A. THE ORIGIN AND DEVELOPMENT OF THE CUNEIFORM SYSTEM OF WRITING

The cuneiform system of writing was probably originated by the Sumerians. The oldest inscriptions unearthed to date—more than one thousand tablets and fragments from about 3000 B.C.—are in all likelihood written in the Sumerian language. Whether or not it was the Sumerians who invented the script, it was certainly they who, in the third millennium B.C., fashioned it into an effective writing tool. Its practical value was gradually recognized by the surrounding peoples, who borrowed it from the Sumerians and adapted it to their own languages. By the second millennium B.C., it was current throughout the Near East.

The cuneiform script began as pictographic writing. Each sign was a picture of one or more concrete objects and represented a word whose meaning was identical with, or closely related to, the object pictured. The defects of a system of this type are twofold: the complicated forms of the signs and the great number of signs required render it too unwieldy for practical use. The Sumerian scribes overcame the first difficulty by gradually simplifying and conventionalizing the forms of the signs until their pictographic originals were no longer apparent. As for the second difficulty, they reduced the number of signs and kept them within limits by resorting to various helpful devices. The most significant device was substituting phonetic for ideographic values. Figure 6 was prepared to illustrate this development.

NO. 1 is a picture of a star. It represents primarily the Sumerian word *an,* "heaven." The same sign is used to represent the word *dingir,* "god."

NO. 2 represents the word *ki,* "earth." It is obviously intended to be a picture of the earth, although the interpretation of the sign is still uncertain.

NO. 3 is probably a stylized picture of the upper part of a man's body. It represents the word *lu,* "man."

NO. 4 is a picture of the pudendum. It represents the word *sal,* "pudendum." The same sign is used to represent the word *munus,* "woman."

NO. 5 is a picture of a mountain. It represents the word *kur,* whose primary meaning is "mountain."

NO. 6 illustrates the ingenious device developed early by the inventors of the Sumerian system of writing whereby they could represent pictorially words for which the ordinary pictographic representation en-

tailed a certain amount of difficulty. The sign for the word *geme*, "slave girl," is actually a combination of two signs—that for *munus*, "woman," and that for *kur*, "mountain" (signs 4 and 5 in our table). Literally, therefore, this compound sign expresses the idea "mountain-woman." But since the Sumerians obtained their slave girls largely from the mountainous regions about them, this compound sign adequately represented the Sumerian word for "slave girl," *geme*.

NO. 7 is a picture of a head. It represents the Sumerian word *sag*, "head."

NO. 8 is also a picture of a head. The vertical strokes indicate the particular part of the head which is intended—that is, the mouth. The sign therefore represents the Sumerian word *ka*, "mouth." The same sign represents the word *dug*, "to speak."

NO. 9 is probably a picture of a bowl used primarily as a food container. It represents the word *ninda*, "food."

NO. 10 is a compound sign consisting of the signs for mouth and food (Nos. 8 and 9 in our table). It represents the word *ku*, "to eat."

NO. 11 is a picture of a water stream. It represents the word *a*, "water." This sign furnishes us with an excellent illustration of the process by which the Sumerian script gradually lost its unwieldy pictographic character and became a phonetic system of writing. Although the Sumerian word *a*, represented by sign No. 11, was used primarily for "water," it also had the meaning "in." The word "in" is a word denoting relationship and stands for a concept which is difficult to express pictographically. The originators of the Sumerian script had the ingenious idea that, instead of trying to invent a complicated picture-sign to represent the word "in," they could use the sign for *a*, "water," since the words sounded exactly alike. The early Sumerian scribes came to realize that a sign belonging to a given word could be used for another word with an altogether unrelated meaning if the *sounds* of the two words were identical. With the gradual spreading of this practice, the Sumerian script lost its pictographic character and tended more and more to become a purely phonetic script.

NO. 12 is a combination of the signs for "mouth" and "water" (Nos. 8 and 11). It represents the word *nag*, "to drink."

NO. 13 is a picture of the lower part of the leg and foot in a walking position. It represents the word *du*, "to go," and also the word *gub*, "to stand."

NO. 14 is a picture of a bird. It represents the word *mushen*, "bird."

