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Global political economy dynamics of the next ten years

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Introduction

Predictions and hopes are different things. Predictions are based on past empirical observations. They single out what seem to be essential variables and the relationships between them and assume that their importance will prevail in the future. Hopes add a component to a prediction, namely an evaluation, which refers back to the entity that produces the prediction. More favourable predictions are hoped to become a reality while others, which would see the entity in a worse position, are not hoped for. A closer look reveals that with a consideration of what predictions are used for by an entity, predictions and hopes are less independent. By predicting an event that one hopes for, the chances that it actually happens might be increased. E.g. in business environments predicting that a competitor will have no chance might intimidate the opponent and help to be victorious. On the other hand, predicting a bad result might induce the entity under consideration to change its current course of action. E.g. the catastrophe predictions of the Club of Rome in the Sixties were meant to be a self-destructing prediction to save the entity, human society, from running into environmental disaster. In both cases, predictions usually exaggerate to produce a stronger impact. Therefore, the way a prediction is formulated always to some extent carries the hopes or anxieties of the entity that produces it.

Typically, hopes and anxieties exist parallel in a social entity. If it is a large social entity, like Europe's population, then its structure - countries, classes, ... - will split up the predictions following the lines of this structure. This makes the modelling of the situation very complicated and these complications increase exponentially if the *largest social entity*, the world population, is considered. The *smallest social entity* seems to be a single human individual, but this view is deceiving since a social entity always needs to be embedded in a group of individuals to exist, it carries the existence of its supporting of other individuals of the species in its brain.

Confronted with the broad span between the largest and the smallest social entity there are two concepts that help to simplify the situation: the *limit* and the *feedback*.

For the smallest social entity, let us abbreviate it as 'the family'¹, there are two kinds of limits that constrain its predictive ability: purely physical limits, and information-bound limits. The former concerns the upper limits of speed and storage capacity (memory) but also the time available for making predictions. The latter are constraints related to the achieved level of understanding and being able to express oneself in a given language. To be able to exist at all both types of limits must not be exceeded, that is a minimum of expectation formation must be possible.

With the largest possible social entity, let us abbreviate it as 'humanity', the limits that are binding look somewhat different. The physical limits nowadays are becoming all too visible, namely how the species can exist as part of the biological and climatological changes which it produces. Information-bounded limits are given by the limits that a sensory system concerning the global situation with respect to the different parts of humanity, but also with respect to a democratically organized global consciousness has to observe. Technology is one side of this problem, institutionalized political mechanisms are the more difficult, other side.

The concept of feedback loops helps to approach a satisfactory state of affairs without crossing the above-mentioned limits. Feedback loops in a family are established by education and consultation of the less experienced members with the help of more experienced ones and knowledge drawn from external sources that store approved knowledge. Maintenance and control of these external sources are of central importance. It is via this channel that most of the more up-to-date knowledge enters the family; filtering this knowledge - e.g. by a religious group - is an outstanding example of exerting *information power*. Expectation formation in the family thus is always exposed to two countervailing forces: increased knowledge and increased manipulation.

The way from the smallest social entities, families, to the largest social entity, humanity, as the way back is paved by feedback loops. It still mostly is geography, the location of families, which explains why intermediate social entities, social institutions, emerged. The path downward, from large to small, features knowledge transfer, education and manipulation; it is an essential component of governance. In the opposite direction power transfer - rule setting and monetary transfers - as well as election processes are the

¹ For a more detailed discussion of this concept see (Hanappi and Hanappi-Egger, 2005).

significant elements. Again, the forces exerting power on the intermediate social institutions still mostly are structured along geography. The evolving interplay between downward and upward streams is the way in which the self-contradictory concept of *democracy* has to be understood. Without the flesh of the rich set of social institutions that mediates between individuals and humanity, without consideration of the history of this set of social institutions, the evolution of mankind necessarily remains in the dark².

A major deficiency of the largest social entity, humanity, is that it indeed misses till today a governing social entity, a powerful enough world government. Therefore, feedback that concerns e.g. climate catastrophes or pandemics does not have an adequate entity that can be addressed. This makes predictions on all levels of social entities even more complicated because the result of a possible 3rd World War will have to be predicted too. It is not possible to predict how many people will survive such a global war, but it can certainly be assumed that on the scale of humanity's hopes the prevention of such a war is highly ranked. For the scale of hopes of humanity, the hope for survival clearly is a lower bound. But let me spare the discussion of hope for the last chapter.

Predictions

Turning to the topic of predictions, the complicated historical record of humanity spans over several thousand years, while family histories rarely ever reach back more than a hundred years. What can be observed is that in the last decades, in particular since the introduction of the internet and the widespread use of smartphones, the paths between families and the largest decision-making entities technically have shortened dramatically. Manipulation as well as the principal access to sound knowledge and democratic progress were exploding. Just using the time since the end of WW2 it is a safe guess that this *technical* development will go on in the next decade. What is less clear is what the economic, political and military developments will be that are encompassing this technological path.

Since 1974 capital accumulation - approximated as real GDP growth - has experienced two severe slowdowns, one in 2009 (global financial crisis) and one in 2020 (pandemic).

² This is the core of the critique of mainstream economic theory brought forward by evolutionary political economy and institutional economics, compare (Hanappi H. and Wäckerle-Scholz M., 2017) and (Dopfer K. et al, 2017).

However, the overwhelming new development in the new millennium is the enormous rise of GDP in Asia.

