

# Global Atlantis

## Science-based Pragmatism for Survival

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### Abstract

During the different stages of the capitalist mode of production, the evolution of the human species has led to an outstanding ability of our species to master dangerous crises, to grow in numbers and to develop a stock of knowledge that increases our capacity for flexible response. Nevertheless, we are currently confronted with an accumulation of impasses for the omnipresent capital algorithm (in brains as well as in larger social entities), which leads to seemingly hard-to-prevent environmental disasters and continuously more severe local wars. This sinister general outlook underscores the need for some optimistic pragmatism: There are ways to safeguard human survival by *replacing* the capital algorithm that governs most current decisions with different decision-making mechanisms.

Contrary to the seemingly universal applicability of the capitalist algorithm<sup>1</sup>, these mechanisms have to be tailored differently to fit the respective field of application, which they shall cope with. Above all, they have to combine the global dimension of human reproduction (we still plan to live in a global Atlantis built on the global division of labor) with the locally visible and manageable cultural environments, which are still the prime origins for the motivations of human individuals. This task concerns, e.g., institution-building to achieve a democratically organized, generally accepted global governance, as well as a transparent yet creative mechanism to allocate the surplus achieved in different production spheres.

In the background of all the urgent flexible responses to the upcoming problems, there has to be a globally organized class of scientists, of organic intellectuals<sup>2</sup>.

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<sup>1</sup> A concise definition of the capitalist algorithm can be found in (Hanappi, 2013, 2025c).

<sup>2</sup> The concept of organic intellectuals has originally been introduced by Antonio Gramsci (Gramsci, 1930) and has been extended in (Hanappi, 2019b, 2020).

## Introduction

All human practice starts with the anticipation of what will happen in the future. It combines three elements: (1) What is to be achieved? (2) What are our tools? (3) Who are we and what is surrounding us? The less we can answer these questions, the more we have to rely on intuition, which does not necessarily reduce our chances of succeeding. All practice relies on some kind of theory; intuition is just the extreme case of a theory we are not aware of. The relation between theory and practice is scalable; it ranges from completely inadequate, useless theories to more successful, more adequate theories.

The development of knowledge - the movement from inadequate to more adequate theories - rests on their repeated use. Failures and successes of their application have to be remembered and recorded<sup>3</sup> to weed out bad theories and to spur new ideas as candidates.

This chapter sets out to improve the understanding of capitalism, more precisely, of the capitalist mode of production. For that purpose, it proceeds in three main steps: The first section identifies capitalism's positive contributions to the development of human societies. The second section puts the accompanying, socially negative elements of capitalism into focus. In the course of its development, in particular during the last decades the negative elements became global and omnipresent. After some 500 years of capitalism, it now appears rather evident that this mode of production – like every previous mode of production (e.g. slavery mode of production, feudalism) – will prevail only finite period of time. In other words, it will approach its end if its 'historical mission', detected by scientists towards the end of this mission, is exhausted. As soon as the consequences of capitalism's former successes are starting to threaten the very existence of the human species, there has to be either an evolutionary jump into a new mode of production, or the final stage of humanity is near. Like all life forms the existence of the human species is a finite episode.

The way in which these dangers, these basic facts of the finiteness of all life on earth, will manifest themselves probably as the accelerating dynamics of climate catastrophes. But before these developments might take place, there is also the dangerous transition from the military and economic battles of a handful of military-industrial capitalist complexes (e.g. USA, China, Russia) into one truly global capitalist regime. This transition will at least be the major challenge for mankind for the next ten years<sup>4</sup>. And even if the capitalist mode of production can master it, it has to be doubted that its essential ingredient, the capitalist algorithm, can overcome the environmental catastrophes. The third section finally provides some ideas on what can be learned from the problem areas, which remained unsurmountable for the capitalist mode of production. If mankind survives the end of capitalism and masters the challenges of environmental sustainability, then a new mode of production might be labelled '*Global Atlantis*', the blessings of capitalism – the fruits of its historical mission, e.g. globally changing division of labor and dynamic commodity

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<sup>3</sup> In this sense all science rests on recorded history.

<sup>4</sup> There are two opposing possible outcomes for this mid-run challenge: global racism and global humanism (Hanappi, 2018c, 2026b).

production - will be made available to a democratically self-governed cooperating human population.

As the described task of this chapter is much too aspiring, what indeed follows is necessarily only sketchy. To introduce the methodological background, next some preliminary methodological remarks are provided.

## **Preliminary methodological remarks**

There is a long and ongoing debate on what can be considered as *scientific* method. Following Descartes, there are two stages to be followed (Descartes, 1637). First, the dynamics of an observed object of investigation have to be analyzed, i.e. disassembled into the parts that are thought to be essential. In the second stage, they are recombined again to form a thought model, a synthesis, which is able to provide a better understanding and anticipation of the behavior of the object of investigation; compare also (Hanappi, 2018b). The scientific activity to determine which elements are essential and how to observe their dynamic behavior is just one process. The distinction between ‘*qualitative* research method’ and ‘*quantitative* research method’, proposed by some sociologists therefore only is meaningless pseudo-scientific jargon. Science always is a synthesis of both. The same has to be said about the necessity to locate a scientific paper as part of a certain school, e.g. being Keynesian, Walrasian, Marxist, or the like. The very root of scientific activity is that it is not a pseudo-religious belief system that follows the dogma of a mastermind, but rather a conglomerate of interdependent, preliminary hypotheses. A declaration of belief, therefore, is completely superfluous and, in the sense of Descartes, should be replaced by a ‘declaration of recurring doubt’.

Thus, the starting point for scientific activity is doubt: It is the contradiction between what is observed and how these dynamics of an object of investigation are currently reproduced in a theoretical model. With respect to the concept at the center of this text, capitalism, many proposals of what it is have been around for a long time already - and have to be doubted. They range from the view that this mode of production is a representation of the ultimately best form of social arrangement, which will prevail for eternity, to the opposing view that capitalism brings to bear the worst of human incentives, which will bring the human species, lacking its moral underpinnings, soon to a bitter end. The hypothesis put forward in the text that follows is that capitalism is an episode in the development of the human species<sup>5</sup>, which has a starting point and will have an end. It has brought about specific progress in overcoming existing contradictions of pre-capitalist societies, but it also developed new contradictions, which are now leading to an approaching end of capitalism.

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<sup>5</sup> The timing of this episode is controversial. For most scholars, capitalism started with merchant capitalism around 1500. When it will end is even more doubtful. There are signs that capitalism will not be able to survive the global climate catastrophe it produces, which means that its demise might fall in the second half of this century.

