

CHAPTER VIII

STYLISTIC DIFFERENCES AND THE RELATIVE CHRONOLOGY OF THE CHICHEN ITZA INSCRIPTIONS

In a former paper¹ I have shown that the outline of the history of Maya writing can be traced through differences in the form of the hieroglyphs. On this basis the following divisions may be recognized:

- I. Epoch of Glyph Formation (Archaic Epoch): to about 8.5.0.0.0 (A. D. 140).
2. Epoch of Glyph Type A (Great Epoch): 8.5.0.0.0-10.3.0.0.0 (140-889).
3. Epoch of Transitional Forms (Epoch of Nahua Influence): 10.3.0.0.0-11.12.0.0.0 (889-1460).
4. Epoch of Glyph Type B (Epoch of Maya Nationalism): 11.12.0.0.0-11.16.0.0.0 (1460-1539).
5. Epoch of Decadent Forms (Colonial Epoch): (1570-1800).

All the inscriptions now known from Chichen Itza clearly pertain to the Third Epoch, the Epoch of Transitional Forms.

In the paper noted above I have attempted a grouping of the inscriptions then known to me, arranging them in a sequence. This sketchy method of treatment, utilizing only the two hieroglyphs Kin and Cauac, has now been rectified as well as elaborated, and applied to all available texts at Chichen Itza. Furthermore, it has been extended to all hieroglyphs that show sufficient clearly recognizable variation for this purpose. The results are represented in tabulated form in Table I.

In the first column, Cauac is represented in its three principal forms. The first type, with the dotted detail to the right, still is that of the Old Empire. The next form has the dotted element in both lower corners, while in the third variant the right element is dropped, preserving only that to the left. This is the form used in the Fourth Epoch. The order of the three variants, then, is obvious: from the Old Empire type through an intermediate form to the late type preserved in the codices. In the second column, some Cauac variants are given in their proper places, where two forms are found in the same inscription. This second variant is employed for smaller glyphs in the Monjas lintels; it foreshadowed the following form inasmuch as in it the right dotted element is omitted.

I consider the changes in the hieroglyph Cauac as the most important of all, since they imply different concepts of the sign. Old Empire Cauacs often have a "mouth-line" on the left, that is, the sign is thought of as animated or personified. In this case the dotted element becomes a kind of ear ornament (see I, 1 in Table I). The following form (VI, 1) with two dotted elements has lost this aspect, but returns to it again in the third stage (IX, 1), except that here the dotted element itself now signifies the mouth. As all other changes in hieroglyphs are of less consequence, I selected Cauac as the principal glyph for Table I.

¹ Beyer, 1932*a*, pp.73-102. A brief résumé in Spanish appeared under the title "La Historia de la Escritura Maya" in Beyer, 1934*b*, pp. 300-305

The natural division of the list of twenty different inscriptions in three series by the Cauac variants of column 1 is confirmed and still more refined by the glyph in column 3. The Monjas-Halakal-Casa Colorada group is further subdivided by this sign, appearing there in two variants, the central part being inverted in the second type. Again a subdivision is effected in the latter half of Table I (IX-XIX) by separating IX-XV from XVI-XIX.

The hieroglyph Kin (column 4) has the Old Empire form in Inscriptions I, III (?) and VI-VIII. Also Inscription XX reverts to it, and it is possibly also found in XIX. The slanted form appears first in IV, then in V, and is constant from IX to XVII. The variants with double strokes (XVI and XVII) are the same as those employed in the surviving codices. The Hand with Kin (column 5) appears in two variants, one having the Kin symbol to the left; the other having it in the center. Its first occurrence in the center (fig. 358) is not very clear, it must be admitted, but in the inscriptions in XVI and XVII there exist many well-preserved examples.

The composite glyph Day-Sky (column 6) is present in three variants and in it also may be recognized the form of the essential detail of the day sign Caban (column 7). This has its upper circlet to the left in II and XIX, while the other instances have it to the right.

A composite Flame hieroglyph is reproduced separately as prefix (column 8) and as superfix (column 9). Its Old Empire form is retained in I and VI-VIII. Although as a superfix (V), it is soon inverted, the prefix preserves the old position much longer and only in XVI does the reversed variant make its appearance, but still beside the normal form. The variants employed as prefixes in V and IX (column 8) are closely related.

Imix with an inserted Ahau (column 10) has two principal forms, the one with a normal Ahau (I, etc.) and the one with an inverted Ahau (VI). The Monjas group clearly distinguishes itself from the rest of the inscriptions by this criterion.

The sign Ahau on the whole is identical with its Old Empire type, but minor differences can be detected, as shown in column 11. Again the Monjas group has its own peculiar variant with strokes on top. For the Itza examples a full frame is characteristic (V, IX, XIV, XVI, and XVII), the only exception being X. Peculiar is the variant in XX with "almond" eyes and a line for the nose.

The hieroglyph of column 12 appears, in its two variants, occasionally in different inscriptions, but the prevailing forms are distributed as indicated in Table I.

For the prefix represented in column 13 a late variant can be distinguished from the earlier better executed form.

In column 14 there are probably two different signs brought together, although they have the same symbolic value. The Monjas group again differs from the other inscriptions.

It does so also for the sign reproduced in column 15, which is a prefix in occurrence at the Monjas and Halakal lintels, while it assumes the full form of a complete glyph in later texts. The only exception to this is in XV.

The various ending signs in column 16 give the Akab Tzib a unique place, but IV is connected with the later texts. The Monjas group again has its own variant.

