



## From Integrated Capitalism to Disintegrating Capitalism Scenarios of a Third World War

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### Abstract

In the last decade significant changes in capitalism are appearing, it entered a new stage. After the political breakdown of Feudalism in World War 1 a stage of capitalism that aimed at integration of all parts of society was slowly developing. 15 years later the authoritarian regimes of national socialism, Fascism, intermitted the evolution of Integrated Capitalism. Since 1945 it flourished again, though its political governance on a global level in recent decades ran into more and more contradictions. After the deep economic crisis of 2008 a turning point towards authoritarian governance of capitalism - in particular in the USA - is evident. Since this type of new nationalist authoritarian capitalism destroys global integration it is called Disintegrating Capitalism. An immediate consequence of the global contradiction between worldwide interwoven production processes and rivalries between nationalist regimes is a rapidly rising danger of a third World War. The second, more speculative part of the paper explores possible forms, which this WW3 could take on. A conclusion provides some ideas on possibilities to react to war tensions.

**Keywords:** Global Political Economy, Capitalism, World War 3

## **Integrated Capitalism**

### Integrated Capitalism

World War I has been the ships and merchants of her Majesty to organize cheaper inputs (e.g. slaves) and to transport them to places where they could be used (e.g. American cotton fields), so that finally the corresponding output (e.g. cotton) could become a cheap and plentiful input in another place (e.g. textile manufacturing in Great Britain). Global labour productivity did rise, but evidently each merchant's ship also had to carry soldiers, representatives of the feudal power of an empire. Adam Smith, in 1776, was correct to identify division of labour - to raise labour productivity - as the constituent element of the 'wealth of a nation', though he ignored all direct coercive power that implicitly had been necessary to enforce its global implementation. It was this mechanism of the political economy of merchant capitalism, which married state power (of the feudal class) to economic action (of the merchant capitalists).

At the time of Smith's analysis merchant capitalism already had started to be transformed into *industrial capitalism*. It was straightforward that this new form of capitalism emerged in England: The small island was the centre of global power and was flooded by inputs from all parts of the world. It simply became more and more difficult to process all these imports (e.g. cotton). Thus, the innovation of production processes became the signum of the new stage of capitalism, of industrial capitalism. Adam Smith could already hint at the metamorphosis of his division-of-labour argument from a macroeconomic reason of the wealth of a nation to an organization principle of work at the British factory level. Hundred years later the American Frederic Taylor expanded this microeconomic strand of Smith's division-of-labour argument and ennobled it by calling it 'scientific management'. In fact, the return of the concept to the national arena gave birth to another character mask of capitalism, which is closely associated to industrial capitalism: the entrepreneur. It is this behavioural substrate which incorporated activities, which previously had been attributed to what was called a 'factory owner' that now entered economic history. The entrepreneur was more than an uninspired factory owner, he had an economic mission of highest importance, namely to combine and to apply existing inventions to advance production techniques, i.e. to increase labour productivity. And at the same time to anticipate, which new, eventually produced products could be sold. The

personified economic actor of the entrepreneur was the hero of industrial capitalism, in particular in the second half of the 19<sup>th</sup> century. The triumph of the class of the non-feudal bourgeoisie, a small part of it indeed coming close to the ikon of an entrepreneur, certainly was to get rid of the feudal class. The dark side of entrepreneurial behaviour, of course, was the emergence of local unemployment wherever human labour input could be saved. In the most entrepreneurial states the conditions of the working class deteriorated the fastest. Working classes rapidly developed their class consciousness, and as it was emerging from larger local factories it became *national* working class consciousness. In Europe the contradiction between working class and capitalist class became an explosive national mix in many states just before WW1. This war, indeed, was not just the breakdown of the old European feudal state order; it also was a showdown for the class contradictions within each state.

The first result of this turmoil was that the nature of the political entity of a state had to be redefined, the feudal definition was dead. The different inter-class wars in European states were decided in just a few years. With the exception of Russia<sup>1</sup>, the national bourgeois classes did prevail, and with some concessions to labour parties were able to establish what has been called *integrated capitalism* (Hanappi, 1986, 2018a). It is important to see that this new stage of capitalism was built in particular *on the level of a specific nation state*. It was on this level where the integrating class compromise was fixed. In a sense, the trouble with Fascism and Stalinism was already presaged by this focus on the nation state.

A second world historic earthquake was the fact that the old feudal superpower and star of industrial capitalism, Great Britain, had lost its global hegemony. Within a decade it became clear that the USA will be the new hegemonic power of integrated capitalism. As a former colony and safe haven for too progressive Europeans it was well prepared to become the home for a new and unfettered form of capitalism. Its population consisted mainly of Europeans coming from different nations, who took away the territory from red Indians and in the beginning still had used African slaves as a major part of the working class. Racism vis-a-vis these two groups was paired with openness for different white skin populations – though a dominance of the group of white Anglo-Saxon Protestants quickly developed. Nationalism in

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<sup>1</sup> In Russia the victorious Bolsheviks established a strictly organized hierarchical party elite that became a new ruling class. Coercive power was monopolized and concentrated, and it controlled all economic processes. The integration of all work processes as processes controlled by this state elite class made the emergence of an independent working class impossible. What remained was more or less unorganized local anti-state resistance. The ideological damage that resulted from such a perverted development of a communist revolution can hardly be exaggerated.

the USA therefore often occurs as a substitute for the class consciousness of a white working class, which in a racist way looks down on a still less reputable black (and coloured) population. There never had been a comparable national class struggle between workers and capitalists, other contradictions – in particular racism - had dominated the political field. And after all the USA consisted of many rather large federal states, nevertheless held together by a strong centre and a common language. As a consequence the US type of integrated capitalism developed its own mechanisms, which differ from the European varieties.

In Europe the dramatic intermezzo of Fascism showed how weak the first attempt to build a stable form of integrated capitalism indeed was. The mechanics of the success of a fascist movement can easily be formulated. Any type of Fascism builds on nationalism. Its first step typically is to blur economically determined class contradictions – it propagates that the observed splits in society run along the distinction between members of the domestic nation and foreign elements. To make this argument powerful enough two conditions have to be met. First, the alienation process – the distance to the globally divided labour process - must have proceeded far enough to hide the individual economic position in the work process. Second, information technologies and media organisation must allow direct manipulation processes that dominate internal model building processes of individuals. Once the image of ‘the foreigner’ has been installed in the minds of a large enough part of the population, it has to be filled by real and observable representatives. This will then amplify the pretended validity of the Fascist internal brain model used. When Fascism first occurred in Italy after WW1, in some aspects it already had a forerunner in French history: Napoleon III had used the defeat of the bourgeois revolution in 1848 to get into state power with the help of a partly confused French population, old class structures fell apart and allowed him to drag together a sufficiently large part of supporters. The shake-up of traditional class structures during the times of an upcoming revolution is certainly an important element increasing the vulnerability of a society as Fascists start to destabilise it. Why are class structures getting fluid as an existing social structure of accumulation<sup>2</sup> reaches its end?

