Résumé:
In 1926, Dr. Max Westenhöfer, professor of pathological anatomy in the Berlin University, declared in an address before the Anthropological Congress at Salzburg, that apes originated from the human lineage. Man, for his own, developed from a remote animal that itself evolved from ancestors that resembled amphibians.
ABOUT AN AQUATIC STAGE IN MAN's EVOLUTION

**ABSTRACTS**: Several features in human morphology and anatomy allow us to consider that man's immediate predecessors have once passed through an aquatic phase, before becoming land-dwellers. The question is when this event occurred and in what proportion it had consequences on the evolution of the other Mammals.

In 1926, Dr. Max Westenhöfer, professor of pathological anatomy in the Berlin University, declared in an address before the Anthropological Congress at Salzburg, that apes originated from the human lineage. Man, for his own, developed from a remote animal that itself evolved from ancestors that resembled amphibians.

Westenhöfer assured that the ancient mammals were originally all bipedal, and regarded modern man as the least removed from their hypothetical prototype.

Primitive surviving features from an aquatic phase are preserved in man's anatomy today, such as the appendix, the lobulations of kidneys, and the indentation of the spleen and formation of additional spleens. The last two characteristics are now only found in water mammals, and so professor Max Westenhöfer explained that the predecessors of modern man must have been more aquatic, and they have accordingly never passed through a simian stage!

The trunk of man's peculiar stock would be directly connected with the root from which all mammals have sprung. Thus the study of human morphogenesis had logically to be carried back to a very early stage in the vertebrate line, for instance the passage from an original aquatic way of life to terrestrial existence.

This opinion strikingly differs from Alister Hardy's explanation of man's special nature (1960 a), suggesting that many of the particularities which separate apes from human beings could be accounted for by his having passed through a recent semi-aquatic phase, a few million years ago. Sir Hardy indeed explained man's emergence from an original ape-like stock.

The British biologist remarked that there was a gap in the palaeontological record between the four-legged Miocene anthropoids (he mentioned Ramapithecus) and the bipedal australopithecines: a period of millions of years, and that could be explained, according to Hardy, by the time that man had spent in the sea developing an upright position...

If this hypothesis is correct, then Australopithecus is "the ape" that returned to land! Sir Hardy (1960 b) meant: "The remains of Australopithecus were found in caves, but not far from the caves, there are said to be deposits indicating dried-up lakes or inland seas; so perhaps Australopithecus himself was still associated with water?". He must also have been naked, because hair-loss is seen as a consequence of this period in water. However, the real zoological problem in this case is rather to ask ourselves why such an ape did not remain aquatic, and why he once came out of water?

Also for Elaine Morgan (1982) something happened to the ancestors of Homo sapiens which did not occur to those of gorillas and chimpanzees... The latter are supposed to have diverged from a common lineage, 4 or 5 years ago: what about this famous aquatic phase? So the new idea that Australopithecus afarensis was both our ancestor and that of chimpanzees (Edelstein 1987).
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Another author ( Verhaegen 1985 ) rather thinks that the passage into water had taken place during the epoch of Homo erectus, slightly later... What is the real date?

Without contest, indeed, sufficient morphological and physiological features prove that this aquatic phase actually occurred in the past.

Some characteristics, commonly regarded as being unique to man, can also be found in other mammalian lineages [ Cetaceans, Sirenians, Pinnipedia ] which live in water, as professor Max Westenhöfer certified.

Hardy’s theory indeed tried to explain, if we regard modern man as an evolved ape, the loss of body hair, the sub-cutaneous fat and bipedality [ Sir Hardy argued that the ancestral primate was not able to advance far into water on 4 legs and kept its head above water : the natural reaction would have been to stand erect ], and other curious particularities in man, such as his diving reflex ( reduction in heart rate and cardiac output, which lessens the body’s consumption of oxygen ), also aquatic habits of people and underwater childbirth ( Morgan & Verhaegen, 1986 ).

As a matter of fact, all these considerations should be re-examined in the light of initial bipedalism theory : man’s aquatic phase is earlier!

Max Westenhöfer asserted that man comes from a stock peculiar to himself and would slightly differ from the oldest mammals that evolved from amphibian-like forms.

Professor Westenhöfer found support for his notion of the structural primitiveness of man in the development of brain and skull, in the structure of foot and pelvis, in the carriage of the head and in the posture of the body ( Westenhöfer 1924, 1929, 1935 & 1948 ). The human chin, he said, originated from the peculiar position and function of human teeth. The chin has kept its primitive characteristics in man, while it has deviated in other animals because of the strong development and specialisation of their teeth. Westenhöfer thus considered that the chinless mandible comes from a lower jaw having a well-developed chin, the mental ossicles being primitive elements ( Westenhöfer 1924, Frechkop 1941, 1948 & 1954, Heuvelmans 1954 ) : a feature that has been lost by apes, australopithecines and other fossil-known hominids. This process occurred at the same time as a strengthening of the jaws which brought about a decrease in brain size and a loss of stability in bipedal gait.

As I already explained ( de Sarre 1988 ), the globular form of the skull, also a primitive feature, represents the final evolution of a sea-living creature's floating and sustenance organ. It was indeed in this remote time that the actual shape of man’s brain-pan came to emergency : such a round configuration only could develop naturally in water, at the top of a vertical column that was completely upright, just like the flower at the top of its stem. This fact is closely linked to the aptitude of walking erect on 2 legs [ initial bipedalism ].

All that happened at a very early aquatic stage in the evolution, when a water-dwelling pre-hominid started to evolve into the first land-living vertebrate. Man alone has conserved most of the features of this ancient creature : such as the original orthograde position of the body, the hand in a primitive form, the head resting without special muscular support on the vertebral column, and the brain remaining of big volume in a round-shaped skull.
And so the human being, among living vertebrates, is the least removed from the ancient prototype. Indeed, man retained in his whole organism many features from a former aquatic phase.

Post-scriptum:

REFERENCES CITED


MORGAN E. & M. VERHAEGEN, 1986 : "In the beginning was the water". The New Scientist, 1948 : 42.


