

CHAPTER II

PERSONALITY TRAITS AND **EVERY DAY ACTIVITIES**

Introduction

In the previous chapter we have considered the historical background, the homes and villages, and certain aspects of the every day life of the people. The present chapter will give the reader a conception of the Maya's personality and his reaction to his environment. I have intended not to duplicate the sociological study of Maya life by Redfield and Villa [fn1] but to supplement it by a psychological approach.

I have tried first to describe the personality of the Maya and to contribute some new information on Maya folkways and customs, and then to discuss the various attempts to measure the mental capacity of the race by psychological tests. It is hoped that these tests will be of interest, not only to the psychologist studying differences between races and to the psychometrist who is faced with the problem of devising tests for members of different cultural groups, but also to the historian and the archaeologist who are trying to explain the cultural differences and similarities between the ancient and the modern Maya.

In as much as all conclusions drawn here must necessarily be based on judgements of one culture upon another, a detailed description of the methods of study is given.

METHODS OF STUDY

I have attempted to determine scientifically the psychological and personality characteristics of these people :

1. By submitting a rating scale of 61 character traits to white persons who were familiar with the Maya in their own environment and who gave their opinion of the Maya in general.
2. By submitting a similar rating scale to five Maya men and to eight mestizo men and having them grade other individual Maya.
3. By recording incidents in the every day life of the Maya and their reactions to various social and psychological situations.
4. by giving standardized, non-language performance tests in individual men, women, and children.

As a result of eight consecutive seasons among the Maya, I have formed a fairly definite picture of the typical member of the race. To check any bias, a rating scale was devised and sent to 29 individuals who come from a non-Maya cultural background but who

are familiar with the race. 2 the items in the scale were grouped under : (1) out put of energy, (2) attitude toward self, (3) attitude toward environment inanimate objects and persons, (4) mood, (5) intelligence, (6) general interests, and (7) pathological traits. To illustrate the nature of the scale:

In the lives of these people, superstition plays apart of

Tremendous Importance	Great Importance	Moderate Importance	Little Importance	No Importance
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The rater was instructed to check the point which seemed best to characterize the Maya of Yucatan in this particular feature.

Certain valuable clues to Maya attitudes and behavior have unquestionably been brought out. We are aware of the difficulties involved in the use of rating scales, particularly in those which call for the judgment of a group. individual differences are large and in some cases maybe so great as to make any judging of the group as a whole impossible. Also the person grading the may have had in mind one or two individuals, although the test called for an opinion of the group. We feel, however, that in the cases where there was definite agreement among 30 individual judgments (mine included), the degree of validity tends to be high. this method has been criticized because it appears to prove points which need no proof and to attempt to verify the obvious. However, I believe that 30 independent opinions, if they are in agreement, are better than one. This seems well illustrated in the Mayas attitude toward strangers discussed Adaptation to Each Other. It would be difficult for one observer to experience so many different reactions, where as a combination of observers naturally discloses the truth more adequately.

In order to compare these judgments made from the white mans point of view and with the Mayas judgment of himself, a modified rating scale was submitted to five Maya men who were asked to grade 34 other Maya. The rating of individuals by other individuals is subject to the same pitfalls as the group rating system, but there again we feel that fairly general agreement on a given trait tends to indicate that he trait is genuinely characteristic. in the event of general agreement in the ratings of all Maya individuals by Maya, we may find are liable indication of the qualities which the Maya admire and perhaps of their characteristic traits. We can not, of course, go so far as to call these characteristics racial, since they maybe culturally or environmentally conditioned, they may throw some light on the racial potentialities of the people.

A similar rating scale was submitted to eight mestizo men, who graded 38 Maya men. Since both Maya and mestizo graders considered individuals rather than the race as a whole, the evaluation of their rating scales is reserved for the discussion at the end of this chapter. the text material contains only my opinion modified by the combined opinions of the other 29 white observers.

I tried to learn by observation of actual situations what a Maya does under certain circumstances. for example, what does he do if some one comes into his house unwanted, if some one inures his dog, if cows enter his milpa. It was though that by this method some light could be thrown on the nature of cultural conditioning of personality traits.

I have chosen to describe those incidents in the everyday life of the Maya which illustrate attitudes and behavior characteristic of the race. The validity of every detail recorded is unquestionable, although it should be remembered that the psychology of the informants is a factor to be considered in the interpretation of the incidents.

The nearest approach to quantitative measurements in the psychological field is that which makes use of standardized tests of certain aspects of intelligence. The tests now available are fairly adequate for the comparison of individuals in a given group, but in my opinion they are not adequate for the comparison of races because of the tremendous difference in culture and environment and because of the lack of proper facilities for administering tests to certain groups. These were the tests selected: Knox Cube Imitation [fn3], Stringing of Beads [fn4], Lincoln Hollow Square [fn5], Ferguson Form Board [fn6], Seguin Form Board [fn7], Goodenough Drawing Scale [fn8], and Form Discrimination (Davenport) [fn9]. Although I am aware of criticisms for each of them, I believe that they are the best available for testing under these circumstances. That it is difficult to procure suitable mental tests for people of different cultural groups and to judge the results is readily understood.

Concerning this problem, Blackwood states:

Nevertheless, it would be well not to lose sight of the fact that whatever the tests measure, it is certain to be something rather arbitrarily evolved out of our own psychological background, with reference to our own sphere of action. That is to say, the tests are so constructed that the individual who makes a good score may be credited with the ability to achieve a certain measure of success in our own civilization. [fn10]

Among others, she lists the difficulties of material culture, language, administration, social status, motivation, selection, and age as influencing the results of the tests.

Recently I attempted to revise the McAdory Art Appreciation test with a view toward making it more universal and hence usable for race testing [fn11]. We experimented with clouds, trees, horses, cows, etc., instead of objects limited to white culture as in the McAdory Art test. We soon experienced the usual difficulties; clouds in different parts of the world have different meanings, and the same is true for trees and animals. Thus, to the Navajo clouds mean rain which they want, clear sky means heat or cold which they do not want. To the average white individual these objects have entirely different connotations.

Cook records:

When I first went into the Tropics, I went to see a native who was buying a few cows from an American I asked him through an interpreter what point he based his judgment on in making his selection. He said, the horns and the hair and the tail; and that was an entirely different method from our American point of judgment in the selection of cattle. I asked him why he based his opinion on the horns. His answer was that he sold most of his bulls for work cattle, and that he picked cows that had big, strong horns because they yoked them entirely by the horns. I asked about the hair. He said that if you got these American cattle with long coats of hair, that the ticks would eat them up. Then I asked him about the tail, and he said that when a cow had

along tail it walked faster than it did with a short, stub by tail. I was not so sure of that, on a scientific basis. [fn12].

These exemplify the difficulties encountered in obtaining a test which maybe applied to people of different cultural backgrounds. Until more satisfactory tests are constructed, we can at best try to make quantitative measurements of mental characteristics by using only those tests which minimize the difficulties involved in racial testing. Obstacles presented themselves: (1) All directions had to be given through an interpreter. (2) the Maya are not accustomed to speed as are white people, and most of our mental tests are based on speed. (3) their culture is quite different from that of either urban or rural whites in America and in Europe. they are not familiar with, or interested in, form boards and other tests and do not wish to be both e red with such seemingly use less occupations. they show little of the competitive spirit of the white race. (4) there was no place where the tests could be conducted under optimal, since the doors of the houses could not be closed because of heat and darkness, and the participants were consequently distracted by onlookers, noises, and insects. (5) the fact that the person giving the test was of a different race diverted the attention of some of the subjects, many of who m were very self-conscious when taking the tests.

From this it is evident that most of the subjects did not exert their full mental capacities and the results presented may be of questionable value for the moment. However, their worth may be more obvious in the future when other investigators attempt to measure psychological characteristics of primitive people.

From a combination of the four above-named methods we shall describe the mental capacities of the Yucatan Maya, covering:(1) adaptation to their physical environment, (2) adaptation to each other (3) adaptation to the spiritual world, (4) pathological trait s, and (5) general intelligence. the result is summarized in figure10.

Adaptation to the physical environment

ACTIVITY OF THE PEOPLE

The life of the Maya follows a simple routine. The mother rises early, often between three and four in the morning, to prepare her family's breakfast, which consists of beans, tortillas, and coffee. 13 After breakfast the father goes to his corn field, leaving his wife to wash and dress the children for school. Washing, cooking, and general house work occupy the mothers time until ten when the older children return from school for lunch, resuming their studies from three to five in the after noon. In spare time the mother sews or embroiders (pl. 15f). when the men return from the fields between three and four, warm water is supplied for their baths, the garrapatas are removed from their bodies, generally by the wife, and clean clothes are given to them. After supper the people sit around talking over the day's events and by ten o'clock they are asleep.

The Maya are active and energetic. the men work hard in their corn fields. the women rarely assist in this work, but are steadily occupied with their house hold duties. the children attend school irregularly for a few years and help with the duties o f home and farm. In all these activities the Maya are definitely industrious and persevering. this is

illustrated by the digging of a well in one small town. The men spent three or four weeks digging through one particularly hard rock which was 1m thick. there was never a thought of abandoning the hole for a softer spot after work had once begun.

CLEANLINESS AND NEATNESS

The Maya women are rather neat house keepers in spite of the fact that the doors are generally open to domestic animals. because of insects and dust, which even doors will not keep out, house keeping in Yucatan is difficult at best. the dirt, which comes chiefly from the animals and from the loose thatch of the roofs, is swept up several times a day. Parts of the yards are also kept clean by daily sweepings, and pans, kettles, tortilla tables, and other domestic utensils are scoured with henequen fibers or rough leaves and ashes after each use.

Personal cleanliness is an outstanding characteristic of the Maya, who bathe and wear clean clothes daily(pl. 15a-f). 14 it is not unusual for them to take two baths in a day. the bath is not a leisurely immersion but a thorough scouring, often aided by a powder made from finely ground white egg shells which have been soaked in water saturated with wood ashes, ground fine on a metate, remixed with water, and left to dehydrate in the desired shapes on a clean table. To scent the powder the women often add flowers of jasmine, rose, orange, or vanilla to the water. After the bath the women may use it in the dry form as a talcum or face powder.

Three hundred and fifty years ago Landa commented on the cleanliness of the Maya :

They bathed a great deal, not troubling to cover them selves before the women, except such as they might do with the h and &. they [the women] bathe constantly, like the men, in cold water, but with little reserve, going stripped into the places where they go for water. they also bathe in hot water, heated by fire; this is however rather for the sake of health than cleanliness. 15

It is said that in ancient times the law permitted a man to be at his wife if she failed to have warm water ready for his evening bath. In modern times the men use water that has not been heated, except by exposure to air. about half the men bathe in their yards while the others bathe standing on a small board inside their homes. At the corn fields they bathe out side at the well or cenote. the women bathe inside their homes with heated water.

The Maya do not brush their teeth but rinse them out h with water after each meal.

THRIFT

The Maya maybe considered a thrifty people. Left over food is always fed to the pigs, dogs, and chickens. corn is systematically stored for future use; beans and chile are dried and laid away until the next crop. [fn16] Squash are kept for a short time after harvesting. Firewood, on the other hand, is gathered from day to day. Inside some Maya houses one may find a large bundle of firewood sufficient to last two or three days, but one rarely sees a wood pile near a house, as is so characteristic of New England farms.

