

Deepening Contradictions

From Exchange Rate Exploitation to Fascism

Hardy Hanappi

Email: hanappi@econ.tuwien.ac.at

Homepage: <http://www.econ.tuwien.ac.at/hanappi>

Institute for Mathematical Methods in Economics

Vienna University of Technology

Version 08-07-11

Abstract

This paper develops the idea that countervailing forces, contradictions, are at the root of dynamic developments, which occur on the background of a more stable environment. Contrary to the usual stability assumptions in most economic models, the evolution of social systems thus is assumed to follow a path, which can be characterized by a repetition of two distinct phases: (i) The build-up of contradictions ('deepening contradictions'), and (ii) a structural metamorphosis. In a first part the origins of this idea in classical political economy are investigated. As the 20th century's world wars are in urgent need of a more sophisticated explanation by political economy, the argument in the second part of the paper is taken to discuss this issue under the perspective of social alienation as (technologically enhanced) deepening contradiction. The third part then tries to understand some central contemporary global contradictions to see what kind of metamorphosis of the global political economy can be expected.

Introduction

Theories describing the evolution of political economy are bound to incorporate countervailing forces. Since evolution always has to involve some kind of emergence - emergence of a solution to conflicting trajectories, emergence of a social institution, emergence of a new utility dimension, or the like – the sources of emergence are pivotal for any deeper understanding of evolutionary dynamics. Nevertheless in some cases it might be useful to assume away parts of a multidimensional network of partly countervailing forces to find out dominating long-run tendencies. If some contradictions work out very fast relative to the rest of the system, then the assumption that from a long-run perspective they do not exert any influence and thus can be substituted by the equilibrium level of the variables they drive can provide an interesting theoretical construct. But the higher the share of these equilibrium assumptions within a model, the less its explanatory power with respect to evolutionary dynamics. In the general equilibrium theory proposed by some economists theorizing collapses to the proof of an abstract statement about a formal construct void of any empirical content: If a world of perfect markets with omniscient and single-minded (utility and profit maximization oriented entities) producers and consumers existed, then for certain types of functional forms of the relevant characteristics of these entities a unique and stable vector of prices would exist. Typically all major evolutionary trajectories of political economy observed in the last centuries – e.g. technological advance, new utility dimensions opened up by new commodities and services, new social institutions – do not even have to be assumed away; they simply do not exist in a theory, which focuses on a theoretical issue concerning infinitely fast price adjustments of omniscient entities¹.

The description of contradictory forces in political economy has been lurking in the background of theoretical approaches at least since the time of Malthus².

Industrial Capitalism – Classical Political Economy and Economic Reality

It can well be argued that the roots of classical political economy are to be found in empirical observations of economic processes that happened long before their theoretical elaboration was envisaged. From the late 18th century till World War 1, a period usually called industrial capitalism, a set of theories on the evolution of society emerged. Though the scholars producing these theories clearly were motivated by the conflicts they experienced during their lifetimes, they nevertheless had to build on older theory fragments. In particular with respect to methodology these older frameworks usually incorporated world views held in previous generations. It proves to be particularly difficult to revolutionize not only the

¹ The straight forward image of the development of political economy implicit in such an extreme special case of assumptions is to complement momentous price adjustment by a pure random walk of all variables not covered by market variables. Notably the most a-theoretical issue about the evolution of political economy that can be imagined; notwithstanding the fact that random walks are an important element in the natural sciences.

² It indeed is easy to go further back in the history of science. Newton's observations leading to calculus are based the concept of a velocity (presuming a time span) existing at each moment (the negation of a time span). Or even much earlier the philosopher Zenon's well-known arguments still prove to contain many non-trivial aspects (compare [Mazur, 2008]).

content of the subject matter of a theory but simultaneously also the language in which this new content is to be described. There seems to be an additional contradiction between observed reality and a sign system which reaches out to grasp its essential features. Some theorists, like Auguste Comte, tried to imitate other sciences – in particular the successful natural sciences of Newton and Leibniz - striving for a ‘social mechanics’. Others, like Karl Marx, looked for help in Hegelian and ancient Greek methodological insights on ‘dialectics’. Some classical political economists remained rather helpless and escaped to thorough description in a slightly polished everyday language, like Smith and Malthus.

Malthus saw growth in population and output. But he also noted ‘eternal’ social contradictions that are incompatible with the harmonizing naturalistic views, which his father in adoring Rousseau entertained. It is interesting to see how he frames the contradictory forces within a generally growing society. The tables which he presents to show the incompatibility between population growth and growth of agricultural output suggest that the former grows exponentially, while the latter only increases linearly. This is an issue which transforms two (rather imprecisely measured) empirical observations into two different types of growth functions – just like Newton transformed his observation of the fall of the apple from the tree in front of his study room into his hypothesis on the laws of motion. But then, in a second step, he roughly follows the idea of his precursor Quesnay, who envisaged the economy of a country as an organic unity: All parts of an organic whole have to interact in a specific way to enable periodic reproduction, i.e. social existence³. Consider the two different functional forms of growth processes as just two elements of the same social system and immediately a contradiction pops up. A small number of people in a linearly growing agricultural environment first can easily grow exponentially, but at a certain point in time contradictions become visible: There are too many humans for the available agricultural output. At this point of the story Malthus introduces a new theoretical element, the ‘checks on population growth’. These checks are independently occurring social incidents like wars, famines, plagues, and the like. Though Malthus is well aware that their appearance is related to the growth processes in society he is very vague about these links. And he is so for a good reason: The historical record shows a highly irregular pattern⁴. In modern algorithmic language one could think of these checks as latent program calls, which become manifest only as a certain threshold variable reaches a critical value. There is barely a hint in Malthus how the dynamics of these threshold variables, which initiate checks, look like. But he seems to take it for granted that they all are connected to a common index, namely the output per head. And that this common index in principle only fluctuates irregularly around a fixed level is what he suggests as a basic economic law. Diagram 1 summarizes this vision with fictitious data roughly resembling France in the 19th century.

³ Quesnay, being not only the leading economist but also a medical scientist, had applied the metaphor of the human blood circuit to the yearly macroeconomic exchange processes in France.