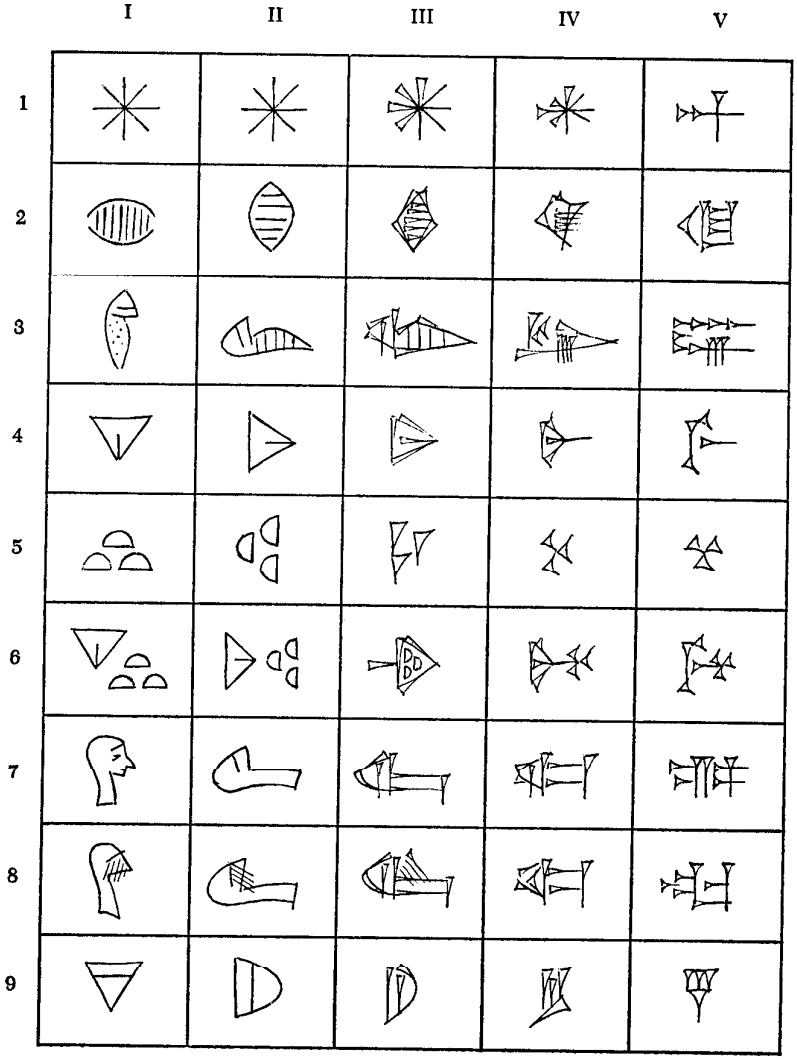

FIG. 6.—*The Origin and Development of the Cuneiform System of Writing. A table showing the forms of eighteen representative signs from about 3000 B.C. to about 600 B.C.*