The wealth of the Maya is measured in the amount of corn or the number of cattle a man owns. Some families do invest in gold chains on which may be suspended religious medals or United States gold pieces of varying denominations. For the most part, however, this is not the custom. What actual cash the people have is said to be deposited in jars secreted within the houses, but I doubt this, believing that most of their wealth is in agricultural products. The lack of cash does not indicate extravagance, for the Maya can procure most necessities by barter. Consequently the ability to be self-supporting and economical is the best criterion of thrift among these Indians.

CRUELTY

The results of the rating scale questionnaire given no evidence which conclusively proves the Maya to be either particularly cruel or particularly kind. I consider the Maya cruel to all animals when judged by our standards. They think nothing of beating, kicking, or throwing stones at dogs. Children and even adults derive satisfaction from tormenting small animals. They have a custom of soaking an opossum in kerosene and then lighting its hair—a punishment, they say, for stealing chickens. One source of enjoyment is attaching a lighted candle to the thoracic plate of a large cockroach. The insect dashes about madly to the great amusement and satisfaction of the observers. Pisotes (native mammals) and raccoons, when caught in the bush, are—not merely killed but chopped into small pieces by the milperos. Maya are much less cruel, however, to horses than to other animals, though their standards, even in this respect, are far different from those of most whites. A stagecoach driver of Cenotillo will not have a Maya Indian drive his volan (passenger carriage) because he knows his mules will be whipped through out the entire journey. An informant tells me that Maya muleteers are exceptionally cruel to their pack animals when they are stuck in the mud, adding that a certain man in Dzitas is so care less about the saddle blankets on his horses that all his horses develop sores, which receive no care. Some persons regard this cruelty as a result of ignorance and insensitiveness rather than of intentional infliction of pain. Toward human beings, the Maya are at times extremely cruel, as will be described later in this chapter. (See under Sexual Conduct).

CONSERVATISM

The Maya, like most people who live in small and homogenous groups where strong social controls operate, are conservative and unprogressive. Slow to take up new ideas, their attitudes and their material culture have been very little changed by modern trends and technological developments. Their pottery, weaving, and cross-stitch work have remained very much the same during the entire history of Yucatan. In general, they have not adopted the Spanish language but rather the Spaniards have adopted the Maya language. Their mode of dress has not changed appreciably for hundreds of years, and it is my belief that their daily life is very similar to that which their ancestors led. Only in the large Yucatan towns and cities, where social contacts are freer and where social controls can not be maintained as strongly as in the smaller communities, there are signs of change. In such towns the European mode of dress is gradually being adopted, especially by the women, and cosmetics are commonly used. The people petition the government for radios, electric lights, and corn-grinding machines, and the idea of progress is gaining a hold in their minds. The

cooperative movement and similar modern methods of economic organization are being tried.

MOVEMENT FROM PLACE TO PLACE

The general conclusion of the 30 graders of the rating scales was that the Maya are disinclined to wander. One rater added that they are disinclined to wander unless they have to move. It is my opinion, however, that they move from place to place rather easily, generally as a result of dissatisfaction with a court decision or the failure of a corn field. Of 28 families moving in and out of Pisté in the last 10 years, 10 moved because of domestic and marital difficulties, nine in order to better their working conditions, five because of fear of bewitchment, and four to be able to live with friends and relatives. I know of one family which moved from Pisté because someone burned their farm house. They felt certain that they knew who did it, but since there were no witnesses, the case was dismissed by the justice of the peace and the family, dissatisfied with the decision, moved to Tizimin. In Pisté there seem to be a transient and stable element. Thus the Tun, Mex, Ceme, Dzib, and Castillo families do not move about, whereas the Vasquez, Canul, Ucan, Tamay, and Alaya families are constantly moving in and out of Pisté.

Adaptation to Each Other

The Maya are a talkative and sociable people who are more prone to group activity than, for instance, are the Navajo. They love to joke, talk, and laugh with one another. In the opinion of the white raters the Maya are good-natured, trusting, unselfish, and cooperative and have considerable respect for the rights of others.

The Maya are moderately sympathetic toward each other. The feeling of responsibility for the poor, sick, and unfortunate is strong within the family and such persons are generally cared for.

The Maya are not beggars. Only once in eight years have I been asked for money, and in exchange for little kindnesses, I have been given chickens, eggs, flowers, vegetables, honey, and other gifts. In large cities such as Merida, where the population is chiefly non-Maya, one does see beggars, but the Indians themselves are fundamentally too proud. Furthermore as has been pointed out above, the care of old or incapacitated people by their relatives makes begging not only scorned but unnecessary.

The Maya are courteous and friendly to each other and to strangers, particularly when the purpose of the stranger's presence is known. This seems to be more true of Indians near large towns and those located along the railroad. One rater added: In far-away villages, however, they are extremely unfriendly; they do not only prevent all intercourse with strangers but they deny them food and water even when they have both in abundance. I have heard that in certain areas as this coincidence exists, but no member of the organized expeditions of the Carnegie Institution has experienced such treatment. We have, in contrast, found what Landa described 350 years ago:

The Yucatanians are very generous and hospitable; no one enters their houses without being offered food and drink, what drink they may have during the day, or food in the

evening. If they have none, they seek it from a neighbor; if they unite together on the roads all join in sharing even if they have little for their own need. [FN17]

An other attitude of the Indians toward strangers is shown by the following incident. When my wife and I came to Chichen Itza in 1931, a Maya woman who entered our house sat and watched us for a long time, then cautiously came and stroked Mrs. Steggerda's hair and arms. This was also experienced by Mrs. Morley among the Indians of Xcacal, Quintana Roo. In general the Maya are inclined to be trustful of others. As our party were leaving a village after spending about a week there the schoolmaster (perhaps half Indian) flung his arms around me exclaiming, "All Americans are tall and all Americans are good."

LEADERSHIP AND INDEPENDENCE

Most Maya are of a retiring nature and disinclined to be leaders. One of the few cases of leadership I observed in eight years was that of Eustaquio Ceme in Chan Kom. He organized and directed the building of a straight road through the bush from Chan Kom to Chichen Itza, a distance of about 12 km. Very soon after it was completed, however, much of the road was abandoned because of lack of funds to maintain it. Dionicio Dzib is another of the rare natural leaders. When on hunting trips it is he who always takes command. He has been the comisario of the town for several terms and as a judge he is considered kindly and impartial. But Dionicio so dislikes this responsibility that he has moved his family to a neighboring community to escape insistence of the Piste people.

The independence of the individual Maya is pronounced. In taking measurements of families each member must be consulted separately; consent of the father and mother for themselves does not imply participation by the children. Children make their own decisions early in life, as in the case of a seven-year-old boy from Pisté, who was loaned to his married sister to take care of her year and a half old son. After doing this faithfully for nearly a year, he refused to return to his own home because his father was so often drunk. Although his father wanted him, the child preferred to stay with his sister and her husband, which he did until he accidentally dropped the baby. The sister was about to spank him when he deserted her and returned to his father. Another instance is Juan Pech from Tunkas, who became an orphan when six years old. Before his mother died, she had appointed his godparents as guardians, but he preferred to live with his uncle and did so until he was 14, at which age he began to live by himself in his own home. Finally, although there have been more than 100 children measured each year and all are friendly with me, each must be individually petitioned every year to be measured. The grown children were paid 50 centavos, which represented a third of a day's wages, for their trouble and time (less than half an hour). Yet this did not entice them. In my series among Negroes and Whites, on the other hand, I am constantly asked: "When are you going to measure me?" and "Is it my turn today?" Such remarks are never heard from the Maya. They may be in desperate need of the money and time is not an important consideration, but their independence demands that they do not comply too readily. This is not a lack of cooperation but rather reluctance to register enthusiasm.

COMPETITIVE SPIRIT

According to the raters the desire to excel among the Maya is as much present as it is absent. The same is true for vanity and self-love. However, my experience leads me to

believe that these traits are not pronounced. The only example of competition that comes to mind is their interest in the readings on the dynamometer which recorded their respective hand grips. For the rest of the anthropometric data no interest was shown; no one cared to be taller or to weigh more than another as is so often the case among the Whites similarly measured. In taking the intelligence tests, no one displayed any incentive to excel in either speed or quality of performance. This spirit is characteristic of the Maya from early childhood, when their games do not involve the competitive spirit to any great extent.

JUSTICE AND QUARRELS

The Maya have a strong respect for law and a keen sense of justice. Not quarrelsome by nature, they are fairly willing to compromise. However, they are likely to try to take revenge or to hold a grudge for a long time after a dispute. Situations arise, of course, in which disagreements have to be settled. If the destruction of one man's corn field by another man's cows is witnessed, the owner of the animals is generally obliged to pay for the damaged one. If he refuses to pay, he has a few days to think it over, after which he is sent to the municipio for final judgment.

HONESTY

As a group, the Maya are honest. Although the two doors of my thatched house in Yucatan are generally left open, no money or any object has ever been stolen. This is particularly significant in view of the fact that a very little gift such as a discarded envelope, a tin can, or a box is highly valued. Articles which are found by the Maya, however, are not returned even though the owner is known. Finding is keeping.

Petty thievery is not commonly practiced, as it is among certain other racial groups. Very seldom does one hear of Indians stealing corn from one another, although opportunities are many, since the unguarded corn cribs are often miles from the village. According to Redfield, there are stories that men who steal from corn fields are killed by the guardian spirit. These stories are the real looks on the open granaries in the distant bush. [fn??18]

HUMOR

Humor plays an important part in the lives of the Maya, the practical joke being considered the most amusing. They take great pleasure in accidents which do not turn out to be serious. A man stumbling or falling off his horse is very funny. If a huge rock falls next to a worker, every one laughs. They do not think accidental injuries amusing, however. For instance, an Indian fired a gun at a man in anger, but because he missed the whole affair became a joke. To appear innocent after untying an apron string or tossing a stone is very waggish. Karl Ruppert tells of one workman who left the others for a few minutes, leaving his cotton gloves behind him. While he was away, some of his fellow workers removed the stinger from a scorpion and placed the harmless animal in one of the gloves only to jerk his hand out quickly while the others shouted with laughter. At the excavations a wheelbarrow filled to overflowing by the others, who laugh when the man starts away with his burden. Young boys constantly play tricks on each other, much in the manner of young white boys. A boy will give a sudden blow on another's leg, just above the bend of the knee, making the boy fall forward, or sometimes one boy will pull another's foot suddenly so as to make him fall. Miss MacKay, former nurse at Chichen Itza, tells of a Maya family, assembled to mourn

the death of a relative, who were provoked to laughter and hilarity when a bat flew into the room.

Roys writes in a letter of the humor of the ancient and colonial Maya:

It seems to me that there is plenty of evidence that the Maya were a cheerful, joking lot. In the Motul Dictionary [fn19] of the 16th century, I have hunted for and found the names of a number of dramatic representations. Nearly all these suggest comedies, indeed, slap-stick farces in my opinion.