⁴ Malthus’ remark on this irregularity seems to have tempted Richard Day to enrich his mathematical interpretation of Malthus with the modern formal paradigm covering irregular phenomena: deterministic chaos [Day, 1999, pp. 159-185].

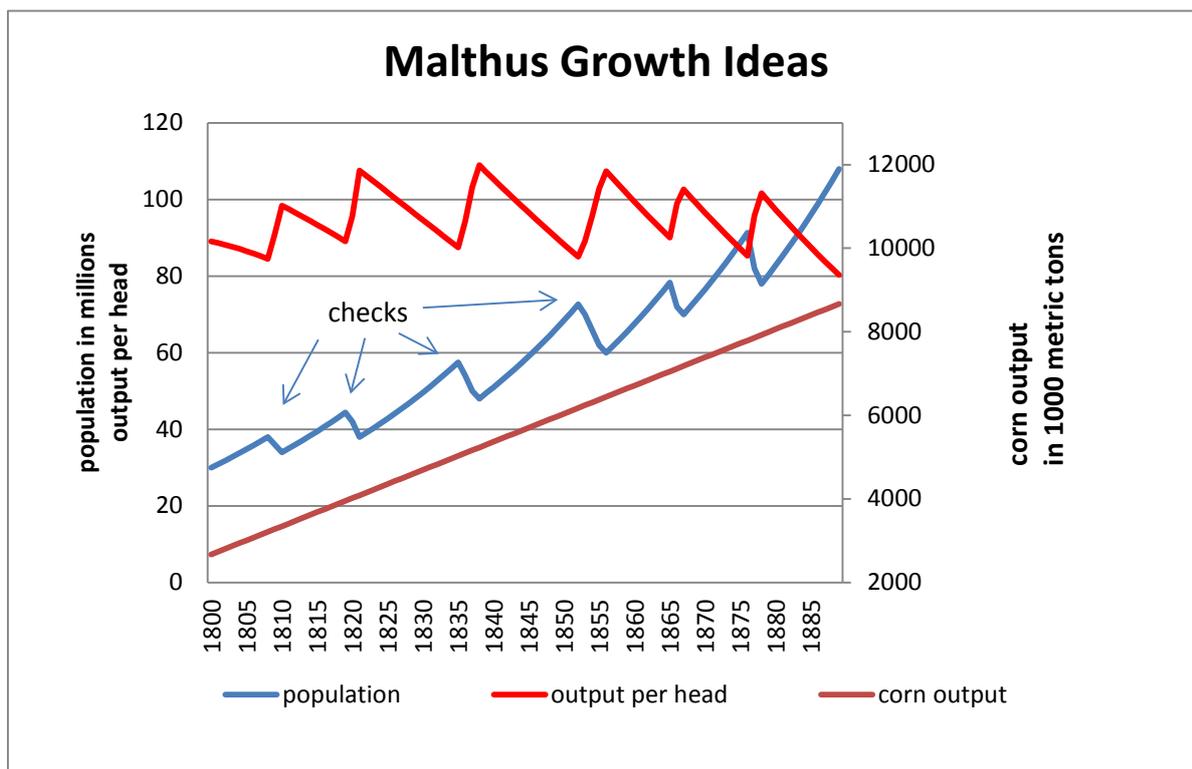


Diagram 1

Despite growth output per head remains within a certain bandwidth, which just reflects the conflict between contradicting natural growth styles and the variety of checks keeping them in line. Though today reconstructed historical data shows that his vision is rather far away from the real trajectories of 19th century France⁵, his methodological approach to the working of contradictions still is interesting.

This also concerns his second methodological innovation, which aims to explain what happens during the sharp resurrecting crisis times of active checks. As checks come in very different formats, Malthus answer had to remain rather unspecific to cover them all – he formulated his famous vision of ‘the survival of the fittest’⁶. It is worthwhile to take a closer look at this notion.

First it is noteworthy that it is an issue on ‘survival’, which in the context of diagram 1 means it is an issue about the upper turning point of a population that is confronted with a survival ‘check’. Moreover ‘survival’ implies that it is a living subject, a species, which meets a challenge. To be more precise: The phrase purports some optimism, since it insinuates that the species will as such will live, but will be subjected to an internal restructuring, some of its individuals will be eliminated, some will ‘survive’. It is the latter to which the verb ‘survive’ refers to. This implies that the surviving subject, the species, is composed of a set of

⁵ The basic flaw certainly comes from missing the incredibly strong impact of innovation that could not be anticipated at the time of Malthus. He thus argues still within a slowly growing physiocratic world.

⁶ Later this idea proved to be pivotal for Darwin’s breakthrough in biology.

individual elements, and these elements necessarily have to be assumed to be different⁷. Otherwise it would not be possible that some survive and others are extinct. The **contradiction** between the surviving species and its opposite, the weeding out some of the smaller elements constituting the species, enables a description of the dynamic evolution of the species by its endogenously changing structure. Such an interpretation clearly demonstrates how path-breaking Malthus' methodological idea was.

Turning now to the concept of 'fitness' it is obvious that Malthus had to remain completely unspecific with respect to what fitness refers to: If the 'checks' encountered by the species are ever changing events to be experienced as new, or profoundly re-shaped threats to the members of the species, then it is simply not possible to be more specific. The vague notion of being fit to survive a new challenge again implies an exciting new element of theory-building: As the sequence of novel changes to be mastered in the future is in turn forming the composition of the species in a meta-evolutionary process, diversity and to a certain extent even randomness of its structure become vital advantages for survival⁸. The **emerging contradiction** consists of the opposition between the need to maintain the traditional internal bonds, which stabilize the species, and the need to dare systematically a certain amount of innovative new behavior to improve the chance of species survival in the case of an unexpected 'check'. 'Stabilization versus innovation' governs not just theory-building and the accumulation of knowledge, but also infiltrates all practices of the diverse members of the species. As unspecified as the concept of 'fitness' on general methodological grounds necessarily remains, as absolutely pivotal specification becomes as soon as a practical bottleneck becomes visible. Methodological imperatives thus change with the tides of social evolution.

