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Ecological and Evolutionary Dynamics of Aresian and Erosian Economy

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Abstract

In this paper we explore the ecodynamics of economic transformation of Central-East –European late socialist industries under the pressure of globalization. We use both term ARES and Eros in allegoric sense and as an acronym of Accumulation, Risk, Environmental degradation. In this framework we deconstruct the process of the neoliberal transformation of local economies. Deconstruction of informational, technological and social dynamism also helps to reveal the hierarchical ranks of the four environmental actors feeding the ARESian dynamics of contemporary economical and social phenomena.

Key words: 4T tetrahedron ecodynamic modell, the neoliberal economic turn, diversity

1. INTRODUCTION

Economy is an environmentally and ecologically embedded anthropological system of human subsistence being liable to harsh ecodynamics of co-evolving actors: nature, social and technological contributions, and knowledge. In a holistic frame of reference of our MEO model [1] economical evolution appears to be a human ecological drama in the everchanging civilizational stage. But evolution as a discourse is also a *cultural construction* offering a naturalist explanatory model, cosmology and metanarrative surviving the postmodern „megadeath” of other metanarratives. The concept of evolution is also embedded into semantic web generating significance of relational elements and logics ready to be transferred to social, cultural or technological realities [2] [3].

The holistic extension of biological phenomena to organizations, memes or artefacts, technologies, cultural idioms or social communities at the same time helps us to create a unified interpretive framework. The sophisticated discourse of organizational ecology dealing with population dynamics of organizations, markets, consumers or audience proved to be a reliable way to describe complex processes of economy. In this paper we try to deconstruct hidden ideological elements of alternative frames of evolution applied to economy. The two alternatives, the darwinian and kropotkinian ideology of evolutionary theory have opposite basis, one implying competitive „struggle for life” and „survival of the fittests” algorithm versus the other concept based on symbiotic, mutualist „affiliative-cooperative” logistics. Kropotkin in his work *„Mutual Aid: A Factor of Evolution”* explores the evidence of cooperation in

nonhuman animals and the human history concluding that cooperation and mutual aid is one of the leading factors in the survival and the evolution of species. and the ability to survive.

Ecology teaches us that both form is relevant (being usually mixed) in the complex ecodynamics of ecocorrelations, nevertheless the one-sided view of evolutionary logic of competitive vision of global economy may give free way to socially and environmentally disastrous political and economical decisions and behaviors of the stronger and dominant few. The other ecocorrelational patterns expressed by the parasitic, saprophytic or simply neutral actors may even help the legitimation of the dominant actor to destroy the sustainable stage for the common tragedy. Economical criticism based on evolutionary and ethological insights of development of human economical behavior may balance this bias.

2. HOMO GLOBALIS AND ITS ANTHROPOZOICUM

The concept of niche construction [4] [5], Kenneth Boulding’s theory of ecodynamics (1978) and the tetrahedron environmental ecodynamical framework [6] offer an elucidating framework to put human responsibility in focus of evolutionary dynamics of global economy.

Human economical activity has changed the global climate by accumulating greenhouse gasses in the atmosphere, accumulation of CFC gases hurted the ozone shield and destruction of rain forests; overfishing and pollution of the oceans caused significant rate of

extinction and decline of biodiversity. On the other side - as Markl [7] points to- „*through the evolution of the conscious mind in the human species, nature became aware of itself and can thus, for the first time in more than three billion years of natural evolution, influence and even to some degree take control of its own future development according to intentional goals.*” A new geological epoch emerged entitled by the term noosphere of de Chardin and Vernadsky conceiving human being as geobiological actor with evolutionary significance. In the 60s, researchers in Czechoslovakia had defined our geological period as “anthropozoicum”, in which human social systems became able to rework the whole biosphere. The contemporary technological frontiers, genomics, nanotechnology and the awaited catastrophic consequences of nuclear technology, chemical pollution exert significant impact on biological evolution. We are not far from the apocalyptic vision of Gordon Rattray Taylor's *The Biological Time Bomb*, the global biogeochemical drama with its irreversible changes induced by human contribution. The MEO model helps to understand how different - competitive, aggressive versus symbiotic – economical agency derived from different philosophies works via their proper ecorelational dynamics exerting multidirectional and mutual niche construction and selection at the level of natural components, artifacts, ideas and social forms. The mutual niche construction framework [8] helps to reconsider social criticism of technology, theories of autopoietic systems, social shaping of technology, actor network theory, coevolution, replicative theory of biological and cultural evolution.

3. DIVERSITY AND/OFF EVOLUTIONSCAPES

We propose a human ecological explanatory model based on the tetrahedron environmental ecodynamical framework, where natural, social, technological and ideospheric niches are constructed or reconstructed by the human actor, and these niches (and populations within them) may relate in different ecodynamical manner with each other: namely competitive, predating, mutualist-symbiotic, neutral or parasitic, or even saprophytic- scavenger ways. Applying the idea of selfish meme [9], the populations of ideas, technological artifacts, or institutionalized social discourses and collective representations may compete or cooperate with each other through human agency. It is even true for the different concepts of evolution like in case of Lamarckian, Wallacian, Darwinian, Kropotkinian version or by the extension of evolutionary theory beyond the biological scene like the general models of evolution dealing with chemical, biological, social, mental evolutionary levels [10] [11], and there is abundant literature on co-evolutionary models also. In the competing concepts of evolution there is a recurring dilemma regarding the blindness of evolution based on mutation by chance and selection of the fittest versus an inherent logic of evolution one can find in Taylor's „masking theory” and nowadays' epigenetic insights to genetic mystery. These alternatives may change our scape of evolutionary process towards a Lamarckian

direction. We can not mute the contemporary denial of Darwinism, the so called „intelligent design” (ID) theory focusing on the problem of *irreducible complexity* of the biochemical, and biological complex systems calling for the concept of intelligent design [12]. The scientifically interpreted theory of „intelligent design” gained significant interest and reception based upon dozens of peer reviewed papers .