The capability of a social structure of accumulation can be measured by its ability to reconcile the continually upcoming contradictions within a society. Most of these conflict buffers materialize as institutions. Despite a certain flexibility of the institutional framework its rigidity continually becomes tougher, the share of the ruling class that manages it grows and becomes more influential. Additional to this general trend the strategy of the social-

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<sup>2</sup> The concept of a social structure of accumulation has been introduced by David Gordon, see [Gordon, 1978].

democratic labour movement in Europe after WW1 was to use its participation in national state power to limit the core activity of the ruling capitalist class, i.e. to limit profit maximisation. In this situation the first naïve attempts to come up with a new model of integrated capitalism had to face the difficulty that the free market idea proposed so forcefully by the economic school of marginalism since 1874 had not left any role for a political institution like the nation state. The Great Depression mainly reflected the short-cummings of a global state system based on uncontrolled local dynamics, dynamics of capitalist firm behaviour faced by powerless and disoriented national state bureaucracies. The economic disaster from 1929 onwards prepared the ground for Fascism, also known by its more telling name: National Socialism.

As this name frankly displays, the new movement redefines socialism as a national agenda. Instead of solving the conflict between exploiters and exploited by an institutional framework representing integrated capitalism, it replaces the emerging elements of such a framework by an authoritarian police state, which founds itself as the political expression of the will of the legitimate inhabitants of a certain geographic territory: the nation state. Overwhelming state power, ideological streamlining, and a clear-cut image of the enemy of the nation – the foreigner – are the components, which release the supporters of National Socialism from their uneasy identity problems. It does not solve national class conflicts, it replaces them by a command economy that forces larger parts of the population into military duties and the production of weapon industries. The state of National Socialism necessarily is in permanent war preparation, which eventually swaps into actual war. World War 2 was started by this unavoidable internal dynamics of National Socialism. And it started in Europe, Germany and Italy in the lead, because the multi-cultural mosaic of the European peninsula admitted National Socialist leaders to draw a clear picture of the enemy in the immediate neighbourhood. As an important complement anti-Semitism allowed to denounce internal enemies of the new regime, a clean-up within the nation could be used to satisfy many of those who had felt socially deprived in the interwar period. The military success of National Socialism in WW2 was impressive. It showed the enormous potential of authoritarian streamlining of ideology along the lines of nationalism. It could be argued that it were only the special features of integrated capitalism in the USA, which in the end defeated National Socialism<sup>3</sup>.

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<sup>3</sup> In fact, some influential US politicians were proposing to join Hitler's fight against the Soviet Union, since the latter had to be considered as the main enemy of capitalism. If they would have been able to determine US

The proper system of integrated capitalism then took hold of Europe and North America after WW2. A well elaborated institutional framework, what later was called the European Social Model, enabled a flourishing type of integrated capitalism that survived in industrialized countries for more than 70 years without leading to a new world war. Class conflict in economically advanced countries to a remarkable extent could be sublimated by distributing a bit of the gains of the tremendous increase of the fruits of the global division of labour to the richer working classes in these nations. Integration though, always took place on a national level. When the working class of a certain country became a so-called 'middle class' it was due to its successful interventions on the level of the nation state. This type of integration of opposing classes allowed for the illusion of an already existing socialist setting: the social position of an individual in a certain country only depends on its own abilities. But this illusion also necessarily included ignorance with respect to the majority of poor countries in the world. In other words, exploitation by exchange rate regimes and global value chains had to remain blind spots for the general public of OECD countries.

Nationally integrated capitalism in economically advanced countries had a handful of most essential features:

- ***Class consciousness*** of the classes (determined by their position in the production process) had to be ***channelled*** into the ***party programs*** of a corresponding ***representative political party***<sup>4</sup>.
- The ***public discourse*** had to be ***steered*** by a specialized branch of ***information management***, i.e. a media sector that provides ideological streamlining as well as a certain level of 'acceptable' critique.
- ***National fiscal policy*** had to assure that output could be sold to a public that held enough money to do so. This implied not just an appropriate tax and subsidy system but also included the use of an ***increasing government debt***. The latter had to be understood as the price to be paid for profits measured in money terms. The role of the creditor to the nation state could eventually be distributed across different classes. Thus a delicate balance between

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politics, then a completely different course of history would have resulted. Fortunately, the numerous Jewish emigration to the USA that had started already in the 19<sup>th</sup> century (supported by all emigrated European scientists) was influential enough to avoid such a coalition.

<sup>4</sup> There typically exist two parties: A conservative party representing the ruling class (firm owners and their private and public managers) and a progressive party representing the working class (all employees with no ruling power). In Europe national conservative parties were joining in the EEP fraction of the European parliament, while the largest part of national progressive parties had been organized by the Social-Democratic fraction of the latter. A rough correspondence to Republicans and Democrats in the USA is evident. But during the last fifteen years this simple picture of politics was dramatically changing.

the financial positions of the two main classes became a central task of the nation state: *National stability* including a moderate rise in government debt became the *mantra of integrated capitalism*.

Though economic policy to a large extent remained a national affair, in a rapidly globalizing human production system the interplay between countries has been evolving too. Its development, essentially characterized by exchange rate systems, was a rather unguided process signalling that no conscious global political actor was surveying it. Economic theories, usually running under the header of ‘open economy macroeconomics’, reflected this ambivalent economic history. From the end of WW2 till the break-down of the fixed-exchange rate system of Bretton-Woods in 1971 mainstream economic theory praised fixed-exchange rates. Then, with the conservative roll-back (since 1978 Margret Thatcher) and the second wave of strong US dominance (since 1981 Ronald Regan) flexible-exchange-rate systems became the preferred darlings of mainstream economic theory. But in the mid-eighties the European Union – representing mainly European transnational firms – did strike back by planning a European political and economic entity with its own currency, the EURO. Again then, (since 1999) within the Eurozone there are no exchange rates, it is a fixed-exchange-rate system. Of course, Eurozone supporters in mainstream economic theory praise it again. Though major arguments just repeat what had been put forward before 1971, there is a major difference in the current constellation.

What has not received appropriate attention in mainstream economics, but has played an essential role in the last half century is the emergence of international finance. The possibility to transfer exploited money amounts to financial centres, to design global exploitation mechanisms, i.e. ‘global value chains’, based on worldwide exchange rate constellations and a similarly diverse mosaic of national fiscal systems – these are features that simply could not be grasped with the rigid national-account-macroeconomics that Keynes had devised for the analysis of the Great Depression. It is this short-coming that enabled the sudden prominence of study fields called ‘financial economics’. Though the latter theoretically just scratches the surface of the underlying new political economy. It just generalizes some short-run techniques of one type of the actors, namely of financial centres. The whole political environment, not to speak about environmental limits, remains completely external. At best, some naïve allegations stating that all these externalities somehow also follow intuitive finance considerations are offered as an excuse.

But the latest developments that are now empirically only too visible are calling for a novel theoretical explanation of the dynamics of global political economy. Let me arrange the contours of such a theory around the concept of ‘Disintegrating Capitalism’.

## **Disintegrating Capitalism**

While Integrated Capitalism was based on the idea of an institutional framework that allowed stable exploitation on a national level, Disintegrating Capitalism first of all is aiming at hierarchical subordination of employees within three, almost continental political units: USA, Russia, and China. Contrary to Integrated Capitalism - the name already indicating its inward bound orientation towards internal, national compromise solutions – the new Disintegrating Capitalism considers internal problems as solved by direct coercive power supplemented by new information technologies. The adjective ‘disintegrating’ thus points at the new, outward bound aggressive policy that this new type of capitalism exhibits as a central feature. The new authoritarian empires need confrontation with each other to justify their own internal, inflexible command structure.

It is most interesting to see how Disintegrating Capitalism has been emerging out of its ability to overcome – at least in the short-run - the ever stronger contradictions that evolved in the last two decades of Integrated Capitalism.