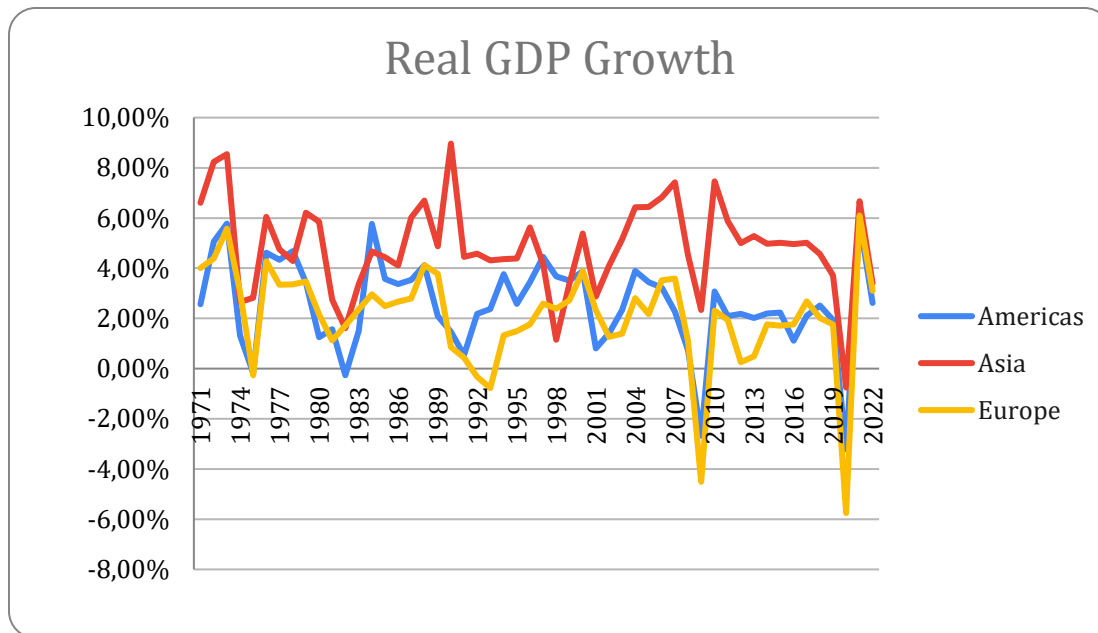


Figure 1: Real GDP growth

Source: OECD

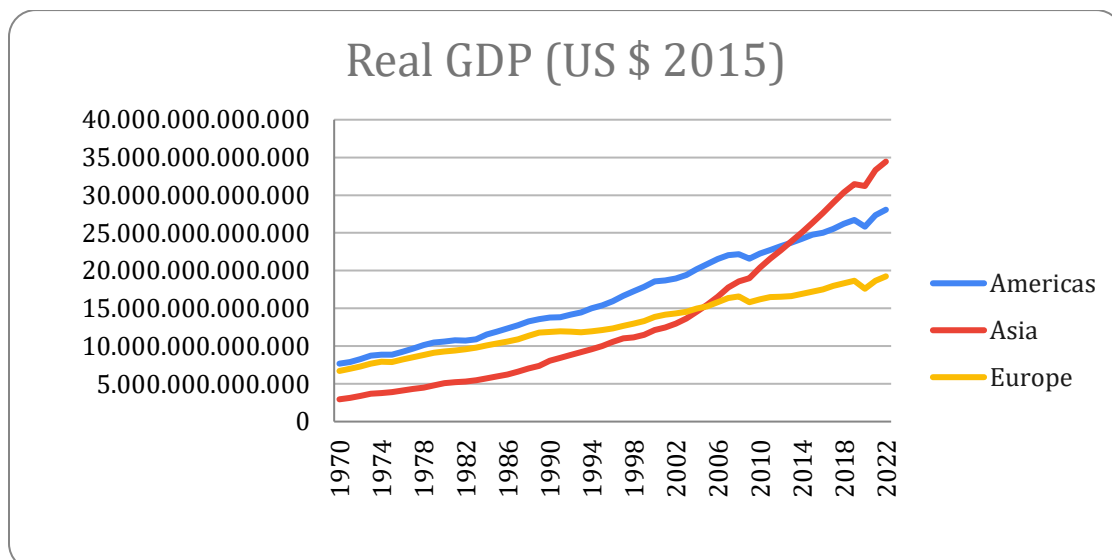


Figure 2: Real GDP Levels

Source: OECD

The most important social unit that became particularly prominent during the last two decades is the so-called 'military-industrial complex', let us abbreviate this as MIC. This combination of groups combining direct coercive force (military and police) with economic dominance (global oligopolisation) is as old as capitalism³. The structure of the dominant MICs is easier to identify than the highly complicated network layers of social institutions described in the introduction. The four strongest MICs in the world clearly are the USA, China, Russia, and the European Union – with the caveat that from a military point of view the EU is only a part of the US-driven NATO. The so-called Global South plays a most important role with respect to global economics, but to be a power comparable to the dominant three MICs (USA, China, Russia) it lacks unity, militarily as well as politically. The long-run military trajectory after WW2 was dominated by the conflict between the USA on one side and Russia and China on the other side. The first phase, called the Cold War, saw a steady increase of military potential prevented from exploding into a war by a doctrine of military strategy called MAD, mutual assured destruction⁴. In 1990 the Eastern European satellite regimes of the USSR collapsed and the following decade was characterized by a marked military power shift towards NATO. The USSR itself was dissolved, but the remaining big player Russia kept a considerable nuclear arsenal of weapons. In Russia the balance between military and economic elites of the MIC experienced a heavy shift to the military sector, accompanied by the exodus of a large group of *oligarchs* – centres of economic exploitation in Russia – which were spreading all over the world. The relations of these oligarchs to the military cadres in their homeland were diverse⁵. From the point of view of global division of economic resources, the role of Russia with its Stalinist form of exploitation rested on its rich natural resources, mainly its oil and gas reserves. Meanwhile the liberation of Eastern European satellite countries from Moscow-dependent Stalinist regimes did allow them to join Western European market processes, though with limited success. The former exchange of cheap Russian energy exports for manufactured commodities of the satellite states proved to be more difficult to substitute by economic links with Western countries. As these countries joined NATO, which thus advanced militarily more than 1000 miles eastwards closer to Russia,

³ In the times of British merchant capitalism ship trade was already always accompanied by soldiers extending the political empire.

⁴ While MAD usually is understood to cover only the US versus USSR conflict, it is clear that from the beginning it also included the US versus China conflict: The bombs on Hiroshima and Nagasaki were dropped *after* Hitler had already been defeated in Europe, and were additionally justified by the USA as a warning vis-à-vis China.

⁵ It is remarkable that Xi Jinping once mentioned that he considers it as the pivotal mistake of Gorbachev to allow the split between oligarchs and military leaders, i. e. the collapse of the MIC.

it was predictable that at a certain point the Stalinist military elite would try to stop this process⁶. This started in Ukraine in 2014, when Russia was insisting to hold the Crimea as its main access to the Black Sea, undermining the plan of the Ukrainian president to integrate the peninsula as part of Ukraine and to join NATO⁷. The invasion of Ukraine in February 2022 then was just a follow-up of the continuing civil war in the Eastern regions of the country. An important side effect of the invasion was that Belarus, which by NATO had been envisaged to be the next domino to fall into the Western orbit, was now tied more closely to Russia⁸.

The traditional fault lines between the West, the US-led MIC, and the East, the two MICs on the Eurasian continent, remained in Eastern Europe, the Middle East, and at certain peninsulas around China (Korea and Vietnam). When from 1990 onwards the West advanced in Eastern Europe the Middle East became a more fiercely embattled area too⁹. As from 2014 onwards, and in February 2022 with the invasion of Ukraine the resistance of Russia became surprisingly visible – there immediately emerged the fear that Russia could advance towards the West again – the US-led MIC revived its traditional pacific front position vis-à-vis China. Like in a pincer grip the two Western military organisations, the NATO and the newly founded AUKUS (Australia, UK, US), should strangle the other two MICs in Eurasia. The continuing conflicts on the street of Taiwan have become the most exposed incidents showing this Western strategy.

But the newly emerging China-USA conflict has a much a more complicated economic underpinning than the original Cold War immediately after WW2. The Chinese political economy is interwoven with the US economy in a much more complicated way than the Russian economy¹⁰. The roots of this tighter liaison reach back to 1976, when Deng Xiaoping changed the basic direction of China's economic development. The pragmatic turns¹¹ that Deng Xiaoping initiated were furthering substantial acceptance of basic capitalist algorithms as long as they remained under the ultimate political surveillance of the Communist Party of China. The combination of a strong ruling class using Stalinist

⁶ Compare (Hanappi and Wäckerle, 2017), originally published in 2011.

⁷ The plan to establish the Crimean Peninsula as an independent republic already had failed in June 1992, when the Ukrainian government rejected a proposed constitution.

⁸ The force of public opinion, which in many former Stalinist governed states was an important element for turning them into NATO members, in this case was weaker than the forces of direct military forces of the big brother Russia.

⁹ See (Hanappi, 2014).

¹⁰ A most interesting introduction to the history and current state of affairs of this interdependency has been published by James A. Fok (Fok A., 2021).