The fundamentalist Darwinian sense of evolution is based on natural selection, a mindless, mechanical and algorithmic process. Faithful followers of Darwin are ready to extend evolution beyond the chemical, biological frontier, as [13] Dennett argues that there is little or no principled difference between the naturally generated products of evolution and the man-made artifacts of human creativity and culture. In this cosmological attempt we must realize the evolution is also a concept of creation, and in *ideological-theological* sense it works as a quasi-religious doctrine of atheism. Meme theory, coevolutionary concepts in this sense are materialist analogies and counter-parallels of Schelling's and Hegel's objective idealism, in which the Spirit itself is present in the Nature, Society and Human individuum. Dennett as a consequent follower of Darwin, considers human creativity operating by the Darwinian mechanism, nevertheless he celebrates biodiversity and diversity of the memes, implying an imbuilt value and measure of evolutionary systems like sustainability of the process, and its guarantee for diversity of populations of every kind (biological, technological, ideological) as a basic condition of flexibility.

But selection, struggle for life, survival of the fittest as an inherent and legitimated logic has different background regarding its social and cultural meaning and value system. Progressionist ideology of Marxism-Leninism, Stalinism created basis to an extreme cruel annihilation of conservative, „retrograde” social classes, denying values of social diversity and sustainability. Peasants, aristocrats, middle class bourgeoisie, sometimes whole nations were exterminated as victims of ideological and social *!r*/evolution. Diversity and sustainability is neither an inherent value of evolutionary dynamics, if we see evolution to be a blind algorithm of mutation by chance and selection.

A „progressionist” pressure towards synchronized replicability appears in Csányi's *replicative model of evolution* based on the concept of self-organizing systems, in which both populations at biological and socio-cultural level exhibit pressure towards better replicative quality and integration with other systems in a convergent manner, while diversity is diminishing.

4. EVOLUTION, SOCIAL SCIENCES AND ECONOMICS

The social sciences adopted the concept of evolution also a very diverse way. The forefathers: Morgan and Tylor had adopted evolution in their anthropology generating an unilinear scape of development, which had been devalued by the Boasian particularist turn.

Particularism may be seen as a vote for diversity. This diversity-friendly attitude may appear in evolutionary theory also as in the case of Tönnies' non-unilinear view of social evolution, or in other neoevolutionary samples, like Leslie A. White's *technological* determinism, or Julian Steward concept focusing on diverse and successful adaptation to *Nature*. Sahlins with his framework of specific evolution or Lenski's *information* based evolution model represent alternative theoretical frameworks too.

Economics also proved to be good niche for evolutionary theories, as those processes working in "life world" of economy, like demographical changes of technologies, markets, firms and services reflect evolutionary logic. Evolutionary economists see economic organization as a dynamic process involving ongoing transformation, and that economic behavior is determined by both individuals and society as a whole. Economic systems may be treated as evolutionary systems investigating the non-equilibrium *processes* that transform the economy *from within*. As economic behavior is also evolutionary product (based on the insights of evolutionary psychology) evolutionary economics must be extended towards this behavioral field. Evolutionary economics has behavioral and human ethological interest exploring economic behavior in evolutionary to connect economic habitus with ancient instinctual human features like predation, emulation and curiosity. Evolutionary economics by its own evolutionary methodology explores the dynamics how demography of firms, institutions, industries, trade and growth is changing. The evolutionary view appears in mainstream economist work of Schumpeter who proposed an evolutionary perspective to conceptualize tensions on macroeconomic equilibrium endangered permanently by technological, organizational innovations as these changes may transform the economic ecosystem, technologies and means of production. Nelson and Winter analysed the evolutionary changes in the field of technology and processes along the continuous changes following Darwinian logic. They focused on mechanisms of selection, inducing variations and provide the conditions of self-replication. Their framework can be compared to organizational ecology or population ecology. Darwinist or even Malthusianist perspectives are emerging from neoliberal market theory, where markets or monetary markets are thought to be as major selective medium, where unsuccessful competitive firms must go bankrupt and leave the market. Economics and anthropology is also intertwined in this field as neoevolutionist anthropology help to understand the role of diverse cultures in economic performance, and domestic and international inequalities of income just as the background of the roles of social, economic and political power in shaping economic outcomes in evolutionary context. It seems to be an ongoing evolutionary scene where the facts of globalization and the increasing weight of multinational corporations in the international economy changes lifestyle and social forms of local nations and different generations. But evolutionary economics implies also wider evolutionary horizon,

when dealing with the impact of new technology on the biosphere, or the ways in which economic thought is affected by and affects the always changing economics.

5. THE INTEGRATIVE TETRAHEDRON MEO (MAN-ENVIRONMENT-ORGANISM) MODEL

The „tetrahedron” ecodynamic concept, – where the four environment are conceived as both constructed and selective niches, and also as four set of populations (*Natural* ecotops, *Social* forms, institutions, *Technological* artifacts, systems and *Infospherical* issues like beliefs, knowledge systems, cosmologies, semantic webs) – was strongly inspired by Kenneth Boulding's concept of ecodynamics, who viewed human behavior as embedded in a larger interconnected, and ecodynamic system including dimensions of spiritual and material kind, both.

