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Capitalism and Crisis in the 21st Century

The End of the "End of History": The Structural Crisis of Capitalism and the Fate of Humanity

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THE GLOBAL CAPITALIST ECONOMY is now in its deepest crisis since the Great Depression. Even the world's ruling elites no longer have any doubt that a significant historical turning point has arrived. The neoliberal phase of capitalist development is coming to an end. This will prove to be the end of the so-called "End of History" and the era of global counter-revolution it signifies.[1]

The immediate and important question is: what will be next? Where is the world heading as the crisis unravels and evolves? Many among the intellectual left and probably not a small section of the working classes in the advanced capitalist countries are hoping and expecting that the current crisis will lead to a successful restructuring of global capitalism. There will be a new global "new deal" based on social compromise and management of the global environmental crisis. Is this hope realistic? If yes, what conditions are required for it to be materialized? If not, what should "we" (those who are committed to a social transformation that will bring about a more egalitarian and more democratic social system) expect and hope for?

The current crisis is likely to be followed by a prolonged period of global economic and political instability that could last several

1 During the week of March 9–13, 2009, the *Financial Times* published a major series on "The Future of Capitalism." The series started with Martin Wolf's Introductory Essay, where Wolf said: "Another ideological god has failed. The assumptions that ruled for three decades suddenly look as outdated as revolutionary socialism" (*Financial Times*, 2009).

decades. As the old (neoliberal) institutional structure disintegrates, different social groups, classes, and states will engage in complex and intense conflicts and struggles. It is through the interactions of these conflicts and struggles that the direction of a new institutional structure will be shaped and determined.

To evaluate the likely outcomes of these conflicts and struggles as well as the future historical possibilities, it is useful to compare the current crisis with some of the earlier periods of major instability and crisis of global capitalism. A consideration of their similarities and differences helps to reveal the significance of the current crisis by placing it in a broad world historical context.

The Crisis of Private Monopoly Capitalism: 1914–1945

The dominant institutional structure in the advanced capitalist countries in the late 19th and early 20th centuries was known to Marxists as "private monopoly capitalism" and to Keynesians as "small government capitalism."

The rise of big, monopolistic, capitalist corporations made possible the application of new mass production technologies. The early 20th century was characterized by major technological innovations (automobiles, airplanes, new telecommunication technologies, electric power, and oil as the new major source of energy) and rapid expansion of international trade and investment.

However, because of the inherent contradictions between "socialized production" and the system of "capitalistic appropriation" (Engels, 1978), private monopoly capitalism was unable to provide a minimum acceptable level of economic stability. As mass production expanded, there was a tendency for the capitalist economy to become increasingly unstable, leading to increasingly violent and destructive economic crises, culminating in the Great Depression.

Capitalist development had brought about fundamental social transformations. A growing proportion of the labor force had become a proletarianized, modern working class. Urbanization and the development of modern transportation and communication had prepared the material conditions that favored workers' organization.

By the late 19th century, the world was effectively divided up among the western imperialist powers. Imperialist exploitation in the colonies and semi-colonies had nevertheless contributed to the

disintegration of precapitalist social structures and the rise of new social forces: "national bourgeoisies" and the new, modern intellectuals influenced by western ideas.

By the early 20th century, the capitalist world system was challenged by increasingly powerful socialist working-class movements in the system's core (the advanced capitalist countries) as well as the national liberation movements, which represented primarily the interest of the indigenous elites in the colonies and semi-colonies.[2] The inability of private monopoly capitalism to accommodate the political and economic demands of these new social forces had led to revolutionary upheavals that threatened to overthrow the entire capitalist system.

Finally, by the early 20th century, British imperialism was already in an advanced stage of decline. Yet U. S. imperialism was not ready to assume the role of hegemonic power in the capitalist world system. The competition between Germany and the United States to succeed Britain as the next hegemonic power led to intensified interstate conflicts and eventually had to be settled with two world wars.

The Second World War ended with U. S. victory and consolidation of American hegemony. Under American leadership, the capitalist world system underwent successful restructuring. A new institutional structure, known to Marxists as "state monopoly capitalism" and to Keynesians as "big government capitalism," was established.

In the core states, there was a massive expansion in both the size and the economic function of the government. The advanced capitalist countries actively used Keynesian macroeconomic policies to promote economic growth and high levels of employment. Many Western European countries had large state-owned sectors, and Japanese capitalism was famous for its quasi–central planning development strategy.

With the establishment of welfare state institutions and recognition of organized labor as a partner in the capitalist social regime, the western working classes were incorporated into a new social compact that provided a guaranteed minimum lifetime income (unemployment benefits, government provided pensions), government-subsidized re-

2 The states in the capitalist world system, depending on their political and military strength, and their positions in the system-wide division of labor, are divided into three structural positions: core, semi-periphery, and periphery. On the elaborations of these structural positions, see Wallerstein, 1979, 18–23.

production of labor power (public health care and education), and a promise of rising living standards over time (rising real wages in proportion with economic growth).

The United States pushed for decolonization in Asia and Africa. The disintegration of the British and French colonial empires opened up the market for U. S. corporations. More important, it prevented the radicalization of the national liberation movements, while managing to accommodate their main demands: national independence and industrialization.

The 20th century international communist movements were largely radical forms of national liberation movements.[3] China was a big semi-colonial, peripheral state before the revolution and Russia was a big semi-peripheral state that was in the process of declining towards peripheral status. In both cases, the indigenous bourgeoisie was unable to lead a successful completion of industrialization and failed to reverse its home state's secular decline in the inter-state system. It took a revolutionary social transformation, which involved the massive mobilization of the exploited great majority, to prepare the necessary social conditions for modern economic growth.

The Yalta agreement and the Cold War regime provided the geopolitical framework that accommodated the socialist semi-peripheral states. Under this framework, the Soviet Union would refrain from challenging U. S. hegemonic power and withdraw support for revolutionary movements outside of its sphere of influence. In return, the United States would recognize the right of "peaceful coexistence" and "peaceful competition" of the Soviet Union and other socialist states under its influence.

The consolidation of U. S. hegemony, Keynesian big government, the welfare state for the western working classes, the accommodation of national liberation movements, and the Yalta–Cold War regime, together constituted the post-1945 global "New Deal." Over the following two decades, the global capitalist economy enjoyed unprecedented rapid economic growth, still nostalgically remembered by many as a so-called "golden age."

3 This statement applies to the communist parties that came to state power in the non-western world. On the other hand, the western communist parties may be best regarded as radical forms of social democratic movements (as represented by the Eurocommunist tradition).

The Crisis of State Monopoly Capitalism: 1968–1989

By the mid-1960s, global capitalism was confronted with a new period of major economic and political crisis. Rapid expansion of the global capitalist economy and welfare state institutions provided a favorable environment for the growth and organization of the working classes. By the 1960s, there were upsurges of working-class militancy in both the core zone and the semi-periphery. The profit rate suffered large and sustained declines throughout the world system. The Bretton Woods international monetary system collapsed and the global capitalist economy fell into a deep crisis of accumulation in the 1970s.

In 1968, virtually all of the advanced capitalist countries were challenged by revolutionary workers' and students' movements. Immanuel Wallerstein referred to 1968 as the year of "world revolution" (Wallerstein, 1998, 1–33). In China, Mao Zedong mobilized ordinary workers, peasants, and students to challenge the "capitalist roaders" who were in authority in the Communist Party. In the 1970s, Chile and Portugal represented the most hopeful socialist revolutions in the semi-periphery.

Overall, however, the western working classes were primarily fighting for the consolidation and expansion of the postwar welfare state rather than the overthrow of the capitalist system. On the other hand, most of the semi-peripheral states (in Latin America and Eastern Europe) borrowed the "petrodollars" (the massive amounts of dollar deposits that the oil exporters made with the western banks during the 1970s) to temporarily extend an accumulation boom and appease their domestic working classes. The global capitalist classes were thus able to isolate and defeat the revolutionary challenges.

As the global revolutionary upsurge faded, political initiative passed into the hands of the ruling elites. After the fascist coup in Chile in 1973, the Pinochet regime and the so-called "Chicago boys" (U. S.–trained economists who studied at the University of Chicago under Milton Friedman) implemented the first monetarist experiment, with devastating economic and social consequences. The counter-revolutionary coup in China in 1976 dealt another major blow to the global revolutionary movement. The ensuing historical processes eventually opened up China to the global capitalist economy and

turned hundreds of millions of Chinese workers into the world's largest reserve army of cheap labor power.

As Margaret Thatcher came to power in Britain and Ronald Reagan came to power in the United States, neoliberalism became the new orthodox economics in advanced capitalist countries. In 1989, as the Berlin Wall fell, the apologists of the existing social system celebrated the "End of History." Two years later, the Soviet Union disintegrated. The fall of the Berlin wall marked not only the end of the "Cold War" but also the final demise of the postwar global "New Deal."

The Crisis of Neoliberal Capitalism, 2001–2025(?)

In 2001, the U. S. stock market bubble started to collapse, after years of "new economy" boom. The Bush administration took advantage of the psychological shock of 9/11, and undertook a series of "preemptive wars" (first in Afghanistan and then in Iraq) that ushered in a new era of intensified inter-state conflicts.

Towards the end of 2001, Argentina, which was regarded as a neoliberal model country, was hit by a devastating financial crisis. Decades of neoliberalism had not only undermined the living standards of the working classes, but also destroyed the material fortunes of the urban middle classes (which remained a key social base for neoliberalism in Latin America until the 1990s). After the Argentine crisis, neoliberalism completely lost political legitimacy in Latin America. This paved the way for the rise of several socialist-oriented governments on the continent.

After the 2001 global recession, the global economy actually entered into a mini–golden age. The big semi-peripheral economies, the so-called "BRICs" (Brazil, Russia, India, and China) became the most dynamic sector. The neoliberal global economy was fueled by the super-exploitation of the massive cheap labor force in the semi-periphery (especially in China).

The strategy worked, to the extent that it generated massive amounts of surplus value that could be shared by the global capitalist classes. But it also created a massive "realization problem." That is, as the workers in the "emerging markets" were deprived of purchasing power, on a global scale, there was a persistent lack of effective demand for the industrial output produced in China and the rest

of the semi-periphery. After 2001, the problem was addressed through increasingly higher levels of debt-financed consumption in the advanced capitalist countries (especially in the United States).

The neoliberal strategy was economically and ecologically unsustainable. Economically, the debt-financed consumption in the advanced capitalist countries could not go on indefinitely. Ecologically, the rise of the BRICs greatly accelerated resource depletion and environmental degradation on a global scale. The global ecological system is now on the verge of total collapse.

The world is now in the midst of a prolonged period of economic and political instability that could last several decades. In the past, the capitalist world system had responded to similar crises and managed to undertake successful restructurings. Is it conceivable that the current crisis will result in a similar restructuring within the system that will bring about a new global "New Deal"?

In three respects, the current world historical conjuncture is fundamentally different from that of 1945. Back in 1945, the United States was the indisputable hegemonic power. It enjoyed overwhelming industrial, financial, and military advantages relative to the other big powers and, from the capitalist point of view, its national interests largely coincided with the world system's common and long-term interests.

Now, U. S. hegemony is in irreversible decline. But none of the other big powers is in a position to replace the United States and function as an effective hegemonic power. Thus, exactly at a time when the global capitalist system is in deep crisis, the system is also deprived of effective leadership.[4]

In 1945, the construction of a global "New Deal" involved primarily accommodating the economic and political demands of the western working classes and the non-western elites (the national bourgeoisies and the westernized intellectuals). In the current conjuncture, any new global "New Deal" will have to incorporate not only the western working classes but also the massive, non-western working classes. Can the capitalist world system afford such a new "New Deal" if it could not even afford the old one?

Most importantly, back in 1945, the world's resources remained abundant and cheap, and there was still ample global space for envi-

4 On the decline of American hegemony, see Arrighi, 2007; Li, 2008, 113–138; Wallerstein, 2006.

ronmental pollution. Now, not only has resource depletion reached an advanced stage, but the world has also virtually run out of space for any further environmental pollution.

Peak Oil and Phases of the Global Crisis

The rapid expansion of the global capitalist economy over the second half of the 20th century rested upon the exploitation of cheap resources, and especially cheap oil. Oil accounts for about one-third of the world's total energy supply and nearly all of the world's transportation fuel. Oil also provides indispensable inputs for chemical industries which produce chemical fertilizers, plastic products, and modern medicine.

Now there is a growing body of evidence suggesting that world oil production either has already peaked or will peak very soon. Among the world's largest producers, U. S. oil production peaked in 1970. Britain and Norway, the two most important European producers, peaked in 1999 and 2001, respectively. Mexico, which used to be the world's fifth largest oil producer, peaked in 2004. Russia, the world's second largest oil producer, peaked in 2007. Current evidence suggests that Saudi Arabia's crude oil production is likely to have peaked in 2005 (*The Oil Drum*, 2009).

The Association of Peak Oil and Gas now suggests that world oil production is likely to have peaked in 2008 (ASPO, 2008).

Oil is an indispensable resource for the global capitalist economy. Other fossil fuels, such as natural gas and coal, are also nonrenewable resources and their production is likely to peak in a few decades. Converting natural gas or coal into liquid fuels substantially reduces energy efficiency and increases greenhouse gas emissions.

Nuclear energy is nonrenewable and has serious pollution and safety concerns. It can only be used to generate electricity.

Solar and wind are intermittent resources and cannot provide more than a limited proportion of the world's electricity use, absent some major breakthroughs in electricity storage technologies.[5] Moreover, they can only be used to generate electricity and therefore cannot directly substitute for liquid fuels.

5 Solar thermal technology or concentrated solar power could have less of a problem of intermittency if there are heat storage facilities. But it nevertheless suffers from very serious seasonal variations. Performance in winter is likely to be particularly weak.

Many other renewables, such as hydro, geothermal, tide, and wave, have limited physical potentials and cannot substitute for fossil fuels on large scales.

Biomass is the only renewable energy that can be used to make liquid fuels or chemical inputs. But biomass production is limited by the availability of land and fresh water. Recent research finds that biomass production could actually result in more greenhouse gas emissions than conventional fossil fuels.[6]

After the 2001 recession, global oil demand grew rapidly, led by the surging demand of China and India. After 2005, despite surging oil prices, world oil production was unable to grow and in effect stayed on a high plateau from 2005 to 2008. The surge in the oil price was one of the factors that precipitated the global economy into the current crisis.

In response to the crisis, capitalist governments, led by the United States, have attempted to stabilize the situation through massive increases in government deficits. In effect, governments are substituting public borrowing for private borrowing and public debt for private debt. While these measures will help to keep the global capitalist economy afloat for a few years, in the medium and long term most capitalist governments will have to confront an overwhelming fiscal crisis.

A recent research paper finds that the United States will likely run a cumulative fiscal deficit of over ten trillion dollars in the coming decade. And this is based on a set of optimistic assumptions. It assumes that there will be an orderly recovery from the current recession and the current fiscal stimulus package will expire in two years. It takes no account of new spending for financial stability, the housing plan, and health care reform. Worse, in the long run, the USA faces a fiscal gap of 7–9% of GDP. That is, to stabilize the long-term debt-to-GDP ratio, the USA must either raise taxes by 7–9% of GDP or reduce spending by the same amount (Auerbach and Gale, 2009).

Until now, the Chinese capitalist economy has suffered only limited damage. The Chinese government is committed to spending hundreds of billions of dollars on infrastructure investment to sustain economic growth. The Chinese economy and China's demand

6 For detailed discussions of the economic and technical limitations of nuclear and renewable energies, see Trainer, 2007.

for energy are likely to continue to grow at a relatively rapid pace for a few more years.

By about 2015, however, the irreversible decline in world oil production will become apparent. As the decline of the energy supply takes place against the continuing growth of demand in China and possibly in other large semi-peripheral states, world energy prices will again rise rapidly, generating global inflationary pressure.

Squeezed between shrinking export markets (as the advanced capitalist countries suffer from economic stagnation) and rising energy costs, China's trade surpluses will likely disappear and China may be forced to sell some of its foreign exchange reserves to stave off economic crisis. The combination of China's dollar sales, global inflationary pressure, and the U. S. fiscal crisis will greatly increase the likelihood of a general dollar collapse that will take the global economic crisis into a second, more violent and more destructive phase.

Chinese capitalism will not be able to postpone the crisis forever. In perhaps five to ten years from now, China will likely be hit by an insurmountable economic crisis as its export-oriented manufacturing industries suffer from the shrinking of the global market and its massive demand for energy and materials can no longer be sustained. The third and final phase of the global economic crisis is likely to see the general collapse of the Chinese, and with it the global, capitalist economy.

Battlegrounds of Global Class Struggle

In the neoliberal era, most of the world's labor-intensive, energy-intensive, low-to-medium value-added industrial activities were relocated to the semi-periphery of the capitalist world system (China, India, the rest of Asia, Russia, Eastern Europe, and Latin America). Large industrial working classes, subject to the most intense capitalist exploitation, have taken shape in China and some other semi-peripheral states. The semi-periphery has accounted for most of the growth in the world's energy demand and greenhouse gas emissions. The growth of the semi-peripheral economies has been based on exports of manufacturing goods, energy products, and other commodities to the core zone of the capitalist world system.

It is only a matter of time before the working classes in China and the rest of the semi-periphery learn how to get organized effectively,

fighting for a broad range of economic and political demands. The Latin American working classes now stand at the frontline of the global anti-capitalist, anti-imperialist struggle.

Confronted simultaneously with the collapse of global trade, decline of world energy production, and the prospect of growing working-class militancy, the semi-periphery is likely to prove to be the "weakest link" in the global capitalist chain and a key battleground of global class struggle. If working-class revolutions take place and get consolidated in Russia, China, and Latin America in the coming one or two decades, then the global balance of power could be turned decisively in favor of the global working classes and revolutionary forces.

The core zone, or the advanced capitalist countries, will be another important battleground. In the big-government capitalist era, the western working classes enjoyed benefits of the welfare state institutions and rapid growth of living standards. These benefits were based partly on exploitation of the world's cheap resources, and partly on the transfer of surplus value from the periphery and semi-periphery. In the neoliberal era, despite the capitalist counter-offensive, the welfare state institutions have remained mostly intact in the core zone (in contrast to the devastating economic and social consequences in much of the periphery and semi-periphery).

However, virtually all of the advanced capitalist countries are now confronted with long-term fiscal crises, which result from a combination of the working classes' historical entitlements to pensions and healthcare programs and what is, from the point of view of capitalist accumulation, an unfavorable demographic trend (the gradual aging of the population).

The capitalist classes in the core zone are thus confronted with one of the following options. Either they continue to honor the working classes' historical entitlements, in which case the capitalist governments in the core zone will sooner or later become fiscally bankrupt under the increasingly onerous burden of rising social and environmental costs, leading to an accumulation crisis. Or they would have to confront the working classes directly, attempting to deprive them of their historical attainments. In this case, however, the capitalist classes would risk losing all political and social legitimacy, precipitating a revolutionary crisis.

As in the period 1968–1989, the outcome of the current crisis will depend on the development of the global class struggle. Unlike in previous periods of crisis, in the current world conjuncture, capitalism is no longer a viable historical option.

Climate Change: Socialism or Barbarism?

Climate change is probably the single most important symptom of the global environmental crisis. The global average temperature is now about 0.8 degrees Celsius higher than in pre-industrial times. If the global average temperature rises to two degrees higher than the pre-industrial benchmark, there is likely to be widespread drought and desertification in Africa, Australia, Mediterranean Europe, and western North America. Summer monsoons will likely fail in Northern China. 15-40% of plant and animal species may become extinct. Substantial ocean and land carbon cycle feedbacks may be initiated that could release massive amount of greenhouse gases, taking climate change out of human control (Spratt and Sutton, 2007).

If global warming rises to three degrees, then the global sea level could rise by 25 meters, submerging much of the world's present coastal areas and destroying the Amazon rainforests. If global warming rises to four degrees, much of the world will likely be no longer suitable for human habitation and the world population may eventually fall to less than 10% of the present level (Lovelock, 2009).

According to IPCC (Intergovernmental Panel on Climate Change) models, an atmospheric concentration of carbon dioxide equivalent (a measure of the amount of greenhouse gases in the atmosphere) of 450 ppm (parts per million) is roughly associated with global warming of two degrees. However, James Hansen, one of the world's leading climate scientists, recently argued that the IPCC models seriously underestimate long-term "climate sensitivity" (the responsiveness of the earth's climate to certain amounts of change of greenhouse gases). Hansen estimates that to prevent long-term global warming by more than two degrees, the atmospheric concentration of carbon dioxide equivalent must be stabilized at less than 350 ppm (Hansen, *et al.*, 2008). Using Hansen's climate sensitivity, an atmospheric concentration of carbon dioxide equivalent of 450 ppm is likely to result in eventual global warming of four degrees.

Currently the atmospheric concentration of carbon dioxide equivalent is at about 380 ppm.

A recent scientific paper points out that since 2000, the world's greenhouse gas emissions have grown far more rapidly than what has been assumed by the IPCC models. After making allowances for non–carbon dioxide greenhouse gas emissions and carbon dioxide emissions from deforestation, Anderson and Bows (2008) estimate that to have any chance of stabilizing the atmospheric concentration of carbon dioxide equivalent at below 450 ppm, the world's carbon dioxide emissions from fossil fuels must peak no later than 2015 and then rapidly decline at an annual rate of 6–8%.

As discussed earlier, nuclear and renewable energies are subject to many technical and economic limits. In addition, a major problem is that the entire modern economy's energy, transportation, industrial, and residential infrastructure is built on fossil fuels. It takes many decades to replace a society's economic infrastructure. Without fundamental transformation of the infrastructure, short-term conservation measures and minor technical changes are unlikely to achieve substantial, sustained reduction of greenhouse gas emissions.

Consider, for example, a society which each year replaces 5% of its infrastructure.[7] Compared to the old infrastructure, the new infrastructure has an emission intensity that is lower by 50% (alternatively stated, economic output per unit of greenhouse gas emissions rises by 100%). This is equivalent to assuming that all of the new power plants plus half of the new transportation infrastructure is completely emission free. With such heroic assumptions and assuming there is no economic growth, the economy's emissions would only fall by 2.5%, far short of the 6–8% annual reduction that according to Anderson and Bows is required for an acceptable outcome of climate stabilization.

Now suppose the world economy grows at 3% per year, so that each year the new infrastructure would represent 8% of the old infrastructure (5% replacement + 3% growth). Assuming again that the emission intensity of the new infrastructure is 50% lower than that of the old, then the world economy's average emission intensity (taking into account both the new infrastructure and the not-yet-replaced

7 This in effect assumes that the infrastructure has an average lifetime of 20 years. In reality, much of the infrastructure could last half a century or longer.

old infrastructure) would fall by 4%. However, taking into account 3% economic growth, world emissions would fall by only 1%. In reality, since 2000, the world's carbon dioxide emissions from fossil fuels have grown at about 3% per year.

Thus, to have any hope of preventing major climate catastrophes, the world needs to undertake a massive, coordinated, and planned transformation of the entire economic infrastructure. Moreover, to the extent that technical changes by themselves are quite insufficient to achieve the desired conditions of climate stabilization, the world's total material consumption needs to be adjusted downwards in accordance with the stabilization requirements. For the downward adjustment to take place without undermining the general population's basic needs, there must be a radical equalization of the world population's consumption standards.

It is completely inconceivable that these goals could be achieved within the historical framework of the existing social system. Instead, they would require a new social system based on social ownership of the means of production (at global, national, and community levels), democratic planning, and global cooperation.

