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INTERPRETATION OF MAYA HIEROGLYPHS
BY THEIR PHONETIC ELEMENTS.—I.

BY HILBORNE T. CRESSON, A. M., M. D.

THE intent of this article is to demonstrate, as briefly as possible, the method pursued in my endeavor to analyze the Maya hieratic and demotic script by the phonetic elements of which it is composed. So far as the work has progressed the indications are that the Maya graphic system, like that of other early peoples, is based upon a primitive ideographism, most of its elements being derived from motives suggested by organic or inorganic nature and objects invented by man for his necessities. The symbols were gradually given phonetic significance, and had advanced to that stage which Dr. D. G. Brinton has designated the *ikonomatic*. The Maya script, like the ancient Mexican, is largely of this character. There are indications that the Maya script had begun to enter a stage even more advanced than that of the *ikonomatic*. At times sounds even so meaningless as that of a single letter are to be remarked; this is very rare. It is not my intent to advocate that they had arrived at a stage where each sound was indicated by a certain element or sign. They had, however, reached a point in their progression toward an alphabetic method where we find ideographic suggestions, phonetic characters and phonetic additions, intermingled. Particular attention is called to the assertion "begun to enter a more advanced stage" for the *ikonomatic* method prevailing, in the majority of cases, it is evident that the advance into another stage was but in process of transition.

The consonant sounds are indicated by the characters, yet syllabic characters frequently appear. Vowel fluctuation is one of the most important factors in Maya script, and the various combinations produced by the Maya scribes require careful and especial study. The sign v-s is proposed for this peculiarity where it occurs. For instance, Fig. 122 is a genuine syllabic character, the guttural consonant k, whose variants play an important part in Maya script. Its phonetic values seem to be kan, ka v-s, an v-s, k. Where ka v-s is indicated it is meant that this element and its variants may have any of the phonetic values, ka, ke, ki, ko; ak, ek, ik, ok, and that an v-s may = an, en, in, on; na, ne, ni, no. It is to be remarked that this method of using a syllable and portions of a syllable is quite common in Maya script. The element ban, Fig. 135, has the phonetic

value of ban, ba v-s, an v-s. The syllable cab is represented by Fig. 125; it has the phonetic value of cab, ca v-s, ba v-s, and also the additional phonetic value of Ma v-s. The character of the Maya language explains these peculiarities, most of its roots being monosyllables or dissyllables, and, as in all languages, largely monosyllabic, there are many significations attached to a single word. Cab, for instance, has twelve or more different meanings. The face glyphs and drawings that accompany demotic script, and the sculptured representations that appear with hieratic script, it is my opinion, are composites of phonetic elements and ideographic suggestion, and it is an important question whether the peculiar ornamentations or decorations of the ancient Mayan structures of southern Mexico are not closely allied to these composites. This has already been suggested by me in other publications.

The plates accompanying this article, from Fig. 1 to Fig. 192, give a series of elements to which certain phonetic values have been assigned, these having been frequently repeated in new combinations with probable results, corresponding in some cases with the interpretations of De Rosny, De Charency and Thomas. They are now offered for consideration to Maya students, and as a basis for future progress in the work, subject to further alteration and change. An interesting fact is their resemblance to many of the phonetic elements of the day signs of the Chilan Balam of Kaua, which is a demotic form of the script that can readily be traced to that of the older codices. Most of the phonetic elements obtained by me and given in this article are derived from analyses of the day signs of Landa and a few of the month signs; from analyses of the hieratic script of Palenque, the Yucatec stone of the Leyden Museum and a vase in the Peabody Museum, Harvard University, found at Kabahr by Mr. Edward Thompson, United States Consul to Merida, Yucatan. The inscription on this vase is, in the opinion of Dr. D. G. Brinton and myself, a beautiful example of the demotic form of hieratic script. Variants of some of the phonetic elements on this vase may be seen in Figs. 1, 3, 4, 8, 10, 19, 22, 27, 43, 84, 85, 92, 122. Especial attention is called to the fact that many variants exist of the phonetic elements given in my list, and to use them one must habituate himself to these variations. Vowel fluctuation is the only method, in my opinion, that can explain some of the combinations used by the scribes in forming their glyphs. Especially is this puzzling in more demotic forms of script, yet I venture to say that there are but few of the day signs of the Chilan Balam of Kaua that cannot be analyzed by my method, and their evolution from those of Landa demonstrated. Space will not permit further discussion of this interesting subject.

It is to be remarked before beginning our list of values assigned phonetic elements that the consonant x or sh is interchangeable with that of ch.

Figs. 1, 2, 3, 4 = Ha v-s, a, kan v-s, ka v-s, an v-s.

Figs. 7, 8, 9, 10 = Cab, ca v-s, ba v-s, ma v-s, m.

Figs. 11, 154, a, b = Ka v-s, za v-s, composed of Fig. 6 and Fig. 1; see Fig. 154, a, b.

Figs. 12 to 22 = Man, ma v-s, an v-s.

Fig. 23 to 26 = Na v-s. Fig. 26, variant of element in day signs, Chuen and Akbal. The day sign Akbal is probably akanbal = bal, "object" or "thing," acaan = "set up"; is allied to Fig. 162, the chak glyph, composed of ideo-phonetic elements suggesting akaan-tun or "stones set up," symbols of