Since **contradictions**, including smaller contradictions occurring and overcome in the age of capitalism, are the central concept for this article, the text draws on parts of the work of three important scholars: Schumpeter, Keynes, and Marx. Schumpeter insisted on the importance of disequilibrating creativity; Keynes constructed institutional frameworks allowing for the stabilization of the destructive overshooting of capitalism's disequilibrating force; Marx had unified the aspirations of the French Enlightenment - Hegel's heritage - with the knowledge of classical British political economy, which embodied some of the dynamics that this school had derived from observing the hegemonic England. For Marx, contradictions were rooted in exploitative relations between social classes. Schumpeter saw the potential of contradictions to advance technological progress. Keynes anticipated how, on an aggregate level (national and global), the implicit contradictions produced by the financial capitalism of the 20th century can lead to collapsing societies<sup>6</sup>. Of course, reasonable doubt can never fully subscribe to one of the great thinkers of the past. It can only take what it finds useful to propose its own set of hypotheses.

## 1 - Fruits of the historical mission of capitalism

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Since its early days in merchant capitalism, the capitalist mode of production has brought about a substantial advance in living standards for the average human individual. The problem is that the average human individual does not exist. This concept is only a theoretical concept, which hides the important internal dynamics that have caused the proclaimed advance of living standards. First of all, three questions arise: (1) Whose living standards? (2) How can the living standard of a population be measured? (3) What have been the essential mechanisms with which the capitalist mode of production was able to achieve its historical mission? Starting with (2), the measurement question, it can easily be seen that the rise in living standards of different parts of the global mankind has followed stupefying different trajectories. An obvious biological measure of the standard of living is how many individuals can live in a geographical region for which (average) life span<sup>7</sup>. The divergence of life expectations between the rich North and the poor South shows how unequal the long-run trend towards increasing overall life expectations (the success of capitalism) proceeded. This is a first hint at a common property of capitalism: It proceeds by producing and *amplifying inequality* and *shifting contradictions*. It has to be understood that, as a mode of production, this basic property produces pulsations of the system - locally and globally - but also has the merit to imply a long-run improvement of the overall biological success<sup>8</sup>. The number of human individuals has been increasing

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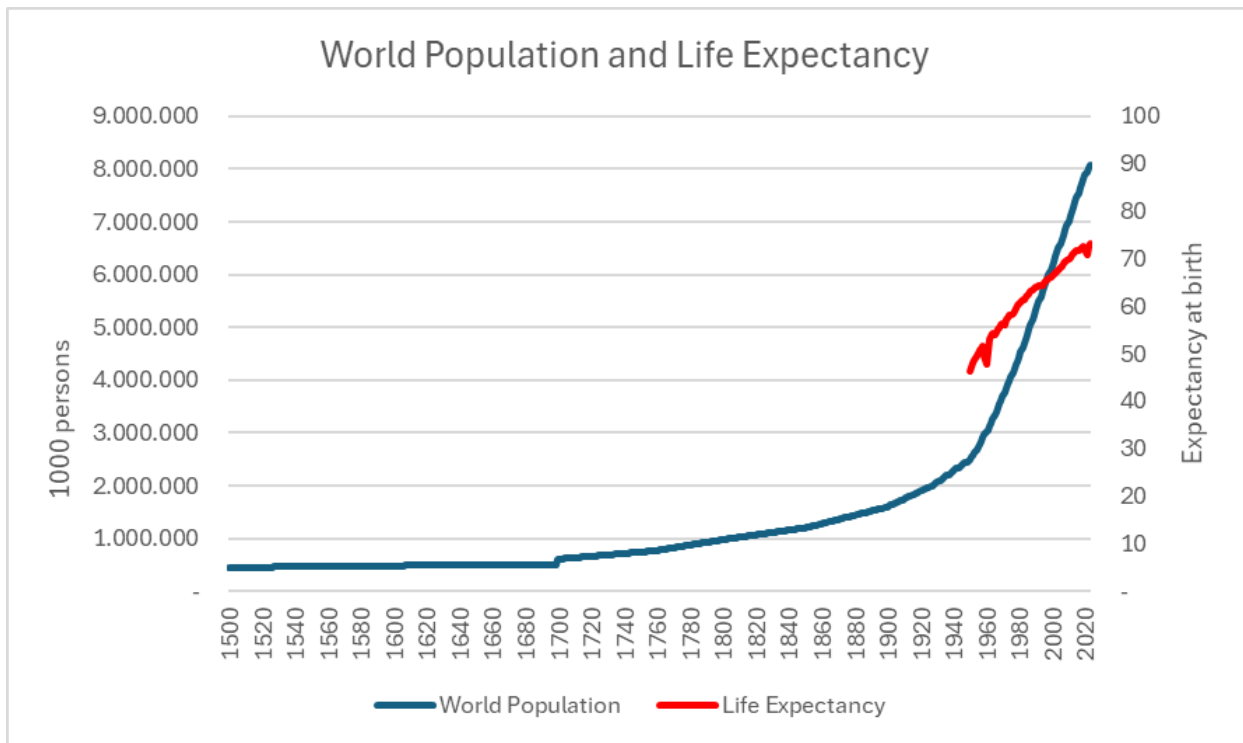
<sup>6</sup> Keynes was involved in a prominent position in the disasters of both World Wars of the 20<sup>th</sup> century. He recognized the dangers of nationalism and fascism as pathological excrescences of capitalism, which had to be avoided by governance intervention.

<sup>7</sup> An extended description of the so-called demographic transition during capitalism can be found in (Smil, 2021).

<sup>8</sup> Joseph Schumpeter's catchy description of this property as 'creative destruction' summarizes the violent turbulences produced by reoccurring disequilibrating forces in political economy, compare (Schumpeter, 1911). Of course, Schumpeter as an apologist of capitalism underlined the positive trend of increasing welfare, of creativity overcompensating destruction in the longer run.

sharply. Around 8000 years BC, when the agricultural revolution set in, the number of human individuals is estimated to have been a modest four million individuals. During the era of capitalism<sup>9</sup>, starting with merchant capitalism around 1500, it exploded to a level of more than 8 billion people in 2025.

Diagram 1



Source: United Nations, Department of Economic and Social Affairs, Population Division.

