

Thresholds

June 27, 2019

It was Umberto Eco, who in his work from 1976, *A Theory of Semiotics*, Indiana Univ. Press, introduced the concept of thresholds in semiotics. In this way he tried to outline the area of nature, which is about semiotics, from the large part of nature, which - according to Eco - was below the threshold for semiotic analysis. I didn't know Eco in 1976, but I remember his lecture at the Semiotic Congress in Berkeley in 1990. On that occasion, he had no disapproving comments on biosemiotics, but close cooperation with Sebeok might have convinced him that Peirce had something important to say.

Ever since, the question of a possible lower threshold has been a recurring ingredient in biosemiotics discussions. But I never really understood the idea. Usually, the possession of a brain is seen as the lower threshold for semiotics to be relevant. The earliest incursions to actual brains arose about 500 million years ago with some primitive bilaterals such as the 1 mm long flader. The

fact that these animals are called bilateral is because, in addition to the radial symmetry that they share with relatives such as jellyfish, they are symmetrical about an up-down axis so that they have a lower side and an upper side. Thus, they also get a front and back so that a real mouth is formed, and above this 'mouth' one then finds some conglomerates of nerve cells, ganglia, that have been called the first real brain. And in any case, that is where the brain is later located in evolution.

But why should this particular step in evolution take such an important role? - to be the very hotbed of the development of biological semiotics. If you first leave the human-animal barrier, the most logical place to set up a new barrier for me to see would be the beginning of life. It is - in this optics - the continuous interchange between a digital phase (the DNA phase) and an analogous phase (the organism phase) i.e. code-duality, that constitutes the basis of the semiotic game.

If one wants to escape thresholds, one can choose to

follow the deceased John Deely's proposal for a physiosemiosis, embedded as such in the universe. I have always had sympathy for this proposal. But as a biologist, I have preferred to stop at life, and thus biosemiotics. I also doubt whether the empirical basis can really justify the existence of a physiosemiosis in the universe. In any case, it is beyond what a biologist understands.