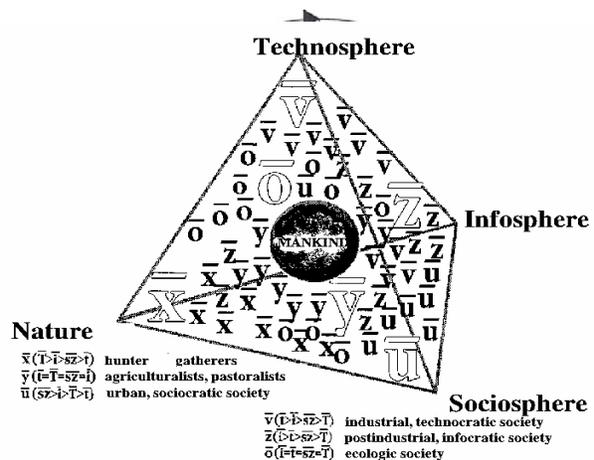


Figure 1. Vectorial space of tetrahedron human ecological model with competing niches of Nature, Technosphere, Infosphere, Sociosphere (Lazar 2000)

Niche construction theory is based on similar interrelationist framework of abiota, biota (other organisms), and artifacts as our MEO tetrahedron model's Nature; Social; Technological, and Infospherical environments. Niche construction theory (NCT) refers to the capacity of organisms to modify their *own and the other's niche* (sometimes in mutual ways) and transforming natural selection pressures with demographic consequences. This modification may be performed via dominant aggressive dynamics and offensive, suppressive strategies, but the ecodynamical relationship may gain frame of mutualist, cooperative processes between these actors. Multivariate dynamics in cultural evolution and consequent shifts in the demographics of the natural, technological, social or conceptual populations are strongly influenced by *human economical agency*.

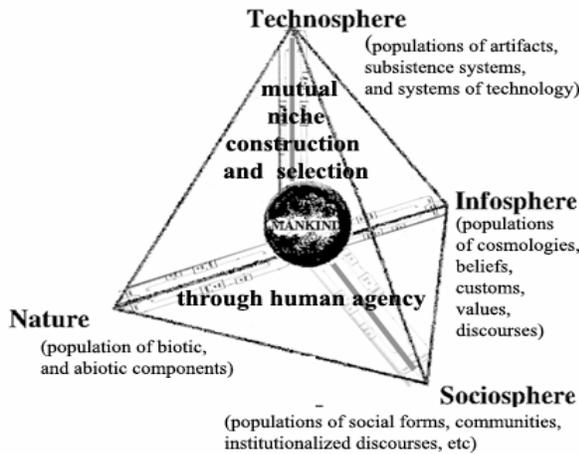


Figure 2. Mutual niche construction and selection of artifacts, ideas, social forms through human agency (Lázár 2012)

This four dimensional model is not far from Ekins' [14] four capital model of economics, where the ecological, human, organisational and technological forms of capital are organized in an interactive, closed loop instead of the open loop system of classical Adam Smith-ian „land-labour-capital” model.

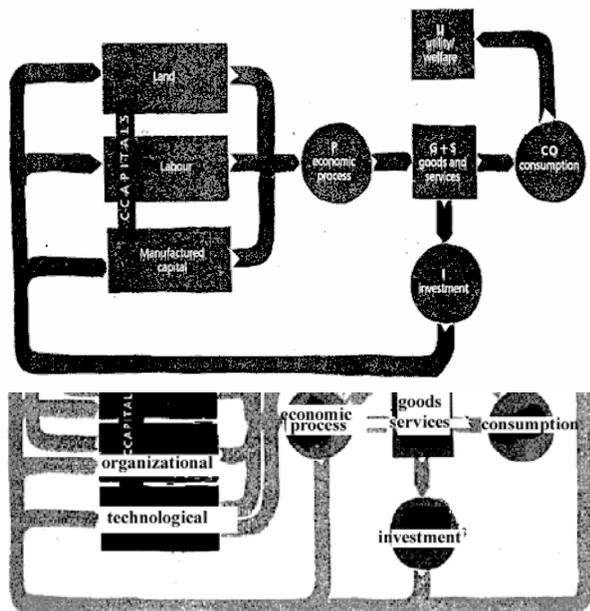


Figure 3. The open loop model of the classical economy and the closed network of Ekins' four capital (based on Ekins 1994)

6. ARESIAN VERSUS EROSIAN EVOLUTIONARY THOUGHT

Applying the tetrahedron model helps to simplify ecorelationships of different subsistence systems and helps to understand ecodynamics of conflicts,

competition, struggle versus reconciliation, symbiosis, cooperation in frame of human agency of economics. Ecological patterns like predation or mutualism may be understood in frame of economical reference. Convergent discourses help us to create a multidimensional insight. Organizational ecology helps to apply the population dynamics and ecological metaphors for institutions, organizations and firms. Political ecology explores relationships between political, economic and social factors with environmental issues and changes. Evolutional economy as shown above also borrows categories and logics from evolutionary theories.

Estimating the weight of our dilemma regarding dominance versus symbiosis in economic dynamics we can explore human ecological dynamics of economy based on warfare logistics, where vision of Virilio [15] about our economic civilisation may offer clues for the hermeneutics of human suffering. In his concept our economic reality creates the so called 'integral accident' where the peace of modernization causing depopulation, extinction of traditional social groups, silent ethnic cleansing, and loss of narrative and local identity may be interpreted as the continuation of war by other means.

In this exploration we can trace how the four (Natural, Social Technological or Infospherical) environmental actors interrelate in this economical drama. The ecodynamics of in(ter)fluence of infosphere (media, banking, marketing, political discourse) versus technosphere (industry, technology, production), sociosphere (nations, classes, social groups, networks) and Nature may represent the logistics of offensive dominance versus symbiotic mutualism. We use the term **ARES** both in allegoric sense of fight, war, predation, dominance and agression and as an acronym of **A**ccumulation and concentration of profit and power, **R**isk, **E**nvironmental degradation and **S**upremation and dominance while the same is to do with the opposite term of **EROS** as allegory of love, philia, agape, ecological symbiosis, mutualism and as acronym of **E**nvironmental Responsibility and **O**ptimalist strategy, and **S**ustainability of economical activity [16].

The paradigm of ARESian economy consists of accumulation of wealth, extraprofit, concentrated monetary, technological and information power, threatening risk emerging from Natural, Social and Technological processes, and the realised consequences like anomy, riots, environmental degradation and crisis, modern slavery and social suffering while the EROSian framework is the positive counterpart: environmental responsibility and optimizing strategy leading to environmental reconstructive organistic sustainability. The aim of ARES economy to win through (Nature, competitive economical actor, legal constraint etc.) while EROS economy means win through the economy itself (frugality, voluntary simplicity, Schumacherian or buddhist economy). ARES economy is based on eco-logic of dominance and predation, while EROS economics is based on cooperation, symbiosis and mutual optimisation.