In the coming decades, the global class struggle will determine how the current structural crisis of world capitalism will eventually be resolved. There are three possible outcomes.

First, the crisis will end with another successful restructuring of the capitalist system. The global economy will continue to be dominated by production for profit and the endless accumulation of capital. In that event, global ecological catastrophes will be inevitable and humanity will in effect have committed its own collective suicide.

Second, the global class struggle will lead to the overthrow of the capitalist world system. But humanity will nevertheless fail to construct an ecologically and socially viable new social system. Human civilization will then sink into permanent chaos and barbarism.

Third, the global class struggle will pave the way for the rise of a new global system based on ecological sustainability and production for the general population's basic needs, characterized by a high level of economic, social, and political democracy.

To paraphrase Marx (1978), we will make our own history. But we will not make it just as we please; we will not make it under

circumstances chosen by ourselves, but under circumstances directly found, given, and transmitted from the capitalist past.

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Marxism, Crisis Theory and the Crisis of the Early 21st Century

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IN THE WRITINGS OF KARL MARX we find the most penetrating theoretical construction of the basic laws of motion of capitalism, and also acute observation of the significant events of his time and their larger meaning. Distinguishing his different levels of analysis can be obscured by the employment of the same words in different usages. For example, as Marx moves between the use of the term "class" applied at the level of the mode of production to "class" as class fractions relevant to a specific social formation in his contemporary conjuncture, the term takes on different meanings (Ollman, 1978; Tabb, 2009). So too his writing explaining the causes of economic crisis range from disequilibrium in reproduction schemas and the core contradictions of social relations under capitalism, to contingent events of timely importance which attribute causal significance to such things as the discovery of natural resources or the bankruptcy of a particular enterprise. Just as our use of "class" depends on the

subject of our inquiry, so "crisis" is employed to consider different ranges of explanation.

Marx was quite expansive in discussion of crisis but, as Schumpeter writes (1951, 49), he "had no simple theory of business cycles. And none can be made to follow from his 'laws' of the capitalist process." But this is to ignore his dialectical method. It is true that nowhere does Marx present a single crisis theory. He offers different explanations in different contexts. This should not be surprising, for Marx's science is not a deterministic one but a dialectical approach with strong stress on historical specificity. For us his work raises the question in what ways our understanding of Marxian crisis theory helps explain the conjunctural crisis of the early 21st century and suggests appropriate political responses. In attempting to discuss these crucial questions in the limited space available I will paint a broad canvas highlighting diverse elements to connect discourses which frequently stand in isolation from or conflict with each other. Such scope reminds us of the breadth of Marx's writing; the different levels of analysis, periodization, and abstractions he pursued.

Marx on Crisis

Most frequently Marx and Marxists consider crisis at the level of an abstract model of capitalism in which the discussion is of the relative merits of underconsumptionism versus falling rate of profit, of overaccumulation, disproportional growth among departments, and profit squeeze foci, all at the level of the economic system as an entity. There are severe difficulties in carrying out empirical investigations: counteracting tendencies, measurement issues, the transition from an international economy to a globalized one (and the difficulties of measuring profit at the level of the world system), the importance of differential rates for different sectors, issues of redistribution in the sphere of production and along the commodity webs controlled by transnational oligopolies. A focus on the present conjuncture in economic history raises other framings stressing the role of finance, which is privileged in Marx's own analysis of specific crises.

Marx follows a method of historical–logical development through the three volumes of *Capital*. Volume I offers an abstract model of production and then expanded reproduction. In Volume II circulation is presented, and in Volume III the two are brought together in

terms of the totality of capital in general as the unity of production and exchange. Because Marx's writings involve such a large overarching vision there are five important problems for those who would want to develop a Marxist theory of crisis. First, as noted above, is that he does not develop such a unitary theory. Second, he treats crisis at different levels of abstraction. Third, there are alternative readings possible for just about everything Marx writes because of the extremely elastic multifaceted constructs he routinely deploys (Ollman, 2003). Fourth, Marx only completed a small part of his ambitious project and so in many places he offers partial analyses which do not get completed in his lifetime. Fifth, when looking at historically specific crises (and not crises at the level of capitalism's historical–logical development) it is the particularities of a conjuncture that are dominant and Marx cannot be expected to have answers ready made for our stage of capitalist development and conjunctural specifics, even as his method gives us guidance. Let us look at each of these.

At the level of capitalism as a mode of production emphasis is given to the law of the tendency for the profit rate to fall, which Marx himself believed was "in every respect the most important law of modern political economy" (Marx, 1973, 748). This law, he believed, "has never before been grasped, and even less, consciously articulated." Indeed, it is not an easy "law" (read: tendency) to grasp in any concrete time and place, given powerful countertendencies: increases in the intensity of exploitation, producing more relative surplus value through speedup and such; or increases in absolute surplus value through a lengthening of the working day, which seems to have been happening in recent decades in the United States. Other countertendencies are not easy to measure: working off the clock at places like Wal-Mart and for white collar and professional workers thanks to the Internet, email and Blackberries; the cheapening of the elements of constant capital; wages forced below their value; relative overpopulation of the reserve army which globalization has surely promoted; as well as changes in the cost of raw materials, expansion into new markets, and so on. Measurement of the profit rate on a global scale is no easy task and accounting for offsetting tendencies which have interrupted the falling rate of profit over the century and a half since Marx presented this idea is hardly a straightforward project as a guide to explaining crises. If crisis is generated when the ratio of capital to the laboring population has grown so that neither

absolute nor relative labor time can be expanded further, "there would be absolute over-production of capital" producing a "steep and sudden fall in the general profit rate." This could be caused by a rise in the money value of variable capital (an increase in wages) or a change in the composition of capital (Marx, 1908, 251–2). Contemporary work by Marxist scholars focuses on both.

Canonical quotation from Marx by falling rate of profit theorists tends to draw from Volume I, while disproportionality and underconsumption theorists draw on Volume II. For Marx production and circulation are two moments in a unity; suggesting a single-minded focus on one and ignoring the other would not be a complete analysis. The barrier to capital established by the need to realize surplus value in circulation is as real as the task of creation of surplus value in production. To see only the latter is the fault Marx attributes to Sismondi and Robertus. To conceive only of the totality of the process of production is Ricardo's error. Privileging elements seen as central contradictions and so of primary explanatory importance is surely important if we are to get beyond "everything effects everything else," but invites criticism from other Marxists. For example, for a decade or more after the 1966 publication of Baran and Sweezy's *Monopoly Capital* there were prolonged debates over whether they were Keynesian underconsumptionists, a charge any Marxist looking at stagnationist tendencies in capitalism faces. (Baran and Sweezy rejected the idea that crisis is caused only by a persistent tendency toward insufficiency of demand for consumer goods and also therefore the policy efficacy of income redistribution.) There are vast literatures in the history of thought on such matters well before Keynes. (One might look, for example, at Schumpeter, 1954, 740ff, and, for a Marxist viewpoint, Bleaney, 1976.) It is possible to cite Marx to refute the idea that crises could be prevented by increasing effective demand. He writes of the idea that if people spent more, more could be sold, that "if one were to attempt to clothe this tautology with a profounder justification by saying that the working class receives too small a portion of their own product, and the evil would be remedied by giving them a larger share of it, or raising their wages, we should reply that crises are precisely always preceded by a period in which wages rise generally and the working class actually gets a larger share of the annual production intended for consumption" (Marx, 1907, 476). This is the basis of profit squeeze analysis, which

has been used to explain the stagflation of the 1970s (Bowles, Gordon and Weiskopf, 1984).

My own emphasis in examining economic crisis in our time is to focus on elements I believe central to Marx's thinking but underdeveloped by him in his lifetime. To see how incomplete, consider that the scope of the three volumes of *Capital* (even if we include the posthumous *Theories of Surplus Value*) concern capital in general. What we know as *Capital*, its three volumes, were a mere one-fourth of his planned work on Capital. He intended to deal with crisis much later as part of the last of his six topic areas, "the world market." Marx, writing to Engels in a letter dated April 2, 1858 (also see his letter to LaSalle, February 22 of that year): "The whole shit is divided into six books: I. Capital; II. Landed Property; III. Wage Labor; IV. State; V. International Trade; VI. World Market." Marx left little guidance as to what would have comprised the last three critical books. (For a discussion of Marx's alternative schemas which suggest that the whole of *Capital* as we know it was roughly *one–twenty-fourth* of the project, see Nicolaus, 1973, 52–56.)

Marx distinguishes five levels of analysis (and he is not always clear on which he is operating in any particular analytical exercise). The first is the general abstract level, "more or less applicable to all forms of society." The second level is of the categories "which go to make up the inner organization of bourgeois society" (landed property, circulation and credit, the three great classes, and so on). That is as far as he got, for the most part. The design was also to consider "the state in relation to itself" (where taxes and public finance would be analyzed). Then international exchange (exports and imports, exchange rates). Finally, as he notes in the schema cited above, "the world market and crises" (which presumably would treat both globalization of the system and crisis theory, not at the level of the nation–state as at level two but the comprehensive and emergent form at the level of the world system (see Marx, 1859; Tabb, 1999, ch. 5). By the time Marx would have gotten to crises at the level of the world system we cannot know what he would have privileged. It is unlikely such an analysis of capitalism as a system would offer a deterministic model applicable to all crises.

On a different plane, we need to distinguish capitalism as a mode of production and analysis of particular capitalisms in their historical

specificity (for a discussion of levels of analysis in Marx's general method and their dialectical connections see Ollman, 2003). The latter can be distinguished as a specific conjuncture, such as U. S. capitalism in the era of global neoliberalism. Tendencies at the level of capitalism in general condition historical specificities and possibilities at the level of a particular conjuncture. (Note please: here I am using levels to mean gradations in abstractions, as per Ollman, rather than the five levels Marx spoke of in describing the five parts of the project of *Capital*.) Marx treats capitalism in general where he discusses laws/tendencies and also relevant conjunctural features of his time, moving between them in a larger analysis. A focus on one or the other requires and suggests different emphases. Below, when I discuss the Marxist understandings of the present conjuncture of Robert Brenner in comparison to Leo Panitch and Sam Gindin, it is useful to stress Brenner's grounding in the falling rate of profit as the most important law of capitalist development at the level of analysis of capitalism as an abstraction as it is manifest in the current conjuncture, versus Panitch and Gindin's starting in the conjuncture, their openness to class agency with only secondary allusion to capitalism at the level of the qualities that all capitalist societies have in common. It is a matter of levels of abstraction from which they start which leads Brenner to focus on accumulation structures and Panitch–Gindin to specificities of national power in the contemporary conjuncture. Part of the phenomenon of Marxists arguing past each other is a failure to recognize that they may be privileging different levels of analysis in Marx's thought. The choice is often premised on the questions one is asking. Different purposes call for choosing different levels of abstraction.

World events and financial overextension are themes Marx discussed in many treatments of crisis episodes in his time (the conjunctural plane of analysis). I think issues of finance and globalization should be privileged in discussion of the contemporary conjuncture. In his writings Marx lends support to almost all serious major explanations of crisis and a number of minor ones, including as well the long forgotten bankruptcy of Gurney and Chapman (immortalized in Volume III), a firm that drew Marx's attention as the cause of a crisis, using "cause" here to mean trigger, since it is the deeper structure of capitalist contradiction which is the ultimate cause. In 1850 he and Engels write in the *Neue Reinische Zeitung* about the importance

of the discovery of gold in California as "a fact of even more importance than the February [1848] revolution." They emphasize the importance of British investment in railways and excessive imports into England as a result of the speculative fever of the prosperous years 1843–45 explaining the crisis of 1847, which was at bottom a crisis of overproduction. They also pay attention to the potato famine and bad crops in other countries in 1845 and 1846, as well as to the importance of purely monetary phenomena. At such a level of historical specificity surely oil prices, subprime mortgages, U. S. current account deficits and global liquidity would be considerations today. That productive capacity on a global scale now comes from faster growing countries of the former periphery of the world capitalist system and create trade and capital flow imbalances, and that at its peak in 2007 the FIRE sector (finance, insurance and real estate) captured 40% of the domestic profits of all U. S. corporations, up from 10% three decades earlier, would not have escaped Marx's notice.

Conjunctural crises and revolution are connected in a number of places by Marx and Engels, not only in their theoretical work but in commentaries on current events. Thus, after the hopes of 1848 are disappointed, they write:

> In the face of this general prosperity, in which the productive forces are developing as exuberantly as is possible within the framework of bourgeois relations, it is not possible to talk of a real revolution. Such a revolution is possible only in periods in which these two factors — namely, modern productive forces and bourgeois forms of production — come into contradiction with each other. . . . A new revolution is possible only as the result of a new crisis. It is inevitable as is the latter.

But revolution does not follow each crisis, despite whatever optimism Marx, Engels and others might have with each new crisis. On their more sober days they (and we) surely understand that capitalism has a way to go in developing its potential to innovate and find new dynamic growth paths. It is necessary to separate out, then, the discussion of cycles and their causation, the way crises are solved to redistribute the burden to the working class and recovery through distributive outcomes favoring capital and the increasing contradictions between the forces and the social relations of production which point to the need for

socialism. Elsewhere I have argued — based on Marx's expectations as to the nature of technological change (offered in the *Grundrisse*) and its impact on the measurement of value — that a transition to a new mode of production is plausibly forecast as a result of advances in technology we have come to identify with automation and social knowledge applied to product and process innovation, so that labor time no longer measures value. It is at this stage of a more mature capitalism that socialism on a world scale can come about, due to working-class understanding of the gap between human need allowed by the potential of the means of production but prevented by existing class relations (Tabb, 1999, 82–87). The structural contradictions of capitalism on a world scale provide the terrain for maturing working-class consciousness and class unity capable of overcoming national and other prejudices, as well as systemic critique in ways not earlier viable. This is not an easy process and worth serious discussion (which cannot be pursued here).

Financialization

As Marx wrote in a 1879 letter to Nikolai Danielson of April 10,

> Railroads . . . steamships . . . were . . . the means of communication adequate to the modern means of production. . . . they were the basis of immense joint stock companies, to commence by banking companies. . . . they gave in one word, an impetus never before suspected to the concentration of capital, and also to the acceleration and immensely enlarged cosmopolitan activity of loanable capital, thus embracing the whole world in a network of financial swindling and mutual indebtedness, the capitalist form of "international" brotherhood.

Globalization, a process well underway with the territorial expansion of capitalism (and certainly evident in Marx and Engels' discussion in the *Manifesto*) took place through the expansion of financialization which was never a mere matter of intermediation but corrupt to the core. In *Capital* Marx wrote of "a new aristocracy of finance, a new sort of parasites in the shape of promoters, speculators, and merely nominal directors; a whole system of swindling and cheating by means of corporate juggling, stock jobbing, and stock speculation. It is private production without the control of private property" (Marx, 1908, ch. 27).

Marx saw and studied the withdrawal of capital from production to make money in speculation — a phenomenon ignored in the mainstream finance theory of the sort taught today to millions of undergraduates, which features the fairy tale of rational expectations, efficient capital markets, and smooth movement from one equilibrium position to another. To make the facts fit the theory, financial crises bring out creative explanations: government interference, exogenous events, a few bad apples. But when the details come out concerning the deceitful, dishonest and systemic corruption that accompanies endogenous crises caused by greed pushed to the point of unsustainability, the workings of the system itself, of overoptimism collapsing in the face of the realities of overextension, one could do no better than revisit Marx's classic formulation in *Capital* III, ch. 33:

> Banks and big money-lenders and issuers surrounding them constitute enormous centralisation and gives this class of parasites the fabulous power, not only to despoil industrial capitalists, but also to interfere in actual production in a most dangerous manner . . .

There is more here than a condemnation of rentier depredation; we have the outline of a theory of endogenous business cycles, one that gives prominent place to finance, noting signal events such as the above-mentioned consequences of the failure of Gurney and Chapman, triggering a general crisis. Inability to pay debt as the cycle turns is integral to the mechanics of crisis. At other points Marx focuses on the imbalances between investment and consumption, the tendency of the profit rate to fall, and other systemic explanations at the level of analysis of the mode of production. But at the level of a particular historically specific crisis it was enough that a failure of a major firm could trigger a broader collapse through knock-on impacts on its creditors and interdependencies in credit and supplier markets. (On a different level of analysis of the intertwining of the credit cycle and the business cycle, see Marx, 1907, 570–73.) In structuralist terms overextension, the increased creation of fictitious capital's exaggerated claims, leads inevitably to crisis. Marx wrote of the innate fragility of the credit mechanisms of the system in structuralist terms, "where the ever-lengthening chain of payments, and the artificial system of settling them, has been fully developed" (Marx, 1906, ch. 3). Banks, which intermediate between savers and those who

can make productive use of borrowed money and repay with interest, are crucial to an economy. However, their temptation to overextend themselves, putting other people's money at risk, is integral to systemic crises, which can start in the realm of finance but are tied to the disappointment of expectations in the "real" economy. An important aspect of this process of financial self-levitation is that liquidity is created through speculators pyramiding debt. At each stage in the chain those with claims presume their money is secure, until it isn't. Rather than monetary authorities unproblematically controlling an expanding and contracting money supply in countercyclical fashion, speculation creates liquidity in a procylical fashion. In expansion borrowing is easy and low cost. In contraction credit crunches deprive the system of loan capital, inhibiting recovery. This phenomenon is integral to capitalism as a mode of production, but takes different conjunctural forms. One may think of repurchase agreements for collateralized debt obligations in the present period, for example.

At the structural level financialization in the contemporary conjuncture was a response to the crisis of growth and profitability that came with the decline in the profit rate of the old industrial economy from the 1960s and 1970s. As the U. S. auto, steel, rubber, textile and other industries, which dominated most of the 20th-century economy, declined, financiers figured out ways to withdraw capital in corporate reorganizations at the expense of workers. In the new centers of accumulation, above all China and other "emerging markets" of the semi-periphery and the oil exporters, huge current account surpluses were available for investment elsewhere. This kept global interest rates low and allowed the huge borrowing of some 70–80% of global current account surpluses by the United States, important factors in the vast increase in liquidity in financial markets and in stimulating global growth. Along with major redistribution from labor income to capital observable throughout the world economy, surplus funds available on generous terms led to reduction in loan standards. New borrowing had been possible for even those with poor credit without much of a risk premium. Because of low rates of return, the smart money in finance looked to the general form of money capital in new financial instruments. The financial sector became more prominent in restructuring contemporary capitalism.

Deindustrialization in the 1970s was followed by leveraged buyouts in the 1980s as finance capital took over "underperforming"

companies with borrowed money collateralized by the assets of the target companies and broken up, pieces sold off, after wage concessions, layoffs and asset stripping. As returns in the real economy fell the big money was made by financial manipulation. This continued through the Savings and Loan ripoffs, Long Term Capital Management, Enron, WorldCom, to subprime mortgages, collateralized debt obligations and the rest. The new financial paradigm, a seeming M—M' circuit, was possible. Greater risk was taken, as fictitious capital grew to previously unimaginable proportions with the explosion of debt. Economic growth became more dependent on the wealth effect of rising asset prices to promote consumption. The overcapacity which first became evident in the core economies is now present in the emerging markets. Dependence on unsustainable levels of debt and global capital flows reflected the stagnation tendencies of the advanced economies and the shift in where production takes place globally. When the bubble deflated, many firms could not pay their debts and faced bankruptcy. If financiers had not followed this high-risk strategy, many would have survived, preserving jobs. The incidence of such corporate restructurings was highest for firms controlled by hedge funds and private equity groups, which bought them using the target's assets as collateral and then loaded them up with more debt to extract quick payouts. In this way vulture finance capital destroyed productive assets and in many cases entire communities. The attack on the income gains of better paid, often unionized, workers pushed the compensation of many to marginal survival levels, the Wal-Mart wage. Accumulation increasingly takes the form of redistributive growth, as wages and social entitlements diminish in a process David Harvey has called "accumulation by dispossession."

When one looks at the commanding heights of financial capitalism it is really a very small club. Even before recent developments more than half of all the debt of households, nonfinancial companies and government in the United States was held by the top 15 institutions. As banks fail they are bought at knockdown prices by larger institutions. The stronger banks buy up the weaker ones, usually with federal assistance for most of the risk, but this does not lead to a renewal of lending. The larger subsidized banks will in all likelihood come out more powerful and crisis-prone. They are too big not only to be allowed to fail but too big to be regulated by any one jurisdiction or even by a regulator club drawn from the financial community. Among

the problems of conglomerates such as Citigroup is that they have conflict of interest roles as security underwriters, lenders, borrowers, investors, market makers and managers of our money, and those of businesses and the super-wealthy, assisting in capital flight and tax avoidance on a global scale. There is insufficient, to put it mildly, international effective examination of what they are doing. As Henry Kaufman writes: "Through their global reach, these firms will transmit financial contagion even more quickly than it spreads in the current crisis. When the current crisis abates, the pricing power of these huge financial conglomerates will grow significantly, at the expense of borrowers and investors" (Kaufman, 2008, 19). The power of finance capital as the hegemonic fraction of the capitalist class increased.

In instrumentalist terms those who are charged with regulating finance come from a financial industry background and retire to even more lucrative positions in finance. They tend to do their job in a way that gives these "parasites" the widest latitude possible, constrained only by fear of damage to system survival. Politicians depend on this sector for monies to run for office and generally allow their leading lights to run the Treasury Department (think Clinton and Robert Rubin, Bush and Hank Paulson). Former chief economist at the International Monetary Fund Simon Johnson sees the behavior of the American financial elite as the cause of the crisis and their influence standing in the way of properly addressing the crisis. His is a fascinating analysis: he sees the U. S. financial elite as behaving pretty much like any Second or Third World country. The IMF's typical clients, developing country and transitional economy governments all with depressingly similar crises, needed loans but did not want to make the changes that would mean these loans could solve the problems they faced. Subaltern national capitals were called to account. The countries needed to live within their means and pay their debts, increase exports, reduce imports, and do this without horrible recession. As Johnson sees it:

> Typically, these countries are in a desperate economic situation for one simple reason — the powerful elites within them overreached in good times and took too many risks. Emerging market governments and their private-sector allies commonly form a tight-knit — and, most of the time genteel — oligarchy, running the country rather like a profit-seeking company in which they are the controlling shareholders. (Johnson, 2009, 2.)

He implicitly sees Paulson and Geithner as part of the Wall Street cabal which benefitted from and enabled the speculative risk-taking, structured by government policy to bail out their cronies with the goal of replacing as much of their wealth at taxpayer expense and reestablishing the system as close to the way it had been as possible.

In his instrumentalist account, the former IMF chief economist declares that the finance industry has indeed captured the government of the United States and continues to guide its rescue efforts in its own interests and not those of the country. In an essay titled "The Quiet Coup" Johnson conveys, from a clear-eyed international regulator's perspective, the extractive nature of finance which promotes growth through redistribution of surplus. Indeed it is characteristic of the neoliberal social structure of accumulation that finance exercised power over the producers, both labor and productive capital. Johnson describes what he calls "a classic Kremlin bailout technique," the assumption of private debt obligations by the government which acts to squeeze ordinary citizens and make them as taxpayers and service recipients bear the cost of paying contracted debt. But of course this is a policy the IMF has encouraged at the bidding of money-center creditors and their governments, which set IMF policy. The particulars of American crony capitalism reflects the close relation of the financiers, their regulators and elected officials who depend both on generous contributions from Wall Street and the structural sense they have that finance is a key sector responsible for American prosperity which must be protected at all cost. Nonetheless, the structural weaknesses which become periodically evident for the reasons Marx suggests lead to repeated crises.