The first challenge of Integrated Capitalism had its roots in the incompatibility of independent national governance systems and global trade and finance. The fixed-exchange-rate system of Bretton Woods had to be removed already in 1971. The rapid fall of the US Dollar opened the door for a new launch of US hegemony in global trade. The corresponding losses of European and Japanese exports curbed growth processes there and lead to a remarkable increase of government debt<sup>5</sup> in these competing capitalist countries. As a consequence, the social-democratic governance recipes of Integrative Capitalism became less attractive for the national bourgeoisie in the concerned countries. Government debt is money forwarded by creditors, i.e. wealth owners, to maintain current effective demand and thus political stability. A sudden increase of government debt means a rise of the price paid for these conditions. During the 80-ties a more direct form of national exploitation, based on less integrative rules started to be propagated by national capital owners in Europe. And in the USA with the rise of

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<sup>5</sup> Remember that in a nation-oriented Keynesian framework it is necessary to increase public debt to stabilize employment if additional unemployment occurs in export-oriented branches.



Ronald Reagan the first 'strong man' appeared again on the political stage in 1981. His double strategy consisted in condemning the state, e.g. his statement '*In this present crisis, government is not the solution to our problem, government is the problem.*'<sup>6</sup>, and at the same time to install stronger state power. His government expenditures for military expenses exceeded all known limits. He joked, '*I am not worried about the deficit. It is big enough to take care of itself.*'<sup>7</sup>. In retrospect, it is clear that Reagan was a first role model for Disintegrating Capitalism; the government he despised was that of Integrated Capitalism, the government form he introduced was the authoritarian leader model: '*One hundred nations in the UN have not agreed with us on just about everything that's come before them, where we're involved, and it didn't upset my breakfast at all.*'<sup>8</sup>. Reagan's kind of rhetoric, mixing contradictory claims, performing as a national hero and as an example of the simple man in the streets at the same time, a leader and also a member of the mass that follows his proud course, this entire habitus did not have a place in Integrated Capitalism. The latter still insisted on an element of enlightenment, of truth and compromises reached by mutual trust.

With Reagan's new political style, the first contradiction between national governance and global system was transforming into a second contradiction: The capital exports to an ultra-conservative USA coming from all parts of the world soared, not the least because of the sudden jump of interest rates that Reagan's boost of military government expenditure had induced. This led to less capital and increasing interest rates in the rest of the world. In Europe firm bankruptcies due to exploding capital cost led to a jump in unemployment. This was the emerging second contradiction. Despite its promise to stabilize capitalism, Integrated Capitalism was evidently unable to do so. High unemployment levels had occurred again, and had come to stay.

Finally, a third contradiction emerged almost unnoticed. With capital now strongly concentrating in Wall Street, the command centre of financial capitalist decisions had moved far away from all the other places in the world where physical exploitation processes as well as physical consumption process – e.g. in indebted European countries – took place. With that change the focus of global capitalism shifted towards exchange rate exploitation and worldwide value changes; it more often contradicted the needs and ambitions of local national ruling classes. The special role of the USA in this transformation has to be highlighted. The USA now were more than just another nation state. Its capitalist class was the financial

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<sup>6</sup> See Ronald Reagan's First Inaugural Address.

<sup>7</sup> Joke at the Gridiron Club annual dinner (24 March 1984).

<sup>8</sup> Reacting to international criticism of the US invasion of Grenada, during [press conference](#). (3 November 1983).

capitalist class of the whole world. It was in charge of global money, the US Dollar, and global credit. Seen from this perspective, the financial crash in 2007 was just a burst of a housing credit bubble in the home of capital, which could be overcome with moderate damage by printing new Dollars. The catastrophic amplification of this event in the periphery, i.e. the rest of the world, is owed to its rigid financial dependency on a financial centre, which it cannot control. This is the real background of the fashionable interpretation of ‘financial markets’ as a godlike power that honours or punishes ‘correct’ national behaviour.

Before a conclusion on the features with which Disintegrating Capitalism overcomes these contradictions can be drawn, it is necessary to characterize briefly the developments in Russia and China<sup>9</sup>.

‘Socialism in one country’, Stalin’s famous slogan from 1924, can be taken as a starting point for the first 70 years of post-feudal Russian development, see [Stalin, 1925]. To understand it in terms of class dynamics some special characteristics of the large territory of the Czarist empire, which it had to revolutionize, have to be sketched. The vast majority of the population still were workers in agriculture, framed as feudalism’s traditional farmers’ class, a small proportion in some bigger cities – estimates range between 10% and 15% - could be considered as modern proletariat. Lenin’s political talent primarily had consisted in building a coalition of these two classes that was strong enough to seize power during World War 1. Once in state power, a new ruling class had to be formed more or less from scratch. Stalin and Bucharin proposed to form this class as the carrier of national communism in the Soviet Union. The vacuum of political governance after feudal Czarism had to be filled with an organisational structure that was strong and rigid enough to keep the Russian territory under a unified control. While this organisation nominally had to be the communist party it was evident that the command of the production and distribution system had to be enforced by an apparatus that had to be administered and policed by a hierarchy of functionaries. Over the following 70 years the new ruling class therefore developed as a hierarchical structure of members of the same political party. The hierarchy within the party correlated not just with consumption possibilities but also with the capacity to exert command in economic power and direct power. Both dimensions of power thus were united in the respective hierarchical position of a person, or a small pressure group. The most essential binding element for such an organisational structure probably is the fetish of a common enemy. A fetish, of course, only works and materializes as shared communicated content if it to some extent really exists.

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<sup>9</sup> A more detailed treatment of Russia’s and China’s history goes beyond the possibilities of this survey.

The capitalist states surrounding the Soviet Union and trying continuously to destabilize it internally were real. The core of Stalinist policy consisted of misusing this fact to transform the Soviet Union into a police state. The first economic task of this new ruling class was to build basic infrastructure. For this goal the concentrated direct force of the state was used to redirect economic activity away from agriculture and towards heavy industry. By and large these efforts were successful, though the resistance against Stalin's regime could only be broken by state terrorism. World War 2 then allowed this regime to redress its rigid autocratic organisation as a nation-saving affair. After Stalin's death in 1953, the following party leaders rather desperately tried to maintain the rigid party organisation, the heart of the Soviet Union's ruling class, while a renewed Integrated Capitalism in the USA and European countries flourished and allowed its working classes considerably more consumption and liberties than in the USSR. It is not surprising that in such a situation it was more and more the top personal of the secret service of the police state that acted as leader of the USSR. In 1990 finally the satellite states broke away and Russia lost its role as second centre of a bipolar world. Today, it is again the idea of nationalist pride, nationalist ideology that helps the former head of secret service, Vladimir Putin, to maintain political unity. Of course, military and police power still have to play their role as the backbone of the system. As partly opposing class forces some circles of so-called oligarchs have started to play a role, which eventually might become dangerous for the regime.

