec style is the replacement of individual representation of personages by that of groups, whether in one and the same scene or in isolated compositions which integrate a single purpose such as the pillars of the colonnade of the *Templo de los Guerreros*, independent units which compose a coherent and significative whole: an assembly of warriors which has some inference to the probable function of the locale. The content of the scenes is primarily religious and symbolizes myths or rituals.

The principal motifs of the Toltec culture brought to Chichen Itza are the following: feathered serpents (interlaced with the beams and adorning bases and pedestals, and platforms); serpentine columns and pillars with the head above the floor, the body erect and the tail of the cascabels doubled so as to maintain the lintel; individual warriors on the pillars and jambs, or forming processions on the reeds and altars; processions of jaguars; telamons supporting the gravestones of the altars; standard-bearers; eagles and tigers eating hearts; the motif of the "man-bird-serpent"; statues of individuals reclining, erroneously called "chac-mools"; effigies of the gods Quetzalcoatl, Tezcatlipoca, Tlaloc, and Tlalchitonatiuh; scenes of sacrifices in which hearts are being torn out. The engraving on the bas-relief or the round bust was utilized according to the purpose of the monument. The Mayan-Toltec art of Chichen Itza reproduces a number of new concepts imposed upon them by the invaders, which are of a religious and narrative character. It reflects a culture that is both foreign and grafted into the Mayan trunk but which conserved the most basic of the native religion in its thematics and which, in its execution, bears the indelible mark of the artistic genius.

### Mayapan

Although all the buildings which remain as vestiges in Mayapan pertain to the late



postclassical period, that is, from the thirteenth to the fifteenth centuries, an earlier occupation, contemporaneous with the Puuc style, that is, of the eighth and ninth centuries, is identified by the presence of some huge masks of Chaac. These were originally used to decorate buildings; many fragments of these and other motifs of the friezes in the Puuc style were used as simple materials in the construction of the walls from rubblework.

On the basis of their inscriptions or their style some stelae correspond to the end of the late classical period and show a relationship with those of Puuc, or those which Proskouriakoff associated with "The School of Oxkintok". They are crude in their execution, and the interior elements or their ostentation are not in relief but are cut. There are stelae on which the space prepared for the glyphic text duly squared was not sculptured, and other monuments remained unadorned (more than 25) which suggests that they could be totally or partially painted on a layer of stucco, or, rather that important events had prevented them from being finished. Some figures show sufficient similarity to that of the *Paris Codex*.

The greater part of the sculptural material from Mayapan stems from the ornamentation on the architecture: serpentine columns on which the unadorned shaft would be stuccoed and painted; the tails of the cascabels, doubled at a right angle to support the lintels, carved in stone, are also the heads of serpents, also sculptured in stone and found at the foot of the beams or on top of the higher platforms in imitation of those from Chichen Itza but with interlaced bodies, probably painted on the beams; traces of human figures in a natural size, made from stucco in high-relief and which were placed near the foot of the columns; others were provided with shanks so that they could be embedded; human heads also with a shank, some in the style of the Mayas, vestiges of the classic occupation. Representations of animals such as monkeys, jaguars, dogs, lizards, and small lizards decorated the jambs and columns. Turtles with human heads used to form small altars. Motifs painted on the stucco were used to complete the decoration on the buildings. Like the rest of Yucatan, the sculptural art

(Above) The original style of the work in Palenque makes their pieces or elements in architecture and sculpture distinguishable as does this huge mask out of stucco which is found on one side of the Palace in Palenque. At the side the monumental mask from stucco which is found in Cojunlich in the zone of the Bec River. This place was recently discovered, and many archaeological investigations have been carried out there.





which characterizes the style of Mayapan is of a symbolic-religious nature. As the architecture, so too the sculpture connotes a decadent period in which it was a matter of copying the Toltec form, in which there still remains a Mayan classical substratum of that on the Peninsula, and in which one can readily take cognizance of an evident connection with the style of the eastern coast of the Peninsula.

### Tulum

On the eastern coast of the Peninsula of Yucatan one finds any number of places, some of which we can refer to, citing them from north to south: El Meco, Nisucte, Playa del Carmen, Palmul, Akumal, Xelha, Tanchah, Tulum, Xcaret, Punta Soliman, Chacmool, Ich-paatun, besides those that are found in Islas Mujeres, Cancun and Cozumel. All of them present features in common but we shall confine ourselves to the place most known and explored: Tulum.

Few open sculptured monuments are known from this region; among them some stele and fragments come from Tulum. Stele 1 bears a date from the sixth century A.D., while the ceramic information clearly places it in the late postclassical period, that is, from the thirteenth to the fifteenth centuries. We believe that this monument was originally erected in another center, perhaps Tanchah, which was occupied long before and is five kilometers distant from there, somewhat northward from Tulum. On the basis of its composition it is associated with the classical Mayan sculptures: the personage is richly attired, with the body facing the front and the face in profile, a long skirt similar to that used by some priests of Palenque, a ceremonial two-headed bar made from flexible material and hanging over the chest as in the most ancient stele of Copan. All the other vestiges of stone sculpture are probably contemporaneous with those of Mayapan. What is characteristic of the sculpture of Tulum and for the coast as a whole is the use of stucco and its integration with the architecture. Its principal expressions, all achieved with stucco in a form sufficiently coarse, are as follows: serpentine columns in which the stuccoed shaft was painted; the head above the floor and the cascabels raised in order to support the lintel; human figures standing or seated in niches above the entrances; a deity descending head down, the legs open above, the hands joined below the face, the arms and shoulder equipped with wings, possibly a representation of the Mexican *tzontemoc* (the sun setting in the late afternoon); huge masks in bas-relief in the corners of the friezes between two horizontal moldings and at times severed by these moldings; human heads in bas- or high-relief on the inside walls; a man falling, caught in an interlaced band, a statue of the type designated "chacmool" found in a locale with this name; heads of serpents to decorate the beams unearthed in Nisucte.

The contents of the art from the Eastern coast is both religious and symbolic. Its characteristics are such that one can speak of a regional style very closely aligned to that of Mayapan, in so far as it imitates the Toltecan and that technically is of a quality very much inferior to that of the classical Mayan sculpture.

### The meridional area

In the formation of the Mayan culture the meridional area played a most important part since it was the link between that and the Olmecan, from which it is derived to some extent, as are all the other cultures of Mesoamerica.

During the preclassical period the localities along the Pacific littoral and of the Highlands of Guatemala and Chiapas, as, for example, Bilbao, Izapa, Kaminaljuyu and Chiapa de Corzo were occupied. Olmecan engraved sculpture on stones up to six meters in height, represent-

ing diverse scenes, as also figurines out of jade typically Olmecan, were found on the coast of Chiapas, that is, in Pijjiapan, Ocozocoautla.

Towards the end of the same period, that is, the upper preclassical and protoclassical, colossal heads were sculptured in huge blocks, cruder than those of La Venta and other Olmecan localities, the so called Izapa's style was developed in a locale also on the coast, close to the border between Chiapas and Guatemala. A number of stelae are known of which the greater part is from Izapa itself and the others from Santa Margarita, San Isidro Piedra Parada, Bilbao, El Baul, El Jobo, Monte Alto, Abaj Takalik, Chocoma, and in the Highlands, that is, in Chiapa de Corzo and Kaminaljuyu. This style reveals strong resemblances to that of La Venta and Monte Alban I, whereby their Olmecan origin is firmly and unquestionably established, and, at the same time, also some features which later came to be classic in Mayan sculpture.

The themes handled on the stele are of a mythological nature and comprise human figures which generally are integrated with the scenes, real or mythological animals, plants, geometric and symbolic motifs with an abundance of volutes. The technique most utilized is the bas-relief, but there are also altars and other monuments in a round form. The association of the stele and altar is already common. The thematic aspect offers a rich variety of compositions: an individual who seems to be fishing and carrying water (the motif of water appears repeatedly); descending figures; the tree of life in a mythological complex; an anthropomorphic god accompanied by a serpent; a jaguar suspended over a fire; personages around a hearth; a man falling head downward into the water; a crocodile erect, facing a man is supporting a bird; a reclining skeleton out of whose stomach emerges the umbilical cord, which is maintaining a winged figure; an individual in a canoe; scenes of decapitation. In some cases, two men seated facing each other are, nevertheless, separated by a column of hieroglyphics. Stele number 1 of El Baul presents a personage which can be associated with the ancient date of 36 A.D., previous in more than 260 years to the first stele, certainly Mayan. Another stele of the same center depicts a ball-player, duly attired and with the mask of an animal. Stele number 11 of Kaminaljuyu shows a hierarch richly attired and armed, which permits us to assume that since the more advanced preclassical period a ruling class was accustomed to auto-glorification through sculptured monuments. A deity with a hooked nose, associated with the water, has to be the antecedent of the Mayan god of rain.

The early classical period is manifested in the meridional area through the continuation of the occupation of such centers as Izapa, Chiapa de Corzo and Kaminaljuyu; the latter came strongly under Teotihuacanian influences, especially with reference to architecture and ceramics. As far as the late classical period is concerned, it is characterized by the peculiar style of the region of Santa Lucia Cotzumalhuapa which flourished in Santa Lucia of the same name and numerous localities of the district of Escuintla, in Guatemala in such regions as Bilbao, El Baul, Palo Gordo, etc. Classic Maya, Teotihuacanian, Totonacan and Toltec elements are recognized in this style. The monuments comprise stele, rocks or enormous cut stones which had been utilized in the bas- and high-reliefs as well as in the round shape. Among those executed in the latter technique figure human and mythological heads, and of animals such as serpents, macaws, jaguars and monkeys, all of them provided with a shank for the purpose of being embedded in the buildings. The contents is symbolic-religious with numerous narrative scenes, some rather complex in that a number of individuals take part; actions performed in the ball-game; players duly attired and with yokes like that of belts; human sacrifices through decapitation or the extracting of human hearts, associated with the ball-game; the frequent presence of death in the form of skeletons, skulls, and men with seeming ribs; human figures seated on a throne probably portraits of dignitaries; obese and fat-cheeked men; human heads in the fauces of serpents; the solar disk and god descending enwrapped in flames, probably representing the sun; mythological animals and beings such as serpents, turkey buzzards, the deer-feline, man-crab, man-eagle, etc.



In combination with these themes there are frequent hieroglyphics which correspond to a system of their own, distinct from that which the classical Mayas used, where one can recognize the signs of the twenty days of the Mexican religious calendar. We will add that in this region appeared many pieces which pertain to the Totonacan culture, such as the axes designated votives and the yokes, the latter smooth or sculptured.

In the meridional area the postclassical period is very poorly represented quantitatively as well as qualitatively. From the few examples of sculpture which we recall, a number of them were discovered in connection with buildings intended for the ball-game: "markers" in the form of a human head inside the fauces of a serpent [*Mixco Viejo* (Old Mixco)], heads of jaguars in a round form and provided with shanks as the cited "markers" (Chalchitan), a gravestone in crude bas-relief which was placed near the center of one of the lateral walls of a ball-field (Chichen), an anthropomorphic figure out of stucco found in another game-field (Huil). In addition to that, a number of altars and a stele from Tajumulco are known, which depict jaguars, eagles, solar disks and crude human figures, apparently a degeneration of the style of Cotzumalhuapa. In these regions of the Highlands of Guatemala the "Mexican" influence is obvious.

The sculpture of the meridional area clearly reflects the influences which, in the course of different periods, were imposed in the field of art on the Mayan population by the Olmecans, the Teotihuacanians, the Totonacans, the Toltecs and the Mexicas; in addition, it shows how as the classical Mayan sculpture disclosed, it was nourished by Olmecan art during the preclassical period.

A stone relief of a personage in a sitting position who emits voices and messages. The figure is not finished in the best manner, neither in its norms nor in its proportions. At the side, a stone-relief which belongs to the style from Usamacinta in which two personages are shown. The one at the right, of a major hierarchy bears a miniature scepter with the figure of the solar god on it.



## PAINTING

### Generalities

Painting, with its richness of color, the possibility for depicting scenes in which several participate, and the greater facility for animating them, brings us still closer to the way of life of the Mayas than sculpture does, and, in addition, introduces us directly to their mode of living. If, on referring to sculpture we had said that it offered us fixed portraits of society, then we can state that painting presents us scenes in movement, some like strips of animated drawings, others like authentic documentaries in color.

### Technique

It has not been possible to determine with complete certainty if the technique employed for mural paintings was the fresco on top of something smoothed with lime and still humid, or a tempora painting on a surface already dry. Both methods may have been followed since it was practicable to use either or both of them. From the analysis of some murals it has been possible to establish that first the contours of the figures and the principal internal lines were traced with a light paint (red in Bonampak); then, the different colors were applied, each one over its determined area, but generally covering the interior outlines which were finally resketched with black paint, somewhat diluted, in order to permit the complementary details to stand out. Some parts of the bodies are more obscure than others, but it does not seem that the differences in tonalities would cede to the purpose of obtaining a tridimensional effect. Nor is the intent observed for representing the perspective in the scenes which are executed on a number of planes. The interest of the artist is concentrated on the line, and the outline really shows the great mastery of the painter who has failed only in some foreshortened figures.

The colors used, of a vegetable and mineral origin, embrace an ample gamut: red, pink, orange, yellow, green, light and dark blue, purple, sepia, and coffee in addition to white and black. Mixtures of colors in a greater or lesser solution resulted in a very rich coloring.

### Themes

There are unfortunately very few mural paintings which had resisted the inclemency of the weather and the passing of time over the centuries. Only some of them were known and copied, of which quite a number disappeared after they had been discovered during the last few decades. It is very likely that the majority of the temples did have paintings with historic, religious and decorative themes. We shall confine ourselves to review some of the most important discovered in the following periods and places: for the classical period, Uaxactun and Bonampak in the central area; Chacmultun and Mulchic in the septentrional; for the early postclassical period, Chichen Itza, and for the late postclassical, Santa Rita and Tulum, all of them in the septentrional area.

### Uaxactun

An incomplete section of a mural was discovered in a room of Structure B XIII which had been built during the early classical period, probably sometime in the fifth century A.D. It deals with a ceremony, apparently of a civil nature in which important personages are taking part; it is divided into double lines some of a more important hierarchy than others, judging by their attire and their place in the scene. A very schematic room gives the tone to the representation. In this painting, until now the one of the greatest antiquity in the Mayan area, there is revealed from that time on, the mastery and dexterity of the painter in the composition of the scene, the firmness of the line and the capacity for expressing movement

by the participants to communicate the realism of the happening. Hieroglyphics, possibly titular, complete the pictorial narrative.

### **Bonampak**

In 1946, the discovery in Bonampak of a building with completely painted walls on the inside, from the level of some footways near them up to the closure of the dome, provided the greatest and best example of what the pictorial art of the Mayas had been during the classical period. The three rooms of this building ought to have been painted at the end of the eighth century A.D. The fairly good state of conservation made it possible to attempt to copy and analyze them in detail.

The paintings of Bonampak, in addition to their incalculable artistic value, have a tremendous historical importance since they present vivid scenes of some critical events of the Mayan civilization. A number of interpretations of their contents have been presented: a) an encounter between the lords of Bonampak and those of some rival center; b) an incursion carried out by the people of Bonampak in a village, in order to obtain prisoners to sacrifice them for their rituals; and c) the repression of a peasant uprising. We, however, believe that the first two alternatives can be discarded for the following reasons: 1) the enemies that are wounded, dead or prisoners lack arms and from their colorful dress they are obviously not lords; 2) before they died, the prisoners were tortured, which contradicts everything that we know about the considerate treatment that captives received before they were sacrificed, apart from the fact that a raid to obtain victims intended for immolation would not have any relevancy and would not merit becoming part of history. On the other hand, the third alternative seems to us to have been confirmed, or, at the last, justified through the context of the paintings: the enemies of the lords of Bonampak, who were easily conquered, are common people and before they were killed, they were punished by torture, through tearing out the nails, as can be observed. The date in which the murals were painted corresponds precisely to the end of the late classical period, a little before the woeful decline of the Mayan civilization in the central area, the end of the cultural activities and the physical disappearance of the priests which is deduced from this. Besides, if together with Thompson and other investigators we believe that true peasant rebellions put an end to this civilization, it is perfectly credible that the first attempts at freedom had failed and that the ruling class decided to commemorate the repression as an example for all, so that such uprisings would not recur again.

From the thematics of these paintings a sequence is inferred:

1. In the east room, under the protection of the gods who are seen in the upper part of the dome, the *halach uinic*, his relations and their three *batabes* are getting ready to attend, in the company of the highest personages of the court of Bonampak, a procession of musicians and dancers; in an intermediate fascia the merchants or servants are presenting jade jewelry and jaguar skins; another fascia contains a hieroglyphic inscription which ought to complete the pictorial narrative.

2. In the central room the gods were substituted in part by human figures in cartouches (it has been suggested that they could be the painters), who alternate with the captives and animals; almost the entirety of the surface depicts the battle, the sentencing, the torture and the death of the prisoners.

3. The deities again occupy the upper part of the dome, while the *halach uinic*, his family, the *batabes* and the other remaining members of the hierarchy are present at a colorful dance which is performed on top of the steps of a platform for the purpose of expressing thanks to the gods for the successful conclusion of the social conflict.

The historic nature of the event which provided the basis for the murals painted in

Below, page LXXIV of the *Códice de Dresde* ("Dresden Codex") which probably represents the destruction of the world; at the right, a partial reproduction of the scene of room 2 of the Building of the Frescoes in Bonampak which with singular coloring, movement and realism depicts a battle.







Bonampak is obvious. The style is realistic and dynamic while it communicates the dramatic intensity of the happening which the participants, the lords and the peasants, had experienced. All these aspects were presented by the artist—it would be more correct to say by the artists—with authentic naturalness, each one for the part he had to represent: as observers or directors, engaging in a dialogue, imploring, punishing, playing musical instruments, dancing, being tortured, sacrificing oneself, in few words, dynamically living their historic drama.

### Palenque

In a number of buildings of the Palace in Palenque traces of mural paintings were discovered; the greater part of them in the worst possible conditions. In the Building designated "E", that is, in the east gallery of the southwestern yard, the façade was painted from the base up to the level of the lintels. Seventy-five decorative motifs of a geometric form were estimated around one hundred and fifty according to the imprints they had left. On the northwestern interior corner of the same building the presence of a mural, very much destroyed, which comprised a human figure, had been appraised. The northern entrance still retains part of what had formed an inside frame; the lateral motifs could represent a symbolic aquatic fascia or the body of a serpent which is accompanied by fish.

In the "C" Building, that is, in the western gallery of the northeastern yard, the painter Villagra was able to reconstruct hypothetically, with very limited identifiable elements, a scene of offering similar to that on the gravestones of the Palace and of the Slaves. In the northern gallery of the same yard, he copied a painted hieroglyphic inscription which was contained in a fascia forming a square, but which had unfortunately deteriorated very much. Being the fragment of a possible chronologic inscription it appeared on the last flight of stairs of the tower.

### Chacmultun

Although at a distance of more than three hundred kilometers from Peten, this locality in the Puuc region conserves paintings thematically and stylistically related to what we have already mentioned with regard to Uaxactun, yet both are separated in time by several centuries. It is evident that the tradition of historic painting had wide diffusion during the classical period in the central area as well as in the septentrional. Several rooms in two buildings in Chacmultun, constructed in the late classical period, were painted with murals on the inside and on the domes. Various ceremonies, probably of a civil nature, were represented in them, divided into sections in which a number of personages participate, who seem to have some connection with the silhouettes of the architectonic structures (platform, stairway, temple or room with a roof from palm leaves). Apart from the headgears, sufficiently varied although with few panaches, the individuals wear little clothing; they do carry arms, parasols and other objects. Some are standing motionless; others are walking, going up the stairs, picking up arms, making gestures, giving orders in a simple composition on one single plane, but well organized.

Its relationship with the classic Mayan painting is evident from the narrative and historic contents expressed in a realistic and pictorial language, in which the outline shows the professional excellence of the artist. One can note that the movements were rather ingeniously emphasized, that the style is quite provincial—as the locale ought to have been within the political framework to which it belonged; however, these murals constitute a good example of the classical pictorial art in the septentrional area.

### Mulchic

While the paintings of Chacmultun are sufficiently similar to those of Uaxactun, the

murals of Mulchic, a small place in the Puuc region at a short distance from Uxmal, recall, although in a very modest way, the paintings of Bonampak which were more or less contemporaneous with them. The themes are fairly similar since, in the main, they call forth memories of a battle and the sacrifice of the prisoners. However, some differences suggest that the warlike conflict could have been due to causes quite different from those which we believe had taken place in Bonampak. On the one hand, only common people are taking part in the combat and they are almost naked without any appurtenance which would indicate a high social rank. The fight between these individuals takes place without there having been any recourse to more sturdier weapons than thick round stones which they throw at each other, but which have already caused some victims, stretched out on the floor; a number of men have been hanged. In addition to the group which is struggling, a man seems to be disguised as a monkey; his body is painted black; he is threatening with a knife. On both sides of this scene there are a number of personages, richly attired with a long, smooth headgear which terminates in feathers (similar to that of a figure in a stela in Uxmal); a mask out of the mouth of which a serpent is emerging; many adornments and protective bands on the arms and legs. It is not known precisely what relation there is between these lords and those in the fight among the *mazehualob*, but in the scene on the opposite wall two sacrificers, painted in black and each one armed with knives, are getting ready to immolate two individuals of high rank who are lying on the floor. As a hypothesis one could accept that the historic event which it was desired to commemorate was not, as in Bonampak, the uprising of the peasants against the rulers, but rather that of the *batabes* of Mulchic against the governors of Uxmal. The lords of both places did not take part in the combat, but the leaders of the rebellion which had been unsuccessful were sacrificed.

Once again we are in front of a painting which relates a historic happening of such importance that it was considered necessary to have it made known to posterity, probably as an example for preventing its recurrence. With much more modest means than those that the artists of Bonampak had used, the painter of Mulchic created a composition which transmits the dramatic impact of an event in the history of a small center, whose governors had apparently wanted to oppose, in vain, the domination of the metropolis on which the center depended.

### Chichen Itza

For Yucatan the passing from the classical to the postclassical period meant the substitution of the ruling Mayan class by foreign governors who were the bearers of the Toltec culture with which we became acquainted in Tula (state of Hidalgo), the old Tollan according to the historical sources. In addition to their political domination, the invaders imposed new beliefs and deities, different artistic concepts, distinct techniques, all of which was fused with the ideas, customs and practises of the Mayas. Such changes are reflected in the paintings just as we have already found them in architecture and sculpture.

With the exception of some few vestiges discovered in the building of *Las Monjas* ("The Nuns"), all the other murals correspond to the early postclassical period (from the eleventh to the thirteenth centuries), and consequently clearly reveal their Toltec relationship through more than mere details as the mastery which the composition of certain scenes show. However, the technical ability leads us to suspect that in many of these paintings the hand as well as the brush of Mayan artists were present. We shall refer later to the principal murals found in these two structures superposed on the Temple of the Warriors and on the Temple of the Tigers which form part of a unit in the *Juego de Pelota* ("Ball-Game-Field").

The name, the Temple of Chacmool, was affixed to the structure discovered below the Temple of the Warriors. The paintings, which had retained their brilliant color, were

discovered among loose stones coming out of the walls that had caved in; the original arrangement of them could be determined in part, and thus the stones were individually copied and the scenes integrated therein were reconstructed. They formed part of the coating of some benches placed near the walls and which surrounded an altar. They represent two types of personages, and the greater number of them are looking at this altar. Fourteen at the southern side, possibly priests, are seated on benches covered with jaguar skins; their clothing is luxurious and consists of smooth headdresses elaborated with panaches, of feathers, some with masks from the mouths of which serpents emerge; and long skirts, some with short capes; they are carrying shields, serpentine scepters and are presenting offerings laden on plates. Those on the opposite benches are warriors, armed with darts and shields; they are seated and can be seen in profile on thrones in the form of jaguars represented from the front. Warriors and priests are physically characterized by their features which are definitely not Mayan.

Now we are going to talk about the Temple of the Warriors, a superposed building which a little later was called the Temple of Chacmool. The stones found in the rubble were from the walls and their paintings had remained intact. From the various units, narrative and historic contents could be reconstructed. The elements recovered from the western wing of the wall, which divides the temple into two rooms, integrate two contiguous scenes in its northern half with a third on a lower band which present the following motifs: a) an aquatic surface is surrounded by a mottled fascia on which a loader is walking and several warriors are fighting all of them have their bodies painted in horizontal reddish stripes; a temple and a canoe probably occupied by a warrior; b) the huts of a village and a temple are being attacked by warriors who also have stripped lines on their body; c) a number of stripped prisoners are marching in single file, with their body also painted in stripes, their arms tied, led by their captors; the warriors are painted in black; a plumed serpent with its head raised on the lower band. In the eastern wing of the same central mural in the southern section, that is, inside the sanctuary, painted stones comprise a scene horizontally divided into two parts, although they form only one single thematic unit. It deals with real events which are related in a form harmoniously conceived and executed: below is the sea on which several canoes are sailing, each one of which is transporting two warriors whose bodies are painted in a dark coffee color and who are carrying darts, *atlatl* and shields, weapons which are typical of the Toltecs; the oarsman's body is of a light color; the upper part represents a village set up on the shore of the sea in which the inhabitants work; the roofs out of palm leaves are in flames on a number of huts, as well as a temple constructed from palms out of which a plumed serpent is emerging. These fragments belonged to a vast surface of painted walls and the theme is related to the conquest of the northern part of Yucatan by the Toltecs. On the opposite side of the same wall, many loose stones represent a human sacrifice in which a man with a light skin, held down by two individuals painted black, is about to receive the blow which will split his chest, the blow is given by a *nacom*, also with a black body, as his two confederates; the victim is lying on top of a plumed serpent that is apparently undulating, and this is used as the sacrificial stone. On the outer northern incline of the same building one could note a procession of lean human figures, carrying knives, decapitated heads and a burning brazier.