Marxist Thinking on the Current Crisis

There have been two major foci among Marxist theorists on the current crisis. The first is typified by Robert Brenner, who said in a 2008 interview: "The basic source of today's crisis is the declining vitality of the advanced economies since 1973, and, especially since 2000" (Brenner and Jeong, 2009, 1). For Brenner, the decline in the rate of profit and overcapacity in global manufacturing is the cause. Leo Panitch and Sam Gindin, on the other hand, write: "The origins of today's U. S.–based financial crisis are not rooted in a profitability crisis in the sphere of production . . ." (Panitch and Gindin, 2009, 1).

In fact, however, each has a more complicated story to tell, each recognizes the place of the overaccumulation of capital in the context of the decline in manufacturing profitability in the United States, and also the crucial growth of finance. Brenner makes much of the growth of debt and dependence on financial speculation in what he calls "asset price Keynesianism," his term for the wealth effect which allowed consumption to rise with the stock market and housing bubbles. Despite his strong causal formulation, Brenner understands that the continuation of capital accumulation came to depend upon waves of speculation and debt creation. But for him the important points are that economic growth slowed, despite easy credit, and that this debt buildup could not compensate for the weakness of the real economy. Recognizing the Bush administration's huge federal deficits, that housing by itself accounted for half the growth in employment between 2001 and 2005, and that collapse of the housing bubble brought on the crisis, Brenner prefers to focus on the underlying weakness in manufacturing, which encouraged speculative, debt-driven growth. He traces the problem to the fall in profitability, starting in the early 1970s. While Brenner distinguishes his understanding from that offered by Baran and Sweezy's stagnation thesis, it can be seen as consistent with the *Monthly Review* stress on the ending of the postwar boom, which was dependent on a high level of liquidity coming out of the war, the need to rebuild, automobilization and suburbanization, militarization and the sales effort (Sweezy and Magdoff, 1972, 1987; Foster, 2009; Foster and Magdoff, 2009). The focus by Magdoff and Sweezy (1988) was on secular stagnation leading to the crisis of capitalism because of the inherent stagnationist tendency of the system. Indeed, stagnation rather than growth was the normal state of the system, and it required a host of continuous expedients to promote growth against this tendency, expedients that had to fail eventually. Brenner roots the problem not in any long-run tendency, as the *Monthly Review* authors do, but in the increase in international competition squeezing profits, that is, the falling rate of profit framing.

Panitch and Gindin (2009, 1) understand that "the spheres of capitalist finance and production are obviously intertwined (in significant ways today more than ever before)." Contra Brenner, they assert that the origin of today's crisis is not to be found in the global trade imbalance, yet they understand that the development of securi-

tized financial markets and internationalization were important. Panitch and Gindin are much more optimistic about the strength of capitalism and especially of U. S. capitalism and its continuing hegemony (Panitch and Gindin, 2005, and numerous recent public talks). Panitch (2009) sees the crisis as an opportunity for the left to demand a permanent nationalization of the banks and their operation as public utilities responding to social needs democratically determined, a focus on agency as opposed to Brenner's more structural framing. Other Marxists have stressed the theme that financialization represents a speculative attack on the real economy. Financial actors with their short-term time horizons destroy productive companies that might otherwise invest for the long run, suggesting the damage done by the disembedding of financial markets from markets for real goods and services so that the monetary economy has become "autonomized," following a self-referential logic of development counterproductive to the reproduction of the capitalists as a whole (Altvater, 2009). I think this is right. The power of finance has increased so that a large part of recent growth if properly measured may over a longer span be seen as not real growth at all, but a redistributive growth enriching finance capital through appropriation from other sectors of the economy and at the expense of working-class living standards. Social control of banking could diminish this form of financial appropriation and make crisis originating in that sphere far less likely. Social control of banking raises issues of public investment, the needs of the society and the inadequacy of the profit motive in social allocation. Brenner's focus calls attention to the cost of growth, job creation and income depending on the level of private investment; he calls attention to the inability of the U. S. economy to provide sufficient jobs and a rising living standard.

Efforts to distinguish among such alternative explanations have not satisfied the critics, nor led to widespread acceptance of one over other explanations of what is a complex and closely interconnected process of crisis in the contemporary accumulation process. An alternative approach, social structure of accumulation analysis, can I think fruitfully offer a holistic frame for fruitfully considering stability and instability in an evolving capitalism. It is a relatively open framework used in diverse ways by scholars influenced by the Marxist tradition (Gordon, Weiskopf and Bowles, 1996; McDonough, 2010).

I find it useful to suggest that the end of the national Keynesian social structure of accumulation of core fordism and Keynesianism means that we cannot return to the accommodations characteristic of that regime. The same is true of financialization and its neoliberal cognates which brought on the current crisis. We have approached the limits of the regime of accumulation that started in the late 1970s which featured financialization — growth through massive debt creation and speculation as a defining characteristic — deindustrialization and globalization. U.S.–based transnational capital sought both markets and production venues elsewhere and squeezed labor harder. Money was made not only from intensifying exploitation in ways business union leaders were unprepared for, since they were still looking for class cooperation when, as the head of the UAW at the time Douglas Fraser explained, capital was waging a one-sided class war. Foreign competition from Japan and later other Asian exporters was a major factor along with U. S. producers increasingly moving offshore and introducing more capital-saving technology. For the last 40 years or so American workers' income has stagnated, benefits and job security have eroded, and in the privatization, anti-tax/anti-government climate public services have deteriorated. Companies have increasingly maximized short-term returns, corporate raiders and private buyout firms have restructured much of American industry, working people have borrowed more and personal debt grew dramatically. These developments can be understood in agency terms as the doings of the Bush–Cheney government, and this would not be wrong. But they are as well the result of far deeper structural forces at work that have reduced American exceptionalism and indeed the relative privilege workers of the core of the capitalist world system have enjoyed through the centuries of colonial and imperial domination and monopoly of the core on manufacturing in the world system. Politically, the project is to see that the next social structure of accumulation embodies the principles of a solidarity economy. I look at the determinants of the current crisis with this in mind (Tabb, 2010b, 2010c).

The growth of capitalism has always been accompanied by disregard for impacts on communities, working people and the environment. These concerns are intensified in periods of economic and financial crises, crises I have argued which need to be theorized at the level of their endogenous nature in a capitalist system and the

particularities of the social formation and historical conjuncture. Undermining bourgeois hegemony requires rejecting the conventional wisdom of what government should do in a period of crisis, what the priorities should be, and pulling aside the acquiescence to class privilege in the distribution of social wealth in a war of position which takes ideology and class interest seriously. Each of the elements highlighted in this essay, the different levels of structural analysis, the alternative framings of capitalist crisis and causal explanations, and the need for emotional as well as intellectual connection to a transformative project need to be part of an understanding of the existing political economy and appreciation of the need to supercede it.

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Neoliberalism, the Rate of Profit and the Rate of Accumulation

ERDOGAN BAKIR AND AL CAMPBELL

Accumulate, accumulate! That is
Moses and the prophets!
— Marx, 1996, 591

IT IS ALMOST UNIVERSALLY ACCEPTED by economists of all persuasions that capitalism's current neoliberal[1] economic structure has yielded slower growth than capitalism's previous post–World War II economic structure.[2] In a Marxist framework, growth is dialectically related to investment, as both cause and effect. Investment in turn is similarly dialectically related to the rate of profit.

1 Three recent Marxist book-length treatments of neoliberalism that distinguish it from the previous period are Glyn, 2006; Harvey, 2005; and Duménil and Levy, 2004.

2 This is true in both First and Third World countries. The only significant exception to this is China, which has pursued non-neoliberal policies in the neoliberal period.

Marxists and many other economists consider the rate of profit to be both a key determinant and an indicator of the health of a capitalist economy.

In a previous work (Bakir and Campbell, 2009) we carefully empirically documented a result that is also widely accepted by many Marxists, that the rate of profit[3] has been lower in the neoliberal period than in the previous period. This is one important structural cause (again, as well as an effect) of the lower rate of growth. The purpose of this brief essay is to consider another structural cause of the slower growth that occurred.

Marx's opus, *Capital*, is well known for weaving together two different approaches to the description of capitalism: its historical/descriptive passages, and its logical/theoretical passages. A bare-bones presentation of the part of the logical/theoretical structure that is relevant to this paper is as follows. Workers create more value in production than the part they receive back in wages, the value of labor power. The rest of the value that they create is divided into two parts. One is used to replace the values consumed in production, constant capital. The other is expropriated from them by the owners of capital, surplus value. A large part of the surplus value is then thrown back into the circuits of capital as new capital, as value seeking self-expansion in the process of expanded reproduction. The goal of the capitalist system — of the dominant agents in the system, the capitalists, or of the system itself, its law of motion — is described by Marx frequently in two different ways, which are closely related but not entirely equivalent: the drive for profits, or the self-expansion of capital (accumulation).

Marx was well aware that not all the surplus value appropriated by the capitalists is thrown back into expanded circuits of capital. His attack on the "Abstinence Theory" in *Capital*, I, Chapter 24, section 3 (1996, 587ff) was an extended presentation of this point. For the purpose of his logical/theoretical presentation of the capitalist mode of production, however, it was not necessary to engage in any extended investigation of "capitalist personal consumption." So long as this remained a minor part of the use of the expropriated surplus value, it would not have important effects on the dynamics of the system. In fact, even if it had been a sizable part of the total surplus, as long as its share remained relatively constant its only effect on the

3 The paper only considered the U. S. economy.

dynamics of capitalism would be to generate a slower rate of accumulation than if it did not exist.

In this paper we will not be concerned with capitalist personal consumption, but rather with something else that has similar implications for the issue under consideration: the reduction in the rate of accumulation. Profits are also excluded from a return to productive circuits of capital, and hence accumulation, if they are inserted into financial circuits. In a Marxist framework, financial profits are simply a transfer of a part of the total profits created in production to the financial sector. It is theoretically possible that in certain circumstances the transfer of profits from the productive circuits of capital to the financial circuits might not diminish the rate of accumulation of capital, because finance has improved the conditions for accumulation more than it has subtracted from the amount available for accumulation.[4] The evidence presented here, however, will demonstrate that the increased transfer into financial circuits under neoliberalism has occurred simultaneously with a drop in the rate of accumulation. While the problems involved in claiming that this sort of correlation "proves" causation are well known, at a minimum this supports the argument against the neoliberal claim that increased finance has improved the conditions for accumulation.

This paper will investigate the change under neoliberalism in the relation of the rate of profit to the rate of accumulation. Given the need to be concrete and detailed we will here investigate only today's largest economy, that of the United States.

This issue of the somewhat changed relation between profits and accumulation under neoliberalism, a modification of the core process of capitalism, has received relatively little attention in recent Marxist literature.[5] This paper intends to both flag this issue for greater future consideration, and to present a body of basic empirical evidence to support the position we put forward.

The paper will proceed as follows. In section 1 we will document our claim that under neoliberalism there has been an increased

4 As, for example, basic credit does not create profits, but does improve the conditions for the accumulation of profits as capital, as described by Marx in Capital, Vol. III, Part 5 (1998).

5 The only Marxist work that we are aware of that addresses this issue in any depth is that of Duménil and Levy. They briefly discuss this in their 2004 book, and in two earlier papers. Two valuable non-Marxist works that address this issue are Stockhammer, 2004, and Arestis and Karakitsos, 2004.

divergence between the rate of profit and the rate of accumulation. Then in section 2 we will turn to supporting the argument that an increasing fraction of capital is flowing into financial circuits instead of back into circuits of productive capital. We will present six different indications that this is the case. In a Marxist approach, net interest payments to the financial sector from the non-financial sector are deductions from the produced profit that is available for productive reinvestment and accumulation. The first three indicators will reflect the increased flow (and the later partial diminution) under neoliberalism of net interest to the financial sector. In sub-section 2.1 we will present the increased real rate of interest, which jumped with the birth of neoliberalism. In sub-section 2.2 we will consider the other factor in the net interest payments, the net liability position of non-financial corporations. Our results here debunk a popular false analogy to the well-known Third World debt story, that very low (at times negative) real interest rates in the 1970s were the cause of the debt problem of the non-financial corporations in the 1980s. We will see that to the contrary the debt burden in fact began to rise sharply already in connection with the boom in the U. S. economy in the 1960s, and then roughly leveled out over the 1970s. Then in response to the real interest rate jump at the end of 1979, non-financial corporations initiated a process of trying to reduce their liabilities. Because of the high debt service of the 1980s, however, they were not successful in this effort until the 1990s, when real interest rates dropped from their 1980s levels. By 2000 they had reversed their situation and become net creditors. This then poses another important issue that we have not seen discussed in the Marxist literature on neoliberalism and financialization. If the non-financial sector succeeded by 2000 in solving its debt burden problem that had caused the jump in its transfers of potential profits to the financial sector in the 1980s, and even become a net creditor, why did it not begin to benefit from its new financial position to the extent of even draining potential profits back from the financial sector into productive circuits of capital? Why shouldn't an analysis of this financial transfer that many Marxist writers have pointed to as a key aspect of financialization be said to have been over by 2000, and perhaps with it a central aspect of neoliberalism? In sub-section 2.3 we consider the combined effects of subsections 2.1 and 2.2 and directly look at the bleeding-out of profit from the productive sector by looking at the part that net interest

payments constitute of total after-tax profits. Sub-section 2.4 presents the direct impact of this process on the profit rate by looking at the difference between the after-tax profit rate of the non-financial corporate sector and its effective rate of profit available for paying dividends and retained earnings after it has paid net interest.

Another important reason for the increased role of the financial sector is an additional change in the corporate governance paradigm. Before neoliberalism a large part of corporate investment came out of retained earnings. Sub-sections 2.1 to 2.4 have already referred to one change in that approach, with more borrowing and resulting interest payments in the first decade of neoliberalism. But there was a second part of the corporate governance shift, less often noted, that also strengthened and enlarged the financial sector. Corporations were now under more pressure to pay out much of what would before have been retained earnings to stockholders as dividends. The recipients would then return that money to the corporations, either through banks or investment funds, for their operations and investment. This circuit of investment and operational funds being paid out and then returned to the productive sector all involved activities by the financial sector for which it was well paid. In sub-section 2.5 we will look at this change in the corporate governance paradigm that involved an increased pay-out of dividends and reduced retained earnings. For robustness we look at this two ways: dividends as a share of dividends plus retained earnings (that is, as a share of what is left of after-tax profits for corporations to allocate once net interest is paid out), and dividends as a share of the entire after-tax profits. Finally, in sub-section 2.6 we look at what we argue is the result of the contributions just considered, the size of the financial corporate sector as compared with the non-financial corporate sector. Given the centrality to our argument of the claim that the financial sector has grown, for robustness we look at its relative size four ways: by value added, by before-tax profits, by after-tax profits, and by non-residential assets. Section 3 concludes.

1. *The Divergence between the Rate of Profit and the Rate of Capital Accumulation under Neoliberalism*

We begin with an observed change with the onset of neoliberalism in the core process of capitalism, capital accumulation. We will present the data two different ways to clearly illustrate our claim.

Figure 1[6] compares the after-tax rate of profit and the rate of capital accumulation. A striking impression from the graph is the difference in the relation of the two rates before and after 1979. In the earlier period the two rates appear to roughly move in parallel. Increases in the rate of profit are roughly reflected in increases in the rate of accumulation. After the beginning of the neoliberal regime, however, the rate of accumulation showed a general decline over the first 12 years of the much-discussed[7] 17-year neoliberal profit rate recovery from 1980 to 1997. Only the very strong profit rate growth driven by the stock market bubble in the 1990s finally pulled the rate of accumulation up with the profit rate. Its connection to the stock market bubble at that time, as opposed to the profit rate itself, is reflected by its continuing to rise with the stock market for the years 1998–2000, even after the rate of profit started to fall. We see the same lack of correlation in the much smaller profit rate revival after 2001. This poses the question: what was being done with the growing profits during these times of increasing rates of profit and declining rates of accumulation? This paper will argue that an

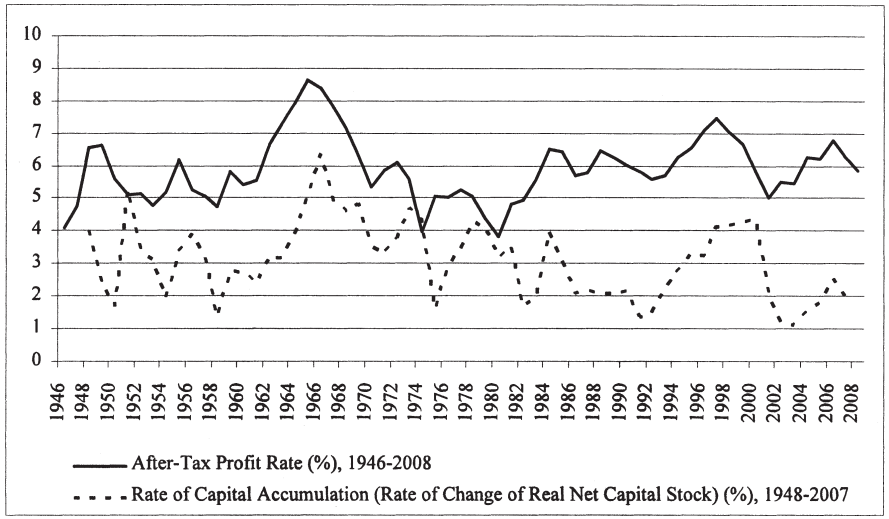

Figure 1: The After-Tax Profit Rate and the Rate of Capital Accumulation

6 Appendix A defines all computed data series, and provides the sources of all data used.
7 By, among others, the above mentioned works by Glyn, Harvey, and Duménil and Levy, and the more mainstream Ducca, 1997.

important part of the answer was the markedly increased diversion of profits from the circuits of productive capital into the circuits of finance.

Figure 2 presents the data from a different point of view to reinforce the same claim. Here we look at the rate of accumulation as a fraction of the after-tax rate of profit as an indication of how much of that profit is being directed toward accumulation. Again the graph gives a visual impression of a change of regimes between the earlier period — which from this graph one could consider to have ended in 1979, 1980 or 1981 — and the later period. The fraction of the profits that is redirected toward accumulation appears to be lower in the neoliberal period than in the previous period. A simple average of this ratio in the earlier and later period supports the visual impression. The average for 1948–1979 is 0.61, while the average for 1980–2007 is 0.43.[8] Again, our claim is that under neoliberalism a smaller percentage of profits was directed back into productive investment. Instead those profits were entering circuits of finance.

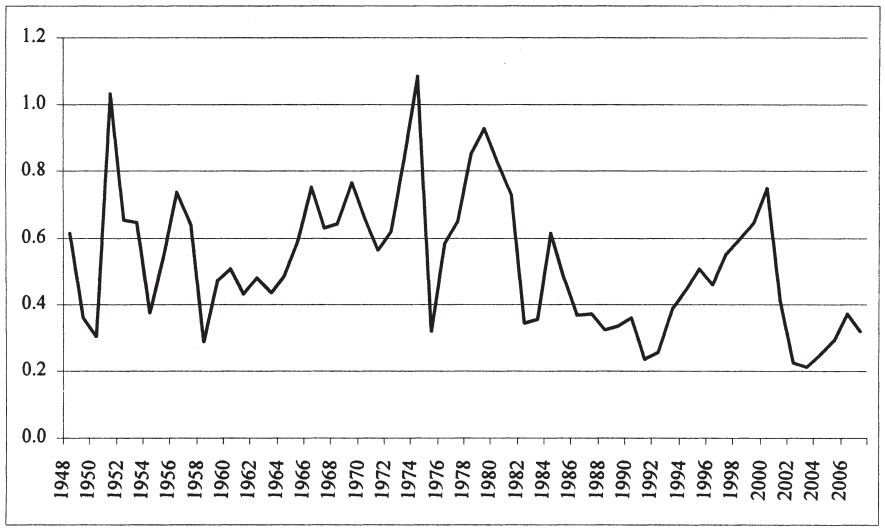

Figure 2: The Rate of Capital Accumulation as a Fraction of the After-Tax Profit Rate, 1948–2007

8 This choice of 1979 as the endpoint of the period from among the three possibilities that are visually suggested gives the weakest support for our claim of a significant change, but there is not much difference. If one considers 1948–1981 against 1982–2007 the change is from 0.62 to 0.40.

2. *The Flow of Profits into the Financial Sector*

In this section we will present evidence showing that there was an increased flow of profits into the financial sector, and showing some of the changes which caused this increase.

2.1 *The Real Interest Rate.* The first indicator that we will look at to support this claim is the real interest rate.

Figure 3 shows clearly the widely noted fall in real interest rates in the mid-1970s, followed by their sharp increase beginning with the Volker shock to levels above what they had been in the 1950s and 1960s. Both the long-term interest rate that is relevant for investment and the short-term rate that is involved in immediate operations followed this pattern. This "revenge of the rentiers" in itself suggests that there would be an increased flow into the financial sector, but we support that conclusion through numerous further considerations in the rest of this section.

2.2 *The Corporate Debt Burden.* The flow from the non-financial corporate sector into the financial sector depends on two factors: the interest rate (presented above), and the debt burden.

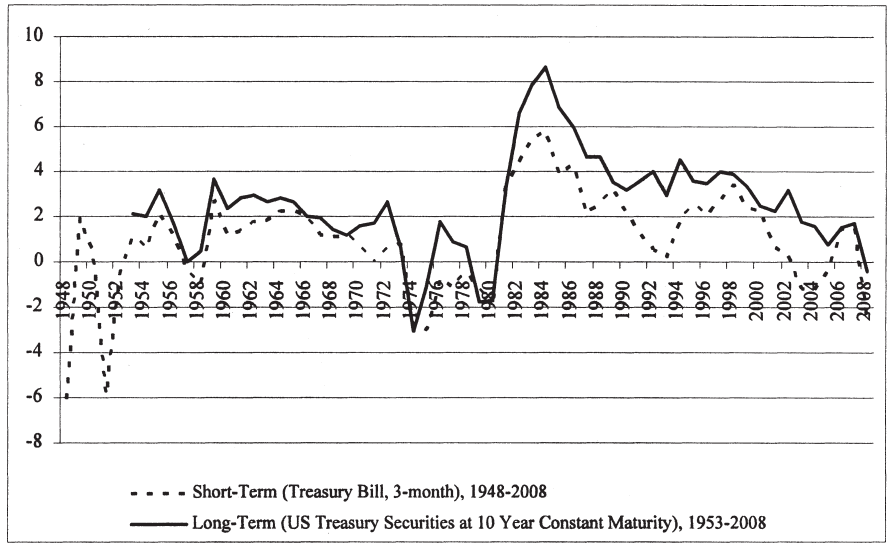

Figure 3: Short-Term and Long-Term Real Interest Rates

Because the transformation from the post–World War II (more) regulated structure[9] to neoliberalism was a process, different authors date the start of neoliberalism differently — the Volker shock of 1979, the first oil shock of 1973, and so on. But while one can certainly find changes in the 1960s that were important for the rise of neoliberalism, essentially all authors see neoliberalism as beginning sometime in the 1970s.

One important result concerning the structural transformation of capitalism that led to neoliberalism that we can see from Figure 4 is that the rise in the debt of non-financial corporations occurred before the onset of neoliberalism. A loose argument often put forward is that the large increase in corporate debt in early neoliberalism resulted from the low interest rates in the 1970s.[10] Here we see to the contrary, however, that after a slow rise in the 1950s, the net liabilities of non-financial corporations began to rise rapidly in the 1960s in response to the booming U. S. economy, even while (as we saw in Figure 3) interest rates then remained near 2%. After a slight fall in the early 1970s, net liabilities then returned in 1975 to slightly above their peak level at the end of the 1960s, and then stayed fairly constant until the early 1980s. When the post-1979 sharp increase in interest rates dramatically increased non-financial corporations' debt service, they responded as expected by working to reduce their net liabilities. But given the high real interest rates and resulting debt service of the 1980s, their situation actually deteriorated somewhat over the decade. Only in the 1990s, when both short- and in particular long-term real rates fell sharply from their early 1980s levels, were non-financial corporations able to begin a rapid reduction of their net liabilities. By 2000, non-financial corporations had eliminated their debt and held net financial assets.