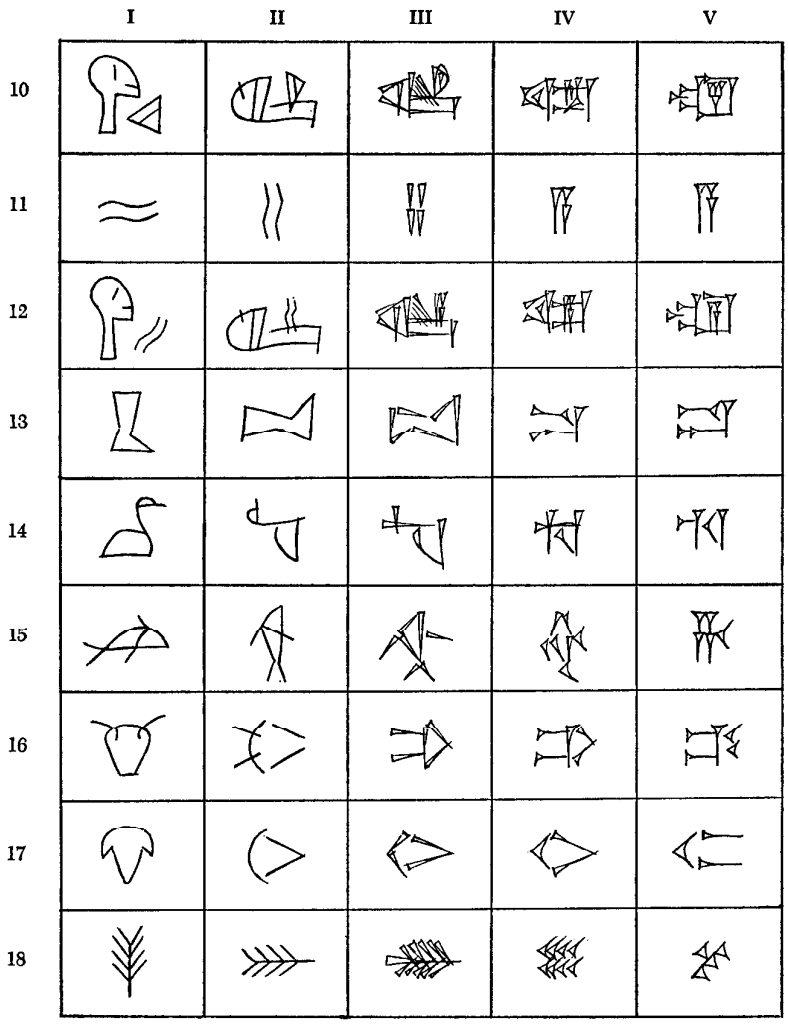

FIG. 6.—*Continued*

NO. 15 is a picture of a fish. It represents the word *ha*, "fish." This sign furnishes another example of the phonetic development of the Sumerian script. The Sumerian word *ha* means not only "fish" but also "may"—that is, the Sumerians had two words which were identical in pronunciation but quite unrelated in meaning. And so, early in the development of the script, the Sumerian scribes began to use the sign for *ha*, "fish," to represent also the phonetically identical *ha*, "may."

NO. 16 is a picture of the head and horns of an ox. It represents the word *gud*, "ox."

NO. 17 is a picture of the head of a cow. It represents the word *ab*, "cow."

NO. 18 is the picture of an ear of barley. It represents the word *she*, "barley."

The signs in the first column are from the earliest known period in the development of Sumerian writing. Not long after the invention of the pictographic script, the Sumerian scribes found it convenient to turn the tablet in such a way that the pictographs lay on their backs. As the writing developed, this practice became standard, and the signs were regularly turned 90 degrees. The second column in the table gives the pictographic signs in this turned position. The next column represents the "archaic" script current around 2500 B.C. Column IV represents the forms of the signs of about 1800 B.C. in which most of the literary documents were written. The more simplified forms depicted in the last column were the signs used by the royal scribes of Assyria in the first millennium B.C.

B. THE SUMERIAN LANGUAGE

Sumerian is an agglutinative tongue, not an inflected one like Indo-European or Semitic. Its roots, by and large, are invariable. Its basic grammatical unit is the word complex rather than the individual word. Its grammatical particles tend to retain their independent structure rather than become inextricably attached to the word roots. In structure, therefore, Sumerian resembles no little such agglutinative languages as Turkish, Hungarian, and some of the Caucasian languages. In vocabulary, grammar, and syntax, however, Sumerian still stands alone and seems to be unrelated to any other language, living or dead.

Sumerian has six vowels: three open vowels, *a, e, o,* and three corresponding close vowels, *ā, ê, u*. The vowels were not sharply articulated and were frequently modified in accordance with a law of vowel

harmony. This was especially true of vowels in grammatical particles, which were short and unaccented. At the end of a word, or between two consonants, they were often elided.

Sumerian has fifteen consonants: *b, p, t, d, g* (hard), *k, z, s, sh, ch* (as in the Scottish "loch"), *r, l, m, n,* and *g* (like the ng in "lung"). The consonants were amissible; they were not pronounced at the end of a word unless followed by a grammatical particle beginning with a vowel.

Sumerian roots are monosyllabic in large part, although there are a considerable number of polysyllabic words. Reduplication of roots is used to indicate plurality of of objects or actions. Substantives frequently consist of compound words: *lu-gal,* "king" ("big man"); *dub-sar,* "scribe" ("tablet-writer"); *di-ku,* "judge" ("judgment-determiner"). Abstracts are formed with the help of *nam* (English "-ship"): *lu-gal,* "king"; *nam-lu-gal,* "kingship." The substantives have no grammatical gender. Instead, they are divided into two categories, animate and inanimate. Animals belong to the inanimate category, grammatically speaking.

The Sumerian sentence consists of (1) a series of substantive complexes related to the predicate either as subject, indirect object, dimensional object, or direct object; (2) the grammatical particles expressing these relationships; (3) the predicate consisting of the verbal root preceded by a thematic particle and a series of infixes recapitulating the relationship between the root and the substantive complexes. The substantive complex may consist of a noun alone or of a noun and all its modifiers, such as adjectives, genitives, relative clauses, and possessive pronouns. The relationship particles always come at the end of the entire substantive complex and are therefore known as postpositions.

Sumerian is rather poor in adjectives and often uses genitival expressions instead. Copulas and conjunctions are rarely used;* the relevant words, complexes, and clauses are usually arranged asyndetically. There is no relative pronoun in Sumerian; a nominalizing particle is used at the end of the clauses instead. Relative clauses, moreover, are used to a limited extent only; their place is often taken by a passive participle which is identical with the infinitive in form.

In addition to the main Sumerian dialect, which was probably known as *Emegir,* "the princely tongue," there were several others which were less important. One of these, the *Emesal,* was used primarily in speeches made by female deities, women, or eunuchs.

* In the appendixes, therefore, "and" has been placed in parentheses wherever justified; the translations throughout the book, however, have not been consistent in this respect.