Ah con cutz:	the turkey vendor.
Ah con cum:	the pot vendor, actually designated as an entremezzo or farce.
Ah con ic:	the chili vendor.
Ah con tzatzam:	the grease or fat vendor.
Ah sac hol paal:	might be translated the white haired boy.
Ah sac il mo:	the white parrot.
Ah pakal cacau:	the cacao planter.

As with us, the peddler, and perhaps also the rustic, were the subjects of humorous vaudeville skits. One of the several names a man could have was the coco kaba, which I translate as a joking or jesting name. "Joking" about a land title seems to have been a method of questioning it, and was much resented by the owner in colonial times. Comparison might also be made with our humor directed toward the garbage man, the street cleaner, and the traveling salesman.

GAMES AND DANCES

No questions were submitted on this topic in the rating scale, but according to my observation the Maya play very few games. Little children seldom play with their crudely carved wooden dolls, perhaps because a Maya child of four or five years usually has a younger brother or sister to tend. Often the children make figures of animals from fruits and vegetables. There is a game called ppilishol in which a hole is made in the ground close to a wall or stone fence and a line is drawn about one meter away. Each player places a tamarind or pitch-tree seed behind the line and tries to flick it into the hole. The player who succeeds in getting the seed into the hole wins the game and takes all the seeds around the hole. Today it is sometimes played with buttons instead of seeds but in recent years the game of marbles has largely taken its place. They play another game called "grinding cohhee," in which two boys face each other, join hands, and whirl in place swinging their hands between their bodies and over their heads. They also play a game very much like our "wheelbarrow" in imitation of the scorpion. American baseball and basketball are now played in the Indian villages by the men and boys. These games were introduced chiefly through the schools.

The Spanish people and the mestizos play many games which are being adopted by the Indians. Such games as leap-frog (brinca burro, or jump the donkey) and "Button, button, who's got the button?" are common. There is another game which might be called "hand car" in which the arms are interlocked and the subjects, back to back, begin a rocking motion. Another game is played with two boys holding their arms together another boy

inserts his head between their arms, and the first two so move their arms that the third boy sails through the air and lands on his feet. This game, they say, resembles a henequen mill.

One of the most common amusements in Indian villages today is the bullfight. Originally borrowed from the Spanish, the pastime has become a Maya institution, the greatest change being that the Maya tease the bull until it is exhausted instead of killing it (plate 16d-f).

The dance of the Maya is called a jarana. Redfield says:

A jarana is a social dance; an opportunity for youths and girls to enjoy a rhythmic, complementary, stylized activity; to let music enter and stir the blood, to wear festival attire, to excel in the form of play that is also art. For the unmarried the jarana is a prelude to marriage, and chance to choose and be chosen The jarana is a complex of interdependent elements that occur together: the characteristic dance-step and accompanying posture; the wooden dancing platform (usually), the palm leaf shelter (enramada), the appropriate musical airs, certain etiquette of the dance-floor, special steps and tunes with which the jarana is brought to a close. In the more sophisticated communities, to these elements are added the recital, by a dancer when challenged to do so, of humorous quatrains (bombas). [FN 20]

This dance begins about nine o'clock in the evening and lasts until dawn. Some of the older women sit as spectators along the edge of the platform and remain nearly motionless the entire night, but men of all ages and young women and girls take a very active part in the dance. At the jarana, when a boy likes a girl, he will put his hat on her head while dancing with her. In Pencuyut, Maya mothers show their sons that they would like a certain girl for a daughter-in-law by trying a handkerchief on the girl's neck while she is dancing with the boy. If the boy also likes her, he puts his hat on her head, and the next time he dances with her, he has one of his friends cry out, "Bomba," meaning that he declares publicly his love for the girl. At that time he may sing out so that all may hear:

"In yamacch bey u tuknel in uich,
A cichpamile bey u zazil kine
Bali ua ca yacunten, cichpam zacpacal
Hebix in yamaeche, tu dzu in puczikal."

(I love you as I love the pupils of my eyes,
For your fairness is like the brightness of the sun;
Would that you loved me, beautiful wild dove,
As I love you, with all my heart.)

These dancing customs seem to be more characteristic of larger towns than smaller ones like Pisté, where I have never observed any special ceremonies associated with the dance.

MARRIAGE

Among some conservative rural Maya it is still the custom for a young man seeking marriage to request his elders to accompany him to the home of the girl of his choice. [FN 21] This

choice is seldom based on mutual affection or love. The mores demand that young people do not make their own marriage arrangements or become companions before marriage so that there is little opportunity for love to play a part in mate selection.

Unlike the established patterns in many other civilizations, families rarely make previous arrangements for the marriage of their children. No steps are taken until the young man announces his desire to have his parents go with him to visit the parents of the girl. The young man and his parents take food and wine with them, and the purpose of the visit, although generally known, is not told until a second similar visit is made. Then, after allowing for a few days of consideration, the boy's family returns for a decision. If this is favorable, plans for the wedding are made immediately. During the so-called period of engagement the man is often called upon to feed his bride-to-be and to provide for all her necessities; she in turn must wash his clothes at the home of her parents. At the time of the marriage the bride may go to live with the bridegroom's parents. This is such a common procedure that a special name, *ilibtzil*, is given to the girl. If the man goes to live in the home of her parents, he is called *haancabtzil*. In a survey of 28 cases of married couples in Pisté, there were 17 in which the bride went to live in the home of her husband's family, nine in which the bridegroom went to live in the home of the bride's parents, and two in which a new home had previously been prepared for the newly married couple.

Just prior to the marriage the couple select, and the man pays for, a complete trousseau. In addition he pays for the wedding feast. From colonial times down to 1918 the Indians rarely got out of debt to their employers because of the tremendous handicap of borrowing for their wedding party. It is not the same today but the wedding of one Maya worker in Pisté in 1932 cost him (rate of exchange, 3.60 pesos for \$1.00):

Wine, whisky, and other liquors	20 pesos
Bread, sugar, chocolate, cigarettes	11
2 dresses, "ternos"	30
2 dresses, ordinary	7
1 trunk	6
2 strings for dressing hair	2
4 handkerchiefs	2
1 rebozo (shawl)	10
2 pairs of shoes	15
Towels and comb	3
A gold chain with gold pendants	105
Registry	34
Incidentals	<u>50</u>
	295

The marriage expenses of another Pisté Indian were:

2 full lace, embroidered dresses, "ternos"	36.00 pesos
2 combs	2.50
2 ribbons	2.00
1 looking-glass mirror and hair hooks	1.50
1 pair shoes	8.00

2 pairs of stockings	3.00
6 rings	18.00
1 gold chain	40.00
Anise, liquor (16 bottles)	16.00
Bread, sugar, and chocolate	18.00
Cider (25 bottles)	2.50
Registry	34.00
Incidentals	<u>50.00</u>
	196.50

Marriage in Indian villages today is not an elaborate ceremony with a priest officiating and certain rituals observed. It consists merely of paying a registration fee and celebrating the marriage feast which generally lasts an entire day. At the end of the festivities, after the guests have departed, the man and woman are considered married without further church or legal sanction.

It is not customary for a bridegroom to pay for his bride. There is one instance in Pisté where the father of a marriageable daughter demanded a house and farm land in payment for her. Ordinarily, however, the bridegroom's only expenses are the trousseau and the ceremonial meal.

As was the case in Landa's time, a woman ordinarily does not marry again within the first year after the death of her husband. A second union is not usually preceded by a ceremony. The man and woman merely begin living together and are accepted as husband and wife by the community. A Maya man may occasionally have two wives at the same time, in which case he seldom maintains separate homes for the women who, for the most part, live peaceably together. Such a custom is not common among the Indians as it is among the Spanish-speaking classes, however. I knew of only two cases of polygamy among Indians in Pisté and one in Chan Kom during my stay in Yucatán.

FAMILY TIES

In the domestic life of the Maya, family ties are strong, although outward displays of affection, such as kissing and embracing, are rare. During my years in Yucatan, I have never seen a Maya man kiss a woman. Couples are considered affectionate if they carry out their respective duties faithfully. To their babies, however, the Maya are demonstrative and fondle and caress them, using baby talk as white parents do. It is evident that most parents are very fond of their children. Very rarely do fathers chastise their children physically and the mothers resort to harsh punishment only occasionally.

Even very young children have authority over their younger brothers and sisters. I have seen a two year old boy severely beaten by his five year old sister because he refused to do what she wanted. The father is generally the head of the family and nothing is done without his confirmation. I am not aware of a single Maya family in which the woman controls the actions of the family, as is often true in white society.

Respect for elders within the family, especially toward them other, is very pronounced. One time a Pisté mother, 65 years old, decided to punish her son, an eer-do-well and nearly always drunk, with a beating. She got her oldest son to perform the beating, while she stood by and counted the lashes. The man knelt during the punishment, after which he kissed his mother's hands and feet and was then forgiven. In another case, after

the death of their father, three brothers lived happily with their mother until two of the boys married; then, at the instigation of their wives, they requested that their mother leave them. She refused to share their corn with her, and, in addition, they secretly sold one of her horses. When the mother discovered the sale, she told the officials of the municipality, who gave her permission to punish her sons, one of whom was at that time mayor of the town. In case of resistance, the sons were to be jailed. She flogged the boys herself. Deep respect for elders was characteristic also in the time of Landa:

The young men respected the elders highly, and took their counsels and sought to pass as mature. The elders said to the younger ones that since they had witnessed more, what they said should be received with credit, so that the youths following this would gain the more respect themselves. So much was respect given to the elder men that the youths did not mingle with them, except in cases of necessity, such as marriages. 22

Jealousy among the Maya over their mates is especially pronounced during the first few years of married life. Several of the Maya girls whom I have measured in consecutive years have meanwhile been married, after which the husband is often too jealous to permit further measurement, even though the girl is very willing. In most cases the girl is again allowed to come for measurement after two years. Landa writes, "Nevertheless, they are very jealous, and do not lightly suffer infidelity on their wives' part; and now that they see the Spaniards kill their wives for this reason, they are beginning to maltreat and even to kill them." [fn23].

Lovers occasionally quarrel over their girls, and one case in Pisté resulted in death. A young man, aged 18, was in love with a girl who had another lover. At a jarana both of the young lovers were drunk and began to quarrel over the girl. One started the fist fight and the other retired to the path that the first was to take in returning home. As he passed he was stabbed to death with a dagger. [fn24]. These lovers are not to be confused with the conservative Maya mentioned under Marriage. In every population there are those who have illicit relations before marriage, and it is this class among the Maya who have the most quarrels.

SEXUAL CONDUCT

According to most raters, sex plays a part of only moderate importance in the lives of the Maya. Gann, in discussing the Maya of British Honduras, says, "Both men and women are singularly lacking in sex instinct, and this seems to have been a characteristic of the Maya from the earliest times" [fn25]. Landa describes the relationship of men and women thus: "The women were in the habit of turning their shoulders toward the men in passing them, and of turning to the side of the roads; this also they did in giving a man a drink, until he had finished it" [fn26].