The next step in classical political economy certainly was the monumental contribution of David Ricardo. As Milonakis and Fine [Milonakis and Fine, 2009] point out, Ricardo's model is more a break away from Malthus than a closure of his incomplete system⁹. The reason might well be that Ricardo was much more interested in the logical consistency of the relationships he assumed to govern social evolution, than in the question if these assumptions really are adequately describing what had been historically observed. With his work a truth concept based on formal beauty started to dominate the truth concept based on the muddy grounds of the efforts to structure what has been historically observed and reported.

⁷ Note that this view renders the assumption of a representative individual entity - which became so dear to the methodological individualism of the 20th century - completely obsolete.

⁸ Note how this implication contrasts the feature of optimal decisions of representative entities to be determined in the context of methodological individualism. In the latter stochastic enters only as a mirror of assumed distribution forms of exogenous disturbances, while for Malthus his 'checks' are at least ex post explained as part of the endogenous dynamics.

⁹ Duncan Foley's perspective on the transition from Malthus to Ricardo is rather the opposite: "Ricardo's extraordinary insight is that because that the marginal land yields no rent, the surplus product on the marginal rent determines the profit rate *in the whole economy*. ... This beautiful discovery closes Ricardo's system and gives it complete determinacy. In effect, it solves the problem of distribution. Malthus has already given a theory of the natural wage in his demographic analysis. Ricardo has given a rigorous form to Smith's theory of rent as a residual; all that remains is to determine the profit rate, which Ricardo has now accomplished." [Foley, 2006, p.75]. In Foley's view Ricardo just completes Malthus' insufficient analysis.

Nevertheless Ricardo's lasting influence on all later economic theory cannot be denied. Despite his nagging critique of Malthus, Smith, and Ricardo Karl Marx always acknowledged them as serious political economists. As such he regarded classical political economy as science - as an intellectual attempt to distill the essence behind an empirically observed phenomenon - distinguishing it sharply from 'vulgar economics', which just described these appearances using surface oriented concepts. Ricardo's discovery of the force of the insistence on logical consistency certainly impressed Marx, and his own insistence on the fundamental role of a labor theory of value reflects this appreciation¹⁰. The scientific abstraction reconstructs actually occurring historical phenomena by adding a dimension of depth, which is missing in the pure, 'phenomenological' description. 'Vulgar economics' according to Marx thus explains capitalism only by direct reference to immediately visible surface phenomena: If excess supply (demand) occurs then prices fall (rise); all exchange rates between market participants seem to express their respective ownership of productive capacity and innate scarcity; as soon as a market process is entered all power relations and institutional constraints seem to vanish; and the like. For Marx classical political economists did dig deeper. Their central concern was how exploitation in a society structured by classes works. A 'primary distribution' - politically stabilized and determining the ownership of land, means of production, and labor force - was a central theoretical element, only on this basis the production process could be understood as exploitation of nature, and of one class by another class. Only after these particular details of political power distribution dynamics (stock dynamics) and their consequences for the production process were determined the 'secondary distribution' (flow dynamics), describing how the products and services that had emerged were allocated across the different classes via certain market mechanisms, can be scientifically studied¹¹. Ricardo's consistency in following this classical agenda was what Marx acknowledged, but at the same time he added a new idea based Hegelian logic. Ricardo clearly saw that class antagonisms were evolving, and his idea of consistency was to show to which final state these dynamics will lead. His much admired general result was that for any given distribution of decreasing fertility of land in a country, it will be the marginal product of the least fertile cultivated piece of land, which determines all the essential economic variables. In the language of modern economic theory he postulated an equilibrium state by specifying the stabilizing dynamic trajectories. This methodological prescription - namely first investigating empirically observed dynamics, then using a (more

¹⁰ John Roemer - in interpreting Marx - correctly noted this: 'The subsistence concept, then, was not simply one that perhaps captured the conditions of nineteenth-century capitalism; it was logically necessary to accomplish Marx's purpose, ...' [Roemer, 1981, p. 148]. But apart from this Roemer substitutes the equilibrium results of a competitive process for Marx's own dialectical logic: 'We might better describe Marx's exchange concept as competitive; each commodity was supposed to exchange for its value, properly defined.' [Roemer, 1981, p. 148]. This then results in the futile discussions of inconsistencies of such a neo-Ricardian interpretation of Marx.

¹¹ The consumption process itself was of minor importance for classical political economy, since everything that could determine it was already dealt with in the first three stages: primary distribution, production, secondary distribution. Only in 'vulgar economics', where 'everything appears upside down' {Marx,] the preferences of classless consumers look like determining market prices, and in the sequel the production process. From this perspective primary distribution becomes the blind spot, indicating that this is exactly the ideological goal of this view.

or less) formalized consistent model to come up with an asymptotically approached final state, which then can be used for further stability analysis¹² - is indeed remarkable and was considered by most contemporaries as the introduction of scientific methods used in the natural sciences to the social sciences. Evolution of class conflict thus became evolution towards a stable state, characterized by optimal fitness with respect to an exogenously given environment (the structure of agricultural fertility). Note the close relationship to Darwin's method in studying the evolution of animals on the Galapagos Islands.

For Marx consistency meant something radically different; consistent dialectic logic meant that contradictions are self-amplifying up to a point where novelty emerges, namely the famous anti-thesis to a contradictory thesis. So there are immediately two different dynamics to be considered: On the one hand an enduring and self-enforcing process of deepening contradictions, and on the other hand a shorter period of fundamental metamorphosis leading to a redefinition of what is to be considered as essential. Novelty is signaled by the very emergence of human history, by its progress: negation of negation (the process of synthesis) is not simply leading back to the starting point, as any bivalent logic would have it. The point at the horizon of the accelerating class struggle is a new type of society, a new mode of production, a new primary and secondary metabolism of the species¹³. For Marx only a very limited set of issues in regard to the relatively short future period of metamorphosis seemed to be possible, the emphasis of his oeuvre clearly was laid on speeding up class conflict, on approaching this second type of dynamics faster.