7. DOMINANT ECONOMIC STRATEGIES- THE ARES SCENARIO

Aresian paradigm may emerge from the hidden cultural algorithm at the deepest layer of the given culture organizing accepted behavioral codes, habits and attitudes, social norms, values and ideologies. It may root in Indian warrior spirit of tribes living in scarcity of resources, or in habits originate from frustrating mothering like in case of the Mundugumors, a tribal New-Guinean society centered around war, cannibalism, and head hunting, as they were represented by Margaret Mead [17].

But there are ARESian ideological codes also. Darwin and Marx applied this core logic in their *evolutionary paradigm*, and *social conflict theory* translated into history of the Twentieth Century with the known historical consequences. Nietzsche's denial of Christianity as the 'religion of the weak' implied this core value system also. The common content of "fight for your life", "survival of the fittest", or viewing human history as story of „class fight” or „war of races”, or „clash of cultures” is the ARESian core of the Darwinian, Marxian and Nietzsche-ian metanarratives. This Ares-ian ethos roots in Hobbes's vision of Leviathan, and Adam Smith's Selfish economical anthropology, where the Selfish economical actors generate public good. Hayek and his follower, Milton Friedman share the neoliberal reframing of the old libertarian view. Virilio offers us the ultimate model for Aresian frame of contemporary culture and economics. He looked at the war, as paradigm and conceived military logic organizing the economical algorithm of globalization.

ARESian subsistence had led to mass extinction of prey animals by mammut hunters or in the New World in case of animals over weight of 50 kg-s. The Nature dominated human ecosystem proved to be very stable in human timescale with almost zero human demographic growth. According to the environmental anthropological understanding of the hunter and gatherers's ecorelationships, Nature controlled their demographical growth and determined their rituals, social life and technology. Even nowadays' hunter and gatherers like !Kung Bushmans of the Kalahari show surprisingly well balanced environmental fitness.

Neolithic agricultural revolution generated *accumulated surplus, storage and transfer of food and population*, and the demographic surplus generated cities, merchantry, bureaucracy, army, education and cultic and political governance of accumulated goods: products, services and knowledge – and ultimately kleptocratic relationships.

Accumulation became key element of ARESian cultural logic of hostile defence and offensive grabbing the goods. New sort of social and environmental risks arose calling for social contract between primer producers (slaves, serfs, peasants) and the armed authority for defending of accumulated surplus. This paradigm

created sociocratic dominance with diverse ARESian framework of despotisms, slavery-based economies, cast-based social order, charismatic leadership based on feudal social contracts. The pastoralist's ARESian paradigm was based on their flexible, mobile and dynamic social structure and the mobile economical power of herds. Technology played as mutualist actor both in power dynamics of hydroelevation culture of Mesopotamy, Nile or Indus Valley by their military controllability. The domestication of horses for use as vehicle, the invention of stirrup and the reflex bow supported also the military power of pastoralists in the Asian steppes. The primordial neolithic producer, the agricultural cultivator proved to be subordinated in all ARESian forms of economies from the ancient city states until the technocratic powers of the Twentieth Century, just as other victims: hunter and gatherers, horticulturalists, tribes of rain forests.

But risks of technological power had been remarkable in the earliest technocratic economical organisations, like hydroelevation based cultures. The disastrous ecological fate were common, the salinisation of the land and the consecutive loss of soil fertility led to the clash of Sumer and Harappa and Mohendjo Daro in the Indus Valley. The natural fate of the civilizations of ARESian paradigm used to be environmental degradation be they ancient cultivators of Rapa Nui, Easter Island or the the above mentioned city states with self-inflicted environmental disasters, ecological degradation and cultural degeneration. But – as part of the ARESian scenario - these environmental collapses were accompanied or completed by military invasions, genocides, western colonialization, even in the case of Rapa Nui.

The same happened in the next turn of *technological dominance* created by Industrial Revolution and its emerging technocracies. Accumulation, extension and concentration of power, capital generated the colonialization of the Rest by the West, and on the other hand this happened in the case of the state-capitalist, technocratic Soviet dominance of the remnants. The ARESian logic of these centuries were unquestionably dominant, and war economies were strongly dominant feature of the last century.

The ARESian accumulative pressure generates a renewed kleptocratic basis for relationship of dominants and submitted social strata. According to Tandom's [18] definition „*kleptocratic capitalism is a system of economic production and exchange, the creation of fictitious wealth without going through production of real wealth and political governance controlled by 'looters and daytime robbers'. It is 'rent seeking' by the rich nations, and within each nation by the rich economic and power elite. This creates at the opposite polar end the dispossession and disempowerment of the masses of the people.*”

The political ecology of competitive aggression for resources must imply political economical insights to the dynamics of conflictual restructuring of economic networks and polities.

As Le Billon [19] explores the political ecology of war, the deployment of violence to arbitrate resource-linked conflicts embedded in the historical pattern of social relations within and between countries requires anthropological analyses with attention regards the risks of violence linked to the conflictuality of natural resource based political economies.

8. ECONOMY FOR WAR/ WAR FOR ECONOMY/ ECONOMY AS WAR/

The most explicit connection of economy and ARES rests in production and trade of weapons. The amount of military expenditures is estimated as high as 2.7% of World GDP. In 2011 the ten leading arm producing countries paid 74% of total world expenditures (\$1.29 trillion). Costs of international arms trade reach 30 billion dollars (without domestic sales). Illegal trade in politically instable countries and regions may be tragically stable market for civil wars, riots, long term gerilla wars or drug armys.