Columns 17 and 18 represent the variants of prefix and suffix, respectively, used commonly with the hieroglyph Ahau. The older texts down to VIII have the arrangement: Ben-Lamat-Center, while afterward it changes. The suffix (column 18) has the same position in most instances, only the examples from I having it inverted. The Monjas group has its own form (an opening at the bottom of the smaller element). For the texts in IX-XVII

only one variant is assumed, although the smaller element occasionally has the hook reversed. Inscription XX is unique in giving to both parts of the Owl-Plume the same shape.

The affix in column 19 appears in two different positions, illustrating an older (down to VIII) and a later (at least from XII down) variant. (Strictly speaking text VIII itself does not contain the sign, but we may well assume that it would have, had it included hieroglyphs with that prefix.)

Similarly, the glyph in column 20 changes its position. Curiously enough, however, the Yula inscriptions, although having almost the same style as those in the Temple of the Four Lintels, revert to the old type. The position in Inscription XX is again different.

For most of the inscriptions their position in the sequence of Table I is warranted by sufficient glyph material, but in some cases the evidence, it must be admitted, is somewhat scanty. Personally, I have doubt only about number III, the Annex, or East Wing of the Monjas, and number XX, a stone disc from the Caracol. Unfortunately only a few of the hieroglyphs of Inscription III are signs listed in the table, and on the whole, their style is individual not to say unique. Even the Kin sign is not clear, since it can be interpreted as having four double strokes but arranged in ancient fashion. It is only the day sign Ik (fig. 288) that clearly speaks for great age as it is identical with Old Empire forms.

The building which now forms the East Wing of the Casa de las Monjas seems to be an ancient construction, possibly anterior to the second story of the Monjas. On the other hand, its roof construction is the same as that of the near detached one-room building called the Iglesia.¹ This latter, in its outer wall decoration at least, is clearly Nahua, even having statues of the Conch and Turtle-Men. Probably both buildings have been restored and redecorated in a later period. The roofs may have been destroyed and new ones constructed, but I think the lintel of the East Wing already must have formed part of the ancient building as its dimensions and shape indicate. For this reason as well as because of the evidence given by the Ik glyph I feel justified in placing this lintel among the oldest inscriptions.

The old stela that has been divided into quadrangular pieces and re-used in the High Priest's Grave (Inscription II) supplies few hieroglyphs that can be identified, but all indications speak for an early monument. The form of the day variant (column 6) is the same as that at Old Empire sites, and the Ahau is similar to that of the Akab Tzib in its lack of a nose.

The Temple of the Hieroglyphic Jambs has the slanted Kin and other details in common with later inscriptions, but its Cauac specimens possess the Old Empire characteristic of having the dotted element to the right.

The weather-worn inscription on a quadrangular column in the High Priest's Grave (number XIV) occurs in surroundings that clearly indicate a late origin, so the paucity of text-glyphs does not invalidate our late relative dating of this inscription.

The hieroglyphs on the lintel used in modern times as a water trough at the hacienda (number XV) are crude as well as badly preserved. However, the Cauac form is represented by several specimens and assures at least its general position among late monuments.

The inscription from the Temple of the Owls has only a late Cauac to be used in our table, but architectural details of the building corroborate the late position given to it

¹ Seler, 1915, V: 218, 238.

GRADUAL TRANSFORMATION OF HIEROGLYPHIC FORMS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
I. Akab Teib		—				—	—					—	—		—				—	—
II. Broken Stela, High Priest's Grave	—	—	—	—			?	—	—			—	—	—	—	—	×	—	—	—
III. Annex	—	—	—	×	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV. Hieroglyphic Jamb	×		—		—	—		—	—			—	—		—		×		—	—
V. Initial Series	×	—		×	—	—	—		—				—	×	—	—	—			—
VI. Monias					—	—	—												×	
VII. Halakal	×	—	—	×	×	—	—	×	—	—	×	×	×	—	×	—	×	×	×	×
VIII. Casa Colorada	×	×	—	×	×	—	—	×	—	—	×	×	×	—	—	×	×	×	×	×
IX. Three Lintels		—			—		×						—		—	—	—		—	—
X. One Lintel	—	—	—	×	—	—	—		—			×	—	×	—		×	×	×	—
XI. Hieroglyphic Band	×		×	×		—	×	×	×	×	×	×	—	—	—	—	—	×	×	—
XII. Caracol Stela	×	—	—	×	—	×	×	×	×	—	×	—	—	—	—	—	—	×	×	
XIII. Serpent's Tail	×	—	—	×	—	×	×	—	—	—	—	—	—	—	—	—	—	—	—	—
XIV. Column, High Priest's Grave	×	—	—	—	—	—	—	—	—	—		—	—	—	—	—	×	×	×	—
XV. Water Trough	×	—	—	—	—	—	—	×	—	—	—	×	—	—	—	×	×	×	×	—
XVI. Four Lintels	×	—			×	×	×		×	×	×	×		×	×	×	×	×	×	
XVII. Yula	×		×	×	×	—	—	—	—	—	—	×	×	—	—	—	—	—	—	—
XVIII. Owls	—	×	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
XIX. Tomb	×	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—
XX. Cylindrical Stone	—	—			—	—	—	—	—	—		—	—	—	—	×			—	

in our list.

The painted inscription on a capstone of a small chamber (number XIX), probably a tomb as Morley informs me, has practically no serviceable sign; even the Cauac is not free from suspicion. The only indication for a late date is given by figure 443, which agrees in its rigid lines with the forms of the codices, while the Old Empire specimens show much more curving. There is further evidence supplied by the pictorial part of the slab (pl. 13, *a*), because it shows clearly a Nahua warrior with the typical descending bird (Xiuhtototl) on his fillet, the peculiar nose ornament Yacaxihuitl, etc. Maya influence is revealed in the particular form of the wrist and ankle ornaments.

