Dependence of the Dynamics of Mass Processes in the Economy from the Mechanism of Polymerization of Protein and of the Data of Nucleotide Decoding of Human DNA

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Summary

This article analyzes the dynamics of trends on the stock market using the symbols of the sequence of model macromolecules such protein molecule. Considered natural sciences study the forecast of dynamics of mass processes in the economy.

1. Introduction

Attention to the cyclical and rhythmic repetition in social processes was drawn Sorokin (1927). Research area Leontief (1941) in the economy is close to the work of Sorokin in sociology. Application Leontiev Walrasian system and analysis on a "cost - issue" related to the preparation of chess tables ("chess balances"). To investigate the problems of economic growth and development, has developed a dynamic version of the Leontief first static analysis model "input - output", adding a performance of requirements in capital to the list of so-called final demand or final sales.

No less interesting in this regard, the work Patty [1] in genetics. Patty presented a model of the macromolecule having a spiral shape (like a spiral of protein or double helix of DNA) consisting of two subunits - A and B. It has been shown that alternating subunits A and B in a spiral line period, i.e. after a certain number of subunits sequence of two subunits[1] exactly repeated. The model for one turn of the helix is responsible for 7 subunits. Once formed the first round, the place where should settle another subunit, designated kinda niche, which is limited to one side of the last subunit (Xn) preceding turn, and on the other - the

[1] B B A B A A B A B B A A A B B A B B B B A B B A B A B B A B B A A B A A B A A A B B B A A A B B B B B A A B A B A B B B A A B B A B A B A A A B A A B B B B A A B A B A A A A B B A A A A A B A A A A A A B B B B B B B A B A B A B A A B B A B B B A B

underlying subunit numbered Xn-6 (i.e., necessary to count in reverse direction 6 subunit). Both of these elements Xn and Xn-6 somehow determine which here should turn subunit A or B, they "decide": A good, B not good (or vice versa). Was obtained rule: if Xn = Xn-6, i.e. if the two subunits are identical, then joins A, if Xn ≠ Xn-6, i.e. if these subunits are different, then joins B. Thus, in addition to the linear period of the model had the three-dimensional period. Sequence in the model Patty is not accidental.

Perhaps protein polymerization processes, as well as the majority of mass processes on Earth depend on tidal activity of the Sun and Moon. Dynamics of nonlinear oscillations given by the solar-lunar perturbations of the gravitational field at the Earth's surface, may determine the processes and forms of polymerization from the beginning of the origin of living matter on our planet.

2. Main

The symbols A and B of the sequence resulting in the model Patty, were distributed in pairs AA, BB, AB, BA, AA sequence adopted for the «A»; BB - in «C», AB - for «t»; BA - for «g» and the data encoded couples applied to the analysis of the dynamics of hourly trend on the stock exchange, hourly dynamics of fertility, as well as trends in mortality due to accidents and accidents (so that every hour of the dynamics of a stock market trend designated depending on the "growth" or "decline" of the symbols A and B).

Then the structural layout of indixes of trends in the curves in the exchange reports, peak fertility (in the world), as well as the values of mortality (for tragic reasons) built in an orderly pattern.

It seems that humanity, taken as a single living organism, unconsciously, but systematically implementing its economic activity and manages its vital functions (including a massive fertility and mortality), based on the information encoded in the base Y-chromosome is strictly reproducing data on a statistical level of general human DNA.

This same pattern in the form of cyclic trends [9] found in the architecture and linear sequence of positive and negative trends in the dynamics of the market FOREX.

Fig. 1. Diagram of changes in FOREX quotations

All values of the indixes in any collection, stacked in the final picture of the values exhaustive 8-dimensional matrix. If all 1-hour trends (per day) divided into familiar characters A and B, and the pair combined in pairs triplets series (6 values in one triplet), it will always receive 4 triplet.

In these triplets, as mentioned earlier, two pairs of positive values "+, +" (if two consecutive hours on the stock exchange there is a positive trend dynamics) will be denoted by «A»; paired two negative values "-, -" (when two o'clock consecutive negative trend observed trend) will be denoted by "C", and intermediate values: "+ -" - the symbol of «t», and «-, +" - the symbol of «g».