The trade of arms controlled mostly the leading powers, like the Soviet Union and the United States, China or European states like Germany, France, U.K. or Italy. The ARESian consequences like accumulation of extraprofit and political influence, risk of political instability, social and natural environmental degradation and social suffering are inevitable. The ARESian economy in frame of trade of arms helped to sustain the *Third World War as the Third World's War* in the second half of the Twentieth Century, producing almost 40 million casualties in Africa, Asia and Latin-America. The closed link between the armed forces, commerce, and politics embodied in the military-industrial complex became overt in the fifties-sixties in the USA, the European and Soviet type countries.

8.1 The Keynesian ARES

Wars are dependent on money and economy, and economical interest also may play role in planned and executed wars, trade of weapons. Economical preparation for war, called as military Keynesianism generates a system of producing, mobilizing and allocating resources to create basis for violence, and balance internal economy and social tensions. It's key feature that the government's military budget has a stabilizing effect on business cycles and fluctuations, if the government can export warfare far from the own homeland. This military Keynesian strategy is thought to solve recessions. Economy may gain from military periods on the supply side, as wars may induce accelerating progress of technology, mainly if destruction caused by the war avoids the domestic economy like in case of USA in both 'world wars'. But extreme military spending like in case of the War on Terror in Iraq and Afghanistan, had the opposite, a detrimental effect on monetary balance and industry. Wartime institutions are good samples how ARESian framework reshapes institutional system like the War Industries Board (WIB) or the War Productions board

(WPB), awarding defense contracts, allocating scarce resources – such as rubber, copper, and oil – for military uses, and persuading businesses to convert to military production. On the Second World War two-thirds of the American economy had been integrated into the war effort by the end of 1943 [20].

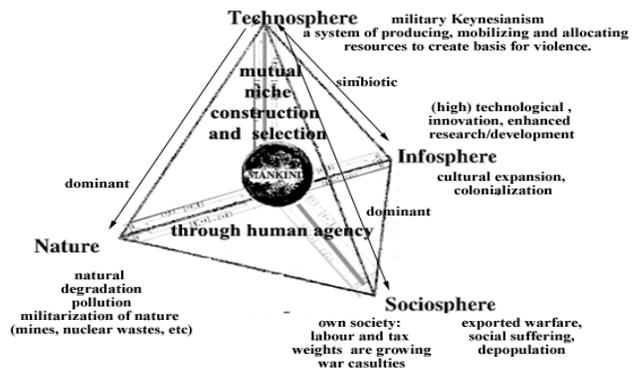


Figure 4. ARESian economy

8.2 The Bolshevik economy of ARES

In a reverse logic the economy can be used as tool of civil war or even for genocide, like in the case of war-, or military communism from 1918 to 1921 in Russia, where all industry was under Bolshevik party (state) control and centralized management. Obligatory labour duty was imposed onto non-working classes and serious requisition of agricultural surpluses was implemented from peasants. Food and most commodities were rationed and distributed in urban centers in a centralized way. Private enterprise became illegal. The state introduced military-style control of railways and communication. At the end of this period the Cheka reported 118 peasant uprisings in the beginning of the year 1921 [21]. This period contributed to a famine that caused between 3 and 10 million deaths. The ARESian content of military communism even proved to be self-annihilating, as the production and commerce had collapsed totally, monetary mechanism were replaced by barter and heavy industry had fallen to output levels of 20% of the previous level. But it was intended to create long term social transformations by eliminating private property, commodity production and market exchange. According to Bukharin [22] the Bolsheviks "*conceived War Communism as the universal, so to say 'normal' form of the economic policy of the victorious proletariat and not as being related to the war*". Bolsheviks used this ARESian logic a decade later again by the ruthless robbery of peasants by grain procurements led to the so called HOLODOMOR had been causing 5-7 000 000 death by starvation from hunger in Ukraine and the Caucasus.

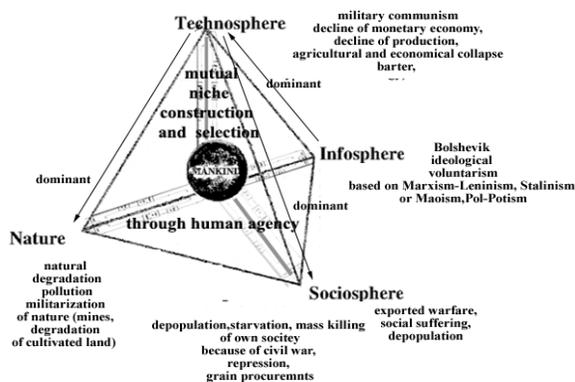


Figure 5. From ARESian to EROSian - from domination to the sustainable existence.

8.3 The Globalist ARES

The millennial neoliberal globalisation with its destructive influence on local national industries may be seen also as an ARESian framework. The so called Washington Consensus implied some economical commands like trade liberalization: liberalization of imports, with particular emphasis on elimination of quantitative restrictions (licensing, etc.); any trade protection to be provided by low and relatively uniform tariffs; liberalization of inward foreign direct investment; privatization of state enterprises; deregulation: abolition of regulations that impede market entry or restrict competition, prudential oversight of financial institutions; legal security for property rights- with obvious result of subversion of local economy.

Under the Aegis of trinity of deregulation, liberalisation and privatization most of the former Hungarian industry and cooperative frame of agriculture had been disappeared. This framework destructed protective barriers of local economies, while privatization of collective state property was accumulated in hands of few. In the first years of the nineties legendary industrial plants had been disappeared like MOM (Hungarian Optical Works), Budapesti Húsipari Kombinát (Budapest Meat Industry), Gamma, Ganz Co. Csepel Co. Ikarus, Orion and hundreds of bigger or smaller firms in Hungary. The privatization of the firms by foreign investor covered buying the markets, while infrastructure, machinery has been transferred to other countries or Asia, buildings were transformed into malls, bureau centers or depot market of Chinese products. The bureaucratic environment of European Union may buffer or enlarge the pressure of the forces of globalization. An example: Hungary – although having extrem good agricultural conditions – had lost its whole sugar industry except one factory.