It is sometimes implied, in particular by mainstream commentators on the basis of data such as Figure 4, that non-financial corporations have responded in accord with market pressures by paying down

9 Often referred to as "the Keynesian compromise" period, or particularly in the United States, the "Golden Age."

10 This argument is sometimes made as an invalid analogy to the Third World debt, which did indeed rise sharply in the 1970s in response to low interest rates (although it was also the result of the sharply increased cost of oil for oil importers and the predatory lending practices of the First World financial institutions that were recycling petrodollars, in particular the New York banks).

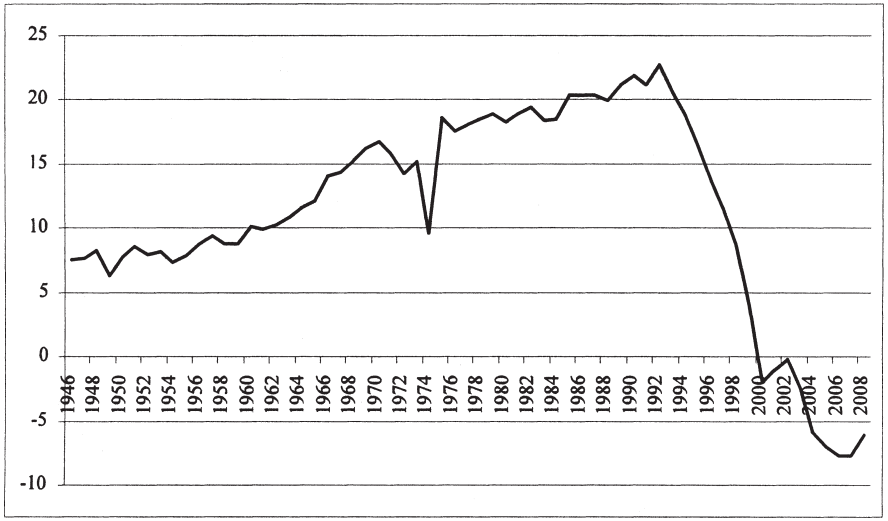

Figure 4: The Ratio of Net Liabilities to Net Capital Stock (%), 1946–2008

their debt and thereby resolving this problem of large losses of potential profits to the financial sector. As we will see in the next subsection, this is not the case. While they indeed reduced the part of after-tax profits paid to the financial sector, they never returned to near the position they occupied before the mid-1960s, and their situation sharply deteriorated again in 2007 and 2008 (see Figure 5 below). This then poses an important issue that we have not seen discussed in the Marxist literature on neoliberalism and financialization. If the non-financial sector succeeded by 2000 in solving its debt burden problem that had caused the jump in its transfers of potential profits to the financial sector in the 1980s, and had even become a net creditor, why did it not begin to benefit from its new financial position to the extent of even draining potential profits back from the financial sector into productive circuits of capital? The answer is that due to the structure of finance the non-financial sector pays roughly twice the rate of interest on its liabilities as it receives on its assets. Because this point is seldom presented, Appendix B demonstrates this current structural aspect of neoliberalism and the relation of the financial to the non-financial sector, which is different from the debt mechanism of the 1980s and 1990s. Thus, while the financial sector is indeed siphoning off less potential profits than it did in the 1980s,

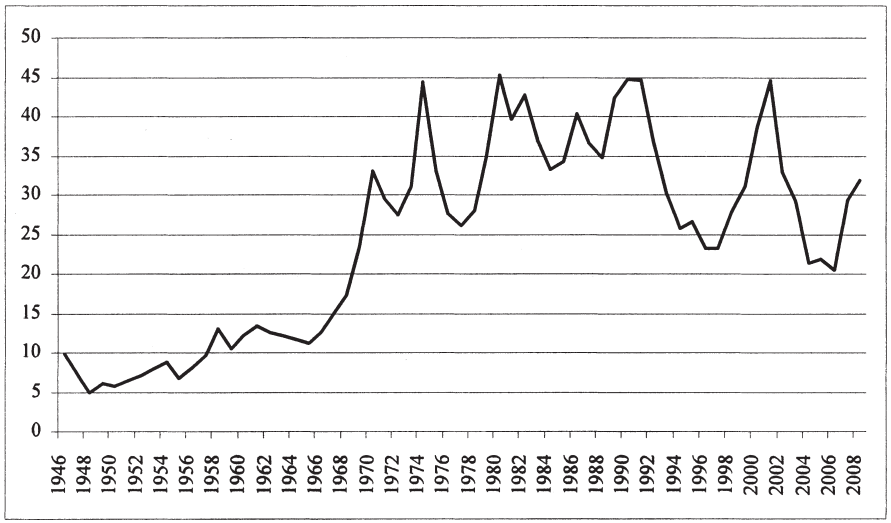

Figure 5: Share of Net Interest Payments in After-Tax Profit (%), 1946–2008

it continues to siphon off more than it did in the "Golden Age," as we will see directly in the next sub-section.

2.3 *The Proportion of Profits Exported to the Financial Sector.* The combination of the factors described in sub-sections 2.1 and 2.2 gives the net flow of interest payments from the productive sector to the financial sector. Figure 5 shows this net flow of interest payments as a share of after-tax profits. Its low share until the mid-1960s reflects the combination of the low real interest rate and the low debt burden. Its climb starting in the mid-1960s reflects the increased debt burden that we saw above. The two dips in the 1970s reflect the interest rate dips. We then see a sustained higher level in the 1980s before the combined reduced interest rates and reduced debt burden caused a major reduction in the 1990s.[11]

2.4 *The Effects of Net Interest Payments to the Financial Sector on What is Left in the Non-Financial Sector for Accumulation.* In Figure 6 we compare the after-tax profit rate to what is left to the corporations for use for dividend payments and accumulation after they pay off their net interest obligations ("after-tax rate of profit net of interest payments").

11 The large four-year spike after 1997 is a result of the sharp four-year drop in the denominator, the after-tax profit that one sees in the after-tax profit rate in Figure 1, and is not immediately connected to our concern with profit transfers.

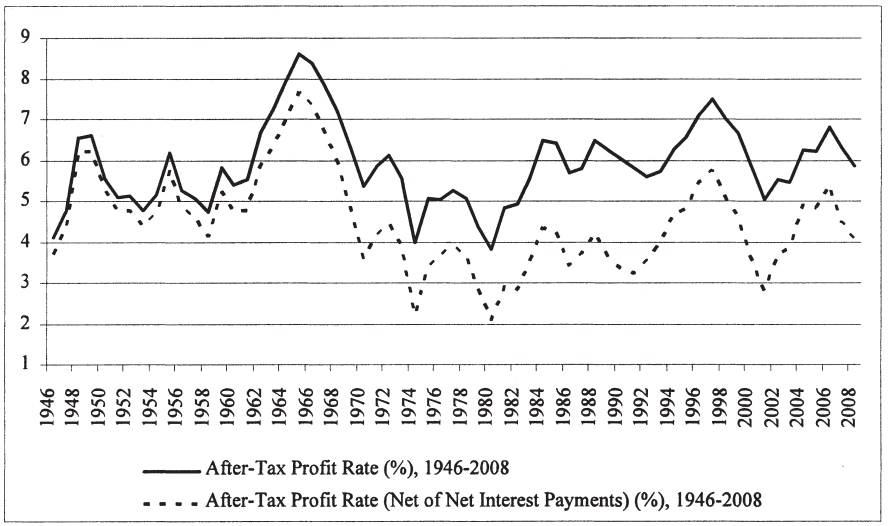

Figure 6: The Effect of Net Interest Payments on the Profit Rate

What we see here is consistent with the last Figure, which showed the sharp increase under neoliberalism in the share of total after-tax profits devoted to net interest payments. The 1970s saw a structural change in capital accumulation, with markedly less of the profit generated in the non-financial sector remaining available there for possible accumulation. This gap widened further under full neoliberalism in the 1980s and early 1990s. While it has recently narrowed some from its greatest spread, it is far from returning to its structure in the Golden Age up to the mid-1960s.

2.5 *Further Restructuring: Increased Dividend Payouts.* An important aspect of the neoliberal structural changes has been changes in corporate governance.[12] One important part of the financialization of capitalism has been a drive to force corporations to pay out as dividends what before they would have held as retained earnings. They then must borrow these funds back for investment and daily operations, with a significant fee paid to the financial sector for these transactions.

Figure 7 considers corporations' allocation between dividends and retained earnings of the residual left from after-tax profits after

12 See, for example, Lazonick and O'Sullivan, 1996; Jacoby, 2005a, 2005b; and Aglietta and Rebérioux, 2005.

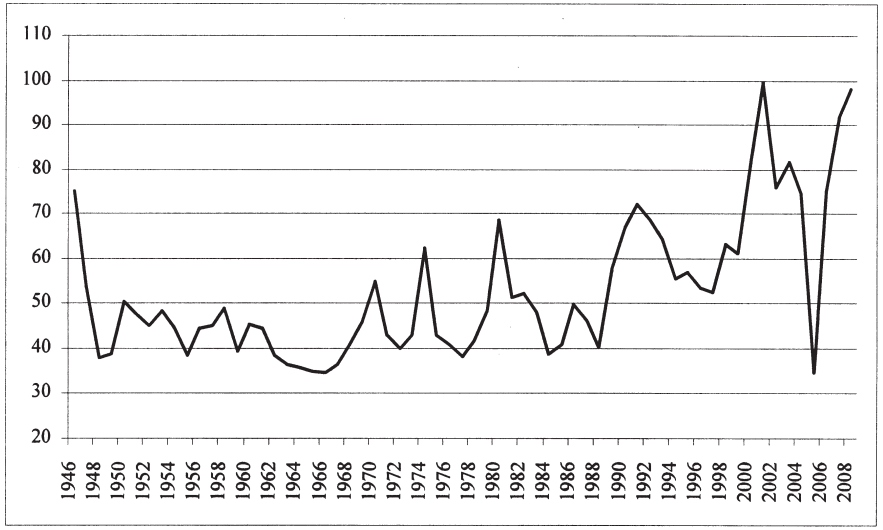

Figure 7: Share of Net Dividend Payments in After-Tax Profit (Net of Net Interest Payments) (%), 1946–2008

they have already paid out their net interest obligations. One sees a small and slow fall in the share of dividends from 1950 to 1966, with dividends around 40% and retained earnings around 60%. From then until 1997 one sees a continual rise, until today dividends constitute about 80% of this final corporate allocation.[13]

Figure 8 considers the same issue of dividend payouts, but now considering dividends as part of the three-way division of after-tax profits. What we see here is that the growth of net interest payments from the late 1960s that we have discussed above is enough to cause the dividend share to continue to drop until 1988. After that, falling interest payments combine with a continued and accelerated decrease in retained earnings[14] to allow this element of financialization, the continually sharply rising payout of dividends.

2.6 *The Share of the Financial Sector in the Whole Corporate Business Sector.* All the considerations above together suggest that under neoliberalism there has been a restructuring of capitalism involving a

13 The 2005 data point looks like it may be a data error. The 2001 data point is suspect, as it indicates no retained earnings whatsoever. The overall pattern is the same with or without these two points.

14 Again the 2001 and 2005 data points are suspect.

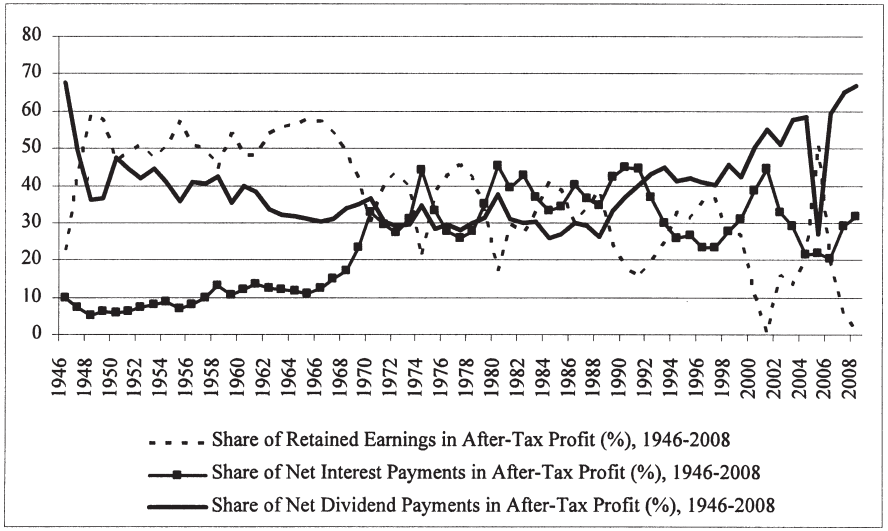

Figure 8: The Three Components of After-Tax Profit

greatly increased transfer of profits produced in the non-financial sector to the financial sector. Such an increased transfer would cause one to expect that the financial sector would grow relative to the non-financial sector. Figures 9 to 12 compare the two sectors four different ways: by value added, before-tax profits, after-tax profits and non-residential assets. Figures 9, 10 and 11 all show an acceleration of growth of the financial share in the mid-1960s, and then a further acceleration in the mid-1990s.[15] Figure 12 finds the initial acceleration to begin by the beginning of the 1960s and the further acceleration to occur by the mid-1980s. The two common conclusions from all of these comparisons of interest to this study are that the financial sector began to grow in size relative to the non-financial sector before neoliberalism, and that it then accelerated under the latter. A final important result is that all measures show that the relative growth of the financial sector has stopped. While it is not clearly declining in size, it appears to have stabilized. Three of the measures

15 They obviously differ in a number of ways, such as the relation of the late 1940s and 1950s to the starting point of the acceleration of the 1960s and the relation of the period from the mid-1970s to the acceleration of the mid-1990s, but these differences do not affect the point we are addressing here.

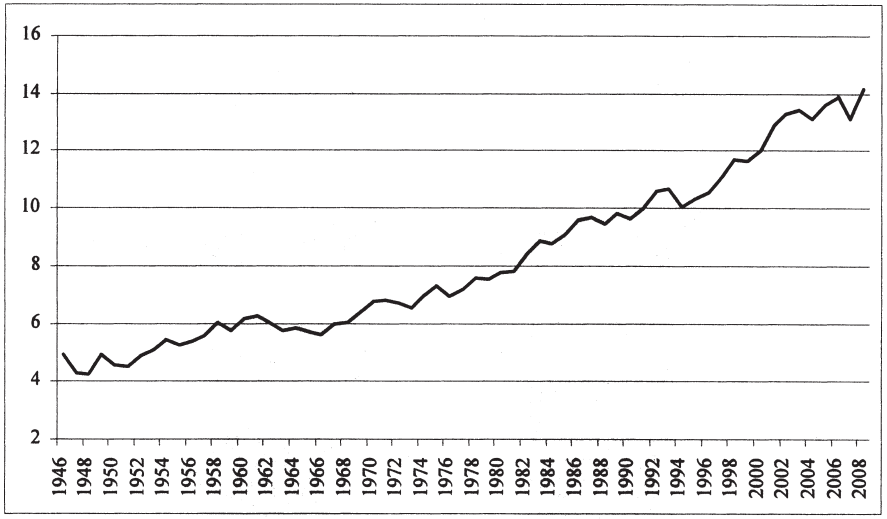

Figure 9: Share of Financial Corporate Business in Corporate Business Net Value Added (%), 1946–2008

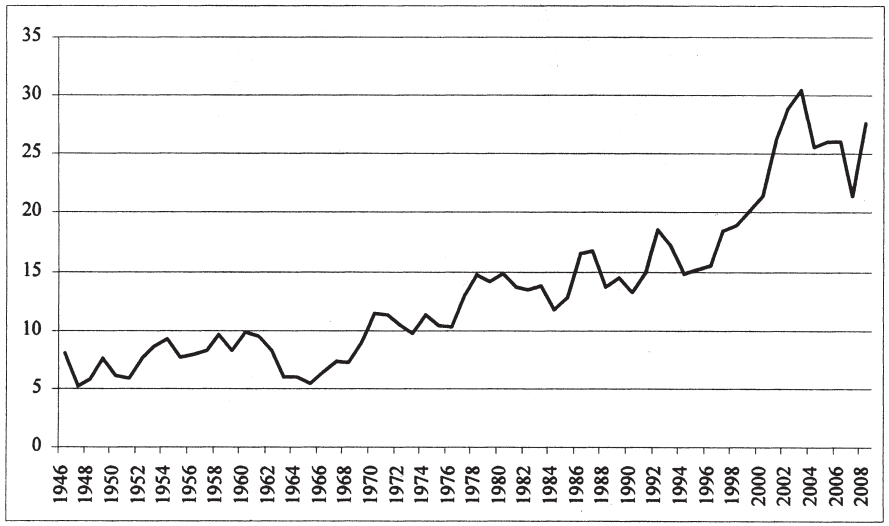

Figure 10: Share of Financial Corporate Business in Corporate Business Before-Tax Profit (%), 1946–2008

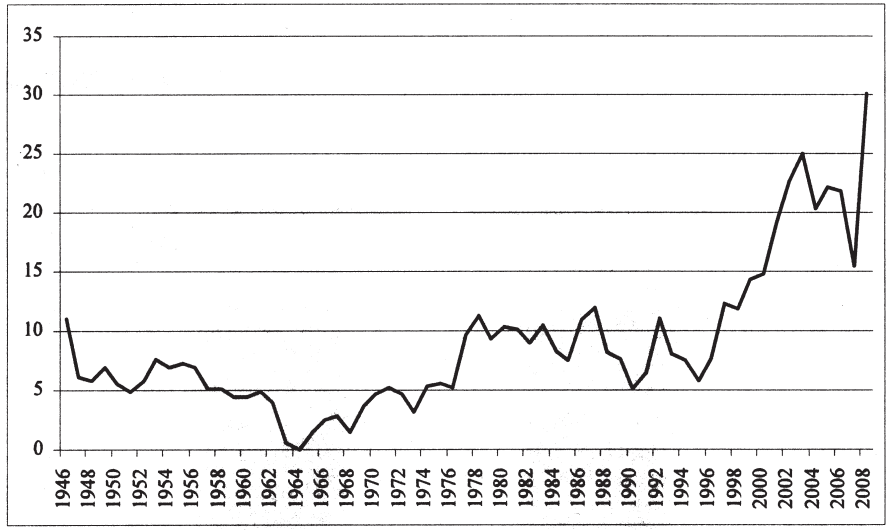

Figure 11: Share of Financial Corporate Business in Corporate After-Tax Profit (%), 1946–2008

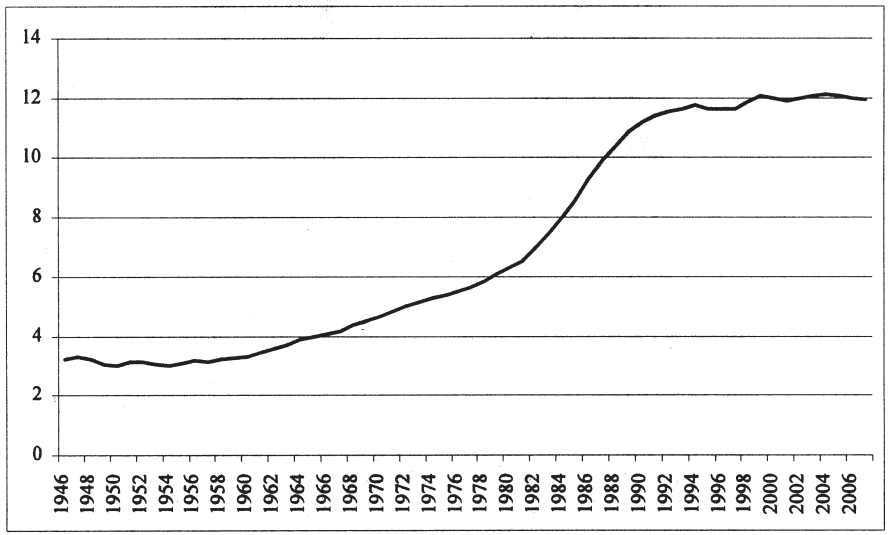

Figure 12: Share of Financial Corporate Business in Corporate Business Nonresidential Assets (%), 1946–2007

place this near cessation of relative growth in the early 2000s, though one places it in the early 1990s.

3. *Conclusion and Considerations on Conditions Today and in the Near Future*

This investigation of various data concerning the transformation of the relation between the rate of profit and the rate of accumulation and the transfer of profits from the non-financial to the financial sector has yielded the following three central results.

First, the results here, involving those aspects of neoliberalism relevant to the topic of this paper, strongly reinforce the understanding of the birth of neoliberalism as a process extended over time. Non-financial corporate indebtedness began to climb rapidly in the early 1960s, and connected to that the share of after-tax profits that flowed out of the sector as interest payments began to climb by the mid-1960s.[16] However, the often-discussed jump in real interest rates which strongly reinforced this outflow of interest payments did not occur until the end of 1979, and it was only following this that one had the major divergence of the rate of accumulation from the rate of profit under neoliberalism. If one considers the increase in dividend payments only in the frame of the final allocation between that and retained earnings, this increase began in the mid-1960s. But if one considers it in terms of the allocation of after-tax profits, the increase in net interest payments just noted from the mid-1960s onwards was enough to keep the share of dividends from rising until the late 1980s, when the combination of net interest payments and retained earnings fell. The result of all this is that, looked at by four different measures, the financial sector accelerated its growth relative to the non-financial sector when neoliberalism became fully dominant by the late 1980s to mid-1990s.

Second, growth in the size of the financial sector relative to the non-financial sector appears to have at least greatly slowed, if it has not entirely stopped. This poses an important question about how neoliberalism and capitalism more generally will continue to evolve.

Finally, and we would argue most importantly and also minimally discussed in the literature, the divergence between the rate of profit

16 Or, largely equivalently, the after-tax rate of profit diverged from the "after-tax rate of profit net of interest payments."

and the rate of accumulation remains above its pre-neoliberal levels. This structural change in capitalism is connected to the transfer of potential profits (net interest) from the non-financial to the financial sector at rates that also remain above "Golden Age" levels. Different factors that one would expect from economic reasoning to contribute to this transfer of profits were investigated, and they all[17] were found to have behaved consistently with the conclusion that there was a greater transfer under neoliberalism. While these rates have dropped somewhat from their higher values in the early neoliberalism of the 1980s, they remain above the pre-neoliberal levels and the data indicate no trend of further decline over the 1990s and 2000s. Of particular interest, we have addressed why the much discussed change of the non-financial sector into a net creditor sector has not eliminated (or even reversed) the flow of potential profits out of the sector and hence the divergence between the rate of profit and the rate of accumulation. Hence our data has supported the position that this increased divergence across a 30-year span between the rate of profit and the rate of accumulation is a structural characteristic of the neoliberalism that replaced the earlier post–World War II capitalism.