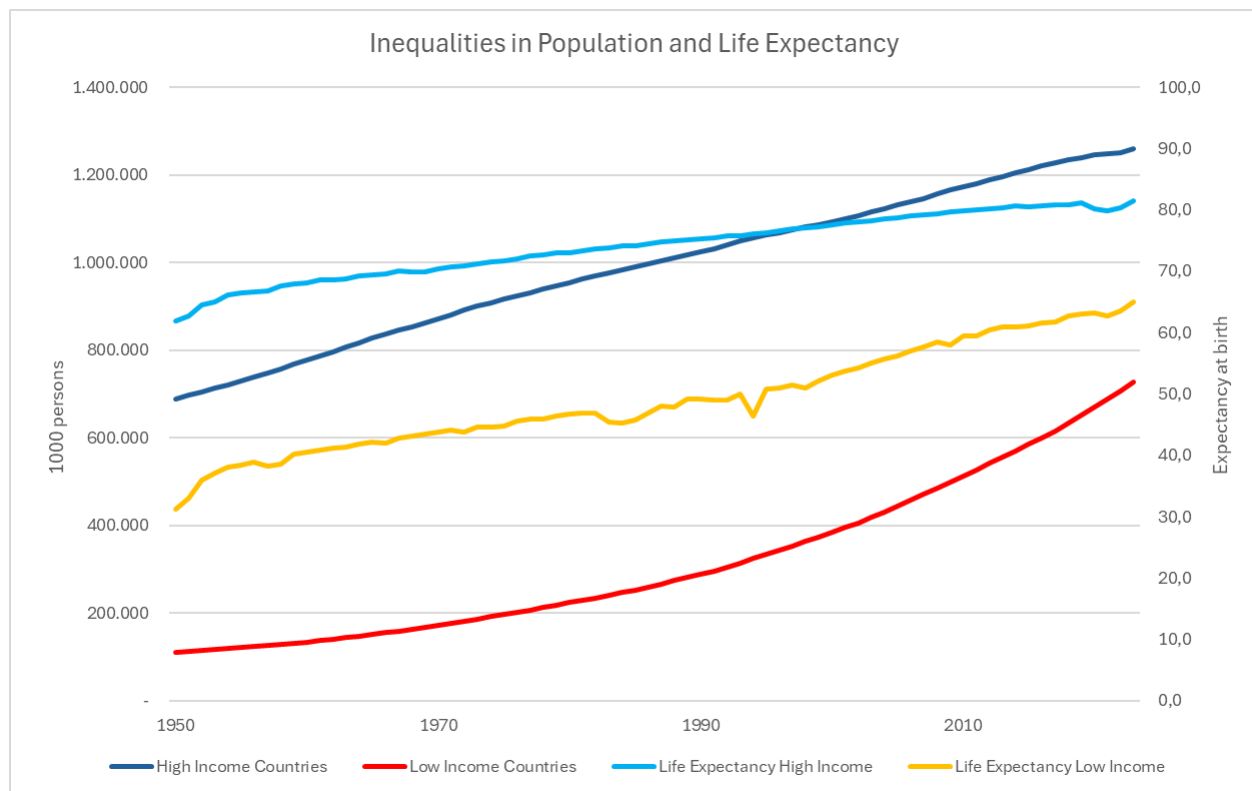
In Diagram 1, the life expectancy at birth since 1950 is shown (right-hand vertical axis), too, which makes it plausible that even on a global scale, the lifetime of individuals will approach an upper limit<sup>10</sup>. But, as a glance at the difference between rich and poor countries immediately reveals, this upper limit of the global average will be reached in high-income countries much faster than in low-income countries.

Following the split between high-income and low-income countries proposed by the World Bank, Diagram 2 shows that since 1950, the number of people living in low-income countries has risen much faster than that in high-income countries. During the past 75 years of globalizing exploitation in capitalism, a fast-increasing share of poor individuals is confronted with a slower-increasing share of rich individuals. In that sense, global inequality is rising. The good news is that despite this bad news, life expectancy at birth in the poor part of the world is slowly approaching the levels of the rich part (right-hand scale).

<sup>9</sup> For the structure of different stages of the capitalist mode of production compare (Hanappi, 2018a).

<sup>10</sup> Current estimates indicate that such a biological limit for human individuals will be between 120 and 130 years.

Diagram 2



Source: United Nations, Department of Economic and Social Affairs, Population Division.

The biological success of capitalism is clearly bought by its implicit disequilibrium dynamics. It is interesting to consider the inner dynamics of this mode of production along the lines of two eminent economists: Schumpeter and Keynes.

The common wisdom of learned economists has it that Schumpeter saw capitalism as economically stable, but politically unstable, while Keynes thought that it is politically stable, but for economic stability needs intervention by state action. Though this contradiction contains a grain of truth concerning the attitudes of the two economists, it is somewhat misleading.

Keynes' intellectual merit was to reintroduce the macroeconomic point of view into economic theory<sup>11</sup>, which enabled him to consider the full circuit of monetary exchanges within a larger political-economic entity. To stabilize the aggregate working of a nation's capitalist system, the demand side had to be supported repeatedly by additional public demand. No single production unit could escape the prisoners' dilemma situation of generally lacking effective demand; only an entity representing the complete exploiting class, the government of a capitalist country<sup>12</sup>, could step in to solve the crisis. As a consequence, public debt had to become a regular element of macroeconomics. With this

<sup>11</sup> Classical British political economists of the 19th century already had been 'macroeconomists', but the marginalist school of 1874 (Walras, Jevons, and Menger) had destroyed their heritage.

<sup>12</sup> It was Marx who had anticipated this role of a government of a capitalist state in financial capitalism by dubbing such a state the 'executive committee' (in German: 'geschäftsführender Ausschuss') of the capitalist class.

simple extension that added a political instrument to the seemingly perfect market equilibrium of Walras, the stability of *financial* capitalism could eventually be saved. In the same vein, Keynes initiated the installation of an *International Monetary Fund* for the case of problems of national funds - if a certain nation's public debt would reach its limit - to act as a lender of the global capitalist class. Evidently, this was Keynes' reaction to the Great Depression of 1928. Repeatedly occurring disequilibria between national accounts of capitalist countries<sup>13</sup> had to be politically corrected by a globally acting capitalist institution, the IMF. The most remarkable property of Keynes's theoretical innovation is its method: Disequilibria at the lower level of economic units (e.g. firms, nation states) can be stabilized by intervention of an institution at the next higher level (e.g. the nation state, a global institution), which can represent the common intentions of all the units at the lower level. Moreover, Keynes was not only proposing a theoretical extension of economics, Keynes also *acted* as a *politician*, initiating the installation of statistical offices and other more universal institutions of the global capitalist class. In this sense, Keynes's approach basically proposes stepwise, extensive **growth** of the capitalist system. These steps, the limits of a capitalist system at a certain geographical extension<sup>14</sup>, are the mystery behind the connection between Keynes and Schumpeter. Each break is a point where escalating Schumpeterian disequilibrium provokes a new Keynesian institutional framework.