Is this social setting to be interpreted as a form of capitalism? In 1945 George Orwell in his famous novella 'Animal Farm' suggested that Stalinism is just another form of the same type of capitalist exploitation. Orwell's intuitive guess can – and did – lead conservative interpretations to conclude that capitalist exploitation is an innate property of human behaviour, it always will reappear in all human societies. Now, in 2018, we would hold that a more progressive interpretation of Orwell's satirical tale seems to be more adequate: Stalinist production systems - authoritarian variants of capitalist exploitation - in Russia and China survived, and in the case of China are even thriving. Nevertheless, they produce such severe global contradictions that their collapse is foreseeable. The USA, the traditional stronghold of capitalism, with president Trump is turning into a similarly authoritarian system<sup>10</sup>, which underlines the global dominance of this latest form of capitalism. To call this stage of capitalism Disintegrating Capitalism expresses the prediction that the core of capitalist

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<sup>10</sup> Seen from this perspective the support of Trump's election campaign by Russia appears in a different light.

exploitation - what has been defined as the capitalist algorithm in [Hanappi, 2013a] – with this latest turn will reach its limit. It will be unable to resolve the contradictions it produces.

Russia is linked to the global economy primarily via the military power of its ruling class, and as a consequence via its importance in weapons production including military research. The second important link stems from its oil and gas reserves, which are particularly relevant for Europe<sup>11</sup>. As the sudden loss of power in 1991 showed, the strictly hierarchical internal power structure is rather fragile if pivotal personalities cause a disruption in the chain of command<sup>12</sup>. Stability in Russia currently is owed to the skills of president Putin, he still is an experienced former head of Russia's secret service.

The official turning point towards capitalist algorithms – a step taken in Russia by Boris Yeltsin in 1991 – happened much earlier in China. With Deng Xiaoping becoming the 'most influential leader in the party after Mao's death in 1976, the turn to an official appraisal of capitalist algorithms happened 1982. The PRC adopted a constitution proclaiming a 'Socialism with Chinese characteristics'. In Deng's words: 'It doesn't matter if a cat is black or white, so long as it catches mice.' In this analogy the colour of the cat is either 'socialism' or 'capitalism', the catching of mice is the increase of output, China's GDP soared. The earlier start of arrangements with internal and external capitalist processes paid off. Furthermore, the need to control an extraordinary large population made a party organisation necessary in which each node had to assume its respective military, economic, and political authority simultaneously. Of course, despite its sophisticated structure the network of China's communist party experienced many challenging problems. It managed to escape a demographic explosion, but the contradictions between ever larger cities and the open land get worse. Catastrophic environmental conditions meet a population eager for further mass consumption goods – often implying further environmental damage. With respect to class struggle the higher ranks of China's ruling class are relatively safe. As a recent study shows, China's citizens have more trust in their national leader than in the local politician, whom they meet in their local community. The national myth of a long-run superiority of Chinese culture has been revived since Mao's death and is expressed, e.g. in a very ambitious expansion of academic research programs.

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<sup>11</sup> When it still was connected to its European satellite states the deal was to provide cheap energy in exchange for more advanced manufactured goods produced in satellite states.

<sup>12</sup> A detailed treatment of the Soviet Union's collapse from Gorbachev to Yeltsin goes beyond the scope of this text.

The downside of China's lead in more and more areas of global capitalism might be that a global capitalist crisis hits a strongly interwoven Chinese economy harder than a more isolated country. But the financial crisis in 2008 showed the opposite: China had learned its Keynesian lesson and with large publicly financed infrastructure programs had kept its growth path on track. Since more than a decade it also spread its wings to create global outposts of Chinese influence in the world – economically and politically. The chosen approach usually is prudent but decisive. And there is always China's longer run global strategy in the background. Its most recent efforts concerned a streamlining of its internal lines of command. With Xi Jinping a strong and charismatic leader of the ruling class has come into power. As in the other examples of large authoritarian capitalist nation states the top families of China's ruling class have amassed enormous wealth.

China's major potential is its large population that combined with a disciplining work organisation makes it the star of global commodity production. It is also particularly remarkable that Chinese culture remains an internal affair, not only because of the language barrier but also due to government policy. But perhaps the latter property will change soon if ever larger numbers of tourists and students from China travel to Europe and elsewhere. Disintegrating Capitalism also produces its own, typical global citizen, which surpasses national habits.

Unfortunately, global politics is not in the hands of the mass of democratically organized ordinary citizens – yet. It evolves on the basis of more or less unconsciously taken actions of classes and subclasses, eventually represented by some political entrepreneurs, with communications usually transported by biased media. In such a situation it is clear that the very meaning of democracy, of well-specified democratic mechanisms, is only just emerging<sup>13</sup>. Given the current empirically observable trajectories, the chances that global democracy can develop at all are not too good. It might well turn out that the human species is doomed to vanish during the current century.

## **Scenarios for a Third World War**

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<sup>13</sup> The central deficiency of most theoretical models of voting theory and democratic mechanisms (including social choice theory) is an inadequate treatment of internal model building of agents. Too demanding assumptions on information acquisition and information processing capacity, and missing modules for communication between agents are typical severe mistakes.

In March 1938 the most important scientist of the 20<sup>th</sup> century<sup>14</sup>, John von Neumann, wrote a letter from the USA to his friend Rudolf Ortway in Budapest. He was sure that nothing could prevent World War 2:

*‘I don’t believe that the catastrophe will be avoidable. The arms race is even more intensive than it was before 1914. The view (anyhow a bit artificial and contradicted by all historical experience) that the (contemporary) dictatorships are by nature more pacific than the monarchies (of yesteryear) has been contradicted by the events of the recent past. Thus, since we don’t know the “real” mechanism anyway, in my opinion the strictest empiricism is called for. What did happen in 1914 will happen again a fortiori. What needs proof is not why this or that thing will happen (although such a proof would not be difficult, using the common devices of dialectic) but rather why this or that thing will not happen. And for that, I see no sufficient reason. ‘. [Neumann, 1938]*

Von Neumann’s letter is remarkable for several reasons. First, it expresses his pessimism with respect to possibilities to prevent the next World War (it officially<sup>15</sup> started in September 1939) and grounds it on empirical observations, e.g. the growth of military expenditure. Second, he mentions dictatorship as a characteristic state form that leads to military conflict; this evidently corresponds to the authoritarian turn that Disintegrating Capitalism implies. Third, while he thinks that a proof of his pessimism on empirical grounds is more important, he also hints at the possibility to predict the steps leading to war. And he proposes to use a certain method to do so: *The common devices of dialectic!* In other words, the staunch anti-communist, or more precisely anti-Stalinist, John von Neumann as a classically educated central European academic proposed a scenario approach as an exercise in classical Greek (and Hegelian) dialectical style; i.e. by proceeding in steps of build-up of contradictions and their resolution as synthesis in newly emerging dimensions.

What was visible for a commentator at the Institute of Advanced Studies in Princeton in 1938 might be compared to what is visible for social scientists in 2018. Today, the increase in military expenditure is consistently reported by SIPRI (Stockholm International Peace Research Institute), compare diagram 1. Since the collapse of the Soviet Union, military expenditure has been tremendously increasing, in particular in the USA. The military dominance of the latter is impressive; it spends more than the sum of the next seven largest

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<sup>14</sup> Von Neumann’s influence on mathematics, theoretical physics, economics, computer science and biology can hardly be overestimated. For his foundations of game theory compare [Leonard, 2010] and [Hanappi, 2013b].

<sup>15</sup> On 12<sup>th</sup> of March 1938, just before Neumann wrote his letter, the annexation of Austria by Nazi Germany took place, an event that could as well be seen as the start of WW2.

military budgets of other countries. But since 10 years China’s military expenditure started to catch up.

