INFORMATION

1. MEANING SOUND AND LOOKS - *C. LOOKS: THE GRAPHIC ASPECT*

The need for graphic representation of the sounds of language became felt when the span of time and distance of man's utterances was requested to exceed the physical limitations of the speaker. An administration of greater volume and complexity than that what an individual was able to remember, required some kind of notation that could be separated from that individual and that specific point in time. The embryonic predecessors of writing were most likely systems of notation of administrative data, consisting of numbers and… names. The data taken down were trade and cadastral data, that, as it was foreseen, needed to be remembered and consulted at a yet unknown point in the future, by a yet unknown individual. Once proven successful, these systems held a promise to allow local rulers to spread their word, and thus their law and authority, beyond the range of their voice and muscles. The first known scripts thus developed in the Sumerian city states of the late 4th millennium BC, and enabled these local centres of power to grow into territorial states exceeding the vision of the central **zigurrat** (tower). Shortly after this innovation was introduced in Sumeria, an elaborate script emerged on the banks of the Nile, where a powerful centralized Egyptian empire was about to see the light.

Whether the idea of writing spread throughout the world from one Sumerian origin or it emerged independently in different cultures, the development of writing systems seems to follow a universal sequence from purely pictorial representation (pictograms) to sets of abstracted sound-representing symbols (**phonograms**). Pictograms convey meaning without intervention of sound values; there may be a symbol meaning 'town', 'river' or 'mountain' irrespective of what the word for 'town', 'river' or 'mountain' sounds like, and thus regardless of any specific language. Such a symbol is named a **logogram**. The advantage of logograms is their universal applicability - because they are language-independent - but they have the obvious disadvantage that there must be a separate symbol for every word. A system consisting of pictograms only cannot be expected to be completely learned and memorized by anyone, as only a limited number of concrete substantives could possibly be represented by naturally drawn pictures.

All complete writing systems the world has ever known, from the highly pictorial Egyptian hieroglyphs to the modern alphabets, do effectively contain both logograms and phonograms. As purely pictorial 'proto-scripts' develop into 'scripts' or writing systems, naturally drawn pictograms are stylised and augmented with drawings for abstract phenomena (hence called **ideograms**), and will ultimately contain logograms for all basic words of a specific language. Phonograms are developed out of logograms through a process starting with the **rebus** principle: the sound values (in a specific language!) of mono-syllabic words are attached to the logograms representing these words, thus creating a phonetic syllabary or syllabic script. A fully syllabic script would contain as many symbols as the language it is used for contains syllables. A syllabary can develop further into an alphabetic system, in which single phonemes (units of sound) instead of syllables are represented by symbols - thus requiring even less symbols. Alphabets may contain both the consonants and the vowels used by a language, or be consonantal (containing consonants only). To the symbols (**letters**) of consonantal alphabets, the vowels following consonant sounds may, either optionally or obligatory, be added to the letters by diacritical marks (**vocalization**), as may certain phonetic modifications of the consonants (nasalization, aspiration etc.).

As said, even in alphabetic scripts some logograms persist: examples are the ciphers (0,1,2,…, in English: 'one', 'two', 'three'…) and signs like + (in English: 'plus'), - (in English: 'minus'), & (in English: 'and'), and, recently added, @ (in English: 'at').