I feel that the expression of the sex instinct among the Maya is somewhat hampered by their mode of life. It must be remembered that the entire family and often several relatives live and sleep together in one small room. Furthermore, the men are hard-working farmers, much of whose energy is spent outdoors. When they have leisure and conditions are more favorable, their conduct changes, as will be seen by the following discussion.

Marital difficulties occur rather often. In fact, a justice of the peace told me that they comprised the majority of cases during administration. Separation and divorce occur occasionally; non-legalized separation is more common than legal divorce. In Pisté there

was one case in which the local authorities demanded that the woman remain with her drunken shiftless husband because of their children. when she became desperate during his drunken spells, the town fined him or placed him on public work, but the effect was only temporary. Finally the woman, after consulting a spiritista (medicine woman) in a neighboring town, left Piste and did not return home. the family remained divided, the youngest children going with the mother and the older going with the father.

Extramarital sexual relations are sometimes practiced and apparently such behavior is not regarded as particularly unfavorable or wrong except by jealous husbands.[fn27] Infidelity in a wife is considered a stigma upon a man's honor and makes him feel that he is the object of ridicule and scorn. If a woman is annoyed by the attentions of some man and tells her husband, he is obliged to fight and avenge the woman. If, on the other hand, the woman accepts the attentions and does not tell her husband and the husband finds the two together, then it is the woman who must be punished among the Maya. Such punishment for women offenders are usually beatings by the husband. Sometimes, however, the punishment is much more severe, as in the case of one man who had illicit relations with his cousin's wife. When discovered, he and the woman left for another town. A group of townsmen, including the cousin, caught and murdered the offender. They cut off his testicles and forced the woman to eat them and drink his blood. After this they threw his body into a cenote. The woman was also subjected to torments, including the pulling of most of her teeth. In Dzitas, an unfaithful wife was killed by her husband with an ax. A man from Dzitas killed his wife because he found that she had been unfaithful to him.

This type of punishment recalls Landa's remarks on adultery:

They had laws against delinquents which they executed rigorously; such as against an adulterer, whom they turned over to the injured party that he might either put him to death by throwing a great stone down upon his head, or he might forgive him if he chose. For the adulteress there was no penalty save the infamy, which was a very serious thing with them. One who ravished a maiden was stoned to death, and they relate a case of a chief of the Tutul Xiu, who, having a brother accused of this crime, had him stoned and afterwards covered with a great heap of rocks. They also say that before the foundation of the city they had another law providing the punishment of adulterers [the women] raise their eyes they reprove them severely, and put pepper on them, which causes great pain; if they are immodest they whip them, and put pepper on the other part, as a punishment and affront. [fn28]

This method of punishment is still practised today. In 1935, a Maya man found his wife with another man. Later he took her to the cornfield, where he tied her and put ground chile into her vulva, after which he covered her with cornstalks and set fire to them. Although she was burned terribly, she did not die. The husband spent six months in jail for this and paid a heavy fine. A case is reported from another town in which the wife of an unfaithful man attempted to take revenge upon the other woman with the use of a whole chile pepper. This method of punishment is commonly reported from various parts of Yucatán.

The following examples show further the reactions of the Maya to extramarital relations. C. L. and his wife and baby were living together peaceably until another man came to take his meals at their house. After about a month, C. discovered that the man was

having relations with his wife. The two men had a fist fight, and C. was going to shoot the other, but the police interfered and the man escaped to Tizimin. C. beat his wife, who then left him and followed her lover to Tizimin. When P.A. found his wife with a man from Dzitas, he beat her. She then went to Mérida for two months, but before going she sold her chickens and took the money. P. then went on a rampage and sold his 50 mecatas of cornfield and his corn for about 100 pesos. Also he sold his house and in about a week he had spent all of his money. Later the wife and children returned and the family, now reunited, is in extreme poverty.

This jealousy and retaliation is not always characteristic of the Maya. Another example shows that the men may be tolerant and even indifferent toward infidelity on the part of their wives. In 1937 a man about 60 years old came to live with one family in Pisté. He became infatuated with the wife and took her to jaranas and for walks and paid undue attention to her. This the husband knew full well but said that he did not care so long as his place was kept clean and his food was served on time. Thus, he did not have to work so hard and was assured of about one peso a day.

Occasionally unmarried girls become pregnant. Punishment for the offenders is not severe, although the attitude of the town in general is to frown upon such procedure. One young unmarried girl of 13 became pregnant by a married man who lived in the home of her father. The girl was locked in the local cuartel until she would tell who the man was. When convicted, he was given six months in jail and compelled to pay a fine of 25 pesos. He is now free but no longer lives in Pisté. The girl lives with her child in her parents' household. Another girl in Dzitas became pregnant when she was 13 years old. The parents put the case before the judge, who told the boy to marry the girl, but he did not want to. He was then put in jail for a short time, after which he was set free. The boy and girl lived together until the child was born, after which he abandoned the girl. She is now living with another man, who previously had abandoned his wife.

Prostitution

In the Indian towns prostitution is uncommon, although it does occasionally occur. In one town I know of there is an elderly woman known as the "arregladora" (xtab sahcolel in Maya). She arranges for either an unmarried girl or a married woman to come to her home to meet a man. The arregladora gets 50 centavos for her trouble, while the prostitute receives one or one and a half pesos. There are, however, no special houses of prostitution in the Maya villages.

One man in a small Yucatan town openly uses his wife as a prostitute. Her attitude toward this situation seems to be one of willingness, and all appears to be satisfactory, the husband claiming all his wife's children as his own. When his daughter was about 15 years old, he subjected her to the same procedure.

INCEST

Incest, although not common among the Maya of Yucatan, does occasionally occur. In some cases it is punishable by imprisonment. A man from Tinum had a child by his 15 year-old sister. In San Pedro, near Tinum, a man of 40 had intercourse with his 10 year-old daughter, who died as a result. The man was sent to prison for 15 years. In Centotillo a man of 40 committed incest with three of his daughters, threatening to kill his wife if she told. The fourth daughter, a girl of 14, however, refused to submit to her father and told the

authorities. The father was sent to jail for eight years. Two of his daughters had had children by him.

Adaptations to the Spiritual World

According to all the raters, the Maya are definitely fatalistic, and religion plays a part of questionable importance in their lives. Contacts with the Spanish have brought considerable Christian influence into Maya religious beliefs. For instance, today each village worships its own patron saint, yet all the people fear their Maya pagan spirits. It is probably significant that 77 percent of the Maya children born in Piste since 1918 were given names taken from the Espinosa Calendar of Catholic saints' days. the Maya believe that if a child is not given his particular saint's name, he will not live long; that every person has his own particular destiny and luck, and if he is not named for the saint of his birthday, he might receive some one else's destiny. Furthermore, they believe that when the Lord opens up the "Big Book" on Judgment Day, unless the person has been correctly named, he will not be in the right place in the book. These beliefs are perhaps the result of Catholic teaching.

At present Christian worship is carried on mostly by the women. the Maya children still are given a Christian baptism but are not generally made to learn or comply with the doctrines of the church. Hence, today the children know very little about Christianity.

The religious ceremonies of the Maya are a mixture of pagan and Christian rituals. One such ceremony is a celebration for a bountiful harvest. It is called the u hanli col (meal of the milpa), a ceremony in which only men take part (pl. 14). A Maya priest officiates, offering prayers in the Maya language which are patterned after the Catholic style. Many Spanish phrases are used, the sign of the cross is made often during the ritual. The ceremony consists of baking and eating 13 loaves of bread, each of which is made of 13 layers of large-sized tortillas. Between the layers of some of the loaves cooked beans are place; others are separated by ground, cooked squash seeds. These uncooked loaves are then wrapped in leaves of the boob tree [*Coccoloba Schiedeana* Lindau], securely tied with string and baked in a Maya pib (underground fireless cooker). 29 The pib must be placed where the celebration is to occur.

In addition domestic or wild turkeys are boiled and roasted. The kidneys, liver, heart, gizzard, part of the neck, and the wings are kept separate from the main parts of the fowl and are later mixed with the bread. The loaves, which were spread with baked beans, are then torn apart and put into a huge bowl called cat in Maya. To the contents of the bowl is added the turkey meat, which is pulled from the bones into small bits. In another huge bowl the bread which was spread with ground squash seeds is torn apart and mixed with the liver, heart, and other parts of the boiled turkey. Bowls of gravy and of balche 30 (alcoholic drink) are next added to each mixture. Each step in the process is followed by prayers of the priest.

The cost of the celebration depends upon the number of people invited. At the event I witnessed about 30 people were present and the cost was:

1 carga (about 42 kilos) of corn	3 pesos
2 turkeys at 4 pesos	8
2 bottles of anise	1.4

2 almudes of squash seeds	1.2
2 kilos of beans	.5
3 kilos of lard at .90	2.7
3 kilos of port at .80	2.4
4 bottles of honey at .35	1.4
Miscellaneous	2.0
Total	22.60

The u hanli col is generally celebrated as the fulfillment of a promise in return for a good crop. [fn31].

Superstitions

Superstitions among the Maya are numberless and frequently concern the interpretation of dreams and omens of various sorts, many of which are regarded as forewarnings of death.

Some of the most common superstitions concerning dreams are these:

TO DREAM ABOUT:	MEANS THAT:
Black pigs	Bad luck will follow you to the milpa the next day unless you tell of your dream when you awake.
Floating on air, or having a tooth pulled and suffering intense pain	One of your own family will die.
Having a tooth pulled and suffering little pain	One of your relatives will die.
Red tomatoes	A baby will die.
A black bull trying to push into your house	Some of your own family will die.
A black bull trying to push into someone else's house	You will attend someone's funeral.
Walking in a strange city	You will soon witness a funeral
Ticks on your hands	Death coming soon (refers to earth on your hands in the cemetery)
A red skinned bull passing you	One of your friend's children will die.
Breaking a water jug.	Someone in the family will die soon.
Burning house	Someone in the family will have a fever or bad luck will come.
A dog, especially a black one, biting you	You will have malaria soon.
White horses fighting	It will rain the next day.
Seeing snakes	You will have quarrels, especially with your mate.
A woman without clothes	You will see a rattlesnake the next day.

The Maya tell that if a person sees a green snake with red eyes, a tarantula or a scorpion carrying its young, an opossum, an unusually large or unusually small hen's egg, or hears the crying of an owl, misfortune will surely come to him. One woman in Piste wept when her husband's bees fought and killed each other, because she believed it to be a sign that he would soon die. Although her husband remained alive, her son-in-law died within four days. When in Chichimila, I was rudely stopped while counting the stars in Ursa major. The townspeople informed me that if I continued to count them, my wife would surely die. The sight of a crab is a particularly ill omen. The informant told me that after one man saw a crab his baby died within two months, another became violently insane, another's wife died within two weeks, and a fourth died himself within six months.

The Maya believe that sickness is brought on by dwarfs, for whom gourds of food are placed in the doorway, one for each member of the household, to prevent an epidemic. If one gives away an ember of burning wood, turkeys will die. When a baby chick dies, the Maya bury it easy of a kan xul tree to stop further deaths. Baby turkeys will not learn to eat by themselves but must have a chick in the brood to teach them to eat. A brightly colored thread sewed into the skin on the head of baby chicks keeps the evil spirits away. If a man has setting hens he must neither eat the tuber called macal nor drink balche, else the eggs will not hatch. If, on the other hand, the family forces the setting hen to eat macal with them, then all will be well with the incubating eggs. My informant added that this is absolutely true, saying in broken English, "Every Maya people knows." the Maya believe also that the flowers of the Siempreviva leave an invisible stain on the hands, causing bad hatches with poultry, and children are forbidden to play with them.