The warfare consequences of “economy as war” may result in a growing gap of social and economical inequality, causing deep social distress and ill health. According to Wilkinson “inequality kills”, because people die younger in countries with greater inequalities

in income [23]. Mária Kopp and her colleagues described a strange phenomenon called Central East European Health Paradoxon. It offered explanation to the striking fact, that while in the seventies average life expectancy was better in Hungary than in Austria, in the nineties Austrian males lived 7.7 years longer in average, and 40 % of Hungarian males between age 40 and 60 did not reach age 60. This mid aged mortality crisis arose since the late 1980s, as the mortality rates among 45-64 year old men in Hungary has risen to higher levels than they were in the 1930s, in spite of economic development and excess cardiovascular mortality in midlife - three times higher than the European average, while the mortality rates in the older age groups were comparable to those of Western Europe [24].

The ongoing proletarianisation of the world population, the accelerated transformation of the peasantry into informal and mobile labour, and the gradual delegitimisation of the post-welfare and post-developmental state [25] lead to a growth in exploitation and a loss of protection for those exposed to circumstances that create social suffering. [26] The rate of losers of post-communist transition of former egalitarian society proved to be astonishing high, as the rate of poors living under the minimal life standards embraces 35 per cent of Hungarian society as a whole and its members share only 5–6 per cent of Hungary’s total economic resources. Nevertheless this social-economical process was surprisingly free from catastrophe-perception, as industry (as Nature) „horror vacui” and the economical niches were soon refilled. Although the general unemployment rate did not exceed 12%. there were regions where it was „fluttering” between 15 and 25 %, and a significant part of the roma population were excluded from the labour market because of their low education level. The post-socialist situation is also comparable to the Western “good bye” to the social welfare state as the globalization caused loss of jobs, loss of wages, downsizing, social insecurity in the Western economy, too. The concept of 20:80 society [27] reflects this shift and the continuous degradation and social sinking of the middle class.

In the so called Hungarostudy behavioral epidemiological surveys Kopp with her colleagues verified that among the primary risk factors one could find unemployment, loss of worksite control, low education, which factors seemed to be more dangerous than smoking. Such leading risk factors like high degree of job instability, increased loss of control in work, second or even third jobs - weekend work, decreased social support at work and the unemployment generating distress for millions since 1990 may be view as direct consequences of this economical shift guided by Washington Consensus.

Deterritorialization or displacement of former system of local industry and repopulation of economical space by transnational firms pumping out their profit from the region both at level of production and commerce, and public service systems like energy, water supply may have together built up the syndrom of ARES-economy in the Central East European region. Demography

reflects historical changes: population of Hungary has been diminished from 10,374,823 to 9 935708, loss of half a million citizens reflect a significant depopulation in spite of strong Hungarian immigration from neighbour countries.

In Russia – where a more radical libertarian scenario was implemented – the New economical World order was evaluated as economical genocide by Glazyev, a Russian economist, former member of the government, working as economist at the Security Council and the Federation Council staff. Based on demographic data he made a harsh statement: *“The rate of annual population loss has been more than double the rate of loss during the period of Stalinist repression and mass famine in the first half of the 1930s...”* He revealed that since 1993 politicians from Yeltzin’s inner circle *“carried out, under cover of market reforms, a policy of appropriating the national wealth and colonizing the country for the benefit of international capital, the consequences of which have been catastrophic for the Russian people mirrored by indexes like demographic collapse, nutrition, disease, narcotics addiction, crime, employment, education, culture, and morale.* Based on these historical experiences one cannot neglect the critical opinion of Noam Chomsky or other thinkers, who considers neoliberal logistics of the strongly market-based approach inspired by Washington Consensus to let a way to open the labor market of underdeveloped economies to exploitation by companies from more developed economies. According to these critical voices the set of neoliberal policies that have been imposed on helpless countries by the Washington-based international financial institutions, have led them to crisis and misery. This mechanisms like the privatization of state industries, tax reform, and deregulation ensure the development of a corrupt and cynical collaborative local elite who will rise to political power and also have a vested interest in maintaining the local status quo of labor exploitation.

As the other side the coin, we have to enlighten the beneficial components, too. The technological and organizational progress, and advantages of foreign investment help employee to gain higher wages and better working conditions than the former standard in their domestically-owned workplaces, and strong infrastructural development took place in some fields. Even fruits of accumulation and concentration of wealth, economical and monetary power help the local technological development (pharmacological, biotechnological inventions, high tech IT and telecommunication developments like computerized mobile phones, etc) and better life quality diminishing the painful developmental gap.

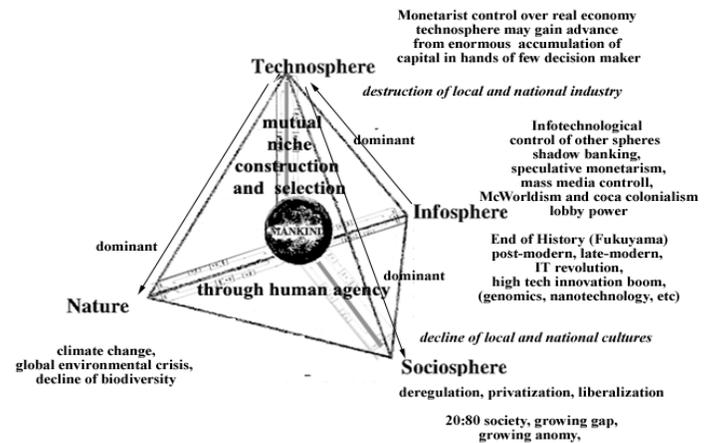


Figure 6. From ARESian to EROSian - from domination to the sustainable existence.

