



Giant T-patterned purely informational strings and self-similarity from the RNA world to human mass-societies

Magnus S Magnusson

R University of Iceland, Iceland

Abstract

Biotechnology is providing unique possibilities for understanding human behavior urgently needed due to explosive population growth and pollution in the biologically extremely recent human mass-societies only paralleled among animals in insects. Can bio-mathematical models be found to explain such a human revolution occurring in a biological eye-blink?

The biology of behavior, Ethology, received its first Nobel prize in 1973 (in Medicine or physiology) shared between N. Tinbergen, K. Lorenz and K. von Frisch and in 1975 E.O. Wilson's Sociobiology pointed to social insect societies as biological models for human mass-societies. But none of the studied organisms were components of any others, so Lorenz's Nobel lecture, "Analogy as a source of knowledge", had no mention of self-similarity/analogy.

This bio-mathematical project started in the 70's focusing on the creation of mathematical patterns, the T-system, including T-patterns and T-patterned strings, called T-strings, with detection algorithms and software, THEME (PatternVision Ltd), widely used for their detection in humans, animals and neuronal brain networks, and finally drawing attention to similar patterning in DNA and proteins and thus deeper self-similarity. A model thus appeared in cells as mass-societies of highly specialized proteins shaped and controlled by giant purely informational T-strings (DNA) only paralleled in the recent mass-societies of humans also shaped and controlled by purely informational giant T-strings (texts), where among others, words are highly significant T-patterns and the same is true for most (all) known patterns in proteins. Parallel T-system analyses of texts and proteins are in progress. Giant T-string self-similarity has happened between mass-societies of Nano scale actors (proteins) and humans forming a bio-mathematical continuum from cells to human culture.. Two analogous revolutions (based on DNA vs. text) nine orders of magnitude apart in size and years enabling the only large-brained mass-social species to cumulate in T-strings unique understanding of itself and the world.

Biography

Magnus S. Magnusson, PhD, Emeritus Research Professor, founder and director of the Human Behavior Laboratory (hbl.hi.is), University of Iceland. Author of the T-pattern, T-string and T-system model and the corresponding detection algorithms and software THEMETM (PatternVision.com), initially focusing on real-time organization of behavior. Co-directed DNA analysis. Numerous papers, talks and keynotes in ethology, neuroscience, mathematics, religion, proteomics, mass spectrometry, A.I., robotics and nanoscience. Deputy Director 1983-1988 in Museum of Mankind, National Museum of Natural History, Paris. Repeatedly invited Professor at the University of Paris, V, VIII and XIII in psychology and the biology of behavior. Now works in formal collaboration between 32 European and American universities initiated 1995 at the University Rene Descartes of Paris V, Sorbonne, based on "Magnusson's analytical model".

Publications

1. Casarrubea M, Jonsson GK, Faulisi F, Sorbera F, Di Giovanni G, Benigno A, Crescimanno G, Magnusson MS, T-pattern analysis for the Study of Temporal Structure of Animal and Human Behavior: A Comprehensive review, Journal of Neuroscience Methods (2014), <http://dx.doi.org/10.1016/j.jneumeth.2014.09.024>
2. Magnusson MS (2017) Why Search for Hidden Repeated Temporal Behavior Patterns: T-Pattern Analysis with Theme?. Int J Clin Pharmacol Pharmacother 2: 128.

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