¹¹ Mao Zedong had tied in 1976; he had been the charismatic leader of China's revolution, but his view of Marxist theory was leaning to more philosophical issues that his late wife Jiang Qing then turned into overly radical – though economically impotent - political practice.

techniques to maintain its power with selected economic mechanisms, which it chose to integrate the surplus it extracted in the global economy, proved to be outstanding successful. How successful this organisation of the military industrial complex of China really was, became visible in the new millennium. China could choose to sort out those market mechanisms that fitted its long-run goals, e. g. it could force the exchange rate of its currency to stay low despite exploding exports and against the outcry of financial market enthusiasts who proclaimed the 'necessity' of its rise. China survived the Great Financial Crisis of 2008 much better than the Western MIC, since its (Keynesian) intervention to boost public investment in infrastructure was not restrained by mislead gurus of 'public finance stability'. And most important of all, China understood early on that exploitation on a global level mainly is **exchange rate exploitation**, which works via several **stations of production chains**. With unfavourable exchange rates to countries with extremely low wages the intermediate products can then enter further improvement at the next station, e. g. in China, before they could conquer market shares in the rich West, with still another exchange rate, where they then are finally consumed¹². This type of integration in global production chains, of course, needed the possibility to allow for Western social institutions, e. g. capitalist production units owned by Western firms, *within* China. Finally, the swelling profits in China – in 2023 the highest number of super-rich private owners could be found in China – often were used to finance US public debt. In short, the Chinese model of authoritarian capitalism became a central backbone of global capitalism.

Compared to the flourishing of its economic performance the military developments in China were rather modest. Contrary to Russia this MIC can be taken as an example of a more industrially-oriented MIC.

The development of the US-led MIC is the most difficult one to understand. At the surface US politics seem to be easy to analyse: The two great parties, Republicans and Democrats, represent a more conservative and a more social-democratic strand of capitalist ideology. But this simple picture concerns at best domestic social policy including immigration policy. With respect to foreign policy Democrats were as their opponents convinced that the US-model in the long-run has to be installed in all countries of the world¹³. J. F. Kennedy had started the war in Vietnam, Bill Clinton – after having been pushed by Republicans – had started to extend the reach of NATO towards Eastern Europe, more recently Joe Biden has disappointed many leftists who had hoped that he

¹² Compare (Suwandi, 2019, p. 63), where the production chain of an I-phone is given as an example.

¹³ In 1960, in an impressive book, which was translated in many languages around the world, the way of a representative country towards the 'American Dream' has been vividly described (Rostow, 1960).

would start a less aggressive foreign policy than his predecessor Donald Trump. The reason for the uniform foreign policy can easily be found in the very special position of the US economy in the world economy. The global oligopolisation process¹⁴ has resulted in an extreme concentration of the largest firms in the USA, from there they are dominating Western capitalism – just take a look at the firms used in calculating the Dow Jones Index. And like economic concentration and centralisation has found its home in the USA the encompassing military power in the world now also is concentrated there¹⁵. But to spread military dominance all over the Western hemisphere is easier than to keep the multi-layered global exploitation process in the hands of the economic core in the USA. In the end military organisations – like NATO and AUKUS – are hierarchically structured command systems, while the global production system has a much more fine-grained structure of social institutions; as it was described in the introduction. This explains why a coordinated action of US industry- and military-induced US policy currently is so hard to achieve. Where the military branch sees the necessity for a further push of the strangling pincers, the economic part of the US-led MIC is split. Weapons industries (including aerospace, BOEING, etc.) linked to the military can be convinced, other parts see more long-run difficulties upcoming with additional war efforts. The latter group evidently predicts to have more advantages from a further global division of labour under the leadership of a USA-China joint venture. It bets on the emergence of a global ruling class that combines Chinese-style local hierarchies – based on police and military – and a US-style globally free-wheeling capital-management elite. The odds are that this second group will win out, not the least because also China's ruling class tends to consider the long-run. China's cautious support for Russia stems from its recognition that in any future constellation of the world economy – where China will play a decisive role – Russia's rich natural resources will have to be accessible. Thus, a soft landing of the current Putin-led regime is preferable to a collapse and falling apart into many small domains of local warlords. The example of the destruction of Yugoslavia by boosting ethnic differences, converting them into military conflicts, for China is a mild remembrance of how existing political entities can be blown up¹⁶. This is not the rosy picture that a future global hegemon wants to see. As a consequence, the mid-run development of China-USA trade

¹⁴ In (Cogliani J. F. et al, 2024) a recent empirical estimation of the exploitation status of all countries in the world can be found. Their work might be enriched by a dis-equilibrating dynamics of oligopolies that follows power laws found in other biological processes (Taylor R.A.J., 2019).

¹⁵ The force of the US military has been estimated to be around ten times the force of the added-up five next strongest armies.

¹⁶ Compare (Hanappi, 1994). In the Middle East similar tactics have been used based on the boosting of differences within religious views. In this case the horrible result were the different groups of radical Islamic terrorism.

relations will not deteriorate. Note, that this is the first piece of a – necessarily speculative¹⁷ – prediction.

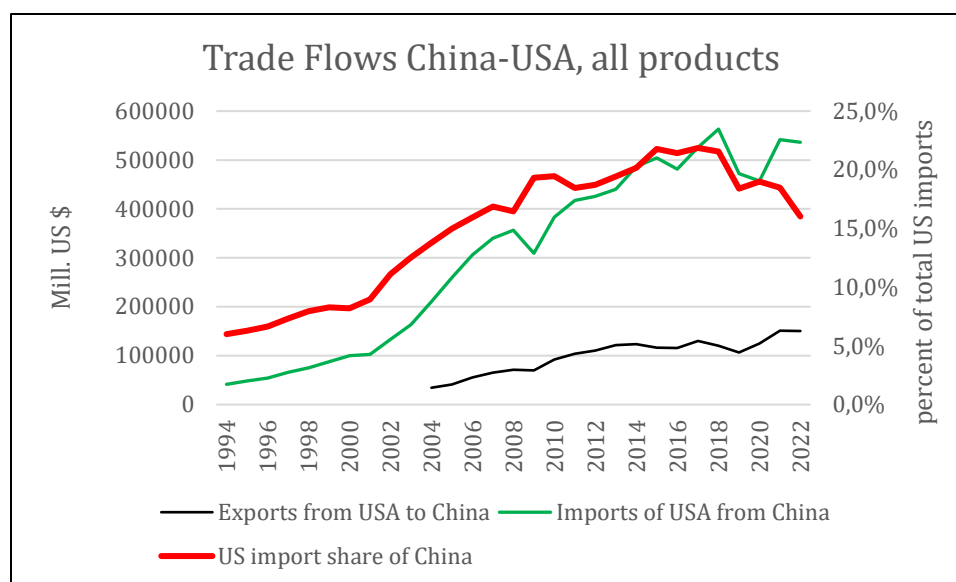


Figure 3: China-USA Trade Flows

Source: Worldbank WITS

Even with the markedly more aggressive rhetoric of US politicians concerning China in the last years, the US imports from China are stabilizing at a level of 20% of all US imports (all products), compare figure 3. For the next ten years the US trade deficit therefore will remain at its more or less constant, enormous level. Even if a slight progress in the global division of labour leads to some modest growth in total imports of the USA, this might only lead to a small decrease of the share of China in this total (axis on the right).

It is easy to see which trade partners have been driven out of US markets to make room for China, compare figure 4.

¹⁷ Kant distinguished between rational speculation, reason, isolated ratio, and blind speculation. The first is a necessary ingredient of science.

