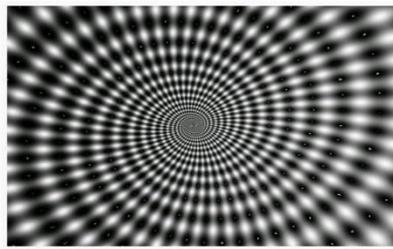


**MA-THEMATICAL LOGIC, TEMPORAL KNOWLEDGE**  
**AND THE ARROW OF CAUSATION**



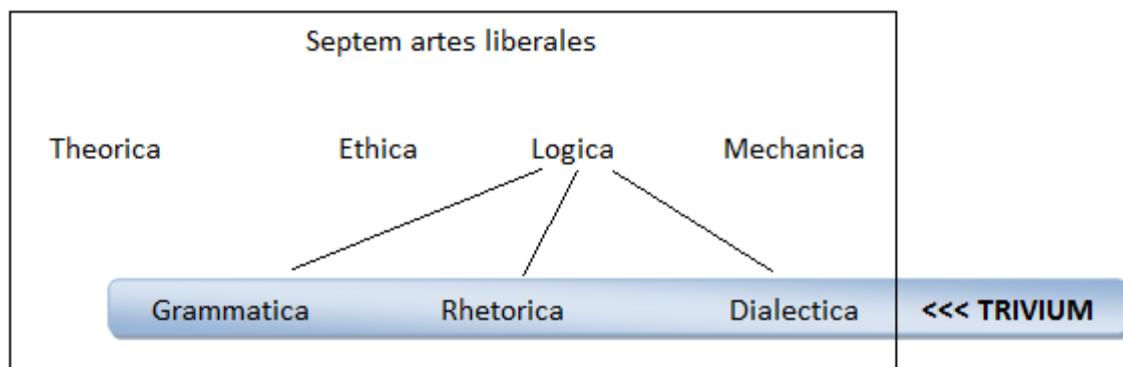
**Reality is merely  
an illusion,  
albeit a very  
persistent one**



Motivato  
CONVULSION  
THE QUESTION

*Mathematics is a precise mental tool to capture working elements (Gestalt) of reality and a means of optimal rationalization, in technical terms. No other method and product of the human mind can offer such a conversion and condensation of information into the temporality of knowledge. The exact methodical distinction between illusionary and real elements of the physical world is much more than an intellectual beauty contest, it is the fundamental question to discover the hidden harmony in the mystery of a chaotic material world. Such deep cognitive reflections lead inevitably to the enigma and puzzle of teleological and causal attributions of human existence; mathematics is a humanistic scientific discipline which can help us to decipher the meaning of our pilgrimage of life, if we allow for a logical balance of passion and reason.*

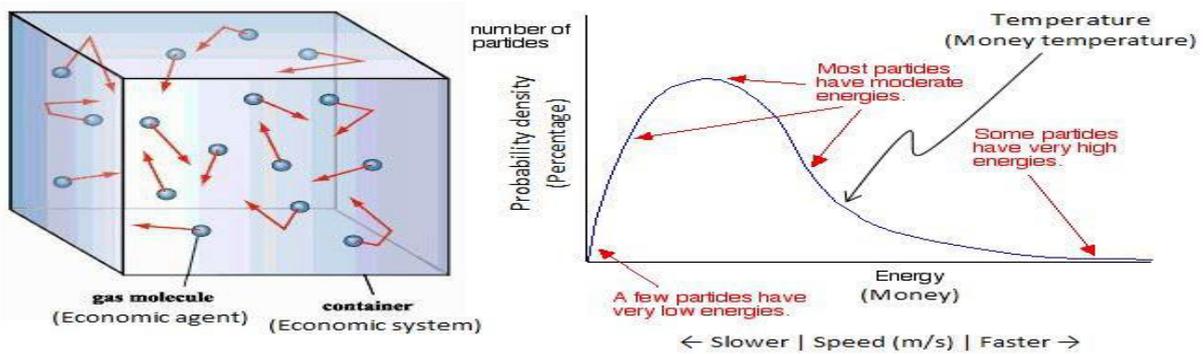
*Mathematics is mindful (not mindless), pattern-orientated (not law-orientated) and a cornerstone of occidental culture, albeit in the scientific tradition of the septem artes liberales. It derives its status as a 'monarchic' science from being instrumental as a testing tool for research; however, even the most abstract mathematical formulation of temporal knowledge is always accompanied by human natural language, for the sake of interpersonal scientific communication. The fundamental question, if these formulated patterns are statistically (probabilistically) of teleological, causal or timeless (eternal) events, cannot be answered by the mathematical method as scientific strategy alone. The non-Gaussian distribution nature or scheme of physical phenomena on planet earth suggests that humanity (humans as biological entity) itself has become the greatest and most dangerous geo-physical force on earth, with the probable potential of self-annihilation. In addition, the natural sciences are contradictory, regarding their diverging concepts of physical explanations as it is not possible to reduce thermodynamic law, biological evolution and information theory into one temporal body of knowledge. These empirical facts of scientific research are mainly fast overlooked, due to overspecialized expertise in professional academia as science is employed to increase the economic production (of capital) by a partialized division of labor.*