Comparable superstitions among the Negro, Indian, and Creole population of Louisiana are listed by Roberts:

It is useless to set eggs just after a thunderstorm for they will not hatch. If you set eggs on Friday they won't hatch. Long eggs will hatch roosters, and short ones, pullets. [fn32]

Among American farmers there is a current belief that anything that grows above the ground is planted in the new of the moon, anything below the ground, in the old of the moon. There are likewise many beliefs concerning the weather. For example, thin corn husks indicate a mild winter; and thick, a cold one. Rain before seven, clear before eleven. If a swallow flies low, it is going to rain. [fn33]

A study of the superstitions of American college girls by Beck with 34 indicates that they believe a rabbit's foot brings good luck, as does a horseshoe. Breaking a mirror brings bad luck and a black cat crossing your path also brings bad luck. Rain will fall if one steps on a spider.

From the above examples, it can be clearly seen that superstitions and omens are a part of almost every person's heritage, and that education does not necessarily obliterate these beliefs.

The cicadas are said by the Maya to be excellent weather prophets. One kind, named choch in Maya, makes a sound like its name, "choch, choch, choch"; when it chirps for a long period it will soon rain. If another variety of cicada called "chip-it-tin" chirps continuously, there will be a dry season; if its call is varied and irregular, it will rain every two or three days. the Maya often regulate the burning of their corn fields According to

these insects. If the zu huy bird (*Dives dives*) cries often, it will rain hard very soon. The Maya do not kill the h-kinmaz (green grasshopper) for fear they will not see the sun when they die. When one of these grasshoppers comes into the house, first one to see it takes hold of it, spits on it, and throws it out of doors, saying, "Go and get money for us." The same applies to a butterfly, except that one says, "Go and get water for us." The Maya do not kill the chuy tunich beetle, one with spiny legs, lest their souls be not lifted to heaven when they die. Evil winds take on the forms of animals, and an individual struck by one of them will soon become ill. To counteract them the Maya put their hats on the top of small whirlwinds to catch these spirits. If a match drips on the floor and continues to burn, it is a sign of good luck; and, if it burns all the way down, the person who has dropped it will have a long life. Finding a natural cross of sticks in the woods is good luck. Sweeping over the foot of a boy indicates that he will marry an old woman; and sweeping over the foot of a girl means that she will marry an old man. Sweeping a house at night will make one poor. Giving a gift and later taking it back will cause garrapatas to bite the donor in the eye. Eating a pig's tail will cause a man to get a stick in his eye. A Maya man very rarely eats chicken wings, or he will soon be dominated by his wife. If a dress is sewn while a person is wearing it, the family will have bad luck and become very poor. Leaving a story unfinished will cause the person telling it soon to have a terrible fright.

Hunting also is beset with many difficulties. A hunter who sells the head, liver, and stomach of an animal he has killed will have bad luck hunting in the future; by selling the paunch of a deer, he will never be able to kill another deer. To bring bad luck to another hunter, one buys meat from him and throws the bones into the cenote. By finding two blue stones in the stomach of a deer, a hunter will have unusual success in hunting for one year; but after one year he must return these blue stones to the deer at their watering places or great misfortune will follow him. The Maya believe that there is a deer in the woods who has witnessed a hundred deaths of his own kind and who has a wasp's nest in his branched horns. If a man should kill this deer, he would die suddenly.

The following signs indicate that visitors are coming: an oriole singing, a dragonfly coming into the house, a butterfly flying high, a cat washing its face, or a fire hissing. If the visitors stay too long, a broom put behind the door will hasten their departure.

The Maya have countless superstitions regarding events in nature which forewarn the observer of sickness, disaster, and death. For instance, if a black moth flies about the house, someone will die. If it stays on the wall, rain will follow the next day. If a large butterfly enters a room and stays there, the Maya will not chase it out, for it is the soul of a dead relative. An unanswered cock's crow during the day or night forecasts disaster in the town. If hens cackle at night, they are seeing who has come to get a member of his family for companionship. A bird, especially a crow, flying through a house indicates that someone in the family will surely die, and black crickets or a wasp's nest in a house are associated with death. If the toh bird perches near a woman making tortillas, it predicts death within a year. Fireflies in the house portend sickness in the family. A dog which incessantly digs holes forebodes the death of some member of the household. When the dog drags itself along the ground on its haunches, it is said to be measuring the length of someone's grave. The Maya hesitate to establish a new cemetery plot, for such ground will demand a greater proportion of dead than an old cemetery would. Other signs of approaching death are excessive sleepiness or pointing out the path of a rodent through a house. Carrying a lighted candle

from the house onto the street foretells that the person will soon follow in a funeral procession.

The Maya consider Tuesday and Friday unlucky, Monday and Saturday lucky. Because of this, most marriages occur on Mondays. Of 24 weddings recorded for Piste between 1854 and 1858, everyone took place on a Monday. In recent years this custom has not been followed so closely, although Monday is still though excellent. Saturday is deemed lucky for the purchase of lottery tickets.

Numbers have great significance, the most important being nine, probably because of the association with the nine steps to the ancient Maya heaven, and 13, because of its reference to the 13 gods of the bush. Nine is the number about which superstitions are rife. A centipede found on a Tuesday must be divided into nine parts to bring good luck. To see a green snake and not kill it will bring death within a year, an event which may be averted by catching the snake and cutting it into nine pieces. To make a cat stay at home, its whiskers are cut off and buried. Then the cat is turned around nine times and lard is rubbed on its paws.

The use of the number nine is common in the cure of diseases. Whooping cough may be prevented by hanging in the doorway on nine successive days as many gourds of pozole as there are members in the household. On the morning of the ninth day the pozole must be shared by various friends. Another remedy for whooping cough is to crush nine ant lions (*Myrmeleon*) and drink them in water. Nine kernels of corn are ground and applied to granulated eyelids, and skin troubles may be cured with a concoction made by boiling together nine pieces of fish skin, nine pieces of corn cob, and nine small pebbles. Nine sour orange leaves and hot water are used as an appetizer for an upset stomach. A Maya mother generally resumes her household duties nine days after the birth of her child. There are nine days of prayer for thanksgiving, and there are nine nights of prayer after the deaths of a relative. To stop too much rain the youngest member of the family stands in the main doorway of his house with his back to the street and bows nine times, each time saying, "Stop, rain!"

Thirteen seems to be limited chiefly to religious ceremonies, in one of which loaves of bread are made by using 13 layers of tortillas separated by 13 slices of bean paste. Thirteen loaves are prepared for the ceremony. When a corn field is to be burned, 13 bowls of *zaca* (food) are offered to the gods of the bush.

The use of odd numbers as omens and in magic formulas is exceedingly common in most racial groups. There are widespread beliefs concerning the number thirteen and Lawrence, writing on this topic of numbers says:

"A Hindu woman, on returning with her young child from a strange village, is careful, before entering her own dwelling, to pass seven small stones seven times around the baby's head, and throw them away in different directions, in order thus to disperse any evil which may have been contracted during her trip."

Marcellus Empiricus in the fourth century A.D. recommends: "for the cure of a sty on the eyelid, take nine grains of barley and poke the sty with each one separately, meanwhile repeating a magic formula in Greek. In the south of England, for intermittent fever, the patient is recommended to eat seven sage leaves on seven successive mornings, fasting meanwhile." [fn35]

MAYA BELIEFS CONCERNING VIRGINITY, PREGNANCY, REPRODUCTION, ETC.

In order to test the virginity of a boy or girl, the Maya measure the neck of the subject with a small rope or string, folded double, the end of which the subject then bites. If the loop goes over the head easily, the subject is no longer a virgin; if it sticks on the forehead, the subject is "pure." If a girl walks without swinging her body, she is a virgin. A girl with slender hips is a virgin. If the flower called nab, which grows in the water of cenotes, fades immediately in a girl's hand, she has lost her virginity.

The Maya believe that the unborn baby will be a boy if the pregnant mother sees a snake that does not go away immediately. All the snake's strength goes into the baby and it becomes a boy. Babies conceived from new to full moon will be girls; from full moon to the last quarter, boys. The same is true for cattle, horses, dogs, pigs, and cats. The setting of hens at new moon produces more pullets; at full moon, mostly roosters. If the testicles of bulls and deer are eaten during pregnancy the child is more likely to be a boy.

A pregnant woman should never eat the stomach of a cow or bull, or she will carry her baby for more than nine months. The expectant mother should not touch her body during an eclipse of the sun or moon, else the child will have a birthmark—black in case of a sun eclipse and red in case of a moon eclipse. A pregnant woman, while sewing, should never throw the thread over her shoulder since then the umbilical cord of the baby will be entangled around its neck. Moreover, if a pregnant woman walks over a rope or vine, the umbilical cord of her baby will surely cause the infant to be strangled. Twins and triplets are believed to be unfortunate. Maya mothers believe that they have enough milk for only one baby, and thus in most cases one of the twins dies. It may be significant that in my experience in Yucatan I have encountered only one set of living twins, and they were in a mestizo family.

One informant relates how his family tricked fate. His sister had five babies, each of which died in infancy. She wanted very much to keep the sixth baby, so at his birth a mock funeral was held for him. They cut a stalk of a banana tree to the size of a real baby, dressed it in clothes, and laid it on the table as if it were a dead baby. Candles and chocolate and ceremonies were prepared. Everyone was serious and attempted to weep. Half an hour after the baby was born the other was given the banana stalk in her arms and the real baby was taken away by the grandmother. Then when the Spirit came for the infant, he took by mistake the banana baby, thus leaving the real one in the home. After the formalities of a funeral, the banana baby was passed through the roof and buried on the east side of a xul tree. A cross was made for the grave, which was covered with lime, and candles were lighted as at a real funeral. After this, the woman lost no more babies.

WITCHCRAFT

Witchcraft is commonly practiced in the Yucatan villages and it is one of the chief causes for moving from one village to another. For example, a 13 year-old Piste boy, living with his grandmother, became sick and passed from his bowels small stones, sticks, and pieces of cloth. The family consulted a yerbatero from Dzitas, who told them that the child was bewitched by the medicine man from Piste, a man perhaps 65 years old. He, of course, denied the charge, but the grandmother pressed the case into the Dzitas court, curing which

time he was lodged in jail. The justice of the peace refused to fine him but advised that he move out of town, which he did after having lived in Piste for over 18 years.

A married woman whose husband was unfaithful to her began to suffer from a tumor on the navel, which constantly suppurated. She went to various doctors, but no medicine would help her. At the suggestion of witchcraft she called a yerbatero, who, after washing the wound thoroughly, applied some herbs. With three or four applications a complete cure was effected, which was attributed entirely to magic.