9. THE OTHER FACE OF ARESIAN DYNAMICS: DOMINATION OF INFOSPHERE

The terms: postindustrial, postmodern, postmaterial and consumer society, the Baudrillardian view of economy of signs, marketing based economy, information age, tittitainment, infotainment, monetarism, cult of information, etc. all signify the turn of this epoch towards infospherical dominance. The virtualization of money, and the liberation of former forbidden gambling-like monetary actions where virtual megabyte creates megabyte money by permanent service of monetary robots led to the situation where the amount of circulating money as symbol without any real background values, material, human work or gold basis has been accumulated ten times bigger than money referring to property, human efforts or raw material including gold. Even the monetary „food chain” and hierarchy of banking has been transformed in an irreal way. Consecutive world wide crises in sense of the Virillio-ian global accidents have polisemic nature, sometimes inducing a suspicion of strategic character lended by decision makers of IMF, World Bank, and agency of Merrill Lynch, and „infotroops” alike, sometimes they seem to be unmanagable catastrophe of unforeseen mistakes of the 24 hours megabyte monetary robot machinery of stock exchange. The infospherical power centers generate dominant discourses with „applied” political correctness, mainstream thematization, ideologies, values systems, ethical control and frameworks of interpretation. Infospherical dominance exerts hermeneutical power and hegemony creating a mediated reality through mass media, and expert discourse at academic and mass popular level at the same time. The monetary, economical and social collapse of the so called PIGS countries may be taken as a serious danger sign regarding viability of this infospherical dominance of millennial globalization.

10. CORPS AND COOPS

This picture above seems to prove that globalization is about the victory of the world of corps over the world of coops. ARES won through EROS. But this is a short-sighted illusion. Coops symbolize an other economical logic in evolutionary context too. According to Tomassello human evolution has predisposed us to work collaboratively and given us an intuitive sense that cooperation deserves equal rewards and a new kind of interdependence and group-mindedness with a collective intentionality at the level of the entire society. Corning [28], looking at the mutualist evolutionary strategies covering analog phenomena like cooperativity, interdependencies, symmetry, altruism created the Synergism Hypothesis. He emphasized, that synergistic effects have provided the underlying functional basis for the evolution of complex systems, as it has been also shown by Maynard Smith and Szathmari, and Wilson as his theory of group selection includes mutualistic, win-win forms of co-operation providing differential reproductive advantages.

Johnson goes further when saying: *„Corporate workplaces probably aren't in sync with our evolutionary roots and may not be good for our long-term success as humans. Corporate culture imposes uniformity, mandated from the top down, throughout the organization. But the cooperative—the financial model in which a group of members owns a business and makes the rules about how to run it—is a modern institution that has much in common with the collective tribal heritage of our species. Worker-owned cooperatives are regionally distinct and organized around their constituent members.”* This evolutionary thought opens a different perspective of Darwinian concept too, when Johnson makes us to remember another Darwinian statement: *„human species had succeeded because of traits like sharing and compassion.”* If our scavenger ancestors' trick of survival rooted in their coordinated behaviors, ability of working together, and skills of sharing, then the cooperative, EROSian kinds of business and economies are in line with human evolution based on interdependence and group-mindedness from the very beginning.

Boose and Özcan in their organizational ecological framework helps to compare corporations and cooperative firms and affirm that coops appear to have higher longevity than corporations, and this survival advantage does not depend on economic conditions nor on the coop's local embeddedness in anti-corporate communities supporting coop ideology. Although the counter cooperativist legal climate of the post socialist East-Central European nineties could counteract this phenomenon, in a (historically and socially) balanced economical policy one can imagine proper circumstances to such output of ecodynamics of actors of economy. The key is that engagement facilitates collective decision making and social and environmental responsibility as well. As Boone and Özcan [29] emphasize, „coops” emerge out of necessity

when „corps” are absent, and *„local conditions may trigger ideological incentives to overcome the material disincentives of coops spurring collective action to mobilize resources against corpses.”*

The worker-owned cooperatives maximize value for their members, the cooperative is operated by and for the local community. The PROUT (Progressive Utilization Theory) established by Prabhat Ranjan Sarkar [30] may be a good example of counter-ARESian efforts *prohibiting* the personal *accumulation* of goods and profit *beyond a correct limit* without the permission of the community. The program offers optimal utilization and rational redistribution of goods at natural, social, technological and infospherical and spiritual level. The associative, collective frame of property, production and sharing the profit help social optimization of the symbiosis of the infosphere and technosphere, while mutual limitation exerts control over dominant strategies.

11. CONCLUSION

Let us compare ARES and EROS as ecodynamical metaphors in the field of economical adaptation and summarize the critic of ARESian economical logic. The ARES and EROS acronyms help to enlighten the dialectics of the counter logic of dominance versus cooperation: ARES: Accumulation, Risk, Environmental degradation, Suprematist dominance leading to anomy, riots, environmental crisis, slavery and social suffering versus EROS: Environmental Responsibility, Optimum Strategy leading to Environmental Reconstructive Organistic Sustainability. The aim of ARES economy to win through (Nature, competitive economical actor, legal constraint etc.) while EROS economy means win through the economy itself (frugality, voluntary simplicity, Schumacherian or Buddhist economy). ARES economy is based on eco-logic of dominance and predation, while EROS economics are based on cooperation, symbiosis and mutual optimisation.

The EROSian economy offers new ethical alternatives based on theories and arguments of international discourse groups or alternative economical trends like Schumacherian economy, Buddhist economy, etc. This economical ethos has a well established discourse basis as the philosophy and ethics of environmental responsibility of Hans Jonas, social economics of Amitai Etzioni, „deep green values” of Arnie Ness applied in economics by of Knut Lms, values and habits of Buddhist economy represented by László Zsolnai. All of them pay attention to the submitted (social, natural or sustainable technological) environmental interest and values.

EROSian economical attitude counteracting the ARESian ethos. Frugality, voluntary simplicity may oppose accumulation, while social and environmental responsibility and solidarity protects the interest of the poor, ethnic, religious and other minorities, the future generations and the Nature itself lessening the social, technological and natural risks and diminishing environmental degradation.