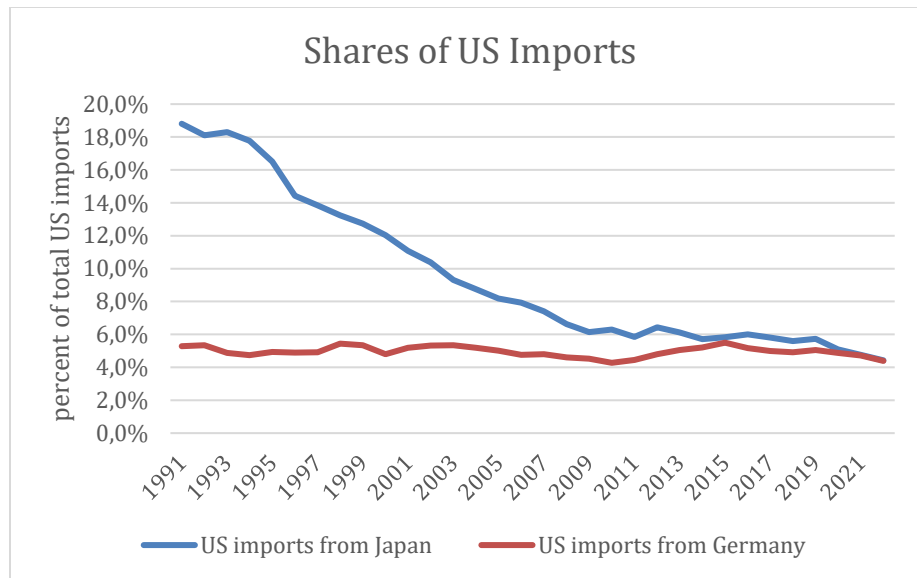


Figure 4: China's import shares

Source: Worldbank WITS

While trade with Europe kept its share, it evidently was imports from Japan, in particular the automobile industry, that received a heavy blow. So, while forty years ago the strong economic ties between the USA, Europe and Japan led to speculations about a shift of the centre of global economic activity towards Japan, it now is very clear that Japan is out of that game. The strengthening of Japan as a military partner, instead of perceiving it as an economic competitor, is a straightforward consequence of the military part of the US-led MIC.

A more subtle type of problem for this MIC is waiting across the Atlantic. Most obvious is this problem in the Eastern Mediterranean and the Black Sea. Via NATO a local strongman had been supported in Turkey, Recep Erdogan, whose policy turned out to be harder to control than had been expected. As the advance of NATO to include Ukraine has been stopped and Russia even succeeded to occupy 20% of Ukraine's eastern territory, the flaring-up war in Turkey's neighbourhood induced Erdogan to deliver weapons to both sides of war parties. In other somewhat less dramatic conflicts in the region (Kurds, Azerbaijan, Syria) Erdogan's role also was often dubious and did not follow the US approach. It is known from the thousands of years old history of large empires that if they start to crack, it is disobedience of vassals in the outer regions that first signals their downturn. In the meantime, it is common knowledge that equipping radical Islamic groups with US weaponry to push back the influence of Russia in the Near East has been a big mistake. Their terrorism quickly was out of control – and still is. Another case is the

agreement of the US-led MIC with the feudal leaders of oil-states – established in Saudi-Arabia since 1972 – to provide military equipment for cheap and stable oil delivery¹⁸. The rivalry between this ally and the neighbouring US-ally Israel has a history of seven wars (1967, 1973, 1982, 1987, 2000, 2006, 2008). When in May 2023 Syria under president Bashar al-Assad was reinstated as a member of the Arab League the newly emerging unity of Arab states – from those close to the USA to al-Assad who still maintained ties to Iran and Russia – indirectly was a thread to Israel. The Secretary-General of the Arab League, Aboul Gheit, had stated its goal very clearly in 2020: "The goal all our Arab countries seek, without exception, is to end the occupation and establish an independent Palestinian state on the 1967 borders with East Jerusalem as its capital.". So far, no plan on how Israel and a Palestinian State could live side by side had been agreed upon. On 7th of October 2023 a brutal assault of Hamas fighters on Israeli civilians initiated the latest escalation resulting in the military conquest of the Gaza strip by the Israeli military. While Israel is a loyal ally of the USA, the US president nevertheless was not able to convince president Benjamin Netanyahu to stop the slaughtering of thousands of Palestinian civilians in military revenge actions. This sanguinary conflict between allies of the US-led MIC shows how quick an empire's power can deteriorate if the vassals get into conflict and have enough military power¹⁹ to lead local wars.

How fast the two wars in Europe's south-east end is hard to predict, the way they will end is easier to imagine: In Ukraine the Russian army has too many reserves to be defeated and thrown out of the country, though it is not strong enough – and too exhausted - to advance further to the West. On the other side the military arm of the US-led MIC slowly is shifting its attention to the eastern part of the pair of pincers, to Taiwan and China. Financially and with respect to the delivery of weapons for the Ukraine the plan is to shift these burdens to European countries. But Europe's population has already experienced that the cost of a war aiming at extending Western dominance are high and are immediately felt in form of higher prices and reduced social welfare²⁰. As far as military obedience is concerned, there is no way out for European NATO countries – they are part of NATO, Europe's highest commander is US general Christopher G. Cavoli. But as political entities with democratic elections local governments increasingly are confronted with citizens that resist the manipulative efforts of most mass media propagating more European military expenditure to support NATO. Indeed, it is one of the big surprises of

¹⁸ A first crisis of this deal – described in (Fox, 2021) - has been an upheaval against the feudal Arab regimes in 2011 called the Arab Spring; compare (Hanappi, 2016).

¹⁹ Israel is the only nuclear power in the region, explaining why Iran is desperately attempting to become one too.

²⁰ This impact has recently been quantified, see (Stamegna et al, 2024).

the last two years how coordinated and unisono the big newspapers and TV stations in Europe were streamlined to support NATO's perspective. The direct influence of the highest military circles on the decision-makers in the mass media nowadays evidently is well established. That information power is a mighty complement to direct coercive power has never been neglected by Europe's left political parties²¹, but how far this truth has already been implemented in NATO's strategies was nevertheless surprising.

For Europe' left the neglect of a concise investigation into the latest developments in the Western variant of the military industrial complex, the US-led MIC, not only resulted in short-comings with respect to understanding the importance of mass media. It also resulted in a certain blindness vis-à-vis the strategical options of Europe's political parties on the far right. As a matter of fact, the political success of fascism in the interwar period was largely built on the ability of far-right leaders and demagogues to address the actually existing material and spiritual needs of the populations in Germany and Italy, the big losers of the first World War²². The recent surge in the popularity of the far right in Europe is based on a similar feeling in a large and growing part of Europe's population. Since 1990 it is common knowledge that the iron Curtain dividing Europe has fallen and the border to Russia has been shifted 1000 miles towards the East. Capitalism as the prevailing system in Europe was victorious and should have provided a continuous and harmonious welfare increase for all. But at least since the Great Financial Crisis of 2008 this has turned out not to be the case – at least for the overwhelming majority of Europeans.

The narratives about the advantages of capitalism told by European political leaders sound more and more hollow and are in stark contrast to the experienced worsening of income and wealth distribution that produces an ever-smaller group of super rich. This situation makes the current European political governments vulnerable. There are two promising entry points for the leaders of neo-fascist movements: **First**, it is sure that the climatic catastrophe will lead to a massive migration from Africa and the Middle East towards Europe rather soon. Even if undemocratic regimes in border regions are installed and militarily supported by the EU, the number of migrants in Europe will be the preferred topic for neo-fascist movements. In neo-fascist propaganda the 'foreigners' - be it African, Arab, or Asian – will replace the 'Jews' of their interwar rhetoric, even more so than already is seen. **Second**, as the US-lead MIC pushes the EU leaders to finance the military goals of NATO at the expense of the benefits of the European social model, the

²¹ In an influential article Louis Althusser had already hinted at the carriers of the structural force of information power early on, see (Althusser, 1969).

