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T-Patterns and self-similarity from the RNA world to protein and human 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 (see patternvision.com), 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 has presented as well as the essentials of the current detection algorithms including examples of detected T-patterns using the specially 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 a durable external T-patterned memory was done only a few thousand years ago - a biological eye-blink allowing cultural memory to become largely external to brains and the rise of the only large-brained mass societies with science and technology. The analogy and self-similarity is striking with the invention of DNA by the RNA world countless millions of years ago.

Biography

Magnus S Magnusson, Research Professor, founder and director of the Human Behavior Laboratory, University of Iceland. He has done his PhD in 1983, from University of Copenhagen. He is author of the T-pattern model and detection software THEMETM (PatternVision.com), focused on real-time organization of behavior. He Co-directed DNA analysis and published numerous papers (>1700 citations) and has given talks/keynotes in ethology, neuroscience, mathematics, religion, proteomics, mass spectrometry and nanoscience. He was Deputy Director from 1983-1988, in Museum of Mankind, National Museum of Natural History, Paris. He was repeatedly invited for temporary Professor at the University of Paris, V, VIII and XIII. Since 1995, he is in collaboration between 32 universities initiated at the University of Paris V, Sorbonne, based on "Magnusson's analytical model".

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