Our method of stylistic comparison which has proved so powerful fails completely for the inscription found on the curved part of a cylindrical stone with tenon from the Caracol. It is, therefore, placed at the end of the list. All we may say is that the forms of these hieroglyphs differ from all the other Chichen Itza inscriptions and that for this reason the piece must have been produced by a workman from a distant region. Only Kin shows the typical Old Empire form. At the first glance Gouged-Eye seems to resemble the Monjas variant but it lacks the lower Ahau, which is the really important point. The upper Ahau as a distinct part, as shown in XX, 3, is more common than the fused Ahau when the Maya area as a whole is considered.

From the decoration of the piece we may draw the conclusion that it comes from a period of Itza dominion. It seems well established now from Ruppert's detailed description of the Caracol¹ that this cylindrical monument dates from the time of Inscriptions XI and XII. In comparison with these two texts, the hieroglyphs of Inscription XX are rather crude or decadent, showing that the sculptor was a poor hierogrammate.

Out of the bewildering mass of details in Table I can be drawn a few important conclusions. One is that the inscriptions of the Casa de las Monjas and the Casa Colorada at Chichen Itza, and the lintel from Halakal, form an isolated group, whose peculiar glyph types are reproduced in figure 768. All the variants of these hieroglyphs taken from these three sources are so nearly akin that they must be referred to the same people and same period, or to one school of sculptors. A slight difference is indicated by the two variants of the Gouged-Eye glyph (column 3 in Table I) and another one by the employment of a distinct ending sign (see figs. 671-673) in the Casa Colorada, while the Monjas and Halakal lintels agree (figs. 674 and 683-685). On the whole, Inscriptions VI, VII, and VIII, agree in using the glyph types of figure 768, and they differ from the preceding as well as from the following texts.



Fig. 768
CHARACTERISTIC GLYPH-FORMS OF THE MAYA (COCOM?) INSCRIPTIONS
(Standard Forms)

Now, most of the last—that is, Inscriptions IX-XX—can safely be referred to the Itzas, an originally Mexican (Nahua) tribe which adopted the Maya writing and calendri-

¹ Ruppert, 1935, pp. 135-140.

cal system, but retained much of its ancient customs, traditions, mythology, and art. The proofs for the late and consequently Itza character of these inscriptions are so overwhelming and well known that there is no need of a detailed discussion. As typical glyph forms for the Itza (Nahua) monuments we can select the standard series given in figure 769. We have, then, in Table I the proofs for an Itza dominion for a period with an undetermined beginning, but ending with the exodus of this tribe to Lake Peten Itza after the fall of Mayapan.

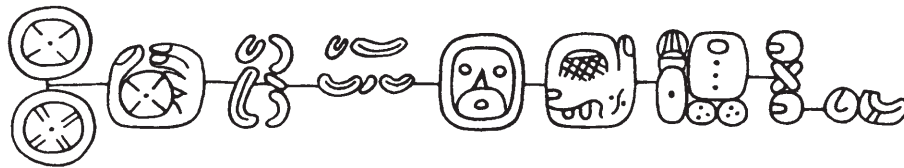


Fig. 769
CHARACTERISTIC GLYPH-FORMS OF THE ITZA INSCRIPTIONS
(Standard Forms)

Before this period Chichen Itza was ruled or occupied by another people who left examples of their power and art in the assemblage of edifices called today the Casa de las Monjas Group and the Casa Colorada (Chichan Chob).

But now comes the interesting fact that immediately before them we again have an Itza text in Inscription V. The style of the famous Initial Series is so unmistakably Itza and it especially is so closely related to the Temple of the Three Lintels, that there cannot be the slightest doubt about this connection. Compare, for instance, the two identical calendrical statements 10 Tuns 1 Ahau in figures 680 and 681, and the prefixes in column 8 of Table I. In the light of these formal criteria we can now take the doorway of the Temple of the Initial Series at its face value, that is, the Atlantean figures and the lintel are contemporaneous. There is no more need to explain the lintel as taken from an older structure and re-used in the temple. The lintel was chiseled by a sculptor whom our tabulation clearly designates as the precursor of the later Itza School of sculptors.

While the Initial Series lintel undoubtedly is a work of the first Itza School, this cannot be said of the Temple of the Hieroglyphic Jambs. It is just as clearly not a work of that school. Probably it belongs to the period of the first or second Itza dominion, if we accept the traditions, since its glyph forms show many affinities with the Itza hieroglyphs. Therefore, it is probably a monument executed by foreign Maya craftsmen at that time in the service of the Itzas.

I consider Inscriptions I and II as pure Maya monuments and thus preceding the first (second) Itza occupation. In fact, practically all hieroglyphs of the Akab Tzib are Old Empire forms. Even the Owl-Plume (column 18) is in the same position as that it occupies in the southern cities.

Now we are in position to construct Table II, giving *in nuce* the political history of Chichen Itza based on the style of its hieroglyphs. There are four clearly defined periods, beginning with the one at the end of the Old Empire, having pure Maya monuments. Then comes a short Itza occupation, followed by a period of splendor to which at least two great buildings, the Casa de las Monjas and the Casa Colorada, must be assigned, and which is completely different from the two former styles. Finally, in the Fourth Period, the Itzas return and erect in the course of time many great edifices.