The small temple has been called the Temple of the Tigers; it is raised above the eastern platform of the *Juego de Pelota*, with the representation of a procession of jaguars appearing as the decoration on the façade. It consists of two rooms; the interior one was apparently completely painted. A number of scenes have survived *in situ*, but unfortunately very damaged. The best conserved and most well known depicts a battle in which there are more than one hundred taking part. In the upper part, a Mayan village with its working populace seems to be cornered between a small group of warriors and the battle contingents. Although on a small scale, this is a conglomeration of many combatants, armed with lances, darts, *atlatl*, and shields. A great variety of attitudes express the confusion of the struggle; lances which cross one another, etc., but all has been composed in a dynamic rhythm. In

another section of the same room a scene depicts a human sacrifice in which the *nacom* cuts open the chest of the victim who is extended over a stone, while being held down by arms and legs; groups of warriors are present at this ritual act; some, painted black, are dancing around a prisoner. On another wall one can see a large canoe, painted red, carrying a group of warriors.

In their greater part these paintings are of a narrative form and commemorate the conquest of the north of the peninsula, especially of Chichen Itza by the Toltec military; some are of a religious-symbolic content in which death or sacrifice are clearly perceptible. The artists, Toltecs or Mayas, endeavored to fulfill the purpose of emphasizing the glorification of the military class while leaving for posterity the review of their exploits. With a great economy of lines they limited themselves to the essentials, so that the different groups in battle could be identified without going into details about their clothes and adornments. In this way the artists succeeded in fulfilling their commission, principally as for the battle scenes which are impregnated with the movement of a real war clash.

### Santa Rita

Towards the end of the past century a number of mounds were discovered near Corozal, Belize. In one of them there was a building in which the outer walls had conserved paintings that were copied, but shortly afterwards they disappeared. The murals of Santa Rita transport us to a pictorial world completely different from that which we have dealt with till now. Here no attempt was made to perpetuate a historic event for the glory of its perpetrators, but rather to allude to a mythical world exactly as we have found also in many pre-Hispanic codices. Under a symbolical celestial fascia, very similar to that of the Mixtecan codices, a series of personages in a complicated form of attire are walking on top of a terrestrial band, quite conventional, decorated with arrows, knives for sacrifice, and flames. All of them are wearing helmets from animals, masks, and superposed garments of clothing. These individuals are achieving acts which, only with difficulty, could be interpreted as part of a real, historic context. They are probably deities who are taking part in the procession, some joined by a cord, others seated and engaging in a conversation; the bodies and faces of all of them are painted. The most understandable scene combines two individuals, separated by a drum decorated with a human skull which ought to be singing, judging by the double flow of dashes for the words which come out of its mouths. On top of the drum there is a solar disk with triangular rays, stellar eyes and the head of a reptile, very similar to that known from the Mexican or Mixtecan codices. The one who is playing the drum seems to be wearing a skull as a mask, and a smooth headgear which terminates in a panache and serpent; his torso is not visible, as occurs with the greater part of the figures, in view of the tremendous weight of the clothing, appurtenances and adornments. The other individual, with a headdress consisting of an animal and a panache, and a very complex attire, is offering the heads of two who had been decapitated to the macabre drum or the drummer. Calendaric Mayan hieroglyphics accompany these representations in which the sign *Ahau* predominates, joined to numerals which consist of points and bars.

The paintings of Santa Rita, of a mythical-religious contents, were executed during the late postclassical period in a style very similar to that of the Mixtecan codices and that of the *Borgia Codex*, as are the paintings of Mitla which are also Mixtecan. For the artist the human bodies lacked any importance; the emphasis had to be placed on the attire, the appurtenances, the facial decoration, that is, on all the elements which were used to characterize the deities. The movement which attempts to animate them is ungraceful.

### Tulum

A number of buildings in this locality have preserved elements of the paintings which had originally covered a great part of their façades and their walls on the inside. We are going to refer here to the murals of the temples called of the *Dios Descendente* ("God Descending"), of *Los Frescos* and of The Castle. Once again we find ourselves in front of



mythological-religious themes, expressed as in Santa Rita in a style very similar to that of the codices. The motifs comprise small scenes having from only one up to three participants, deities among whom a goddess of vegetation and the God of Rain predominates. In addition to that, there is an ancient deity who can be *Itzamná*. A goddess is grinding something with a *metate*; a priest is wearing a mask from turquoise and nacre, a headdress decorated with a shell, on one arm a bag for resin, and in a container which terminates with the head of a turkey he is presenting an offering. The many representations of offerings which are from maize dough and other vegetable matter complete the scenes; there are also such animals as the lizard, serpent and fish; celestial or marine fascias. The central theme seems to be that of the dependence of vegetation on the rain, and the allusion to the necessary rituals for the purpose of assuring good harvests. The scenes are delimited between horizontal bands which intercross the vertical ones, forming small frames. The figures are less rigid and less overloaded with attachments than those in Santa Rita. The colors that were used were white, black, turquoise, blue, and very rarely, red.

The murals of Tulum correspond to the late postclassical period (from the thirteenth to the end of the fifteenth centuries A.D.). There are authentic reproductions of the pages from the codices, on the walls. They show marked foreign influences—Toltec, Mexican and Mixtecan; however, they are closer to the Mayan representations than to those of the cultures mentioned.

A grave-stone with hieroglyphic inscriptions; the relief was a technique handled perfectly by Mayan artists.

## CERAMICS

### Generalities

When a people become agriculturists, they need some receptacles for cooking the vegetable products, of which the hunter-collector was able to do without as far as the preparation of his food was concerned. Besides, they have leisure time to dispose of which he can utilize for making implements which are useful to him. It is not by mere chance that in all latitudes agriculture, the sedentary way of life, and the fabrication of objects from baked clay, were precisely developed simultaneously. Among such objects the greater part is of an utilitarian nature and serves for cooking grains or vegetables; for conserving liquids; for serving foods, etc. The forms of the containers are in themselves functional and are very similar in all parts of the world, since they meet identical needs and are made from the same materials. They consist principally of pots, tumblers, earthen bowls and plates with a variety of designs, proportions and sizes. Apart from the use of ceramics for domestic purposes, receptacles of better quality, finish and presentation, were elaborated for its use as offerings in certain rituals, such as the dedication or inauguration of a building, the veneration of deities or priests, the posthumous gift to the deceased.

Mayan potters, on the whole, used to make use of the local clay although its lack in some regions naturally obligated them to import it. To reduce the excessive plasticity of the clay and to avoid its shrinking during cooking, particles for removing grease were added which could be of mineral origin (as sand, fragments of volcanic rock, quartz, calcite, mica or volcanic dust), of vegetable origin (such as very small seeds and fibers), or from animal matter (such as shells, more or less pulverized). The Mayan artisans did not have the lathe which was utilized in other cultures, although it is feasible that they did make use, as is still the case among some of the peoples of Mexico, of two plates placed and joined by a convex bottom, making the superior spin over the inferior one in an inverted position, thereby obtaining a very rudimentary form of lathe. The ancient ovens from pottery must have been similar to those which are still used in many regions.

### Technical and stylistic development

The study of ceramics through the centuries shows a logical development, that is, from the simplest forms and the most elementary decorative techniques of the lower preclassical period, up to the greater variety in designs, finish, and ornamental motifs of the late classical period. In the course of the preclassical period (from 1500 B.C. to 150 A.D.), the common forms are: globular pots with or without a neck, simple or tripod; earthen bowls with diverging sides; deep plates with diverging sides or with the edge turned upside down. The pieces are covered with a layer of slip obtained from the same clay which had been melted; these pieces are monochromatic, i.e., grey, black, cream, orange or red. Where there is any decoration it is generally executed over the fresh clay before the baking, with the pressure from cloth or textile, cord, and the stamp of a rocking chair; scrapped with a shell; an incision with the nail or the point of an object; carved; the application of the *pastillaje* (modeling technique). The motifs are in accordance with the material with which the pressure or the incision is made, or they form parallel lines or intercrossed ones. Following this period, that is, during the protoclassical (from 150 to 300 A.D.), sophisticated forms appear, such as the tetrapod plate with mammiform supports and the bichrome decoration (red on yellow or orange), with simple geometric motifs (frets) or stylized animals.

In the course of the early classical period (from 300 to 600 A.D.), ceramics came under the strong influence of Teotihuacan, principally in the meridional area but also in the central, in the form of cylindrical, tripod tumblers, from smooth or plane bases and frequently







Ceramic objects were made not only to meet the domestic needs but also for utilization as offerings in certain rituals. To the left, a beautiful Mayan figure from terra cotta which comes from Jaina, Campeche (The National Museum of Anthropology). Above, to the left, a cylindrical glass with a broken band in the upper part. To the right, a zoomorphic receptacles (The National Museum of Anthropology).

provided with a round cover. Very characteristic of this period is the element which has been designated "basal molding", the thickening of the side of the plates on their lower part, which stands out at an angle. The decoration can be carved or painted, before or after the baking, preferably with red and black on orange, also making use of such colors as cream, coffee, beige, pink, grey and green. The decorative motifs are generally geometric (that is, stripes, triangles, curved and undulating lines), of a symbolic nature, implying serpents and other stylized animals.

The late classical period (from 600 to 900 A.D.) is characterized in ceramics, just as in the other artistic expressions, by an extraordinary richness and variety in technique and stylistics. Among the main forms of containers we will mention the following: a large shallow pan with handles, jugs, plates without a base or tripods; earthen bowls with vertical sides, divergent or convergent; cylindrical tumblers with tall sides, lightly convex or concave, of an ovoid shape with a stem; fire-pans or urns with overabundant molded ornamentation. The decoration runs the gamut for all the possibilities to which clay is adaptable: incision, engraving, impression, modeling, *pastillaje*, painting. We can add such colors as purple, blue, yellow and flesh to those which we mentioned before for the earlier period. The motifs are extremely varied and comprise geometric symbols, striae or parallel bands, points, disks, hieroglyphics, animals, vegetables, deities, personages of different hierarchic ranks organized in civil or religious scenes. The figures can be ingeniously stylized or very naturalistic, the scenes attained with a great deal of realism. Painted plates and tumblers are encountered in the entire Mayan area. Aesthetically speaking, the most outstanding among the most valuable

are from a number of locales in the Highlands of Guatemala: Kaminaljuyu (very Teotihuacanian), Chama, Nebaj, Ratinlixul, Chipal, Huehuetenango and Zaculeu. Among the principal painted scenes we can recall the following: priests sacrificing themselves; the ritual in the deer hunt; personages receiving offerings; the bat deity associated with hieroglyphics; an important personage receiving vassals; a wealthy merchant being carried on a portable platform; hunters lying in ambush, etcetera.

In its first phase (from 1000 to 1250 A.C.), the postclassical period is marked by the influences from invaders, the bearers of the Toltec culture, to Yucatan. Many ceramics very diffused in that period appear, although very few are common to Tula: the so-called fine orange-colored ceramics designated "X", and the "lead-colored" or of a metallic sheen one. The first seems to have originated on the Gulf Coast and the second in the Highlands of Guatemala. The forms which correspond to the orange-colored ceramics are in the main the tall cylindrical tumblers (the pot for chocolate) with the base for a pedestal; the plate, earthen bowl and pot are tripods which sometimes have stands. Their decoration can be painted in black with geometric or zoomorphic motifs; engraved or cut with floral elements and volutes; or with the application of a molded element such as human or animal head. The most common forms of the leaden ceramics are small pitchers, tripod earthen bowls and zoomorphic containers. This is especially typical of Chichen Itza.

The last phase of the postclassical period (from 1250 to 1541 A.D.), shows a period of technical and stylistic decline in ceramics, the Toltec influence and a return to specific Mayan forms. In Mayapan, Tulum and Champoton the greater part of the ceramics encountered belongs to this period. Apart from some classical forms (such as the plate, the earthen bowl, or tumbler without support or tripod, with or without the basal molding), and others from the period of the Toltec influence (such as the jug or pyriform, cylindrical or ovoid tumbler with a ring-shaped base or pedestal); the main forms are the following: large deep shallow pans and high tumblers with handles; containers with effigies for handles, generally of animals; abundant plates or tripod earthen bowls with anthropomorphic or zoomorphic stands; quite a number of censers which may be cylindrical or globular over a tall, bell-shaped base in the form of a sandglass, anthropomorphics in which the figure can be affixed to the receptacle, seated on top of the cover which would cover it, or constituting itself a hollow sculpture; effigy containers which comprise small simple or tripod glasses or tumblers with masks of deities, or in the form of animals (turtles, birds and jaguars), up to huge urns with an affixed figure in a round shape. The decoration can be monochromatic, black over greyish or whitish clay, determining points and vertical sproutings or geometric elements, but the technique most used is the application by *pastillaje* of shots of clay with finger prints, or produced by the extremity of a tube; small disks, little balls or cones. Figures with a round form making up part of the fire-pans and urns, or independent, and with articulate limbs, all of them polychrome, constitute the most characteristic of the ceramics of this last period. The motifs represented are in the main that of deities, as much Mayan (Chaac, Itzamna) as Mexican (Tlaloc, Ehecatl, Xipe-Totec, descending god). The clay is coarse, of a thick grain and badly baked; the surface is barely or badly polished; the style of the figures is realistic although the execution is frequently coarse and never attains the level of perfection which we know, for example, in the containers with modeled decoration of the late classical period which were discovered in Palenque, Teapa and Tapijulapa.

#### Figurines

In the Mayan area from the lower and middle preclassical period (that is, from 1500 to 300 B.C.), figurines were manufactured from clay, but they were coarsely executed; their facial features were obtained by means of modeling, incision, perforation and *pastillaje*, all



Another artistic work in which the Mayas expressed their sensibility was in the cutting and polishing of stone. A huge mask of *Chaac* in the form of a glass cut from alabaster (The National Museum of Anthropology).

of which coincide with that of the other Mesoamerican cultures. Although stylistically different, the figurines of La Victoria are unquestionably related to the aforementioned culture in technique, crudeness and finality. Their use had to be associated with an elementary phase of development of the beliefs, when those of a magical nature predominated in order to explain the natural phenomena and in which worship was not institutionalized, having been limited to a familiar standard and carried out in the intimacy of the home, in the fields of cultivation and in the course of interments. As a people that had just gotten started on farm production, the Mayas associated in a primary form the fertility of the earth with the fecundity of woman. From then on the immense number of figurines may be generally feminine and may be encountered in the corn fields, traces or remains of habitation, and burial places. Their disappearance in the course of the higher preclassical period, their complete absence apparently during the early classical period, imply most assuredly important changes in the process of the integration with the religion. Animistic beliefs in natural forces were converted into a complete theological system which united many deities, for the purpose of which the ceremonial centers were constructed and whose rituals were directed by a specialized clergy.

The reappearance of the figurines in the late classical period shows us the evolution that the Mayan society had experienced since the lower preclassical period. The figurines do not reproduce the elementary concept of magic any more, which customarily associated woman with the earth and the human process of reproduction with vegetable germination. The social structure had thus developed in the sense of an increasing complexity, and in a stratification of the groups which comprise it; the clay figurines reflect this process in the social aspect and in the beliefs. When reference is made to the natural forces, they reproduce the conventional image of the deity or add some attribute which symbolizes it. The great number of female figurines made in molds, reproducing one and the same attitude (the hands raised) and the same vestuary, has to allude to the goddess *Ixchel*, the patroness of procreation, gestation and parturition, as also of medicine; the mask of Tlaloc as a breastplate or ornament for the attire is obviously related to the God of Rain which, in its imported version, brought to the Mayan area from the Mexican altiplano, by way of the Atlantic Coast; the huge eyes of some figurines identify the solar god, while the skull of some identify the god of death.

But the greater part of the figurines do not try to refer to religious concepts or to deities but to human beings of distinct social levels, vital activities and physical characteristics. The men represented can be important hierarchs who are standing, or seated on their thrones; priests, warriors, disguised dancers, ball-players, owls-men, old men, young men, fat men, dwarfs, hunchbacked men deformed by hereditary defects or diseases. The women are important ladies: priestesses, old and mature; young dressed in clothes to fit them, weavers with their loom; they can be accompanied by a tiger or a child, carrying astride a man who holds on to their breast, or they can be seated near an old man leaning on their leg or obviously engaging in an erotic dialogue. There are also figurines of such animals as the jaguar, the dog, the monkey, the deer, the bird, the turtle, etcetera.

The figurines can be modeled, molded or of a mixed technique, that is, the body is modeled and the head molded, or else they can have adornments and other details applied. They would probably all be polychrome. A number of pieces are hollow and were used as timbrels or whistles; some are flutes. In the modeled pieces the anatomic proportions and facial features are very realistic; in the molded ones the size of the head is very exaggerated and the features more conventional. Many of the modeled figurines seem to indicate an attempt at individualization and the intention to be genuine portraits, although perhaps somewhat idealized. The torsos and lower limbs are generally treated carelessly; the head was striving to achieve to the greatest perfection.

Almost all of the figurines were found in tombs; they are known mainly from the Island of Jaina, from the ceremonial centers of Peten, Copan, Palenque, Jonuta, Kaminaljuyu

With the most elementary instruments the Mayas were able to make thousands of objects, the greater part of which were intended to complete the attire of important personages or to serve as offerings in the burials. The Disk of Gold with the small stone plaques which are shown here, reveal the perfection attained by the Mayas in the art of lapidary (National Museum of Anthropology).



and La Victoria. The presence of the representations of the goddess *Ixchel* on the tombs would probably symbolize a future rebirth; the portraits would be associated with the individuals to whom they had been entrusted; furthermore, there would exist a collection of samples of different types from which the relatives would select the most adequate for their deceased.

Apart from the funeral function, the figurines would be venerated at family altars and would be used for some rituals in the temples to judge from the fact that close to a thousand small heads and fragments of torsos, limbs and some complete pieces were found at the foot of the Pyramid of the Inscriptions in Palenque, in its posterior facade, probably cast from the temple after some ceremony.

## THE ART OF CUTTING AND POLISHING PRECIOUS STONES

Centuries before the Mayas had fabricated their first pieces of jade, the groups to which the Olmecan culture is attributed were already lapidaries, as the findings carried out in La Venta disclose, which correspond to the middle preclassical period (from 800 to 300 B.C.).

Jade—scientifically jadeite—is a very hard material which was worked with very rudimentary techniques, in as much as the appearance of the metal in Mesoamerica was very late (around the twelfth or thirteenth century A.D.). Without discarding the possible use of very hard stones, it seems that the tools that the Mayas had utilized were principally from wood (hammers, drills, knives); from bone (drills); from cords and fibers of henequen (saws). Such tools were used for breaking, cutting, engraving and perforating; they were duly covered with abrasives (sand, dust from hard rocks or even jade itself) and glued together with some vegetable gum. With the points from obsidian it was possible to make fine lines and to obtain light incisions; polishing would be executed by means of jade or another hard stone or else from hide to which some abrasive would be adhered.

With these elementary tools the Mayas made thousands of engraved objects in bas- and high-relief, and in round shapes. The greater part of them were intended for complementing the attire of important personages, or served as offerings which used to be buried in buildings, in tombs or in other places such as the *cenotes* of Yucatan, where it was believed that the deities used to dwell. The pieces which entered into the composition of the adornments for the hierarchs comprised diadems made from disks; small tubular pieces for separating the hair into locks; earguards formed out of various elements; nose rings and rings worn on the lower lip; necklaces, bracelets, rings, breastplates, adornments on the ceremonial belt and short capes; spherical, cylindrical and tubular beads in the form of flowers and fruits; masks made up like a mosaic; small heads and figurines. The motifs represented can be geometric, floral, animal (serpent, jaguar, turtle, bird, etc.), human figures in full face or in profile. The engraved plates, used as breastplates, reproduced scenes with a number of personages engaged in dialogue or carrying out a sacrifice.

The main localities in which pieces of jade were found are Kaminaljuyu and Nebaj in the Highlands of Guatemala; Uaxactun and Tikal in Peten; Copan in the region of Motagua; Palenque, Jaina and particularly in the sacred *cenote* of Chichen Itza. In this last place thousands of objects were recuperated and studied; they comprise pieces from the early classical to the postclassical period which are recognizable by their themes and styles, and were made during the Toltec occupation.

Besides jade, the lapidaries used to include fragments of shell and pyrite in the mosaics, as well as turquoise during the post classical period, or they used to fabricate such objects as breastplates from these materials.

## THE ART OF EMBROIDERING WITH FEATHERS

What sculpture, painting and the art of cutting and polishing stones offer in the presentations of important personages among the ancient Mayas, the objects made from feathers obviously used to occupy the very first place, perhaps even of still greater importance than those of jade. The working with feathers which the chroniclers mention with admiration was above all used to enhance the attire, but it was not limited to that only. As part of the dress the feathers constituted primordially the headdress, whether it would be of only one large feather, or if it were a colorful panache, or served as a way of finishing a turban or a complicated arrangement of some kind. We also see impressive panaches which resemble enormous wings on the backs of the lords or dancers. Small feathers were used to make small capes,

Little evidence exists of artistic work which was done with plumage. However, through the paintings and sculpture, as in this case, we have had the opportunity to become acquainted with the quality and beauty of this art and to appreciate it.



fringes and tassels. Shields were lined with feathers, and lances as well as scepters were decorated in this fashion. Fans, sunshades and canopies for the thrones of the chiefs were also made from feathers. The feathers were interwoven with cotton cloths, were sewed on them, or glued with paste on wooden or wicker frames.

The abundance and great variety of birds, both terrestrial and aquatic, supplied sufficient raw material not only for the necessities of the Mayan aristocracy but also for exportation to other peoples who lacked the more showy feathers. The most esteemed was that of the quetzal, especially the feathers from the tail which, together with jade, were considered the most precious by the Mesoamerican peoples. Other feathers much sought after for their vivid colors were those of parrots, macaws and large parrots; those of the turkey and pheasant for their brilliant iridescent colors and their tonal combinations and those of the doves for their delicateness.

## GOLD OR SILVER WORKS

We are devoting a part of this chapter on Mayan art to gold or silver works, since pieces fabricated from metals were discovered in the Mayan area in spite of the fact that the Mayas were not goldsmiths. The only objects found in a classical Mayan locale were two legs from tombac but, although they were in the wadding of earth in a box for offerings associated with a stele showing the Mayan date which corresponds to the year 782 A.D., the metal legs had been deposited much later. Other objects were encountered in the Highlands of Guatemala (Tajumulco and Nebaj) and in the valley of the Motagua River, near Quirigua, together with ceramics known as "leadens" which characterizes the epoch of the Toltec dispersion at the end of the tenth century A.D.

The greater number of metal objects found in the Mayan area come from the sacred *cenote* of Chichen Itza. In the main they consisted of pieces of gold, copper, tombac, which is an alloy of gold and copper, and gilded copper. The techniques utilized were hammering, smelting in a mold, soldering, gilding, covering one metal with another, and repoussage. The objects embraced smooth or embroidered gold disks; coiled laminas forming tubes which were useful for covering the handles of fans, scepters, dart-throwers or other instruments; sandals, earflaps, pendants, disks and rings, goblets, masks, innumerable cascabels which were simple, anthropomorphic and zoomorphic or in imitation of coiled wires; human and animal figurines. All the pieces rescued from the *cenote* and fabricated by melting are of foreign origin, principally from Panama, Costa Rica, the Mexican altiplano and Mixtec area; and in a lesser quantity from Guatemala and Honduras. The more ancient are not before the end of the tenth century A.D., when the Toltec invaders arrived. Their presence in Chichen Itza has to be attributed to commerce. Nevertheless, the gold respoussé disks on which battle scenes and human sacrifices were represented, in which Mayas and Toltecs took part, the latter always as conquerors or sacrificers, were probably manufactured in the very same place, perhaps by Mayan craftsmen under Toltec guidance, and utilizing metal coming from imported pieces but hammered and repousséd in Chichen. The glyphs, numerals and other Mayan features which accompany the scenes would most likely have lost their significance by then and would be used simply as ornaments.

## MUSIC, SONG, DANCE, THEATER AND LITERATURE

We have grouped these artistic activities together because they were obviously linked together. However, we shall treat each one of them individually.

### Music

Apart from the information of the chroniclers about the presence of musicians at ceremonies and parties, and about the instruments they played, we find in the painting, that is, on murals, in codices and ceramics, the aesthetic confirmation of such data. The archaeology, in its turn, has also disclosed the material existence of many of the instruments although, as is quite natural, those which were fabricated from perishable materials are lacking.

