

Eörs Szathmâry

Climbing the Steps of Evolution



Born in 1959 in Budapest. 1979-1984: biology student at the Faculty of Natural Sciences, Eötvös University, Budapest. 1987: Ph. D. in ecology (theoretical biology). 1987-88: SOROS Fellowship at the University of Sussex. 1991-92: research fellow in the Laboratory of Mathematical Biology, National Institute for Medical Research, London. Since 1987: research fellow of the Hungarian Academy of Sciences in the Ecological Modelling Group, Department of Plant Taxonomy and Ecology, Eötvös University. — Address: Ludovika tér 2, H-1083 Budapest, Hungary.

My project at the Wissenschaftskolleg has been to write a joint book with John Maynard Smith (University of Sussex, Brighton) about the major steps in evolution. The chapters are: the origin of life, the origin of eukaryotic cells, the origin of sex, the origin of multicellular organisms and development, the origin of cooperation and animal societies, the origin of the human language capacity. The book is almost finished, and several research papers have been written as a by-product. An excellent library service turned out to be crucial for this project.

My major adventure with the book was undoubtedly the problem of language. We have now a fairly firm idea that the human capacity for language must be innate. If this is so, its origin is a question of evolutionary biology. Yet, many linguists are quite reluctant to take this view, arguing essentially that one either has a proto-language with severely limited syntax, or a full-blown Chomskyan deep-structure, and intermediate steps are inconceivable. We do not believe this view is correct and attempt to explain why.

I have written papers about: toy models of simple forms of development, evolutionary biotechnology, and the origin of the genetic code. The latter work is the most important by-product of the book. In that I explain my hypothesis that useful coding preceded translation in evolution, in the form of amino acids attached to anticodon-like trinucleotide handles, and serving as coenzymes of ribozymes in the ancient RNA world.

I went on shorter or longer official trips to Trieste, Vienna, Bielefeld, Brighton, and Klosters to give professional talks. An important part of

my work was to start convening an international research group in theoretical biology at the Collegium Budapest for 1994—95.

I established excellent personal and professional relationships with some fellows at the Institute, adequately catalysed by sufficient amounts of Saint-Émilion Grand Cru. Peter Hammerstein and James Griesemer were my peers in evolutionary biology. I am going to pursue means of further collaboration with them. Other members of the *Grand-Cru Club* included Shahid Amin, Oriol Bohigas, Barry Eichengreen, Bettina Heintz, and Robert Schulmann, being supervised with some legal authority by Peter Häberle. Tears are dropping from my eyes into my glass when I think of the happy days we spent together in Arcadia.