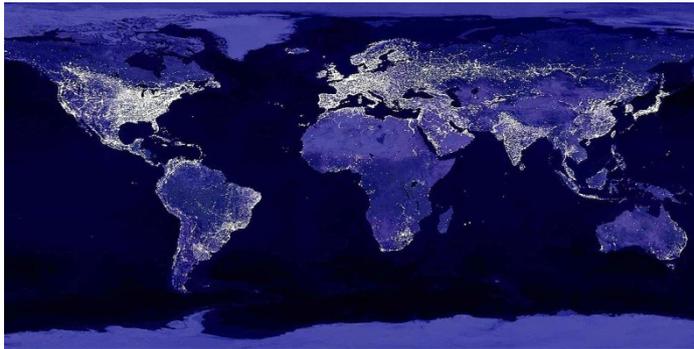


ADVANCING GEORGIST THOUGHT



The Eco-Energetic Point of View:

Globalistics of Natural Resources, Economic Value and Money



*Henry George (1839-1897) was the first economist to coin and use the image of **spaceship earth**, in his groundbreaking work, *Progress and Poverty* (1879: p.173, NY; reprint by Cosimo, 2005). The quest for the **cyclical return** of economic depressions, combined with the deep interest in a possible underlying **natural law** of human progress and decline, is at the heart of his scientific method. It is no coincidence that Francis A. Walker, the first President of the American Economic Association, was a fierce opponent of Henry George as he was also engaged in the research topics of land, economic value creation and money; it is well known that academia is primarily about abstractions of reality, the learning about real life concerns or practices of reality, is viewed as a secondary activity, and even as a disturbance of the discourse to archive knowledge.*

*What historical event chain caused the creation and publication of *Progress and Poverty* (and the other elaborations of this economic problem by HG, e.g. *The Science of Political Economy*, 1898)? The scientific study of available **post-***

*mortem data sets is pointing to the empirical fact that the panic of 1873 was the first truly great international crisis of the political economic order as similar phenomena (**panic patterns**) occurred in different global locations **simultaneously**. The 50 years of the US National Banking Era (1863-1913) until the Federal Reserve Act ('the child of all panics') were preceded by scattered free banking practices and a slow conversion tendency towards state-chartered banks, with higher monetary reserves and legal business standards. The US population tripled in this period, from about 30 million to well over 90 million. It is also difficult to estimate the real length of the long depression which is normally defined from 1873-1879, but we have to keep in mind that the panics of 1893 and 1907 followed closely.*

In any case, this temporal period left a deep psychological mark on Henry George who experienced and observed great progress and poverty at the same time; consequently, humanistic and scientific questions arose: what is causing all this simultaneous gain and pain? Is there any way to balance such events? Are we doomed to repeat these cycles?

*We do not want to simply and technically reduce these painful human and natural events of economic suffering and affluence to central/commercial banking techniques, monetary circulation analysis or into the quantitative supply/demand for money (although we know how decisive the velocity and volume of monetary agency effects the modern production economy); abstractions of reality may be sophisticated tools to command or centralize economic **policy making and planning**, but they tell us very little about the real commercial intercourse in every-day economic exchange and production. Concerning economic growth, business cycles and depressive spiral effects, we have to focus on the productive sequence of natural inputs and processed outputs, like the enigma of the Solow residual explicates. Something happens in between the technical processing of natural resources and the human exchange of economic outputs; it is a quality that the quantitative accounting of total factor productivity does not cover and it can also not be explained by human ingenuity. Let us call this the hidden variable: 'the alchemy of the economic circuit'. As a result, it is imperative that we **demystify** the quasi-theological omnipotent role of money and view the human economy as an economic energy circuit or eco-logical energy transduction system. Consequently, human*

*economic activity is not an abstraction of perpetual motion from households, firms and banks, but a real product of natural resource processing via **systemic energy transduction**.*

*The systems evolution of the modern monetary production economy in the last 100 years has reduced almost all human necessities into the **need for money** (which has also deeply affected the human psyche, in terms of value preferences); in this economic system, money and energy (natural resources) have become **interchangeable**, thus no-thing (money) equals some-thing (energy).*