Among the percussion instruments we shall refer to the *tunkul*, a drum from hollow wood with two reeds which was played horizontally; another drum was the *pax* which is not described; with regard to the large drum from hollow wood, almost always with stands and which was played when it had been set up in a vertical position, the Mexican *huelhuetl*, we have not been able to find its corresponding name in Mayan. There were also clay kettle-drums of a globular, cylindrical and truncated form, small or medium, simple or double, portables or propped up on the floor; some similar to those which the present day Lacandons



call *kayum*, "the singer god". All these drums or very small drums bore the skin of the monkey as drum-heads. Timbrels are also known, which can be large gourds with a wooden handle or hollow figurines from clay in the inside of which there were tiny seeds, little balls of clay or tiny stones; in the late period there were cascabels from gold or copper. We can also make mention of the turtle shells which were beaten with the horns of a deer, and the fluted scrapers, generally from bone and in some special cases from stone. The drums were played with the hands or utilizing a long stick at the end of which was attached a small rubber ball.

Among the wind instruments, we can recall the large trumpets of the frescoes of Bonampak which were made from some perishable materials such as wood, the bark of a tree, or the ditch reed, and they had, at times, a calabash at their extremity to obtain greater resonance; the trumpets from marine snails; the flutes made from the ditch reed, bone, or clay, simple and with diverse holes, of two or more tubes as the so-called flutes of Pan which were composed of five tubes; the clay whistles, anthropomorphic or zoomorphic which constitute a great part of the figurines and, finally, the ocarinas which produce two or more sounds and which also customarily represent human or animal figures.

### Singing

With or without musical accompaniment. singing used to form part of many religious ceremonies. The chroniclers allude to the songs during the rituals which were celebrated with the change of the year-bearers (the days on which the year began). On certain occasions they also used to sing to the rhythm of the drum "their fables and old customs of ancient history" which were written in some of their codices. Although without the music, the folk songs to the Sun, to the unlucky days, to the god Kukulcan, to the *katuns* and *tuns* of the calendar, to the flower as a symbol of feminine virginity, etc., have come down to us.

In every community, a functionary, the *ah holpop*, was the main singer or the one who used to teach music and singing; he was also in charge of taking care of the musical instruments and he directed the *popol-na*, the communal house where many activities for entertaining the people were celebrated.

### Dancing

Music and singing used to accompany the dances. Important days of the calendar were the ones that marked the beginning of their year of 365 days, and those days—the bearers—could not exceed four (*Kan*, *Muluc*, *Ix*, and *Cauac*, in Yucatan at the time of the Spanish conquest). According to what day it was, the nature of the dances was changed as also the deity who was the patroness, but the ritual itself was not perceptibly altered. Among the dances connected with these ceremonies we can mention that of the warriors (*holan okot*), in which more than 800 men participated and which lasted one whole day; also another dance in which the dancers were old women; the dance designated *Xibablba okot* or the dance of the devil in which, among other things, fire was set to a vast amount of logs of wood and the participants used to pass, dancing, over the live coals of this wood; another type of dance was that carried out while the dancers were immobile on high stilts.

During the month of *Zip* the hunters used to celebrate their occupation with a festivity in which they danced a dance called *okotuil*; a dance also used to accompany the sacrifice by dart throwing, and the song for this is included in the *Cantares de Dzitbalché*. The *colomché* was a game with dancing and music in which a dancer hurled darts at another who tried to dodge them with a stick. Dances associated with animals were also celebrated, probably of a symbolic-religious nature: the bird *puhuy*, the weasel *cux*, the armadillo *iboy*, the centipede *itztzul*. Landa mentions a dance, the *naual* in which men and women used to take

part—generally only men or only women participated—and which the chronicler considers as “not very respectable”.

### The theater

Independently of representations by dances of a ritual nature, others had only one single purpose: that of entertainment, although it is very probable that they also had some ethical message, although not precisely religious. The chroniclers were admired for being present at some of them which Landa considered “very elegant” and the actors as “charlatans who perform with much grace and charm”. The dictionaries of the seventeenth century give different names to designate the actors, according to their role, names which correspond to nobles, to elegant fellows, clowns and magicians. The *ezyah*, for example, made visionary numbers. They used to present legends and ancient stories, as also true farces in which they displayed their charm through jokes and gibes. The profane nature of these comedies is confirmed in the chronicles which assert that they were presented “for the recreation of the people”. Some representations apparently used to be extremely vulgar, in which the actors used to exaggerate “grimaces and the swaying of the hips” to make everyone laugh.

Landa alludes to two platforms in Chichen Itza which we now call the Platforms of Venus, and of Eagles and Jaguars which, according to the chronicler were “two small theaters from ashlar with four stairways, tiled or paved above, on which they say they used to represent the farces and comedies”.

In the *popol-na*, a theatrical director, the *ah cuch tzublal* used to collaborate with the one already referred to as the master singer, the *ah hol-pop*, in the preparation and direction of the works. The liking for the theater continued among the Mayas as among all the other Mesoamerican peoples until after the conquest, but then it came to be orientated principally by the friars and, of course, for the sole purpose of catechizing.

The *Diccionario de Motul* mentions Mayan names of some one-act farces very popular in the seventeenth century, the origin of which is probably pre-Hispanic. Their translation, according to Barrera Vasquez would be as follows: *The cascabel of heaven*, *The seller of wild turkeys*, *The seller of pots*; *He who sells chiles*; *He who sells gossip or dirty stories*; *He who entrusts—governs—the High Jagged Mountain*; *The macaw with the white mouth, or of dishonest business*; *The little boy with the white head*; *The cultivator of cocoa bean...*

Among the scenic representations of a pre-Hispanic origin which survived through the centuries and the censure of the colonial system, the *Rabinal Achí* occupies an important place. It is a Quichean drama-ballet in which the exploits of a warrior are narrated: his capture, trial and sacrifice. The work, which unfolds up to the complete fulfillment of the destiny which a man brought about through his actions, follows a slow pace in which the speeches are repetitive and excessively drawn out; but in spite of the monotonous cadence the interest is maintained and, in addition, it increases up to the fatal end.

### Literature

It is difficult for us to set a true value on Mayan literature as we were able to do with all the other arts. The pre-Hispanic texts which we have been able to acquire (the codices and the inscriptions) are written in hieroglyphics which have been only partly deciphered. More than real literature, they seem to be the summary in brief, ideographic, and phonetic notes of data which the priest needed to record for effecting the ceremonies, for obtaining calendaric dates, for foreseeing eclipses and predicting favorable or unfavorable periods of time.

What we know as literary Mayan texts are documents written in a number of Mayan languages as a result of the Spanish conquest, when cultured indigenous individuals learned

from the friars how to write their own language using the Castilian alphabet. As a consequence of the moment in which they were edited, these texts contain European contexts which are fused with their own ideas and relate facts in which those genuinely pre-Hispanic are confused with those which the conquerors had shown them. However, eliminating in so far as possible the European interpolations, these documents constitute the only testimonies of a Mayan literature. At the beginning some, perhaps, were recorded in codices, but it is more probable that they used to pass from one generation to the next by oral tradition, until they were ultimately transcribed by the natives in the course of the colonial period.

In one of the first chapters, when we referred to the native sources, we said something about the contents of the *Libros de Chilam Balam* (*The Books of Chilam Balam*), of the *Manuscrito de Chichicastenango* (*Popol Vuh*) and the *Memorial de Sololá* (*Anales de los Cakchiqueles*) (*The Cakchiquel Annals*). Besides these important documents we are familiar with the folksongs, the prayers, the prophecies and the spells which are undoubtedly a part of the oral literature and which originate, in the main, from the Yucatecans, Lacandons, Tzotzils, and the Quicheans.

Taken as a whole, these texts have a very varied, religious, magical, prophetic, mythical, esoteric, historical and epic contents and, although their elaboration did not have any literary purposes, they actually constitute a very valuable example of what the intellect and the sensitiveness of the Mayas created in the field of literature.

As we stated in relation to the native sources of this literature, the authentic, the true thought stands out which emanated from a mind which considers that the fundamental is the magical-religious concept and not the ratiocination. Because of that it is difficult for us to understand it and, at times, it seems even completely impenetrable; but what is certain is that in addition to contributing important information about the history and culture of the Mayas, it transports us to a world which we can well designate as poetic.

It is beyond doubt that art in Mayan society fulfilled the vital role corresponding to it. In the ceremonial centers the people found, where the artistic expressions were, the confirmation of the existence and authority of an entire system of which it formed a part and which functioned for the better well-being of all. The deities that used to assure the harvests, used to avoid the dangers, used to placate the evil intentions of the harmful beings, used to protect their existence and guarantee the survival of the community, were there, present in the temples which displayed their effigies. An active communication between the populace and the supernatural world was established through music, singing, oral literature, dancing and theatrical presentations. The common people used to talk with the gods; danced in their company or facing them; enjoyed their presence, and with this form of living together they found greater peace of mind and hope, and were certain that all would continue the course planned by the creators forever.

But if art fulfilled its spiritual function for the great masses, at the same time it transmitted to them the social and political message of their rulers. The created order was maintained by means of those who were the representatives of the gods, and it was indispensable to continue the norms that they had established, to respect their orders with the most complete submission. Only in this way could the priests intervene in favor of the people. As art in all its expressions materializes it, the intermediaries were as powerful as the beings whom they represented, with whom they were in intimate and permanent contact and whom they could influence in a good or evil manner. In this form the governors utilized art to strengthen their domain and to assure the preservation of a regime of which they were the immediate and most favored beneficiaries. Mayan art, a product of a theocratic society, acted effectively for the better functioning of it and for its eternal, everlasting continuation.



# The Cultural History of the Ancient Mayas

## General ideas

In the attempt to synthesize the cultural history of the ancient Mayas we have to reiterate what we affirmed in a previous chapter ("Socio-economic Characterization of Mayan Society"): that we consider that the course of the historic development of any people whatsoever is not due either to the desire of the people, nor to fatality or chance, nor to the influences of ideas. On the other hand, however, neither do we deny that in any specific moment a forceful personality, unforeseen circumstances or ideological currents can accelerate, detain or deviate from such a development during some period of time, generally very limited in the historic sense. We are convinced that the material forces are the ones which determine the road of history, motivate the sprouting of ideas or are embodied in extraordinary beings, and, that these same forces, within a greater or lesser lapse, bring about the return to the normal course after some deflection has been effected. These forces are intimately grounded in the economic process, in the ecological frame within which they work, in the degree of technological advancement, in the demographic growth, in the relations which are established between those in the production of goods with those in their distribution, in the contradictions which these relations continue to create and in the solutions with which an attempt is made or the surmounting of such contradictions is attained.

It is obvious that the historical process does not imply either an unilinear direction nor the step through obligatory stages, nor a synchronic occurrence on the universal plane, but it does yield to an inherent dynamics of all of human society. We do not make any pretensions in any form whatsoever of pigeonholing the cultural history of the Mayas within preconceived schemes or of explaining it regarding to the history of the ancient peoples of the Old World. On the other hand, we also deny all validity for its segregation from universal history in the name of peculiar aspects which their culture presents, as occurs in all civilizations.

With an infinity of variations, with differentiations of levels which, in terms of time

The history of the Mayas, attested to by multiple artistic expressions, is distinguished by their forceful personality. Many studious people have endeavored to separate that, under the heading of peculiarities, from their universal context, and simultaneously presenting it as something completely unique. However, this is an idea which is far removed from historic truth. A partial view of the *Cuadrángulo de las Monjas* ("Quadrangle of the Nuns") in Uxmal. The Mayas, through their purity and beauty with which they had invested their architectonic forms, have been regarded by some as the Greeks of America.

can signify centuries of millenia, human history is one sole history in its inception of evolution. In the chapter already cited, we have presented our general ideas with regard to this problem, and have come to the conclusion that Mayan society could be compared with those of other peoples of the Old World with which it shares a number of basic elements; in addition to that and in spite of its peculiarities, it can still be considered as pertaining to one and the same socio-economic model, based on the mode of tributary production, also designated "Asiatic" since it had been developed in China, Cambodia, India, the Near East, and in addition also in Egypt, Crete and Mycenae. But let us see now what was the precise process of birth, integration, growth and decadence of this society.

#### Lower preclassical period (1500-800 B.C.)

In the Mayan area some exceedingly few places were discovered, and only from time to time, which presented lithic evidence of a pre-farming occupation; but it is quite possible that during the lower preclassical, in a slow but progressive form, hunting, fishing and collection were perfected and, to some extent, were replaced by agriculture. The most ancient vestiges of an agrarian culture in the Mayan area were found in the locality of La Victoria, a Guatemaltecan village close to the Mexican border, on the coast of the Pacific Ocean. It can be accepted that, as in La Victoria, the first sedentary peoples established themselves precisely on the shore and margins of the rivers, in order to continue their secular activities and to complement them with the cultivation of maize. Afterwards, little by little, in the course of the seven centuries which are attributed to this period, the economic basis passed from that essentially of hunting, fishing and collecting to another in which the production of food was the primordial occupation.

The population was still quite low and the technology employed very rudimentary, as we see it reflected in the monochromic ceramics of its first phases, of simple, functional, plain forms and with fine decorations (application of textiles, chords, and shells on the fresh clay), and on their stone tools, mainly carved. Nevertheless, it had assured their survival and development by taking advantage of the marine richness and the fertility of the riparian lands. It was a matter of a small community, self-sufficient, which functioned through a simple organization of a family type, in which all the members collaborated in the work of production and the goods were apportioned fairly. Their religion was animistic with simple magic rites which brought security to the people, at least to the extent of their being able to obtain the essential products. The crude feminine clay figurines, with which they used to try to obtain the fertility of the land by associating it with the fecundity of the woman, fulfilled an important role in their beliefs and practises. They also practised a simple worship of the dead.

#### Middle preclassical period (800-300 B.C.)

It is very likely that even without fundamental technological changes during the middle preclassical period, the productive forces were, however, very manifestly increased through the demographic growth and agricultural development. On the one hand, the cultivation of maize (its yield was augmented by the natural genetic improvement while being cultivated) and of other plants (such as beans, squash and chile), became the principal means of sustenance through which the population was assured of constant and better alimentation. On the other hand, the immense Mayan territory offered unlimited space for a population which was growing, and for that reason this period is characterized by the beginning of a tremendous expansion, which embraced the part from the littoral of the Pacific up to the north of the Peninsula of Yucatan.

At the same time, the transformation of the social structure had also been initiated.

The magic rituals linked to the popular beliefs came to be the exclusive fulfillment of a group supposedly endowed with supernatural powers (magicians and sorcerers) who, little by little, came to be separated from the process of the production of foods to devote themselves to less laborious, but more advantageous activities, as much for material benefits, which they obtained from the credulity of the people, as through the prestige which their positions afforded them. In the towns and villages which arose as a consequence of the demographic growth and greater concentration of the inhabitants, a humble dwelling bigger than the others, erected on a more elevated platform located in the center of the agglomeration, was dedicated to the rituals which before were celebrated at home and in the corn-fields. In any case they still continued to make the clay feminine figurines for magical purposes.

Around the middle of this period, influences from the Olmecan culture, coming from the coast of the Atlantic Gulf and through the Isthmus of Tehuantepec, penetrated the Mayan area, extending as far as the littoral of the Pacific and the Highlands of Guatemala. These influences probably affected the ruling class; foreign groups which brought new knowledge (as that of the calendar, the long count, the beginning of writing, the jaguar deity, sculpture in the form of colossal heads), made themselves felt and they utilized this knowledge to strengthen their own domain; but the life of the Mayan people continued along the same lines as before, producing for its own sustenance and for the group which led them, without difference if that was the Olmecan in the meridional area (that is, Kaminaljuyu and the Pacific coast), or the Mayan in the central area (*Altar de Sacrificios*, Seibal, Uaxactun and Tikal), and in the septentrional area (Dzibilchaltun).

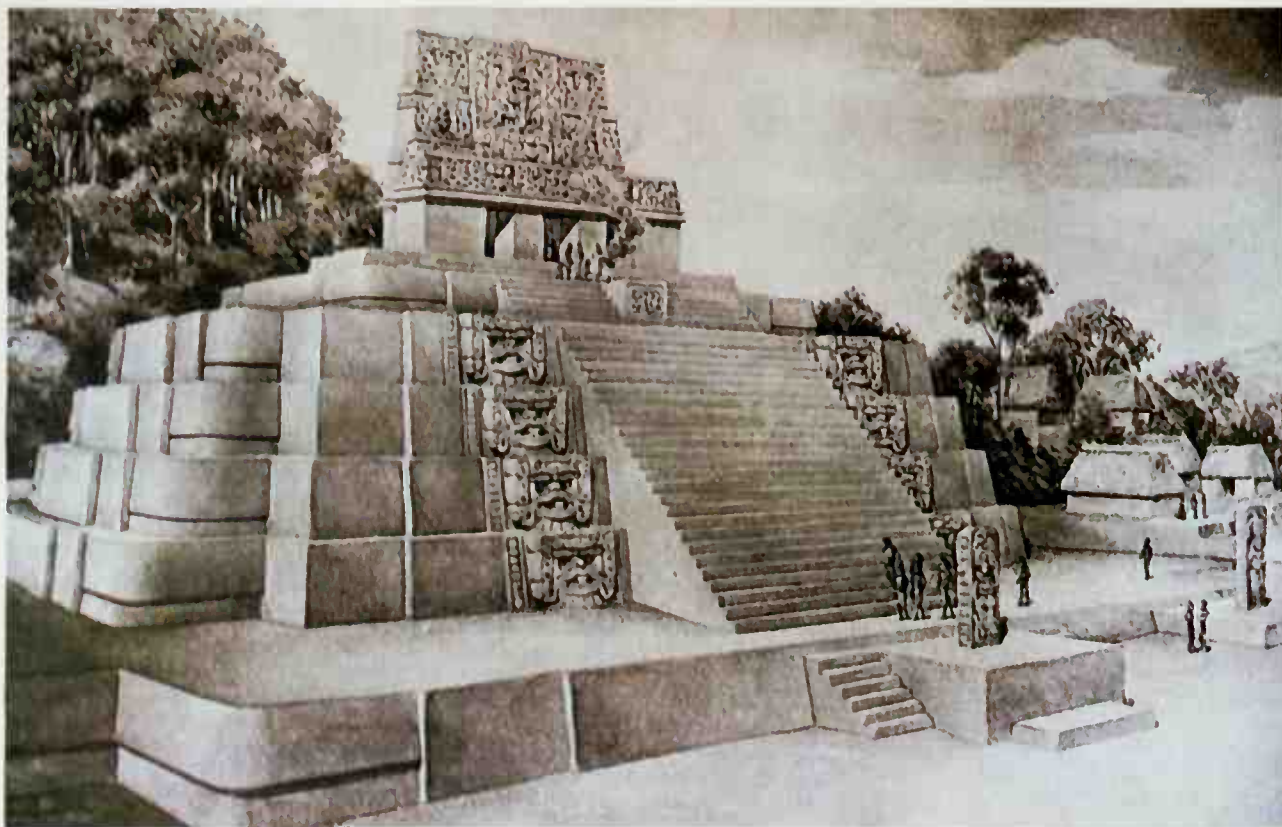
#### Upper preclassical period (300 B.C. - 150 A.D.)

In the upper preclassical period, a great part of the Mayan territory was occupied by a population which had increased considerably with a rhythm parallel to the increase in the lands cultivated and the production of foods. We do not believe that in this way a marked technologic progress was produced, but it is probable that with the same agricultural tools, basically limited to the stick used for sowing, they would more than meet the needs of all.

The social differentiation begun in the previous period, stood out with the increase of the population and the diversification of functions established to guarantee the communal order, the organization of productive works, the distribution of food, the carrying out of public works and the fulfillment of religious duties. A higher class, a remote descendent of the original guild of the sorcerers of the earlier centuries, had changed their role as a simple intermediary between the people and the forces of nature, into that of an institutionalized minority with the function of dominating and exploiting, in addition to living at the expense of the people who produced the surpluses.

The ceremonial centers, in their turn, remained well differentiated from the original grouping of the humble dwellings within the community. For the buildings dedicated to religious worship, instead of elevating them with a simple platform, pyramids were constructed, the result of the superposition of a number of platforms. These pyramids still sustained the combination of the temples and modest dwellings, but they had already begun to be richly adorned with huge masks of molded stucco. Blocks of stones, stele and altars were raised in which not only the features of their gods appeared, but even of those who were supposedly representing them, together with a writing which comprised numerals and calendaric signs.

During this period large centers flourished such as Izapa, on the Pacific coast, which marks a transition between the arrival of Olmecan elements and those which came to be integrated in the formation of the Mayan culture. Other localities, such as Abaj Takalik, Monte Alto and El Baul, also prospered on that same littoral; in this latter one, a stele with



the date of the year 36 A.D. is almost a Mayan stele with its human figure and the columns of chronologic hieroglyphics. In the Highlands of Guatemala, the Miraflores phase of the great center of Kaminaljuyu represents a magnificent example of the development attained by Mayan society. The remains of important personages were found in a number of tombs. It was known that they had been interred with the richest offerings of jade and ceramics and with their servants who had been sacrificed to provide company for them in the world of the dead. In Peten, such places as Uaxactun and Tikal also experienced a tremendous growth, and the builders had discovered the manner and means for obtaining mortar by mixing lime, sand and water, with which they had begun to make walls from rubblework and to produce stucco which was very useful to the artists for reproducing masks of their deities. The famous pyramid, E-VII-sub of Uaxactun, was then constructed as well as structures and tombs that were erected and painted in Tikal. In the north of Yucatan the sites of Dzibilchaltun, Acanceh and Mani had already been occupied.

The presence, on the one hand, of the bas-reliefs of human figures luxuriously attired, probably the images of the rulers, shows us something about the preponderance acquired by them. The absence, on the other hand, of clay figures of the earlier periods reveals important changes in the spiritual concepts: in point of fact, the natural forces, which the sorcerers were accustomed to control, had been transformed into deities for whom the priests requested offerings and demanded frequent rituals and ceremonies.

#### Protoclassical period (150-300 A.D.)

In the period referred to as protoclassical, the existent conditions at the end of the earlier period were established still further; Mayan culture was close to its crystallization, completely differentiated from the other Mesoamerican cultures. In actuality, only quantitative changes characterize this period still included, until only a few years ago, in the upper preclassical period. These changes were as follows: a greater number of ceremonial centers as a consequence of the demographic growth; a greater number of buildings constructed; a more general use of rubblework and of stucco decorations; stele with hieroglyphic inscriptions: dates and images of leaders and the social stratification each time more pronounced. However, a new type of ceramics appeared, decorated in polychrome and with more sophisticated forms (tetrapod mammalian plates). Some simple tombs were also thatched; simple narrow ditches with a number of rows superposed with stone slabs, which were put closer and closer until they closed the cavity; that was the beginning of the Mayan dome which had just been discovered.

A drawing by Tatiana Proskouriakoff in which structure K5 of Piedras Negras, Guatemala, has been reconstructed, corresponding to the classical period.



### Early classical period (300-600 A.D.)

In the works published about the history of the Mayas, it is described in detail that the moment in which its culture crystallizes, that is, the beginning of its classical period, is stamped by the appearance of the first recorded dates on their monuments; by the construction of roofed buildings with the so-called Mayan dome and by the fabrication of a polychrome ceramics with some specific forms, among which the one that especially stands out is the tripod plate with the basal molding (the Tzakol phase). Reading some of the authors who are Mayan specialists, one gets the impression that the classical Mayan period constitutes a sudden budding, a miraculous phenomenon without antecedents. In actuality it is the culmination of a long process which embraces many more elements than the three we have mentioned as representative. Besides, with reference to these last ones, it is fitting to recall that monuments with calendaric glyphs, numerals with points and bars, and dates of the long count were already accomplished facts on the Atlantic and Pacific shores many centuries before the most ancient stele, most definitely Mayan (number 29 of Tikal), dated 292 A.D. We shall also remember that the form of roofing with the Mayan dome began on some tombs centuries before it had appeared on the buildings of the classical period. Likewise, ceramics painted in various colors are known from the preceding period.

When we speak of the culmination, we believe that the classical period is not characterized by only the supposed appearance of some few features, but rather that it is the logical result of a technological, economic, social, political, religious and artistic development. With regard to the aspect of agricultural technology, we do not feel that tremendous progress in the realm of tools was achieved, in which the sowing stick continued to be the basic and, what is more, the only instrument; but with reference to the building of terraces for cultivation in the mountainous regions in order to conserve the rain-water and to avoid erosion, or of irrigation canals derived from a natural deposit—lakes, lagoons, springs, rivers—or an artificial one—the ravine coated with clay, the rudimentary channel. In citing these works we are referring to the Highlands of Guatemala and Belize (terraces), associated with some rivers of the lowlands (the canals in contact with the Candelaria and Champoton Rivers, and with specific specialized cultivations such as cocoa in Tabasco and Soconusco). In an effort to attain a more intensive cultivation than that designated "grubbing", it was also possible to reduce the time in which the lands were left fallow, provided of course that the earth would respond favorably to this shortening.

In other fields, on the one hand, the technological advance is obvious and very important, although it did not contribute to the motivation for the goods production intended for the consumption of the majority of the population, but rather, on the other hand, to divert thousands of arms from the necessary production to complete sumptuous works for the benefit of the ruling minority. That is the case of the utilization of the dome for roofing, with which the construction of ceremonial centers received a strong impulse and stimulated architects to build imposing and, at times, daring structures. The same can be said about the notable advances which sculpture, the modeling in stucco, painting, ceramics, lapidary, and the art of embroidery with feathers reveal the results of which are more evident in comparison with the expressions of the previous period. The elaboration of a perfected hieroglyphic writing, the progress in astronomical and mathematical knowledge, and the integration of a much more complex and exact calendaric system than that of other peoples in the earlier periods, all these intellectual attainments, coincide to provide us with a cultural picture of the classical period that is so much more complete and advanced than that of the preclassical.