TABLE II
PERIODS OF POLITICAL DOMINIOM
OF CHICHEN ITZA BASED ON THE ARCHAEOLOGICAL EVIDENCE

Periods	Inscription	Ruling Tribe	Remarks
First Second Third	I and II IV (?) and V VI-VIII	Maya Itza (Nahua) ?	Itzas absent (Cocom's rulers?)
Fourth	IX-XX	Itza (Nahua)	

This scheme agrees with the traditions in so far as it clearly shows Chichen Itza twice occupied by the Itzas (Nahuas) and abandoned during the period in which the buildings of the Monjas group were erected. Does this period correspond to the stay of the Itzas at Chakanputun? Or does it refer to the conquest of Chichen Itza by Hunnac Ceel of Mayapan?

We may consider the artistic qualities of the inscriptions also, limiting our attention to the sculptured specimens in order to deal with homogeneous material. This will lead to the simple arrangement presented in Table III.

The inscription on the lintel in the Akab Tzib is like that of the southern cities not only in the form of its hieroglyphs, but also in its artistic value. The glyphic characters, although simplified as to their essential details, are beautiful.

The accompanying human figure, unfortunately much effaced, has the vivid natural pose of true Maya art.

A little less artistic, but still of good workmanship, are the great hieroglyphs of the Temple of the Hieroglyphic Jambes and the inscriptions of the Monjas group. For the latter we have the representation of figures on the Halakal lintel (pl. 2). The three personages here shown have the stiff hieratic grandeur of deities, but probably are priests impersonating gods.

TABLE III
EVALUATION OF ARTISTIC SKILL IN THE CHICHEN ITZA INSCRIPTIONS

Inscriptions	Artistic conception and execution
Akab Tzib	Good
Hieroglyphic Jambes Monjas group	Fairly good
All Itza inscriptions	Mediocre






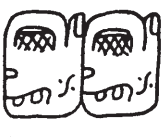


All the hieroglyphs and sculptures of the Itzas proper are artistically inferior to the former. The sculptor of the Akab Tzib was a Maya artist and so probably were the less gifted sculptors of the Monjas and Halakal lintels and of the hieroglyphic inscription in the Casa Colorada. The Itza inscriptions are the work of artisans lacking higher artistic taste and ability. There is considerable variety in the form of the hieroglyphs of Inscriptions IX-XX, and even one longer text, the Hieroglyphic Band of the Caracol, is

composed of several different parts. The style of these sculptures is somewhat individual, although the variations do not deviate from the type forms indicated for Inscription XI.

Table III, then, shows that the Itza texts can be separated from the others by this method of artistic evaluation.

Table IV gives another division of the hieroglyphic material in two groups, namely, one including the earlier inscriptions, the other the later ones. Here the two possible arrangements of the parts and not the ethnic or aesthetic factor are the basis of classification.

TABLE IV
COMPOSITION OF DUPLEX GLYPHS

Inscriptions	1	2	3	4
Initial Series 1 Monjas 1, 2, 3, 4 Casa Colorada 2, 3				
Three Lintels 1, 2 Hieroglyphic Band 4 Four Lintels 1, 2, 3				

There exists, however, one exception, represented by the two Yula lintels. They do not have all the hieroglyphs exemplified in Table IV, but some others that can be utilized, and these agree with the upper group. Now, these lintels undoubtedly are clearly related to the Temple of the Four Lintels of Chichen Itza,¹ but in several minor details they differ. The vertical arrangement of the glyphs is used not only for composite hieroglyphs at Yula, but also on the fronts of the lintels for the entire glyph blocks (see pls. 11 and 12). The succession of the glyphs is A1, A2, B1, B2, C1, C2, D1, D2, that is, contrary to the arrangement in the Temple of the Four Lintels (pls. 7-10).

While the object of Tables I and IV was to bring out the differences and also the resemblances in the form of the hieroglyphs of all the inscriptions, Tables V and VI are concerned with the significance of the signs; they will show the distribution of the hieroglyphic groups and single glyphs.

Inspection of Tables V and VI gives the impression that the inhabitants of Chichen Itza at all periods were interested in more or less the same phenomena or problems since most of the hieroglyphs appear to be distributed at random. The clear cut Monjas-Halakal-Casa Colorada group of Table I is not so clearly distinguishable here, as it has numerous connections with the texts both above (before in time) and below (later in time). This homogeneity in ideas of the Chichen Itza inscriptions permits us to infer that the Itzas probably received their instruction in Maya hieroglyphs in that same region. It also indicates that the people who dwelt at Chichen Itza during the Monjas group interval must have been from the same neighborhood, that is, from northern Yucatan.

There are, however, also some differences between periods notable in Tables V and VI. For the Monjas-Casa Colorada group figure 770 is characteristic, not occurring elsewhere. Also glyph number 17 (Table VI) and glyph pair 26 (Table V) appear there only. As they occur in only one or two specimens at the Casa de las Monjas and Casa Colorada,

¹ Carnegie Inst. Wash., Year Book No. 24, p. 250.

respectively, while figure 770 is common, they have not so much weight as the latter case.



Fig 770
CHARACTERISTIC HIEROGLYPH
FOR THE MONJAS GROUP
(Standard Form)



Fig. 771
CHARACTERISTIC HIEROGLYPH
FOR THE ITZA TEXTS
(Standard Forms)

For the Nahua-Itza inscriptions two hieroglyphs seem to be characteristic (fig. 771, first two glyphs), to which we can add the common glyph pair 32 (fig. 771, third part).