Another woman suffered constantly from headaches, which no medicine seemed to cure. She finally consulted a yerbatero, who told her that a rival woman was bewitching her and that the cause of her headaches must be near her home. He went to the house and in looking about discovered a lump of earth which had recently been removed. They investigated and found a little wooden box in the shape of a coffin, containing a doll-like wax model with the forehead stuck full of pins. The yerbatero took out the body, removed the pins, and threw it into the fire. The woman was soon cured of headaches.

Witchcraft is sometimes practiced with other than evil intent. the Maya believe that one can call back an absent lover by putting a piece of the lover's clothing into a water jug and then setting fire to it. A clean cloth is put over the mouth of the jug, and it is turned round and round as the lover is called: "Come back to your home-you know your home is clean and tidy. You know how much I love you. Come back to your home because you know that nowhere else can you find more love," etc.

DEATH AND BURIAL

In case of death, Piste families may call a number of specified young women to pray for the soul of the departed. Older men and women are summoned to prepare the body for burial, putting on clean clothes, bringing the hands up on the chest, and tying the wrists and ankles. The ceremony of closing the eyes consists of opening and closing them nine times.

Generally the body is lowered into the grave 24 hours after death, the wrists being untied at that time. Holy water and a handful of table salt are placed inside the coffin and lime is sprinkled on the top of the grave. After the funeral ceremony cigarettes are passed as well as habanero (alcoholic drink), if the latter is available. Seven weeks later there are nine nights of ceremony and after seven months another nine nights. Adults act as pallbearers for adults, and children for children. Mourning is but indifferently observed.

I witnessed a man's funeral in February 1938. At the house, the open coffin (a rough crude box) lay upon the table, several candles and a cross at the foot end. Some women were sitting around, and outside the men were talking and joking. Finally the wife, who was to head the procession, came out briskly, carrying her baby, and started the march. She was attended by six or eight women, one of whom carried a wreath of roses. Then came the pallbearers carrying the body head first. One man said it should be borne feet first, so they halted while the change was made. Then the procession continued on its way, a dozen or so men following the bier and a number of children bringing up the rear. One man took a hammer and four nails, while another brought along the top of the coffin and a cross which was to serve as the grave marker. At a street corner arose some question as to which road the procession should take: the men wanted to go the shorter way; the women, through the town—they finally went through the town. the men took turns as pallbearers. At the cemetery the wife and daughter wept loudly while the coffin was laid on the altar in the cemetery house. Due to the custom among the Maya of second burials, 37 there were

several cans and boxes containing human skeletons on this same altar (pl. 13). These were merely pushed to one side, neither removed nor covered. A Maya woman recited Catholic prayers for about 20 minutes while the men sat outside on the tombstones talking, laughing, and smoking. When the service was over, the coffin was nailed shut and lowered into the grave. Many of the men assisted in covering the coffin with dirt and, since there was but one shovel available, much of it was pushed in by hand.

This incident seems to typify the fatalistic attitude toward death of the present-day Maya. Apparently a considerable change has taken place, for Landa wrote:

This people had a great and excessive fear of death.....When it came the time to die, it was a thing to see what were the grief and lamentations they displayed for their deceased and the sadness they felt. They wept during the day in silence, grievous to hear. For many days they went about in deepest mourning. They kept abstinence and fasts for the deceased, especially a husband of wife. They declared it was the devil that had taken them off, because they thought all ills came from him, especially death. These people have always believed in the immortality of the soul.....They believed that after death there was another life better than this, which should be enjoyed after leaving the body. This future life they said was divided into good and evil, into pains and delights.... The delights they said they would come into if they had been of good conduct.... The torments of the evil life which they said awaited the wicked, lay in going to an evil place below the other, and which they called Metnal, meaning hell, where they were tormented by demons, by great pains of cold and hunger and weariness and sadness. [fn38]

Pathological Traits

USE OF ALCOHOL

Excessive alcoholism is common among Maya men, According to the raters. In 1936 and 1937 there were three open cantinas in Piste, and town officials as well as other citizens regularly became drunk over week ends. However, to drink while working is not customary, and very rarely does one see a Maya woman intoxicated. In one case the boy is now only 15 years old and has been drunk regularly each Saturday and Sunday for the past eight years. Sometimes there is considerable fighting and property damage as a result of drunkenness, but cases brought before the town officials on this charge are generally dismissed. For example, while his wife attended the village dance a man became drunk. He searched for her and, because he could not find her, tore loose her washboard and threw it into the well along with the rope and crosspiece over the well which was owned jointly with his neighbor. His punishment was merely to clean out the well when he became sober.

MURDERS AND SUICIDES

The murders which occur are sometimes committed by persons who are under the influence of alcohol and who are often motivated by jealousy. A murder in a drunken lover's quarrel has been described under Family Ties. According to Ricketson, murders are never committed by Maya women.

Especially during political unrest, murders are often executed with fiendish violence. While an election was being held in a certain town there was much drinking and in the middle of the afternoon some of the men from each party went to get more whisky from a neighboring ranch. On the road the parties met and one of the men was killed and his body mutilated with a machete. The supposition was that the murder was committed because of political difference.

In another town two men stole horses and purposely left them in the bush to die of thirst. They also stole and killed cows, pigs, and chickens. The townspeople assembled to discuss the matter and decided to kill the offenders. The opportunity finally came when the men went to a wake. The townspeople blocked all the streets and waited. At about 10 o'clock the men, unaware of their danger, came to the plaza and the shooting began. One of the men, shot in the hand and arm, escaped and hid in a chicken coop. The other tried to escape but was captured. The man who was hiding was soon found, chopped up, put in a bag, and taken to the cenote where the other man was made to confess where the stolen horses were. They then tied stones to his feet and threw him into the cenote with the body of the first offender.

In spite of the establishment of courts in which crimes may be settled, murder is still an accepted form of revenge for serious injuries done to an individual. Naturally, family feuds develop and last for many years, as a result of these murders.

Suicides almost never occur among the Maya. In Piste there have been none during the past 20 years, and in Pencuyut, a town of 500 people, none have occurred in the last 50 years. In Dzitas, a town of 2000 people, there have been only three cases in about 25 years. The Yucatan doctors assert that most suicides occur in the final stages of pellagra. The patient becomes mentally deranged and jumps into a cenote or hangs himself.

Landa wrote:

They also said, and held as quite certain, that those who had hung themselves went to this paradise; and there were many who in times of lesser troubles, labors or sickness, hung themselves to escape and go to that paradise, to which they were thought to be carried by the goddess of the scaffold whom they called Xtab. [fn39]

INSANITY AND FEEBLEMINDEDNESS

Insanity among the Maya is often regarded as bewitchment. The case of a man who became insane soon after his marriage was thus explained by his son: his father had two sweethearts at the time of his marriage; the other of the disappointed girl bewitched him in revenge for 13 months thereafter.

There have been two other cases of insanity in Piste within the memory of the present inhabitants: one person became violently insane in 1931 and died within six months in the Merida Insane Asylum; the other is said to have become violently insane after eight months of terrific pain caused by kidney trouble.

An analysis of the admissions to the mental hospital at Merida at three widely different times may give some indication of the prevalence of certain mental diseases among the inhabitants of Yucatan. The records include the Spanish-speaking population as well as the Maya. Admissions for September 1926, June 1931, and January 1936 are presented as random samples. The number of admissions for these three months were 21, 27, and 29 respectively. The population of Merida in 1930 was given as about 90,000 and that of Yucatan as approximately 380,000. There are no other mental hospitals in Yucatan. Thus

it is obvious that our figures are of little value when considering the incidence of insanity in the Yucatan population.

Psychosis toxica was by far the most common diagnosis (fig. 7), ranging from 33.3 percent of all cases admitted in June 1931 to 41.7 percent in January 1936. This perhaps represents all mental conditions due to toxic substances and a general type of disease which could not be diagnosed specifically. Manic depressive psychosis was second, ranging from 17.2 in January 1936 to 20.0 percent in June 1931. Alcoholism was most prevalent in September 1926, whereas "mental confusion" occurred more often at the other times. Mention of dementia praecox was made only once, but this may be due to difference in diagnosis and terminology.

Feeble-mindedness occurs very infrequently among the Maya. In Yucatan there are no institutions for such cases and since the struggle for existence is so difficult, the feeble-minded soon die. In Pisté the schoolteacher, when informed of the meaning of the term, stated that in his school there were four such cases. I, however, regarded these cases as normal individuals or high-grade morons. During my considerable travels about Yucatan I have never seen any low-grade morons, imbeciles, or idiots among the Maya and it is my opinion that such persons die in infancy.

General Intelligence

Differences of opinion exist in estimating the general intelligence of the contemporary Maya. Four raters considered them as very bright, 14 as fairly bright, eight as average, three as rather dull, but no one rated them as stupid. Miss Eunice Blackburn, principal of the American school in Merida, states that over one-half the Indian children in her school fail when American standards are used. This may be due, however, to poor preparation and inability to adapt themselves to changed conditions of environment rather than to low intelligence. On the other hand, she states that under their own standards the children who look most Indian do schoolwork as well as or better than the Yucatan whites.

The Maya are not inventive. They follow very much the same pattern of existence that their ancestors did. In following a trail in the bush, however, their power of observation is keen. That this is characteristic of Indians in general or that it is a result of their training is debatable. Klineberg concludes: "There is no sense of acuity as such. The differences depend entirely upon the training of powers of observation." 40

The memory of the Maya was rated by 12 or 26 raters as very good, by eight as good, by four as fair, and by only two as poor. No one rated it as very poor.

The Maya are rather imaginative as is illustrated by a story told to me by one of them, concerning the alux (dwarf) of the forest.

One evening, after working in my milpa, I went within the hut that I had built there, sat down in my small hammock and placed a lamp by me which threw light towards the door. I also placed my gun at my feet and then stayed quietly awaiting and thinking how I would shoot the Kulus [bush dog]. Whilst so musing I felt my wrist gripped and shaken. I turned to see who could have been the intruder and to my great wonder and surprise I saw a little dwarf about 75 cm. Tall who was wearing a curious little hat and no less curious sandals. I made up my mind to talk to him, asking him what he wanted, who he was and why he had touched my hand in such an unexpected

manner. He withdrew from me without answering, however, I and went out of the hut. Although I followed him, I soon lost sight of him. I returned to the hut and lay down again but with an alert mind and keen eyes on all things around me, trying to see whence the little man came and how he came so noiselessly. Then at the precise moment that my mind was relaxing, lo! The little man entered swiftly again and this time touched my face. I rose suddenly, sitting on the hammock. As the little man went forth, I followed him with the fixed idea of getting him. But in vain, because the little man disappeared mysteriously from my sight. So strikingly rapid had this been that I did not know what to think of it. Only a few minutes had elapsed when I heard something running through the corn stalks, and a great noise just like thunder came from the direction of a large cave which I knew was there. I thought my last hour had come and that I would be killed by some unknown and mysterious enemies, undoubtedly the "alux," and a terrible fear got possession of my senses. I felt something which never in my life had I previously experienced. I, a man who has been in many a hunt by day and night all alone in lonesome places, had never seen or felt anything like what I was just then feeling. When I recovered myself a little I began to hurry from the milpato my home. A strong fever struck me and I had to send for a medicine man to treat me, and this man made several signs of the Cross on me and invoked the Lords of the land and the balams. Then I was cured, but it was not until nine days after the occurrence that I was able to relate what I am now telling you.