APPENDIX A

After-Tax Profit = Net Interest Payments + Net Dividend Payments + Undistributed Earnings with IVA and CCAdj

Net Interest Payments: NIPA Table 1.14 Line 25[18] (http://bea.gov/national/nipaweb/Index.asp)

Net Dividend Payments: Flow of Funds Account Table F.7 Line 23 (http://www.federalreserve.gov/releases/z1/Current/data.htm)

Undistributed Earnings with IVA and CCAdj: Flow of Funds Account Table F.7 Lines 28 + 32 +34

17 With only the partial exception of the net liabilities of the non-financial sector, which behaved consistently with this result of increasing profit transfers through the beginning of neoliberalism in the 1970s and 1980s, but then acted to lessen them beginning in the 1990s.

18 NIPA provides data on nonfinancial corporate business whereas the Flow of Funds Account provides data on nonfarm nonfinancial corporate business. Due to the very small size of the farm corporate business the difference is insignificant. For example, farm's share of labor hours in nonfinancial corporate business is 0.78% on average for the period 1946–2007, and its share in the capital consumption allowance is similarly just 0.7%.

After-Tax Profit (Net of Net Interest Payments) = Net Dividend Payments + Undistributed Earnings with IVA and CCAdj

Net Capital Stock = Equipment and Software + Structure (Residential and Nonresidential) + Inventories: Flow of Funds Account Table B.102 Lines 4 + 33 + 34 + 5

Nominal Interest Rates: Federal Reserve Statistical Release, Historical Data: H.15 (http://www.federalreserve.gov/releases/h15/data.htm)

Consumer Price Index (CPI) is for Urban Wage Earners and Clerical Workers (U.S. City average) (http://www.bls.gov/cpi/home.htm)

Net Liabilities: Liabilities – Financial Assets: Flow of Funds Account Table B.102 Line 21 – Line 6

Value Added, Before-Tax Profit and After-Tax Profit of Nonfinancial Corporate and Corporate Business: NIPA Table 1.14

Nonresidential Assets of Financial and Corporate Business: Fixed Assets Accounts Table 4.1 (http://bea.gov/national/FA2004/SelectTable.asp)

APPENDIX B

Consider the year 2007, which one can see from Figure 4 is a year of maximum relative financial assets for the non-financial sector. From the Flow of Funds Table B.102 one gets financial assets of 13.730 trillion and liabilities of 12.8072 trillion (hence, as asserted, the non-financial sector is a net creditor). From NIPA Table 1.14 we can see that "money interest" (*i.e.*, interest actually paid or received) is an order of magnitude greater than "imputed interest." If we look at the actual "money interest," the non-financial sector pays out 0.7949 trillion for a rate of 6.2%, while it receives 0.4748 trillion for a rate of 3.5%. If one includes also the fictitious imputed interest of 0.0665 trillion paid out and 0.0468 trillion received, the rates change to 5.7% that it pays and 3.7% that it receives. While it is frequently claimed that the United States became a debtor nation in 1985 but continued to receive positive net inflows from its negative net investments until the early 2000s because U. S. investments abroad earned roughly twice what foreign investments in the United States earned, this exactly analogous domestic process that has such harmful effects on the

profits of the non-financial corporate sector has not been, to our knowledge, discussed in the same way. This is one more reflection of the power of finance under neoliberalism.

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Credit Crunch: Origins and Orientation

PAUL COCKSHOTT AND DAVE ZACHARIAH

THE CYCLICAL PATTERN OF CAPITALISM is periodically punctuated by severe crises that lead to restructuring of the political–economic system. In this article we argue that the underlying factor of the current crisis is a real economic imbalance caused by an unprecedented growth of the financial sector. We argue, moreover, that a return to an expansive era of capital accumulation will become impossible in the advanced countries.

Each structural crisis opens opportunities for significantly advancing the position of the working class. But it requires a socialist movement with the organizational and programmatic capacity to articulate and implement progressive policies. This is not the state of the movement at present. We believe that without a political economy of the working class it is impossible to formulate a coherent political program of the working class.

1. *Insights from Political Economy*

1.1. *Value and money.* Classical political economy held social labor as the basis of economic value. Labor is a universal but scarce resource. When goods and services are produced as commodities their market prices are correlated with the quantity of social labor necessary to reproduce them (cf. Farjoun and Machover, 1983; Zachariah, 2006; Cockshott *et al.*, 2009).

When a commodity is sold, a relation of debt and credit is formed between buyer and seller. Money is a means to account credit and debt, and is derived from the state's ability to enforce a tax debt on its subjects. What it deems universally acceptable as means of settling tax obligations becomes a universal equivalent that can be used in exchange.[1] Thus when a buyer exchanges a money token for a commodity, the seller accepts the token as a means of settling its debts elsewhere.

Money is therefore not wealth but represents a claim on wealth, derived from the legal system and the state. It gives the power to command labor, as either the labor-content of commodities or the labor-power of others.

1.2. *Profitability and the steady-state rate.* The basic unit of production in a capitalist economy is the firm, which is driven by the profit imperative. The decisions each firm takes locally have macroeconomic consequences; therefore profitability, *i.e.*, the rate of return on capital invested, is a crucial variable in the development of capitalist economies.

At any moment in time there is a large number of firms earning different rates of profit, $R = P/K$, where P is the annual flow of profits and K is the capital stock invested in the form of buildings, machines, equipment, etc. The *average* rate of profit over all capital invested is fundamentally constrained by the size of the workforce relative to the capital stock in terms of labor value. In fact, one can show that the average profit rate tends towards a dynamic steady-state rate:

$$R^* = (l + p + d) \;/\; i \qquad (1)$$

where l is the growth rate of labor, p the growth rate of productivity, d the depreciation rate of the capital stock and i is the ratio of gross investment to net profits.

The steady-state rate rises with higher growth of the workforce and productivity but is reduced by an increasing investment ratio. Note that R^* is independent of the wage share. Moreover, since l is constrained by population growth, long-run demographic factors

1 We realize that this position may seem new to readers whose background in monetary theory comes from reading Marx, Ricardo, Menger or Smith, all of whom presented money's currency as being based on intrinsic metallic value. The authors sympathize instead with the Chartalist school of monetary theorists and historians; for example Keynes, 1936; 1940; Innes, 1913; and, more recently, Knapp, 1973; Wray, 2004; Forstater, 2003; Cockshott *et al.*, 2009.

affect the evolution of profitability (for derivation of (1) and further discussion, see Cottrell and Cockshott, 2006; Zachariah, 2009).

1.3. *Trade surplus and deficit.* If a region or country runs a persistent trade surplus it is making a loss in real terms since it is trading away a part of its surplus product for money tokens, *i.e.*, credit. But the credits accumulated by agents can be used to acquire assets in the debtor countries, thus increasing their power to command labor beyond the territory of their state.

Conversely, a region or country running a persistent trade deficit is appropriating a part of the surplus product of others while providing less in return. However, its accumulated debt increases. The annual account flows of a capitalist country can be written as

Firms' Net Saving + Households' Net Saving +
Government Surplus = Trade Surplus

Thus, when running a negative trade surplus the capitalist sector, households and/or the government are net borrowers. Of course "households" consist of different classes with different incomes, propensities to save and levels of accumulated debt.

1.4 *Productive and unproductive sectors.* An economy can be partitioned into two aggregate sectors: i) a "productive" or basic sector, the output of which enters directly or indirectly into the consumption of the working people and their dependents; and ii) an "unproductive" or non-basic sector which comprises the remaining economic activities. The unproductive sector exists by the support of the surplus product of the productive sectors. The expansion of the unproductive sector reduces the amount of surplus available for reinvestment in the productive sector, and thus affects long-run capital accumulation (Cockshott and Zachariah, 2006).

1.5. *How the financial sector really works.* From industrial capitalism a set of economic agents — *rentiers* — emerged that derived its income not from industrial assets but from interest payments and dividends. Its economic activities, nowadays covered by the term "finance industry," is a significant unproductive sector.

Apologists for the banks say this Smithian classification is misleading. The real criterion of whether the banks are productive or not is to be found in their balance sheets. It was, they would say, an archaic Calvinist prejudice on Smith's part to tie productiveness to physical

production. Marxist economists would argue that the crucial question is not whether the banks produce anything physical, but whether they produce surplus value. Do they produce surplus value?

For instance, charging for clearing checks or for making payments into other accounts are portrayed as provision for banking services. However, what one sees when one looks at the UK banking sector is that such charges are insufficient even to meet the wage bills of the banks. For the general public, this is the main use of banks, but it is not their main source of revenue. That comes instead from profits on financial contracts. Over time the banks and other financial institutions have come to make a part of their revenue by trading in financial contracts of ever greater complexity and abstraction.

1.6. *Unproductiveness of modern lending.* Suppose we have a public company that is initially 100% owned by shareholders. If taken over by a private equity firm then most of what previously went as dividends is now transferred to interest. It is clear that no additional value is created by such a change, so interest payments are just another form that can be assumed by profit revenue.

Suppose instead that a company expands and finances this expansion by bank credit. Here, arguably, the bank plays an indirect

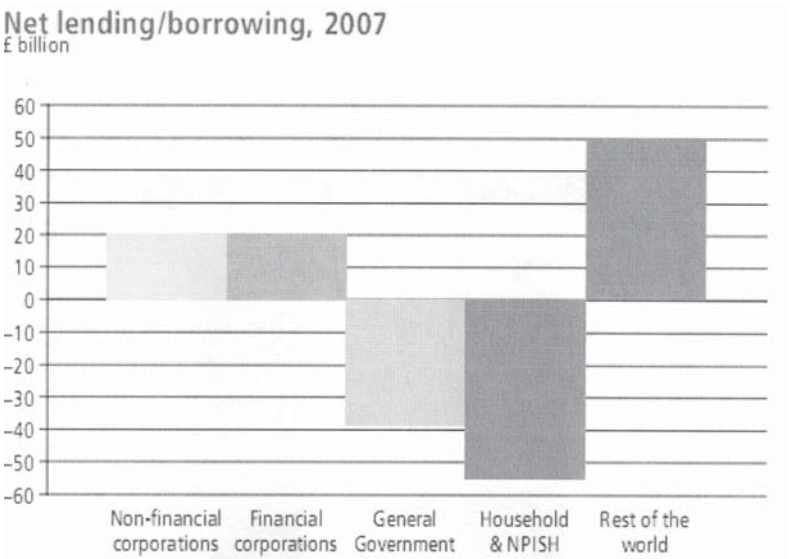

Figure 1: United Kingdom Sectoral Balances
Reproduced from the 2008 UK National Accounts Blue Book

productive role. A net growth in deposits corresponds to income that has been earned but not spent; if the bank channels this to productive investors it allows that portion of national income to be materialized in new equipment.

But productive lending is now a small fraction of what the great financial centers, like New York and London, do. Look at Figure 1: non-financial corporations are net lenders, not net borrowers from the banks. Net lending and borrowing in the system must balance, so the banks mainly channel profit from industry, and from overseas, into the two sectors that are net borrowers: the state and private households. Some state expenditure will be productive — new highways, schools, health care, etc. — but most goes on current costs or unproductive items such as warplanes and submarines. The money lent to the personal sector will in a large part go on unproductive consumer credit.

On balance, the financial system funds unproductive activities.

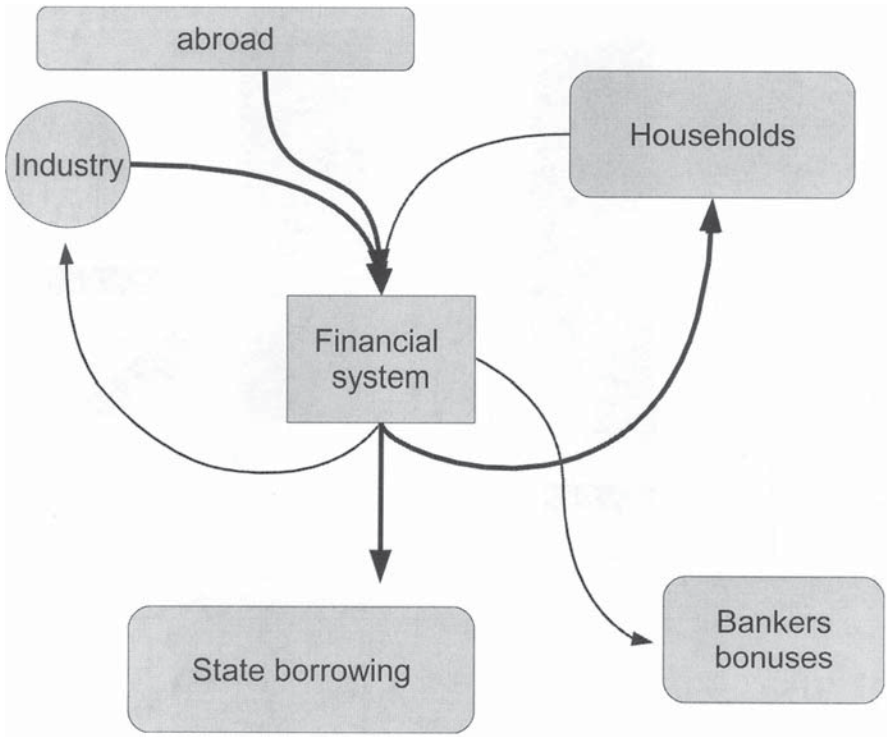

Figure 2: Outline of Main Flows of Funds

1.7. *Unproductiveness of dealing in contracts.* The financial system trades in a huge variety of other contracts: shares, bonds, futures contracts, etc. Trading in such contracts would appear to be a zero sum game, one person's loss will be another person's gain and *vice versa.* But this is no longer the case in a bull market. If the general price of financial assets rises over a period of years, then in paper terms most traders can show a monetary profit.

What creates prolonged bull markets?

Look at Figure 2. In an ideal world the state would run a balanced budget, the nation would not depend on foreign borrowing and the financial system would channel savings from households to industry. But in reality the industrial rate of profit is too low, the number of new shares being issued to finance industrial investment is not sufficient to absorb savings. This imbalance becomes even worse since the industrial sector ceases to be a net investor and becomes a net saver (Figure 1). Shortage of new issues causes the price of existing shares to be bid up to absorb the funds.

Here is a paradox. A rise in the price of financial assets can not itself absorb net savings. If firm A uses incoming funds to buy shares from B, then A can balance its accounts: its new deposits are now matched by new assets. But B now has the money for the shares. What does it do?

It tries to purchase other shares, bidding the price of all shares up in the process. The money stays in the financial system. This inflationary process would go on indefinitely unless there were some balancing outflow. Here the bonuses and profits of the banks play a role. Because asset prices are appreciating all round, financial firms show big trading profits which they distribute as dividends and bonuses to their traders.[2]

During the bull market the financial system acts as a vast Ponzi scheme. Any excess of deposits by savers over and above the current needs of industry and the state are translated into profits and bonuses. Savings are converted into current consumption revenues of the banking community.

2 As we write this, Goldman Sachs has announced that it is paying out $4 billion in bonuses to its traders for the last quarter alone, averaging about half a million dollars per individual.

The bull market sustained the illusion that saving is possible, even though real capital accumulation was at barely more than replacement levels. As time passed the illusion grew more and more unstable. The banks, having distributed so much dividends and bonuses in the good days, became under-capitalized. When the crunch came they failed and the taxpayer had to take over their liabilities.

The financial system now takes on the role of the feudal aristocracy and priesthood. They spend the nation's surplus product in conspicuous consumption. Instead of papal indulgences promising a better hereafter, they sell modern promissory notes supposedly guaranteeing a happy retirement. The promises are almost as egregious as those Luther protested against. Today's savings have gone on bankers' bonuses, airforce jets and soldiers' wages. The truth is that the real consumption of the retired must always be supplied by the labor of their younger contemporaries. The enormous, expensive and unproductive financial system consumes savings today, while being unable to conjure up new labor to support future retirees.

2. *Capitalist Trajectories of the 20th Century*

2.1. *The broad picture up to World War II.* The second industrial revolution of the mid-19th century was followed by a crisis of profitability in the center of world capitalism, Great Britain, and the Great Depression of the 1870s. The outcome of this was a restructuring of the political–economic system: the increasingly competitive capitalist interests drove the rising industrial powers of Britain, the United States, Germany, France and Belgium into the game of rivaling Empires. The conquered or dominated territories served not only as suppliers of cheap raw materials, but also as important outlets for the speculative ventures of the rentiers' surplus capital.

At the same time industrialization had already brought dramatic social changes through the transformation of the rural population into urban wage-workers. The crisis of the 1870s also saw the rise of labor unrest and the birth of the modern labor movement and socialist mass organizations among the industrial working classes of Western Europe and North America.

While the ruling classes enjoyed a *belle époque* after the crisis, the trajectory of unleashed rentier interest and imperialism resulted in

a World War, with great human costs and reparations, followed by another Great Depression in the 1930s and the collapse of liberal parliamentarism, culminating in an even costlier World War (cf. Hobson, 2005; Hobsbawm, 1987).

2.2. *From post-war boom to crisis of mid-1970s.* The catastrophe of depression and war resulted in another restructuring of the political–economic system after 1945: One by one the colonies fell through anti-imperialist struggles. The center of global capitalism shifted from Britain to the United States, which would build an informal empire of military bases and client states in the Cold War.

In the advanced economies the working classes could assert their strength, winning several progressive reforms. In Western Europe socialist or social-democratic parties were in power. Nationalizations were undertaken, capital mobility restricted and real interest rates were kept low to promote industrial investment. In short, the balance of forces shifted from the rentier interest towards industrial capital, as well as labor.

The high demand for labor and low unemployment after World War II also strengthened workers' bargaining power on the labor market. In addition, workers were concentrated in industries in which strikes would cause major disruptions not just to the firm but the economic system, thereby strengthening workplace bargaining power. This created a basis for substantial gains in real wages and living conditions. It was politically acceptable as long as profitability and growth could be maintained and the rule of capital left intact (Kalecki, 1943; Silver, 2003). Under varying degrees of state-led industrial development, rising capitalist economies could achieve rapid capital accumulation, high growth rates and low unemployment, but they could not prevent the decline in profitability that was apparent in the 1960s.

This is predicted from the steady-state rate R^*. Rapid accumulation implies a high investment ratio i which reduces R^*, unless the growth rates of productivity p and of labor l counterbalance it sufficiently. The former was already high during this period but the latter met demographic constraint as the reserves of labor-power in the advanced economies were depleting. The result was a declining average rate of profit, pushing a greater fraction of capital into bankruptcy after interest payments and dividends. See Figures 3, 4 and 5.

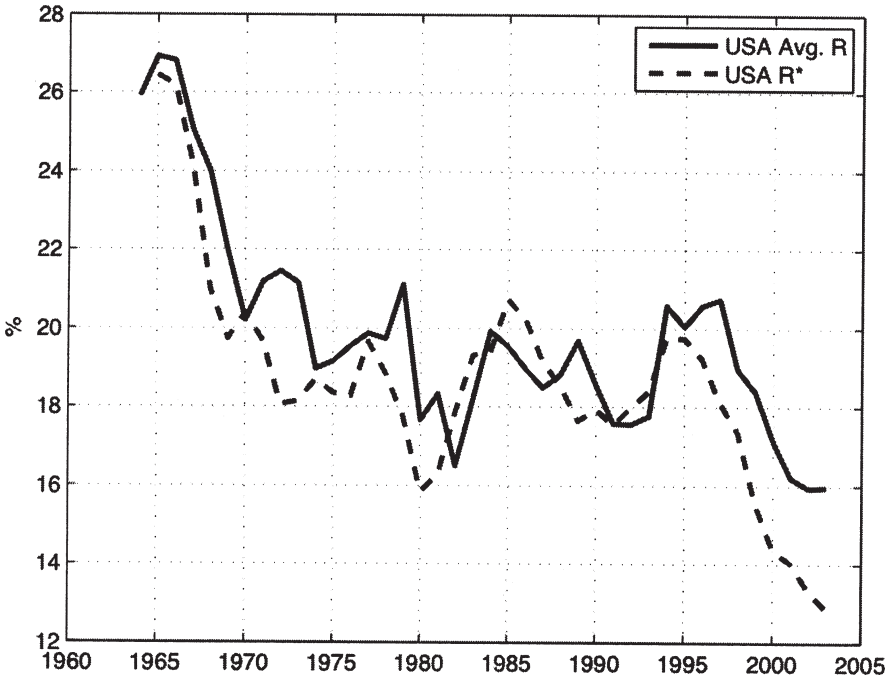

Figure 3: Trajectory of Profitability in the USA. The dashed line in these Figures is the attractor for the average profit rate defined in equation (1). (The variables in R^* were smoothed with a ±2-year window.) Source: Marquetti, 2009.

The trajectory of declining profitability resulted in another global crisis in the mid-1970s, which would again lead to restructuring. However, the labor movement was in general incapable of addressing the crisis with an adequate political program. The substantial gains it made during the expansive phase of capitalism had strengthened the material basis for reformism and support for the existing framework of state policies. Instead it was the rentier interest that was able to re-assert itself (cf. Glyn, 2006; Duménil and Lévy, 2004).

2.3. *Neoliberal era leading up to the current crisis.* It began in the USA in 1979 by a sharp increase in real interest rates, which raised the debt burden of states across the globe and reduced the fraction of profits retained by firms. Capital accumulation slowed down, and with it

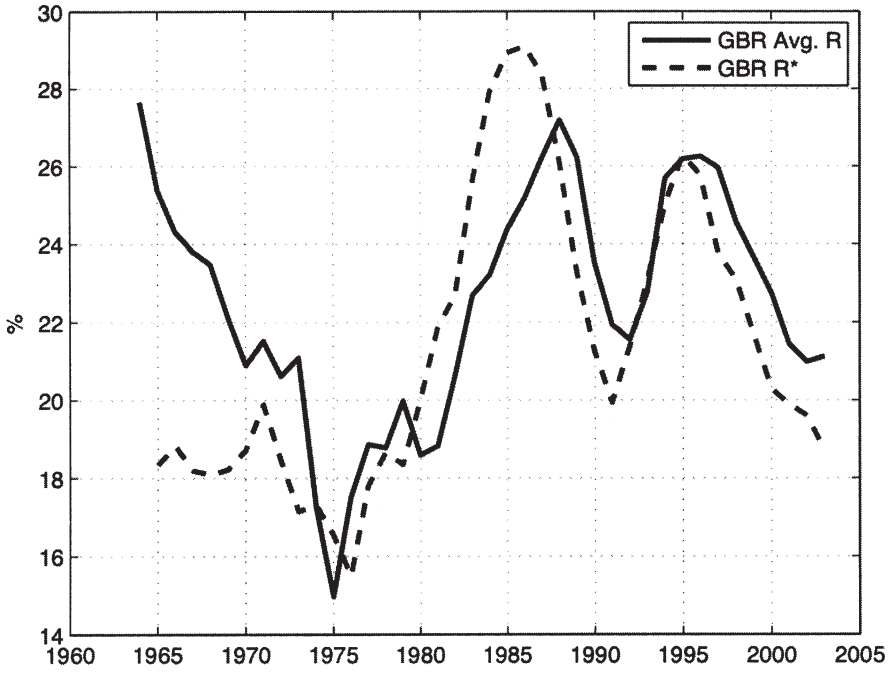

Figure 4: Profitability in Great Britain

output, employment and productivity growth. As the investment ratio i rises, the downward trend of R^*, in effect until that moment, was halted or even reversed, albeit at a social cost, with a greater fraction of the surplus product consumed unproductively.