But evolution by dialectical pulsation also incorporates a second feature not to be found in the dry framework of British classical political economy: History, emerging social progress, is made by humans who double the actually observed dynamics in their minds and their collective consciousness. This information environment constitutes a second layer of existence, provides a secondary metabolism. The philosophers of German idealism, in particular Marx's teacher Hegel, took this second - spiritual - world as starting point for their interpretation of the world: Hegel derived the emergence of the dynamics in the material world as final outcome of an endless process of negations of negations, which had originated in the highest imaginable superior being, in God. Similar to his break with Ricardo's view of consistency Karl Marx also inverted Hegel's dialectics. According to him the world of ideas emerges as a product of the continuously pulsating contradictions (material negations), and not vice versa¹⁴. As in the process of deepening contradictions partial breakthroughs happen, which direct further development in a partially new direction, the interaction between the consciousness's of classes, the material interventions based on them, and the feedback of the outcomes on the models predominantly used by the different classes,

¹² The influence of trade and technological change on the results of the basic model was studied by Ricardo in specialized chapters, ex post.

¹³ The distinction between primary and secondary metabolism has been explained in [Hanappi, 1993].

¹⁴ This approach leads straight to his theories of alienation and class consciousness. While the first renders the perception of work by workers ever more abstract, the second becomes a challenge for an intellectual communist elite acting as catalyst.

becomes a highly complicated matter¹⁵. The formal tools of the 19th century, mostly borrowed from the natural sciences, were not able to help in that respect. Quite to the contrary these instruments started to play a central role in dissolving classical political economy by the way of the so-called ‘marginalist revolution’ of 1884 – the year Marx died. In retrospect it can be seen that his research project only had just begun¹⁶.

Extrapolating the research program of classical political economy a promising nexus linking the sequence of different modes of production seems to be the concept of exploitation. In its most basic form exploitation refers to a specific form of link between the growth processes of two living entities (in biology often called ‘populations’, in economics sometimes called ‘classes’). Though the growth of the number of members of an entity (e.g. the cow population in Brazil) over time is a dimensionless scalar, linking two such scalars to describe exploitation implies assumptions on situations without the investigated exploitation process. Calling the growth rates without the exploitation link ‘natural growth rates’, a typical measure for the link would involve the additional growth over this ‘natural growth’ of the exploiting entity and the lost growth, the negative difference compared to natural growth, of the exploited entity¹⁷. In case of non-renewable resources with natural growth zero less dynamic interaction will be involved as in cases where part of the exploited growth is used to enhance the ‘natural growth rate’ of the exploited entity – e.g. by the use of fertilizers in agriculture. So far all this applies to the human species exploiting its environment, ‘nature’.

In the case of exploitation of ‘man by man’, of one class of society by another class, the simple counting of heads in each class proves to be theoretically insufficient. The reason is to be found in an already mentioned property of this special species, the doubling of reality in the mind model maintained by each member of the species. This mind model enables not only individual consciousness (i.e. the physical individual sees itself as an active entity in the mind model it maintains) and memory, it also supports anticipation of the future. In human settings alternative futures are individually evaluated: A growing number of members of a tribe might enhance the amount of food gathered and hunted, but it also means that it has to be shared by more people. To divide the tribe into one class spending time on reproductive work, and another class protecting the tribe from being robbed by foreign intruders (warriors) bears the danger that the warriors turn their specialized power to the inside of the tribe and force the reproducing class to exchange output at rates reflecting the new power structure: class exploitation has emerged. The internal primary metabolism underwent a metamorphosis, from now on internal exchange ratios incorporate the

¹⁵ According to Louis Althusser a severe break - a ‘rupture’ – can be observed in Marx’s writings as soon as he started to tackle these complicated questions in preparing ‘Das Kapital’ (compare [Althusser, 1965]).

¹⁶ Some prominent contributions of 20th century economic theory can be interpreted as (unconscious) brave attempts to take up certain aspects again: John von Neumann tried to invent a formal language, which was able to support the treatment of internal modeling of strategic entities, i.e. game theory [Neumann and Morgenstern, 1942]; the ‘new classical macroeconomics’ (the ‘Rational Expectations School’) in the early 1980-ties included the use of individual model-building in their standard models, but had to assume that all internally used models are the same and are equivalent to the true model, to keep their theory treatable [Sargent, 1979].

¹⁷ See [Hanappi, 2006] for a more detailed exposition.

anticipation of possible individual harm done by exploiters. A remarkable double contradiction is building up:

- (1) Division into specialized classes usually enhances the overall available amount of goods and services, but at the same time locks the parts of society into exchange relations (and exchange ratios), which reflect not just (skill adjusted) relative time spent on certain activities but also coercive power structures. The concept of 'relations of production' summarizes such a particular state of affairs. From the exploited individuals point of view its personal net effect of these contradicting forces will become important, and in principal will become a source of revolution¹⁸.
- (2) All members of a class will entertain a similar interpretation of the relations of production, which will be amplified within each class by its internal communication possibilities. Moreover the interpretation of the exploiting classes - due to its control over communication media - will establish itself as the dominating interpretation. This type of power, ideological power, proves to be extremely effective, since it paralyzes actions of the exploited at the point of their internal model-building, a possible counter-action cannot even be thought of. And due to this efficiency increase, societies with two specialized parts of the ruling class have an evolutionary advantage: an ideology (e.g. religion) producing group and a coercive power securing group. If in the course of successful streamlining of a society's ideology the self-amplifying dogma starts to petrify, then it can never be contradicted by an equally well developed counter-dogma. Indeed a contradiction to a fully developed ideology can only emerge out of non-ideological practice of the exploited: This is the source of science and enlightenment emerging as contradictions to religion¹⁹.

So while **exploitation** is the element that is common to all modes of production (at least since the agricultural revolution some 10.000 years B.C.), what underwent a sequence of changes by revolutionary metamorphosis is class structure. Within each mode classes can be identified by their exploitation status, and their function in the exploitation process²⁰. But how can exploitation status be determined? The first characteristic to be noticed for human societies is that exploitation is not a concept that can be usefully applied at the level of the isolated physical individual; it always refers to total society²¹. Second, it refers partly to the primary metabolism of society, to the biological reproduction of the human species: The

¹⁸ Note that Marx did choose this contradiction as didactic entry point when he starts 'Das Kapital' with the concept of a commodity: individual use-value and social exchange-value of commodities are experienced as diverging.