²² See (Hanappi, 2022a).

populations of member states will turn against the current EU leadership. Neo-fascist movements will offer nationalist programs adjuring made-up past glory and nationalist independence. It will take some time till this fake message is discovered and neo-fascist politicians will already be in state power when this happens²³. If democratic institutions remain intact, they then will be voted out again – but this cannot be guaranteed.

It is this second element that endangers European unification and due to the economic consequences leads to a further decrease of welfare. In such a dire situation neo-fascist governments typically turn to coercive political and economic practices reminding on Stalinist regimes. It is evident that the sympathy of Europe's right-wing parties for Putin's Russia has good reasons. An additional rational element to make the case for coercive measures implemented by state power are the worsening environmental conditions. Despite the fact that environmental policy is an urgent **global** task, exceptionally strong national measures can be sold as proud national initiative that can save the proper citizens from the dirt brought into the country by 'foreigners'²⁴.

From the perspective of political economy Europe therefore constitutes a risk for the US-led MIC. There are already troubles with certain local warlords in Europe's South-East - like Netanyahu, Erdoğan, Assad and Zelenskyy to name just the most prominent ones – and there is more to expect. At the same time Europe has been a preferred place for the economic expansion of exports of the US service sector, in particular for financial services. In 2022 a massive share of 25.8 % of total exports of services of the USA were flowing to Europe²⁵. This was much more than the share of all product exports from the USA to Europe, 17.8 %, in that year. The centralisation of capital in the USA at the current stage mainly takes place via movements in the global financial sector. Europe has a well-developed banking sector; consumer debt and public debt of the EU members are well organised and mostly are rather transparent. But contrary to the United States taxes are not as easily changed to favour the super-rich as was the case in the USA. In Europe fiscal policy (including tax policy) is in the hands of the different countries' governments. For the profits of the US service industries this means that life is more difficult²⁶. It has to be noted that the war in Ukraine had some beneficial economic side-effects for the USA.

²³ The case of the government of Georgia Meloni in Italy is an interesting forerunner of such a development. As long as a single European country is concerned, the unifying power of the European NATO command is strong enough to subordinate its nationalist aspirations. But there is a critical number of EU countries that could change this state of affairs.

²⁴ This strand of thought has not only been characteristic of classical fascism, it is also alive in the right-wing circles of the USA.

²⁵ The corresponding share of US services flowing to China was 4,6 %.

²⁶ The two main countries in Europe receiving US service exports are Ireland and Switzerland.

With the destruction of the North--Stream 2 pipeline and the sanctions concerning oil and gas imports from Russia the imports of LNG from the USA experienced a boost. Furthermore, the NATO-ordered increase of military expenditure of European states resulted to a large extent in imports of US weaponry. In the end all of these shifts in expenditure had to be paid by European households; no wonder that it needed massive mass media campaigns to blame all the newly emerging hardship on Russia. Of course, Putin had started the invasion of Ukraine in February 2022 and the defence of its Western part was just another logical reaction. But two years of war with two hundred thousand victims and severe economic consequences for all Europeans could certainly have been avoided. The turmoil in the political atmosphere in Europe only just has started and that global finance – with Europe playing an important role – is a very fragile system has already been experienced in 2008.

Based on these arguments, the prediction for Europe is rather sinister. Europeans will enter an economic ice age. For the large majority welfare will freeze or even decrease, an ever-smaller group will manage to cooperate with US capital abroad. What is worse is that coercive measures and militarisation will increase and will make life more troublesome. At least in the longer run another global financial crisis is looming, since - apart from local wars – no profitable investments (based on existing effective demand and short-run profit expectations) can be found by the huge amount of capital cantered in the US. Thus, interest rates in general will stay low. Bad times, but Europeans will survive.

What might happen in the Global South is a different story²⁷. It will be very diverse. In **Latin America** the USA will try to stabilize some strongholds, countries with US-friendly governments like Javier Milei in Argentina. Their dominance in providing weapons will guarantee a certain local success. On the other hand, China, which in the near future will globally prevail as far as economic matters are concerned, will exert stronger influence on other Latin American countries. In fact, I expect a certain complementarity between China and the USA on this continent; a kind of secretly agreed upon cooperation. Russia will be acting with the back to the wall, so it will not have room to manoeuvre there.

India is a very special case. Narendra Modi has cemented its leadership in recent years and has based it on voters from poorer and more religious social strata in India's North. This seems to persist in the near future and evidently can be combined with closer ties to the USA. But as recent elections in Turkey have shown – where Erdoğan's supporters in south-east Turkey have a similar background – the general trend to strongly growing

²⁷ Australia can simply be counted as a part of the US-led MIC, not as a part of the Global South.

populations of large cities in India's South, can quickly reverse a seemingly stable dominance. What clearly can be predicted is that China as well as the USA will try to win India as a strong and upcoming economic partner. An additional problem for the USA will concern the military strength of India, which as a nuclear power is in a stalemate with US-backed Pakistan, a nuclear power too. This should imply that military questions will be kept out of the competition for economic cooperation.

Africa is well known as the world's powder keg in many respects. Not only has it been extraordinarily exploited by the colonial powers of the 19th centuries, slaves and natural resources fuelling capitalism from the first stage onwards²⁸; it still is a hot battlefield for aspiring global empires. With respect to welfare increase the situation measured in personal averages has improved a little in the last decades, but compared to other continents it was left behind. Infrastructure remains poor, the vast majority of Africa's youth lacks the chance to get a good education, for many of them it still is the best chance to join one of the criminal and semi-criminal rioting gangs supporting or fighting one the short-lived rulers of the respective country. It is mainly the double perspective of profitable investment and strategic military outpost that underlies the interest of the different MICs concerning Africa²⁹. Instead of helping to approach global standards these isolated attempts have driven the continent in an economic impasse³⁰.

It can be predicted that Africa will become a dramatically more troublesome part of the world in the next decade. The main reason in this case is the climate catastrophe that has already started to destroy the basic foundations of human survival. Such a development unavoidably results in massive migration movements and violent local conflicts between those that are unable, or not willing, to run away. People living in the wealthier parts of the US-led MIC already have become more used to embarrassing high numbers of death toll abroad - two hundred thousand deaths in Ukraine, several ten thousand killed in Palestine in a few months, etc. – but what might happen in Africa in the next decade will exceed all these catastrophes. Of course, similar catastrophes can also be expected in other single parts of other continents, e. g. there is a very dangerous climatic and economic development taking place in Bangladesh, which probably also will result in an enormous wave of migration.

²⁸ This fact is the most important blind spot in Adam Smith's famous analysis of the 'Wealth of Nations', (Smith, 1776). See also (Fay, 1960).

²⁹ The fact that infrastructure is wanting redirects economic aspirations towards the extraction of natural resources. In this area only a small group of educated workers are needed, which then mostly are sent from the home country of the investing firm – leaving Africa's infrastructure mostly in place.

³⁰ Egypt, Nigeria and South Afrika governments have announced to start a common economic breakout of this bad situation some twenty years ago. Till today not much success is visible.