If you look at a digital layout data, then all of the available set of values and trends of triplets, regardless of the time, at regular intervals will give the final values kaissoidov (from "Caissa" by Walter Jones, "Caissa. Poem about chess", 1763), are exhausted tables: Tab. 1 and Tab. 2 (Appendix to Chapter 2).

Consider the analog dynamics of trends on the stock exchange FOREX (trend EUR & USD) [25] for the period from 2008.11.18. on 2008.12.03 (Fig. 1). Digital data layout is as follows:

2008.11.18.00:00:00, -1, -1, +1, -1, -1, -1, -1, +1, +1, -1, +1, -1, +1, +1, +1, +1, +1, +1, -1, +1, -1, -1, -1, +1
2008.11.19 00:00:00, +1, +1, -1, -1, -1, -1, +1, -1, +1, +1, +1, -1, -1, +1 , +1, +1, -1, +1, -1, -1, -1, -1, +1, -1
2008.11.20 00:00:00, -1, +1, +1, +1, +1, -1, -1, -1, +1, +1, -1, +1, -1, +1 , -1, +1, -1, +1, -1, +1, +1, -1, -1, -1
2008.11.21 00:00:00, -1, +1, -1, -1, +1, +1, +1, +1, +1, +1, +1, -1, +1, -1 , -1, +1, -1, -1, -1, +1, +1, -1, -1, +1
2008.11.24 00:00:00, +1, +1, +1, -1, -1, +1, +1, +1, -1, +1, -1, -1, +1, +1 , +1, +1, -1, +1, +1, +1, -1, +1, -1, +1
2008.11.25 00:00:00, +1, -1, -1, -1, +1, -1, -1, +1, +1, +1, +1, -1, -1, -1 , +1, -1, +1, +1, -1, +1, -1, +1, +1, +1
2008.11.27 00:00:00, -1, -1, +1, +1, +1, +1, -1, +1, -1, -1, -1, +1, +1, +1 , -1, +1, +1, -1, -1, +1, +1, -1, +1, -1
2008.11.28 00:00:00, +1, -1, -1, -1, +1, -1, +1, +1, +1, +1, -1, -1, -1, -1 , -1, -1, +1, -1, -1, +1, +1, -1, +1, -1
2008.12.01 00:00:00, +1, -1, -1, -1, -1, +1, +1, +1, +1, -1, +1, -1, -1, -1 , +1, -1, -1, +1, -1, +1, -1, +1, +1, -1

2008.12.02 00:00:00, +1, +1, -1, +1, +1, -1, -1, +1, -1, +1, +1, -1, +1, +1 , +1, +1, +1, +1, -1, +1, -1, -1, -1, +1
2008.12.03 00:00:00, +1, +1, -1, -1, +1, +1, +1, -1, +1, -1, +1, -1, -1, +1 , -1, -1, +1, -1, +1, -1, -1, -1, -1, +1,

or by transferring data performance indixes of trends in molecular genetic characters:

2008.11.18.CTC, GTT, AAA, GCG; (Tab.01: [IV]: C; Tab.02: [II]: g; Tab.02: [I]: A; Tab.02: [IV] : g)
2008.11.19.ACC, TAT, GAG, CCT; (Tab.02: [III]: A; Tab.02: [I]: t; Tab.01: [IV]: g; Tab.01: [II] : C)
2008.11.20.GAT, CAG, GGG, GTC; (Tab.02: [I]: g; Tab.01: [IV]: C; Tab.02: [IV]: g; Tab.01: [IV] : g)
2008.11.21.GCA, AAT, TGC, GTG; (Tab.01: [II]: C; Tab.02: [I]: A; Tab.02: [III]: t; Tab.01: [IV] : g)
2008.11.24.ATG, AGC, AAG, AGG; (Tab.01: [III]: t; Tab.02: [III]: A; Tab.01: [III]: A; Tab.02: [III] : t)
2008.11.25.TCT, GAT, CTA, GGA; (Tab.01: [I]: t; Tab.02: [II]: g; Tab.02: [II]: C; Tab.01: [II] : g)
2008.11.27.CAA, GCG, AGT, GTT; (Tab.02: [II]: C; Tab.02: [IV]: g; Tab.01: [I]: t; Tab.02: [II] : g)
2008.11.28.TCT, AAC, CCT, GTT; (Tab.01: [I]: t; Tab.01: [III]: A; Tab.01: [II]: C; Tab.02: [II] : g)
2008.12.01.TCG, ATT, CTG, GGT; (Tab.02: [III]: t; Tab.02: [I]: t; Tab.01: [IV]: g; Tab.01: [II] : g)
2008.12.02.AGT, GGT, AAA, GCG; (Tab.01: [I]: t; Tab.01: [II]: g; Tab.02: [I]: A; Tab.02: [IV] : g)
2008.12.03.ACA, TTT, GCT, TCG; (Tab.01: [I]: A; Tab.02: [I]: t; Tab.01: [II]: g; Tab.02: [III] : t).