The economic development was determined, more than through technological advances principally by an authentic demographic explosion, the reflection of which is adjudged in



In the proto-classical period the existent conditions had already marked the crystallization of Mayan culture as distinct from the other Mesoamerican cultures. Stele I of Izapa, Chiapas, which represents a personage standing on the top of the heads of a serpent and also on water.

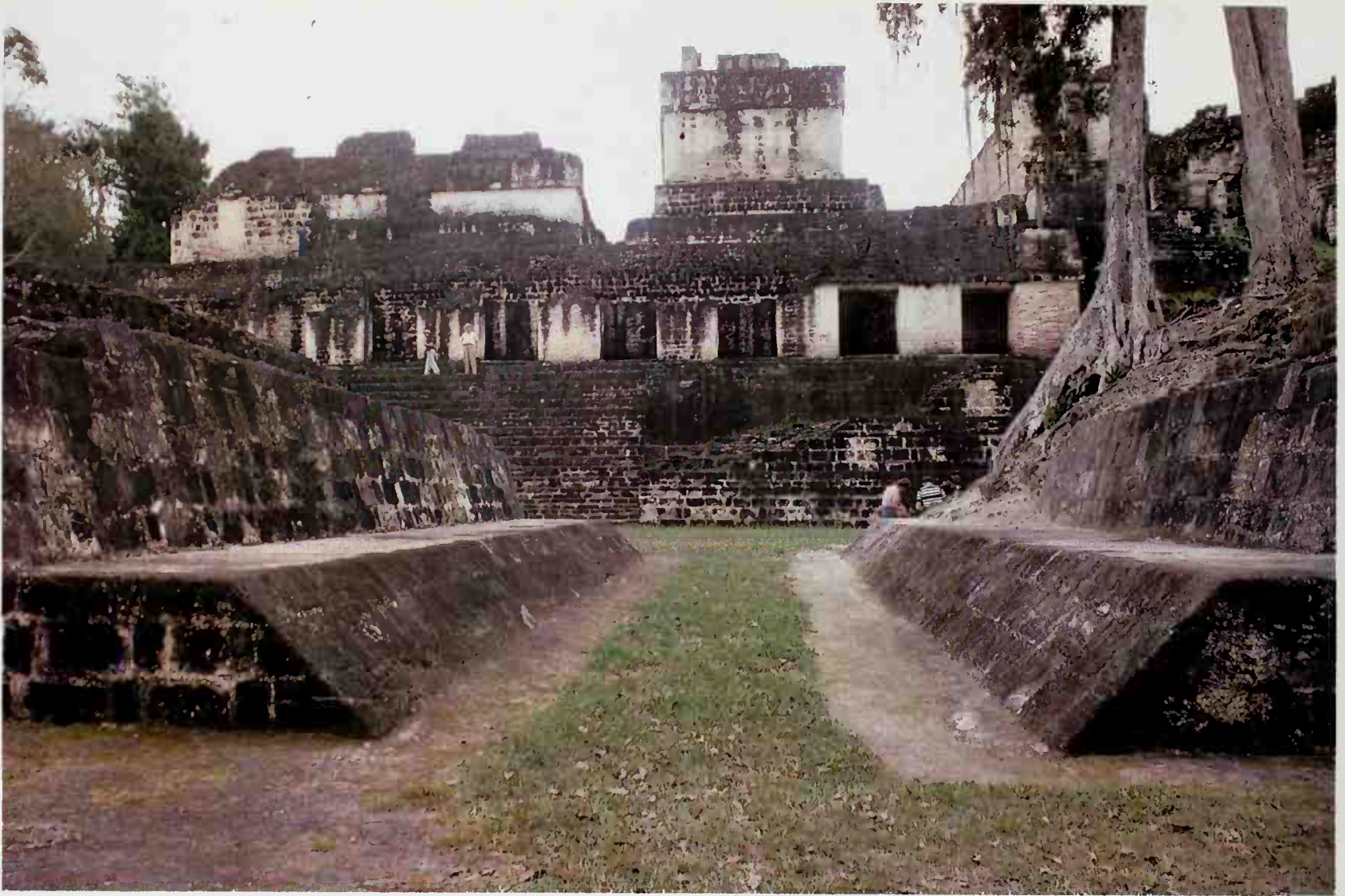
the great number of new ceremonial centers, or in the extraordinary growth of those which had already existed. The increase in population was relatively easy in view of the expansion that had started in the earlier centuries, which still encountered such virgin and cultivatable lands in the immensity of the Mayan area (approximately 400 000 square kilometers).

The commercial interchanges also contributed to the economic motivation, and these were established or increased within the Mayan area as also with the peoples who were not Mayas, in order to fulfill the needs of some regions lacking articles which others did produce, such as salt which comes from the western and septentrional coast of Yucatan; obsidian and other products of volcanic origin such as basalt and ashes from the Highlands of Guatemala; cocoa bean from a number of coastal zones; cotton, tobacco, etc. However, aside from some articles of prime need, a great part of the interchange was limited to luxury items (such as jade, quetzal feathers, and marine shells) destined for adornments and ritual appurtenances of the ruling minority. For that very reason we believe that in that period the commercial factor would have fulfilled only a secondary role, which is, however, highly exaggerated by some authors in dealing with the development of the productive forces.

The extraordinary increase in the ceremonial centers in number and importance; the setting up of many stele in which the deeds in the life of the rulers are narrated within a chronological frame of great precision; the richness in the polychrome or engraved ceramics; the luxury with which the high personages were represented on the bas-reliefs and in some paintings; all that contributes to the presentation for us of the classical Mayan society as a solidly stratified structure in which the power was in the hands of a small group accustomed to rule and exploit the majority of the population in the name of gods, that is, they were an integrated theocracy.

It is possible that this theocracy was born from an earlier form of power, to which Sanders and Price refer as the chiefdom, which could have been the type of government in force since the middle of the preclassical period and, with still greater assurance, in the upper preclassical as well as in the protoclassical one. This political structure would have come to be a transition between the domestic organization of a community form, of the lower preclassical, and a more complex system with views to a division into classes. In it the relations of kinship inherited from the original clan would have prevailed, in the breast from which they sprouted, then, with the increasing complexity of society, the predominance of some lineages would have been accentuated which, at the outset, carried out the more important functions on the civil level (production and distribution of the products), religious (acts of magic), and perhaps military (the defense against invaders). With the passing of time and with the increase in the population and their subsequent needs, these lineages strengthened their privileged position until they imposed themselves as the rulers, and through that their functional power was transformed into a political force and one of economical exploitation.

Large centers in all the Mayan area flourished during this period. In the south Kaminaljuyu, under a probable domination from Teotihuacan, experienced an exceptional height of splendor (Esperanza phase); the rulers from outside constructed pyramids surfaced with an incline and slab in the style of the great metropolis of the Mexican altiplano; interments were made in covered tombs which had roofs of palm, inside the pyramids, accompanied by rich offerings of jade, pearls, polychrome ceramics, etc., and by the victims who were sacrificed to wait upon them in the world beyond. In the localities of the central area, as Uaxactun and Tikal, the Mayan rulers built large units which consisted of pyramids, temples and palaces, and erected stele and altars for being represented in them, luxuriously attired and with multitudinous ornaments. Mural paintings adorned their palaces and sepulchres. Ceramics initiated the fabrication of new forms and original decorative motifs, or adopted patterns from Teotihuacan, which had been imported originally from the meridional area. The septentrional area, although to a lesser degree of intensity, followed a parallel development of which we have, as important testimonies thereof, traces in Dzibilchaltun, Oxkinok and Acanceh.



#### Late classical period (600-900 A.D.)

This period clearly indicates the apogee of Mayan culture. The productive forces thus attained their maximum development. But we do not believe that such development would be attributable to technological progress, since it is highly likely that the methods of cultivation of the earlier period continued in full force, perhaps on a greater scale it was attributed to the demographic growth which in its time reached its culminating point, at least in the central area.

In those centuries the Mayan territory had to be practically occupied in all its expanse, even to the point of saturation in some regions. The exploitation of the land would have reached its limit, making use of the technique of grubbing and, in suitable places, of some hydraulic works; it is also probable that the rhythm of cultivation was strengthened, thereby shortening the periods of rest for the soil. At that time the Mayas had to have recourse to all the alimentary products within their reach, complementing their diet of maize and beans with tubers, vegetables, and flour which could be obtained from the small fruits of the browse, and with the fruits of the cohune palm; the same is applicable also to the products from fishing and hunting, and the collecting of crustaceans, mollusks, reptiles, and every class of uncultivated fruits.

The exploitation of nature was completed by the overexploitation of man. This period is characterized by a real waste and mismanagement of productive forces: natural resources, human energy, technical and scientific knowledge, and intellectual as well as artistic creative capabilities.

The florescence of hundreds of ceremonial centers on the Pacific coast, in the Highlands of Chiapas and Guatemala, in the valley of Motagua, Peten, the basin of Usumacinta and its tributaries, the gulf coast of Mexico and in the whole Peninsula of Yucatan show us the extraordinary aspects which the demographic growth must have resulted in, during the late classical period.

The construction of thousands of buildings, imposing pyramids, and temples which

The region of Peten, where Tikal is situated, is one of the greatest ceremonial centers of the central area and was a participant in the extraordinary demographic growth which took place during the late classical period.

reached such a height as 70 meters; terraces which maintained buildings of several storeys; palaces with many tens of rooms; indigenous altars; ball-game fields; observatories, sepulchers which came to be luxurious constructions such tremendous frenzy for building signified a waste of time and forces similar to that by which the edification of the Egyptian pyramids had originated, as well as the Babylonian ziggurats or the Khmer temples. These sumptuous buildings, extravaganzas, were complemented by the worthwhile works of thousands of artists who decorated the structures with reliefs and paintings, as well as of the innumerable artisans who fabricated precious objects for the rulers and commerce. With diverse materials, great capability, and the use of various techniques, the Mayas had created an art which is probably, in many aspects, the most refined of the American Continent.

In order to attain all these achievements, the quality and quantity of which are amazing when one takes into account the unduly low level of the technological resources, it was indispensable for a powerful centralized organization to function for the control of all the aspects of the life of the community which embraces production, distribution of foods and other goods; activities which were not productive but only of a ceremonial nature: public works; beliefs and fulfillment of religious obligations. Such an organization would be achieved by means of governments of the regional theocratic or dual aristocracies (civil and religious powers separated within an essential unity), and the domination would be exercised through a complex bureaucracy, the ultimate ramifications of which would penetrate even the most reduced populations as well as those from the governing centers. The production of surpluses ought to have covered the needs of the artisans, who used to work to provide everything for commerce; the needs of all who used to work in the construction of the ceremonial centers, as well as the needs of the warriors and of the civil and religious hierarchy.

#### The collapse of the central area

The brilliant apogee of the Mayan civilization in the central area was to have a tragic end, probably even violent; their causes have provoked endless controversial discussions and hypotheses. Natural phenomena such as climatological changes or earthquakes have been suggested. Nevertheless it is known that the central and septentrional areas were outside of the seismic region of Guatemala and Chiapas, and in so far as supposed catastrophic rains in Peten are concerned, which would have impeded the burning of the fields and the consequential cultivation, these have not been able to be established, neither the supposed mass migration of the population which would have been occasioned by that.

Other hypotheses are to the effect that plagues and epidemics, as for example, yellow fever and malaria, affected the population in such a way that it was necessary to abandon the lowlands of the south. The presence of these diseases in pre-Hispanic times is, however, not confirmed, and, once again, we repeat that the depopulation of the central area has also not confirmed.

The exhaustion of the earth through excessive use, during centuries, of the grubbing system which would have converted lands originally favorable to agriculture into wide treeless plains, has been persistently insisted on. This theory has also not been established and the presence of wide treeless plains seems to correspond to certain types of earth; on the other hand, in the wooded regions utilized for cultivation, the forest does not tarry in being reproduced when cultivation is interrupted, but without being replaced by desolate plains.

It has further been suggested that it was due to an intellectual and artistic decadence, caused, to a considerable extent, by the intrusion of "exotic" ideas, religious beliefs and foreign concepts which the ruling *élite* would have adopted, while the peasants would have reproved it, faithful to their divinities and traditional practises. The popular inconformity would have been able to provoke genuine rebellion against the rulers, but ideologic changes and spiritual disagreement of the masses do not generate social upheavals if material conditions which favor a violent change are not present.



A huge mask from stucco of the acropolis north of Tikal in Guatemalan Peten. The decline of Mayan classical society, manifested in the abandonment of the large centers, presents today one of the greatest mysteries of this civilization.

The invasion of cultural groups other than Mayan undoubtedly did take place in different regions of the central area: Peten, Usumacinta and Palenque, but their local dominion was, on the whole, not of long duration, and through that came the decline (except for some exceptions), as in the places which did not have any knowledge of the invasions. However, we have no doubts about the fact that external pressure and, in some districts, the irruption of groups culturally remote, and the momentaneous conquest of power by them ought to have helped the disintegration of the Mayan civilization in the central area.

According to our judgment, the cause of the tragic end of this civilization has to be looked for in the contradiction inherent in Mayan society, in the antagonisms of origin which the existent relations between its members presented, according to their position within the process of the creating and distributing of goods, in a word, in the characteristic mode of production which customarily sustained the social organism.

In attempting to explain the Mayan decline in the central area two facts have to be taken into account:

a) In the course of the ninth century of our era cultural activities were coming to an end, that is, the construction of ceremonial centers and the building of pyramids, temples, palaces, ball-game fields and the remaining structures dedicated to ritual or residential purposes; the erection of stele and other monuments with calendaric records, hieroglyphic inscriptions and the representations of important personages and, at the same time, the fabrication of decorated ceramics and jade objects also ceased. In short, everything referring to priestly activities and to the needs of the ruling class came to an end.

b) The common populace continued to live in sections of the central area, occupying, as in Palenque, the ceremonial buildings or the environs. When the Spaniards arrived, the native population was still very important in a number of regions. It could have been densely grouped together in specific districts, as Thompson affirms, while conserving a political organization that was centralized and imperious (as that of Potonchan and the coast of Tabasco, Nito, Naco and the zones adjacent to the Gulf of Honduras, Chetumal and the neighboring localities, the province of Copan, the Alcalan-Tixchel area, Tayasal and the banks of Lake Peten-Itza), or, on the other hand, the population could be dispersed in small towns or independent villages with a simple organization on a communal level and without more than modest dwellings, but somewhat larger than the huts, dedicated to religious worship (as in the Chol, Mopan, north of Peten, Belize and Lacandon regions).

On the basis of the two facts to which we have just referred, it is only possible to deduce one other alternative: the disappearance of the Mayan ruling class or its substitution by foreign chiefs. When the ruling Mayan class disappeared, the people of the towns occupied the ceremonial centers which extended up the jungle which had sprung up and which compelled them to leave; from then on they survived in a scattered form, as we have already stated, with an economy of self-sufficiency and a system of the communitarian type. When foreign domination surged, it could have been destroyed in a relatively short time, as in Palenque and Seibal, or it could have lasted until the Spanish conquest, principally in the places along the littoral of the Yucatan Peninsula from Tabasco up to the Gulf of Honduras.

The disappearance, probably physical, of the ruling aristocracy resulted from an attempt on the part of the Mayan people to settle the antagonism inherent in the mode of production. At the end of six centuries this antagonism would have reached a crisis because of the waste of the productive forces and the overexploitation of the working class. The attempt to find a solution to the existent contradiction between the productive forces and the relations of production was manifested by means of the annihilation of the ruling class which, in its turn, had produced the disorganization of the economic regime and the political system, the end of the creation of works of art, of the recording of dates, of

the representation of important personages and the account of the deeds of their reigns in hieroglyphic texts. With the finish of the Mayan aristocracy in the central area, the high culture also died which had been created at the cost of the exploitation, the misery, the ignorance and the religious fanaticism of the people.

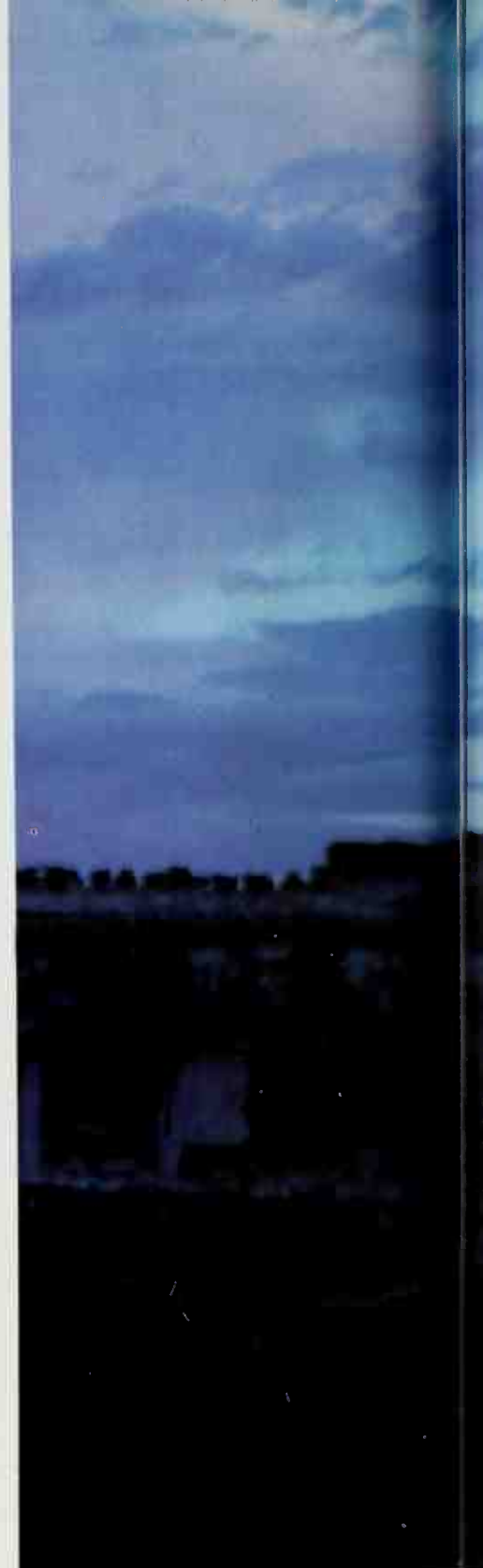
The intentional pre-Hispanic mutilation of numerous monuments which depict the rulers and the disorderly abandonment of stele broken by blows, can be the reflection of a popular rebellion. The paintings of Bonampak, as we have already referred to them in a previous chapter, can well testify to the repression of one of the first peasant uprisings at the beginning of the ninth century when the decline of the classical ceremonial centers began.

#### Early postclassical period (1000-1250 A.D.)

While at the end of the ninth and beginning of the tenth century A.D., Mayan civilization had reached its dramatic decline in the central area, in the other areas the course of history continued, although altered by the intrusion of groups of culture that were not pure Mayan, groups that were infiltrating during the tenth century. In the Yucatan Peninsula it is probable that the first invaders proceeded from the region occupied by the Chontals and Putuns, concentrating themselves principally around the Lagoon of Terminos and the mouth of the Grijalva and Usumacinta Rivers. Their culture was hybrid, Mayan-Aztec, and they already had occupied a peripheral position within the Mayan area and the border area with the people who spoke Uto-Aztec. According to Thompson, the Putun groups consisted of those who, following the Usumacinta and its tributaries, brought the foreign cultural aspects to such localities as Seibal, Altar de Sacrificios and some others at the end of the classical period, and even succeeding in dominating the region politically. The Itzas, according to the author mentioned, were of the same Putun origin and had occupied Chichen Itza around the year 918, proceeding from the eastern coast of the peninsula to which they had previously come by a maritime route. Another much later surge of the same Itza group reached Chichen under the leadership of the Toltecan caudillo Quetzal-Kukulcan, who was accompanied by his warriors, priests and servants after their expulsion from Tula in the year 987. In the Highlands of Guatemala and on the Pacific Coast the invaders were the Pipils, whose culture, as that of those who had invaded Yucatan, was connected with the Toltecs.

In actuality, however, the subjection of the Mayan people to chiefs who were not autochthonous did not signify any change of great importance in the development of the productive forces. The peasant continued to work the lands, the products of which were then canalized for the Itza, Putun or Pipil rulers. In any case, one important factor helps to explain the apogee which Chichen Itza then knew, a place in which the cultural transformation that had been provoked by the invaders was valued to a much higher degree than in any other place. The invaders were concentrated there for the express purpose of imposing their domination on them. The architectonic richness of such buildings as *El Castillo* ("The Castle"), *El grupo de las Mil Columnas* ("The group of the Thousand Columns"), the Temple of the Warriors and the monumental Ball-Game Field attest to the power and strength of the new rulers.

The factor to which we referred to is the mercantile development which effected the production of the artisans, to a great extent not intended for meeting the needs of the Mayan dominant class, but rather to bring about interchanges over a wide expanse. The merchants would have had a role of the first magnitude, very closely linked to the nobility and, at times, even part of that. Numerous places along the coast served as ports of interchange for articles proceeding from the altiplano and the Gulf of Mexico, and which were exported to Central America, and also for the exportation of such raw materials as salt, honey, incense, cotton and cocoa, produced in the Mayan areas of Campeche, Yucatan, and Tabasco. The traffic of slaves from the Mexican altiplano took part in the transactions between the Mayan country and those of Mesoamerica and Central America. The increase in commerce had to augment the pressure on the producers of raw materials and manufactured articles, everything to the benefit of the new ruling class which, in addition to its growing economic







Mayan society had perceived the approach of the downfall of the great ceremonial centers as Palenque in which the decline was accelerated by the mutilation and intentional deterioration of the buildings and sculpture. A nocturnal view of the Tower of Palenque.

power, counted on the help from its military force. It is very likely that the exploitation and oppression of the Mayan people were then much greater than in the earlier period which resulted in the heightening of the contradictions in the relations of production.

The apogee which characterizes the period of Toltecan occupation in Yucatan probably can be justified by the commercial and military nature of the domination of the invaders. This brilliant epoch demonstrates something about the worsening of generalized slavery to which the Mayan people would have been subject, upon whom it was imposed, besides the production of surplus goods for the maintenance of the rulers and warriors, and also the provisions for the merchants, changes in their beliefs, the veneration of new deities and the increase of human sacrifices.

The sudden end of Chichen Itza around the middle of the 13th century, is perhaps not due exclusively to the conquest by the people from Mayapan as is deduced from the contents of the historic sources. The participation of the same Mayan people, weary of such oppression, in a violent and hopeless action similar to the one that had put an end to the Mayan classical civilization in the central region, constitutes a hypothesis with many probabilities of its certainty.



#### Late postclassical period (1250-1524/1541 A.D.)

The last pre-Hispanic period is characterized by a process of disintegration which is manifested in the economic, political and cultural aspects. The fall of Chichen Itza marked the end of the intense trade organized by the Putuns and Itzas, a trade which over a period of various centuries had created commercial ties with the people of the altiplano of the Gulf of Mexico and of Central America. From this time on, the political and economic hegemony went over to Mayapan where the commercial interest appears to have been orientated principally towards the eastern coast of the peninsula which had experienced then the height of its fluorescence.

The future socioeconomic structure of the classical period, reinforced by the Toltecan rulers in the early postclassical period, presented profound flaws in the late postclassical period. The possession of land had undergone some modifications of considerable extent, and many communal pieces of property had come to belong to the producers of cocoa bean and other plants such as cotton and henequen, to the rich merchants and, very probably to the warriors with their right to awards for their merits on campaigns. Among the ancient states divided into chieftanships frequent difficulties arose, regarding the question of the borders which naturally created a bellicose atmosphere. For that reason some of the centers were surrounded by walls as was the case in Mayapan, Tulum and Xelha, among others. The same phenomenon obligated the people of the Highlands of Guatemala to construct their ceremonial groupings on the top of hills and in places protected by such topographic accidents

With the decline of Chichen Itza the political and economic power of the Peninsula of Yucatan passed into the hands of the ruling family of Mayapan.

The bellicose atmosphere of the postclassical period brought about the fortification by means of walls around many cities; in this way Tulum is protected, taking advantage of the natural accidents of the terrain to which a wall was added.



as ravines and rivers. The wars accelerated the disintegration of the life of the Mayas, a situation which reflects the cultural decadence manifested principally in the architecture, sculpture, painting, and ceramics.

This process culminated in a new popular rebellion. This is no longer hypothetical as had, however, been what we suggested to explain the fall of Chichen Itza, but is explicitly referred to in the historic sources. In 1441, it was that rebellion that provoked the destruction of the superiority of Mayapan and the annihilation of the ruling family, Cocom, in spite of the fact that they had depended on the military help of Mexican mercenaries.

In the decades that followed, the economic standard had to be considerably lower than that of the earlier period, although the peasantry continued to produce more food not only for their own sustenance but also in the form of surpluses to provide commerce, which still thrived, and for their local caciques. On the political ground the deterioration was accentuated by the lack of supremacy in Mayapan. Besides, plagues, epidemics and hurricanes, which the chronicles mention, contributed to making the conditions of life more disagreeable. The cultural activities which correspond to this epoch are almost nil.