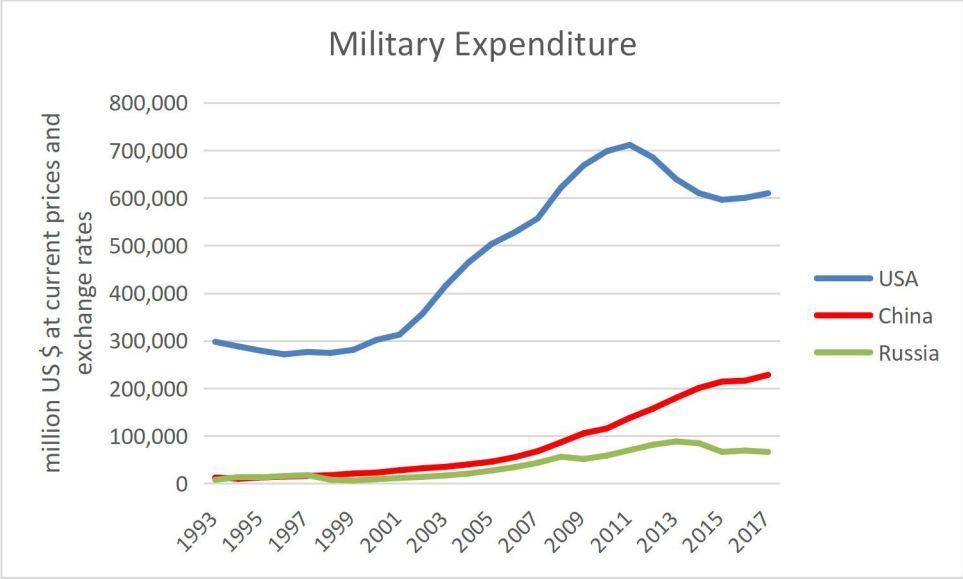


Diagram 1: Military Expenditure

Source: SIPRI

A further push of expenditure in 2018 has been already initiated by Donald Trump.

Contrary to John von Neumann’s judgement on the situation in 1938 it nevertheless is still not too late to stop war preparations. The chances for a peace-keeping intervention are still there, but to get a clearer picture of their forms and prospects it is necessary to imagine first the ways in which the worst, a World War 3, can happen. This is exactly what John von Neumann avoided: A scenario approach based on dialectics.

What follows are three scenarios of different forms of WW3. They should be read as purified thought experiments and not as parallel forecasts. As the analysis of WW2 in retrospect showed, a modern World War always will be a clash of several different global contradictions that at a certain point in time are getting synchronized, accumulated and expressed as violent explosion of military fight. The three types of WW3 exposed therefore are meant to depict different sets of class motives for a better understanding, while in a real WW3 they, of course, will be mixed in unforeseeable proportions.

**Scenario 1: A classical truel: USA-Russia-China**

Since the most significant appearances of Disintegrating Capitalism as authoritarian governance form currently are the USA, Russia and China it is tempting to model a possible Third World War as a truel. A truel is an extension of a pistol-duel to three shooters. This type of situation has been modelled by game theorists and lead to some surprising results<sup>16</sup>. To derive the probabilities of survival of the three enemies USA, Russia, and China several rigid rules of the analysed truel have been introduced:

- Shooting order is determined by drawing lots randomly.
- They continue firing at each other in this order until only a single entity is alive.
- All shots are lethal, and everyone knows that entity USA hits in 100% of all shots, Russia hits in 80% of all shots and China hits in 50% of all shots.
- Each entity chooses its ideal strategy.
- Each entity has the option of intentionally missing.

With the use of transition matrices this special case can easily be solved<sup>17</sup> and it is found that the probability to survive the truel is highest for China – the worst shooter (!) – with 52%. The second best survival rate is 30% for the USA, the best shooter; interpret this as its overwhelming military power. The worst chances to survive are the 18% survival rate of Russia, a medium level shooter. Remarkably, it turns out that it is advantageous for the worst shooter to shoot in the air, i.e. to avoid the battle, as long as the two better shooters fire at each other.

This little formal narrative<sup>18</sup>, despite its short-cummings due to rigid assumptions, is quite telling. In principle, in 3-person games it can quite well be the case that the chances to survive are *not* best for the strongest player. Moreover, the necessity to enter such a game of simultaneously shooting at each other (WW3) at all is quantified: If the utility to carry on without WW3 is multiplied by one minus the expected survival probability, then this expected utility can be compared to the expected utility derived by multiplying the survival probability with the utility of being the sole survivor. As long as the former is larger than the latter for each of the three no WW3 will be started.

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<sup>16</sup> An early formulation of the problem can be found in [Kroetke, 1975].

<sup>17</sup> Details on this calculation can be found at Presh Talwalkar's webpage '[Truels, or how game theory may explain survival of the weakest](#)', September 2007.

<sup>18</sup> The narrative is an extension and modification of the well-known game-theoretic 2-person models of stable deterrence, see [Luterbacher and Ward, 1985].



Resistance against war in the general public can modify not only expectations on the utility of being a sole winner, public opinion also influences military power because government expenditure devoted to warfare reduces resources available for domestic use. All this clearly is part of the tool box of global peace movements.

To include Europe as a fourth player is inadequate since the turn to large authoritarian political entities implies also a turn to military regimes. Thus NATO is the relevant entity in charge of the European peninsula. And since the end of WW2 it still is an US general who is the high commander of NATO in Europe. Seen from this perspective the efforts of some EU officials to build-up an independent European army are futile. As Donald Trump frankly observed Europe's contribution should consist only of financial support for military expenses (2% of GDP), while military and political command - Trump is an enemy of the political aspirations of the EU - should stay under US command. The largest gain of territory of NATO was the eastern extension of the EU in 2004. The immediate inclusion of the new EU members in NATO went almost unnoticed in the public, showing the ignorance, the missing attention of political economists concerning the upcoming military dimension. More recently, the military strategy of Trump seems to include the possibility to delegate part of local operational responsibility to close vasals, which receive massive weapon support from the US, e.g. Saudi Arabia and Israel in the Middle East. Turkey, one of the strongest NATO branches in the area is a special case. It seems to have been allowed to destroy an emergent state of the Kurdish population, which would have been closer to the European style of governance. The fact that the EU is practically impotent to interfere is just another proof of its irrelevance in the global 3-player-game.

## **Scenario 2: Dissolution: Multiple civil wars in many main countries**

Another view of global war sees it as parallel smaller civil wars in many countries. The global focus is split into fights within nations or regions. The theoretical point of departure of this perspective is the assumption that the dominant horizon that shapes the internal model-building process of class members is restricted to their local, 'cultural' environment. National classes, alienated and confused with respect to the existing globalised production system, only can react to their relative welfare status; either relative to other national classes or relative to the immediate past. Though mainly based on emotions, on feelings instead of theory, the correlated political actions are directly related to observable welfare effects, e.g. household

consumption due to either increased profits or increased real wages. Blindness with respect to everything that happens outside the own nation state is a necessary ingredient of national class rhetoric<sup>19</sup>, in a sense it is the price to be paid for that veil of concreteness. The commonly used name of this successful local party strategy is 'populism'. It is the foundation of national class struggle that eventually takes on the form of civil war.

In Europe populism comes in two varieties: right-wing populism and left-wing populism. Both variants – sometimes implicitly, sometimes explicitly - refer to a past historical national state form that they propose to return to.

Right-wing populism basically aims to re-install the authoritarian, racist regimes that seized power in Germany and Italy during the 30-ties of the last century. In ideological warfare it is characterized by xenophobia and – with the exception of right-wing populism in Israel – anti-Semitism. With respect to the organizational setup of the ruling class it proposes a hierarchically stream-lined police state; and tries to transform existing institutional frameworks in that direction as soon as it comes into state power.