*Having said this, it now becomes easier to understand that the application of the mathematical method can help us to better formulate the basic body of knowledge for a physics of social systems, i.e. a natural science of human society. Wandering toward this goal is much more than an intellectual beauty contest of scientific curiosity, but such a mindful approach can enable us to break free from ideological precepts of social scientific research as envisioned by Auguste Comte. Aim and intention of such a socio-logical math is to short-cut*

*the endless (mindless) academic production of linear word chains in the 'social sciences', many job qualification (actually legitimational) works (like dissertations) having much more than 500 'unreadable' and regurgatory pages. Let us now study a few more practical examples: the current socio-economic divide (the 1% vs. the 99%) in income distribution can perfectly be described by using a combination of Boltzmann/Gibbs law and Pareto power law, but endless academic discourses are being held without even getting the basic facts right, concerning the distribution pattern. The income (Y) of a nation over time (t) is often calculated this way:  $Y_t = rRt + iKt + wLt$  (r=return; R=rent; i=interest; K=Kapital; w=wages; L=labor). The underlying production function reads:  $P = R + W + I$  (P=production; R=rent; W=wages; I=interest). Henry George (1879: *Progress and Poverty*) tells us (transposes) that cyclical crises in a capitalist economic system arise because:  $P - R = W + I$ , i.e. rent factually curbs production and should be taxed for public revenue. This formal distinction between earned (w, i) and unearned (r) income is vital for understanding the socio-physical distribution scheme of economic income. The author wants to clarify for the reader herewith that economics can be taught in 1 lesson and that the fundamental working principles of the body economic can be formulated by the mathematical method, i.e. the arrow of causation points to the key role of rent (accumulated assets or wealth) as economic return in the production function, concerning distributional patterns, and the money illusion, since 2000, has reinforced this unhealthy direction of wealth 'sharing'. The privatization of nature (location of real estate and natural resources as rental value of assets/wealth) is a major factor of economic return, concerning the productive 'interplay' of rent, wages and interest. It is also decisive to mathematically observe the productive temporal turning point when the economic return on capital as interest decreases, which changes (switches) the monetary flow (book-keeping) of fiat liquidity into 'dead' (non-productive) assets instead of enhanced living productivity. In any case, such alternative 'mathematical interpretations' of economic reality are being hidden by the virtual number crunching and post mortem artistry of the money illusion 'discourse community' in the economics profession.*

## Maxwell-Boltzmann Distribution | Money Model



Luigi Fantappie (1901-1956) observed precisely that the original Einsteinian formula of relativity (absoluteness) is quadratic and that it allows for forward vs. backward motion of living matter; his unified biophysical theory\* can help us to better understand the fundamental motion and development of living matter. Moshe Carmeli (1933-2007) informs us with his physical theory of cosmological special relativity that the creation of time follows an interval scaling where temporal motion becomes 'shorter' in the longer run of spatial expansion vs. contraction. Tariq Mustafa (1934) elaborates in his writings that the original space-time corridor evolved in very long intervals (loops), developing a spiral model of human history. Thus, the ethical economy of humankind on planet earth pertains to a moral dimension of space and time; space divides the human bodies into self-contained action units and time gives the human psyche the privilege to exist and to develop personally for a 'next' or 'coming' world, i.e. even the most righteous human beings on this globe need space and time for their correction. Wandering toward this goal of rectification, setting the right intention and aim, means to 'catch' the arrow of causation by applying ma-thematical logic and methodical extension of temporally limited knowledge. Mathematics can provide us with better tools to reflect and act in our finite physical and ethical universe; from this psychophysical viewpoint, the essential difference of human existence is to 'have or to be' as E. Fromm (1900-1980) explains in his deep psychology of human society, i.e. we can either 'have/possess nature for material gain' or 'be/enjoy nature for personal elevation', that is ownership vs. stewardship of planet earth. Maths can enable us to formulate/balance these vital tasks of having and being as individuals, groups and collective unity. However, the Gaussian dictum to 1<sup>st</sup> understand (learn) the underlying mathematical idea and to 2<sup>nd</sup> train (do) the formal application is a prerequisite of all creative methodical discovery in life and science.

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*\*Ulisse di Corpo (1959) of Rome, a PhD in Statistics, has done great scientific efforts to disseminate the methodical implications for human medicine and psychology*

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