When the Spanish galleons in the successive command of Hernandez de Cordoba, Juan de Grijalva and Hernan Cortes appeared, proceeding from Cuba, they were plagued by the Mayas. The foreigners, in those years, scarcely touched Mayan land as they went to the center of Mexico. Afterwards, with Tenochtitlan conquered, the conquest of Guatemala was effected as also that of Yucatan. The Mayan people was going to experience a new era of domination.



# The Mayas: From the Conquest to the Present Time

## THE CONQUEST

### Discovery

From the moment in which the Spaniards trod on Mayan territory, they were able to perceive that the people who occupied it were not going to let themselves be dominated easily. We are not referring to the unfortunate members of Valdivia expedition who in 1511, upon returning from Darien, were shipwrecked in front of the eastern coast of Yucatan. There is no doubt that they perished as sacrificial victims, with the exception of two of them who, with regard to the conquest, were going to assume antagonistic attitudes. Those two were Jeronimo de Aguilar, who facilitated this conquest as the interpreter of Cortes, and Gonzalo Guerrero who, as advisor of the cacique of Chetumal, tried to impede it.

Francisco Hernandez de Cordoba, in command of the first expedition, which was in 1517, was able to judge what the resistance of the natives would be like. In Cape Catoche, after a few days of cordial welcome to Islas Mujeres, he lost twenty-six of his men in combat, and in a very short time his enterprise came to a tragic end in Potonchan (Champoton), where the cacique Moch Couoh and his hardened troops inflicted so cruel a defeat on him that he, battered and thirsty, had to withdraw in order to return to Cuba and to die shortly afterwards as a result of his wounds. The Spaniards called the Cove of Champoton, *Bahía de la Mala Pelea* in memory of the calamity suffered there.

In 1518, Juan de Grijalva, after having traversed the eastern and septentrional coast of the peninsula, disembarked in Campeche to get some water supplies. He had a very difficult encounter with the inhabitants, the result of which was one dead and forty casualties on his side, with a vast massacre of Indians.

In the following year Cortes reached Mayan lands. There were no difficulties in his crossing along the littoral, until he came to the mouth of the Grijalva River. There in Centla

For the Mayas the conquest did not represent liberation but rather the recrudescence of a situation which they had been enduring for a long time. The wall and cliff of Campeche was erected by the Spaniards during the colonial period to protect their riches and natural resources from English piracy.

he suffered a bloody battle which, in spite of its short duration, cost the lives of eight hundred natives, victims of the fire-arms and the cavalry.

#### Conquest of Guatemala

The conquest of the Mayan area was initiated many years afterwards, when Cortes had already seized Tenochtitlan and a large part of Mesoamerican territory. In December, 1523, Pedro de Alvarado departed from Mexico bound for Guatemala, and wrought much havoc on his way to Soconusco, when he stumbled against the resistance of the populace. He was then confronted with the Quiches and personally killed in battle the chief, Tecun Uman. After that he assassinated the Quichean kings in Utatlan, defeated the Tzutuhils in Atitlan and annihilated the town of Escuintla. In the course of a few months, through the strength of arms and the fear he had instilled, he succeeded in dominating Guatemala and established the city of Santiago de los Caballeros de Guatemala, the capital, on July 25, 1524.

#### Attempts at conquest in Yucatan

The conquest of Yucatan had, however, not yet begun. It was started in 1527 when Francisco de Montejo, the Governor, disembarked on the eastern coast of this territory. He was well received by the Mayas, but many Spaniards very soon became ill because of the extremely hot climate and the closeness to the swamps, source of malign fevers, in the place in which Salamanca de Xelha was founded. In a short time the twenty sick whom Montejo had left in Pole before penetrating deeper into terra firma, had died. While this was going on, the Governor lost a dozen of his men in the chieftanship of Chauac-ha, in the course of an impetuous attack on the part of the Mayas. Somewhat later he was subjected to another battle in Ake, in which his troops had a number of casualties in return for a multitude of natives who had lost their life. The first phase of the conquest had ended without more success than the recognition of the littoral up to the Ulua River and the establishment of a weak garrison in Salamanca de Xamanha.

A second attempt did not fare much better. It is true that the region of Tabasco, the margins of the Lagoon of Terminos and the province of Acalan had been pacified; for this reason the invasion of the peninsula was started, this time, from the extreme southwest. Montejo sent Davila in order to cross that section towards the eastern coast. He succeeded in doing that without having any encounters with the inhabitants. In Chetumal he founded his Villa Real but he had to make frequent incursions in order to conquer the resistance of the natives. To intimidate them Davila attacked them in Chequitaquil, near Chetumal, where the cacique of Uaymail, apparently advised by Gonzalo Guerrero, was preparing a campaign against the Spaniards. Davila succeeded in dispersing the Mayas, but the cacique and Guerrero escaped. He sent to Montejo the modest spoils of war which his attack yielded him, with a number of messengers who would have to give a report about him and his position. But the messengers never reached their destination: in Chinante (Hoya), the town of the *Cochuahes*, they were intercepted and murdered.

A little later, Davila knew that in Chable fortifications had been constructed and that warriors were assembling; thus he took the square by surprise and from then on wanted to penetrate the territory of "Cochuah", but such a resistance was encountered in the town where the messengers had been murdered, that he realized the necessity for his returning to Chable with half of his troop unable to take part in any combat. The populace was waiting for him for a real war; but again Davila recovered the square by a surprise attack and returned to the Villa Real in Chetumal. They spent there several months, without resources, and harassed by a populace resolutely hostile. Finally, disheartened, they decided

to go along the coast towards Honduras, where they arrived after a very difficult and hazardous journey which lasted almost seven months.

Montejo, in his turn, was not making much progress in his endeavor to conquer Yucatan, starting out with Campeche and Champoton, which he was occupying. However, even in spite of the growing hostility of the people in Campeche and of the *Cupules*, the Governor and his son decided to establish a Ciudad Real in Chichen Itza, a place which had apparently been discovered in the previous campaign. They reached it by means of the septentrional littoral, and were well received, but when Montejo el Mozo headed for Chichen Itza, he began to be subjected to attacks from the *Cupules* in successive form and each time more intense. The cacique, Nacon Cupul, who at the beginning had received the Spanish Captain very cordially, did not need too much time to be convinced of his intentions to dominate, and taking advantage of a moment of carelessness, tried to murder him, but the Spanish soldiers killed him in the act.

The Montejos set themselves up in Chichen Itza, converted into Ciudad Real (1532-1533) and, believing that the natives were going to accept his authority docilely, began to divide the towns among his captains, designating them *encomenderos*. The Mayas appeared to accept the subservience which this *encomienda* with a paternal disguise represented, but, in actuality, they were getting ready to defend their threatened liberty. Some towns refused to pay the tax; others openly rebelled. The communications with the outside remained cut off; provisions dwindled; every attempt the Spaniards made to leave, they found themselves up a stone wall. An attempt of greater importance also failed and resulted in one hundred and fifty dead Spaniards as against a slaughter of hundreds of Indians. Finally, the Montejos abandoned the place one night, availing themselves of the trick of tying a dog to a bell which continued to ring for many hours as the animal wanted to follow its masters and to reach the food that had been left out of its reach. Harassed afterwards on their retreat, the decimated troop somehow managed to reach the coast and set sail for their destination, Campeche, in order to return to Mexico later. The resistance of the Mayan people had once again conquered the plans of the invaders; the second campaign for conquest had failed as the first had.

#### The fulfillment of the conquest

Beginning in 1535, and continuing for a number of years, the Spaniards were dominating the peninsula after overcoming enormous difficulties. They succeeded in that, fundamentally because of the unquestionable superiority of their weapons, in particular their fire-arms; because of the impression and devastation which the cavalry had produced, and also the action of the friars who had begun, by means of the gospel, to predicate submission to the invaders and to offer the promise of an inviting heaven after a life of slavery. But in Champoton, Tenosique, Sihochac, Tixpeual and Tho, the Montejos and their captains still continued to suffer defeat. Groups of hostile caciques were uniting against the Spaniards; others submitted. Finally, Tho was occupied and on its ruins Merida was established in 1542. In spite of the resistance of Nachi Cocom and the desperate struggle of a people disposed to every sacrifice, laying waste to their own lands, abandoning the towns, obstructing the wells, hiding the food, fleeing to the woods and dying in desperate attacks, each one of the chieftanships were failing one after another.

With the greater part of their territory dominated, the Mayas still tried a number of uprisings, as that of the *Cupules* and *Tazes* in the eastern part of the peninsula (1546-1547), the siege of Valladolid. Finally, with the pacification of the Dulce Gulf (1547-1549), the conquest was virtually consummated after a terrible struggle which had lasted more than twenty years. However, the Itza troop, under its chief, Captain Canek, still resisted in Peten



every attempt of the enemy to penetrate their territory. Only at the end of the seventeenth century, that is, in 1697, were the Castilians able to take their capital, Tayasal, on the rims of Lake Peten Itza. The impressive collective suicide of a great part of the population, which threw themselves into its waters, preferring death to slavery, gives testimony to the heroism of the Mayas in their fatal meeting with a civilization technologically more advanced than theirs.

### THE COLONY

#### Economic changes

The colonial regime was to determine the fundamental changes in the economic sub-structure on which the existence of the Mayas had depended, as had happened with all the Mesoamerican peoples. The first impact on the productive forces had a negative value and a tragic character: death in combat of thousands of men; terrible reprisals against the civil population as punishment for resisting the conquerors; physical annihilation of entire villages; desperate flight of the indigenous to inhospitable regions, and collective suicide in

The conquest of the Mayas was slow and laborious: the resistance which they had manifested made the complete dominion of the territory impossible until the XVII century. A view of Lake Atitlan in Guatemala, a geographic mark of the Mayan culture in this zone.





some cases. But the greatest mortality was still caused by new diseases brought by the conquerors. Epidemics of small-pox, measles and infections of the respiratory tracts caused terrible devastations among the indigenous population, so that virtually all of the inhabitants of many towns were wiped out. It is also likely that malaria, yellow fever, hookworm diseases and perhaps amebiasis appeared after the conquest and became endemic diseases among the undernourished people.

Eric Thompson, who had studied the Mayan demographic problem of that time and after the conquest, discloses some impressive information about the depopulation of the territory as a result of wars, rebellions, epidemics and endemic diseases. A great part of the Mayan area lost approximately 90 per cent of its inhabitants in periods ranging from 20 to 200 years.

However, the productive forces were going to increase considerably in other aspects, upon the introduction of new vegetable products and livestock. Among the imported plants we can mention a number of fruit trees such as lemon, lime, orange, fig, pomegranates, dates, cocoanuts and bananas; melons, sugar cane, grapes; garden products such

as lettuce, cabbages, turnips, onions, cucumbers and radishes, and in addition to that, wheat.

With regard to the livestock, the breeding of horses, mules, donkeys, pigs, sheep, goats, cows and chicken was begun, without taking into account the domestic animals that lived together with the Spaniards, as cats and new races of dogs.

European technology modified some works and introduced others. Metal tools from iron, bronze and steel such as axes, large heavy knives, picks, shovels and plows substituted the stone and wood implements.

Animal traction to transport loads or pull vehicles with wheels took the place of human loading. With the use of the iron crowbar and gunpowder it was possible to excavate wells of relative profundity and, in some specific cases, provide them with chain pumps. Freighters and fishing boats were constructed in the dockyards. Sugar mills were also set up for the purpose of extracting the juice from the sugar cane.

In contrast to this, few factories were set up during the colonial period and they were never developed to any great extent. We can, however, mention the cord maker's shops from henequen, the alcohol distilleries, the soap factories, the blueing factories, the starch ones and the tanneries. There was an increase in the exploitation of *palo de tinte*, of blueing, of cotton, of *grana*, of henequen, of incense, of deer-skin, of honey and wax; in the extraction of salt; in the felling of trees of precious wood; and in fishing.

The cultivation of tobacco was fomented in the eighteenth century—already known through the Mayas—and also that of rice.

In Guatemala and Honduras the mining industry sprang up, especially the gold and silver ones. The extraction and process in the elaboration of these metals were rigidly controlled by the authorities. The gold and silver works, but especially that of silver, then flourished to a vast degree. The arts and crafts industry reached a new high of development in some regions. We can refer to the elaboration of many types of textiles and to the art of quilting, as well as to religious sculpture, all of which brought fame to Guatemala. With appropriate tools imported from Spain, work-shops for shoe-makers, tailors, carpenters and blacksmiths were set up, which were able to satisfy the demands of the Spaniards.

Commerce, directed towards Spain and its colonies in the Caribbean, received a strong impulse. Exportations comprised principally cotton blankets, cocoa bean, blueing, honey, wax, *palo de tinte*, and salt in large quantities; other products were deer-skins, sacks and cords from henequen, henequen branches, fine woods, meat and salted fish, shoes and hats. Some products were imported from Europe, but they were, above all, what the Spaniards had been accustomed to use: wheat, sugar, oil, wine, vinegar, spiritous liquors, clothes, furniture, paper, silverware, porcelain dishes, weapons and agricultural tools. The result of such mercantile operations had slight significance for the people of the Mayan area. This was entirely due to the monopolizing aspect which the authorities imposed on them, and to the amounts of the importations which exceeded the exportations.

It did not take very long before the possession of land was also modified since, thanks to the royal grants, the conquerors received lands for their ownership. The Castilian laws provided that the common lands for community use be respected, but in spite of these arrangements private property was growing at the cost of the communal property, giving rise to the creation of estates, which the Spaniards used for breeding bovine livestock and hogs, and also for the cultivation of maize.

The relations of production were also changed, although for the majority of the population, that is, for almost the entire Mayan populace, these relations did not result in any modification for their benefit: their exploitation, which was even strengthened,

consequently continued, but with one major difference: everything was now exclusively beneficial to the conquerors and their descendants.

### Tributary impositions

On the estates the peasant had the obligation to turn over to his master half of his crops, besides working without pay every Monday; in addition to that, he had to give a weekly rick of sheaves for the arrangement of the principal house; the cleaning of the streets and roads; the weeding and irrigation of the orchards. Actual or supposed debts which the peasant never succeeded in liquidating, and which were hereditary, all these made man into a virtual slave of the landowner; although after a legalized slavery, in the first years of the conquest, the laws to protect the Indians had prohibited such acts.

There was another institution which assured the complete alienation of the Mayan Indian: the *encomienda*, that is, the villages and the people themselves were given to the Spanish colonists by royal decree. The supposed justification, hypocritically paternalistic, of the *encomienda* stipulated that "to be instructed and taught the good uses and customs both in the faith and Christian doctrine, and in order that the Spaniards could make use of them as free people, the priests who have to accompany them on all the expeditions can commission the Indians among the conquered inhabitants". In exchange for the religious education which was imposed on them and independently of the services that they had the obligation of giving to the *encomenderos* "as free individuals", the peasants had to pay tribute for that in the form of corn, beans, chile, chickens, wax, honey, pitchers, caceroles, ropes and blankets. Their services comprised agricultural work; the care of livestock; the construction of public works (official buildings, churches, convents and roads), and private homes; the transport of merchandise to such places as neither animals nor vehicles were able to pass through; and the domestic service as well.

But other obligations also weighed heavily on the shoulders of the Mayan Indians. Such obligations arose from the so-called *repartimientos* ("distributions") which consisted principally in the delivery of a number of products in return for insignificant salaries. Naturally, the beneficiaries of this system were the Spanish authorities, the priests, the *encomenderos*, and the traders.

The "perquisites" that at the beginning of the evangelization were the charities by which the Indians voluntarily helped the Franciscan for their sustenance, with the time they became obligatory and excessive.

As if all these burdens were not sufficient, the population used to pay personal contributions to the Crown, to the clergy, to the Court of the Indians, to the fund for the communities and for the defense against attacks from pirates. The "brotherhoods" were supposedly estates of the Indians, but, in actuality, the clergy obtained the land and used to organize these estates for corn-fields and cattle, extracting from them the gains which served to defray the cost of religious celebrations, especially of the patron saint of the population.

### Social and political structure

The social structure which was established on this economic substructure shows us, in its very foundation, how in the pre-Hispanic period, the great mass of workers, peasants, artisans, salt dealers, miners, fishermen, etc., all of them belonged to the native ethnic level. An intermediate class, composed of mestizos and mulattoes, united the small businessmen, the employees, servants and some professionals. Their influence came to be felt but only at the end of the eighteenth and beginning of the nineteenth centuries. The higher class, the greater part of the white race, was formed by the *encomenderos*, landowners, merchants, functionaries, friars, priests and the military.

The political authorities comprised, on their highest level, the King of Spain, the Courts, the Audiencias and the Representatives of Royalty: the viceroys, governors and commanders-in-chief. The indigenous rulers who submitted and collaborated with the conquerors, were kept at the head of their peoples; honors were bestowed upon them and privileges were conceded them; they remained incorporated to the colonial government in their goals to dominate the Mayas. The Church possessed its own hierarchy, from the Pope in Rome to the most humble parish priest; the Bishop was the highest religious authority in colonial territory.

### Spiritual conquest

The spiritual conquest, at the root of the military conquest and also during that, was initiated, having been attained by the regular clergy and later also by the secular. Among the religious orders the Franciscans stood out in Yucatan, as they had been the first to arrive, followed afterwards by the Jesuits and the Conceptionist nuns; in Chiapas and Guatemala the Dominicans worked while to a lesser degree there were the volunteers and the Jesuits. Divergences were frequent among the friars and the priests for the spiritual control of the indigenous population and, naturally, for the material benefits which that provided. Some friars tried, although they achieved it only in part, to curb the insatiable greed of the conquerors, succeeding in denouncing their outrages and crimes. Others worked for a common accord with the *encomenderos*, landowners and civil authorities and were more concerned with the enrichment for the Church as well as with their personal well-being, than for the saving of souls.

Diego de Landa defended the Yucatecan Indians against the excesses of the *encomenderos*; he denounced them for their customs which he considered sinful; he also presented denunciations against the secular clergy and the civil and religious authorities. But, above all, he dedicated himself to the fight against the native beliefs of the indigenous. His fanaticism induced him to commit the criminal auto da fe of Mani, in which thousands of people were tortured, 150 of them dying, and in the course of which he had made to disinter more than one hundred cadavers belonging to supposed idolaters. In his violence, Landa ordered the destruction of thousands of idols, altars and gravestones, of more than twenty codices and many other valuable objects of Mayan culture.

In a constant and intense effort to eradicate the concepts of the indigenous and to destroy their faith in their divinities which they had been accustomed to worship for centuries, new beliefs were inculcated in them. Nevertheless, the priests or monks were successful only in part, and the result was the elaboration of a syncretism in which, under the appearance of accepting the Catholic creed, the Mayas continued to venerate their gods. During the entire colonial epoch the clergy was entrusted not only with the teaching of the Christian doctrine, but also with the practical preparation for the practise of some occupations. In any case, in spite of the partial rejections and distortions, the spiritual conquest was consummated, assuring the conquerors the full economic, social and political domination of the conquered peoples.

## THE INDEPENDENCE

### Objective causes

At the end of the eighteenth and beginning of the nineteenth century, the structure of the colonial society of which the Mayan people formed a part, had undergone quite a number of alterations. On the one hand, the native population, decimated because of the conquest, had turned to increasing their number, although perhaps their previous number would still

The spiritual conquest accompanied and followed the armed conquest. The Franciscans were the first to reach Mayan territory in their search for ways to indoctrinate a people profoundly religious.



not be reached; the number of Spaniards, natives of the mother country, was relatively low, but that of the Creoles, Spanish born in the colony, and of the mestizoes was increasing. The negroes imported as slaves to supplement the insufficiency of man power, the mulattoes and others, the result of racial mixtures, completed the ethnic picture. In the census of 1790, the population of Yucatan did not reach even 400 000 inhabitants, approximately the same number as in Guatemala, according to the census of 1778.

On the other hand, we have seen that the natural resources had been increasing with the acclimitization of new plants, with the introduction of livestock breeding and of mining, and through a greater development of products already utilized by the Mayas, which had been made possible by the application of metal instruments.

The lands which before were in their greatest part communal, were now principally in the hands of the Church, the Government and the owners of large estates.

The organization of work did not mean for the Mayas more than a greater exploitation for the benefit of the white population. The taxes bore down heavily upon them. The *encomienda* had been abolished but, as Cardoza y Aragon had said, "the old nightmare continued for the Indian". In the social pyramid the Mayan civil and religious hierarchy had been substituted by another still more complex and oppressive which squeezed the people without mercy. The civil functionaries managed the collection of the tributes without any justification; they utilized the work of the Indians in agricultural and domestic labor; they committed abuses of every kind and implanted venality and corruption in the public administration. Many of the priests were seeking their personal gains or enrichment for the Church; only a very small number lived with the indigenous, sharing their poverty, procuring to help them, and trying to teach them. But it was the landholders who possessed the greatest part of the workable lands, which had been converted into estates, cattle ranches and farms. Some industrialists controlled the salt mines, the elaboration of henequen and mining. The wholesale merchants became rich. A middle class had been born and began to make itself felt in the economic, social and political aspect; it was composed fundamentally of small businessmen, small shopkeepers, artisans and intellectuals (a limited number of doctors and surgeons, clerks, attorneys, judicial employees, students, etc.).

In spite of all this, the social mechanism still did not function well. New Spain, the colony of one of the most retrogressive of the European countries in that period, had hardly been able to aspire to a brilliant development. At the end of the eighteenth century the colonial structure presented deep flaws and had begun to crack. The very contradictions of the system were coming to a critical point. The mother country had imposed strong restrictions on commerce, both on the inside as well as on the outside, and a strict vigilance was exercised over the quality and prices of the merchandise as well as for its transportation. In the course of two and half centuries, the royal monopoly did not permit the American colonies to progress. In Guatemala the creation of state monopolies which prohibited the free sale of products caused serious upheavals. The state monopoly on gun-powder affected the pyrotechnists, whose activities were closely linked with the religious ceremonies of a popular kind. The state monopoly of tobacco, the forbidding of its planting in many regions, and the extreme vigilance of its traffic caused tremendous inconveniences for the population. The state monopoly on spiritous liquors suffered the most serious consequences, complicated by the subleasing and proliferation of tobacconist's shops, which led to the manufacture and clandestine sale of alcohol; the result was that the consumption increased noticeably at the cost of the normal yield of work and of the general state of drunkenness, with its natural consequences: quarrels and crimes.

The increase in taxes, the obstacles on internal commerce, the obligation of interchanging merchandise only with Spain, all these negative circumstances with reference to the



An engraving which shows the port city of Campeche, an important point in the mercantile development of the Peninsula. Even prior to the decline of colonial Spain, the middle class of Yucatan requested free assembly, the abolition of the payment of taxes and monopolies, the possibility to foment industries and the predominance of individual liberties and interests.

increase of the colonies, were aggravated with the rise of an aggressive England that was at the same time liberal and Protestant, which was each time interposing itself more and more on world commerce. The popular discontent was growing and the impoverishment affected also many of the white people who had settled on Mayan territory. But if the Spanish colonial empire was breaking, the British, in its turn, had suffered a tremendous blow through the Independence of the United States. Concomitantly, the feudal structure, which to a great extent had survived in the European monarchy, was also crumbling apart. New ideas were invading the world and had come also to the Mayan country. It was possible to consider them among the bizarre, but they responded to the restlessness of the illustrated personages.

#### Subjective causes: liberalism

Liberal thinking, intimately bound with the development of the bourgeoisie, found an echo in Guatemala and Yucatan. In the former, the Economic Society of Friends of the Country formed a group with those who were criticizing the regime and tried to provoke an economic and cultural development. It clamored for free assembly, for the abolition of tributes and of the state monopolies, for the promotion of industries, for the predominance of personal over collective interest, and for freedom for the individual. It did not take long before it came to be considered subversive and was liquidated. The reforms accorded by the Spanish Courts in Cadiz encouraged the liberals who demanded their application. The struggle between the liberals and conservatives became worse and worse.

In Yucatan the Association of Saint John called together in Merida the ones that were not in agreement. The abolition of *repartimientos*, of the payment for perquisites, of forced labor and other burdens which oppressed the Indian were demanded; his liberation from ignorance and fanaticism was also insisted upon. The momentaneous reestablishment of despotism through Fernando VII and the abolition of the liberal Constitution of 1812, were

converted into serious reprisals against the liberals. Many years later Freemasonry grouped together the liberals and the dissatisfied; the Constitution was restored, but the liberals were not all in unison, and in Yucatan a Patriotic Confederation of a heterogeneous composition was formed.

#### Independence, the result of the war in Mexico

In the meanwhile, the armed struggle which had been started in Mexico in 1810, culminated in the Plan of Iguala; Yucatan adhered to that, declaring itself independent from Spain. In Guatemala independence did not come as a result of an actual war against the mother country; only the liberal voices of some politicians were given some attention. The liberals were, almost in their entirety, Creoles who always had been discriminated against by those of the peninsula; they belonged to the small bourgeoisie in which also the mestizoes, and very few Indians, participated. It is logical that the movement of non-conformity was led by those who had material interests, which depended upon the modification of the old colonial structure.

The annexation of Guatemala to Iturbide's empire and to Mexico in 1821, resulted in a triumph for the conservatives who had come to understand that the colony had reached its end. The later independence of Central America in 1823, with one of its immediate consequences, the abolition of slavery and of the privileges of the Church, brought about great discontent among the nobility and the clergy. The triumph of liberal ideas responded to the eagerness of the capitalist bourgeoisie, who desired greater facility for their industrial and commercial activities in order to produce riches, to increase their properties and to have a principal part in the political ground.