*The mathematical infinity of money is computed equal to the physical finity of resources; even the simplest mind can grasp that an optimal economic resource allocation and distribution cannot be achieved via such an artificial accounting system as it is not balanced by a natural ratio. This economic development is insofar dangerous as almost all social systems collapses in human history have been induced by an energy crisis; on the contrary, the **developmental imperative** reads that the higher advancement of an economic system demands to attain a higher level of energy efficiency and natural resource allocation, i.e. the direction (pattern) of the natural selection procedure is to limit entropy and to extend bio-social life physically; increasing energy consumption of all kinds increases the material entropy of the economic system, it costs energy to convert energy from one form to another and it comes always with a loss of energy by friction. The Snooks/Panov algorithm calculates and confirms the eco-energetic fact that every important techno-economic wave took only about a 1/3 of former temporary evolution intervals.*

*As in our times, money grants access to natural resources; we can read the **eco-energetic circuit** of production cycles as follows: energy/quantifies/time; time/quantifies/production/; money/quantifies/energy. This is the essential*

*working body of the economic quantum space of energy, time, production, and money. The increasing conversion of energy quantifies the temporal acceleration of economic cycles; the economic behavior of acute and chronic monetary excess increases the **exponential need for energy** and causes the temporal acceleration of economic production cycles, i.e. shortening the cyclical intervals of depressive and regressive crises. Consequently, the operating scheme of our monetary system needs economic reforms; Henry George envisioned a form of public currency, issued by government agency, to satisfy our desires with least exertion and to perform the indispensable office of interpersonal (temporary) exchange.*

*Reaching such a stage of economic systems sustainability would require separating money (central banking) from credit (commercial banking) by the following **legal reform steps**:*

A) Removal of natural resources (land) as collateral for bank loans/land value=public revenue;

B) Decrease<labor taxation/increase>taxation of capital gains (interest);

C) Banking regulation=100%money/narrow banking.

The systemic interplay of natural resources, economic value and money lies behind all monopolies (tax, credit, land) and privileges (inherited wealth/unearned income), but monetary emission and circulation drive the economic cycle via eco-logical energy consumption (non-physicality performs a physical office). Henry George could simply not foresee this type of economic systems evolution which is defined instrumentally by gaining monetary purchasing power as access to the not man-made goods of this earth (extracting physical value for no-thing).

*Regarding the cyclical and spiral interplay of this physical foundation of human economic activity, it is vitally important to understand that the methodical tools of the economics profession are, since 5000 years and starting in Sumeria, derived from **private wealth management** and asset maximization via money, credit and interest. From this knowledge system follows a scientific vacuum and bias, concerning the sustainability and stability of the public body economic; in addition, global processes of the world economy remain a blind spot. As a result, professional micro-economics (in practice: management models) and fragmentary macro-economics (in practice: economic and monetary policies) do lack the integrative level of meta-prudent cybernetics. Consequently, an economic sustainability science is currently gaining momentum, with different and distinct levels of human economic activity. This **science in the making** is a humanistic response of survivalist rationality (logic) and morality (ethics); it will lead most probably to **economic accounting** methods/models that allow for optimal resource allocation and distribution (with or without monetary agency; possibly with 'new monetary technology').*

Advancing Georgist thought can play an eminent role in this learning process of knowledge systems evolution, referring to the global science of political economy and to world economic waves of progress and poverty.

*The **psychological realization** and scientific research into cyclical progress and poverty was the Georgist and humanistic response to unbearable conditions for millions of people. N.Kondratieff (1892-1936), J.Schumpeter (1881-1950) and H. Rosenberg (1904-1988) have explained these painful events as contractive dynamics of capital formation, on the physical foundations of land and labor; Kondratieff was punished to death in the Bolshevist system as he rendered a very different interpretation of **long wave movements** in the stages of techno-economic evolution although the studies were derived from observable empirical data. It is interesting to note that Central European Georgists like G.J.Pikler (1864-1952) of Hungary and A.Damaschke (1865-1935) of Germany discovered such long wave assumptions as students of the Biblical account in Moses 3 (chapter 25); what both economic points of view have in common, refers to the ca. 50 year temporal regularity of expansion vs. contraction, related to possible human and **scientific remedies** of this money-based capital*

dynamics. The eco-energetic point of view can help us to operationalize the involved factors and to identify key variables for practical remedy formulation.