The Maya have a fair sense of beauty, to judge from the embroidery and jewelry worn by the women (pl. 15f), the flower gardens at each house, and the designs and colors of their baskets. They apparently have only a moderate appreciation of music. The Maya certainly do not sing melodies as do the Negroes. Their sole musical heritage seems to be the native Indian drums which have a deep, hollow sound.

In each of the mental tests made the results were practically the same in that the scores of the Yucatan Maya are decidedly lower than the norms made on white children. I believe, considering the difficulties outlined in the introduction to this chapter, this is proof that at present it is useless to form an opinion of the intelligence of a foreign group based upon present-day psychology tests. However, in order that the reader may decide their value for himself, the results of the tests are presented here with material from other sources for comparison. It is true that the scores are all lower, but the results are evidence of work done. It is the first step and, since actual failures are infrequent, it was deemed advisable to record it.

Table 2 presents the mean scores and probably errors according to age and sex for the performance of the Maya in four tests. In general they males did better than the females, although the difference is significant in three cases only. If any conclusion is warranted from these results, it is contradictory to the statement of Gann and Thompson that the Maya women are mentally superior to the men. [fn41]

Table 2. RESULTS OF PSYCHOLOGICAL TESTS GIVEN TO MAYA INDIANS

TEST	Highest possible score	CHILDREN			ADULTS		
		Male	Female	Significant Difference	Male	Female	Significant Difference
Knox Cube Imitation	12	5.60 ± .23	5.23 ± .34	None	4.70 ± .19	3.15 ± .30	4xPED
Stringing Beads	14	5.07 ± .32	4.50 ± .28	None	4.88 ± .18	4.57 ± .32	None
Hollow Square	8	5.87 ± .19	4.60 ± .28	4xPED	6.05 ± .11	6.20 ± .14	None
Ferguson Form Board	6	N/A	N/A	N/A	3.97 ± .13	2.71 ± .18	5xPED

KNOX CUBE IMITATION TEST

In this test the subject taps four cubes, repeating the order in which they were previously tapped by the examiner. There are 12 combinations, each progressively difficult. The perfect score is 12. It has been shown that there is a positive but low correlation between Knox scores and Binet mental age. In it 15 boys who were tested completed correctly from three to eight of the number combinations with a mean of 5.60+/- .23. The 13 girls completed from two to eight combinations with a mean score of 5.23+/- .34. The value of these means is small, since the number of cases is inadequate for a thorough analysis. Comparison of these figures with the norms of Pintner 42 (fig. 8) shows that performance of Maya boys with an average age of 12.3 and with a score of 5.6 is about equal to that of eight-year-old white children, while the score of the Maya girls (average age 11.0) is between the seven- and eight-year old Whites. In this test the Maya children did better than the adults tested, the men corresponding to the seven-year-old white level and the women to about the six-year level.

The graph suggests that between the ages of seven and eight the Maya children do as well as the white children. Between 10 and 15 years the Maya are definitely poorer than the Whites.

There were 49 adult Maya who took the test, completing from one to eight combinations correctly. The mean score was 4.70+/- .19. Of the 13 adult women, one failed entirely to grasp the idea and the highest combination completed correctly was six. Their mean score was 3.15+/- .30. The difference between the adult males and females is statistically significant .

Davenport and Steggerda, in testing adults by the Knox Cube Imitation in racial studies in Jamaica, give a mean of 4.57 combinations completed for Blacks, 5.00 for Browns, and 6.47 for Whites. 43 The corresponding figure for Maya adults is 4.31.

STRINGING BEADS TEST

The stringing of colored beads test is similar to the Knox Cube Imitation in that the subject must retain a mental image of an involved series. The score is the number of strings correctly imitated. The test has not been standardized, but the results obtained indicate that males do slightly better than females in this test. these x differences in both children and adults are not significant, however.

LINCOLN HOLLOW SQUARE TEST

This test is a form board containing a hollow square, which the subject is asked to fill with a series of eight combinations of blocks. The time allowed for a perfect score for each combination was set at one minute, and the number of problems correctly solved within the time limit was taken as the final score. According to Schieffelin and Schwesinger this is a test of form concepts and manipulative skills. [fn44]

The test was taken by 60 Maya children ranging in age from seven to 15, and averaging 11.7 years. The median number of problems correctly solved by this group was 5.5. The test was taken also by 52 adults and results showed a median of 6.2 problems correctly solved.

Dearborn, Shaw, and Lincoln gave the following medians for problems solved by ages on the Lincoln Hollow Square, obtained from school children of various cities in the United States: [fn45]

Age	4	5	6	7	8
Median	4	6	7	7	7

It will be noted that the Maya children with an average score of five plus, averaging 11.7 years of age, do only as well as whites between ages four and five, and the adults with an average score of six plus approach the scores of five- and six-year-old whites. However, the small number of cases and the conditions of testing must be reconsidered before direct conclusions on intelligence can be drawn from these results.

SEGUIN FORM BOARD TEST

For this test 10 wooden blocks of different geometric design were placed before the subject to put into corresponding recesses in the form board. In the method used, one trial was given to the subject with eyes open, followed by a second trial, blindfolded. Time was recorded for each trial.

In applying this test to the Maya, we were faced with the disadvantage of scoring According to time. The test was given only to adults, most of whom were males. The average time for the first trial (visual) for all adults was 47.4 seconds. The average time for first and second trials and the number of adults of both sexes tested are given on the following page.

	Adult	Males	Adult	Females
	Number	Seconds	Number	Seconds
First Trial (visual)	26	50.0	7	37.7

Second Trial (blindfold)	25	237.4	4	112.5
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The number of women did much better than the men in both trials, but the number of women is too small to make these observations of much value.

Sylvester, in a preliminary study, gave the following averages for the first visual trial of 20 white children of each age from five to 14: [fn46]

Age	5-6	7-8	9-10	11-12	13-14
Time (seconds)	45	29	22	18	15

Comparison of our data with those of Sylvester indicates that the visual performance of the Maya men is slightly beneath the five-six-year white level, while that of the women is slightly above it.

FERGUSON FORM BOARD TEST

There are six Ferguson form boards which are progressively difficult. The objective is similar to that for the Seguin Form Board. The more advanced boards require the fitting together of two pieces to fill one space, and the most advanced one, in addition, has beveled edges. This test was given to Maya adults only, 28 of whom were males and seven were females. The average number of tests completed for the males was 3.97+/- .13, while that for the females was 2.71+/- .18. A comparison of these very small groups shows that the men give a significantly better performance than the women. Scoring was done according to the method of Bronner et al. 47 In this method the time in seconds required for each test is converted into a value, and the sum of the values is the final score, which increases with grade of performance.

The white standards by sex and age according to Bronner are:

Age	9	10	11	12	13	14	15	16
Males	12	18	24	30	36	42	48	54
Females						34	38	41

The actual score for the 28 adult males was 13.18 which, transferred into age values based on white children, shows the adult Maya score to be slightly superior to that of a nine-year-old white child. Since the data are lacking in the norm scores for female whites below 14 years of age, a similar comparison cannot be made for the Maya women. Furthermore, the number of Maya female adults is too few to have much value.

Certain observations recorded by the examiner during the administration of the form board tests gave some interesting information as to the method of attack, form perception, and handling of particular shaped objects. The trial and error method was used to some extent by almost all the Maya subjects, and a great majority used it entirely. In numerous cases particular attention was given to the details and edges of the blocks rather than to their general form. Some individuals were much more concerned with fitting edges together than about anything else in the test. Many fitted the edges together before placing the blocks in the Form Boards. The beveled edges of the more advanced tests caused difficulty to a number of individuals.

GOODENOUGH DRAWING SCALE

The instructions for the Goodenough test require that the subject draw a picture of a man, "the very best picture that he can." Children's drawings are believed to be a form of expression similar to language, and it has been demonstrated that the child draws what he knows rather than what he sees. The test provides a scoring range designed to evaluate the degree of complexity of the resulting performance, since each drawing receives one point of credit for each item of the scale that is clearly indicated, such as hair, eyes, fingers, etc. The total number of points is then converted into an age score. The IQ obtained by this test shows a correlation of .74 with the IQ for the Binet test. These calculations are based upon scores made by white people. The correlation is probably as high as for any performance test and can be considered a satisfactory test of intelligence.

Figure 9 shows the test performance at successive chronological age levels for 48 Maya children varying from 8 to 14 years, together with the performance of Goodenough's standardization from ages 4 to 12 made on 3593 relatively unselected school children, chiefly from smaller urban centers of Middle Atlantic States of the United States. It is obvious that the curve for the Maya subjects falls well below that of the standardization group. Although probably due in some degree to difference in intelligence, we feel that considerable variation may be accounted for by the fact that it was extremely difficult to persuade the Maya to attempt the test. Several subjects turned in blank papers and the drawings of a number of others were very crude. In addition, the small number of Maya subjects detracts from the value of the results.

The 48 drawings mentioned in this study plus 330 additional drawings from Maya - Spanish crosses in Merida were given to Dr. Elaine F. Kinder of Letchworth Village, Thiells, New York, for further analysis. They were compared with 449 Navajo Indian drawings also collected by me. Dr. Kinder showed that the Navajo scores are consistently higher for each age group than those of the Maya -Spanish group. It is generally known that the Navajo are inclined to construct intricate designs and that the school children have an aptitude towards drawing, but such a wide and consistent difference in attainment of two Indian groups has never been demonstrated so concisely heretofore. Dr. Kinder says:

In concluding, it may be noted that our results, showing very clearly as they do the inferiority of the Maya -Spanish group, are not reported simply to demonstrate this difference. Rather, it is felt that, taking the present results along with those of related studies, an appreciation may be felt for the need for standardization of tests in specific cultural-racial groups, and that only after that need is met will group comparison be validated. 48

As a summary of the results of this part of our approach to testing the mental traits of the Maya, it may be said that in practically every case the performance of the Maya was far below that of the Whites on whom most tests have been standardized. I wish to repeat that the results must be interpreted in the light of them any difficulties involved in administering the tests to the Maya. If, in spite of these difficulties, the conclusion is warranted that the Indian intelligence tends to be inferior to that of the Whites, our results in general agree with those of other workers who have studied intelligence among American Indians. 49 I believe, however, that the lower scores of the Maya are due to inadequate tests for measuring mental capacities of races, although I still think that some mental differences do exist.

Discussion

The Majority of people, when thinking of the Maya, believe them to be an outstanding racial group. Aside from the few attributes peculiar to them, such as conservatism, peacefulness, and cleanliness, the present Maya are no more outstanding than the Indians in other parts of North and South America are. The ancestors of these Maya, however, did achieve a high place in cultural attainment. Morley describes them as the "Greeks of the New World." He relates that their priests, during their leisure, developed an accurate knowledge of astronomy in answer to a need of agricultural people who required information on the time of planting, cultivating, and harvesting their fields.