But for the Mayan Indian, indifferent, except on rare occasions, faced with the process which culminated in independence, life would continue in the same way, with only the transfer to other hands of the instruments which had subjugated him till then.

### FROM INDEPENDENCE TO THE PRESENT DAY

#### The crisis and contradictions in Guatemala

The political independence from Spain was going to determine important changes in the economic and political structures of the people in the Mayan area. These changes followed parallel lines in Guatemala as well as in Yucatan with regard to their general orientation, but secondary phenomena sufficiently differentiated, originated to justify that both regions be analyzed separately.

In Guatemala, the first half of the nineteenth century was marked by a tragic economic situation in which agriculture (the cultivation of the indigo plant, and particularly of cocoa bean) declined; the commerce through exportation was almost paralyzed; capital, for lack of security, went out of the country, and public finances were disorganized because of the suppression of state monopolies and taxes.

Economic liberalism, which took the place of the colonial, monopolistic regime, provoked, on the one hand, changes, and, on the other, it maintained the feudal structures. The abolition of slavery and the declaration of the freedom of the individual did not actually alter the regime of agricultural work, in which the peasants were compelled to work on the farms. The expropriation of the properties of the clergy and the distribution of untilled lands which individuals acquired, set up the basis of development of a rural capitalism in favor a minority while, through the bad distribution of the land, the common lands proved insufficient for the great mass of the peasantry. However, they did succeed in increasing the production of the *grana* to supply the flourishing textile industry of France and England,



until the coloring matter elaborated from the cochineal was substituted by anilines. The mining industry was in full decadence, and commerce with Spain was on the road to be replaced by that with England. On the other hand, the five States which had integrated the Confederation of Central America were alienated in sterile struggles among themselves, which culminated in the dismemberment of the aforementioned Confederation. Meanwhile, the Mayan Indian continued to be dedicated to the cultivation of maize for his precarious survival, plunged into the same state of misery that had prevailed in the colonial period.

### Development of the capitalism in Guatemala

The second half of the century was marked by an economic rebirth: mining was recovered; foreign loans improved public finance and international commerce was increased as a result of the vigorous development of English and French capitalism. A reformist revolution brought to power the nationalist liberals who propitiated the strengthening of national capitalism.

The uncultivated lands were auctioned off and the credit concessions gave the impulse to create average agricultural enterprises; the expansion of the small common lands was increased while the larger ones decreased. A new cultivation was supplanted to the production of *grana* and reached the point of being the basis for the economy of Guatemala: coffee. Its intensive cultivation was stimulated and its exportation to Europe permitted the official *hacienda* to prosper, and the public works to be accomplished, among which were the construction of railroads. The economic advances depended, of course, on the prices of coffee in the international market. European immigrants did not delay in becoming owners of coffee and sugar plantations.

New industries absorbed a part of the labor force. The integration of a middle capitalistic class, white and mestizo, was accentuated. At the beginning of our century, the exploitation of coffee, to which was later added that of bananas, rubber, chicle and precious woods, was the very basis of the economy of Guatemala. It was, to a large extent, in the hands of foreign companies, the majority of which were Northamericans.

But the Mayan Indian of Guatemala and Chiapas remained almost completely alien to the integration of the national systems, or rather remained integrated in opposition to his own desire and interests, to a system which offered him no advantages. Legally he was free and was able to dispose of his labor force but, as a rule, his communal lands went into the hands of private owners, and he had to work as a laborer for the owners of large estates. Far from being liberated with the political changes and economic development, the indigenous class, as Solorzano describes, "there began for that group the most arduous period of ill-treatment and arbitrariness". The cultivation of coffee, and the extraction of chicle and rubber resulted in the inevitable emigration of indigenous nuclei which had inhabited the Highlands up to the torrid and unhealthy low lands. The resistance of the Mayas to abandon their native soil was of slight avail: with such stratagems as the apparently voluntary contracting, obtained during festive occasions when they were drunk and through an advance, or with violence, they were recruited legally or illegally, and were sent to farms in gangs of prisoners, the indigenous, made into an agricultural proletariat continued to eke out his lamentable existence in a slavery hardly occult. His participation in the production of goods was similar to what he had experienced before the independence. The freedom of deciding one's own life existed only in the official texts.

### Exploitation and repression of the Guatemalan people

What did the twentieth century mean to the Guatemalan people, made up for the greatest part of Mayan Indians and mestizoes? It signified the progressive appropriation of the

resources of the economy by the Northamerican monopolies; it signified the continuation of the exploitation of the peasant class; it signified the succession of rulers, the greatest number of whom were from the military, who conducted themselves as servile defenders of the interests of those engaged in monopolies; it signified the turning over of lands, railroads, buildings and lines of communication to the powerful United Fruit Company, and the excessive, cruel repression of any attempt of liberation or of simple protest. Manuel Estrada Cabrera, Jorge Ubico, Carlos Castillo Armas, Miguel Idigoras Fuentes, Enrique Peralta Azurdia, Julio Cesar Montenegro, Carlos Arana and Eugenio Kjell Langerud are the names of the presidents to whose governments are attributed, if not the direct organization of the slaughter of peasants, workers, students and professionals, most certainly their complicity or support in not impeding or punishing those responsible. The victims are always accused of social dissidence and of being Communists, a designation which, in an indiscriminate form, has come to be applied to anyone who denounces injustices, outrages, and the lack of liberties accorded by the laws.

Some attempts at democratization, at implanting a legislation to assure the rights of labor and the participation of the opposition parties in the electoral process, and which accomplished in the agrarian reform, were initiated during the governments of Juan Jose Arevalo and Jacobo Arbenz. These men were immediately condemned by the monopolies and the Northamerican Government as pro-Communists and had to endure the attacks from the criticisms and the consequences of such conspiracies. Arevalo was faced with the only alternative of expelling the Ambassador of the United States and Arbenz, who had had the temerity to expropriate the lands from the United Fruit, was overthrown because of an invasion which had proceeded from Honduras with the help of Northamerican planes in a military operation which the ambassador of the United States himself had directed.

Driven on by desperation, guerrilla groups had actuated in the Guatemalan fields for some fifteen years, recognizing the firm decision of a people who had the right to put an end to a secular exploitation.

#### The crisis and contradictions in Yucatan

In Yucatan independence was also followed by a period of economic and political crisis. The alienation of uncultivated lands and of the properties of the clergy, the expansion of the common land, and the formal abolition of slavery and tributes, unavoidably had repercussions in the production and in the incomes for public finance. The rivalry between Merida and Campeche brought about serious conflicts, and the resistance of the Yucatecans to their integration in a politically controlled system, while preferring the establishment of a peninsular federalism, culminated in a declaration of independence to which Santa Anna replied with war and the sending of troops.

However, the social structure remained intact. The *hacienda* continued to be the basis for such a structure, exactly as it had been in colonial times in spite of the fact that liberalism declared itself in favor of freedom and equality. With manual labor tied down by debts and advance payments which were payed up, provided in salaries, with the minimum of goods for the survival of the indigenous (foods, blankets, and spirituous liquors), and of which not only the execution of agricultural labors were demanded but also the obligation of gratuitous works for the benefit of the farm, the landowners were able to procure without any restrictions every exploitation and domination in accordance with their desires.

The indigenous masses, kept at arm's length from the political struggles of the whites, hoped only to conserve their common lands or *ejidos* so as to be able to work them, but in point of fact they continued to live in the same abominable conditions of servants and slaves. Although the Mayas are pacific by nature and tradition, they used to revolt when, because of



During the third decade of the XIX century the exploitation of henequen, which had been going on since prehispanic times, received a strong impulsion.

drought, hunger became insupportable. Numerous uprisings of a partial nature arose in the course of the centuries from the very moment of the conquest on; one of them, more important than the others, was directed by Jacinto Canek who in 1761, was cruelly martyred when he was taken prisoner.

#### The caste war

Political circumstances were going to provoke an explosion of rancor accumulated during centuries, on the part of the Mayan Indians against their oppressors. Some guerrillas were organized in order to struggle against the troops who were coming from the center of Mexico, these guerrillas were provided with arms; their constituents were offered exemption from civil contributions. But, when this promise was not completed, the existent conditions of poverty they were in became more aggravated. The petitions of the Mayas were minimal:



These paintings in the most primitive of styles, which are exhibited in the National Museum of Anthropology and History, show the bellicose aspects of the so-called *Guerra de Castas* ("War of the Castes") through which the Peninsula of Yucatan had lived during the XIX and the beginning of the XX century.

reduction of taxes, especially that of the personal tax, and the request for the rights to celebrate marriages and baptisms. Antonio Trujéque, supposedly in favor of Campeche and against Merida, rose in arms in Tihosuco in 1846, and occupied Peto and Valladolid, achieving in this latter a cruel massacre of the white population. Other caudillos followed his example and a battle was started, known as "the caste war", which was characterized by hideous cruelty on the part of both groups. The rebellious Indians succeeded in dominating almost the entire peninsula, with the exception of the cities of Merida and Campeche, the bordering villages and the real road which united them. Nevertheless, because of differences among the chiefs, because of the fear that the aforementioned cities would set up an unbreakable resistance, on account of the lack of ammunition and perhaps, as has been suggested, because of the proximity of the rainy season which was going to determine the moment for preparing and sowing the milpas, the Mayas were withdrawing towards the east of the peninsula. The war had finished in its active phase, which was followed by a terrible repression against the rebels, many of whom were sold to Cuba as slaves. But the resistance remained latent and nothing was able to be done about that until 1904.

#### The henequen fashion

Since the third decade of the nineteenth century attempts had been made to incite the planters to cultivate much more henequen than what had been done since pre-Hispanic times. This cultivation received a strong impulse when a more complete industrialization was begun; exportation to the United States and England increased more and more. When the caste war was terminated in the middle of the century, the cultivation and manufacture of henequen increased considerably. The demand for this from the outside was also increased, and it was necessary to get a greater surface for its cultivation as well as a greater of workers.



The planters tried to obtain uncultivated lands or those supposedly available at whatever price and in whatever form, legal or otherwise. The increase in the large landed estates urgently required more manual work and, in spite of the laws, a system of forced labor was established. Especially for those who used to work only half the week or less; upon them fell the accusation of loafing and, as a result, they were compelled to become incorporated in the farms. The salaries were exceedingly low; the hours of work excessive; the alienation through advance payments and debts insurmountable; the corporal punishment frequent (the stocks and flagellations); the lack of any real hygiene manifest; the education nil, and liberty practically abolished. In actuality the laborer on the henequen estates was a slave.

During the government of Porfirio Diaz, this situation still persisted in all its apogee, but it was on the point to reach a crisis. Some outbreaks of rebellion on the part of the peasants and workers accompanied Madero's campaign; stores that sold arms were assaulted and a number of political chiefs assassinated.

The fall of Diaz brought about the abolition of the common laborers; the right to contract for work; the suppression of the payment of debts through work, and the end of corporal punishment.

#### Reform rulers

The military governor of Yucatan, Salvador Alvarado, was going to make a reality out of legal precepts and to attempt to achieve ample reforms, since he was sincerely concerned with the miserable conditions of the Mayas. He offered a distribution of lands (which he was unable to fulfill): he assured personal and laboral liberties; he created schools; he struggled



against alcoholism and clerical fanaticism; he founded the Tribunals for Conciliation and Arbitration, and abolished serfdom, the labor force not remunerated on the estates. In spite of that, his policy of reform contained serious contradictions in themselves. Within his conception of a "Socialism of the State", the lands ought to have been used to advantage by "the most apt", who, in this case, were the capitalists who had at their disposal the means to acquire and exploit them; in addition, he demanded the use of agricultural machinery for the peasants, but it was available only for the rich, national and foreigner ones. In other words, he was dreaming of a harmonious and Utopian collaboration between capital and labor, under the paternalistic management of the State.

After Alvarado, Felipe Carrillo Puerto tried to solve in a radical fashion the serious agrarian problem. As a cooperative for grouping together all the producers, he created the association known as *Henequeneros de Yucatán* ("The Growers of Henequen of Yucatan"); he established the common lands for the cultivators of henequen, he expropriated

The splendid viceregal architecture is the evidence of the process of evangelization to which the Mayas were subjected. A general view of the remarkable atrium of the Convent of Izamal, Yucatan.

the abandoned estates and united the workers' unions in one Central League of Resistance, whose members formed part of the Socialist Party of the Southeast. But in 1924, when he was ready to distribute the lands for these cultivators, he was murdered. Somewhat later Alvarado met with the same fate.

Only in 1937, was it possible to attain the delivery of lands to the Yucatecan peasants, which was ordered by Lazaro Cardenas. From then on there was organization for the common land for which the exploitation was collective, and the services for the owners of such lands improved to a great extent, especially with regard to the aspect of sanitation. But these measures provoked the irate resistance of the landowners, supported by politicians and even by some labour unions organizations. Once again there was a recurrence to the accusation of Communism. Among the hostility of the ex-owners of the *haciendas* who continued to manufacture fiber as the owners of the machinery which had been returned to them, the exorbitant commissions of the intermediaries, the immorality of the authorities and the fall in price on the international market, the henequen industry suffered a tremendous crisis. The surface cultivated became considerably less; the yield and quality of the product was lower and inferior, and the salary of the peasant went down and down, according to Gonzalez Navarro, to the amount of two or three pesos per week in 1943. The agrarian reform had failed completely and the state of the common land owners vegetated miserably; the only ones who had benefited had been those integrated in the "gilded caste", which controlled industrialization and exportation without having to be concerned with the cultivation. Thirty years later, Lazaro Cardenas recognized that the misery of the Mayan peasant was still a reality.

Despite all that, for some time the conditions of existence of some Mayan groups did improve due to the apogee of the exploitation of the chicle in Campeche and Quintana Roo, as also that of timber dealers in the woods of the south of the peninsula. The intensive extraction of chicle, at the cost of a difficult and hazardous work in inhospitable regions, and the participation in their exploitation of some Mayan rebel caudillos established the pacification of the zone, in which the conquered in the caste war had been concentrated.

In the course of the last years, an intent to diversify agriculture, a certain impulse for cattlebreeding, and the creation of an infrastructure for the development of the tourist trade, principally that of foreign tourists, had improved the standard of living for a minority of the population. However, the secular problems of Mayan farming had not been worked out. As Gonzalez Navarro calls to our attention, the political parties, that of the official group as well as that of the opposition, coincided in affirming just a few years ago, in referring to Yucatan, that "the sickness of the State is hunger" (PRI, *Partido Revolucionario Institucional*, that is, the Institutional Revolutionary Party), and that "the misery is more acute in the fields" (PAN, *Partido Acción Nacional*, that is, The National Action Party).

### The incomformity of the Yucatecan village

Consequences of the seriousness of the problem which affects the Mayas of Yucatan are the frequent, energetic and, at times, violent protests of the owners of the common lands; the manifestations and mutinies against the actions of the Agrarian Bank in which, for example, a puppet representing the president is burned; the physical detriment to the functionaries of the same institution; the clashes between the owners of the common lands; the tumultuous encounters with the highest federal authorities; the conquest of the municipal presidency of Merida by the opposition party, of conservative ideology (PAN), and the taking of the city halls. All these acts reveal the increase of the tide of popular discontent, of the accumulated anger against a system which had not succeeded in settling vital questions inherent in the socio-economic structure.

A unit of destiny issues from the chronicle of the Mayas from the conquest till the present. In distinct geographic environments, with their own ecologic circumstances, within differentiated historical contexts, their existence evolves fatally under the ignominious sign of exploitation and misery.





# The Mayas of Today

The Mayas resisted the tragedy of their conquest, of the terrible oppression of the colonial period and of the political changes brought about by independence and its aftermath. Many times they had cherished, although in vain, the hope that their conditions of life would improve, but they still continue alive and suffering. In the present chapter we want to give, in a brief panoramic view, a summary of the facts which ethnology provides us with. We have to make it quite precise that industrialization, the opening of highways and, in general, the process, each time more accelerated, of economic development were rapidly altering the forms of life for the Mayas. Actually, the information that we are summarizing here corresponds in many cases to a situation that is not present at this time, but rather valid for the first half of the twentieth century. However, this very information is what is still presented in the most recent ethnological compendiums.

## Population

The Mayan population, that is to say, those who exclusively speak some of the Mayan languages or in addition to Spanish (a Spanish generally very limited, hardly adequate for the most indispensable dialogue on simple mercantile relations), can be estimated at about 1 500 000 individuals. Our information for the Mexican territory was provided by the Geographic Institute of the *Universidad Nacional Autónoma de México* and corresponds to the census of 1970; the information dealing with the groups of Guatemala proceeds from the published essays contained in the *Handbook of Mesoamerican Indians* and refers to the census for 1950 and 1960. However, Otto Schumann, the linguist, believes that the total population of the peoples who speak the Mayan languages has to be more than 4 000 000 persons. Their geographic distribution appears on the map which is included in the chapter entitled "The Mayan Men". In this same chapter the somatic and psychologic features are also studied.

The ethnologic information emphasizes a vast variety in these elements, determined by

The somber and dubitative expression of this Lacandon Mayan synthesizes the drama of a people who had experienced the loss of many of their ancient values and which have not attained the understanding of those who pertain to a society which leaves him out.

their environment—geographic and ecologic—by the level of economic development and by historical contingencies; but it is also obvious that, fundamentally, the Mayas lead a life sufficiently similar in the Highlands of Chiapas and Guatemala as in Peten, in the Basins of the Usumacinta and the Motagua and on the Peninsula of Yucatan. This relative existential uniformity can be explained on the basis of a common origin of the Mayan groups, through their historical development, more or less parallel, and their economic as well as present cultural level which are not differentiated to any great extent. The variations which are observed among the different Mayan peoples are due, basically, to their extent of integration with the systems which are socioeconomical and national. It is evident that to the greatest integration with the aforementioned systems corresponds the greater disintegration of indigenous norms, and that the groups which conserved their own culture with the least possible alterations or modifications are those who live marginally.

On the basis of having presented the culture of the Mayan groups more along common than distinct features, we can offer from that a general synthesis without omitting to mention the principal regional or local peculiarities.

### Technology

In the entire Mayan area the same tools are used for agricultural labors: axes, machetes and sticks with a metallic point for sowing. In the Highlands they also use the scythe and the grub hoe and, in flat places dedicated to the culture of wheat, the simple plow drawn by a yoke of oxen. In Guatemala and Chiapas, where textile labors constitute a very important activity they still use, on a family basis, the waist loom, while for industrial production they work with mechanical looms. In Yucatan there are primitive apparatuses which are used to scrape the fleshy part of the henequen to obtain the fiber with which the peasant family makes hammocks or nets. In the altiplano the rudimentary sugar mills serve to extract the sugar from the cane.

### Exploitation of natural resources

In the Mayan area the wide diversity in the climate determines an agricultural production that is sufficiently varied. The low hot lands can provide sugar-cane, coffee, cocoa bean, bananas, oranges, lemons, annonaceae, mamey, sapodillas, papaya, *chayotes*, yuccas, sweet potatoes, *jicamas*, peanuts, watermelons, melon, cotton, henequen and tobacco. The Highlands, temperate or cold, are especially suitable for the cultivation of vegetables such as rice, wheat, oats, barley, potatoes, peaches, pears and apples. However, both in the hot zones as well as in the temperate or cold, basic vegetables are produced to provide alimentation for the Mayas. They are maize, beans, squash and chile. Agriculture, the primordial activity of the Mayan Indian, is practised essentially for what each community needs for its own consumption; with the surpluses the Mayas can acquire clothing and domestic tools; some towns, on the other hand, specialize in specific cultivations for their commercial purposes.

Apart from cultivation, food is complemented by what can be obtained by hunting some animals (the deer, wild boar, rabbit, and birds), although it is more akin to a sport than a productive activity; together with fishing on the marine, lacustrine and river littorals, and with the collection of vegetables and small animals.

The raising of fowl, on a small scale—a dozen hens, as a maximum—is a secondary recourse which provides a limited source of products used for exchange in case of some minor necessity or reserved for celebrations or curative rituals. It is quite common for a peasant family to raise a pig (at the most, two), bought when very small from a half-breed merchant to whom it is afterwards resold when it attains a suitable weight. In his turn, the merchant later resells to the peasant the meat from the hog which has fattened, thereby deriving

Among the distinct groups which integrate the present-day Mayan society are found the Tseltals whose appearance and clothing we are able to take note of here. According to the linguist Otto Schumann, the Mayan population consists of more than four million people distributed over an extensive territory.





many benefits from the different phases of the operation. Rarely will the peasant be able to own one or two cows as a small reserve in case of some greater need for money. In Yucatan, agriculture, which the Mayas had practised before the conquest, has come to be an important staple of the economy. Honey and wax from the apiaries of the peasants come through intermediaries, to the national and world markets.

### Industry

Independently of the making of some women's apparel—most certainly on the point of disappearing—such as blouses and *huipiles*, the industry as a whole, whether on a family basis or that of a manufacturer, is devoted only to commerce. Although certain articles are manufactured in many regions of the Mayan area, others are typical of only some of them, and, in addition, there are towns which make a specialty of a definite product in particular.

Groups of Tzeltals from the Valley of Amatenango, Chiapas. The textile industry, conducted with taste and artistic sensibility, has been especially developed in the Highlands of Chiapas and Guatemala.



In the Highlands of Chiapas and Guatemala the textile industry is especially developed. In those places blouses, shirts or *huipiles* are made from cotton, and other articles such as blankets, jackets and *sarapes* are made out of wool. In Yucatan the making of embroidered *huipiles* has a very special importance. With fabrics from such hard fibers as *ixtle*, pita and henequen, they make bags, nets, riatas, belts, and hammocks.

In many places, both in the high- as well as in the lowlands, with plaited bulrush they make mats, baskets and hats; those made from palm—the *jipijapa*—in Yucatan, are especially fine and considered of unusual value.

Tanning and the manufacture of sandals are very widespread, and each time more use is commonly being made of old tires for soles.

Pottery-making continues to be an important activity in some regions or, more concretely, in some towns, especially in the Highlands of Chiapas and Guatemala. However, the quality of the ceramics no longer maintains a basis for comparison with what was fabricated in the classical Mayan period; the receptacles are intended almost exclusively for domestic use and very few are now decorated. In addition, the use of caceroles, glasses and spelter plates as well as plastic receptacles is becoming a general practise for replacing the clay ones.

In the Highlands the production of *metates* is still in progress, although its use is gradually diminishing, being substituted by small mechanical mills or by the new custom of taking the maize to the nixtamal mill, the proprietor of which is, in general, a half-breed.

With the juice from the sugar cane extracted, as we already mentioned, by primitive sugarmills in the warm lands, the dark sugar, not the refined, is made in a conic or pyramidal form, known by the name of *panela* or *piloncillo*, which means brown or unrefined sugar.

In woody regions the timber is elaborated principally for making furniture, and wardrobes to safeguard the clothes; in some particular towns one can also find a special use for wood in the production of guitars.

For building houses the people of the Highlands are accustomed to make sun-dried clay bricks, and in certain regions the carved tiles for roofs. The preparation of charcoal is also very widespread.

In Yucatan and Campeche the Mayan artisans devote their time to the elaboration of turtle shell objects and gold or silver-work objects, more concretely, gold filigree jewels.

The Lacandons continue to make bows and arrows which, as is supposed, are not intended for hunting, but which they sell to tourists as *souvenirs* from the jungle.

### Commerce

Frequently ethnologists tend to present a vision of complete or almost complete marginalization with regard to the Mayan communities, as if the Mayas had been excluded from the life of the country. In point of fact, through commerce, the Mayan Indian is fully integrated in the regional economy and by means of that, in the national life. As Stavenhagen remarks, the Mayan people are neither self-sufficient nor is theirs a closed world.

The extensive diversity in the climate and ecological environments accounts for the great variety in their products, although some may be lacking in a number of specific regions, while in others they will be excessive.

In the indigenous market, celebrated in the villages, the Mayan sells what is superfluous for him and acquires such products as he does not have; all that is accomplished in transactions of little importance, similar to those done before the conquest, only that now money is used instead of exchanges. The Indian exchanges what he has no need of in the form of maize, coffee and cocoa bean for manufactured articles—clothing and household goods—salt and sugar.

Apart from the interchange in the *tianguis* (market places), the surpluses of the peasant or the domestic artisan are acquired by the half-breed merchant who, in his turn, brings his products to channels of greater population and even cities; many of these are brought also to the international market. The submission of the producer to the merchant has a twofold advantage: the products that the former sells are acquired at a low price, and those that he buys he acquires at a high price. Consequently, the profit for the merchant is also twice as much. In addition, he lends the Mayas items when there is an urgent need of them and they do not have the necessary means, and when they return the equivalent, an interest is charged because of the "favor" he did for them. According to the verbal information of one investigator, loan in maize is returned in the same quantity of coffee, which is a product of a much higher value. With such types of operations the benefits of the merchant increase, while the producer is despoiled.

The result is more than obvious: in the economic process, through commercial relations with the half-breed group, the Mayas exceed their communitarian framework and are clearly included in regional structures which, in their turn, are part of the national economy, the ramification of the world market. But within this mechanism the Mayan finds himself on a lower step which is, of course, a very unfavorable situation.

#### The pattern for settlements

As we have already stated in another chapter, there were different types of human settlements in the pre-Hispanic period, a diversity which is still apparent, modified only by actual economic and political conditions.