Thus, on the whole, the sequence of the inscriptions as given in Table I is corroborated by the considerations of an entirely different character which have been adduced.

TABLE V
DISTRIBUTION OF GLYPH GROUPS

INSCRIPTIONS	1	2	3	6	7	8	9	10	12	13	14	15	16	17	18	19	20	21	23	24	25	26	27	28	30	31	33	34	35	36	37	39	40	45	46	48	55	56	57	58	*	†	#	¶														
	Akab Tzib													16			23								28	30																			*	#												
Re-used Stela																																							56																			
Annex										13																																																
Hieroglyphic Jambs										13																														37			55															
Initial Series	1				7			10	12	13											24	25					31	33	34	36			39													†												
Monjas	1			6	7	8			12	13			16		18	19	23	25		24	27							34	36			39			46											?	#											
Halakal	1												15							26											36													*														
Casa Colorada	1																20	25		27	28	30								36	37											?		*														
Three Lintels	1	2		6												19																																†										
One Lintel				6											18					24	25										33																											
Hieroglyphic Band													15									26									35																			¶								
Caracol Stela																																																				¶						
Serpent's Tail																																																					¶					
Column, High Priest's Grave																																																										
Water Trough																																																										
Four Lintels	1	2	3		7	9	10	12	13	14	15	17				19	21													33	34			39	40	45													57	58								
Yula	1						9	10		13	14			17	20																																					40	45	46		56	57	58
Owls																																																										
Tomb																																																										
Cylindrical Stone																																																										

Key: * = End 1 Katun 1 Ahau; † = End 10 Katuns 1 Ahau; # = End 11 Tuns 1 Ahau; ¶ = End 16 Katuns 1 Ahau.

Having gained by now some confidence in the sequential arrangement of Table I, we might next try to work out the absolute chronology as far as such is possible with our limited and defective material. As a correlation between the Maya time reckoning system and our Christian Era the Thompson-Teeple hypothesis will be employed as being the most acceptable solution at this time.¹ For the sake of simplicity only the whole years, and not the exactly corresponding days of these years, will be given.

The first inscription (Table I, Inscription I) contains two dates, “Tun 1, 1 Ahau” and “Tun 11, 1 Ahau”. We do not know which one is the contemporaneous date, if one of the two really is intended as such. As a mere conjecture I would say that the expression “Tun 11, 1 Ahau” is more probably the actual date, for the other statement (Tun 1, 1 Ahau) betrays too clearly its arbitrary character. Granting this reasoning, we must decide now on a Tun 11 ending on a day 1 Ahau in the Long Count. As the forms of many hieroglyphs of this inscription are practically still Old Empire, the lintel cannot have been executed much after 10.3.0.0.0. As the next possible date for Tun 11, 1 Ahau after 10.3.0.0.0 is 10.7.11.0.0, it can probably be accepted as the one on which this lintel was dedicated. We have, then, the year A. D. 978 as the date of the lintel, and possibly the date when the whole temple in its present state was finished or inaugurated.

Although the next monument (re-used Stela from the High Priest’s Grave) began originally with an Initial Series, nothing definite about its date can be said, most of the chronologic hieroglyphs being lost or the fragments recovered being too indistinct. Its artistic style is different from the Akab Tzib inscription and other inscriptions, but the form of some of the glyphs indicates that it belongs to the Old Empire or to the beginning of the period next following. It well might be older than Inscription I.

Inscription III contains no calendrical hieroglyphs at all, and its position is very doubtful, as other unfavorable circumstances, mentioned above, make even the relative date uncertain.

The fourth inscription (Hieroglyphic Jamb) can be referred only in general to the same first period in which the Old Empire Cauac still was in use. Other forms (Kin, Caban, Owl-Plume) already show changes, so that the placing of this text after that of the Akab Tzib is amply substantiated.

Then comes the famous Initial Series lintel. It has already been shown that its final date is not “Tun 10, 2 Ahau” but “Tun 10, 1 Ahau”. The next Maya date after the Initial Series day satisfying the conditions of being 1 Ahau as the ending-day of a Tun 10 is 10.9.10.0.0, corresponding to the year A. D. 1017. This date agrees in so far as the traditions of the Book of the Chilam Balam of Chumayel are concerned, since it falls about thirty years after the occupation of Chichen Itza by Kukulcan and the Itzas.²

In the Casa de las Monjas the calendrical statement “11 Tuns, 1 Ahau” is repeated several times. As by now the hieroglyph Cauac has changed its form and tends to become similar to the latest variant, the date must lie a whole KatunWheel or Round later than that of the Akab Tzib. Thus we reach 11.0.11.0.0 or A.D. 1235. That is, as it obviously cannot be the same as the “11 Tuns 1 Ahau” in the Akab Tzib, it can only be the next occurrence of this same date in the Long Count. Only the Casa de las Monjas has this date, while the Casa Colorada and the Halakal lintel, merely on the basis of the similarity of their glyph forms, can be referred to this same period. The traditions of the Books of Chilam Balam

¹ Beyer, 1935, pp. 64-72.

² Roys, 1933, p. 204.

Table VI
DISTRIBUTION OF SINGLE HIEROGLYPHS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Akab Tzib	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Re-used Stela	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annex	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hieroglyphic Jambs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Initial Series	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Monjas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Htakalal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Casa Colorado	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Three Lintels	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
One Lintel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hieroglyphic Band	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caracol Stela	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Serpent's Tail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Column, High Priest's Grave	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Water Trough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Four Lintels	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yolk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Owls	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tomb	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cylindrical Stone	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

indicate that at this time Chichen Itza was conquered by Hunnac Ceel and subjected to the people of Mayapan.