Schumpeter is famous for his concept of interdependent cyclical behavior of different wave lengths of pulsating economic activity, compare (Schumpeter, 1939). Each of the three waves he stylized as 'inventory cycles', 'business cycle, and Kondratieff cycle; each describes a different economic disequilibrium process. Later, Schumpeter's follower Richard Goodwin was the first to provide a mathematical framework which united Schumpeter's ideas (Goodwin, 1990). The essence of Schumpeter's innovation in economic theory is that he insists on the importance of the disequilibrating force of a subset of actors in the dynamics of a society's political economy. He calls this subset of all firm owners in a capitalist country the *entrepreneurs*. In the jargon of the marginalist schools of Schumpeter's times, they do not produce along a production function, they rather *shift* the production function to a new, unknown position<sup>15</sup>. Along the waves of economic activity in such a permanently disturbed economy, specific market equilibrium positions occur only rarely. General equilibrium – the mantra of contemporary mainstream economists - is an unknown phenomenon. What drives capitalist evolution is the creativity of a limited set of outstanding socioeconomic characters at the level of production units, of firms. Note that the empirical data available to Schumpeter in 1911, in principle, were the success stories of firms during the 19<sup>th</sup> century. His abstract 'entrepreneur' indeed was framed in the sight of successful role models in 19<sup>th</sup> century's real life.

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<sup>13</sup> Disequilibria between capitalist countries show up by different variables, public debt, trade, exchange rates, migration, and the like.

<sup>14</sup> David Gordon introduced a broader concept for these steps. He framed them as a sequence of 'Social Structures of Accumulation', (Gordon et al., 1994).

<sup>15</sup> Remember, that this function describes how a whole set of products emerges. Therefore, such a shift, i.e. innovation, consists of both: introduction of new products as well as introduction of new production methods.

With Schumpeter's idea of a class subject that continuously - though stepwise - disequilibrates capitalism, a seemingly contradictory element to Keynes' growth of ever larger political units with a steadily growing institutional setup had been introduced. But the contradiction does not exist: Schumpeter and Keynes only put different spotlights on the *same* capitalist process. For **Keynes**, the **growth of the units of political economy**, growth or at least keeping of the national territory, combined with the growth of the richness of its institutional backup, is the core of his stability program. For **Schumpeter**, the justification for the existence of capitalism is its **capacity to introduce new products and new production technologies**. The surprising fact is that neoclassical economic theory, as it emerged out of the marginalist school of Walras, Menger and Jevons, had ignored both types of pivotal elements of capitalism just mentioned. Neither Keynes's idea of **growth with an adjusting institutional setup**, nor Schumpeter's **growing labour productivity with a growing set of products and techniques**, was dealt with. As a consequence, neoclassical economic theory retreated into a mathematical ivory tower, desperately trying to adjust its role model of Newtonian mechanics to the needs of a qualitatively different environment of human societies<sup>16</sup>.

Returning to the fruits of capitalism's historical mission, it is nevertheless evident that technological innovation, growth of labor productivity, growth of institutional setup, and growth of political units go hand-in-hand. Schumpeter's characterization as a stepwise progression has become visible on Keynes's larger scale of growing state units when a fallback to an imperialist world war occurred in 1914, as well as in 1939. In both cases, groups of countries built a military alliance - a step towards a united political-economic entity - to gain global hegemony. With WW1, the death knell for the political role of the feudal class had sounded. But soon, the new system of financial capitalism ran into the catastrophe of the Great Depression of 1928. Fascist movements under the lead of an imperialist and nationalist 'strong man' dragged finance capitalism back into a war-leading command economy<sup>17</sup>. After WW2, a bipolar global system had been established. In Western Europe, under the influence of the social democratic variety of the labor movement, the European Social Model had been established, which was a first step towards a general institutional framework to enhance the living standards of all social strata. This European Social Model indeed can be interpreted as an example for how far capitalism can fulfil its promise of advancing labor productivity, generating new products and services, and at the same time keeping exploitation and unemployment at bay.

Taking a look at the increase of labor productivity (an essential fruit of capitalism), it is useful to start with the ratio between *quantitative output* and *labor time* needed to produce it. But this is only possible for a well-defined specific product or service: How much time is needed to produce a pair of shoes? This type of consideration in fact contradicts the basic feature of capitalism, namely that it is a socially embedded *commodity* production system. The increase in labor productivity stems from specialization of workers to produce

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<sup>16</sup> This explains why John von Neumann in the first chapter of his path-breaking book on game-theory complains about the pitiful state of economic theory (Neumann, 1944). His game-theory was meant to provide a new language to tackle political economy and social science in general.

<sup>17</sup> In (Hanappi, 2025b) a comparison of the interwar period and the current geopolitical situation is provided.

certain outputs *and the following exchange of these outputs as commodities*. Division of labor is the mystery behind the increase of labor productivity<sup>18</sup>! The total output produced by the labor time of the species is always a *social* product of specialized labor mediated by exchanges that use a form of money.

To take this difficulty for empirical issues concerning labor productivity into account, three important issues have to be mentioned: (1) Not all economically relevant labor time appears as an amount of money at a market exchange. The outstanding two examples are the family work done by housewives and the many activities in the poor South that also never imply monetary exchanges. (2) The monetary equivalent of a creditor's cost of granting a credit is always a very rough estimate, which in the current era of highly developed finance-capitalism can heavily distort the overall picture of the state of the economy<sup>19</sup>. Given these two caveats, the gross domestic product in real terms nevertheless seems to be the best guess for the size of human output per year. (3) All illegal activities as well as activities performed outside the control of the state are not included in GDP. Since illegal activities often use bitcoins to escape state control or taxes, the growing importance of that field is not reflected in GDP. But alas, GDP in constant terms seems to be the best we can get in the moment as an index for overall economic activity of a country. Therefore, when Keynesian macroeconomics emerged after the Great Depression and led to the systematic monitoring of economic aggregates by statistical offices, the GDP numbers quickly started to play a central role in a state's economic policy. On the other hand, the size of the population of a country also has an alternative measure for labor time input, namely the number of persons employed via official labor markets. In this case, the two distortions of GDP figures by unemployed (but labor time spending) housewives, and the officially unemployed workers who partly participate in black labor markets, play a role.