¹⁹ The processes touched upon here are evidently much more complicated by the fact that one of the most important features of a ruling ideology (e.g. a religion) is its capacity to flexibly incorporate parts of more progressive elements of knowledge (in particular certain technical knowledge) without calling into question the ruling class structure.

²⁰ At this point Karl Marx seems to have taken an unhappy short-cut when he suggested that the number of classes is historically decreasing, and at the point of the proletarian revolution will shrink to just one 'benevolent' proletarian dictatorship. As history showed, a more sophisticated class analysis is needed.

²¹ Even the discussion of exploitation at the level of a production unit only makes sense as far as it is derived from this larger context.

species exploits animals' and plants, uses up exhaustible matter, and arranges class exploitation to accomplish just that. But, third, exploitation between classes always is characterized by a transfer of **social value** from the exploited class to the exploiting class. To measure social value, and thus the transfer by exploitation, is pivotal for identifying a particular class structure. Therefore social value, though ambiguously defined, has always been incorporated in all major works of classical political economy; it was important for class analysis. Since production in the economies that were considered by the classics was agricultural work, and work done in the fields was pre-dominantly simple manual work, it was straight forward to assume a labor day of this type of work as the 'natural' unit of the source of social value. To **measure a contribution to social value** within a society **in terms of time** expended by a member of this society performing a social activity only looks strange in the mindset of economists trained in the contemporary mainstream. If one realizes that social reproduction involves activities of society's members spent along the time axis, then no other obvious basic element is possible. All other elements of exploitation are organized by these activities, and gain and lose their importance by this intentional involvement managed by working activity²². A **labor theory of value** therefore is central to determine **social value**²³, which in turn allows analyzing the **exploitation process** in a particular society. Describing the exploitation process coincides with describing the **class structure** – economic base as well as superstructure – of a mode of production. Marx had just added the dynamics of dialectical pulsation to this straight forward deductive view of classical political economy.

Parallel to the blossoming of classical political economy in the 19th century the dominance of England as an unchallenged global hegemon reached its zenith. Its appearance of 'splendid isolation' was built on its rather brutal global governance of colonial world trade and its superior technological advances. But trade (after Ricardo's first strong argument on relative advantage) was not a central topic in most of political economy, and endogenous technical change (after Adam Smith's first strong move) remained similarly in the background. The accumulation of capital so forcefully described by Marx in practice took place not within a nation, but as a global process governed by England's colonial empire. The theoretical discourse of classical political economy had got stuck in theoretical intricacies, being judged as inadequate (Ricardo) or simply run over by the new ideological paradigm of marginalism (Marx). Capitalism proved to be able to survive – though at the price of a century packed with two world wars.

The following two chapters try to take up the idea of deepening contradictions - sets of contradictions, which over a range of decades amplify the opposition of countervailing

²² In a cursory remark, not expecting much resistance, Marx stated, 'Economy of time, to this all economy ultimately reduces itself.' [Marx, 1857, p.35]. Though, as Freeman correctly notes, ex post exploitation might be adequately *expressed* without recourse on physical time [Freeman, 1996].

²³ Critics of the labor theory of value in the tradition of Bortkiewicz [Bortkiewicz, 1907] consistently misinterpret its role. It is not a price theory intended to describe the equilibrium exchange relations between commodity owners in a linear multi-sector growth model. Prices are appearances reflecting a large number of partially disconnected processes based on actions using diverse internal models. To ascribe a God-like role to their coordination capabilities implies the assumption of omniscient and infinitely fast agents with eternally valid innate properties. The analogy to religious dogmas is obvious.

forces – to explain how the explosion in WW1 lead to a first metamorphosis, and then how the new set of contradictions of the interwar period lead to the catastrophe of WW2. The concluding chapter will draw some conclusions on the current set of contradictions in capitalism – and a possible metamorphosis towards a new mode of production.

Classical global accumulation

The 19th century saw the rise of England to the status of an undisputed hegemon of the world economy. The incomparable accumulation of capital, appearing as a continuously flowing and growing amount of money, was backed up by political and military forces erecting and extending a global colonial empire²⁴. Each element of this process was an important pillar of this overall explosion of power of a single nation. At the same time the contradictory forces unleashed by this process were inevitable too: The inadequate political governance system of the feudal class, fitted to the agrarian societies of the Middle Ages, experienced episodes of bourgeois revolutions. The working population, formerly bound the properties of feudal land owners, was increasingly turned into a ‘free’ proletarian class. Clashes between classes and states representing them occurred at many locations.

Despite much local turmoil the accumulation process continued. As described by André Gunder Frank it typically worked along two global triangles: the Eastern and the Western Trade triangle [Frank, 1966]. Using the description of such a triangle the process of a deepening of contradictions can be highlighted.

Starting point is an accumulation regime in England, which allows for a profit sum that is considerably larger than what is needed for the reproduction of this system within England. This excess of profits, appearing as a sum of Pound Sterling, is used to equip a ship with English manufacturing goods. This ship travels to Africa, where the manufacturing goods are sold to the local ruling class. The currency used is of minor importance, since the revenues are immediately used to buy black slaves²⁵. Then the ship travels to the American colonies, sells the slaves, and buys cotton. Again the use of the currency is not economically important as far as the two trades are close in time and space. But in a colony it carries some symbolic value to insist on the use of British currency. Finally the ship travels back to England, where the cotton is sold as input for English manufacturing industries. Comparing the revenues of this last sale with the sum at the beginning of the enterprise gives the contribution of international trade to the rate of capital accumulation.

Take now a closer look at the several steps of this procedure. There are three different societies with different characteristics (including class structure). Diversity in historically emerged societies, one of the poles of the productive contradiction, is overcome by the equalizing action of the agents of capital, the merchants. At the point of sale in Africa two

²⁴ English trade ships always had soldiers on board; trading posts quickly were turned into political and military strongholds, etc.