In the inscription of the Temple of the Three Lintels we have an Itza text again, showing that this tribe had retaken the city. Thus the “10 Tuns 1 Ahau” must mean 11.2.10.0.0, that is, the year A. D. 1273.

There follow next for A.D. 1299 three inscriptions with the date “Tun 16, ending on 1 Ahau,” namely, a passage in the Hieroglyphic Band of the Caracol, the stela found in a niche in the upper platform of this building, and a re-used inscription fashioned into a feathered serpent’s tail. The date 1299, however, is not strictly contemporaneous for the Caracol Tower, as the Hieroglyphic Band has two other and later dates. Also the stela itself has some more Tuns indicated, possibly placing the actual date only about two years later.

The much-battered glyph for 15 Tuns in the Temple of the One Lintel possibly may be interpreted as 11.5.15.0.0 or 1337, but the instance is uncertain.

Another passage in the Hieroglyphic Band seems to represent “8 Tuns 1 Ahau” corresponding to 11.6.8.0.0 or 1350.

The statement “11 Tuns 2 Ahau” at the end of the inscription on the pillar in the High Priest’s Grave is fairly safe. Here there are two structural possibilities:

10.13.11.0.0	2 Ahau (A. D. 1097)
11.16.11.0.0	2 Ahau (A. D. 1353)

of which the latter is preferable.

The next item is again a Tun date from the Hieroglyphic Band of the Caracol. It reads “1 Tun 12 Ahau” and must refer to 11.8.1.0.0 or 1383.

Then comes the Temple of the Four Lintels with the date, several times clearly stated, “Tun 13 ending on 1 Ahau”, or, in the Long Count, 11.9.13.0.0, corresponding to our year A. D. 1414.

One of the dates at Yula may have expressed the same date; however, it is safe to assume only that a Tun above 10 was represented. The two other Tun dates evidently are “Tun 5 ending on 1 Ahau” which must be referred to the year 1465.

The capstone of a small chamber to the southeast of the Mercado group (inscription XIX) has the painted calendrical hieroglyphs “6 Kan 9 Tuns”, which must refer to the Maya New Year day 6 Kan 2 Pop (11.12.8.13.4) and the Tun ending 11.12.9.0.0 (A. D. 1469).

The results of our attempt to give definite meanings to the various chronological expressions “Tun —, ending on — Ahau” are summarized in the following Table VII.

TABLE VII
HYPOTHETICAL DATINGS FOR SOME INSCRIPTIONS OF CHICHEN ITZA

Akab Tzib	Tun 11, 1 Ahau	10.7.11.0.0	AD. 978
Initial Series	” 10, 1 ”	10.9.10.0.0	1017
Monjas	” 11, 1 ”	11.0.11.0.0	1235
Three Lintels	” 10, 1 ”	11.2.10.0.0	1273
Hieroglyphic Band, I	” 16, 1 ”	11.3.16.0.0	1299
Caracol Stela	” ” ” ”	” ” ” ”	”
Serpent’s Tail	” ” ” ”	” ” ” ”	”
One Lintel	” 15, 1 ”	11.5.15.0.0	1337
Hieroglyphic Band, II	” 8, 1 ”	11.6.8.0.0	1350
High Priest’s Grave	” 11, 2 ”	11.6.11.0.0	1353
Hieroglyphic Band, III	” 1, 12 ”	11.8.1.0.0	1383
Four Lintels	” 13, 1 ”	11.9.13.0.0	1414
Yula	” 5, 1 ”	11.12.5.0.0	1465
Tomb Capstone	” 9, (11 ”)	11.12.9.0.0	1469

The determination of the Tuns certainly works as a hypothesis inasmuch as the dates do not contradict the list of the gradual changes in form (Table I) and further since most of them can be brought into agreement with the traditional history of the Itza tribe.

The two Yula dates and the capstone of the tomb force us, of course, to assume that after the destruction of Mayapan (c. 1460) some Itzas still remained in the old city, while the bulk of the population had left for their new home at Lake Peten Itza. The second possibility, namely to place the painted capstone back to 10.3.9.0.0, or the year A. D. 898, is much less recommendable.

The Hieroglyphic Band of the Caracol Tower contains three different dates, while in Table I it forms only one item. The stylistic changes, if there are any, are too small to be detected for short intervals. On the basis of this tabulation we can infer only that the inscription as a whole belongs to the upper section of the New Cauac Series (nos. IX-XV), which is followed by the Four Lintels-Yula group (nos. XVI-XVII). This arrangement holds good for Table VII also.

The 18 parts of which the Hieroglyphic Band is composed are surely not all the work of one sculptor. There are, on the contrary, minor differences in the form of the hieroglyphs which speak for about four different workmen. But these stylistic variations all cluster about the standard forms for their period. Thus, if carved stones of different provenience are joined, they must belong to a certain span of time, which would be less than a century if the dates have been interpreted correctly.

To summarize the results of our investigations as to the age of the Chichen Itza texts, we can say that the inscriptions fall in the time from the cessation of dated stelae in the southern cities (10.3.0.0.0 or 889) approximately to the fall of Mayapan (11.12.0.0.0 or 1460). Therefore they afford examples of the changing forms of hieroglyphs for the Third Epoch of Maya Writing, grouping themselves naturally in at least three well-defined subdivisions.