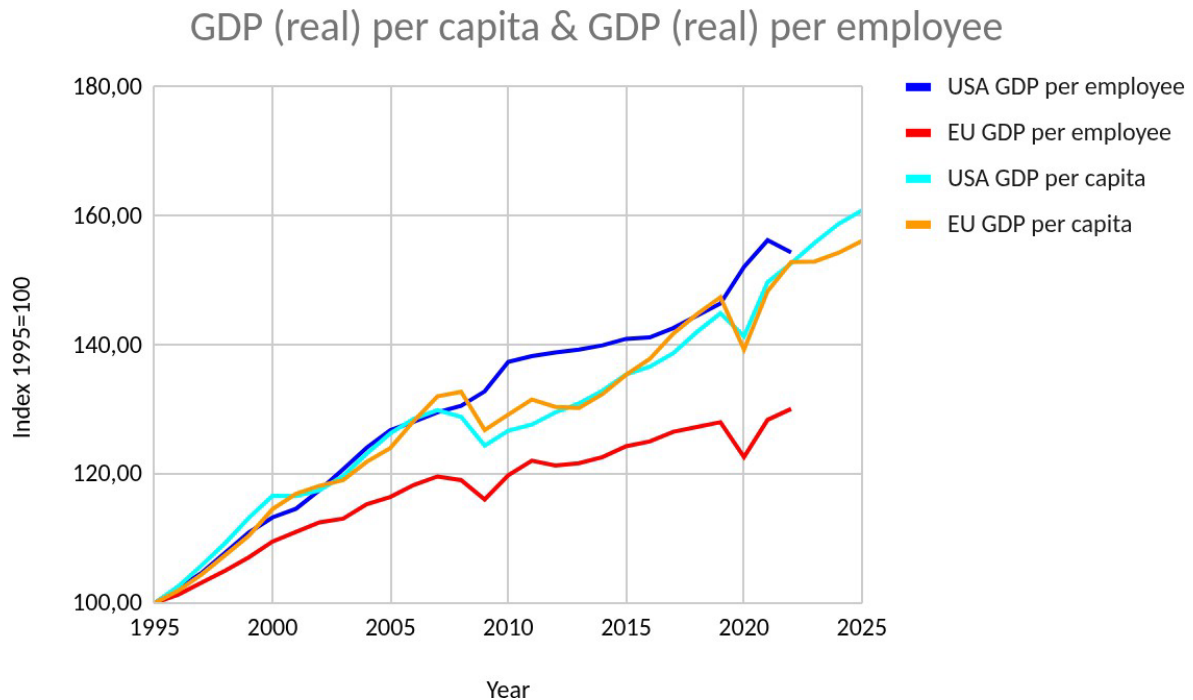
Despite its shortcomings, GDP is still the best empirically available number to measure economic activity mediated in a society by commodity production. As shown in diagram 3, for the USA (the hegemonic capitalist economy), from 1995 to 2025 the development of GDP per capita and GDP per employee is predominantly parallel.

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<sup>18</sup> Compare the two classics on this topic: At the macroeconomic level Adam Smith explained the wealth of Great Britain (Smith, 1776), and at the microeconomic level Frederic Taylor (Taylor, 1911) explained the emergence of profits.

<sup>19</sup> *Imputed banking costs* are never measured by market exchanges but are simply assumed by estimating the gain, which other investment opportunities would have provided.

Diagram 3



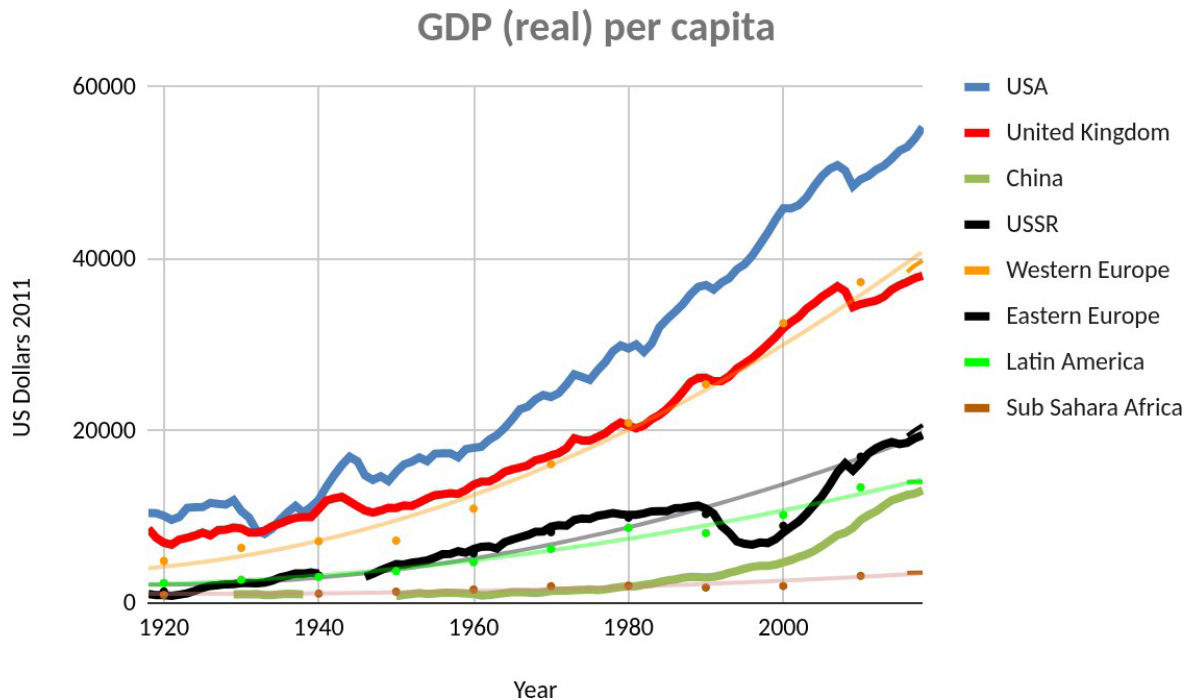
Source: AMECO database

The comparison to the development in the European Union reveals an interesting additional insight: While the GDP per capita of the EU largely follows the trend in the USA<sup>20</sup>, the GDP per employee in Europe demonstrates an important characteristic of the European Social Model. Since 1995, the enlarging EU has kept more workers in employment and has enabled less GDP growth than the USA. Thus, capitalism in Europe favored European employees with respect to job security, but it was less attractive for capital accumulation. Of course, the steadily increasing share of financial services in GDP, which is now monopolized in the US financial markets, plays an important role in this dynamic too.

The global drawback of the still flourishing dynamism of US capitalism in the last three decades can be seen if the longer run perspective since 1918, the end of World War 1, is considered, compare diagram 4.