In the period from 2008.11.18. on 2008.12.03. observed the highest amplitude of the decline in prices on the stock exchange in 2008 [24] at the maximum exponent of the tragic deaths. Noted that the overall configuration of triplets obtained correspond to the regions of genes **GRIA3** (Homo sapiens glutamate receptor) and **CHRNA 7** (Homo sapiens glutamate receptor) (Fig. 2, 3).

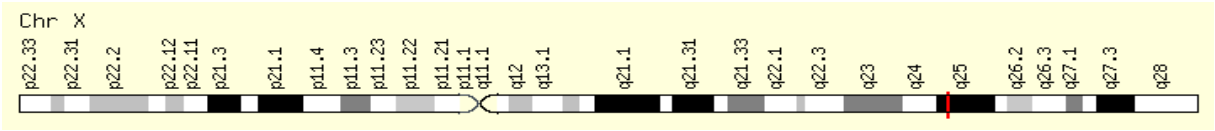

Fig. 2. Localization of a gene on the X chromosome GRIA3

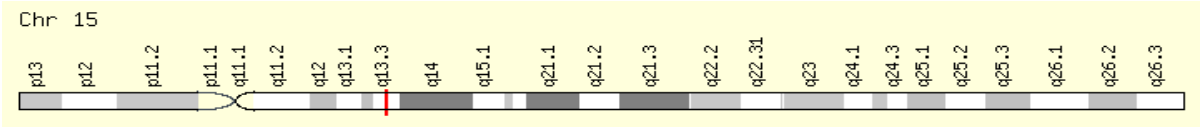

Fig. 3. Localization of a gene on chromosome 15 CHRNA7

Thus, the dynamics of the global stock market and price fluctuations on it, like the curve of mortality (for tragic reasons) are not in the final sense, a random or chaotic phenomenon.

All the dynamics of world stock exchanges and general curve tragic mortality may be determined encoding polynucleotide sequences of certain human genes.

3. Findings

A detailed analysis of the nucleotide layout genes GRIA 3 and CHRNA 7, followed by its reverse decoding, using the method of matrix correlations enables a high degree of accuracy to predict the high-amplitude oscillations stock exchange indices. There is also reason to believe that every single trend of the world stock market actually corresponds to the natural dynamics of each independent company involved in the bidding.

In other words, with cautious optimism, it can be argued that each company or enterprise, which owns shares having a value on the stock exchange, is "its DNA", in line with which consistently ranks all stock dynamics of such company or enterprise. Forecast endemic (or domestic economic) dynamics of individual companies or enterprises is already individually. However, its design characteristics, in contrast to the general quotations on the stock exchange, easier and provide higher accuracy in short-term and medium-term time intervals.

For example, consider the dynamics of quotations (by volume) of «General Motors» for the period from 29.07.2013 till 11.18.2013 (Fig. 5).

Fig. 5. Dynamics of the company «General Motors» for the period from 29.07.2013 till 11.18.2013.

Immediately shift the curve in this literal symbols used in genetic engineering:

...AGAAGTTTCTACGTCCAGTGTATAGGACACCGGCGTGACGGAGTCAG ACGCAGGATCGTG ...,

that the corresponding gene GRIN2B (glutamate receptor, ionotropic, N-methyl D-aspartate 2B [Homo sapiens (human)]).