Left-wing populism wants to return to the national model of Integrated Capitalism that prevailed in the first three decades after the end of WW2. It thus insists on the institutionalized solutions to class struggle – compromises between national classes - that have been emerging in this period; and aims at extending them to reach outcomes that are more favorable for the exploited classes and several minority groups in society<sup>20</sup>. While right-wing populism tends to form coalitions with the traditional national ruling class, left-wing populism tends to form coalitions with the remainders of social-democratic parties in power at the height of Integrated Capitalism.

With Integrated Capitalism vanishing as the globalization of the human production system is accomplishing both populist visions are striving for power. Right-wing populism always is the first mover since it directly opposes Integrated Capitalism. And it indeed can point to the fact that Integrated Capitalism failed to overcome class antagonisms, failed to fulfil the promise of a substantially better life for the majority of people. This became more than visible - it was directly felt - as soon as the great crisis of 2008 occurred. Right-wing populism therefore can use traditional national electoral systems to get into state power, from where it

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<sup>19</sup> In sociological research the phenomenon of blind rhetoric has been studied under the header of 'polarization' of 'opinions'. A most interesting survey, including simulations of opinion dynamics, can be found in [Bramson et al., 2016]. As expected, the arbitrariness of the dynamics of 'opinions' (without roots in political economy) is transferred to an equal plurality of algorithmic models to describe them. Formalisms simply cannot substitute the content of vaguely defined concepts.

<sup>20</sup> Compare [Mouffe, 2018].

then can start to transform states<sup>21</sup>. Left-wing populism, the second mover, reacts on the destruction of the traditional institutional framework, in Europe mainly appearing as the ‘social net’ of the so-called ‘welfare state’. But evidently this type of populism has an organizational deficit: The representatives of Integrated Capitalism are discredited and cannot act as leaders, the movement therefore is forced to experiment with new forms of national organization. More participatory forms of democratic organization take more time, and with multiple social groups involved this weakens this movements strength vis-à-vis right-wing populism. Furthermore, its vision of an improved national Integrated Capitalism is handicapped by the fact that many people still remember its failures, while the song of national glory that right-wing populism sings refers to an imagined far-away past that no one ever had seen. Despite these disadvantages left-wing populism can sometimes be successful in so far as it prevents the right-wing to gain state power<sup>22</sup>.

National class conflict can lead to national civil war between the para-military branches of populist movements, or – more likely – between one group already in state power and the para-military forces of its opponent. It cannot be expected that this happens simultaneously all over the world – the necessary conditions in different countries are too different – but contagious effects might occur.

The lesson to be learned from this second scenario of WW3 is that the distinction between local national perceptions of households and the globally interwoven human production system is of utmost importance. National civil war is an aspect of WW3 that calls for a deep theory of internal model-building processes of families on cultural islands, which at the same time are economically tightly linked to each other. The fluid mobility of national ideological political entrepreneurs, the creators of populist movements, meets the rigidity of dire global economic constraints. This is the crash that provokes local wars. No single national class can escape from this logic, and apart from the fraction of international finance (an offspring of all nationally ruling classes) there are only a few signs of other *global* classes. Perhaps on the bottom of Pandora’s Box a ‘Global Class of Organic Intellectuals’ might emerge, compare [Hanappi, 2018c, 2019].

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<sup>21</sup> Turkey, Hungary, Poland, and Brazil are just some examples that show details of this procedure. Also the ascent of Trump in the USA falls under this category though the global hegemonic role, which this state plays implies several special considerations.

<sup>22</sup> The Mediterranean EU states (Greece, Italy, Spain, Portugal), building on the social-democratic concepts of so-called ‘Euro-Communism’, present an interesting variety of outcomes of left-wing populism in government.

A simple formalized model to enhance the understanding of this second world war scenario, comparable to the truel, does not exist yet. The most advanced research frontier in this respect can be found in the latest advances of complexity theory. An excellent example of the creativity in this field is the work of Yaneer Bar-Yam. In a recent co-authored paper [T. Bar-Yam, O. Lynch, and Y. Bar-Yam, 2018] with the help of information theory an ‘inverted second law of thermodynamics’ has been developed and the application to questions of large scale organization of the multi-layered human society is hinted at. In other words, the 2<sup>nd</sup> law of thermodynamics used to describe the trend towards increasing disorder characterizing non-living systems is complemented by a dialectical counterpart that allows to describe the build-up of order in living (social) systems - in a formal way. This theory is too general to allow for a specific application to the problems of the contemporary global human society, but it shows that in a world where instability is letting its components fall apart (Disintegrating Capitalism) a new global order (a new mode of coordination) can only be reached if a certain minimum of order at the lowest level of its organization is present. Moreover, this implies that in times of revolutionary shake-up there is just a finite, even a small set of smallest building blocks for the next stable era. The prospect is to study the respective implications of the different elements of this set by computer simulations.

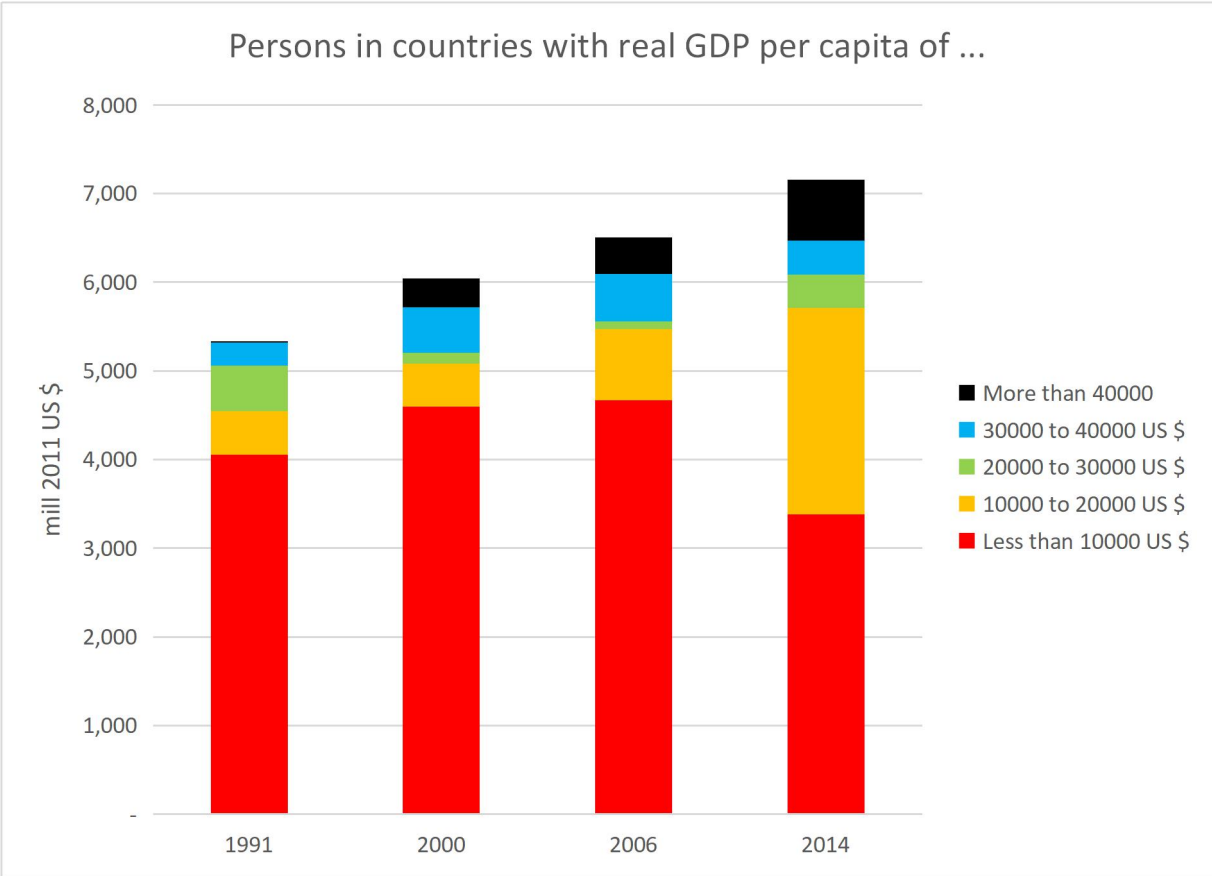
### **Scenario 3: Upheaval: Poor versus rich world**