<sup>20</sup> Note the two parallel crises in 2009 (Great Financial Crisis) and 2021 (Corona pandemic).

Diagram 4



Source: [Maddison Project Database \(MPD\) 2020](https://maddisonproject.org/), University of Groningen

With finance capitalism the old hegemon (the United Kingdom) was replaced by the new hegemon (the United States) and this is also reflected by the average of the GDP per capita of US citizens. The UK after WW2 also lost its advantage over the rest of Western Europe and now both follow similar trajectories. The most interesting - and disturbing - fact is that with **financial capitalism, exploitation** now mainly **takes place at the global level**. The rest of the world (excluding the USA and the EU), where a large majority of human individuals live, earns a permanently slower-growing per capita GDP. The two minor exceptions are Russia (the former USSR), now due to its oil and gas reserves, and China. They now both seem to manage to be included as **necessary intermediaries** in the global financial capitalist production system. Clearly, China's average GDP per capita has caught up remarkably, but is still way lower than in the Rich North.

The **first fruit of capitalism's historical mission**, increased **labor productivity** and the accompanying variety of commodities, does exist, but it came at the price of a **globally polarized exploitation regime**.

The **second fruit of capitalism's historical mission** is harder to grasp and less visible to the unscientific observer: It is the development of an institutional framework, which sometimes is summarized by the notion of '**democracy**'. This concept is remarkably self-contradictory, since it proclaims that, instead of the exploitation of one class by another class, the whole species turns its self-exploitation into self-governance. That is, the concept of 'exploitation' itself is revolutionized by the emergence of an all-embracing

**consciousness of the species.** On the way towards this consciousness, a kind of central nervous system of the species, connecting this conscious core with the different parts of the species, has to be developed. And this is exactly where the role of *the development of democratic mechanisms* enters.

Schumpeter had explained the growth of labor productivity (fruit 1) by the recurring, disequilibrating activities of entrepreneurs. The processes he used as empirical templates for his narrative were the activities of firm owners in the 19<sup>th</sup> century. In their totality, these innovations and their links via production chains and communication produced pulsations of economic activities at different wave lengths<sup>21</sup>. In the 20<sup>th</sup> century, with an emerging full-fledged financial backbone of capitalism and an enormous drive towards larger production units and more fluid financial transfers, these pulsations erupted in the years of the Great Depression, 1928 to 1932. The main agents controlling capitalism now were the members of a conglomerate that was later dubbed by President Eisenhower the 'military-industrial complex'. The leader of such a complex now was typically the leader of a nation-state, a representative of its government. With the disaster of the Great Depression in front of his eyes, John Maynard Keynes realized that it needed interventions from this governing institution to stabilize Schumpeter's ever larger waves of downturns, which had drawn the whole of financial capitalism into the abyss. To introduce such stabilizing policies, it needed an aggregate accounting system of a whole nation-state, statistical offices and macroeconomic modelling. And to implement policies, it also needed national class compromises. The pivotal impact that Keynes provided thus was an entire package of theory, macroeconomic theory<sup>22</sup>, plus a practical toolbox of institutions, which enabled the nation state to turn *short-term* economic advices into effective, real-world policy. It is the latter **institutional framework**, which spans from the choice and collection of meaningful aggregate variables to the design of regulating social institutions, which has to be considered as the '**second fruit** of capitalism's historical mission'. It offered a nation-wide regulating device to tame the exploding forces of Schumpeter's innovation dynamics. The main threat of accelerating economic downturns, of self-defeating speculation spirals, could be found in two properties of the advanced innovation process in finance capitalism: (1) The drive towards ever decreasing unit cost favors larger and larger production units, oligopolisation speeds up. (2) Capital in its form of finance capital becomes extremely fluid and fast. It can leave whole production spheres as well as geographical locations often very quickly – leaving less mobile production elements as ruins behind.

With his analysis, Keynes saw that these evils that endanger a capitalist nation state had become a global monster during the Great Depression. As a consequence, in the 40-ties he proposed elements of a global institutional framework needed to save global capitalism: The International Monetary Fund and the World Bank. Soon both global institutions became dominated by the new hegemonic capitalist nation state of Western

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<sup>21</sup> Compare (Schumpeter, 1939).

<sup>22</sup> The celebrated mathematical Keynesian macroeconomic model indeed stems mainly from his colleague Sir John Hicks (Hicks, 1939). Keynes himself was one of the last economists working almost exclusively with plain text.

capitalism<sup>23</sup>: the USA. Nevertheless, parts of their design reflect long-run necessities of democratic global governance. The IMF has been designed to react on short-term imbalances in some countries that easily can occur if the dynamics of a global currency, at the time the US Dollar bound to the new hegemon's policy, are running wild. The World Bank was designed for long-run intervention. It should ameliorate the increasing divergence between poor and rich parts of the world. It exemplified Keynes' awareness of the necessity of effective demand for a long-run survival of capitalism: One has to assure that the cow one wants to milk should not be starved to death prematurely.

Parallel to Keynes' institutions, which meant to save integrated capitalism<sup>24</sup>, another democratic global institution was revived, the United Nations. Despite the disappointing results of a similar institution dedicated to prevent a world war in the interwar period – the League of Nations - the UN was established in 1945. Currently, in its general assembly the heads of state of 193 countries are gathering (each country has one vote) and its security council includes five permanent members (China, France, Russian Federation, the United Kingdom, and the United States) and ten non-permanent members. Since it also includes members from Russia and China in the security council, its main setup is more general and points more directly towards democratic global governance even beyond capitalism's survival. Unfortunately, its main deficiency, which recently became only too visible, is that it lacks a strong military force to implement its decisions.

Schumpeter's disequilibrium approach during the age of finance capitalism, after WW1, evidently took hold of larger entities of *political economy*, namely of nation states. The concept 'political economy' does not only cover *economic* entities like firms, which try make extra profits by innovations, economies of scale or unfriendly take-overs of competitors. There also always exists the possibility to use pure coercive power (political science is the science of power relations) to dispossess weaker entities. Larger political agents, like nation states, can fall back on this crude exertion of coercive power to acquire more territory and a larger capital stock. In short, they can choose to lead disequilibrating wars<sup>25</sup>. If due to ongoing oligopolisation only few large capitalist political entities are remaining (USA, China and Russia), then the emergence of local wars at their borderlines can be expected as far as the military elites inside each military-industrial complex are stronger than then the economically minded industry leaders. If the latter prevail, steps towards an organized global exploitation of the richly populated rest of the world, might be a solution without another world war<sup>26</sup>.