The most frequent pattern still continues to be the dispersed form in which the peasant population lives in villages and small hamlets, more or less remote from the municipal administration, in which they are grouped around or in the vicinities of a square, the town hall, the church, and the commercial stores; at times there are also some homes of the indigenous in the urban nucleus, but in such cases their economic and social position is superior to the general standard of their neighbors. The population constitutes what has been designated a "vacant town", since the bulk of the community does not live in it and only visit it to participate in civil acts and religious ceremonies, and also to take part in the market. This situation is typical of the Highlands, but it also prevails, although with greater infrequency, in some of the lowlands.

Among the Lacandons, the small groups that live in the *caribales* scattered throughout the jungle, do not recognize any head and represent the most elementary form of settlement. In some regions of Yucatán the scattered nuclei are accustomed to group themselves together near a well or *cenote*.

The heads can present an aspect more or less modern on the basis of their degree of integration in the regional and national structures. Among the Chols, for example, the houses of the half-breeds present an aspect that is quite up-to-date for the villages. Among the Chontals, the heads are absolutely modern; the streets marked with intersections to form squares, and buildings which consist of the church, the municipal palace, public buildings and good stores and inns; besides all that they have water service, electric lights, mail, and telegraph service. The riverside towns, which depend on these centers, are generally restricted to one single street which runs parallel to the river, with the addition of groups of dispersed humble dwellings.

The Mayas of Quintana Roo live in small scattered towns without streets, in which the houses are grouped together by families; they have no civic center nor stores, and the only building which distinguishes itself from all the others is the *popol-na*, the house of the people of the village in which are celebrated the meetings of neighbors and, in addition, other acts

of interest for the population as a whole. The head is at the same time also the sanctuary and contains the most important temple, the dwelling of the "great father", the community house, the quarters of the military companies, and some huts. The pattern for the most modern settlement is the henequen zone in Yucatan, that is to say, around Merida and along the real road which unites Merida and Campeche. There one finds compact villages with streets having intersections, in the center of which the administrative offices are grouped together as well as the church and the commercial stores. In the same region a part of the population continues to live on the ancient estates.

### Dwellings

The type of dwelling varies in accordance with the degree of acculturation, and the geographic environment together with the economic and social standard. Under the best of circumstances it would be possible to place the homes with stone walls, tiled roofs, with a number of rooms and up to two storeys, in the most important centers of the Highlands of Guatemala. As the most lowly type we would have the flimsy and uncomfortable huts of the Lancandons, some of which have walls from thin trunks and branches; others lack walls and have a palm roof which extends almost to the ground. The walls can be from refuse or sun-dried clay bricks with a flat layer of lime or without it in the Highlands, or from plaited cane and mud as is the general case in Yucatan. In some of the villages in the wooded and cold regions they are accustomed to set up boards placed vertically. The roofs, except for those mentioned of tile, are, on the whole, from palm (guano) or dried grass, forming four slopes and terminating in a ridge, but every day it is becoming more frequent to substitute the palm roof for zinc sheets. Almost always the floor is from earth that had been solidly packed down; on rare occasions it is coated with lime. The plan is rectangular or square, with the exception of those in Yucatan which have a prevailing oval form.

The Mayan dwellings have no windows, and the only openings they do have consist of the door at the front of the house. Generally they are built on a platform of slight elevation to which there is access by means of several steps. The interior may consist of one single room in which the entire family lives, as is the case in Yucatan. It may also be divided into two sections, one serves as the kitchen and anteroom, while the other is the dormitory as in the Highlands. The kitchen can also be annexed to the house. Almost always an awning or canopy serves to protect objects as for the storage of the ears of corn. Among the Chortis multiple types of dwellings are found, which provide living quarters for a number of related families; but the general rule is to have a house for only one family.

Every house has various annexes such as the hencoop, the pigsty, the corral, the granary and, at times, a steam bath (*temazcal*), and in Yucatan, an apiary. It is quite customary for each dwelling unit to have its garden with vegetables and fruit trees.

In proportion to the economic development of a village and its integration in the national community, the homes from rubblework and roofs from tiles or sheets are grouped in the center, while the dwellings from plaited cane and mud with palm roofs are on the periphery.

### Household appurtenances

As it was in pre-Hispanic times, now too the household appurtenances are extremely limited. The usual, whether in the Highlands or the lowlands, is the cooking stove with three stones with its dish for cooking *tortillas*, the *metate* on the floor or on top of a bench (Yucatan), some small seats, a small table and a ramrod. The clay receptacles are beginning to be used less and less, being replaced by spelter plates and goblets, or by metallic or plastic buckets; even the *metate* is giving up its top first place in favor of the *nixtamal* mill.



For sleeping, the Mayan male of the Highlands utilizes a bed made from boards, placed on top of two crosspieces held together by four props; on top of that he spreads his mat and covers himself with the *sarape*. In very warm climates the hammock made from cotton thread from henequen fibers or from canvas serves as the bed. Baskets, boxes or wooden trunks to keep clothes and something else like a small chair, a tray suspended from the roof for comestibles, or a washtub for washing clothes (Yucatán), all these serve to complete the household appurtenances. In the more developed towns, a radio or television antenna is seen protruding from the roof; one can also see a bicycle leaning against the façade, and a sewing machine, all of which can form part of the household goods of the home.

### Clothing

The variety presented by the indigenous dress, at the regional and local level, is truly noteworthy; but the most extraordinary phenomenon is the increasing tendency—with the exception of the more margined and more conservative groups, as the Lacandons and the Mayas of Quintana Roo—to replace much of their clothing now for manufactured items, the use of which will become more uniform with the time throughout the Mayan population, especially the masculine element. The blue cloth pants and shirt, in their universal generalization, has not escaped attention in the Mayan area.

The regional markets, *tianguis*, a great attraction for the tourist, are still predominant in the market of the Mayas economy. One of the most typical and known is that in San Cristobal de las Casas, Chiapas.



Naturally one cannot deny that clothing is completely different in the frigid lands from that in the torrid countries. Articles of clothing from wool as jackets and *ponchos* are typical of the former and constitute complete outfits for the men complemented by hats, and, in the rainy season by palm leaf capes; in the torrid zones, however, the shirt and cotton trousers are sufficient. The trousers are held in place tied with a sash of red cotton; the hat is from palm and the sandals from leather. In Yucatan the short trousers and apron have disappeared almost completely with the exception of Quintana Roo. For parties the simple undershirt, which is used every day, together with the loose-fitting men's shirt make up the entire attire; the sandals or simple hemp sandals are now substituted by a shoe with a heel and thick sole. The women use skirts from cotton or wool according to the geographic environment, with more or less long blouses and ample *huipiles* and shawls; they are accustomed to go barefoot, except in Yucatan where the use of house-slippers is common. In general they deck themselves out with necklaces from glass beads in the Highlands and with jewels from gold filigree in Yucatan.

#### Nutrition

The nutrition of the Mayan indigenous is customarily confined to maize, beans and squash, seasoned with chile. Maize is eaten in *tortillas* and tamales, or it is drunk in the form of a mixture from corn and sugar, or prepared with corn-meal gruel, or like a "drink" to which cocoa is added. Only on rare occasions is meat eaten, at most once a week or on festive days among the more prosperous Mayas of the larger centers. However, eventually they do get some form of meat from hunting (deer, rabbit, armadillo and birds). On the shores of the sea, rivers, lakes and lagoons, fishing provides an important nutritional element in the diet. Of course in some regions of the torrid lands, tubercles, mainly the sweet potato and yucca, complete the foods available.

It has become a custom to drink black coffee, sweetened only with unrefined sugar. As alcoholic drinks we have already mentioned *balché* used in Yucatecan ritual ceremonies; *chicha* of the Chortis, and the strong commercial spiritous liquor from brown sugar in the Highlands of Chiapas and Guatemala.

#### Land tenure

Through the time and on the extension of the Mayan area, a process of transformation has been in operation with the private properties of the land, which, prior to the conquest, had belonged in its greatest part to the community as a whole. Communal lands of the *calpules* and *ejidos* (that is, the common lands), are each time more divided up and have been going into individual hands, especially that of the half-breed nuclei, established in the towns, villas and cities. The lands which the communities had been able to conserve are now scarcer and scarcer, and they are limited to the least fertile; they hardly serve for pasture grounds, for the collection of fruits and the obtaining of wood. The lands of the *calpules* or those that pertain to the large families are being divided up and are frequently purchased by the half-breed. The common lands, worked individually, are subjected to the same phenomenon of excessive division and are not even sufficient to assure the maintenance of a family.

The development of private property, which was initiated with the conquest and was increased by the Laws of the Reform as well as by the expropriation of the goods of the clergy, constitutes the natural process which reflects the growth of capitalism among the peasantry. The Mayan Indian, stripped of his land, becomes a rural worker on a lower salary, level than that which prevailed under the system of exploitation. The insufficiency of cultivable lands compelled the Mayan Indian to work on the properties of the coffee plantations owners, or, eventually, in such activities as those connected with timber or the extraction of

the chicle. In the Lacandon jungle, which still offers, although perhaps for very little more time, possibilities of lands for cultivation, a seminomadism predominates which compels the peasant to look for new lands and to burn sections of the woods.

#### Social organization

The traditional system of kinship relationships evolved parallel to the general process of acculturation; this is especially the case in the communities most integrated with this process. In them the class stratification tends to wipe out the vestiges of the traditional system and place the indigenous society close to that of the mestizo.

In Stavenhagen's analysis, the stratification does not exist within the indigenous groups but it is assuredly encountered in the half-breed groups, in which it is revealed by the level of riches in lands and goods; by the degree of education; by the type of manual or professional occupation and, in some cases, by the feeling of belonging to an aristocrat lineage of colonial ancestry. But the stratification that is noteworthy, definite and irreversible, is the one that rules over the relationships between the mestizoes and the indigenous.

The barrier which separates some from the others is not of an ethnic nature, but fundamentally of an economic and cultural character, however this situation coincides with the ethnic division. The indigenous always finds himself in states of inferiority; exploited by the mestizo without difference if he sells him something or buys something from him; treated despotically or paternalistically according to the circumstances, with few opportunities to ascend the social ladder due, on the one hand, to the rejection and oppressions from the higher class and, on the other hand, because of their firm adhesion to their own community. Only some Indians who, perhaps through a small scale commerce, succeed little by little in getting out of their misery will be able to become mestizoes according to the extent that they sever the ties with their own group.

It is clear that this stratification started with the conquest (substituting the pre-Hispanic stratification) and that later was strengthened in the colonial period, persisting in actuality with all its implications: economic, cultural, social and political. The colonial relations, as Stavenhagen emphasizes, turned to class distinctions, giving place to what has been called "internal colonialism" in the framework of a national society.

As far as the kinship relations within the indigenous groups are concerned, they present local variations of a general pattern. In many villages of the Highlands, patrilineal exogamic clans correspond to the *capulli*, subdivided into lineages with indigenous surnames (nicknames). In other villages there is a dual division, with endogamy in each sector, without clans or lineages. The community can also be divided into districts similar to the *calpules*, with bilateral kinship.

In accordance with the regions, for example in the Highlands, the family is preferentially nuclear or rather extensive and constitutes the only social entity. The residence can be on a bilocal basis, but almost always it is patrilocal and the inheritance patrilineal.

In the lowlands the family organization is customarily bilateral, but by preference it is patrilineal and with a residence for the paternal side. Basically the family is like a nucleus; the large size family is tending to disappear. Among the Lacandons the exogamic clans are patrilineal, divided into lineages bearing the names of animals (similar to those of the Tzeltals who had still existed at the beginning of this century), and they are in a most advanced state of disintegration.

In summary, it can be affirmed that there is already the progressive disintegration of the kinship relationships in the Mayan indigenous communities and that they are being substituted by class stratification of a national society with which these communities are each time more integrated.

Nowadays the indigenous Mayan population continues with the process of "acculturation" which does not seem to terminate and provokes conflicting and singular situations. That is the case of these two indigenous wearing a hat, shirt and traditional pants; however, their shoes are obviously of outside origin.



### Political organization

Within the same phenomenon of integration among the indigenous groups with the national economic structure, the political integration is realized little by little, although in the Highlands of Chiapas and Guatemala a mixed system of government survives. In Yucatan the communities are completely incorporated in the municipal system, which functions with a president at the head and commissaries or agents in the villages or places depending on them. However, one exception to this is the theocratic-military government of the most conservative villages, concentrated in Quintana Roo. The highest political chief is, at the same, the High Priest and his title in Yucatecan Maya (*nohoch tata*) means "Great Father". His functions comprise the supervision of ceremonial rights, the vigilance over discipline, as much for the priests as for the military, and in a general form the absolute political control of the populace. A hierarchy of secretaries and scribes works under the orders of the chiefs and among their obligations are the care of the sacred books (among which the ethnologist Villa Rojas found the *Chilam Balam* of Tusik). All the married men are grouped together in companies directed by three heads and their principal mission is to take care of the sanctuary where the cross is kept.

In some of the villages of the Chols and Chontals, "principals" or "masters", who are respected old men well acquainted with the common problems, act as advisors of the municipal authorities; this is a survival of an indigenous government which has disappeared. But in the lowlands this form of government no longer exists, nor is any system of offices in effect which is similar to that of the Highlands.

In the latter as in the rest of the national territory, a city council functions; it constitutes a part of the State and Federal administration, and usually comprises a mayor, various syndics and aldermen with their assistants, a secretary, a treasurer, various constables, a file clerk and rural guards. Some of these offices, as that of mayor, syndics and aldermen, are by election, while the rest are by appointment. An attempt is made to see to it that indigenous functionaries take care of the indigenous matters and the half-breed functionaries of their own. However, the occupation by mestizoes of specific posts, as that of secretary, treasurer, file clerk and rural guards, reveals the dominating nature of the half-breed minority, since the functions which these offices imply are decisive in the municipal organism although the mayor may be indigenous, whose office is more along the lines of a representative than that of an executive.

The indigenous government functions in conjunction with the city council, with the powers simultaneously political and religious, since it takes part in the civil matters of the community and in the maintenance of the beliefs. In the *calpul*, apart from the municipal functionaries, the indigenous hierarchy plays an important role since the "principal", who acts as chief, embraces all the latter ecclesiastical functionaries. Among these functionaries are the treasurers, the majors, devout persons, and the *mayordomos* as well as the constables. The priests, the magicians and witch doctors complete the picture of the complex organism which controls the political and religious life of the community. The political power which traditionally was in the hands of the "principals", the old men of great prestige and wisdom, has been passing, little by little, to the indigenous government which is integrated through a roster of offices.

### System of offices

The system of offices regulates the political and religious life of the community with the active participation of a great part of the population. The offices carry an obligatory nature and imply strong distributions of property and wealth, which very frequently signify the getting into debt for a number of years of their owners without more recompenses than the prestige acquired and the increase in the power of their corresponding *nahuales*. These offices are on different levels and the step from one to the other is duly established. The individual who does not accept an office would be in a very difficult situation in

in the heart of the community and would expose himself to reprisals through some of the chiefs, under the supposed inspiration of their *nahuales*.

The fundamental obligations comprise the care of the temple and of the saints, the expenses involved in religious festivals, the fulfillment of the orders coming from the town council and the participation in judicial activities. Although the system is tending to decline, it still continues in full force in many towns of Chiapas and Guatemala.

As a result of the conquest, the indigenous hierarchies, at least the most compliant caciques, were utilized as the links between the conquerors and the conquered. Later on, in order to obtain a better control of the indigenous population, the system of offices was created through the participation of its own members. The control was not only of a political nature, but also religious, since it served the Church as a means of imposing its dogmas and beliefs, regarding that the formation of an indigenous clergy was considered hazardous. For the Mayan populace the system permitted them to assume functions in the colonial administration, to conserve their unity and, in part, their beliefs, since on accepting the external aspects of the Catholic religion and adopting them to their own credo, they were able to continue venerating their secular gods. In the political aspect, the connection between the indigenous and the municipal structures guaranteed the conservation of the former, avoiding their disappearance within the national frame.

The system of offices, with the expenses one presumes are needed for those who occupy them, undoubtedly determines an economic leveling within the indigenous community and serves as an impediment for nurturing the formation of economic and social layers which would be advantageous to them. But the vast expenditures inherent in the offices do not contribute anything to benefit the indigenous population. The beneficiaries, that is, the half-breed, are those who provide the enormous quantities of spiritous liquors, and rockets, and the extravagant clothes for the saints, and, in this way, through the ritual ceremonies contribute to exacerbate their religious fanaticism and strengthen their subjection in a frame of misery and lack of culture. The existence of the offices, as Stavenhagen emphasizes, is an important factor which reaffirms the difference in class between the indigenous and the mestizoes.

The Peruvian peasants have grasped the meaning of this problem. One of the obstacles over which agrarian reform stumbles is precisely the system of offices. Hugo Neira Samanez has familiarized us with the opinions of an agrarian leader, Saturnino Huillca who bitterly recalls: "In order to acquire the positions we had to sell young sheep, little cows... In this way the people became completely impoverished. For that reason no one now wants to have the offices. Having them we were unable to provide an education for our children; the money that we obtained was to enable us to pay for the offices. For that reason they have disappeared and we no longer want them". And he caustically concludes: "The office is our enemy. It has nothing connected with truth for us. We all have thought over. And the positions are disappearing. Not only here, but also in other towns. They are disappearing completely". The Peruvian peasant leader understood that the offices were utilized for the benefit of the oppressors. "The landowners tell us that offices are available. They say that we hold the masses for the Lord and the Virgin because they are divine. But we have already realized. Consequently, we take no note of us then".

Would that the Peruvian experience would be of use for the peasants of Chiapas and Guatemala, so that they would break with a system that was created to subjugate them and keep them in ignorance and misery.

### Religion

The religious ideas of the Mayas of today consist of a mixture of elements, beliefs, practises and rituals that are both indigenous and Christian. The Mayan believes in God, in Christ, in the Virgin Mary and in the Saints; he participates in masses and processions; he celebrates the ceremonies and holidays which are indicated on the calendar of the saints' days; he says his prayers, litanies and the prayers for the dead. But in the same way he pays



The cross, among some of the present Mayan groups of the central and northern areas, is something more than the symbol of the Passion of Christ. During the *Guerra de las Castas* ("War of the Castes") it was thought that there existed crosses which spoke and transmitted prophecies as well as divine orders.

homage to "Father Sun", who is also Christ; to "Mother Earth"; to the Moon who is the "Grandmother Goddess" or the Virgin Mary. The Chortis venerate the *Chicchan* who control the winds, the spirits, death and all the natural phenomena. The Mayas of the Yucatan peninsula keep on worshiping the *Balames* and *Pauhtunes* who protect the people, the corn-fields and the mountains, and so they worship also the gods of the jungle and the multitude of supernatural beings who are integrated with the *Yuntzilob*, the owners, the masters or "worthy lords". *Chaac*, the god of rain, continues to occupy first place in their beliefs and religious practises.

The Lacandons, in addition to venerating them, also pay homage to *Kin* (the Sun), *Ixchel* (the Moon), *Kisin* (the Infraworld) and *Mensaback* (or *Metzabac*), who is the goddess who makes the rain, sends fever and guards the good souls in a cave near the lake which bears her name; they represent their gods in crude figures modeled on their hearths and they bring them offerings in the archaeological sites where they believe that they still dwell (Yaxchilan, Bonampak, and Palenque).

As far as the cross is concerned, it is something more than the symbol for the passion of Christ: it has come to be a real god among the Mayas of Quintana Roo. Among them has sprung up a Messianic movement with the hope that the Messiah will help them return to the times in which they did not yet know the oppression from the whites. The cross is the patroness of each village and the Most Holy Cross has its sanctuary in the principal position. There were crosses that talk to transmit (with the help of an occult ventriloquist) the prophecies and divine orders.

For the Mayas there exist supernatural beings who protect animals, springs of water, lagoons and *cenotes*; a whole invisible world with beings and gods, both favorable and adverse, among whom figure, in Yucatan, the *aluxes*, playful little genii, of the *Xtabai*, who seduce men in order to steal their souls. In the Highlands, the mountains are sacred, since in them live the spirits of the ancestors, and many other natural places are an object of worship and are marked with crosses; such places are hills, crags, caves, wells, springs of water and lakes. In the Altiplano homage is also paid to the souls of the departed.

Pre-Hispanic concepts survive in the cosmogony, such as the belief in successive humanities which were destroyed by floods, as in Yucatan, and others in which the indigenous and the Christian are confused, as in the case of the Chinautlecanos who believe in a deluge for forty days from which only one boy and one girl were saved who lived in a paradise from which, however, they were driven out, since they had not resisted temptation; afterwards, they were set up in Chinautla and thus provided the founding of its population.

The cosmological concepts also resemble the pre-Hispanic concepts: in Yucatan they believe that the earth is flat, quadrangular, with a god in very corner sustaining the heavens (which also has deities in the corners), and in the Highlands in a concave heaven sustained by columns. The infraworld is a place where a certain kind of earthly life subsists and constitutes the *Metnal*, the kingdom of *Kisin*, the god of death in the lowlands, and the *Katibak* in the Highlands.

We have mentioned the worship of the Sun and the Moon in Chiapas and Guatemala; such a cult does not exist in the lowlands, but the lunar influence is considered important for the agricultural process, for procreation and for childbirth, and besides also as the cause of diseases. The eclipses are explained as the result of arguments between the Sun and the Moon in the Highlands, or due to monsters which consume the star in Yucatan; it is supposed that these phenomena produce spots on the skin, moles and deformities in the new-born and are particularly dangerous to pregnant women.

Rituals, ceremonies and holidays associated with religious beliefs embrace all the aspects of the family and communal life. Routine or improvised acts customarily accompany

prayers. Prayers are made incessantly as are also expressions of gratitude. The supernatural beings are invoked to compensate, with their benevolent intervention, what nature refrains from doing or denies: health and good harvests. Divine help is sought for the protection of the child and the corn-field. Before starting out on a journey prayers are said. Rituals are celebrated when the mountain is going to fall in, when the woods are set fire to and upon starting the sowing as also to ask for water in the event that the rains are insufficient (*Cha-Chaac*) and to celebrate the harvest. Naturally, they also pray to the gods in the time of illnesses, plagues or any other misfortune.

The holidays and ceremonies—organized by brotherhoods or administratorships of estates—are especially closely bound to the patron saint of the village, but also to many other saints as well favored by the faith of the inhabitants. Civil events, such as the changes in the authorities, or religious ones, such as the carnival celebration, Holy Week, All Saint's Day and the Day of the Dead, Christmas and the New Year, all provide a basis for public festivities which go for many days, with the presentation of dances or works of the traditional theater, inspired by historic or religious narratives in which masks are very important. Pre-Hispanic musical instruments, and colonial as well as modern, accompany the dances; these instruments, depending on the regions, can be drums, turtle carapaces beaten with the bone of the deer, marine snails, timbrels, flutes, marimbas, shawns, crude guitars and including even battery radios and phonographs. In these celebrations pyrotechnists have to take an active part and throw hundreds of their artifacts into the air; and as a primordial element, not for stimulating or evoking joy, but rather as part of the ritual, great quantities of spirituous liquor are imbibed, which produce a general state of heavy drunkenness. To fulfill the religious mandates in the traditional fashion signifies, after all, an incredible loss of time, useless expenditures and inebriation, with their customary consequences of brawls and frequent violent acts. It has to be taken cognizance of that the diffusion of Protestantism is marked by a great effort in the attempt to remedy the calamity from alcoholism, so firmly bound to these ceremonies and religious celebrations.

### Nahualismo

It is essentially in the Highlands of Chiapas and Guatemala where that peculiar phenomenon known as *nahualismo* is encountered, which must have very remote roots as far as time is concerned. In the lowlands there still survives among the Chols and Chontals the belief in the *nahuals*. To them they attribute sicknesses, terrors and, in general, all misfortunes which supposedly have their origin in magic. However, the action of brigades and of medical offices among the Chontals is contributing substantially to a reduced degree with reference to the belief that diseases are caused by witchcraft.

The indigenous believe that when a child is born, simultaneously there comes into the world an animal (a cat, dog, fox, jaguar, bat, sparrow-hawk, etc.) which will be its *nahual*, that is to say, its companion and whose life will be indissolubly bound to his. The *nahual* can also be a deformed being or a dwarf, or even a ball of fire; the *nahuales* are invisible and only act at night. The *nahual* continues to acquire power in accordance with the extent that his master rises in the social scale and comes to be feared by the rest: it is the *nahual* who informs his chiefs about the actions of the members of the community, about their private life and their participation in communal activities. The *nahual* is the powerful being who sends diseases and misfortunes to those who deviate from the rules of the community and commit such crimes as robbery, homicide and illicit sexual relations. It is hazardous to attempt to go beyond the common standard to acquire a corn-field that is larger than the usual or to acquire lands that are not indispensable; to construct a large or more attractive house or to buy a horse. The *nahual* also denounces anyone who is accustomed to gossip, to defame anyone of the inhabitants or to reveal intimacies of families. When the infraction of these rules comes to the knowledge of any of the indigenous authorities, their *nahuales* thrust all the weight of the supernatural sanctions against the guilty. The *nahualismo* functions as a



factor of control in maintaining the social order, maintaining respect for the traditional standards and communal life within a rigorous frame of morality.