For the installation of military bases and the recruiting of soldiers Africa will remain important for the three MICs. Desperate young people with little education apart from wearing guns are an important reservoir. But Africa will not develop into an independent political force of itself. It thus also is hard to see how an alliance between Latin America, India, Africa and the other parts of the Global South could be formed. The concept of the 'Global South' itself seems to be based rather on the economic communality that in these areas of the world the first stage of the global production chains of products are located³¹.

Any prediction of what will happen in the next ten years has to consider that two very unpredictable dynamics will shape our future: environmental turmoil and exploding consequences of our man-made information sphere. Probably both impacts will act as amplifiers for the installation of a global and unified new form of autocratic capitalism – partially described above. The path towards this new form is dangerous – extinction of the majority of the species now always is possible – and even if it is mastered, it will not be 'the final best form of all worlds'³². Beyond the next ten years it is certain that knowledge and its scientific application also in the sphere of political economy will have to play a prominent role. To preserve knowledge thus will be a permanent task for progressive forces till then.

Hopes

In mainstream economics the essence of the fact that human individuals do have hopes is encapsulated in the assumption that the 'rational economic individual' possesses a utility function, which it tries to maximise. If it is inborn, if it can change over time, if other individuals' utility functions can enter the own utility function – and with which partial derivative³³ – has been a vital topic of mathematical economists. But as soon as it comes to the usefulness of this assumption the game-theoretic character of human interaction immediately shows that that it is necessary to leave the metaphysical sphere of 'strong but completely unrealistic assumptions', and to accept that humans base their actions on

³¹ Note that in Marxian parlance this mid-term forecast means that for the next ten years the most extreme opponent of global capital, the root of the global working class, will not be able to become a 'class for itself' out of its current status to be a 'class in itself'. A global communist revolution cannot be expected in the next ten years, what rather will take place is the final formation of a highest stage of *global* – authoritarian – capitalism.

³² This vision usually is the most stupid part of the neoclassical model of mainstream economics. It neglects the unescapable disequilibrium character of all evolution and replaces it by a 'general equilibrium' proclamation that is meant to support short-run goals of ruling policy-makers. Note how this attempt resembles the use of religion by ancient dictators.

³³ Compare the most amusing little example of Steve Strogatz (Strogatz, 1988).

the sophisticated, partly overlapping internal models they maintain and update in their brains. Instead of a single inborn, 'private' utility index these models are public and semi-public common knowledge constituting the accumulated experience of social institutions, from the family via the class to the cultural ('same-language') group and to science proper. Of course, these models still carry the intentions of the model-builders; they are inscribed in their structure and often are explicitly included as the set of goal variables, which many models use.

As a consequence, the diversity of entities that transport their intentions into models, the structure of these entities, has to be considered. A model distributed by national mass media, which due to their massive influence might be called the 'prevailing national model' with respect to a certain interpretation of a particular perceived state of affairs, has to be distinguished from the model that a specific class, or a specific individual, within the country maintains as its model of the same perceived empirical facts. These models will differ not only because different social entities have different access to empirical data, they also will differ because the intentions of different social entities, the sets of goal variables they use, have to be distinguished. Examples given: Explain to a less educated, a less 'manipulated', individual citizen why the budget deficit ratio of the country in which it lives should be part of its set of goal variables. Explain to a benevolent government in a country in central Africa why it should abstain from further developing its infrastructure (building houses, sewerage, streets, etc.) because the production of the cement needed for this task is one of the four major sources of the environmental catastrophe that endangers the global social entity 'human species'³⁴.

The overlapping of the different models of different social entities driven by the dynamics of the communication sphere distorts and mixes the goal sets of social entities. While a good harvest had been the hope of the social entity 'farmers' (and a healthy and long life for the human individual) in simpler, earlier times with less interdependencies and communication channels, in contemporary societies the primitive one-to-one relationship between a hope and the social entity that carries it is definitely gone. Seen from a more theoretical angle the emerging dilemma is no surprise. Since models are used to connect the instruments that the social entity controls with the goals that it wants to reach, it is evident that more sophisticated models – mirroring a more interdependent world – will have more contradictory paths that lead from the instrument variable to the goal variable. A *pair of paths* is *contradictory* if one path predicts that an increase in the instrument

³⁴ Compare the concise and thought-provoking analysis provided by Vaclav Smil (Smil, 2022).

variable will improve goal achievement, while the other path predicts a worse goal achievement. In each such case it is the net effect that has to be found out, a well-known task for economists that typically will use econometric estimations to solve the problem. Furthermore, if more than one goal exists, then with larger goal sets the choice of a path that improves goal achievement for one goal will imply less goal achievement for another goal, a phenomenon called goal-conflict, more often. Econometric work is difficult, giving weights to conflicting goals considering their temporal structure is extremely difficult too. The vested interests of other entities that use their information power to implant their models in the model-builders model also are an additional force of distortion – this is nicely touched upon in the signalling models of game theory. All this is fertile ground for a lot of confusion in simple-minded social entities open for autocratic leaders offering clear-cut, coercive pseudo-solutions that in truth only cement their autocratic position.

In other words, the recent decades since 1945 have shown that the long-run project of the French Enlightenment of the 16th century is currently running into a major difficulty. The hope that the distribution of more and more knowledge to all social entities in the world will occur and will suffice to raise humanity to a next level of a truly human species, this hope was frustrated. Of course, some enlightenment did take place, in the last 100 years *science* and its principal availability – though not the capacity of human individuals to understand it – were exploding. Applying it led to an increase of labour productivity that enabled a growth of global population to the level of eight billion people. But the two World Wars of the 20th century were the first signs that something very dangerous is starting to take place in the communication sphere of the human species. Parallel to the by-and-large long-run improvements of the primary metabolism (physical reproduction) of humans, the secondary metabolism (information sphere) was shaken by large-scale waves of nationalism³⁵. Till today such strong waves of shared emotions, mostly distorted and misused by autocratic leaders, which evidently produce a significant impact on the global political economy, are only poorly understood by researchers in political economy³⁶. In the past they manifested themselves mainly as religious or nationalist movements, often as a mixture of both. They usually surfaced when larger parts of a population are experiencing a loss – either by an actual sudden decrease in welfare or by an imagined relative decrease of importance – a loss, which is felt as a loss of social identity. The hope that is then expressed and used by charismatic leaders is pointing at

³⁵ For a discussion of primary versus secondary metabolism see (Hanappi, 2004).

³⁶ How helpless some researchers are when confronted with this phenomenon can be seen by their use of the word 'populism' to characterise them. Compare (Mouffe, 2019).

the possibility to regain an imagined previous grandeur, an exaggerated supremacy of a religion, a race, or a nation for eternity³⁷.

The very interwoven, highly complicated structure of all the models used by social institutions in the world to direct their actions at first sight leaves the impression that little could be said about them and the hopes they generate. But a closer look reveals that the concept of a **structuring perspective** can shed some light on what is going on. A structuring perspective is an assumption on what the strongest, the most pervasive, the broadest distributed model in a society is. Following the historical record four possible structuring perspectives will be distinguished.