The governments of Thatcher in Britain and Reagan in the USA led the way for the policies of reaction, shifting the balance of forces away from labor as well as industrial capital within the advanced countries, and towards the rentier interest. It found low return manufacturing sectors expendable: it was more important to break the bargaining power of workers by unemployment and sharply increase the share of rentier income, which it succeeded in doing. During the period 1965–1974 unemployment was 4.6% in the USA, but had risen to 7.7% during 1975–1984. In Western Europe it was 1.8%, rising to 6.1% for the same periods. Meanwhile the rentiers' share of national income jumped from levels below 5% to levels be-

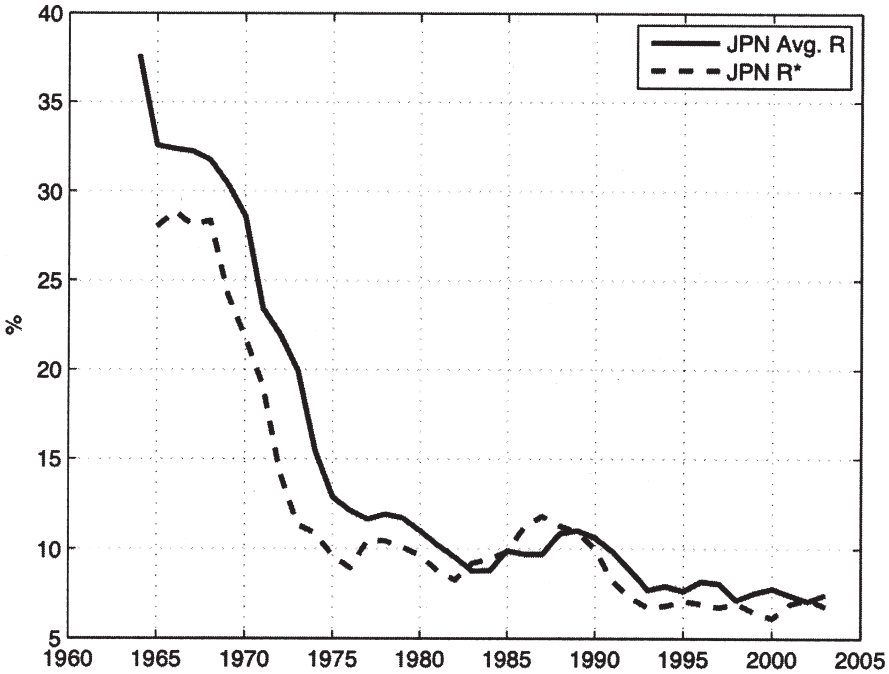

Figure 5: Profitability in Japan

tween 8% and 20% in various countries during the 1980s (Duménil and Lévy, 2004a; Epstein and Jayadev, 2005).

Restrictions on capital mobility were removed and East Asia, Southeast Asia and parts of Latin America were now open for investments, providing vast new reserves of cheap labor-power and restoring profitability on a global scale. Industrial working classes were emerging in countries such as Brazil and South Korea, while progressively being transformed into a service proletariat or facing unemployment in the advanced economies. The rise of "finance" was accompanied by increased income streams across countries as well as financial volatility throughout the 1980s and 1990s.

This trajectory of growing unproductive expenditure lead to significant real economic imbalances in the world economy as its center, the United States, at the turn of the millennium lacked sufficient levels of investments in its productive base to match its increasing

levels of consumption, driven by the financial sector itself. The situation was exacerbated by the costly occupations of Afghanistan and Iraq. The result was a huge annual trade deficit with a persistent accumulation of household and government debt[3] (Duménil and Lévy, 2004b; Papadimitriou *et al.*, 2005).

In section 1.5 it was shown that instead of channeling funding from personal savers into productive industrial investment, the financial sector now seemed to operate in reverse. Industrial and commercial companies are now net depositors with the banks who lend the money to fund personal consumption, or finance unproductive state expenditure. This went hand in hand with a speculative appreciation of all sorts of paper assets. Notional profits from trading in this appreciating paper were then distributed to the executives, traders and shareholders of the banks, undermining their capital base. When the burden of debt eventually became unsustainable, the major banks in New York and London were revealed to be effectively insolvent.

The failure of the financial sector emphasizes that the exponential growth of real capital values can only occur when backed by an exponential growth of something real — ultimately an exponential growth of the source of value: labor.

3. *Limits to the Rate of Capital Accumulation in the 21st Century*

While environmental factors will set external limits to the rate of capital accumulation in the 21st century, it will also face internal economic and political limits caused by demographic factors that capitalism has brought about but cannot reverse:

Once large reserves of cheap labor-power are opened up to employment in capitalist firms, the growth of the workforce contributes to raise average profitability R^*. The profits retained by firms, after interest payments and dividends, are invested in fixed capital with the aim of increasing productivity. Under rapid capital accumulation the demand for labor will rise even faster. But the workforce cannot grow at a higher rate than the population for long. Moreover, the size of the population stabilizes as health and sanitation conditions are improved and the economy industrializes; this raises the child survival rate, but also the net cost of rearing children.

3 On the other side of the coin, export-led countries in East Asia and the Middle East had interests in maintaining trade surpluses with the United States.

Sooner or later the reserves of labor-power begin to deplete: the demand for labor begins to exceed supply in various sectors; real wages rise and the bargaining position of workers improves, with political consequences that follow. This process is now in the making on a massive scale in the industrializing economies of Asia, with growing industrial working classes.

When population stabilizes, exponential growth of real capital becomes impossible. It implies a high investment ratio i, thereby lowering R^* as the productivity growth rate p can only counterbalance it by so much. Either capital accumulation slows down or average profitability is depressed until a significant fraction of capital is unable to meet interest payments and dividends, leading to bankruptcy, capital destruction and restructuring. In either case, the rate of capital accumulation by firms under a class of rentiers reaches its limits. Investment, which is the source of the tremendous dynamism of capitalism, then becomes a matter of just replacing old capital stock with more up-to-date equipment, with no net growth in labor-value. The

Figure 6: Depleting Labor Reserves in USA, Japan and China

social surplus product becomes increasingly unproductively consumed and thus contributes less to improving the living standards of the working classes (Cockshott, 2007; Cockshott *et al.*, 2009).

Capitalist economies that use up their labor reserves will therefore push towards capital exports for more profitable investments elsewhere. In Britain this occurred already in the 1880s, in Japan in the 1980s and China is heading along the same path. Africa and Latin America are likely to become the dominant destinations for capital exports from Asia, initially in the production of raw materials. This may lead to the resurgence of inter-imperialist rivalries.

As the global reserves of labor begin to deplete, the capitalist social order will face economic and political crisis on a global scale.

4. *Policy*

4.1. *Abolition of debt.* The first sign of the crisis was a run on the Northern Rock Bank, which experienced rapid growth by offering mortgages of more than 100% of property prices. Because the

Table 1
Estimated annual growth rate of population n, workforce l and productivity p in %, during the period 1997-2007. In the advanced economies and East Asia, the growth of the workforce is now constrained by declining population growth. There is still a sharp contrast between East and South Asia.

	n	l	p	d	i	R^*
Developed Economies and EU	0.7	0.7	1.6	10.9	83.6	15.8
Eastern Europe (non-EU) and CIS	0.7	0.6	4.1	9.5	—	—
East Asia	1.3	1.0	6.4	9.9	100.5	17.2
South-East Asia and Pacific	1.9	2.5	1.4	10.2	—	—
South Asia	2.2	2.4	3.6	10.1	—	—
Latin America and the Caribbean	1.8	2.4	0.6	10.4	—	—
Middle East	3.0	4.9	–0.2	11.9	—	—
North Africa	2.4	3.3	1.4	11.5	—	—
Sub-Saharan Africa	2.6	3.0	1.1	11.4	—	—

Source: ILO, 2008. Estimated steady-state rates using EPWT (Marquetti, 2009).

funds from its millions of small depositors were insufficient, it had become dependent on borrowing from other banks or large industrial companies.

Fractional reserve banking has depended on banks having a large number of depositors. This damps fluctuations in withdrawals. The law of large numbers no longer applied to the Northern Rock, as it depended on a relatively small number of big lenders. It only took a handful of these to withdraw for it to become insolvent.

Rather than rely on the existing deposit guarantee scheme which ensured all deposits up to £30,000 — equivalent to about 18 months of average wages — the government nationalized Northern Rock and guaranteed all deposits, however large. Instead of allowing banks to fail, the state would bail them out. Governments expressed relief that their action prevented a cascading collapse, but the cost was a growth in public debt unprecedented in peacetime. Was any other policy available?

There was an alternative policy.

The failing banks could simply have been allowed to fail. The UK deposit guarantee scheme was generous; similar policies applied elsewhere. Only a tiny minority of depositors held more than £30,000 cash. So the majority would not have lost anything. Most customers have only modest amounts of cash; a few very rich depositors have tens of millions deposited. To them, the deposit guarantees were practically worthless.

The trillion dollar public bailout was done to protect the claims of these few very rich depositors. Had all deposits above the guarantee vanished, the class system would have been threatened. For what is money but "the power to command the labor of others"?[4] Millions in your account play the role of a patent of nobility under feudalism. Modern Grand Dukes like Buffet and Gates' titles are on a bank's hard drive rather than parchment, but they still command the lives and labor of hundreds of thousands.

Had the banks all closed down, credit card and check purchases would have become impossible. But instead of allowing them to fail,

4 Speaking of a rich man with money, Adam Smith wrote: "The power which that possession immediately and directly conveys to him, is the power of purchasing; a certain command over all the labor, or over all the produce of labor, which is then in the market. His fortune is greater or less, precisely in proportion to the extent of this power; or to the quantity either of other men's labor, or, what is the same thing, of the produce of other men's labor, which it enables him to purchase or command" (Smith, 1974, Book 1, Chapter V).

a Jubilee could have been declared. It would have declared all debts incurred prior to Day Zero legally invalid, excepting modest guaranteed deposits. Those toiling to meet mortgage and credit card debt would have been liberated. The taxpayer would have been freed from the crushing burden of the national debt, and surprisingly, the banks would have become uber-solvent. Their liabilities would have shrunk relative to their cash reserves. Industry would have remain privately owned. But the abolition of debt, which has been a radical measure since antiquity, would have hit the aristocracy of money the way the French revolution hit the aristocracy of land.

The Russians did it after 1917, and shortly later, the German Social Democrats achieved a similar effect via hyper-inflation. Today, the governments of the UK and USA have veered toward the German 1920's course: printing money to pay for wars current or past. Abolishing debts is a "minimum program" demand. It serves to polarize political opinion against the main enemy — the rentier interest — while benefitting the majority. Inflation hits all depositors alike, while debt abolition, of the type described, primarily hits those with large deposits.

4.2. *Abolition of exploitation.* Remember what Marx said to the International Workingmen's Association. That they should inscribe on their banners not a "*fair day's wage for a fair day's work*," but the "*abolition of the wages system.*"

What did he mean by this? How was the abolition of the wages system to be brought about?

By the wages system it is clear that he meant the system in which workers are paid for the value of their labor-power, but the value which they create belongs to their employer. This relationship was, according to him, at the root of capitalist exploitation. But how could it be abolished?

The answer is clear enough if you read his *Critique of the Gotha Programme* (Marx, 1970). It was to come about by replacing money with a system of labor coupons so that people would be paid an hour of coupons for every hour they worked. Using an hour's coupons they would be able to get goods that had taken an hour to produce. "The same amount of labor which he has given to society in one form, he receives back in another." But how do we get from here to there?

Having cancelled debts, the next step would be to fix the value of the Euro, etc., in terms of hours of labor. Each month the Central Bank

would publish the current equivalence between labor and Euros, etc. Economists call this the MELT (for "Monetary Equivalent of Labor Time"). It would pursue monetary policy to stabilize the MELT. At the same time legislation would be passed giving a firm's employees a legal right to the full value added by the hours of labor that they worked. Trade unions would be able to bring a civil action to enforce this right against any firm that continued to engage in exploitation.

4.3. *Socialization of investment.* Since debts had been cancelled, firms, having no interest to pay, would remain solvent under these conditions. But they would cease to pay dividends, and shares would lose their value. This would impact private pensions. But the abolition of the national debt would leave the state in a position to substantially raise state pensions. Relatively wealthy pensioners would still lose out, but the majority of pensioners would gain.

At this stage capitalist exploitation would have been removed, but not exploitation in the form of rent or interest. The removal of these would require additional legislation. Updated versions of the old laws against usury would have to be reinstated to eliminate lending at interest. Rent on land would have to be devoted to public purposes by the introduction of "full site value rating," an old radical–liberal demand. Under this scheme, the city, county or commune authorities would be entitled to levy a 100% tax on the rental value of a site.

We argued in section 1.5 that the original progressive purpose of the financial system has atrophied. But there still remains a need for something analogous in any industrial society. We have argued that the attempt to accumulate capital faster than the population grows runs into insuperable contradictions. There is still a need to transfer resources from declining to rising industries. But from the social point of view this is essentially a steady-state operation. There need be no net accumulation of dead labor relative to living labor. It would suffice if a much reduced and publicly owned financial system worked to mobilize the depreciation accounts of different industries. Depreciation funds from declining industries would be advanced to growing industries.

However, given the need for a very significant redeployment of labor from the declining financial services sector to new environmentally sustainable forms of production, it is doubtful that such depreciation funds would be adequate, so the state might have to directly fund some of the new industries out of income tax.

We believe that the series of measures that we outline above are distinctly different from those of left-Keynesianism. They constitute the necessary steps required to replace the current economic order with one that is no longer based on exploitation and no longer driven by the environmentally and demographically unsustainable imperative of exponential capital accumulation.

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The Final Conflict: What Can Cause a System-Threatening Crisis of Capitalism?

DAVID M. KOTZ*

THE THEORY OF ECONOMIC CRISIS has long occupied an important place in Marxist theory. One reason is the belief that a severe economic crisis can play a key role in the supersession of capitalism and the transition to socialism. Some early Marxist writers sought to develop a breakdown theory of economic crisis, in which an absolute barrier is identified to the reproduction of capitalism.[1] However, one need not follow such a mechanistic approach to regard economic crisis as central to the problem of transition to socialism. It seems highly plausible that a severe and long-lasting crisis of accumulation would create conditions that are potentially favorable for a transition, although such a crisis is no guarantee of that outcome.[2]

Marxist analysts generally agree that capitalism produces two qualitatively different kinds of economic crisis. One is the periodic business cycle recession, which is resolved after a relatively short period by the normal mechanisms of a capitalist economy, although since World War II government monetary and fiscal policy has often been employed to speed the end of the recession. The second is a long-lasting economic

* Research assistance was provided by Ann Werboff.
1 See Sweezy, 1970, ch. 11, for a review of Marxist breakdown theories.
2 History shows that a turn to fascism is also a possible outgrowth of a severe economic crisis.

crisis that requires significant restructuring — that is, institutional change — if the crisis is to be resolved within capitalism and the capital accumulation process restored. Despite the widespread recognition that these are two different types of crisis, there is not an agreed-upon terminology to distinguish them. Here the term "structural crisis of accumulation" will be used for the second type of economic crisis and "business cycle recession" for the first type.

History shows that structural crises of accumulation can be more or less severe, as will be discussed below. Our aim here is to identify the conditions that give rise to a *severe* structural crisis of accumulation, since it is the latter type of crisis that may play a role in the demise of capitalism. The Great Depression of the 1930s was, by general agreement, a severe structural crisis of accumulation. Although it is still early, it appears that the economic crisis that began in 2007–08 may be another severe structural crisis (see section 1 below). By contrast, it will be argued below that the structural crisis that occurred in the 1970s was of the less severe variety. This paper will draw on an analysis of the current crisis, with a comparison to the two preceding structural crises, to make inferences about the conditions that tend to produce a severe structural crisis of accumulation.

Marxist theory locates the cause of crisis in internal mechanisms of the capitalist system, which reflect the contradictory character of the capitalist process. The Marxist crisis theory literature offers analyses of several internal mechanisms that can cause a crisis. Such causal mechanisms have traditionally been called "crisis tendencies," which include underconsumption, the tendency of the rate of profit to fall due to a rise in the value of means of production relative to labor-power, the profit squeeze due to a declining reserve army of labor (Marx's term for unemployed workers), and over-investment (or over-accumulation), as well as other mechanisms.

The traditional Marxist crisis tendencies that populate the literature are a necessary starting point for considering the possible cause(s) of a severe structural crisis. However, the level of abstraction of the usual analysis of the traditional crisis tendencies is too high for this purpose. This paper argues that a severe structural crisis tends to emerge from a particular institutional form of capitalism. If one analyzes only capitalism-in-general — that is, if one includes only the defining features of capitalism — then crisis tendencies can be derived but it cannot be determined in a systematic way whether any particular crisis tendency will give rise to a mild or severe crisis.[3]

Section 1 briefly considers the social structure of accumulation (SSA) theory of capitalist crisis, concluding that it offers a promising theory of structural crisis but has not provided a satisfactory explanation of the factors that give rise to a *severe* structural crisis. Section 2 examines the roots of the current economic crisis, focusing on the U. S. economy from which this crisis originated. It draws the lesson that the severity of the current crisis results from the *type* of capitalist institutional structure that has prevailed in recent decades, namely a liberal institutional structure. Section 3 compares the current crisis to the structural crises of the 1930s and the 1970s, noting similarities to the former and differences from the latter. Section 4 offers concluding comments.

1. *The Social Structure of Accumulation Theory and Severe Structural Crises*

It is common in the traditional Marxist crisis theory literature to supplement an analysis of a particular crisis tendency located in capitalism-in-general by taking account of a specific historical event or state policy, as a means to explain the emergence of a crisis that is severe and long-lasting. However, such an *ad hoc* approach veers uncomfortably close to the "external factor" theory of crisis found in mainstream economics. There is an alternative approach, which takes account of the fact that capitalism never exists solely "in general" but always takes a specific institutional form.

The social structure of accumulation school argues that, in individual capitalist countries and in global capitalism as a whole, a sequence of relatively durable institutional structures can be identified, each lasting for several decades (Gordon, Edwards, and Reich, 1982; Kotz, McDonough, and Reich, 1994; McDonough, Reich, and Kotz, 2010). Such an institutional structure is termed a social structure of accumulation (SSA). This literature has argued that each SSA is a coherent set of institutions that, for a long period, promotes capital accumulation. Eventually the contradictions present in any SSA intensify, so that the SSA no longer promotes accumulation, ushering

3 The defining features of capitalism, in brief, are commodity production and the wage-labor relation.

in a long period of structural crisis. The crisis continues until a new SSA is constructed.

The SSA theory may appear to explain why severe structural crises of accumulation arise, but the historical record shows that some of the structural crisis periods identified in the SSA literature — such as the 1970s — do not seem to fit the concept of a *severe* structural crisis. As many analysts have noted, in the high-income capitalist countries macroeconomic performance worsened after 1973, compared to the period 1948–73. In the United States there was a relatively sharp recession from the fourth quarter of 1973 to the first quarter of 1975, with GDP falling at a 2.5% annual rate over the five quarters. The remainder of the 1970s was characterized by reduced economic growth, high inflation and unemployment, and instability in the international monetary system — that is, it was a period of relative stagnation and economic instability.

A strong case can be made that the 1970s represented a structural crisis of the postwar regulated capitalist SSA, which led to its demise and replacement by a quite different neoliberal institutional structure in the early 1980s. However, GDP growth and capital accumulation recovered rapidly after the 1974–75 recession. Using a business cycle peak-to-peak measure, during 1973-79 — the heart of the structural crisis period identified in the SSA literature — the U. S. economy actually expanded, with real GDP growing at an annual average rate of 3.0% and gross private domestic investment at 3.4%.[4] The unemployment rate, which had risen to 8.8% in June 1975, fell to 5.6% by May 1979. The unemployment rate did not reach double digits during this period until the early part of the neoliberal era, when it rose to 10.8% at the end of 1982. This resulted from intentional government policy, as the Federal Reserve applied very tight monetary policy which drove interest rates over 20%, aiming at destroying labor's bargaining power, stopping inflation, and driving up the international value of the U. S. dollar.

The crisis of the 1970s does not seem to have been a *severe* structural crisis of accumulation of the sort represented by the Great Depression of the 1930s. From 1929 to 1933, GDP declined in the United

4 The data presented in this paper on GDP, business investment, unemployment, interest rates, wages, labor productivity, and income inequality are, unless otherwise noted, from the following sources: *Economic Report of the President*, 1967; U. S. Bureau of Economic Analysis, 2009; U. S. Bureau of Labor Statistics, 2009; U. S. Bureau of the Census, 1960; and U. S. Federal Reserve System, 2009a and 2009b.

States for 3.5 years, falling by 30.5% over that period. Ten years later it had recovered to only 2.8% above its 1929 level. Business fixed investment, which fell to 28.7% of its 1929 level by 1933, was still only 57.7% of its 1929 level ten years later in 1939. The unemployment rate hit 24.9% in 1933 and was 17.9% in 1939. The banking system entirely collapsed in 1933, a sharp contrast to the 1970s when no serious financial crisis occurred.

There is much evidence that the current crisis will turn out to be a severe structural crisis of accumulation, more like that of the 1930s than the 1970s. A real sector recession in the United States officially started in December 2007, although GDP did not start a sustained decline until the third quarter of 2008. The financial side of the crisis began far more dramatically, gathering momentum in the spring and summer of 2008 and suddenly reaching the point of financial collapse in September 2008, when most of the largest financial institutions in the United States and many in other countries suddenly became insolvent. A total financial collapse was averted when the U. S. Federal Reserve and Treasury Department provided an estimated $12.1 trillion in various forms of support to giant financial institutions and the financial markets in general.[5]

A recent study found that, for the global economy, both industrial production and world trade contracted at least as rapidly in the first year of the current crisis as they did in the year following the start of the Great Depression (Eichengreen and O'Rourke, 2009). GDP and industrial production have fallen very rapidly in a number of major capitalist countries in the current crisis. A United Nations report projected a GDP decline for 2009 of 6.5% in Japan and 6.1% in Germany (UNCTAD, 2009, 2).

In the United States, GDP fell by 3.8% in the year following its peak level in the second quarter of 2008. In the first quarter of 2009, business fixed investment plummeted at the astonishing annual rate of 39.2%, its fastest rate of decline since World War II by a large margin. As of September 2009, total employment had undergone its largest decline since 1945, falling by 5.8% from its peak, compared to declines of 2.8% in the mid-1970s recession and 3.1% in the early

5 From the start of the financial crisis through April 1, 2009, the federal government had committed to the financial sector $7.7 trillion as investor, $2.3 trillion as lender, and $2.1 trillion to guarantee financial sector debt. Of the $12.1 trillion committed, $2.5 trillion had been spent as of April 1 (*The New York Times*, 2009).

1980s recession (Norris, 2009).[6] The unemployment rate rose from 4.8% in February 2008 to 10.3% in October 2009, a precipitous rise that far surpasses the unemployment rate increase in the crisis of the 1970s. This occurred despite a $787 billion government stimulus plan passed in February 2009.

Reports that the economic crisis is ending fail to distinguish a business cycle recession from a structural crisis. The U. S. GDP did increase, at a 2.2% annual rate, in the third quarter of 2009, a turnaround that appears to be largely due to government interventions. However, a business cycle expansion can, and usual does, take place during a period of structural crisis, as happened in 1933–37 and in 1975–79. If history is any guide, the contradictions that produced this crisis — discussed in the next section — can be resolved only by significant restructuring of the system, and such a process of restructuring has barely begun at this time.

The conventional SSA theory, which regards the structural crises of the 1930s and the 1970s as similar phenomena, does not provide an explanation of the factor(s) that cause a structural crisis of accumulation to be a severe one. However, the SSA theory's focus on the role of the institutional form of capitalism in explaining economic crises points in the right direction. The missing ingredient is a still more concrete analysis of capitalist institutional structures. Examining the way in which the institutional structure in the United States in the neoliberal era gave rise to what appears to be another severe structural crisis can shed light on the key factors that produce that type of crisis.