### The calendar

The pre-Hispanic calendar disappeared in the lowlands but it still remains in force in the Highlands of Chiapas and Guatemala. The Tzotzils and Tzeltals use the calendar of 365 days, divided into 18 months, with twenty days in each, leaving five surplus days considered unlucky. This calendar is used to determine the exact dates for farming tasks, for the festivals for the calendar of the saints' days and religious events; for the changes in the rulers; for the appropriate periods for the construction of houses; for the realization of the works of the artisans or the migration to the estates of the coffee planters. Among the different groups in the Highlands of Guatemala (the Mam, Kanjobal, Chuj and Ixil), the same calendar of 365 days with the Mayan names for the 18 months continue to be used for purposes of divination, as a chronologic basis for accomplishing the work in the field, and also for the ritual acts. As in the pre-Hispanic epoch, the change of the "Year-Bearer", the day on which the year is initiated, is commemorated through a ceremony. With regard to the religious calendar of 260 days (*tzolkin*), it has been conserved in only a very few communities.

### The cycle of life

When comparison is made between the customs and ceremonies associated with the events which mark the successive phases of the life of the individual, a great similitude can be observed in the entire Mayan area. That points to a common background for all the Mayas in which the system of beliefs was perceptibly the same. However much the process of acculturation tends to be obliterating these practises, their survival through the centuries reveals the profoundly conservative nature of this people.

As all the indigenous peoples, the Mayas too desire to have many children, above all, sons, that is, strength which in the future will help them improve or, at the very least, assure the maintenance of the family until they in their turn can support their own families. For that reason the birth of a child is rarely avoided through abortions produced by specific herbs.

For the parturition it is customary to contract the services of a mid-wife. Frequently, after the umbilical cord has been cut, it is left on the top of an ear of corn which is later sown. It is also a custom to put it under the cooking stove which will play an important part in life, if it is a girl, or on the branch of a tree so that, if it is a boy, he may grow tall and strong; or even to leave it in the corn-field so that he may be a good farmer; or also in the *temazcal*. The idea of safe-guarding it in a warm place such as the kitchen stove, or in a sacred place, in which case it is left on the crosses, is still practised in a number of towns.

During infancy every effort is made to assure the greatest protection for the child, not only so that no material harm can come to him, but also that he may not lose his soul; magical means are utilized for this as, for example, to put a small wax ball on his head or a colored ribbon on his wrists, as is done in Chiapas. In the Highlands, a ceremony is celebrated when the baby is three or four months old; in the course of this ceremony a name is given to the child and he is presented to the saint who will have to protect him. In Yucatan at the same age they still celebrate the ceremony of the *hetzmek* (*xekmeke* among the Chontals), which consists of carrying the baby for the first time astride on the hips, in accordance with the Yucatecan custom. It also serves as the act for presenting objects to the child which he will utilize when he is older: a machete, an ax, a book, a pencil, if it is a boy; scissors, needles and the *metate* if it is a girl.

The traditional marriage is arranged by the parents or a professional intermediary, without the consent of the interested parties. However, among the more cultured Chontals, it is not unusual for the affianced to decide on their wedding and even to run away in order to marry later or live in a free union. It is the custom for the family of the fiancé to make



a gift to the family of the fiancée, which in some villages is referred to as “the price of the wife”, the dowry which consists principally of food and drinks, such as the following: *tortillas*, eggs, *pozole*, meat, beans, chile and spiritous liquor in the Highlands; or jewels, blankets, ribbons, cigars, bread, chocolate and rum, which is typical of Yucatan.

The wedding is an excellent pretext for a festivity to which the relatives and friends are invited, and which, as all the other parties, terminates in a general binge. As if that were not enough, in towns of the Highlands the party and the gifts are repeated at specific intervals for as many as two or three times. To remain in the home of the bride’s family for a period ranging from six months to a year is the rule in the Mayan area: the young husband thus works for his in-laws.

The Lacandons celebrate marriage in a very simple form which probably has its origin in pre-Hispanic times: the couple is presented to the gods in the form of their effigy which is shaped over the hearth; *pozole* and *balché* are offered as a toast to them.

Due to the moral control to which we have already referred when we were treating the *nahualismo*, cases of polygamy are rare among the Mayas, with the exception of the

The religious rituals have still not disappeared from the present Mayan population. Magic and the deification of natural forces; “nahualism” and other elements continue to be in vogue in many regions as in the case of this painting by Raul Anguiano which represents a Lacandon ritual (The National Museum of Anthropology).

Lacandons, for the simple reason that the men are far less than the women, and also for the fact that women need to have protection, which begins from their infancy if they have no father. Divorces are also relatively infrequent although in Yucatan it is quite normal for a couple to separate and then, each one can enter into a marital union with another mate. Landa observed this act in the sixteenth century and he attributed it to the early age at which they then married. But it seems more likely to be due to a certain indifference on the part of the Yucatecan Mayan as far as sexual relations are concerned.

The many diseases which are imputed to the inhabitants of the Mayan towns have their origin fundamentally in malnutrition, in lack of hygiene, general unwholesome conditions, contaminations through the water and contact with animals, independent of the natural environment which is often hostile because of excessive heat, sudden changes in the temperature, and the insects which are the transmitters of viruses. However, only very partially are the illnesses considered as occasioned by natural phenomena and in these cases are treated in an empiric form by means of remedies, the basis of which is principally herbs; the efficacy of this type of treatment has been confirmed by centuries of tradition. In general, an illness is a harm sent by supernatural beings or witches through the malign *nahuales* and as a punishment for having offended the gods or the spirits, or for having infringed upon the beliefs and good customs; it is also believed that they proceed from pernicious "winds". The work of divining the magic cause and recommending the remedy is the task of the sorcerer. Among the inherent properties in medicine much importance is given to what may be termed "hot" or "cold", concepts which are not in any way related to thermic conditions; in the same way reference is made to meals which does not imply actual temperatures of the food.

For some definite Mayan peoples, death is not considered a natural phenomenon, but rather always as a detriment sent by someone, or as a supernatural punishment. The fear of the spirit of the dead is general, being especially dangerous in the moment in which the dying expires (Yucatan), that is as much applicable to inanimate objects as household goods, or food, as to people; for that reason they are removed from the room; in other regions, the danger continues to be even greater for a number of days.

The burial is made in a coffin, mat or a simple canvas cloth, with the body dressed in its best clothes and accompanied by objects which pertained to him; it is supposed that he will continue its use in the life beyond, and foods which he will have need of, and even some money. Those who take part are accustomed not to manifest their sorrow "so as not to distress the dead", but it is frequent for the relatives, at certain times of the vigil and during the journey to the cemetery, to break out in shouts and lamentations. The watch is usually accompanied by music, the burning of incense and sufficient distribution of spiritous liquor. In some regions the dead are buried below or near the family shed. The Lacandons set up in each corner of the ditch a dog made out of braided palms. Among the Tzotzils it is believed that the souls of the children are lodged in a tree with many breasts full of milk, while those of the women who died in childbirth are going to a solar paradise and are accompanied by a star throughout their trip by day and by night. The other souls go to *Katibak*, the infraworld which they reach by crossing a river with the help of a black dog, and there they remain a definite time, suffering temporary torments before being reunited with their relatives in a place of eternal happiness; that is not the case with criminals as their souls are burned. Among the Mayas of Yucatan the good souls go to Glory and the bad ones to *Metnal*, where they are tortured; finally, however, all return to earth, being incarnated preferably in new-born children, and other in animals or whirlwinds.

As can be clearly perceived, the beliefs with regard to death and the life beyond among the Mayas of today, as also their entire system of concepts, present one of the richest and most interesting amalgams of Christian and indigenous elements.



# Epilogue

## Material and intellectual achievements

Without arriving at the dithyramb of Morley, for whom the Mayas would have been "the most brilliant on the planet", there is, nevertheless, no doubt that this people stand out as the creator of one of the greatest civilizations of antiquity. In this work we have tried to sketch their history and their most transcendental attainments.

We have seen how, through the development of their productive forces, it was possible to go beyond the formative horizon in which the Mesoamerican culture had still not succeeded in attaining their diversification and had been maintained on a level of elementary knowledge, in which the economic life was self-sufficient for each community and the social organization was based on kinship relations. There was not a real political system in which each one accomplished his tasks and received in exchange his just share of the production of goods.

During more than a thousand years (the lower and middle preclassical periods) Mayan culture was slowly forming itself through its own motivation and contributions from other cultures as well, until it crystalized in the classical period; this latter anticipated a lapse of a number of centuries (the upper preclassical and protoclassical periods), in which it completed its integration, until it remained clearly differentiated from the other contemporaneous cultures although a common background provided a relationship between them.

An enormous demographic growth, the progressive occupation of the entire area, probable although limited technologic advantages; gigantic efforts of a people animated by a profound religious faith and directed by an omnipotent minority; efficient control of the population through political and religious organisms; an intimate struggle in order to respond to the challenge of an unpleasant climate and a nature, hostile in many parts, are some of the causes which explain what has at times been designated as "the Mayan miracle".

In the construction of hundreds of ceremonial centers, which contain thousands of

As the gilded light which is reflected from the central personage on the central slab of the slaves of Palenque, so in this way "a light of hope has begun to appear on the horizon of the indigenous peoples of America. The Mayas, among them, anguished and impatient are awaiting their hour".

buildings, many architects discovered the advantages of the vaulted roof and their daring was on a par with their imagination. High pyramids; temples crowned by crestings which attain a height of as much as 70 meters; structures of a number of storeys; dwelling units and perhaps administrative units with tens and tens of rooms, without counting the places for ball-games; typical temples of the indigenous; sepulchers; dams; pits; wide roads; all of these show us the variety, the richness, the high level attained in Mayan architecture. To the ceremonial units real cities were integrated which consisted of several thousands of inhabitants; in these units not only the dignitaries and their servants lived but also the many civil and religious bureaucrats, the military leaders, the traders and specialized artisans.

The thousands of buildings were decorated with care. Crestings, friezes, walls, columns, bases and pedestals, lintels and other elements were covered with bas-reliefs of molded stucco or cut from stone, probably all polychromatic. The stele and altars were set up in front of many of them. The sculptural art offers a genuine magnificent aesthetic quality and embraces all the techniques; in like manner the regional styles are also very varied. Gods, hierarchs, religious or palatial scenes, symbols and hieroglyphic texts provide us with a synthetic view of what the ruling class had been concerned with.

The pictorial art of the Mayas is not inferior to their architectonic and sculptural expressions. Few are the examples which time and the inclemency of the jungle have left us, but definitely a sufficient number so that we may admire the talent of the Mayan painters. For example, the murals of Bonampak can be compared to those that we know from Egypt and India. The qualities in the observation of nature, the faithful reproduction, the fine sense of composition, the audacious phantasy and the ability to stylize what characterizes Mayan sculpture, are also present in the paintings.

In the arts which we designate "minor", we are again going to recognize the genius of the Mayan artists. In ceramics we see simple or complex forms, bare or profusely decorated through techniques which range from the simple incision to the modeled complex, going through the relief, just as the use of paint which was applied over a fresh background after the baking, or integrated into the paste during the baking. The ritual containers, a source of wealth because of the information they have to offer, constitute, in addition, an inexhaustible reserve for aesthetic pleasures.

The clay figurines deserve a special mention because of their technical perfection because of the genuine humanity which exudes from them on different hierarchic levels, occupations, ages and physical particularities, by means of the phantasy of the beings into which the human and animal are combined.

The Mayan lapidaries were also great artists; they manufactured without metal instruments beautiful jewels out of jade: diadems, complex earcaps, nose rings, necklaces, breast guards, rings and masks, all carefully elaborated.

But the Mayas were not only outstanding in material accomplishments. What amazes us is the fact that without instruments for observation which, for example, the scholars of Sumeria, Egypt, China and Greece did possess, yet with the most primitive means at their disposal, they succeeded through their constancy, precision and eagerness to acquire knowledge in the attainment of such incredible results as determining the duration of the solar year in a form which is more exact than that of our calendar; to define with exactness the cycles of the moon and Venus, and to predict the dates on which the eclipses would take place.

Something similar to that can be said also with regard to their mathematical knowledge. With a means so limited as a system of vigesimal numeration is, and the positional value of the ciphers, they were still able to calculate accurately astronomical quantities which embrace up to millions of years. In addition to that, they understood the need for a



Below the impenetrable features of this beautiful mask from precious stones are hidden many of the enigmas of Palenque. A piece found in the sarcophagus which was discovered by Dr. Ruz in the *Tumba de las Inscripciones* ("Tomb of Inscriptions").

sign to indicate the absence of all numeric value, that is, the zero, which they realized many centuries before the Hindus had, to whom Western civilization—through the Arabs—owes the use of such a sign.

The need to record their observations and astronomical calculations motivated them to invent a system of writing. They probably had some knowledge of an incipient writing that other people had utilized before them, but they invented their own which proved to be far superior to all the writings of the American Continent. Although it has not yet been thoroughly deciphered, from what we do know about it we can appreciate its complexity and the ingenuity with which it had been elaborated.

With a system for establishing the information obtained by the astronomers, the Mayas were able to go on to the following stage: the creation of a calendar or, more accurately expressed, of a most complicated calendaric system. Apart from lunar and solar computations, they felt the need for another, independent of the course of the stars, created by their intellect and of a purely esoteric nature: thus they invented the *Tzolkin* of 260 days. In their eagerness to integrate all the independent parts of their system in a whole, they first combined the solar calendar with the *Tzolkin*, obtaining what we designate the "calendaric wheel", and then they invented the astonishing chronologic series to which we give the name of the "long count", in which the cycles are connected and constitute an attempt to approach the concept of temporal infinity, since that enables a computation of millions of years. Superposed upon this system they added two cycles more, but of an esoteric contents: that of the nine nocturnal companions and that of the eight hundred and nineteen

days, a combination of the number of deities associated with the heavens (13), with earth (7), and with the infraworld (9).

But the Mayas did not restrict themselves to using their writing only for recording dates, calculations and astronomical references, as was believed until very recently. With it they wrote their history, a synthetic, direct and probably exclusive history of their elite ruling class. On the stele and lintels numerous texts which deal with the life and feats of the rulers still have to be deciphered: until now we have hardly begun to be surprised at this archive of information on the history of the dynasties that had ruled the Mayan centers.

Their religion shows us that it was a very rich polytheism in which the deities, the representatives of the natural forces, were venerated by the peasant population which expected life and health for their beneficence, to make up for the lack of technical resources which allowed them a much higher level of life. Other deities of an abstract nature personified numeric and calendaric concepts, and only the members of the priesthood and the civil hierarchy paid them homage for that. Their religious concepts together with their beliefs about the formation of the world and of the living beings, with regard to the mechanism of celestial bodies and the passing of time, were integrated in a cosmic vision of life in which everything was duly regulated by the gods and which would go on functioning to eternity, always provided that they fulfilled their obligations which their representatives and intermediaries on earth, that is, the priests, marked out for them.

When one compares the Mayan civilization with others of the Old World, one observes a number of similitudes among them in the form of material and spiritual realizations: cities with large ceremonial centers, spectacular architecture, art of a magnificent quality, scientific advances, writing, elaborated religious conceptions, and commerce to remote parts. In this aspect there is no doubt that Mayan civilization has the right to be considered one of the greatest cultures of antiquity and, as some of them, has the exceptional merit of having been developed in an environment naturally hostile.

However, the Mayan civilization is distinct in one fundamental aspect: while those flourished starting out with a technological level sufficiently advanced for their time, the Mayan lacked the very elements which could have been considered as indispensable requisites for attaining so high a level of civilization, among which we can mention again the wheel, the plow, and metallurgy. These technological lacks confer a greater worth on Mayan culture since, with so much less in the form of technical resources, it succeeded in becoming equipped as those of Asia and of the littorals of the Mediterranean, and even surpassed them in many respects, for example, the use of the zero, or the calendar.

#### The Mayas, the creator of goods for foreign benefit

For all of these reasons, Morley referred to the Mayas as the "Greeks of America", a designation which has been frequently repeated. But we do not believe it necessary to determine that in the same way as the Greeks did not consist solely of philosophers and sculptors, the Mayas also did not comprise only scholars and artists. In order that these exalted minorities of intelligence and sensitivity could have been able to exist and realize their works, they required that the immense majority of the population worked arduously in the quality of actual slaves or in a situation very similar to that of slavery.

Without the laborious work of the peasants, the fishermen and the Mayan artisans, the privileged *élite* that retained the power would never have been able to undertake the works which humanity today admires. This *élite* lived from the surplus of production, and from those who participated physically in the creation of goods which only served to benefit that group and to assure the continuity and the strengthening of its domain. The surplus, because of the lack of an advanced technology, was obtained through the implacable



control of the populace, and the greatest exploitation of their forces within a mode of production in which an all powerful State dominated in all the aspects the agrarian communities, through the process of what has been called "generalized slavery", with a tributary system. Besides that, the people directly participated in sumptuous works, since from their bosom emerged the simple workers for ordinary constructions and also the creative artists.

In the course of centuries the Mayas had gone on creating riches for their rulers, that is to say, the lords and the Mayan priests; the *caudillos* of other ethnic groups who in the last centuries, before the Spanish conquest, substituted those in power (the Toltecs, the Putuns, the Mexicas); the Castilians for more than three centuries; the Mexican landowners after independence, and the industrialists, businessmen and politicians of today. Always creating goods which were never of benefit to them; living in misery, ignorance, religious fanaticism, and unsanitary conditions: always exploited.

It is a fact that in Mexico the official work of those supporting the interests and welfare of the indigenous had succeeded in alleviating the situation of the Mayas, but it is faced with economic structures which have political support; and besides that, it is also necessary to state, with the restraint on their own traditional systems of beliefs and internal organization. Without fundamental changes in the economic and social structures of the country, the good proposals of those who gave every support to the indigenous will not go beyond that of palliatives, of superficial and temporary remedies, although they unquestionably help in that the Mayan populace is taking cognizance of their actual conditions.

The situation of the Mayas of today is identical with that of the other indigenous peoples of Mexico and of all the American Continent. It is also not very different from the situation of the population of other continents, which still suffer from political colonialism or that are found subjugated by a neocolonialism of an economic root. However, since the middle of our century, more or less, the world has witnessed important changes which permit the cherishing of a hope for a future, the proximity or remoteness of which no one can predict, but which is definitely inevitable. Colonized or semicolonized peoples have shaken off the yoke of the imperialistic powers: India, China, Vietnam, Cambodia in Asia; almost all of the African States and, in America, Cuba.

A light of hope has begun to appear on the horizon for the indigenous peoples of America. The Mayas, among them, anguished and impatient, await their hour.



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**ABBREVIATIONS USED IN THE BIBLIOGRAPHY**

*Bur. of Amer. Ethn.* — Bureau of American Ethnology  
*CEM* — Centro de Estudios Mayas

*CIW* — Carnegie Institution of Washington  
*Handb. of Mid. Amer. Ind.* — Handbook of Middle American Indians  
*INAH* — Instituto Nacional de Antropología e Historia  
*MARI* — Middle American Research Institute  
*NWAF* — New World Archaeological Foundation  
*Peabody Mus. of Arch. and Ethn.* — Peabody Museum of Archaeology and Ethnology  
*Publ.* — Publication  
*UNAM* — Universidad Nacional Autónoma de México

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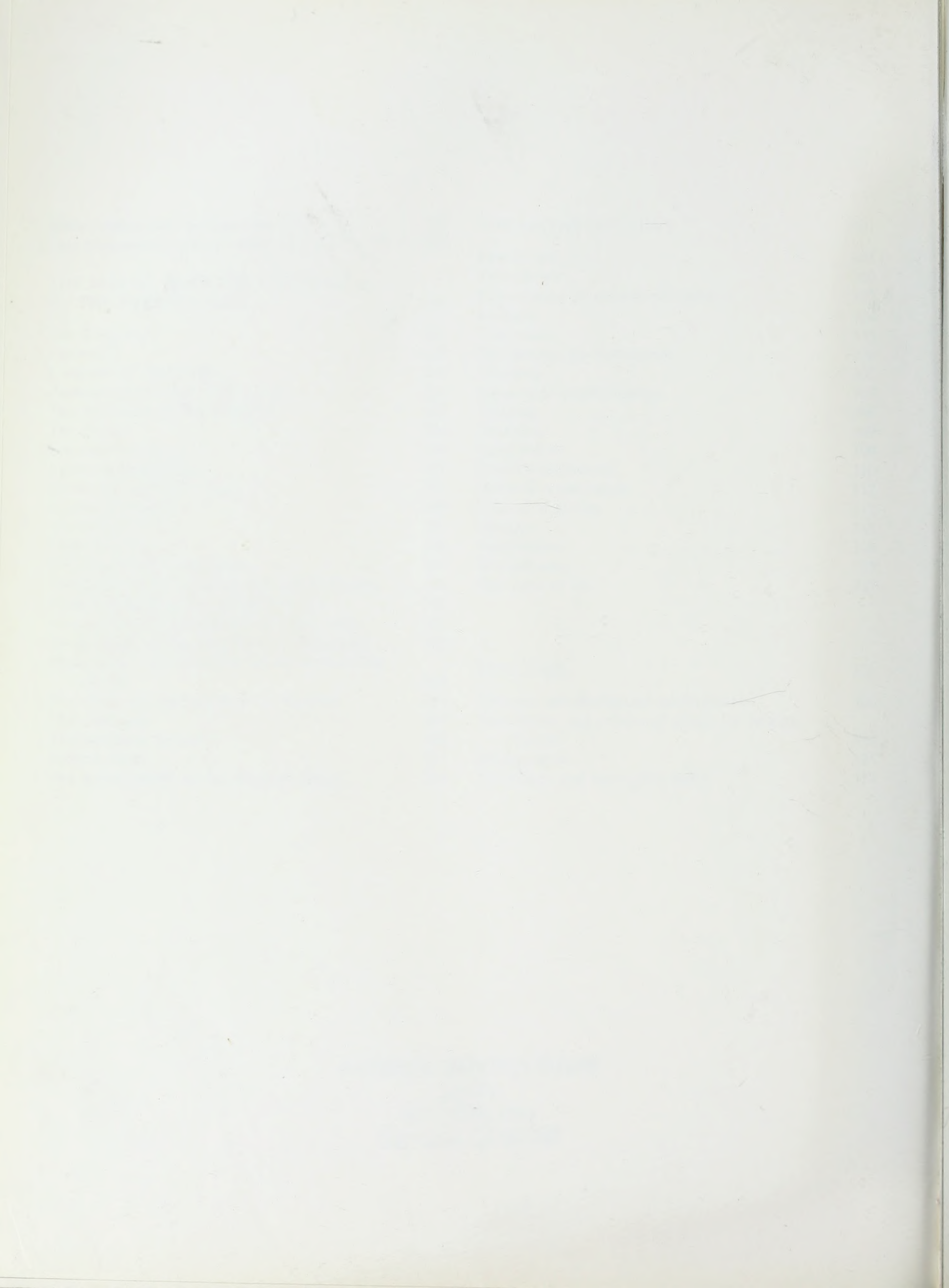
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Since the pioneer works of Spinden (*Study of Maya Art*, 1913; *Ancient Civilization of Mexico and Central America*, 1913), various works of a general nature were written about the Mayan civilization, especially that by Morley (*The Maya Civilization*, 1947), and that by Thompson (*The Growth and Decline of the Mayas*, 1959), which have been turned into manuals not only for students but specialists as well who have been working or are working on this particular subject. The most recent work which brings everything up to date is that by Coe (*The Maya*, 1966). However, during all these years no investigator, whose native tongue is Spanish, has produced a work of such scientific magnitude and duly brought to light which, at the same time, was within reach of an extensive public. When Dr. Ruz Lhuillier wrote *The Mayas*, he filled this great gap, not only because it is the first work of Latin American origin, but also because, in addition, he questions the hypotheses and deductions that had been universally accepted. Through the works of Morley and Thompson, translated and published in Mexico, concepts now obsolete as well as prejudices and focussing were dominated which, while they were able to have been justified twenty or thirty years ago, have now, in actuality, due to the great progress in investigative work on this subject, lost their force to some limited extent or even completely.

Among other aspects, these authors have endeavored to present Mayan civilization as a unique case in universal history, the emergence and development of which would in no way be attributable in any form to other cultures; whose intellectual attainments would far surpass those of whatever other people of ancient times and whose socio-political system would set up a model of equilibrium, wisdom, efficiency and harmonious living among all. Mayan civilization would present an exceptional civilization in that the spiritual values would set up the norms for their structure, their functioning and would even determine the course of their history.

Without denying the peculiarities or special aspects of Mayan culture and their intellectual as well as their artistic accomplishments, Dr. Ruz emphasizes that it is not possible to idealize their culture nor to isolate it from the development of all the other Mesoamerican cultures, nor to separate it from a universal context as though it were completely removed from our planet.

In addition, and this explains the title of the present work, in all the other investigations of this subject matter, a personage, the Mayan people, is lacking because Mayan society was not only integrated with artists, astronomers and rulers — without which nothing that we admire in the vestiges which have come down to us, would ever have been produced.

To identify the Mayas; to determine their role; to establish the relations that they had with the ruling groups; to clarify the use of their scientific knowledge and the function of religion; to show the problems that affected them and the historic solutions which were achieved, are some of the themes that Ruz Lhuillier, at times on the very edge of traditional focussing, treats in this momentous work.

Finally, in *The Mayas* there is a remarkable spirit and endeavor to show the continuity of their existence as a people who had been conquered, colonized and, until now, oppressed; the battered survivals of their culture, their attitude, at times submissive, at times rebellious, in which the yesterday and the today are dramatically fused.

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