²⁵ If African territories are repeatedly visited, then it can be assumed that Pounds were appropriate; but in newly entered land simple direct exchange would do the trick too.

commodities of apparent social value to their respective seller and buyer are exchanged. Both commodities are potentially not producible in the respective buyer's environment²⁶, so they possess a social value that is only expressed via the social value of the sold commodity. From the point of view of consumption they are innovations, they are enlarging the commodity space. The same could be said of the second point of sale. At the third point of sale, when cotton is sold in England, merchant capital is converted back into the form of money with which it started when the ship was equipped at its departure. Looking only at start and end point of the journey the movement of capital is just growth of social value expressed in English currency. This growth procedure had used equality between internal evaluations of trade partners in three continents, but did it contribute to a convergence of the diverse societies? Most likely not: Successful trade with the backward ruling tribe chiefs in Africa usually induced them to expand slavery, and diverge even more from the English social model. A similar argument holds for the American colonies. The ever more modernized and extended slavery in the South in the end lead to the explosion of the American civil war and the loss of these colonies. Far from the often claimed equalizing effect of the introduction of markets this truly global example shows how growth of a seemingly homogenous amount of capital with the use of market mechanisms produces a deepening of contradictions. Differences between parts of the world are getting larger until they become unbearable – and a new metamorphosis enters the scene. With such a necessary, revolutionary change often highly fragile, large scale social innovation is risked.

When the American North won the civil war and Abraham Lincoln won the election, he received a euphoric letter signed by Karl Marx: 'The workingmen of Europe feel sure that, as the American War of Independence initiated a new era of ascendancy for the middle class, so the American Antislavery War will do for the working classes. They consider it an earnest of the epoch to come that it fell to the lot of Abraham Lincoln, the single-minded son of the working class, to lead his country through the matchless struggle for the rescue of an enchained race and the reconstruction of a social world.' [Marx and Engels, 1865]. Note the different consequences that a resolution of the different contradictions according to Marx and Engels were thought to produce.

The disaster that the deepening of the contradictions caused in Africa surely was different again, and can be argued to linger on till today²⁷. But despite the diversity of the set of deepening contradictions (and their consequences) a most influential one can be identified: As merchant capital was successfully growing it continuously had to stretch out for new areas and territories ready to be dragged into its circuit. Its own success thus condemned it to hit borders which in a finite world never can be avoided²⁸. This deepening contradiction

²⁶ Slavery was not possible in England, and the manufactured goods produced in England could not have been produced in Africa.

²⁷ Issues range from the apparent propensity to military tribe conflicts – recently stimulated, of course, by the first world's weapon's industry – to the general economic backwardness relative to all other continents.

²⁸ A connoisseur of Marx's work will recognize his famous tendency of the falling rate of profit behind this argument. Formulated this way, acknowledging the deepening of contradictions, avoids false anomalies often

can be considered as central because it concerns the prime motivation of the major driving force of the global dynamics of the capitalist era: the expected profit rate. The lesson to be learned is rather drastic: At some point of time the decreasing expected profit rate derived from 'peaceful' global trade falls below an expected profit rate derived from a boom in military expenditure needed for a war. In retrospect, much of the rhetoric accompanying the breakout of WW1 can be better understood in the light of this argument.

World War 1 was a transition typical for metamorphosis – as opposed to the long-lasting process of deepening contradictions that preceded it. Within four years of war the old European state system was heavily restructured, the USSR had emerged, the Feudal class had lost most of its political positions, and the seeds for the changing of the guards of global capitalism (from Britain to the USA) had been laid²⁹. As any metamorphosis this short period was packed with quick changes of possible new combinations and coalitions, risky explorations into unknown terrain of social innovation, with surprising successes and failures. When a first consolidation materialized, the finally successful bourgeois revolution in most industrialized countries was not only confronted with a rebellious internal challenger, the labor movement, and an external socialist alternative, the USSR, in Italy and Germany there also was a newcomer, which rapidly took on momentum: Fascism.

Fascism

The short time it took - two decades – to let the new deepening contradictions of the interwar period explode into World War 2 can be taken as indicating how crucially radical the break of World War 1 for the global political economy really was. Not only political decision-makers were confronted with questions never encountered before³⁰, all social sciences gave the impression of a beehive of sometimes daring new thoughts, and sometimes flattest apologetics. In particular in economics the newly emerged triumphant school of marginalism provided only empty formalisms, which not even were intended to inform economic policy beyond a general appraisal of competitive markets. Till today the phenomenon of the most severe global force in the 20th century – Fascism - remains completely unexplained by mainstream economics³¹. The argument put forward in the last chapter to explain World War 1 again leads some of the way: At some point of time the

discussed in equilibrium growth models grafted on Bortkiewicz-like systems (e.g. [Okishio, 1961]) – without abandoning a labor theory of value as pivotal element of exploitation theory.

²⁹ One of the most important aspects of the changing of global hegemony is the transition to the use of the new hegemon's currency as world money.

³⁰ Keynes, who was a most attentive observer at the Paris Peace Conference in 1919, gave an impressive account of this: 'In Paris, where those connected with the Supreme Economic Council, received almost hourly the reports of the misery, disorder, and decaying organization of all Central and Eastern Europe, allied and enemy alike, and learnt from the lips of the financial representatives of Germany and Austria unanswerable evidence, of the terrible exhaustion of their countries, an occasional visit to the hot, dry room in the President's house, where the Four fulfilled their destinies in empty and arid intrigue, only added to the sense of nightmare.' [Keynes, 1920].

³¹ A narrowly defined economic discipline (exclusively concentrating on the praise of illusionary model worlds of private enterprises in competitive markets) is happy to delegate this topic to other departments of the social sciences: political theory, social psychology, and the like.

decreasing expected profit rate derived from 'peaceful' businesses falls below an expected profit rate derived from a boom in military expenditure needed for a war. But with respect to the surge of fascist political parties this explanation remains insufficient.