Fig. 6. Chromosome 12 - NC_000012.11

4. Conclusion

Thus, it was found that the volume fluctuations of quotations for the stock exchange regions of the genes responsible GRIA 3 and GRIN 2B, encoding glutamic receptors belonging to the same gene family. In turn, the amplitude of volatility, appears responsible gene CHRNA 7 cholinergic receptor gene.

Found that the factors determining the mass human behavior are determined by three genes - genes glutamine and cholinergic receptors.

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Appendix to Chapter 2

Tab. 1. Table 1 kaissoids

[I]:[t]	[II]:[g]	[III]:[t]	[IV]:[g]	[I]:[A]	[II]:[C]	[III]:[A]	[IV]:[C]
01.{t} 02.{g} 03.{t}	**02.{g} 03.{g} 04.{t}**	**02.{t} 03.{t} 04.{g}**	**01.{g} 02.{t} 03.{g}**	**01.{A} 02.{C} 03.{A}**	**02.{C} 03.{C} 04.{A}**	**02.{A} 03.{A} 04.{C}**	**01.{C} 02.{A} 03.{C}**
01.{A} 02.{g} 03.{t}	**02.{C} 03.{g} 04.{t}**	**02.{A} 03.{t} 04.{g}**	**01.{C} 02.{t} 03.{g}**	**01.{t} 02.{C} 03.{A}**	**02.{g} 03.{C} 04.{A}**	**02.{t} 03.{A} 04.{C}**	**01.{g} 02.{A} 03.{C}**
01.{t} 02.{C} 03.{t}	**02.{g} 03.{C} 04.{t}**	**02.{t} 03.{A} 04.{g}**	**01.{g} 02.{A} 03.{g}**	**01.{A} 02.{g} 03.{A}**	**02.{C} 03.{g} 04.{A}**	**02.{A} 03.{t} 04.{C}**	**01.{C} 02.{t} 03.{C}**
01.{t} 02.{g} 03.{A}	**02.{g} 03.{g} 04.{A}**	**02.{t} 03.{t} 04.{C}**	**01.{g} 02.{t} 03.{C}**	**01.{A} 02.{C} 03.{t}**	**02.{C} 03.{C} 04.{t}**	**02.{A} 03.{A} 04.{g}**	**01.{C} 02.{A} 03.{g}**

Tab. 2. Table 2 kaissoids

[I]:[t]	[II]:[g]	[III]:[t]	[IV]:[g]	[I]:[A]	[II]:[C]	[III]:[A]	[IV]:[C]
01.{t} 02.{t} 03.{A}	**02.{g} 03.{t} 04.{A}**	**02.{t} 03.{g} 04.{C}**	**01.{g} 02.{g} 03.{C}**	**01.{A} 02.{A} 03.{t}**	**02.{C} 03.{A} 04.{t}**	**02.{A} 03.{C} 04.{g}**	**01.{C} 02.{C} 03.{g}**
01.{t} 02.{A} 03.{t}	**02.{g} 03.{A} 04.{t}**	**02.{t} 03.{C} 04.{g}**	**01.{g} 02.{C} 03.{g}**	**01.{A} 02.{t} 03.{A}**	**02.{C} 03.{t} 04.{A}**	**02.{A} 03.{g} 04.{C}**	**01.{C} 02.{g} 03.{C}**
01.{A} 02.{t} 03.{t}	**02.{C} 03.{t} 04.{t}**	**02.{A} 03.{g} 04.{g}**	**01.{C} 02.{g} 03.{g}**	**01.{t} 02.{A} 03.{A}**	**02.{g} 03.{A} 04.{A}**	**02.{t} 03.{C} 04.{C}**	**01.{g} 02.{C} 03.{C}**
01.{t} 02.{t} 03.{t}	**02.{g} 03.{t} 04.{t}**	**02.{t} 03.{g} 04.{g}**	**01.{g} 02.{g} 03.{g}**	**01.{A} 02.{A} 03.{A}**	**02.{C} 03.{A} 04.{A}**	**02.{A} 03.{C} 04.{C}**	**01.{C} 02.{C} 03.{C}**