In so far as the precise dating of the individual inscriptions is concerned, un-

certainty prevails as well in some doubtful cases as in the general validity of the employed interpretation of the Tun glyphs. As a working hypothesis, our method gives quite acceptable results, but that may be due to chance. Further painstaking special studies on the one hand, and a broad general archaeologic investigation of Yucatan on the other, are needed before we can proclaim our datings as scientifically valid or even as a good hypothesis.

As to future research, which may produce either confirmative evidence or a well-founded refutation of our working hypothesis, a few words may be said.

It is possible that the various irregular Calendar Round dates like 8 Manik 15 Uo, 9 Akbal 1 Chen, 9 Lamat 11 Yax, 3 Eb 10 Pop, etc., have an astronomic significance. Thus an astronomical explanation of these dates must be sought.

Another possibility lies in the meticulous investigation of the architectural details of the buildings to which the inscriptions belong. Construction as well as decoration, material, and form, should be carefully analyzed.

As a third source for corroborative or contrary evidence, the investigation of other ruins of northern Yucatan (like Uxmal and Mayapan) should be undertaken. It should be possible, for instance, on the form of the hieroglyphs of Mayapan to decide the question whether the Monjas group really represents buildings erected during the domination of the Cocombs.

The careful collecting and study of the pottery and sherds undertaken by several members of the staff of Carnegie Institution and briefly reviewed in the Year Books also should contribute greatly to a clearing of these obscure problems.

Concerning architecture, some important work already has been done by Maudslay, Holmes, Seler, Morris, Bolles, Lawrence Roys, Ruppert, Pollock, and many others, yet this avenue of approach is by no means exhausted.

Let us, therefore, hope that these sketchy and in many respects unsatisfactory studies may stimulate further research so that eventually light may be thrown upon the exact meaning and the precise age of the inscriptions at Chichen Itza.

APPENDIX

NOTES ON THE INSCRIPTIONS AT THE CARACOL

When this treatise was finished I received a copy of the monograph on the Caracol. It contains as an appendix a paper by Morley on the inscriptions at the Caracol.¹ For various reasons I decided to add another study to the series, dealing especially with these inscriptions and discussing the new interpretations propounded by that well-known Maya scholar.

Morley and I agree on a number of points and it is not necessary to discuss such cases; they only prove that at least for part of the data two specialists arrive at the same conclusions. On the other hand, there exist a few questions on which my opinions differ considerably from those of my colleague. These will be treated in detail.

Our figure 417, according to Morley,¹ “may be the head of the North Star God” and he quotes J. Eric Thompson for the number Nine, associated with this head. In another paper of Thompson’s,² however, he could have found the right interpretation for this head. The similar signs *a-g* of his figure 23 are explained as “The Long-nosed Rain God”. It is only a little bit more precise when I refer them to god K.

Morley discusses at length our glyph A of figure 184, with the final result that he believes it “may record the day 12 Ahau”. Unfortunately, there is neither a numeral Twelve nor a day sign Ahau. The first superfix in the hieroglyph is the ending sign Death-Hair, and the head is a variant or substitution of the Teeth sign. The parallel figure 185 and other comparative material leave no doubt about the correctness of this interpretation.

In a similar way the ending sign Death-Hair in our figure 507 is misinterpreted as “a possible coefficient of 15 or 10”.

I did not reproduce glyph P22 of the Caracol stela, because it was partly destroyed and I was not sure of the significance of the remaining details. By the photograph published in figure 167 of Ruppert’s treatise on the Caracol I see that there existed a fragment of the monument which contains another detail. This fragment was not near the stela when I copied the hieroglyphs in the Museum of Archaeology and History at Merida (see also p1. 5). The more complete hieroglyph has either the meaning “End of 10 Baktuns” or “End of 11 Baktuns”. The two bars for Ten are clear and I think that the circlet right above them forms part of the numeral. The case, however, is doubtful as the circlet might be part of the ending sign.

The three circlets behind the main sign which greatly worry Morley³ can, perhaps, be satisfactorily explained. In connection with the first two hieroglyphs of the monument (16 Tuns, 1 Ahau), glyph blocks O P22 can be interpreted as “17 Tuns ending, end of 11 Baktuns, 3 [Katuns]” and referred to 11.3.17.0.0 of the Long Count. This explanation assumes the Katun glyph to be suppressed; but it is not impossible that the following glyph block (O23) contains the head of the Katun bird. The complete calendrical statement would then appear as reproduced in figure 772.

I judge this reading so good that I go so far as to value it as a proof for the correct placing of “16 Tuns 1 Ahau” (fig. 691) in the Long Count, thereby incidentally also con-

¹ Ruppert, 1935, p. 279.

² Thompson, 1932*a*, p. 388.

³ Ruppert, 1935, p. 280.

firming the hypothesis that the Tun-Ahaus refer to that computation.



Fig. 772

17 TUNS ENDING, END 11 BAKTUNS, 3 KATUNS

Caracol, Stela, O22-O23.

Morley reads glyph O2 of the Circular Stone as 8 Ahau. My drawings show clearly only the numeral Eight as superfix, but do not allow me to identify the hieroglyph under it.

We come now to the many glyph blocks which once formed part of the façade decoration of the Round Tower (p1. 14)¹ On the whole, I received the impression from Ruppert's and Morley's data that these quadrangular pieces had been expressly made for their purpose and therefore hardly include old material. Their stylistic differences, which puzzled me, must, then, simply be referred to the employment of several sculptors. Accordingly, the blocks are most probably coetaneous.

The "unknown sign"² on block 9 can by the context and comparison with analogous cases readily be identified as Tun (see fig. 687).