As compared to the time before WW1, where the glue between the classes within a nation was just a kind of blunt nationalist ideology³² promising welfare enhancement by a military victory³³, now an additional element has to be considered. This new element consisted of an amalgam of economic remnants of former class members, which suddenly found themselves expelled from their class (small shop owners, petit bourgeoisie, unemployed, etc.), threatened by de-classification (meaning economic ruin), disoriented and angry. As soon as they were organized by a political entrepreneur, a leader, who was able to substitute a spiritual movement (a 'race', a religion, or the like) for their lost function in society, a significant coercive force emerged³⁴. The quickly deepening contradiction between Fascists and their enemies in the interwar period in Europe has to be divided in two phases: (i) a first phase, where the movement uses anti-state propaganda and rather vague common-sense promises to collect supporters; (ii) a second phase, where the movement has seized state power (often by a coup d'état), and uses it to destroy internal enemies, and to build up military potential for outside aggression.

It is evident that in the first phase the potential for fascist movements in advanced economies always rises if an enduring economic depression reduces employment and the centralization of capital forces less productive SMEs out of business. Reduced tax income combined with the pressure to balance government budgets³⁵ leads to a withdrawal of public infrastructure, which in turn fuels the fascist propaganda. The metamorphosis of a nation state from stage 1 to stage 2 of Fascism temporarily solves the ascending contradiction³⁶, since internal enemies of the regime in state power are eliminated fast. Instead of a class structure hierarchical layers of military control are installed, and a corresponding command economy restructures production towards a build-up of internal control systems and outside oriented military potential. Since not all industries are involved in this restricted set of productive activity part of the capital of the country, where the coup happens first, will be shifted to other parts of the world.

³² Nationalism itself therefore had inverted its progressive 'Garibaldi-stage'. To investigate to what extent it still today can play a progressive role in developing countries goes beyond the scope of this paper.

³³ This reveals that to successfully initiate WW1 a coalition of feudal politicians and bourgeois tycoons in the weapons industries was a substantial ingredient for superstructure manipulation.

³⁴ The historical record shows that up to one third of the population of an industrialized country could fall prey to such a movement.

³⁵ In this respect the narrow focus of mainstream economic theory usually plays a particularly sinister role. The basic tenet of the political institution of the state, namely to guarantee the reproduction of a civilized social development, is confused with the tenet of a capitalist firm, which tries to achieve maximum (risky) capital accumulation for given accounting constraints (liquidity granted). In a depression the advice to governments to cut budgets ignores all political implications and – if followed – easily provokes a transition to the second phase of Fascism.

³⁶ This example shows that metamorphosis not necessarily brings about progress. At best a stochastic tendency towards more progressive, welfare enhancing societies can be assumed.

Till today the event of a World War initiated by Fascism has remained a unique experience, whatever can be said about its mechanisms thus has to stick rather closely to these historically observed facts. The danger that such a mode of production takes hold of the whole world economy cannot be excluded, though the build-up of deepening contradictions that would again destroy it in the longer run are easy to imagine.

Exchange Rate Exploitation

To be continued ...

Bibliography

- Althusser L., 1965, *Pour Marx*, publisher François Maspero, S.A., Paris.
- Althusser L., 1970, *Idéologie et appareils idéologiques d'Etat*, La Pensée, no 151, juin 1970.
- Amable B., 2003, *The diversity of modern capitalism*, Oxford University Press.
- Auerback M., 2009, *The Return of the State: The New Investment Paradigm*, The Levy Economics Institute Working Paper No. 561.
- Blanchard O. et al., 2008, *Fiscal Policy for the Crisis*, IMF Staff Position Note, December 2008.
- Bortkiewicz L. v., 1907, *Wertrechnung und Preisrechnung im Marxschen System*, Archiv für Sozialwissenschaft und Sozialpolitik.
- Brakman H. et al., 2007, *Nations and Firms in the Global Economy*, Cambridge University Press, Cambridge (UK).
- Braudel F., 1986, *Sozialgeschichte des 15.-18. Jahrhunderts, Aufbruch zur Weltwirtschaft* (Civilization matérielle, économie et capitalisme. XVe – XVIIIe siècle, Paris, 1979), Kindler Verlag, München.
- Calomiris Ch., 2008, *The Subprime Turmoil: What's Old, What's New, and What's Next*, paper prepared for presentation at the Federal Reserve Bank of Kansas City's Symposium, "Maintaining Stability in a Changing Financial System," August 21-22, 2008, in Jackson Hole, Wyoming (USA).
- Comte A., 1979 (1844), *Rede über den Geist des Positivismus* (französisch-deutsch), Felix Meixner Verlag, Hamburg.
- Dawkins R., 1989, *The Selfish Gene*, Oxford University Press.
- Day R., 1999, Day, 1999, *Complex Economic Dynamics*, Volume II, MIT Press.
- Eichengreen B., 2009, *Out of the Box Thoughts about the International Financial Architecture*, IMF Working Paper 116, May 2009.
- Elsner W. & Hanappi H. (eds.), 2008, *Varieties of Capitalism and New Institutional Deals*, Edward Elgar, Cheltenham (UK).
- Ferguson N., 2008, *The Ascent of Money. A Financial History of the World*, Penguin Group (Australia).
- Foley D., 2006, *Adam's Fallacy. A Guide to Economic Theology*, Harvard University Press, Cambridge, Mass.
- Frank A. G., *The Development of Underdevelopment*, MRP.

