



The International Association for Cognitive Semiotics



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Water, air, earth and fire: detecting the origins of human oral language from the imitation of environmental sounds

In order to understand better linguistic and cognitive features of modern humans, we need to get rid of biases and misunderstandings, such as the principle of *arbitrariness* of linguistic signs, the frequent *misuse* and *mixing* of terms like communication, language, onomatopoeia, iconicity, sound-symbolism, the *confusion* between origin and evolution of speech, but also to underline inaccuracy and limits of language and thought since their beginnings, particularly their usual resort to metaphor, polysemy, redetermination, redundancy.

A long-lasting process from simple *motivated* starts (imitation of sounds) resulted in modern *conventional* products (refined literary works), in which the archaic inner iconic characters still constrain modern speaking and thinking.

I argue that a primitive linguistic *iconic embryo-stage* predated any mature *proto-language* and exploited a large archive of meaningful sounds, mapped onto respective objects, animals, actions, atmospheric events, available in the environment and day-life of paleolithic Homo Sapiens. This stage was followed by slow *abstraction* processes, which evolved similarly to other later human achievements (writing, banking, onomastics) and eventually erased a great deal of spoken language iconicity.

Glottochronology, lexicostatistics, genetic linguistics, traditional dating methods and new probabilistic models of sound-change have reached deep time limits up to 10,000 years ago, but it seems they cannot go any further. In the same time, *multilateral comparison* was able to detect a number of vocabulary units - *global etymologies* - which belonged to the first human oral language and, as a matter of fact, match partially the proposed archaic iconic linguistic units of the present research work. However, it can be maintained that a comparative analysis of environmental sounds, caused by atmospheric phenomena, human activities, animal calls and cries, can recover speech roots from early times.

Basic sounds and related linguistic units refer to vital human activities: hunting, water and food gathering, tool manufacturing, cooking. Social interactions and musical instruments are also to be taken into account. They all fostered *naming processes*, where clear relationships existed between real tool/action sounds and their respective names.

A simple grouping of sounds is established according to Empedocles' theory of '*Four Elements*': Water, Air, Earth, Fire. Here its aim is only to establish a first reference grid, that goes back to the incipient human need of explaining the world structure in its basic components.

A fundamental resource, *water*, left clues in the vocabularies of many languages. The corresponding '*water-sounds*' /kwa/, or /kwakwa/ in reduplicated form, and /kwo/, or /kwokwo/, from cooking activities (see Lat. coquo 'I cook') are perceived even today. They were employed to mark a peculiar feature of water and liquids: a constant *flat horizontal surface*, a property useful to develop concepts such as 'equality', 'equivalence', 'quality'. The erosion of the velar component originated the '*wh-*' pronouns, meaning generally '*the same one as*'. Water-sounds became also useful to express regular basic geometrical and mathematical entities (see Eng. 'square' and 'four', from PIE *kwetwer- 'four').

Examples of motivated '*air-sound*' terms, based on fricative and sibilant consonants, are Lat. fistula 'reed, pipe', Lat. fiscus 'money-basket', Ita. fischio 'whistle'; interestingly, Eng. *fish* refers *iconically* to a '*whistling reed*', employed as a '*fishing rod*'.



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More examples are given in relationship with earthly solid materials, like *rock* and *wood* and Homo Sapiens' primitive *construction technology*.