The unaggressive counter-power of civil control, transparency, freedom of speech and alternative media helps to diminish the oppressive infospherical dominance. In case of EROSian success the anomy, riots, environmental crisis, slavery and social suffering may be diminished and counteracted.

Those efforts for economic optimization needs a fundamental mental turn from egocentric, accumulation oriented greed based attitude of economic and political actors towards a symbiotist, optimal strategy. Our 4T model offers shift from greed based, accumulation driven ARESian monetarism towards a symbiotic ecocratic turn.

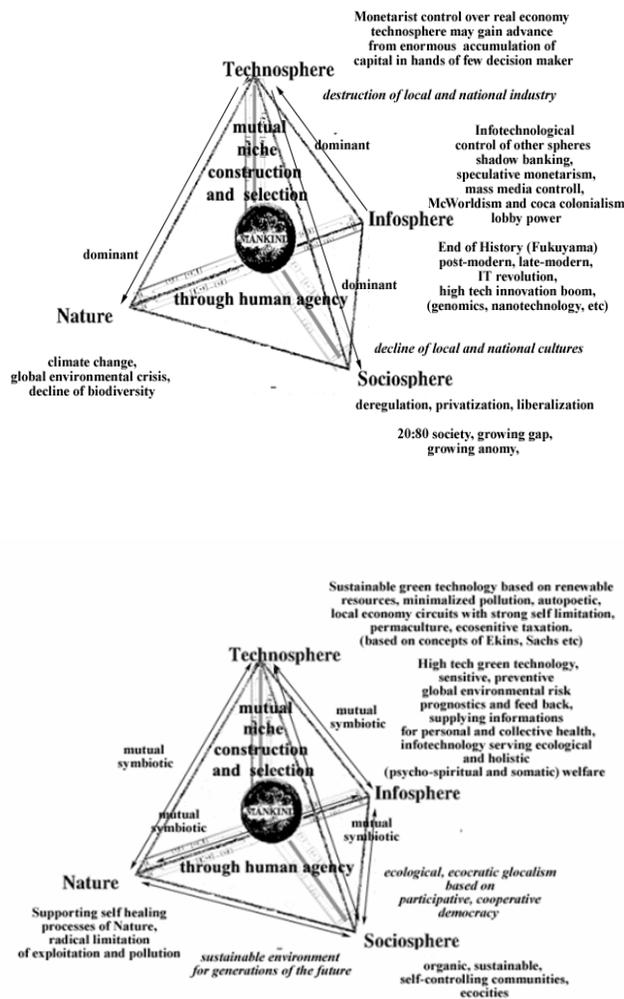


Figure 7. From ARESian to EROSian - from domination to the sustainable existence.

This pan-mutualism is a basic condition for counteracting endless Accumulation, growing Risks, Environmental pollution, exploitation and degradation, and Supremacy of those concentrating the capital. The

sustainocratic turn helps to substitute this ARESian trap with the EROSian correction, where the Environmentally Responsible economic and political attitude helps to alleviate the Anomy, the Riots, Environmental crisis, Slavery are Social suffering and generate an Optimalist strategy, and Sustainability of economical activity and the environment, too. This way we may create the culture and the economy of Environmental Reconstructive Organistic Sustainability. If we reveal the evolutionary importance of cooperation in generating negentropy and growing complexity, like in the so called functionalist phase of the later evolutionary stage - following the pure parametric period at the given level- be it chemical, biological or cultural, we clearly see that more improbable structures with incorporated mutuality gain survival value over their competitors. The EROSian face of globalism is about the growing transnational compelexity, but its real worth depends on the success of self limitation.

The dialectic face of ARES/EROS in economy is reflected by History. The aggressive enforcement of cooperation induced warfare, or war-economy except cooperation rooted in the personal and collective "grassroot" intention: On the other hand pressure of competition and tension of struggle for survival may generate fusions, mutualism and collaborations between former enemies.

Byron's approach [31] implies the comparison of the „economic interaction enabled” model system and the „power-dominated” model system as complex adaptive systems incorporating algorithmically defined variables, like *relation*, *reciprocity*, *coupling* reflecting mutualist tendencies, and power reflecting ability of dominance and influence. Comparing Power Dominated Systems, Economic Interaction Enabled Model Systems, and Economic Interaction Dominated Model Systems scenarios Byron found strong correspondence to exist between the model systems and war frequencies, proving that high level of reciprocity is the most protective in case of war-engendered crises and trade crises showing the complex adaptive learning capacity of the world system. Kropotkin argued that although "There is an immense amount of warfare and extermination going on amidst various species; there is, at the same time, as much, or perhaps even more, of mutual support, mutual aid, and mutual defense...Sociability is as much a law of nature as mutual struggle." and leads to higher intelligence as well. Byron's theory supports this thesis at a higher evolutionary level of complex adaptive learning systems. Based on these considerations we may hope that growing global complexity enforces the mutualist EROSian content of the economic system not only in case of the shareholders but in regard to all stakeholder, nature, culture and future generations as well.

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Ekološka i revolucionarna dinamika ares i eros ekonomije

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Rezime

U ovom radu istražuje se ekodinamika ekonomske transformacije centralno-istočno evropskih kasnih socijalističkih industrija pod pritiskom globalizacije. U radu se koriste oba termina ARES i Eros u alegoričnom smislu i kao skraćenica od akumulacije, rizika, degradacija životne sredine.

U tom okviru se dekonstruiše proces neoliberalne transformacije lokalnih ekonomija. Dekonstrukcija informatičkog, tehnološkog i socijalnog dinamizma takođe pomaže da se otkriju hijerarhijski redovi četiri aktera životne sredine Potpomognuti ARES dinamikom savremenih ekonomskih i socijalnih fenomena.

Ključne reči: 4T ekonomski modeli, neoliberalni ekonomski red, raznovrsnost