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SPECIAL CONTRIBUTION

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Puzzles of Capitalism and the World of Life

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I start quoting Carlos Gadelha.

> The theoretical hypothesis, with political developments of the research program that guides the conception of CEIS (Health Economic-Industrial Complex), is that an equitable society, committed to social rights and life is only viable with a productive, technological and innovation foundation in health that supports it, with an endogenous relationship between the social and economic dimension of development. The new coronavirus pandemic has tragically confirmed this hypothesis and, at the same time, the lack of schools of thought that perceive the economic world as an isolated system of society and politics (GADELHA, 2021, p. 26).

In 1933, John Maynard Keynes announced the abandonment of his convictions of freedom of trade and published an article questioning the globalization of his time.

> Therefore, I sympathize with those who minimize, and not with those who would maximize, the economic intertwining among nations. Ideas, knowledge, science, hospitality, and trips are the things that should be international. But the goods should be

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> national whenever it is reasonable and conveniently possible, and, above all, finances should be mainly national.

In his speech on March 12, 2020, French President Emmanuel Macron proclaimed that "delegating our food, our protection, our ability to heal, and our social environment to others is madness." Since his election, Donald Trump has been hostile to China, but he was not embarrassed to buy masks produced in the Middle Kingdom by 3M, a US-based company. Not to mention the fights with Huawei in the battle of 5G technology.

The territories subject to the authority of Nation States, as well as the majority of their inhabitants, feel the effects of the spatial shattering of value chains. In the health emergency, the interdependence of national economies has taken its toll. Faced with the concern caused by economic insecurity, political polarization is exacerbated, fostered by the growth of the mass of those who saw their working and living conditions become precarious in the geographical arbitration of wages, taxes, exchange, and interest for globalized finance.

Karl Marx, when investigating the structure and dynamics of the capital economy, created the concept of real abstraction. For a contemporary economist who inhabits academies and other businesses, the above concept is a paradox, unacceptable to the canons of Economic Science (?). In this universe of "scientific objectivity," one thing is one thing, another thing is another.

The concept of real abstraction properly condenses the nature of the process of constituting global value chains. This movement takes place by strictly obeying to the norms of capitalism as a system, whose objective is the accumulation of abstract wealth. That is, it is not a matter of producing and generating material abundance in the territories where flesh and blood women and men survive, but of producing goods for the purpose of accumulating money.

It does not matter where to produce, but how to distribute and organize production in the spaces that allow for the maximization of financial results desired by large companies and banks that control production instruments and money. The living conditions of the inhabitants of fractional spaces, either abandoned or occupied, are merely a (good or bad) consequence, of the movements of real abstraction.

Issues relating to the localization strategies of the modern transnational corporation or its morphological mutations (constitution of network companies, with concentration of decision-making and innovation functions and dispersion of commercial and industrial operations) should be evaluated from this perspective.

Globalization is a too imprecise and misleading concept, which is full of ideological irregularities. Its widespread use, its ample acceptance in the media and in the academic environment, should be understood as an indication of relevant chances that have occurred in the world market, in the forms of business organization, in the standards of competitiveness, not to mention the transformations in the financial and monetary sphere.

The conventional view advocated that globalization would lead to the homogenization of national economic spaces and the convergence towards the nirvana of free market. This process would take place outside the scope of the policies decided within the States. Thus, liberal-conservative recipes recommend broad trade openness, in accordance with the old theory of comparative advantages, without the timid modifications of the "new trade theory," privatizations and non-interventionism, rules that emanate from a model of general equilibrium, financial liberalization, a lesson that stems from the hypothesis of efficient markets.

This prescription conflicts with the true reality of the constitution of the different historical-social formations, in the various stages of capitalism. This process involved the articulation between some fundamental instances: 1. Power relations between Nation States within the framework of an international division of labor in transformation; 2. Monetary and exchange regimes, with their hierarchy of national currencies, credit systems and financial markets; 3. Technological standards and business organization; 4. Forms of competition among companies; 5. Standards to establish wages and consumer consumption, as well as other wage-earning groups; 6. Distinct patterns of state intervention.

The new globalization is anchored in the peculiarities of finance. Since the 1980s, the liquidity and depth of the US financial markets have led the movement of real abstraction: they finance and guarantee the exit of productive capital and the consequent deindustrialization of the country.

Manufacturing investment by internationalized companies was concentrated in China and emerging Asia. Large companies have migrated to regions where attractive relationships between productivity, exchange rate and wages prevail. This has unleashed deindustrialization in the countries of origin, the "arbitration" with wage costs, and has stimulated the flexibility of labor relations, a phenomenon aggravated by the disqualification and elimination of workers, imposed by the advance of information technologies and automation in the industry and services. The evolution of the precarious regime constituted labor relations that develop under the practices of flexibility.