- (1) The structuring perspective related to any *religious view* has been dominating the largest part of known human history. It states that a certain predetermined model, expressed as the religion that all human individuals are subordinated to, is true, is deciding what the final result of human actions will be. To maintain and to execute the prescriptions of this 'holy' model a certain group of humans representing the model is needed: the priests of this religion. Of course, the caste of priests did not fall from heaven – though it typically tried to pretend it did so. It was emerging out of the needs of the ruling class, the exploiting class, in early societies characterized by class division. The spread of an appropriate religion helped to cement class dominance and to reduce the exploitative efforts carried out by direct coercive force. As far as the structuring perspective was a successful model, the hopes of the ruling class as well as those of the exploited, which were successfully infiltrated by religion, were simply that the prevailing state of affairs is prolonged. In its more primitive form, the religious perspective held that the strictly hierarchical, military pyramid necessary to execute exploitation should be at the same time the order of the officers of religion, implying that the individual at the top is the ultimate exploiter and God at the same time. As far as different societies adhered to different religions, the wars that emerged were often simple religious wars too. But even in these societies parts of the population escaped the dominance of the hegemonic model and developed their own, independent hopes for a better society. These rebellious social entities – mostly families and individuals – often were remainders of a lost religious war or just mavericks within the hegemonic structure. Therefore,

³⁷ When Hitler promised the 1000 years of an Arian German Empire this resembled the promise of the final victory of God's own people in many religions. Compare the chapter on the ideology of fascism in (Hanappi, 2022).

the hopes in a strictly hegemonic class structure reflect this class structure: The monolithic hope that the existing structure remains stable is confronted by a set of different hopes of groups that want to revolutionise this structure. These opposing forces are rather diverse, because their alternatives are all utopian proposals for the working of a future – not yet existing – society. So far, the history-informed narrative of the religious perspective on the chaos of models and hopes provides a blueprint for the following structuring principles³⁸.

- (2) The history-oriented structuring perspective related to the *nationalist view* is closely related to the just described religious view: The remainders of social entities in areas that just had been lost by a dominating hegemon in a (religion and coercive power combining) war constitute a sleeping danger to the victorious new hegemon. They usually keep large parts of their deeply ingrained cultural habits, in particular the language and the models formulated in this language. If then the coercive power of the new hegemon happens to start to wane away – and each growing empire sooner or later reaches this point – then territories at the borders of its might will start to claim that they are social institutions of their own. They will try to achieve political autonomy on their territory, they will fight to become a nation³⁹. Nations typically form national governments and try to streamline the models used by the social institutions (down to the models that their individual citizens use to interpret the world) which are under their control. Wars predominately become the wars between nations that characterise history till up to WW1. A progressive element in the early phases of nation-building is apparent if one considers that territories in the periphery of an empire often are the most exploited ones. Becoming independent improves the lot of most of the social entities in the new nation, the hope for independence thus is economically often well founded. But as the twentieth century showed, there is an immense danger that nationalist regimes enter a second stage: national racism. The Arian national ideology was built on the explicit exclusion – and killing - of human individuals, which did not belong to a pseudo-biologically specified national prototype. Moreover, the implied ‘cleaning’ of the population soon was not restricted to the domestic territory, but instead a global dictatorship of the supreme own race was

³⁸ Note that the early writings of Karl Marx, from his critique of religion to his treatise on the Jewish Question, touch on exactly this topic; see (Marx, 1843).

³⁹ Garibaldi's unification of Italy, the nation-building after the breakdown of the Austrian-Hungarian empire as well as similar processes in the colonial empires of England and France after WW1 are examples of this process.

envisaged. In its most extreme form this second phase of nationalism was in direct opposition to humanism⁴⁰. As a consequence, the hopes of such proposers of nationalism are directly opposed to the hopes of all people still fighting for the evolution of humanism. National class structures in their different stages of nationalism again mirror the clash – and in early stages the accordance - of hopes. The long shadow of radical nationalism, which first was thought to have been defeated in 1945, has been building up since 1980 (Ronald Reagan) and 1999 (Wladimir Putin) again. It typically goes hand in hand with military build-up, police states, and technological mass-media and surveillance capabilities that enhance the manipulation of models of all social entities. The structuring perspective related to nationalism indeed explains a great deal of contemporary developments in global political economy – and corresponding global hope structures.

- (3) The third structuring perspective is the most sophisticated one; it concerns the *structure implied by the capitalist mode of production*. It is more complicated because it leaves the domain of a diachronic, a history-oriented narrative and becomes a synthetic explanation of what is going on. The starting point of capitalism, its archetypic form is the social entity of the capitalist firm. The behaviour of this social entity, the capitalist algorithm⁴¹, encapsulates a prescription for the behaviour of *all* social entities in the world. In the meantime, this capitalist algorithm permeates large parts of the global set of social entities. It reaches from human individuals acting like ego-firms, one-person firms, to the behaviour of the largest military units in the world. One of the most important properties of this algorithm is that it can easily jump from one field of activity to the next. It only has to be able to transport its 'capital', its power to initiate profits, from one field of activity to the next promising one. In doing so this algorithm again divides societies in classes: One class consists of 'capital' owners whose 'capital' and range of opportunities to employ it is large enough, the other class commands a 'capital' level, which measured against the same limits is zero. Since the zero-'capital'-level class entities simply consider themselves as non-performing ego-firms, they are categorised as 'losers', while the other class of social entities consists of 'winners' – this naming has been made popular by Donald Trump. Because all social entities are alike firms, they all are subject to the same competitive process, which evidently has singled out the winners. Adopting such

⁴⁰ Compare (Hanappi, 2018).

⁴¹ Compare (Hanappi, 2013a).

a world view leaves no room for recognizing class structures. The overwhelming majority of human individuals on earth are losers and the hope of the winners clearly is to stabilize this state of affairs. If the losers subscribe to the structuring according to the capitalist algorithm, then there is no hope for them. The complete individualisation of the world by this type of perspective condemns them to complete fatalism. But class structure has not vanished from the actual global production system, only its visibility underwent a transformation. Shaping the behaviour of all social entities according to the behaviour of capitalist firms had an enormous impact on the growth of technologies and in particular on the growth of overall labour productivity. Profit expectations as the motor of creativity concerning new labour processes and products doubtlessly did raise the global economic performance dramatically. The accompanying advancement of an incredibly more detailed global division of labour was a pivotal ingredient of this process. It is a strange paradox that almost every member of the zero-capital class in this totally individualised world owns an advanced device, a smartphone, which provides the illusion that losers can turn into winners. As in particular the Chinese experiences show, these devices mainly serve to control the mass of losers⁴². But despite the unprecedented advance of technologies and the implied omnipresence of the capitalist algorithm, there still emerge new horizons, which nourish the hopes for a rebellion of the exploited zero-capital population. These hopes become urgent due to two pillars, which are fundamental elements of the hopes of the exploiting class.

The *first pillar* is the prolongation of a world full of a large number of local wars. Ukraine, the Middle East and African states are just the beginning. Such conventual wars are rich sources of profits made without consumer demand, they are excessive consumption of weapons - and human individuals. So, while the thin strata of global exploiters and top leaders of the military branch of MICs can place its hopes on such a scenario - labour saving war technology innovations and further polarisation of wealth and income can support a modest growth of their global capital – this scenario will also produce resistance. All those social entities that are endangered by wars, either because they are potential soldiers and relatives of soldiers or because they fear to lose their basic resources to survive, will desperately hope that wars will end. These hopes will start locally, close to

⁴² Note that this functionality is a consequence of the authoritarian mode of capitalism. In a different mode of production smartphones can serve as the major technical device to enable the mechanisms of global democracy.

these local wars, but they can spread to a **global anti-war movement**. On its way this movement, of course, will have to defeat the currently existing very strong pro-war mass media industry.