These last ideas already show how the fruits of capitalism's historical mission might turn into a catastrophic end of this mission. Keynes stabilizing institutional framework typically

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<sup>23</sup> To characterize the details of the varieties of capitalism that emerged in Russia and China goes beyond the scope of this paper.

<sup>24</sup> For a clear description of *integrated capitalism* compare (Hanappi, 2019a).

<sup>25</sup> In (Hanappi, 2025b) the classical example of such a social step backwards – the takeover of Fascism in Germany in the 1930-ties – is described in more detail. The necessary and sufficient conditions for a fascist turn of capitalism have changed somewhat since then, but the underlying logic has survived to a frightening extent.

<sup>26</sup> Such a solution still is prone to develop into global racism: A governing elite of **superhumans** exploiting the currently powerless fourth global agent of workers living in the vassal states of the three leading empires.

has to grow to accommodate the growing reach of oligopolistic corporations. Institutionalized global governance is a precondition for the full blossoming of a global democracy, which can serve the goals of a surviving human species. Seen from this perspective, the development of Keynesian macroeconomic frameworks indeed is a step towards a mode of production that can overcome the impasse of the capitalist algorithm. Maybe the possible next step would be to turn *useful* privately owned global corporations like Amazon or Wikipedia into publicly owned units? In total, the interplay between Schumpeterian disequilibrium processes and Keynesian accommodation of capitalist growth by growing institutional frameworks was the source of the two highlights that capitalism gave to the development of mankind. Given the accelerating ***dangers of environmental collapse***, these achievements can only endure if some of their basic characteristics are radically inverted. Schumpeter's force of disequilibrating innovation has to be redirected: Away from the search of maximum expected profit guided by the capitalist algorithm, and towards technology and products, which are compatible with the limiting conditions given by planet earth. In accordance to these limited – but necessary - innovation possibilities its monetary evaluation system must be migrated towards a measurement system that follows the rules of democratic global governance<sup>27</sup>. The state of affairs that the Keynesian attempt to establish democratic survival of capitalism was meant to head for, is much more difficult to develop. Cum grano salis it is the quest for a democratic global governance framework. From an evolutionary perspective it is straight forward to assume that the democratic mechanisms, which will build its core should emerge out of the battle against the radical fascist tendencies, which capitalism in its death throes produces<sup>28</sup>.

## 2 - Toxic capitalism at the end of its mission

Capitalism has left its mark not only on the global production system it has produced. But the globalized production sphere is itself the clearest example of a hierarchical system that prevents the development of full-fledged democratic mechanisms. The decisions on what is produced, and where and at which price it is sold, today usually are made by *central* agents – humans, usually supported by electronic devices – applying the capitalist algorithm. An enormous apparatus of marketing machinery then is added to adjust demand – in particular in the rich North - to the needs of industry. As 19<sup>th</sup> century political economists would have argued: The owners of the means of production own the products and, in the sequel, have to sell them to whomever to transform products into money, which then can be used to increase their stock of means of production. In the end, it is the imperative of maximum capital accumulation – the command of the 'dead labor' capital over the 'living labor' of human individuals – that determines all economic and political details involved in this process. As in the case of oligopolisation its reach becomes global, there are ever fewer and larger firm agglomerations, hierarchical command necessarily

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<sup>27</sup> See (Hanappi, 2025a) for some ideas on a complex future world money.

<sup>28</sup> Though some revolutionaries involved in the Russian revolution did mistake the events of 1918 as the end of capitalism, the following seventy years of Stalinism showed clearly that Stalin's concept of 'Socialism in one country' was not a democracy enhancing project.

becomes stronger. The corresponding political units, the nation states, also are concentrating. Today there are three capitalist hubs, China, USA and Russia, and a reservoir of potential vassal states, which could be considered as a pivotal fourth power center<sup>29</sup>. This is the global macroeconomic setting the human species currently is confronted with. Parallel to this crude picture of the evolution of the global macroeconomic state, capitalism also has transformed the way in which *human individuals experience themselves*. Individual experience always is local, the working of the globalized production system remains necessarily beyond the capacity of perception of a single human individual. In fact, this total alienation of the awareness of the material conditions of the existence of the human species - as a species – produces the individually growing illusion that a human individual is in essence the nucleus of a capitalist firm. Of course, the wannabe one-person firms are still stuck within their local environments, even if these environments in the last decades have been enlarged by electronic devices, electronic echo chambers. The indicators of pain and lust are still bound to their local cultures. The interplay of these indicators manifests itself in a *mood*, a mood that is amplified via communication as the mood of a local culture and mostly remains unrelated to, alienated from, its material basics. If global macro-dynamics happen to throw a local culture on a particularly dire material trajectory, then the ideological superstructure of such a local cultural community shows how vulnerable its alienated nature has made it. The *non-existence of universal humanism*, which would need a fulfilment of the aspirations of general enlightenment, will turn into a retrograde renaissance of religious leadership<sup>30</sup>. Or, if a local culture is technologically further developed, it may lead to the ascent of a local nationalist, even fascist, political dictator. The followers of such a strong leader then have to be quickly ideologically streamlined – a process, which needs a strictly supervised military command, a police state. The classical forerunner of this currently reviving scenario evidently has been Hitler's Nazi regime.

It can be expected that - with a somewhat less aspiring territorial reach and eventually mixed with religious traits – such processes soon will also be found in vassal states. Leaders of vassal states will have to be loyal followers to the leader of the respective super power, but they will also need a tough management of their subordinated gentry leaders, which must secure that the workers down the line do their jobs<sup>31</sup>.

It is evident that with the capitalist algorithm still being the central motivation for actions at all levels, from the core of an empire via high nobility vassals down to the lower gentry at the factory level, the approaching climate collapse cannot be prevented. In the short term some forms of neo-fascism in some vassal states might be able ascent to state power, and it even might be possible that a unifying absolute global authoritarian capitalism emerges, which carries features of neo-fascism. But history does not repeat itself, it only rhymes. Feudalism will not experience a second life. The last toxic phase of

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<sup>29</sup> The formation of the BRIC group is the attempt of Russia and China to give this fourth power center a *progressive* role, which they still can control.

<sup>30</sup> This explains, why in particular in parts of the poor South religious belief, e.g. Islam, is surging.

<sup>31</sup> Yanis Varoufakis has a point, when he calls this new development 'technofeudalism' (Varoufakis, 2024). It is indeed a return to power structures known from feudalism. See also (Hanappi, 2026a).

capitalism will be rather short, profits generated by robbery within a closed global system without continuing labor productivity increase, will vanish. After universal confusion resistance can quickly become overwhelming. The historical mission of capitalism will be over.