2. *The Current Crisis and Liberal Institutional Structures*

The SSA theory has traditionally asserted that every new SSA is historically unique. However, it is argued in Kotz (2003a) and Wolfson and Kotz (2010) that capitalist institutional structures fall into two types, liberal and regulated. The main features of a regulated institutional structure are the following: 1) the state actively regulates the economy, including the behavior of business and finance; 2) the capital–labor relation in the workplace has a significant element of compromise between the two sides, particularly between big capital and labor; 3) big business engages in a co-respective, restrained form

6 During the post–World War II demobilization and economic readjustment in 1945, employment fell by 10.1%.

of competition; 4) the dominant ideology emphasizes the benefits of state regulation of business, capital–labor cooperation, and "civilized" competition. By contrast, a liberal institutional structure has the following main features: 1) there is only limited state regulation of the economy and of business and finance; 2) capital, including big capital, strives to dominate fully labor in the workplace; 3) large corporations engage in unrestrained, cutthroat competition; and 4) a free-market, or classical liberal, ideology is dominant, which views the state as an enemy of freedom and efficiency and praises the virtues of unrestrained competition.[7]

Neoliberalism, which arose around 1980, gave rise to liberal institutional structures in the USA, the UK and many other (although not all) countries, and also on the global level where the main economic institutions began to follow the neoliberal model. The economic crisis that began in 2007–08 emerged initially in the United States, and it emerged from the neoliberal institutions in that country and in the global economy.

An examination of the process that led to the current crisis shows why, and how, a liberal institutional structure tends to eventually produce a severe structural crisis of accumulation.[8] Our examination will focus on the U. S. economy, where the current crisis originated. Neoliberal capitalism in the United States gave rise to three developments that led to the current crisis: 1) growing inequality between wages and profits and among households; 2) a series of large asset bubbles; and 3) a financial sector that became increasingly absorbed in speculative and risky activities.

Inequality grew rapidly in the neoliberal era, increasing at an accelerating pace as the neoliberal structure matured in the last full business cycle of the neoliberal era, 2000–07. In the period 1979–2007 average real hourly earnings of nonsupervisory workers actually declined slightly, by 1.1%, while output per hour grew by 69.8%, indicating that all of the productivity gain over the period went to capital. By the mid-2000s the degree of inequality among households had reached a level not seen since 1929 (Kotz, 2009a).

7 None of these features of a liberal SSA prevents big business from seizing opportunities to make profits through its relations with the state or from seeking and gaining monopoly power in markets.

8 This analysis draws on Kotz (2009a), which provides a detailed analysis of the roots of the current crisis.

Rapidly rising inequality tends to create a realization problem — that is, an insufficiency of aggregate demand relative to output. Rising profits stimulate rapid accumulation and growing output, but stagnating or falling wages limit demand growth. Increasing concentration of income at the very top also limits demand growth, since the very rich do not spend a large share of their vast income on consumption.

However, the neoliberal institutional structure has features that postpone a realization crisis. The rapidly growing profits stimulate rapidly rising business investment, which constitutes a part of the demand for output. This can perpetuate an expansion for a time, but if it were the only mechanism operating to resolve the realization problem, an imbalance would quickly arise as the means of production would grow too rapidly relative to output. The neoliberal institutional structure produced large asset bubbles, which provided a longer-lasting resolution of the realization problem.

An asset bubble is a self-perpetuating rise in the price of an asset that results from the expectation of future increases in the asset's price. For example, if financial investors expect the price of real estate to rise rapidly in the near future, they will have an incentive to buy real estate to obtain the capital gain from the rising price. This can become a self-sustaining process if the profits gained by investors from a rising asset price draw in more and more investors, whose purchases in turn cause the asset price to continue rising. Each of the long economic expansions of the neoliberal era in the USA saw a large asset bubble, in southwestern commercial real estate in the 1980s, in the stock market in the 1990s, and in the housing sector in the 2000s.

There were three long economic expansions in the United States in the neoliberal era, in 1982–90, 1991–2000, and 2001–07. An asset bubble can prolong an expansion by holding off the realization crisis that tends to result from rising inequality. It does so by increasing the paper wealth of those who hold the asset undergoing a bubble process. The rising paper wealth leads to growth in consumer spending relative to income.

Figure 1 shows that the ratio of consumer expenditure to after-tax income trended downward from the late 1960s to the mid-1980s. Then the ratio trended sharply upward, when the recovery from the depressed early 1980s began, through 2005. The first bubble of the neoliberal era that was large enough to clearly affect the U. S. economy

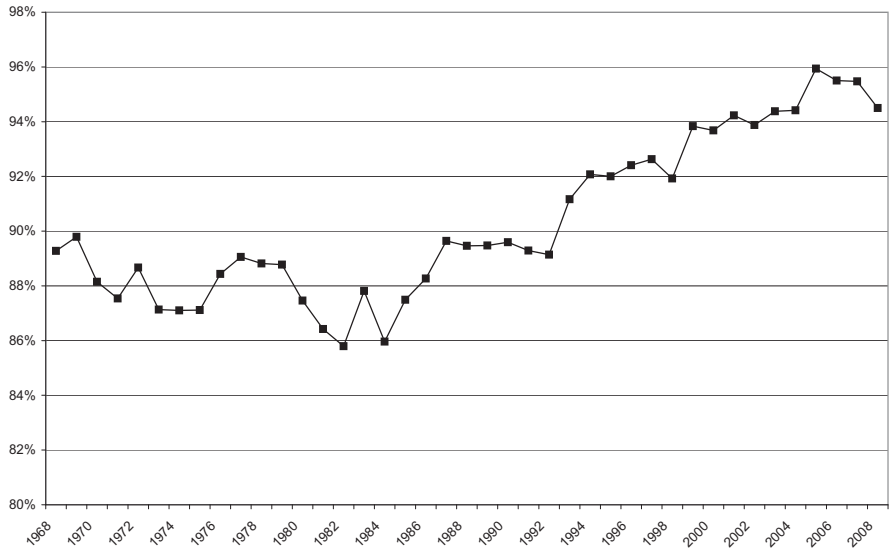

Figure 1: Personal Consumer Spending as a Percentage of Disposable Personal Income
Source: U.S. Bureau of Economic Analysis, 2009, Table 2.1.

as a whole was the 1990s stock market bubble. As Figure 1 shows, after 1992 the ratio of consumer spending to income rose sharply, reaching 93.8% in 1999 up from 89.1% in 1992. When the housing bubble began after 2002, the ratio rose further, from 93.9% in 2002 to 95.9% at its peak in 2005.[9] Over some two decades of neoliberalism, this ratio rose by almost ten percentage points, starting at 86.0% of income in 1984. Relative to GDP, consumer spending rose from a low of 62.0% in 1981 to 70.5% of GDP in 2008.[10]

However, the rise in consumer spending relative to household income, while postponing the realization crisis, makes the eventual crisis worse. Enterprises respond to a long period of rising consumer spending by investing heavily in fixed capital to increase their productive capacity. In addition, a giant bubble generates optimistic expecta-

9 The rise of consumer spending to 95.9% of disposable income in 2005 does not imply that personal saving was almost 4% of income, since part of disposable income goes into interest payments and transfer payments. That year the personal saving rate fell to only 0.4% of income.

10 See Kotz (2003b; 2008) for a detailed analysis of the effects of bubbles on consumer spending and aggregate demand in the 1990s and 2000s.

tions about future profits from real investment, which also tends to stimulate an increase in investment and hence in the volume of productive capacity. Once the bubble bursts — as all asset bubbles eventually must — consumer spending drops to a more normal relation to income while profit expectations simultaneously collapse. The sudden declines in consumer and investment demand reveal a large amount of excess capacity that had not been apparent while the bubble was still inflating. This can depress the incentive to invest for a long period of time, bringing a severe, long-lasting crisis of over-investment.

When the U. S. stock market bubble burst in 2000, business fixed investment fell by 13.0% over the next two years. However, a severe over-investment crisis was averted at that time by the emergence in 2002 of another, even more massive bubble, this time in housing. After 2002 business fixed investment recovered, rising by 29.1% during 2002–07. The housing bubble began to collapse in 2007. In the second half of 2008 consumer spending fell rapidly, at more than a 3% annual rate. Business fixed investment began to fall very rapidly in the fourth quarter of 2008, and by the third quarter of 2009 it had fallen by 20.2% from its peak in the second quarter of 2008.

The speculative, risk-seeking financial sector is the third development that played a key role in the current crisis, in addition to rising inequality and large asset bubbles. As everyone knows, the U. S. financial sector engaged in an orgy of speculative activity in the 2000s, much of it related to the housing sector. As long as the housing bubble kept inflating, this contributed to the economic expansion. By providing a huge volume of mortgage loans to existing homeowners, including homeowners with a poor credit rating, the financial sector made possible the rapid expansion of consumer spending based on the rising values of people's homes.[11] If the only way homeowners could have spent some of the rapidly rising value of their homes had been to sell the home, the housing bubble could not have continued. Thus, the speculative lending of the financial sector made it possible for the bubble to continue to inflate while also enabling the rising value of housing to spur rising consumer spending.

11 During 2004–06 U. S. households borrowed against their homes an amount that averaged 9.5% of disposable personal income (Greenspan and Kennedy, 2007).

However, the result of this process was an increasingly fragile financial sector. Not only did the U. S. financial sector create trillions of dollars of bad assets that eventually collapsed in value, it also itself increasingly borrowed funds to pursue its highly profitable speculative activities. Figure 2 shows the total debt of each of the three major private sectors of the U. S. economy. The debt of the nonfinancial business sector rose only modestly in the neoliberal era. The household sector's debt grew rapidly after the early 1980s, and at an accelerating pace after 2000. From 1980 to 2008 the ratio of household debt to GDP about doubled. By 2008 the household debt had become unsustainable in the absence of a continuing housing bubble, which had enabled households continue to withdraw equity from their homes to remain afloat. However, during that same period, from 1980 to 2008, the debt of the financial sector grew almost six-fold.

Thus, the speculative, risk-seeking financial sector was set up for collapse by 2008. A financial sector collapse makes an economic crisis more severe and harder for the state to control. It is this aspect of

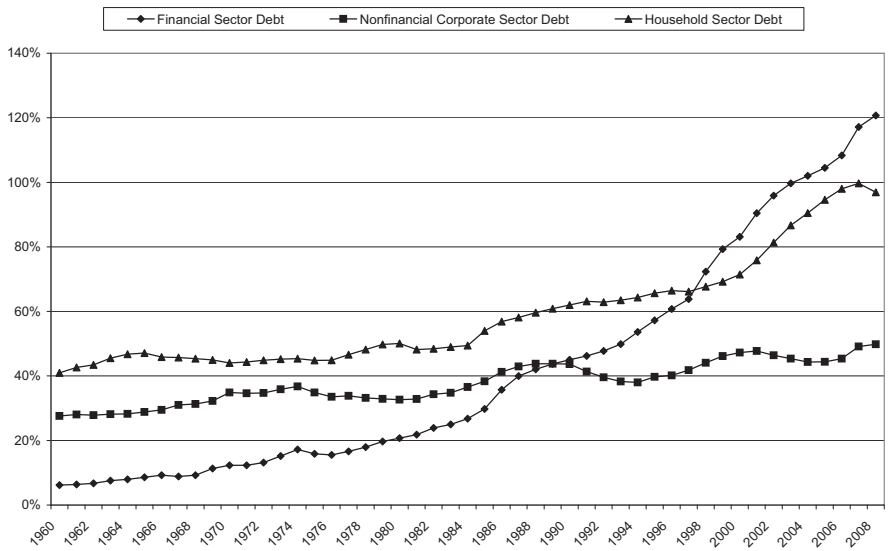

Figure 2: Debt of Major Sectors of the U.S. Economy as a Percentage of GDP
Source: U.S. Federal Reserve System, 2009b, Z-1 Statistical Release.

the current crisis that has received most of the coverage in the mass media, and it is an important factor in explaining the severity of the current crisis. However, it is only one of the important factors. All three developments — growing inequality, a series of large asset bubbles, and a speculative, risk-seeking financial sector — worked together to produce the start of what looks like a severe structural crisis of accumulation in 2007–08. The fundamental cause is an asset-bubble–induced over-investment crisis worsened by a severe financial crisis.

These three developments — rising inequality, big asset bubbles, and a speculative, risk-seeking financial sector — are not inherent features of capitalism-in-general. For example, in the United States during the period of a regulated SSA in 1948–73, wages rose at approximately the same rate as labor productivity, while the distribution of household income became slightly less unequal (Kotz, 2009a). During that period there were no asset bubbles, and the major financial institutions engaged mainly in the traditional financial activities of making and holding loans, selling stock and bonds, and offering conventional insurance. There were no major bank failures or financial panics in that period.

Those three developments are features of the liberal institutional form of capitalism. The weak bargaining position of labor in a liberal form of capitalism tends to cause wages to stagnate or fall while profits rise rapidly. The limited state intervention in the market allows the strong to grab, and keep, a rising share of social output.

A liberal institutional structure gives rise to large asset bubbles, for two reasons. First, the rising inequality causes profits, and the income of rich households, to exceed the available profitable productive investment opportunities. Hence, some of that income finds its way into the purchase of such assets as corporate stocks or real estate, which initiates an asset bubble. Second, the deregulated financial institutions in a liberal institutional structure are free to make the speculative loans without which an asset bubble cannot continue to grow.

The third development that arose in the neoliberal era — a financial sector that pursues speculative, risky activities — resulted primarily from financial deregulation. Once financial institutions are free to pursue maximum profits without oversight or regulation, they

will pursue such risky activities, which promise a much higher rate of profit than the traditional, mundane financial functions. At least, this is so as long as the big asset bubbles last and before the risky investments turn bad.

3. *The Roaring 1920s, the Postwar SSA, and the Neoliberal Era*

According to the usual view found in the SSA literature, the 1920s USA had an SSA that originated in the 1890s. That SSA was characterized by monopoly power and significant state regulation of business (Gordon, *et al.*, 1982, ch 4; Kotz, 1987). However, after World War I there were major changes in U. S. capitalism. The new state regulatory agencies that had arisen during the Progressive Era of 1900–16 were captured by business and/or ceased to exercise any oversight. The limited moves by big business toward a cooperative relation with trade unions in the Progressive Era gave way to an assault on labor, initiated by the breaking of a big steel industry strike in 1919. By the mid-1920s the labor movement was in steep decline. The pattern of cooperative pricing established by J. P. Morgan and other finance capitalists after the 1890s weakened, as Wall Street lost power to new centers of finance in the midwest and west and as new industries emerged (such as automobiles) that were outside Wall Street's control (Kotz, 1978, ch. 3). An extreme individualist ideology became dominant. The 1920s USA closely fit the characteristics of a liberal institutional structure.

The 1920s USA also saw the same three developments that arose in the neoliberal era. Inequality grew sharply, as wages lagged behind productivity growth and household income concentrated at the top. From 1920 to 1929 real hourly wages in manufacturing rose by 19.3% while output per labor hour in manufacturing rose by 62.6%.[12] The share of after-tax income going to the top 1% rose from 11.8% in 1920 to 19.1% in 1928. Big asset bubbles emerged: in Florida real estate in the mid-1920s, followed by a giant bubble in the securities market in the late 1920s. The financial sector increasingly became involved in speculative, risky activities. While this began with medium-size financial institutions, by the end of the 1920s the largest old-line banks were drawn in (Kotz, 1978, ch. 3).

12 Calculated from U. S. Bureau of the Census, 1960, 92, 126, 600. Nominal wages were stagnant but prices fell over the decade.

The Great Depression was set off by the collapse of the U. S. securities bubble in the fall of 1929. This was followed by a rapid decline in consumption and investment, leading eventually, in 1933, to a complete collapse of the banking system. As noted above, investment remained depressed for a decade following 1929. While conservatives blamed this on business fear of New Deal reforms, a case can be made that it is explained by a severe over-investment crisis induced by the big asset bubbles of the 1920s. The combination of bubble-induced over-investment and a financial crisis is quite similar to today's conditions.[13] Thus, the historical background to the current crisis, together with that of the Great Depression, lends support to the view that a liberal institutional form of capitalism creates conditions that tend to eventually unleash a severe structural crisis of accumulation.

The milder and shorter structural crisis that followed the collapse of the post–World War II regulated form of capitalism can be explained by the different dominant crisis tendencies in such a form of capitalism. Under regulated capitalism, labor tends to have significant bargaining power. As a result, economic expansions tend to set off a profit-squeeze type of crisis, as the declining reserve army leads to wages rising fast enough to squeeze profits (Kotz, 2009b; Wolfson and Kotz, 2010). One study (Kotz 2009b) found that every business cycle recession of the period 1948–73 was caused by the profit squeeze crisis tendency.[14]

The most common SSA analysis of the structural crisis of the 1970s views a key factor in the emergence of that crisis to be a kind of long-run, institution-based version of the profit squeeze tendency (Bowles, *et al.*, 1990, part II). According to this argument, over the period of regulated capitalism, there was a long-run increase in the relative strength of labor, as well as other groups, in relation to U. S. capitalists. Eventually this led to a set of sharp conflicts between capital and labor (and other groups such as third-world raw material suppliers) that destabilized the regulated capitalist SSA and the accumulation process it had supported.

13 A little-noticed difference between the 1930s and today is that in the current crisis the financial system approached insolvency right at the start of the economic crisis, while in the 1930s a financial collapse, which happened in the spring of 1933, followed three-and-a-half years of decline in the real sector.

14 By contrast, in the late expansion period in the 1980s, 1990s, and 2000s, real wages did not rise fast enough to squeeze profits (Kotz, 2009b, supplemented with updated data).

Why was the resulting structural crisis less severe than the Great Depression? If the underlying cause of the crisis was the increased bargaining power of labor and other popular groups, that "problem" could be resolved by a few years of policy-induced high unemployment and economic punishment of the Third World in the early 1980s. Neoliberal restructuring — which was accomplished relatively rapidly by the reassertion of capital's power, the dismantling of state regulation of business, and a drastic cutback in social programs — served to resolve the crisis of regulated capitalism.

Also, there is a difference in the managerial capacity of the state at the end of the two types of institutional structure of capitalism. When regulated capitalism enters a crisis, the state has recent experience at managing the economy, which facilitates the resolution of the crisis. However, when liberal capitalism enters a crisis, the state has been through a long period of hollowing out and has little capacity for effective management of the economy. Despite the Roosevelt Administration's bold programs, the U. S. economy did not fully emerge from the Great Depression onto a new path of vigorous accumulation until after World War II, some 15 years after 1929. In the current crisis we have witnessed the difficulties experienced by the Obama Administration due to the lack of recent experience of, and commitment to, active state management of the economy. The economic stimulus program of February 2009 was designed to create or save only 1.6 million jobs, compared to 15 million who were officially unemployed by late 2009, and its implementation has been very slow.[15]

4. *Concluding Comments*

Both theoretical considerations and historical evidence support the view that a liberal form of capitalism tends to eventually give rise to a severe structural crisis of accumulation, while the regulated form of capitalism meets its end in a milder structural crisis. This has several implications.

First, there is an implication for Marxist theory. The analysis above suggests that it is necessary to go beyond analyzing capitalism

15 By contrast, the Chinese state, which has presided over a system that has remained heavily state regulated through the neoliberal era, has been able to enact a relatively much larger stimulus program which took effect almost immediately and restored rapid economic growth, although it did so by boosting investment to what may be an unsustainable level.

in general, or simply supplementing such analysis with the *ad hoc* addition of particular historical developments or state policies. Marxists should seek to systematically analyze the particular institutional forms of capitalism that arise in history to determine their properties and tendencies. There seems to be some reluctance to do so, perhaps stemming from a concern that focusing on the particular institutional form of capitalism will divert attention from the evils of capitalism itself and the need to replace it entirely. Such a concern is misplaced. To be effective at understanding and challenging capitalism, we must analyze its particular institutional features in the current time and place.

Second, the above analysis poses a paradox for the transition to socialism. A long period of regulated capitalism tends to strengthen the working class. The worldwide radical upsurge of the late 1960s occurred after 20 years of regulated capitalism. However, regulated capitalism also tends to bring a rising living standard and expanded public services for the working class, which makes a successful challenge to capitalism less likely. To these considerations the above analysis adds an argument that the eventual accumulation crisis of regulated capitalism tends to be relatively mild, which further reduces the likelihood of a transition to socialism.

By contrast, a long period of liberal capitalism tends to weaken the working class and radical movements. We have observed this in the neoliberal era, and a similar trend occurred in the United States in the 1920s. If a liberal form of capitalism tends to eventually bring a severe economic crisis, it enters that crisis with the working-class movement and radical movements weak and divided. Thus, the potential that might appear to be present for the severe structural crisis that follows a period of liberal capitalism to promote a transition to socialism runs into the problem that there may not be an agent of such a transition that is ready to bring it about.

However, against the above considerations must be balanced the conclusion that the structural crisis following a liberal institutional form of capitalism is not likely to be easily or quickly resolved. If the current crisis continues for some time, the demobilizing effects of neoliberalism may be replaced by the radicalizing effects of a prolonged and severe economic crisis. In the early part of the Great Depression in the United States, there were some protests, but the period of major labor and radical upsurge was 1934–39. Although

any historical analogy is highly imperfect, we are now at a time analogous to 1930–31 — that is, the first year or two of the current structural crisis.

The major capitalist states appear at this time to be trying to resuscitate neoliberal capitalism, but the analysis presented here suggests that it cannot be resuscitated as a viable basis for renewed capital accumulation at this time. A new state-regulated capitalism could form the basis for renewed accumulation, but it would require a lengthy period to construct such a new form of capitalism. This crisis presents an opportunity, which may last for some years, for the left to organize for a real alternative to capitalism.

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Capitalism, Crisis, Renewal: Some Conceptual Excavations

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AT THIS WRITING (end-of-summer, 2009) the decline in U. S. Gross Domestic Product appears to be moderating, and the stock and real estate markets are showing modest signs of life. As we move deeper into the Great Recession, the finer capacities of our theoretical understanding will be tested, as we try to see whether a moment such as the present is the beginning of a genuine recovery — the mantra of the political and media establishment — or merely a momentary respite in a long and deep structural crisis. We need to avoid both wishful thinking and doctrinal dogmatism if we are to contribute to a distinctively Marxist analysis and program.

Any analysis of the current conjuncture, however, will merge into an ever-widening stream of crystal-ball gazing journalism, unless it is grounded in a well-defined theory of the recent period in capitalist accumulation, which is in turn based on a rigorous understanding of capitalism as such. In this regard, we may start by outlining one position that appears increasingly dominant in left circles. This impression of dominance is just that; it does not stem from any sort of systematic "metastudy" of the literature. I will illustrate by referring to two recent papers.

The Keynesian Golden Age and the Neoliberal Turn

Thomas I. Palley, in a work entitled "America's Exhausted Paradigm: Macroeconomic Causes of the Financial Crisis and Great Recession"

(Palley, 2009), rejects the commonplace notion that the crisis was *caused* by the Ponzi-like housing bubble leading to August 2007, insisting instead that we look deeper: "The macroeconomic arrangements that have governed the U. S. economy for the past 25 years are critical for explaining the crisis" (2). Palley cites two factors in particular: the pattern of income distribution within the United States, and the "U. S. model of global engagement." I will focus on the domestic side of his analysis, as it mirrors similar developments taking place on a world scale.[1]

The key event, in Palley's view, was the abandonment of the Keynesian consensus around 1980, and its replacement by neoliberalism, which, in this context, means essentially three things: 1) delinking of wage growth and productivity growth and consequent fall in the *wage share of income* (or rise in its inverse, the profit share), accomplished partially through massive offshoring of jobs; 2) unprecedented increases in business, personal and public indebtedness, and the associated rising strength and relative independence of the financial sector; and 3) the drive toward deregulation, symbolized perhaps by the repeal of the Glass-Steagall Act in 1999. Palley summarizes:

> The bottom line is[:] macroeconomic failure rooted in America's flawed economic paradigm is the ultimate cause of the financial crisis and Great Recession. Financial market failure played a role in the making of the crisis, but its role was supportive and part of the flawed paradigm. Now, there is a grave danger that policymakers only focus on financial market reform and ignore reform of America's flawed economic paradigm. In that event, though the economy may stabilize, it will likely be unable to escape the pull of economic stagnation. That is because stagnation is the logical next stage of the existing paradigm. (32.)