The third scenario for WW3 looks at the profoundly divergent trajectories of welfare of poor parts and rich parts of the world economy, and concludes that this development will lead to a severe military explosion. Diagram 2 presents a rough overview of global GDP developments.

It uses data on all countries in the world. Real GDP in constant 2011 US Dollars is divided by respective population numbers of countries to arrive average GDP per capita for each country. This number then is considered to be an approximation, an index, for being a rich or a poor country. The list of countries then is ordered according to this index. Then countries are grouped according to five ranges of this index. With the help of the population figure of each country the number of people living in each of these ranges can be computed and is used for the bar chart in diagram 2.

It is clear that this procedure only provides a rough picture of what is going on in global economic dynamics since 1991. But GDP still seems to be the most reliable economic data measuring economic activity, and therefore average living conditions in a country. Moreover,

it is one of the small set of numbers that is available for all countries in the world for a longer time period. Population numbers certainly play a central role and combining them with GDP allows a twofold proxy: How much has been produced in a country<sup>23</sup> and how much can be consumed? The US Dollar, of course, is the generally accepted measure of social exchange value, a measure provided by the current global hegemon. Inflation has been subtracted and exchange rates have not been adjusted by purchasing power parities.



**Diagram 2: Global Economic Dynamics**

Source: Penn World Table version 9.0, see [Feenstra, Inklaar, and Timmer, 2015]

Since 1991 worldwide economic activity has increased remarkably. There also have been noticeable shifts towards the second lowest (yellow) segment of the distribution stemming mainly from the lowest (red) segment. This dominating jump can be contributed to a large extent to the rise of China, which entered the second lowest group between 2006 and 2014. Another fact is the slow but steady increase of the number of people living in the richest (black) layer. To the contrary, the amount of people living in the two layers between the richest and the two poorest segments is more or less constant, despite the overall growth of

<sup>23</sup> Adding employment figures would allow an approximation of productivity development. Adding trade and changes in stock variables would provide a more precise picture of the trends.

the bars. This implies the border between the richest and the two poorest ones is getting sharper. India is in the lowest layer (5224 US \$, 1295 million persons), China now in the second lowest (12473 US \$, 1369 million persons), and Russia has entered the lower one of the two middle layers (24039 US\$, 143 million persons); all data from 2014.

Another contribution to the sharpening of the contrast between rich and poor comes from the rising inequality of income and wealth *within* almost every country during the last three decades. Whatever economic measure is used, e.g. Gini or Theil index, national income and wealth inequality has been exploding almost everywhere. In the smaller countries in the two poorer layers of the world economy the rage against inequality often has led to local changes in government, sometimes even local revolutions. A big bang of the poor against the rich world did not take place yet, military support by rich countries, in particular the USA, enabled local exploitative regimes so far to keep rebellions at the gates, a neo-colonialist feature. The new model of Disintegrating Capitalism has as two of its main carriers Russia and China, their old role as supporters of a revolution in the Third World is definitely gone. The remaining giant state of India, indeed a terribly poor and overpopulated country, is caught in religious paralysis that now even is in state power. Nevertheless, an upheaval of large masses of people in the poor countries might occur. Remember that 3 billion persons (lowest layer) live in 1000 US \$ circumstances and are able to observe on smartphones that 1 billion of richer persons (richest layer) in another part of the world experiences living circumstances at least seven times as good as they are in. Neither the eruption of the Arab Spring in 2011 nor the movement of the yellow vests in France in 2018 can be traced back to a single originator with a well-developed plan. Modern information and communication technology enhances action not only after a revolt has started, it actually launches a new form of spontaneity.

It is evident that military facts contradict a scenario 3 of WW3. But one should take into account that the enemy of the rich countries' military forces is widespread over the whole globe. Armed forces of the nuclear powers (USA, Russia, France, UK, China) are used to target military centres not unlimited territories, and as they can expect resistance against warfare also from inside their countries traditional measures of the strength of military force might be misleading. Not only the US experience in the Vietnam War has been a wake-up call in this respect, also the continuously striking religious terrorism has not been beaten yet<sup>24</sup> by the 'war on terrorism' that George Bush proclaimed many years ago. It might also be noted

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<sup>24</sup> Remarkably, what has been beaten was only the territorial claim of the Islamic State, a geographical area that could be localized and conquered.

that on the side of the rebels it often is not so much a rational military general that guides action but rather a shared believe, even a common religion preached by independent hierarchies of religious leaders in different countries, which inspires warriors.

Needless to mention that - ignoring religious myths – not much scientific treatment of this third scenario of WW3 is available<sup>25</sup>; not to speak about additional formal treatments that could provide further insight. The message to take home from this speculation is simple: Several seemingly surprising events of the last decades can be traced back to this source: religious terrorism, waves of migration, the failure of large institutions (World Bank, United Nations Organization, etc.), re-emergence of racism, and the like. Some scholars suggest that to overcome the underlying contradiction probably war is not avoidable, e.g. [Scheidel, 2015]. With such a thread in the back of their head political economists in the rich world, sure victims in this scenario, should immediately start to develop theories to improve the situation of poor countries at the expense of the richest ones; theories that can rapidly be implemented<sup>26</sup>.

## Conclusion

Disintegrating Capitalism is not a prediction. It already has arrived and shapes everyday life. The vanishing of Integrated Capitalism is not a forecast either. Disintegrating Capitalism (DC) dissolves capitalism but to do so it first has to destroy Integrated Capitalism (IC), its immediate predecessor. The essence of the form in which this destruction process takes place is a reversal of the measures of IC, which simultaneously preserves the capitalist algorithm for a sufficiently large group of firm owners. While IC expanded to and across continents, DC focuses on narrower, national territories. While IC aimed to include all parts of society as parts of the capitalist algorithm DC sets up nationalist and racist restrictions<sup>27</sup> and excludes what its leaders define as inferior minority. While IC developed institutions that neutralized direct conflicts between classes using sophisticated decision rules to preserve the interests of the ruling class, DC abandons these institutions and introduces governance structures that mimic hierarchic military organization (including secret service functions).

Different national regimes dominated by DC are *rivals*, not *competitors*. The distinction is important: The actions of competitors are subjected to market forces. Market mechanisms are

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<sup>25</sup>There are exceptions, a particularly interesting one is Zak Cope's contribution [Cope, 2015].