It is clear where the subject, the social class, carrying the resistance will be located: the so-called 'Global South', referring to the globally exploited new slaves. It is also clear that this part of the global population will need a *highly educated complementary class* – call it the **global class of organic intellectuals**<sup>32</sup> – which is able to partly preserve and to transform the fruits of capitalism (high labor productivity and sophisticated institutional framework) into the ingredients necessary to build the **central nervous system of democratic global governance of the whole human species**.

### 3 - Lessons for the Survival of the Human Species

Five hundred years of capitalism have been a long way to teach mankind a long series of lessons. In particular, the 20<sup>th</sup> century saw two World Wars: The first marking the end of political leadership of the feudal class and simultaneous blossoming of nationalism within Europe; the second showing how with collapsing financial capitalism nationalism turns into the catastrophe of fascism with its imperialist aspirations. From 1945 onwards a long period of the hegemony of the USA in the West, embedded in a mainly bipolar world order saw the emergence of the nucleus of a *global* institutional framework. It still was a mode of production built on capitalist exploitation, though it has transformed a major part of the extraction of surplus value to the global exchange rate mechanisms.

The step towards a global production system has not been followed by an accompanying turn towards global governance. The acquisition of the surplus value mainly remains in the hands of one of the three superpowers (China, USA, and Russia). What is next on the agenda of the evolution of the human species thus is to advance to a **Global Atlantis**, to a self-governing entity of human political economy. Contrary to Thomas More's vision in 1516 this time not as an imagination with no place in reality – Utopia – but this time as the next step of the human species.

Europe, the peninsular military outpost of the USA, served mainly as important demand component to transform material and service surplus into monetary profit. To enable this function a sophisticated credit system built on household, firm and government debts had been established. In the shadow of this 'welfare' evolution the *European Social Model*, a blueprint for an institutional framework promising soft exploitation without escalating class struggles, has been established. Keynes' dream of a capitalism tamed by institutionalized compromises seemed to emerge. As John Roemer, a leading proponent of mathematically oriented Marxism (Roemer, 1982, 1994), as well as more recently Daron Acemoglu, the figurehead that tries to bring back institutionalism to mainstream economics, seem to assert, this European Social Model was the most of class compromise that so far was possible under a still capitalist regime (Acemoglu and

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<sup>32</sup> Compare (Hanappi, 2020).

Wolitzky, 2025). But from 2000 onwards, starting with the rise of Putin in Russia and continued by the election of Trump in the USA in 2016, a new type of nationalist surge became visible in global politics. It reminded on a question that had been posed many years earlier.

'Is socialism in one country possible?', was an intensively debated issue in the early years of the Soviet Union. Stalin's answer was a clear '**yes**', which sharply contradicted the view of Karl Marx, the poster boy of Marxism-Leninism, which Lenin and Stalin always used to justify their bolshevist strategies. At the same time a parallel question popped up in the West: 'How is capitalism possible in one country?'. The new hegemon, the USA, together with a Europe devastated by the war, was confronted with the Great Depression – a signal that financial capitalism does lead to global crisis. Hitler's answer to the question also was radical: **Yes**, the capitalism of national industrialists is possible if it is supported by a hierarchically organized military police state! Instead of household-demand-oriented market processes a warfare-oriented command economy aiming on the conquest of global dominance has to be envisaged. Despite the many differences between Stalinism and Fascism, the common denominator of over boarding nationalism cannot be ignored. What is frightening is that the question of nationalism, including the answers of possible military dictatorship, nowadays is on the agenda again. History rhymes.

Even if a compromise between the ruling classes of the three national superpowers becomes feasible during the coming decade, the deeper question if capitalism can overcome the limits set by natural finiteness (compare the opening paragraphs), remains. Will absolute global authoritarian capitalism (labelled 'AGA capitalism' in (Hanappi, 2025c)) be able to handle the accelerating climate catastrophe? Its authoritarian as well as its global character might be helpful, but its *absolute* motivational reliance on the capitalist algorithm – aligning everything on all decision levels according to short-term profit maximization – assures complete failure with respect to environmental sustainability of the human species. As an example, consider one of the most remarkable properties of capital, its high mobility, its fluidity: When class struggles in advanced countries started to become nasty, capital could escape to exploitation on a global level, 'Rich North' exploits 'Poor South'. But now the exploitable terrain is all taken, finiteness strikes. The capitalist algorithm does not work anymore, its promoters become visible enemies of humanities survival<sup>33</sup>.

It might be the case that this visibility is undermined by the growing possibilities of mass media manipulation, in particular in the Rich North. The confusion of alienated populations, of people who indeed are threatened to lose part of their welfare to the Poor South, might turn great enough to seduce them to support fascist leaders. In this respect Europe again – sadly - will be an experimental laboratory: Europe's nationalist right-wing

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<sup>33</sup> The substitutes for the money-based maximization imperative of the capitalist algorithm will have to be diverse, adaptive flexible responses to quantitative limits encountered the earth's environment. It is only the second step to embed them in the monetary framework of global governance, which still will be necessary to maintain *commodity* production, i.e. global division of labor. In this context it has to be noted that the often-misused term 'market economy' is **not** a synonym of 'capitalism'. The *diversity* of market *mechanisms*, which are needed to distribute commodities in any production system with global division of labor are to be distinguished from the capitalist algorithm. For a mathematical treatment compare (Takayama, 1973).

movements so far have not achieved to combine into a unique successful party able to govern. Which nationalist leader should be the ultimate leader still is a fierce competitive process. For the logical candidate, for US president Donald Trump, Europe so far is only a side issue on his way to global supremacy. And mass manipulation in all of Europe is more difficult than in the USA due to the many different languages, which still are the basis of communication (and the individuals' thoughts) in Europe.

The deeper question hidden by this critique of the capitalist algorithm is, if the latter somehow is inscribed in the human DNA. Is there indeed an alternative to the capitalist algorithm at all? The most prominent supporter of the speculation that there is no alternative is biologist Richard Dawkins<sup>34</sup> (Dawkins, 1976). If he is correct, then all efforts to overcome capitalism are obsolete; mankind then will vanish rather soon due to its inborn 'capitalist' property. But as long as this is just a speculation, it makes sense that scientists work on all the mechanisms that could help to maintain the survival of the human species for a world after capitalism – for a possible global Atlantis.

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<sup>34</sup> Apart from this speculation, Dawkins is a staunch representative of atheism condemning all forms of mysticism and religion.

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