- Freeman A., 1996, ***Price, value and profit – a continuous, general, treatment***, MPRA Paper No. 1290, Munich. Web: <http://mpra.ub.uni-muenchen.de/1290/>.
- Furceri D. and Mourougane A., 2009, ***Financial crises: past lessons and policy implications***, OECD Economics Department Working Papers no. 668, Feb. 2009.
- Goodwin R., 1955, ***A Model of Cyclical Growth***, in: Lundberg (editor) *Business Cycle in the Postwar World*.
- Hanappi G., 1989, ***Die Entwicklung des Kapitalismus***, Peter Lang Verlag, Bern.
- Hanappi H., 1993, ***Evolutionary Economic Programs***, invited paper at the 'Ausschuß für Evolutionäre Ökonomie' of the 'Verein für Socialpolitik', Erfurt, July 2003, selected papers edited by Wolfgang Kerber (ed.), *Studien zur Evolutorischen Ökonomik IX*, Duncker & Humblot, Berlin.
- Hanappi H., 1994, ***Evolutionary Economics. The Evolutionary Revolution in the Social Sciences***, Avebury Press, Aldershot.
- Hanappi H. (ed.), 1999, ***Die Zukunft des Geldes***, Wiener Studien zur politischen Ökonomie, Band 13, Wien.
- Hanappi H., 2006, ***Endogenous Needs, Values and Technology. Evolutionary economic modelling to replace microeconomics and macroeconomics***, proceedings of the European Association for Evolutionary Political Economy (EAEPE) Conference 2006 in Istanbul (Turkey), November 2-4, Istanbul, 2006.
- Hanappi H. and Rengs B., 2008, ***On the Eve of Global Financial Collapse. Explanations, necessity, and policy conclusions***, proceedings of the International Conference of EAEPE in Rome (Italy), November 6-8, 2008.
- Hanappi H., 2009, ***Global Cities and Global Firms? On the links between trends in urbanization structures and production structures***. *Global Business & Economics Anthology*, vol. 1, March 2009, pp. 41-48.
- Harrod R., 1939, ***An Essay in Dynamic Theory***, *Economic Journal*.
- Hayek F., 1931, ***Prices and Production***, A. M. Kelley Publishers, New York.
- Hegel G.W.F., 1807, ***Phänomenologie des Geistes***, Jena.
- Hilferding R., 1910, ***Das Finanzkapital***, Europäische Verlagsanstalt, Wien.
- Hobsbawm E., 1996, ***The Age of Extremes: A History of the World, 1914-1991***, Vintage Books, London.
- Hodgson G. et al., 2001, ***Capitalism in Evolution***, Edward Elgar, Cheltenham (UK).

- Ilyina A. and Samaniego R., 2009, ***A Multi-industry Model of Growth with Financing Constraints***, IMF Working Paper 119, May 2009.
- Jevons S., 1871, ***The Theory of Political Economy***, MacMillan, London.
- Kesternich I. and Schnitzer M., 2009, ***Who is afraid of political risk? Multinational firms and their choice of capital structure***, Discussion Papers of the Deutsche Bundesbank no. 02/2009.
- Keynes J., 1920, ***The Economic Consequences of the Peace***, Harcourt, Brace and Howe, New York.
- Keynes J., 1936, ***The General Theory of Employment, Interest and Money***, MacMillan, London.
- Kondratiev N., 1926, ***The Long Waves in Economic Life***, Archiv für Sozialwissenschaft und Sozialpolitik (transl. 1935, REStat).
- Kregel J., 2009, ***Managing the Impact of Volatility in International Capital Markets in an Uncertain World***, The Levy Economics Institute, working paper no. 558, April 2009.
- Krugman P., 1996, ***The Self-organizing Economy***, Blackwell Publishers.
- Lechevalier S., 2007, ***The Diversity of Capitalism and Heterogeneity of Firms—A Case Study of Japan during the Lost Decade***, *Evol. Inst. Econ. Rev.* 4(1), pp. 113–142.
- Lewontin R. et al., ***Not in our Genes. Biology, Ideology, and Human Nature***, Pantheon Books, New York.
- Machiavelli N., 1988 (1532), ***The Prince***, Cambridge Texts in the History of Political Thought, Cambridge University Press.
- Maddison A., 2006, ***Contours of the World Economy, 1 – 2030 AD***, Oxford University Press.
- Mandeville B., 1714, ***Fable of the Bees: Private Vice, Public Virtue***.
- Marx K., 1848, ***Das kommunistische Manifest***.
- Marx K., 1857, ***Grundrisse***, notebook 1, chapter on money (part II).
- Marx K. and Engels F., 1865, ***Address of the International Working Men's Association to Abraham Lincoln, President of the United States of America***, The Bee-Hive Newspaper, No. 169, November 7, 1865.
- Mazur J., 2008, ***Zeno's Paradox: Unraveling the Ancient Mystery Behind the Science of Space and Time***, Plume Publishers.

- Mendoza E., Quadrini V., and Rio-Rull J., 2009, ***Financial Integration, Financial Development, and Global Imbalances***, Journal of Political Economy, vol. 117, no.3 (June 2009).
- Menger C., 1871, ***Principles of Economics***, Vienna.
- Montesquieu Baron de, 1748, ***On the Spirit of Laws***, Paris.
- Neumann J.v. and Morgenstern O., 1942, ***Theory of Games and Economic Behaviour***, Princeton University Press, Princeton, USA.
- Nier E., 2009, ***Financial Stability Frameworks and the Role of Central Banks: Lessons From the Crisis***, IMF Working Paper 70, April 2009.
- Okishio, N., 1961, ***Technical Change and the Rate of Profit***, Kobe University Economic Review, 7, pp. 85–99.
- Ostrom E., 2005, ***Understanding Institutional Diversity***, Princeton University Press, Princeton, NJ.
- Quesnay F., 1758, ***Le Tableau Économique***, Paris.
- Radax W., Wäckerle M., and Hanappi H., 2009, ***From Agents to Large Actors and back. Formalized story-telling of emergence and exit in political economy***, paper contributed to the 11th conference of the Association for Heterodox Economics, London, June 2009; forthcoming in the proceedings.
- Sargent Th., 1979, ***Macroeconomic Theory***, New York: Academic Press.
- Schumpeter J., 1939, ***Business Cycles: A theoretical, historical and statistical analysis of the Capitalist process***, McGraw Hill, New York.
- Shubik M., 2009, ***A Proposal for a Federal Employment Reserve Authority***, The Levy Economics Institute of Bard College, Policy Note 2009/5.
- Smith E. & Foley D., 2002, ***Classical thermodynamics and economic general equilibrium theory***, Santa Fe Institute, New Mexico (USA).
- Sohn-Rethel A., 1978, ***Warenform un Denkform***, edition suhrkamp, Frankfurt a. M.
- Spencer H., 1862, ***First Principles***, Williams & Norgate, London.
- Spencer H., 1884, ***The Man versus the State***, Williams & Norgate, London.
- Walras L., 1874, ***Elements of Pure Economics, or the theory of social wealth***, Paris.
- Wray L., 2009, ***The Social and Economic Importance of Full Employment***, The Levy Economics Institute, working paper no. 560, April 2009.