<sup>26</sup> It is telling that this advice resembles the advices provoked by global environmental challenges.

<sup>27</sup> It is almost too obvious if DC leaders like Donald Trump, Viktor Orban, or Sebastian Kurz build walls and fences at national borders and close migration routes.

installed by a superior power, usually state power. The institution ‘market’ itself is a *political* institution producing the illusion of free action, which in fact is embedded in an accepted set of market rules policed by this superior power. Nationalist rivals typically do not accept a superior arbitrageur, they cut off links to global institutions and return to the national institutions they control directly. Donald Trump’s trade policy as well as Erdogan’s monetary policy are just two recent straight forward examples. Missing an economic interface to global dynamics, authoritarian DC tends to manage its external relations by military conflict, by war<sup>28</sup>.

It should not come as a surprise that a change of the dominant mode of production of human society takes place by a clash of brute forces, of worldwide war. Limiting his attention to the aspect of equality of men the anthropologist Walter Scheidel describes in fascinating historical detail how wars always preceded the setup of large scale new organization of society, see [Scheidel, 2017]. To which extent such a war again is on the agenda today - contrary to the existence of DC - clearly is a question of forecasting. The previous section of this chapter used a scenario technique to sketch some contours of a possible third World War. These scenarios are not independent, mixtures of them are to be expected, e.g. a common strategy of a player in scenario 1 is to stir up national civil war (scenario 2) in a satellite country of its opponent (e.g. Yugoslavia); or to use the rhetoric of scenario 3 to support the fight of national class struggle (scenario 2). But will WW3 happen at all?

Not necessarily, but with a frightening high probability. Some counterstrategies already have been mentioned along the discussion of the scenarios. The immediate candidate, of course, is a global peace movement. This movement already played a pivotal role in ending the Vietnam War, being an incubator for the worldwide cultural revolution of 1968<sup>29</sup>. As the short life and the macroeconomic impotence<sup>30</sup> of this rebellion showed, any movement with durable impact needs not only roots in personal perceptions and feelings, it also needs a very sophisticated and well-developed blueprint of the overall working of a global democratic society. A mode of production is a complicated political economy entity, which needs a complicated system

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<sup>28</sup> Hitler’s Germany, a first experiment in DC, had equipped its command economy with a new national currency, the Reichsmark, and as this was inappropriate to support the German claim to power in a global setting, he started WW2.

<sup>29</sup> The late sixties indeed could be interpreted as a failed attempt to anticipate some forms of post-capitalist social interaction, see [Rowbotham, 2002].

<sup>30</sup> With respect to the influence of the sixties on the *form* of capitalism – as opposed to its goal to (‘we shall ...’) ‘overcome’ capitalism – it is evident that Integrated Capitalism, mainly implemented by social-democratic parties in Europe and the Democratic party in the US, owes a lot to this youth rebellion. Its impact can be found in some short-lived party programs of social-democratic parties in Europe during the 70-ties.



design. Fortunately, the explosive accumulation of human knowledge, of science, should be able to provide just that – if it were not handcuffed by the singular tasks tailored by Disintegrating Capitalism. The next best counteraction thus is to organize the carriers of this knowledge, e.g. scientists, in a progressive global class. Even if WW3 happens, chances are that a restart is possible and the blueprint of a better mode of production is needed. In this case Umberto Eco's vision of an upcoming new Middle Ages<sup>31</sup>, with monasteries (today: universities?) preserving and developing secret knowledge, might become reality.

## References

- [1] Bar-Yam T., Lynch O., and Bar-Yam Y., 2018, *The Inherent Instability of Disordered Systems*, New England Complex Systems Institute, [arXiv:1812.00450](https://arxiv.org/abs/1812.00450) (December 2, 2018).
- [2] Bramson A. et al., 2016, *Understanding Polarization: Meanings, Measures, and Model Evaluation*, Philosophy of Science, August 2016.
- [3] Buenstorf G. et al., 2013, *The Two Sides of Innovation. Creation and Destruction in the Evolution of Capitalist Economies*, Springer.
- [4] Cope Z., 2015, *Divided World Divided Class: Global Political Economy and the Stratification of Labour Under Capitalism* (second edition). Montréal, Canada: Kersplebedeb.
- [5] Eco U., 2007, *Turning Back the Clock*, Houghton Mifflin Harcourt (HMH), UK.
- [6] Feenstra R., Inklaar R., and Timmer M., 2015, *The Next Generation of the Penn World Table*, American Economic Review, 105(10), 3150-3182.
- [7] Gordon D., 1978, *Up and Down the Long Roller Coaster*. In U.S. Capitalism in Crisis, edited by the Union for Radical Political Economics, 22-35. New York: Union for Radical Political Economics.
- [8] Hanappi, 1986, *The Stages of Industrial Capitalism*. Invited Paper on the International Workshop "Technological and Social Factors in Long Term Fluctuations" ,University of Siena December 1986. Published by Springer Verlag 1989, editor: Richard Goodwin, A.Vercelli, M. DiMatteo.

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<sup>31</sup> See e.g. [Eco, 2007].

- [9] Hanappi H., 2013a, *Money, Credit, Capital, and the State*, in: [Buenstorf et al., 2013, pp. 255-282].
- [10] Hanappi H., 2013b, *The Neumann-Morgenstern Project*, book chapter in the book '[Game Theory Relunched](#)' edited by H. Hanappi, Intech publishers (UK).
- [11] Hanappi H., 2018a, *Capital after Capitalism. The evolution of the concept of capital in the light of long-run sustainable reproduction of the species*, World Review of Political Economy, vol.9(1). Published also as MPRA 77161 ([download](#)).
- [12] Hanappi H., 2018b, *Humanism or Racism. Pilot Project Europe at the Crossroads*, published as MPRA 87658 ([download](#)).
- [13] Hanappi H., 2018c, *Metamorphosis in Political Economy. A new combination of three disparate ideas*, Journal of Self-Governance and Management Economics 6(2), 2018, pp. 92-112.
- [14] Hanappi H., 2019, *Classes - From National to Global Class Formation*, introductory chapter of the book with the same title edited by Hanappi H., Intech Publishers (UK).
- [15] Kroetke W., 1975, *AEDI, MUTAB, NEDA and SOGAL*, Creative Computing, vol. 1, no. 4, May-June 1975 ([download](#)).
- [16] Leonard R., 2010, *Von Neumann, Morgenstern and the Creation of Game Theory: from Chess to Social Science, 1900-1960*, Cambridge & New York: Cambridge University Press.
- [17] Luterbacher U. and Ward D., 1985, *Dynamic Models of International Conflict*, Lynne Rienner Publishers, Inc., Boulder, Colorado (USA).
- [18] Mouffe C., 2018, *For a Left Populism*, Verso Books, London.
- [19] Neumann J. v., 1938, *Letter to Ortqvist*, in: [Rédei (ed.), 2005, pp. 193-204].
- [20] Rédei M. (ed.), 2005, *John von Neumann: Selected Letters*, History of Mathematics, vol. 27, published by the American Mathematical Society and the London Mathematical Society.
- [21] Rowbotham S., 2002, *Promise of a Dream*, Verso Publishers.
- [22] Scheidel W., 2017, *The Great Leveller*, Princeton University Press.

[23] Stalin I.V., 1925 (1938), *Socialism in One Country versus Permanent Revolution*, in: *Problems of Leninism* (Moscow: Foreign Language Publishers, 1934), pp. 159-166 ([download](#)).