Morley's reading of the head numeral in figure 638 as Five is very problematical. Where he notes a resemblance of the headdress to the normal form of the Tun glyph I clearly note this difference: the "normal" Tun he has in mind is of bilateral symmetry with vertical axis and the headdress clearly is not.

For the month position in figure 664 Morley also admits the reading Fourteen. But again he relates the following 1 Tun to the Calendar Round Date and not to the Ahau, to which it really belongs. Thus his long computations are entirely out of place.

Although his mind is focused on that subject matter, concerning the hieroglyphs of blocks *a*, *b*, and *c*, Morley says "not one seems to have been of calendrical nature, at least none has a coefficient." Well, there is a Katun sign with a numeral, although not very clear, on block *a* (see fig. 706). On the other hand, his only possible exception, a bar for Five, turns out to be the Sun-Beard (fig. 427), the glyph block being put upside-down! On the same stone is also found the hieroglyph Day-Sky with the Teeth sign (fig. 327), which confirms my view as to the orientation of the sculptured stone. If all the hieroglyphs are studied and not merely the dates, such little blunders will be avoided. It may be added here that stone No. 11 is also in inverted position (see figs. 605, 104, and 419).

While in the preface I expressed some apprehension whether the results of my time-consuming studies were worth while, after the perusal of Morley's last contribution I feel more assured of their value and necessity. We see clearly that with a general investigation of all hieroglyphs even mere calendrical matters become much clearer; at least we may avoid many misleading steps.

¹ Blocks 4-19, belonging to certain hieroglyphic serpents, were found in the débris from the tower and upper platform of the Caracol. The provenance of the three small blocks, *a*, *b*, and *c*, each representing three glyphs, probably indicates that there had been four of them and that they had been closely connected with the hieroglyphic serpents of blocks 4-19. See Ruppert, 1935, p.276.

² Ruppert, 1935, p. 290.

BIBLIOGRAPHY

BEYER, H.

1931. Mayan hieroglyphs: the variable element of the introducing glyphs as month indicator. *Anthropos*, XXVI: 99-108. Vienna.
1932. Maya hieroglyphs: some Tun signs. *Middle American Research Series*, Pub. No. 4, pp. 103-135. New Orleans.
- 1932a. The stylistic history of the Maya hieroglyphs. *Middle American Research Series*, Pub. No. 4, pp.71-102. New Orleans.
1934. Die Mayahieroglyphe "Hand" (29) Verh. des XXIV. Intern. Amerikanisten-Kongresses, Hamburg (1930). Hamburg.
- 1934a. The position of the affixes in Maya writing: II. *Maya Research*, I: 101-108. New York.
- 1934b. La Historia de la Escritura Maya. *Investigación y Progreso*, VIII: 300-305. Madrid.
1935. On the correlation between Maya and Christian chronology. *Maya Research*, II: 64-72 New York.

BOWDITCH, C. P.

1950. The numeration, calendar systems and astronomical knowledge of the Mayas. Cambridge, Mass.

CARNEGIE INSTITUTION OF WASHINGTON

1918. Year Book No.17. Washington.
1925. Year Book No. 24. Washington.
1927. Year Book No. 26. Washington.

FOLETT, P. H. F.

1932. War and weapons of the Maya. *Middle American Research Series*, Pub. No. 4, pp. 373-410. New Orleans.

GANN, T. W. F.

1924. In an unknown land. London.

GOODMAN, J. T.

1897. The archaic Maya inscriptions. *Biologia Centrali-Americana, Archaeology*, Appendix. London.

MAUDSLAY, A. P.

- 1889-1902. *Biologia Centrali-Americana, Archaeology*. London.

MORLEY, S. G.

1915. An introduction to the study of the Maya hieroglyphs. *Bureau Of American Ethnology, Smithsonian Institution*, Bul. 57. Washington.
1916. The supplementary series in the Maya inscriptions. *Holmes Anniversary Volume*. Washington.
1917. The Hotun as the principal chronological unit of the old Maya empire. *Proceedings, 19th International Congress of Americanists* (1915), pp. 195-201. Washington.
1920. The inscriptions at Copan. *Carnegie Inst. Wash.*, Pub. No. 219. Washington.

ROYS, R. L.

1933. The Book of Chilam Balam of Chumayel. *Carnegie Inst. Wash.*, Pub. No. 438. Washington.

RUPPERT, K.

1935. The Caracol at Chichen Itza, Yucatan, Mexico. *Carnegie Inst. Wash.*, Pub. No. 454. Washington.

SELER, E.

- 1902-23. *Gesammelte Abhandlungen zur amerikanischen Sprachund Alterthumakunde*. Berlin.

SPINDEN, H. J.

1924. The reduction of Mayan dates. *Papers Peabody Mus. of Harvard Univ.*, VI, No. 4. Cambridge.

THOMPSON, J. E.

1931. Archaeological investigations in the southern Cayo District, British Honduras. *Field Museum of Natural History*, Pub. No. 301, Anthropological Series, XVII, No. 3. Chicago.

1932. A preliminary study of the ruins of Coba, Quintana Roo, Mexico. *Carnegie Inst. Wash.*, Pub. No. 424. Washington.

1932a. The solar year of the Mayas at Quirigua, Guatemala. *Field Museum of Natural History*, Pub. No. 315, Anthropological Series, XVII, No. 4. Chicago.

WEITZEL, R. B.

1930. Maya chronological systems. *Am. Jour. Arch.*, 2d series, XXXIV: 182-189. Concord, N. H.

WILLARD, T. A.

1926. *The city of the Sacred Well*. New York.