In a study published in 2015, the European Parliament acknowledged the decline in the relative contribution of industry to the European economy, which has lost one-third of its base in the last forty years: "This 'deindustrialization', a process also present in other developed economies, is partly due to the rise of manufacturing in other parts of the world (notably China) and the relocation of labor-intensive workmanship to countries with labor costs and global supply chains with suppliers located outside the European Union".

In response to this decline, the European Commission has set the target that by 2020 manufacturing should account for 20% of added value in the European Union, adopting a strategy to help all industrial sectors to explore innovative technologies and manage the transition to the smart industrial system, the Industry 4.0.

Also known as the Industrial Internet of Things, the potential "new industrial revolution" incorporates the learning of big data machines and technology; machine-to-machine (M2M) communication; automation technologies; the application of information and communications technology (ICT) to digitize information and integrate systems at all stages of production (including logistics and suppliers), both inside and outside the plant; cyber-physical systems that use ICT to monitor and control processes with embedded sensors; intelligent robots that can be self-configured to suit the product; 3D printers; wireless and internet communication networks that serve connected machines; simulation, modeling and virtualization in the design of products and manufacturing processes; collection and analysis of a vast amount of data, immediately on the factory floor or through big data analysis and cloud computing.

Intelligent machines, more accurate than humans in capturing and communicating data, enable companies to identify inefficiencies and problems in advance, saving time and money, with excellent quality control, loss reduction, traceability, and supervision of the efficiency of the supply chain.

The electronic plants of Siemens Electronics in Amberg (Germany) produce state-of-the-art programmable logistics controls of smart factories, where production management, manufacturing and automation systems are integrated. Intelligent machines coordinate the production and distribution of 950 products with more than 50,000 variants, by which approximately 10,000 materials are located in 250 suppliers. By connecting smart machines with data-capture components, innovation cycles are shortened, and productivity and quality are increased. The Amberg plant registers only 12 faults per million (against 500 in 1989), a reliability of 99%.

Some companies are able to set up factories without lights or heating, where automated robots are responsible for production. In the Netherlands, Philips produces electric razors in a “dark factory” with 128 robots and only 9 workers.

Also seeking to restore the prominence of its industry, the USA has established a National Network for Manufacturing Innovation, called Manufacturing USA, based at the National Institute of Standards and Technology, in the Department of Commerce.

The office operates in partnership with the Department of Defense, the Department of Energy, NASA, the National Science Foundation, the Department of Education, and the Department of Agriculture.

In the last four years of the program, nine manufacturing innovation institutes have been created or announced, and six more are planned for 2027. These institutes are public-private partnerships (PPPs), each with its distinct technological focus. The European program, called “Factories of the Future” also uses the PPP model.

Industry 4.0 is part of the strategy of these regions to relocate the industrial axis, as explained by the European Parliament (2015):

> The location of some industries may be closer to the customer: if manufacturing is largely automated, it no longer needs to be 'off-shored' or allocated in distant countries with low labor costs (and high transportation costs). European companies may decide to return their manufacturing to Europe ('re-shore').

When analyzing the so-called fourth industrial revolution, Forbes magazine expressed concern about the effects of replacing workers in a wide spectrum of industries. According to estimates, 47% of American jobs are threatened by automation. Experts suggest special damage to the poorest, especially regarding the disappearance of low-skilled and low-wage jobs.

The central economies are writhing in the anguish of the rupture of the circuit of employment and income. With its "Fordist" format, this circuit was activated by the demand for credit to finance the expenditure of entrepreneurs who were confident in the reciprocal effects of the expansion of income in the set of activities that were developed in national spaces, based on the generalization of industrial production methods that invade services and agriculture.

At the culmination of its development, capitalist progress generated from its technological entrails the traumas and opportunities of hyperindustrialization 4.0. This moment renews the challenges of modern societies: how human institutions will respond to the transforming systemic forces of life. *The Economist* and *Forbes* magazines debate the consequences of the new industrial revolution. On one hand, it offers the promises of abundance and free time; on the other, it threatens precariousness, falling incomes of the less skilled workers, increasing inequality. In this scenario, the debate about minimum income grows as a way to face the tectonic displacement of social relations and the living conditions of men and women, the issue of structural technological unemployment.

The flexibilization of labor relations has shrunk household income growth and subordinated consumption spending to indebtedness. The circuit of income formation in the economy as a whole begins to fail. Unemployment and the reduction of incomes reduce the spending of firms on wage payments and discourage the acquisition of means of production from other firms.

The great contemporary enterprise moves the economy towards the direction of the concentration of wealth and income. Entangled in the traps of financial accumulation and tucked into the swamp of short-term liquidity, it pushes the global economy into secular stagnation, failing in its ability to generate jobs.

Economic-industrial systems such as the one of health (CEIS 4.0) are revolutionized from the inside, reinforcing the classic disjunctive between capitalist dynamics and life, evidenced by the Covid-19 pandemic. The perspective of the contributions of this magazine is inscribed in the search for the construction of another path that recreates an agreement that guides the capitalist dynamics so that the abstract movement of capital takes place in life, guaranteeing the well-being and the moral survival of capitalism.

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