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T-patterns and external memory in human and protein mass-societies: The naked ape suddenly a string-controlled citizen

This talk presents a self-similar pattern type called T-pattern, a kind of statistical pseudo fractal recurring with significant translation symmetry on a single discrete dimension. It now comes with a specialized detection (evolution) algorithm implemented as the software THEMETM for Windows which has allowed the discovery of numerous and complex interaction patterns in many kinds of human and animal interactions as well as in neuronal interactions within living brains. T-patterns have also been detected in interactions between robots and humans and seem characteristic for the structure of DNA and text. A definition of T-patterns is presented as well as the essentials of the current detection algorithms including examples of detected T-patterns using the especially developed T-pattern diagrams. The T-pattern is now a part of a larger set of pattern types and relations called T-system that will be shortly described including examples of patterning detected with specially developed algorithms also implemented in Theme. The potential importance of T-patterns is finally illustrated through a comparison between human mass societies and the mass societies of proteins within biological cells (sometimes called "Cell City"), where self-similarity of organization evolved over billions of years is striking from nano to human scales based on self-similar T-patterns, but appearing suddenly among large-

brain animals in humans only, and partly based on massively copied standardized T-patterned letter strings such as holy, legal and scientific texts. The invention of writing and thus a durable external T-patterned memory only a few thousand years ago -- a biological eye-blink -- is apparently by far the greatest game changer in the history of homo sapiens allowing the explosive development of science, technology and the only large-brained mass-societies as cultural heritage became mostly external to brains. The analogy and self-similarity are striking with the invention of DNA by the RNA world countless millions of years ago.

Speaker Biography

Magnus S Magnusson is a Research Professor. He completed PhD in 1983 from the University of Copenhagen. He is an author of the T-pattern model. He presented numerous papers and invited talks at international mathematical, neuroscience, proteomics, bioinformatics and science of religion conferences and at leading universities in Europe, USA and Japan. He is a Deputy Director during 1983-1988 at Anthropology Laboratory, Museum of Natural History, Paris and repeatedly invited temporary Professor in Psychology and Ethology (Biology of Behavior) at the University of Paris (V, VIII & XIII). Since 1991, he is the Founder and Director of the Human Behavior Laboratory, University of Iceland, in formalized collaboration between 28 European and American universities based on "Magnusson's analytical model" initiated at University René Descartes Paris V, Sorbonne, in 1995.

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