Although the Maya in their knowledge of the apparent movements of the heavenly bodies - the Sun, Moon, Venus and probably as other planets as well - far excelled both the ancient Egyptians and Babylonians, their greatest intellectual achievement was the invention of a chronology, exact to the day within a period of 374,000 years, which is as accurate as our own Gregorian Calendar. For the first time in human history, their mathematical system to keep account of this chronology made use of a positional system of writing numbers involving the conception of the abstract mathematical quantity of zero, one of the outstanding achievements of all time... By their exceedingly accurate system of chronology as well as by their knowledge of the apparent movements of the heavenly bodies, the Maya priests were able to predict eclipses and helical rising and setting of Venus. Moreover, what was of even greater importance to the Maya farmer, they had determined the length of the tropical year with as high a degree of accuracy as Pope Gregory XIII did a good thousand year's later.⁵⁰

Today the modern Maya are not acquainted with this knowledge. For example, one group in the interior could not find the north star nor tell of its significance. Most of the heritage of art and science left by the ancients is lost to the present inhabitants. Nevertheless, they remain an interesting people. I consider the outstanding personal characteristics of the Maya to be calmness and cleanliness. They are a sedentary, peaceable people. They quarrel, of course, sometimes violently, but their methods of taking revenge are more deliberate than one might expect in a culture such as theirs. If a man does injury to another, the injured one does not always immediately claim an eye for an eye. "Just wait," he says calmly, and when the opportunity arises, perhaps months or even years later, he strikes. The Maya are not excitable, flighty people, and they take life rather stoically as it comes. Considering the arduous conditions under which they live, they are unusually clean about their person, taking baths and wearing clean clothes daily. The housewives seem always to be laundering clothes or washing their babies.

The Maya are also conservative, as is evident in many phases of their life. Their houses have remained almost unchanged since Landa's day and probably for many centuries before then. Their pottery designs show marked similarities to the very early examples, and their style of dress has remained the same since it was introduced by the Spaniards during the colonial period. Modern innovations of any kind make but slight impression in the remote parts of the Yucatan, though in a city such as Merida where the population is largely a mestizo Spanish mixture, radios and automobiles are rather common. The Maya are

amiable and cooperative, working well together but preferring to be led than to lead. They are not aggressive or inventive. As is the case in most small homogenous and primitive communities, progressiveness is neither expected nor especially desired.

They are an agricultural people. Farming provides practically their only means of support, yet unlike most primitive communities the world over, the women do almost none of the heavy farm labor. They do not work in the fields and are not at all considered beasts of burden. Their place is in the home. Even at early age children sincerely respect the wishes and rights of their mothers. Mothers love their infants, and abortion and infanticide are relative unknown.

Sex behavior among the Maya does not play an overly important part in their lives. Incest is not common and rape is practically unknown. They marry young, and spinsters and bachelors are exceedingly rare.

The Maya are quick and alert, and possess a practical sense of humor. the men have a tendency toward excessive alcoholism, but the women seldom drink. Toward strangers the Maya are kindly and among themselves they are sociable. They have a great fear of the mysterious and supernatural, and their lives are filled with omens and minor superstitions. The present-day Maya are not a gifted race as far as intelligence is concerned. It has been impossible to measure their intelligence satisfactorily with psychometrically methods, but certainly the Maya at present are not contributing to general knowledge.

Archaeologists have demonstrated that the ancient Maya were well advanced in Mathematics, astronomy, and architecture; perhaps in agriculture, ceramics, and weaving. The present Maya know practically nothing of these arts and sciences, having only numerous strange beliefs and superstitions concerning the celestial bodies, the winds, the trees, and the ancient ruins.

I believe that the contemporary Maya are descendants of an indigenous population living in northern Yucatan when small migrations of men with new ideas inspired them to build a glorious empire. These men were able to exert their influence only for a limited time, after which their descendants became absorbed into the general population. This may have happened twice in pre-Columbian times, and it may be happening today with the ruling Spanish class.

In 1937 a new Presbyterian church was being constructed in the town of Xocenpich. One behind the other, day after day, the Indians trekked to the church laden with heavy stones merely because on or two white missionaries had persuaded them to build a church. This, I believe, typifies the history of the Yucatan Peninsula from ancient to modern times. the Maya were always present but were being continually influenced, first by the Old Empire Maya, then by the Toltecs, then by the Spaniards, and history will record who next will influence this peaceful, pliable Indian population.

Endnotes

Chapter Two: Personality Traits and Everyday

Activities

1. Redfield and Villa, 1934.

2. These persons spent much time and earnest thought in grading the scale, for which I am sincerely grateful: Miss Florence Beatty, Miss Eunice Blackburn, Mr. John Bolles, Sr. German Celis, Dr. Rafeal Cervera, Sr. Pacheco Cruz, Mr. F. Espinosa, Mrs. F. Espinosa, Dr. George J. Gaumer, Dr. E. Guzman, Mr. J. C. Kilmartin, Sr. Ezequiel Lango, Mrs. Helga Larsen, Miss Kathryn Mackay, Mrs. Frances Morley, Dr. S. G. Morley, Mrs. Ann A. Morris, Mr. Earl H. Morris, Dr. H. E. D. Pollock, Mrs. Edith B. Ricketson, Dr. O. G. Ricketson, Mr. Lawrence Roys, Mr. Ralph Roys, Mr. Karl Ruppert, Mrs. Inez Steggerda, Mr. Gustav Stromsvik, Mr. J. Eric S. Thompson, Dr. G. C. Valliant, and Mr. J. G. Wiggins.
3. Knox, 1914, pp. 741-47.
4. Schieffelin and Schwesinger, 1930, p. 197.
5. Dearborn, Shaw, and Lincoln, 1923, p. 50.
6. Ferguson, 1920, pp. 47-58.
7. Goddard 1912, pp. 49-51.
8. Goodenough, 1926, p. 177.
9. Schieffelin and Schwesinger, 1930, p. 197.
10. Blackwood, 1927, p. 4
11. Steggerda and Macomber, 1939, pp. 51-59.
12. Cook, 1917, pp. 573-79.
13. Benedict and Steggerda, 1936, 157-88.
14. Huntington (1912, p. 817) says: "One evidence of relatively high civilization in Yucatán is the cleanliness of the inhabitants They are more completely and universally clothed than most tropical peoples, and their clothes, which are almost universally white, are kept immaculate by daily washing."
15. Landa, 1937, pp. 33, 53.
16. Huntington, in writing of the Maya, states (1912, p. 810): "The pure Indian is a quiet, slow being, inoffensive and retiring unless abused. he never seems to work unless compelled. As for storing up anything for the future, the thought seems never to enter his head. If he has enough to eat, he simply sits still and enjoys life until hunger again arouses him to activity. His wants are few and easily supplied." According to my experience this improvidence is not at all characteristic of the Yucatán Maya.
17. Landa, 1937, p. 40
18. Redfield and Villa, 1934, p. 114.
19. Martinez H., 1929.
20. Redfield and Villa, 1934, p. 156.
21. Of 50 men from the town of Pisté, 70 percent chose wives from the same town; the remaining 30 percent selected mates from within a 25 km radius.
22. Landa, 1937, p. 52.
23. Ibid., p. 41.
24. The spot where the man died is marked in the street with a pile of stones. These stones have not been removed to date (1938) nearly 11 years after the incident; people walking along the path must go around them.
25. Gann and Thompson, 1931, p. 229.
26. Landa, 1937, p. 54.

27. It is estimated that perhaps 50 percent of the Maya men remain true to one woman throughout their entire lives. This percentage is higher than that for the Spanish-speaking classes, about whom I received four independent estimates from persons well qualified to form an opinion. One, a young man of 25 years, estimated that only 20 percent of Yucatecan men remained true to their wives. Another, an American having lived for many years in Yucatán, estimated that 1 or 2 percent remained true. The other 2 men, both past 60 years of age, were Yucatecans and said that in their opinion there were no Yucatecans who remained true to one woman throughout their entire lives.
28. Landa, 1937, pp. 15. 54.
29. The pib is made by digging a pit, into which dry wood is placed. On top of the wood stones are piled. As the wood burns, the heated stones fall into the pit. The food is laid on the hot stones, covered with green leaves and soil, a little water is added to form more steam which cooks the food.
30. To prepare the drink called balche, the Maya take about 5 kg. of bark from the balche tree (*Lonchocarpus longistylus* Pittier) and crush it well by pounding. It is then put into a barrel or large tub containing water to which five or six bottles of strained honey are added. This mixture is allowed to stand for several days, being stirred several times. Before being used, it is strained through a cloth and bottled.
31. For further information on this and other religious ceremonies, see Redfield and Villa, 1934.
32. Roberts, 1927, p. 180.
33. Barnes, 1923, pp. 16-22.
34. Beckwith, 1923, pp. 1-15.
35. Lawrence, 1898, pp. 326-29.
36. After the death of a child among mestizos, the family has a party, inviting many children. They play games, have refreshments, sing, and enjoy themselves, since the parents say that the child is then an angel and it is not well for them to mourn. This is not customary, however, among the Indians.
37. Because of the limestone formation of the Yucatán soil, the Maya have special holes dug in the cemetery into which the body is lowered. At the end of two years the bones are removed, reburied in small niches along the cemetery wall, and the grave is again available.
38. Landa, 1937, pp. 56-58.
39. *Ibid.*, p. 58.
40. Klineberg, 1935, p. 150.
41. Gann and Thompson, 1931, p. 229.
42. Pintner, 1915, pp. 377-401.
43. Davenport and Steggerda, 1929, p. 347.
44. Schieffelin and Schwesinger, 1930, p. 172.
45. Dearborn, Shaw, and Lincoln, 1923, p. 57.
46. Sylvester, 1913.
47. Bronner, Healey, Lowe, and Shimberg, 1937, p. 127.
48. Kinder and Lo, paper in manuscript.
49. Fitzgerald and Ludeman (1926), using three well-known group tests in two Indian schools in the United States, conclude that "the median score of intelligence

quotients of Indian students was found to be 87.5," adding that "nurture or training of the Indians seem to affect his ability to answer certain questions and to solve certain specific tests."

Hunter and Sommermier (1922) tested 715 American Indians in school at the Haskell Institute in Kansas and found that "there is a positive correlation between increasing degree of white blood in the American Indian and score on the Otis intelligence test, which would seem to indicate a racial difference, probably of intelligence, although possibly of temperament."

Garth (1921) gave four association tests, three memory tests, a two word-building tests to 384 Indians, some of mixed and some of pure blood. In all nine tests the mixed blood made significantly higher average performances than did the full bloods.

Rowe (1914) compared 547 white and 268 Indian children by means of the Binet-Simon test and found the Indians everywhere inferior to Whites. The Indian is relatively weaker in tests involving comprehension and definition than in tests of more purely perceptual or memory nature.

Manuel and Hughes (1932) found that at each age level from 7 to 10, Mexican children had lower scores both in drawing ability and in general intelligence.

Garth and Barnard (1927) concluded from the Downey will-temperament test given to 170 full-blooded Indians in the United States schools: "The whites are more speedy in the test than the Indians, they are quicker in making decisions, they are rather more self-confident, they have less motor inhibition, better coordination of impulses, and are poor in volitional preservation Only in the last of these does the Indian excel."

50. Morley, 1936, pp. 593-97.