The *second pillar* again is a negation of a common hope of the exploiters in MICs. The hope to master the avalanche of recent global crises without giving up the capitalist algorithm is the emotional baseline of capitalist propaganda. The recent four major crises⁴³ have been the great financial crisis of 2008, the migration crisis of 2015, the pandemic of 2020, and the accelerating climate crisis since 2022. The risks of some of these crises might be reduced if the MICs manage to combine into one united globally exploiting class. As already mentioned, such a development probably is even the best prediction for the next ten years. But it is also clear that neither the climate crisis, nor the implied migration crisis and the immediately emerging next financial crisis⁴⁴ can be avoided as long as the capitalist algorithm is the central force of global economic dynamics. The emerging hopes of populations suffering from these inevitable crises will eventually produce different types of movements: One dominant type will be a more radical movement aiming at sustainable environmental conditions for the human species⁴⁵. A few less scientific movements – to say the least – will be movements that try to collect members around specific topics: local nationalism and racism, religious leaders, Corona deniers and anti-scientific believers in general. Only the first movement can count as a source for a serious revolution of the capitalist mode of production; the others, the battle against their continuing influence, will be part of an extended goal set of a **sustainable human species movement**. The hopes of a **global anti-war movement** and a **sustainable human species movement** can and should be combined. Their success is the best guess for a mid-term continuation of the primary and secondary metabolism of the human species.

- (4) Returning to the question of a relevant structuring perspective for the current impasse of the global political economy the fourth possibility now is rather evident: It is **the scientific perspective**. It has to be science that informs flexible responses to threatening environmental disasters, it has to be science that demasks

⁴³ For a more detailed description of these crises see (Hanappi, 2022b).

⁴⁴ It is more difficult to predict when the next pandemic will strike.

⁴⁵ Note that it is not the non-human environment that needs to be protected, but the human species itself, the conditions of its reproduction, that are the subject of the corresponding policy. The involved dynamics is a dis-equilibrium process and not a return to an equilibrium state of 'nature', which some green parties seem to believe in..

authoritarian national leaders, it has to be science that designs the best answers to pandemics, it has to be science that revolutionizes and transforms the information sphere from the currently disastrous arena of capital governed mass media into the backbone of a better society. In the past science often was forced to work in the dark, oppressed by an 'official science', which only was aiming to perpetuate the current power relations⁴⁶. This will also be the case in the next ten years.

Linking hopes and predictions

The path-breaking book of Neumann and Morgenstern started with a concise, axiomatic formalisation of utility theory, id est the microeconomic conceptualisation of hopes, and in the following chapters steps into the jungle of strategic decision-making, id est making predictions about sets of strategic outcomes, commonly known as *game theory*⁴⁷. This paper inverts this sequence: first predictions, then hopes. The reason is simple. The idea that hopes can be encapsulated in a rigid setup of a preference order of an individual human decision-maker is misleading. Hopes are dynamic, hopes are emerging; and not at all inborn properties of human individuals. Most of them grow out of a rich and informed communication sphere. And in this information sphere, which so far has not been reduced to a unified axiomatic formal model of the 'information sphere of the human species', the emergence of preliminary predictions made by social entities is the first step towards hopes. This is why preliminary predictions are described before the emerging hopes are taken into the picture. Both, predictions and hopes, remain in a preliminary and unprecise state – contrary to the aspirations of game theory. But note that this approach allows much better for a flexible response to changing theoretical needs than to rely on so-called 'heroic' assumptions. In reconnecting hopes and predictions an additional advantage is that a mixture of pessimism and optimism can be achieved, which is a necessary ingredient for the stimulation of progress.

The rather frustrating outlook provided by predictions for the next ten years is a bit softened by the discussion of hopes given in the last section. Maybe after the next ten years resistance against the world framed by the capitalist algorithm has grown strong enough to enable a world in which the human species has learned enough flexible –

⁴⁶ The most evident case is weapons and surveillance technology, softer disciplines do their job by distracting intelligent researchers with unnecessary – though challenging – mind games.

⁴⁷ See (Neumann and Morgenstern, 1944) and (Hanappi, 2013b).

scientifically founded - responses to the challenges that it inevitably will continue to have to master.

The capitalist mode of production, the omnipresence of the capitalist algorithm, was an important historical step in the evolution of mankind, no doubt. Now survival demands to leave this stage and to take the next step. On this long-run historical path the following two concepts might have to be saved, to be applied – in modified form – also in future stages.

Market mechanisms in their purest, not distorted form, help to identify needs and their relative intensity. To set up the institutional framework to let them fulfil this useful task is rather complicated, 'markets' do not – and never did - emerge spontaneously.

For **democracy** an analogue statement holds. Democratic governance mechanisms are as complicated as market mechanisms, simple majority rules are insufficient. What science has learned so far on setting them up has to be further developed and put into the practice of global governance. This will be a difficult task since existing power structures will have to be overthrown. Thus, a movement able to exert real pressure, pressure in the realm of economic power, will be necessary. But even before such a force is emerging the theoretical side of the new setup can be worked on.

A concept that needs to be reshaped, in many respects even turned upside down is the concept of the **state**. The slaveholder state, the feudal state, the bourgeois state and the nationalist state all were social institutions, which were meant to manage the working of an exploitative class society according to the needs of a prevailing ruling class of exploiters. In doing so this social institution acquired certain management skills, which will be useful for the next stage of evolution. In most cases it was the expansion of the need for public goods, for commonly used infrastructure, that spurred the need for state management skills – as opposed to an impossible management by private, capitalist firms. States learned to consolidate inherent contradictions between firm intentions and to tranquilize parts of the state's population by appropriate compromises. But whenever a bourgeois state seemed to be too soft in its governance, the ruling class quickly intervened to get it back on track for its central task: Manage a smooth working of exploitation. For a new global state, a different type of power has to provide its strength: Not an exploiting globally ruling class, but a democratically elected – non-exploiting –

global government. Its final goal will not be the maximization of capital accumulation⁴⁸, but the accommodation of the reproduction of the species in a dynamically changing natural environment. So even if some skills and procedures of the old types of states might be useful, the general character, measures and supporting social institutions of the new type of state will have to be newly conceptualized⁴⁹.

The most difficult task for the evolutionary jump to be envisaged will be how to get rid – or at least to scale down – the omnipresent capitalist algorithm in the models of social entities. Most of the success of this task will hinge on the overriding forces concerning the fears of being extinguished either by wars or by environmental catastrophes. Such existential fears can drive the elements of the capitalist algorithm into the background of the internal model-building activities of social entities. If this is an enduring experience, then this algorithm might even be forgotten, in particular if there are no bourgeois state institutions trying to keep it alive⁵⁰. Instead of this algorithm, which constitutes the core of the capitalist mode of production, ***the appropriate substitute clearly is an insisting on science and the further development of scientific methods***⁵¹. Sustainable, peaceful reproduction of the whole species with continuous further development of science and scientific methods can serve as the new motor of creativity and innovation. This vision can serve as utopian goal that reconnects pessimist mid-term predictions with optimistic long-run possibilities. This paper is just a first attempt to formulate such a vision.

⁴⁸ Nowadays usually disguised as the highest possible real GDP growth rate.

⁴⁹ An interesting point concerns the need to turn *useful* old (national) monopolies and oligopolies into the new global state's 'state agencies. No global citizen will want to miss a kind of 'Wikipedia'.

⁵⁰ Compare again (Althusser, 1969).

⁵¹ If scientists ('organic intellectuals') can be considered as a new kind of class, which then is the subject promoting a global revolution has been discussed in (Hanappi, 2020).

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