*The scientific observations of Henry George fall mainly into the temporal period (1850-1900) of modern economic history that is associated with the 3rd Kondratieff industrial wave of railway and steel. What is the mystery or alchemy of this deflationary wave circuit? The progress of technological innovation is always accompanied by unsustainable debt levels, caused by the privately capitalized land value (rent) of natural resources and unfair taxation techniques; in addition, this **dynamic inefficiency** is reinforced by monetary and banking practices that support private rent seeking over public economic health and entrepreneurial spirit, i.e. **monetary policy** does not make a behavioral distinction between private rent seeking and public wealth creation. However, there exists a strong empirical relationship between, for example, real estate value and economic wealth creation. One important point is to elaborate the public revenue system from traditional taxation methods to the capturing of rent-seeking via the land value of natural resources, according to the Georgist formula: $P-R=W+I$, and not according to the classical formula of: $P=R+W+I$.*

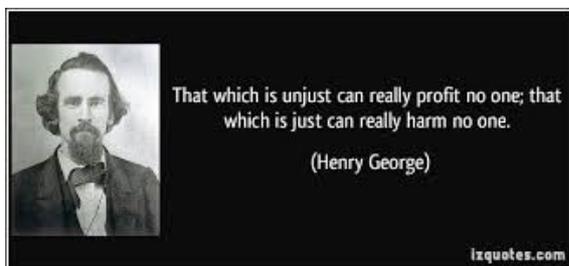
*The resources of nature will be actually freed from rent-seeking and productive activity will be freed from taxation. Consequently, **unsustainable debt levels** can be removed from firms, households and banks via the removal of total private property over land titles or the free goods of nature; land titles will lose their economic value as traded items. Public revenue is derived from capturing land rent via a simple estimation of annual economic value, valued by locational quantity. All types of employment will increase, because taxation is no longer based on labor-intensity; commercial banks will have to develop more expertise in the assessment and viability of all types of entrepreneurial projects, because land value can no longer serve as collateral or security for credit (interest) or loans. As a result, our discourse slowly deciphers the 'alchemy of the economic circuit' which is also an energy transduction system; as in the modern money-based production economy, money and energy (natural resources) have become interchangeable, a legal banking reform towards narrow banking or even 100%money is unavoidable to removing the speed out of rent seeking momentum of all kinds .*

Beginning around the 1850s, the US transformed from a land-based economy towards a money-based economy until the 1910s when the tricky calculations of banking replaced the physical visibilities of a natural economy; this was the life period of Henry George and the observed economic problems of rent-seeking, monetary gambling and wage reduction have grown into a global eco-energetic conflict for natural resources (land value) since the last century.

*There exists no alchemy of the economic circuit; the mystery of cyclical motion (and possible development) is hidden in the physics of the economic wealth and value creation chain. The **long-term dynamic efficiency** of the eco-energetic circuit in economic cycles (and eventually spirals), in terms of sustainability or stability, is disturbed in regular intervals by non-productive rent-seeking (from natural resources), monetary excess (minimizing reserve ratios) and labor taxation (taxing human resources); the extraction of value for no-thing begins with unearned rent and ends with unearned capital gains from interest, i.e. the public body economic is maintained via taxing wages and the private body economic gains from this type of value creation process a more solid capital pool (for even more gambling), i.e. increased **physical mass-momentum**.*

*Entrepreneurship and employment are discouraged under such an unstable system, because it makes no more economic sense to toil and try. The logical consequence of these productive imbalances is an increased energy consumption level which leads to a temporal acceleration (entropy) of the economic crises intervals, observable in technical progress and human poverty worldwide. As a result, the eco-energetic **sustainability** of a money-based economy requires to tax rent seeking and capital gains (to serve as public revenue), must remove natural resources (land) as collateral value from bank credit and interest (loans), free labor and production from taxation, and introduce narrow banking (strict reserve requirements).*

*The social science of economics is not a branch of morality or physics, it is a **science of human action**; the concealed laws (construction principles of reality) of right or false direction of human economic activity can be discovered by empirical, rational and methodical inquiry. A deterioration of ethical, moral and human values is well observable in our times and cyclical economic crisis is always a systemic feedback signal of behavioral mal-adaptation (this topic is about communicating with economic complexity and deserves our separate attention); the establishment of a just legal system, in economic terms, is a vital commonality between all nations on the most basic level of social existence and such a just legislative system, the **economic rule of law as rational imperative**, is discoverable and applicable by **logic** and reason.*



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