A similar note is sounded by David M. Kotz, "The Financial and Economic Crisis of 2008: A Systemic Crisis of Neoliberal Capitalism" (Kotz, 2009). The key thing to note in Kotz' title is the adjective "neoliberal" preceding "capitalism." From the abstract:

> . . . the financial and economic crisis that began in the United States in 2008 indicates the start of a systemic crisis of neoliberal capitalism. The same institutional features of neoliberal capitalism that promoted a series of long economic expansions over several decades also created long-run trends that have led to a systemic crisis. Major economic restructuring is likely to follow. (305.)

1 International and *trans*national features of the neoliberal era and the current crisis are central to their nature and logic; the world economy is not simply the sum of "national" economies. In this paper, however, I focus on the U. S. economy, leaving implicit its specific relation to the recent evolution of transnational capitalism.

Details differ as between Palley's and Kotz' presentations, with Kotz placing more weight on asset bubbles and financial speculation and Palley on the international aspects, but the main lines of their stories are the same. The neoliberal policy turn involved a massive shift in the distribution of income away from workers and toward asset-owners and profit recipients, as measured by 1) the increasing lag in wage growth behind productivity growth; and 2) the enormous jump in executive "compensation," and many telltale signs of luxury consumption that rival the "robber baron" era of the turn of the 20th century. This is the basis for a burgeoning deficiency in effective demand. It leads to the second aspect of the neoliberal turn: the rise in debt ratios to never-before-seen levels, as borrowing replaces the increasingly absent demand to keep production high. Deregulation — removal of controls and public oversight in banking and finance, contributing to an ethos of speculation and irresponsibility — completes the picture.

Now the obvious problem with this analysis, from a Marxist point of view, is its unstated implication: *if only* the neoliberal turn had *not* occurred — if only wages *had* kept pace with productivity, controls in the financial sector had remained in place, and steps had been taken to keep public and private debt within bounds — the crisis could have been avoided. The crisis was a crisis of a *policy*, neoliberalism. Despite use of the term "systemic," the crisis — both the buildup in recent years and its actualization in the joblessness, homelessness and financial disorganization of the present — is not a manifestation of capitalism as such, but rather of capitalism's unfortunate perversion in the neoliberal direction, beginning with the Reagan presidencies (and perhaps also with the Volker ascendancy at the Fed). The problem, it seems, is not with capitalism; it is with Republicans! (The Clinton years are a small source of embarrassment for this position for those who state it in overtly political terms.) Little, other than use of words such as "capitalism" and "systemic," separates this line of thinking from the work of well-known (political) liberal commentators, such as Paul Krugman and Joseph Stiglitz.

If, by contrast, the crisis' roots are traced not to a macroeconomic policy but to the essential and unalterable nature of capitalism itself, what we are experiencing is a *particular form* of that crisis, determined by an actual contingent course of historical development. The necessary thought experiment, then, is to roll back to the beginning of what in actual history became the neoliberal era, *undo* the neoliberal trend, and consider what might have resulted. Will we find an uninterrupted Golden Age of Keynesian/Fordist/Regulated Capitalism? Or will we discover crisis *potentials* in this model, potentials that would have emerged in other ways?

A Simple Aggregative Model

This is an enormously complex counterfactual inquiry, and one that by its very nature cannot have unambiguous or final answers. Moreover, answers depend ultimately on qualitative understandings, rather than on numerical results. The quantitative side, however, should play a role. In what follows, I will outline a preliminary approach to the issue, using a single simple quantitative relation and only the most salient empirical data.

We need three macroeconomic variables:

Y = the flow of real net income or output (output minus replacement of materials consumed in production, and minus the depreciated portion of the capital stocks). In a pure model of capitalism with capitalists and workers but without intermediate classes or strata, Y consists entirely of profits and wages. "Real" means that we are thinking of a flow of actual goods and services, not of its monetary expression. Note that the *real* income of the people in the economy is by definition equal to the sum of what is produced (the output, during a given period of time).

P = profit or surplus value, a component of Y. Profit accrues to capitalists as a result of the extractive (exploitative) power vested in them by virtue of their ownership-and-control of the capital stock.

K = the stock of physical capital, owned by the capitalists. Again, think of this stock as a quantity of the single all-purpose good. Heterogeneous capital goods, depreciation puzzles and associated complexities will have to wait for another occasion.

Now a simple relation among these macroeconomic variables can be stated, in the form of a simple identity:

$$\frac{P}{K} = \frac{P/Y}{K/Y} \tag{1}$$

The ratio on the left, profit divided by the capital stock, is the *rate of profit*, the central indicator of individual capitals' capacity to expand, and a key strategic goal for capitalists. This turns out to be the ratio of two ratios, on the right side. P/Y, on top, is the *profit share of (net) output*, which measures both the distribution of income between capitalists and workers and (more fundamentally), the rate of capital's ability to extract surplus from (exploit) workers. Its inverse, $1 - P/Y$, is the *wage share*. Finally, K/Y, the denominator, is the *capital–output ratio*, a measure of the technical development of production.[2]

As simple and general as it is, (1) captures essential aspects of the contradictory qualities of capitalism. For a given K/Y (certainly appropriate in a short-term context), a higher profit *rate*, indicating an increase in capital's ability to grow and to support financial claims out of profit, can only be achieved by means of a higher profit *share*, which must ultimately undermine effective demand. If, as Marx thought would be the case, K/Y has a long-term tendency to rise, this tradeoff is exacerbated over time: the profit rate must fall, *unless* the profit share rises to offset this fall, and capitalist accumulation is on the horns of a dilemma: either a falling rate of profit puts increasing pressure on financial stability and reproduction, or a rising profit share progressively undercuts markets, making the accumulation path precarious from the other side. It is noteworthy that capitalist mainstream commentators, both today and historically, either warn about the dangers of falling P/K (if they are in

2 For those versed in the traditional literature of political economy, we can translate (1) into more familiar terms. Let λ be the *unit labor value* of output. Then surplus value, s, = λP, and the *stock* of constant capital, C, = λK. The profit rate is then s/C (replacing Marx's $s/(c + v)$; this replacement seems warranted for a post–Industrial Revolution capitalist economy with a preponderance of fixed capital). The profit share is $\lambda P/\lambda Y = s/(v + s) = (s/v)/(1 + s/v) = s'/(1 + s')$, a measure related to Marx's s', the rate of surplus value. Finally, $K/Y = \lambda K/\lambda Y = C/(v + s)$, a measure of the organic composition of capital, again differing from Marx's c/v. In Marx's notation, equation (1) is: the rate of profit $r = s'/Q(1 + s')$, where Q is the organic composition of capital; this expression is similar for purposes of analysis to Marx's $s'/(1 + c/v)$. It remains mysterious why Marx chose a circulating-capital rather than a fixed-capital framework in *Capital* I, since he worked with fixed capital in Parts I and II of Volume III, which were written long before Volume I was published. The translation between physical and labor-value measures does not, of course, affect the outcome of the continuing debate concerning the deeper significance of both abstract and embodied labor in theorization of capitalist production relations.

the "supply-side"/neoliberal/Republican camp), or about the dangers of rising P/Y (if they are "demand-side"/liberal/Democrats, or, indeed, anti-neoliberal leftists). Their defining shared characteristic, of course, is that none of them, from either side, see the contradiction whole, as that would lead to a truly systemic, and system-questioning, analysis.

Some Data for the United States, 1980 and 2006

Now, what has happened to equation (1) during the neoliberal era prior to the current crisis? There are many ways to try to answer this question. I will look at data for two years only, but they are years that, I believe, neatly bracket the period under examination: 1980, at the dawn of the neoliberal boom[3]; and 2006, at its height before the financial crisis of 2007. These years are typical for the moments they represent; I believe the picture drawn from them would also emerge from a fuller time-series analysis.

I begin with the wage share (the inverse of the profit share). From the National Income and Product Accounts, available from the Bureau of Economic Analysis and also from the *Statistical Abstract of the United States*, we find National Income, and Compensation of Employees, both available for both of our years (see Table 1).

Table 1
Employee Compensation and National Income, Wage and Profit Shares
Columns (1) and (2): billions of current dollars

	(1) Compensation of Employees	(2) National Income	(3) Wage Share (1) ÷ (2)	(4) Profit Share 1 – (3)
1980	1647.6	2433	0.677	0.323
2006	7475.7	12031.2	0.621	0.379

Source: Bureau of Economic Analysis (bea.gov), Table 1.7.5, "Relation of Gross Domestic Product, Gross National Product, Net National Product, National Income and Personal Income"; Table 2.1, "Personal Income and Its Disposition"

3 We should, of course, not forget the mini–financial crisis of October 1987, when the stock market lost one-quarter of its value. The "series of long economic expansions" (Kotz, *op. cit.*) actually had a rather mixed character.

Table 1 reports a very insubstantial increase in the profit share from the beginning to the end of the 26-year period, of about five percentage points.[4] Massive surrounding data, however, suggest that this is a gross underestimate, for a period in which trade union membership in the United States declined substantially, whole sectors within higher-paying industries were lost to low-wage countries in the hemispheric American and Asian south, and "free trade" agreements were enacted. NIPA data may not be entirely reliable here; the category "compensation," in particular, is suspect.

To arrive at a corrective, at least for the trend, I use data from Palley's Table 4 (Palley, 2009, 8, drawn from Mishel, *et al.*, 2009), on productivity growth and hourly wage growth, organized by periods beginning in 1967 and ending in 2006. The gap, productivity growth minus wage growth, is positive for all periods after 1973. The data suggest, roughly, that the wage share in our period 1980–2006 declined at an average annual rate of 0.01381.[5] If this rate of decline is applied to the NIPA 1980 wage share of 0.677, the wage share will have fallen to 0.472 by 2006, for a corresponding profit share of 0.528, a much heftier 40% increase over the 1980 level.[6] Perhaps the truth lies somewhere between the calculated values of 0.379 and 0.528; I will use the latter figure in what follows to emphasize the intended comparison between the actual neoliberal path to 2006 and its counter-

4 This profit share is somewhat overstated, as it includes income of unincorporated enterprises. The NIPA accounts would enable us to construct a measure of *capitalist* net income (net income generated in the capitalist sector). We need, however, a measure of income that is as comparable as possible to available data on capital stocks, and these exist only for the private sector of the economy, without separation into capitalist and small-business components. For consistency, therefore, I will keep the overstated profit share. Overstatement may also be present for other reasons, noted below.

5 I will send the detailed calculation to anyone requesting it; dlaibman@scienceandsociety.com.

6 Many development economists cite the historically higher wage shares of advanced capitalist countries, as compared with developing countries such as Brazil, as a sign of their greater maturity. In fact, there is theoretical support for the view that the wage share of income *rises* as a result of capitalist development over the long term (empirical data seem inconclusive, suggesting an important arena for further study). If confirmed, the rising wage share would add to Marx's increasing organic composition of capital an additional source of a long-term tendency for the rate of profit to decline. In this perspective, the trajectory of the U. S. economy over the last 30 years may indicate an extraordinary period of reversal, moving against the longer trend. It should also be mentioned that the first, and perhaps most fundamental, theory of the falling tendency of the rate of profit in Marx appears not in *Capital* III but in the *Communist Manifesto*, and it is based on the long-term shift in the balance of class power toward the proletariat, whose growth in numbers and in experience and ideological maturity pushes the wage share upward.

factual; working with a lower figure for the rise in the profit share would not change the argument in any essential way.

To complete the picture, we will need data on capital stocks. These are notoriously hard to find, and even harder to interpret, and I will not go into too much detail here. My source is the *Statistical Abstract of the United States*, 1982–83 edition for the year 1980, and the 2009 edition for 2006. Unfortunately, the definitions in the tables in those editions, both headed "Net Stock of Fixed Reproducible Tangible Wealth," are not exactly comparable. Table 2 summarizes.[7]

By this measure, the ratio of the private capital stock to the private net output flow — arguably the most appropriate counterpart to Marx's organic composition of capital — increased modestly but significantly, by about 16%, over the period. (It is worth noting that, despite all of the talk about reducing the size of government, the share of government expenditure in national income barely changed, from 0.363 to 0.359.)

In the final step of this exercise (Table 3), we estimate the rate of profit at both ends of our 26-year neoliberal period. The movement of the profit rate is as we would expect: given a modest increase

Table 2
Estimates of Capital Stock and the Capital–Output Ratio
Columns (1) – (4): billions of current dollars

	(1) Capital Stock	(2) National Income (NI)	(3) Gov't Expenditure	(4) Private NI (2) – (3)	(5) K/Y (1) ÷ (4)
1980 "Business equipment and non-residential structures"	2543	2433	883.1	1549.9	1.64
2006 "Private non-residential"	14715	12031.2	4319.8	7711.4	1.91

Source: *Statistical Abstract of the United States*: 1982–83, Table 741, "Net Stock of Fixed Reproducible Tangible Wealth"; 2009, Table 701: "Net Stock of Fixed Reproducible Tangible Wealth"; for Government Expenditure, Bureau of Economic Analysis

7 Questions of measurement bias abound. See Perlo, 1968; Gordon, 1994; Shaikh and Tonak, 1994; for further discussion, Laibman, 1998, 95ff.

Table 3
Capital–Output Ratio, Profit Share and Profit Rate

	(1) K/Y	(2) P/Y	(3) P/K	(4) alt. P/K
1980	1.64	0.323	0.197	XX
2006	1.91	0.528	0.276	0.169

Source: Calculated from data in Tables 1 and 2

in the capital–output ratio coupled with a large (possibly overestimated) increase in the profit share, the rate of profit rises from about 20% at the beginning of the period to about 28% at the end. As all of the commentators describe, the result has been constricted markets (partially offset by escalating debt), financial feeding frenzies, and the Great Collapse with which we are familiar.

We can now use these data to do our counterfactual experiment, and this is shown in column (4) of Table 3. What if the neoliberal squeeze on workers had *not* happened, and the profit share had remained at its 1980 level of 0.323? In that case, we calculate the "alternative" rate of profit by dividing the *1980* profit share by the *2006* capital–output ratio of 1.91, and find (again as we would expect) that the profit rate *falls*, from just under 20% to just under 17%. This is a decline in the rate of profit of three percentage points, or a fall of about 15% from its original level. The question now arises: how significant is this decrease? The neoliberal squeeze prevented it, by creating the conditions that led to the present crisis; had it not done so, would the fall in the profit rate have been sufficient to produce a crisis with a different choreography and via a different route, and of what magnitude?

The Counterfactual: Falling Profit Rates and Structural Crisis

We should begin by acknowledging that the answers to these questions are far from obvious. The first purpose of this essay has been to make the minimum claim that these questions must be addressed; that the Golden Age view of a glorious alternative to neoliberalism, or a glorious return to the years before Volker, Reagan, Bush-*père*, (Clinton), and Bush-*fils*, must be justified and cannot simply be assumed.

The significance of the fall in the profit rate, absent neoliberal polarization, cannot be assessed without some context. I will men-

tion three points in this connection, all of which require much further study: 1) the relation of the profit rate in the circuit of industrial (production) capital to the substructure of returns to outside ownership, in the form of interest and dividends, that is formed on its basis; 2) the question of the inter-generational impacts of lower profit rates, in the form of higher working-class standards of living; and 3) the relation of *high* wage rates to the onset of crisis in the workplace.

Financialization and the capitalist production relation. The rate of return to capital in the "inside" (strategic, or managerial) circuit is the foundation for a substructure of financial obligations accruing at lower rates: the return to "outside" capital in the form of interest on a wide variety of debt instruments; the implicit rate of return given by the dividend payout rate on stocks; the return to rentier capital (passive ownership supplied by a stratum of wealthy individuals); and interest or dividends on assets owned, directly and indirectly, by working-class households. The fall in the baseline profit rate puts pressure on this entire hierarchy of rates and obligations, creating instability in financial markets as participants on both sides withdraw or threaten to withdraw, disrupting customary financial channels. If the spreads between inside and outside rates of return narrow unduly, there is downward pressure on the inside rates that matter for strategic purposes; rising interest rates or necessary dividend payouts to avoid runs on a company's stock may have the same effect as a decline in the general profit rate.[8] Alternatively, falling outside rates — to protect the spread in the case of a fall in the inside rate — may choke off the supply of outside capital, as outside investors either disintermediate or seek opportunities abroad. In short, the falling profit rate becomes more significant to the extent that the inside rate supports a large and/or growing substratum of financial obligations.

Financialization is a form of *intermediation* that is functional for the capitalist process overall — not least because it mystifies the social sources of economic power — and its importance may increase as accumulation proceeds. This shows up in the data for our neoliberal

8 This effect may, in fact, help us answer the question, What if the output–capital ratio had not fallen, and the profit rate therefore had also not fallen, in the non-neoliberal (constant wage share) scenario? The constraints on a given level of the profit rate may tighten, activating the crisis tendencies that are usually associated with a (strictly) falling rate of profit. I have not tried to measure this effect in this short paper, but study of the financial aspects of the long neoliberal boom is clearly on the agenda; see Bakir and Campbell, this issue.

period, but some of it is undoubtedly an aspect of capitalist maturation as such, and independent of the thrust of the most recent period toward polarization and debt. If so, this would increase the significance of the (counterfactual) fall in the profit rate, and lend weight to the view that the alternative to neoliberalism would not have been continuation of a Golden Age of working-class security and stability, but rather a Leaden Age of financial instability and crisis in the real economy emerging in ways other than those actually experienced.[9]

Wage rates and reproduction of the capital–worker relation: labor power and the working-class household. Critics of neoliberal policy quite rightly deplore the impact of polarizing accumulation on working-class living standards. The question then becomes: what would have happened if the U. S. working class had been able, in the time period we are studying, to defend its social and economic positions in such a way as to keep the wage share constant over the period, forcing the profit rate to decline as indicated? The critical impact of a falling rate of profit cannot be determined independently of the corresponding effect on the working class and on class relations.

The entire period after World War II has been one of a steady swing in the balance of class forces away from the working class and toward capital, as capital has reasserted its supremacy and restored its hegemony after its strategic retreat following the October Revolution and the Great Depression of the 1930s. The Great Fear in ruling circles is that the working-class gains of mid–20th century — in five broad areas: job security, home ownership, education, health care, and pensions — might become established inter-generationally, and therefore "locked in" as permanent, structural requirements for social reproduction.[10] A degree of fundamental security enters into "people's expectations" (to use the language of the economists) in a way that problematizes the re-emergence of the classical proletarian condition and therefore the full hegemony of the capitalist ruling class. A single percentage point fall in the rate of profit, using the numerical scenario developed above, corresponds roughly to a *two* percentage point increase in the wage share, toward the end of the

9 For a *very* preliminary report on an effort to develop a full theory of financial relations in a pure capitalist economy, see Laibman, forthcoming.

10 I owe the idea of intergenerational "locking-in," and therefore of a social-relations basis for the time frame appropriate to "long swings" based not on technological development as in the classical Kondratieff conception but on the evolution of the class balance of forces, to Jerry Lembke (Lembke, 1991–92). See also Gordon, Weisskopf and Bowles, 1983.

period. With the wage share hovering around the 0.5 mark, that represents a growth rate of about four per cent; adding in the approximately two percentage points of productivity growth in the same period (Mishel *et al.* actually estimate productivity growth at 2.6% for 2000–2006), this implies an annual growth rate in the real wage rate of six to seven percent. Real wage growth of that magnitude would create havoc in financial markets, not because of its probable effect on markets (the Keynesian worry), but rather because of its *implications for capitalist control in the future* and therefore *for the validity of all of the assets that collateralize the entire system.* With a constant wage share, real wages of course grow at the same rate as productivity; even this, however, amounts over time to significant real wage increases — about 20% over seven years, according to the Mishel figures — and the point still applies.

It cannot be overemphasized that the real crisis *for capitalism* would be the *achievement* of full employment, job security, secure home ownership, health-care security, and guaranteed support in retirement! Rising real wages, in either individual or social-wage form, are therefore antithetical to unproblematic accumulation, and this is an important part of the danger (for capitalism) inhering in falling profit rates. Once again, the "solution" to "neoliberal excess" *within capitalism* turns out *not* to be a solution. The debt crisis in this case is associated not with a fear that working-class debtors (mortgage-holders, *e.g.*) will *not* be able to repay their debts; it derives from the fear that they *may indeed* be able to repay them.

Wage rates and reproduction of the capital–worker relation: control and discipline within the workplace. A similar point holds for the impact of high or rising wage rates on class relations at the point of production. For a full discussion I refer the reader to my *Deep History* (Laibman, 2007), "chapter 4." In a nutshell, capitalist power within the workplace — the capacity to enforce discipline and productivity — requires a strategic decision concerning *devolution* of decision-making and creative responsibility. Devolution in turn has both incentive effects and control effects, with higher levels of devolution undermining control and lower levels undermining incentive. Finally, the terms of this trade-off worsen with a rising real wage rate, and we can envision a high level of the wage rate at which a single degree of devolution is simultaneously the maximum consistent with control, and the minimum consistent with incentive. This line of reasoning may be hard to grasp without a more formal presentation, but its essence is this: *rising* real wages eventually undermine capitalist power and control at the point of production.

Low wage rates are widely understood to be problematic for capitalism as a result of the poverty and social disorganization they engender, and the possibility of working-class rebellion. This is the conception of crisis that is commonly assumed, as in theories of absolute or relative immiseration. But I believe that *high* wage rates are also problematic, with perhaps even more far-reaching consequences, since they are associated with the development of working-class capacities for social and political reorganization, including crucially in the workplace.

From this perspective also, a not-usually-contemplated critical process emerges when the profit rate falls and the wage share and rate rise. This is not merely an argument to the effect that, had we been successful at preventing the neoliberal turn, we would have either a reformist Golden Age of capitalism, or a high-wage revolutionary situation — in which case reformist and revolutionary perspectives coalesce strategically. Keynes thought that "investors" (capitalists) could be cajoled into playing for lower stakes; that they could be brought to accept ever-declining and eventually insignificant rates of profit. This, however, would undermine the financialization of capitalist production relations as such. The disruption of financial markets would also entail loss of inside control over the vast assets accumulated in the name of the public (*i.e.*, workers), such as pension and insurance funds, and it is hard to imagine that this crisis of class control would not spill over into the real economy as yet another form of economic crisis, *i.e.*, breaking the circuit of production with its attendant unemployment, destruction of capital stocks, and so forth.

Once Again on the Current Crisis

To return to the theme stated at the outset. A broad-brush analysis of the neoliberal era and of the standard left–liberal interpretation does not provide a simple answer to the question regarding the nature of the present moment: recovery, temporary respite, or whatever. It is certainly not appropriate to argue that the Great Recession of 2007–? is in any way permanent; that "capitalism cannot recover this time." I do suggest that placing the analysis of the crisis and of

the period leading up to it on a firm Marxist analytical platform is essential if we are to grasp the transformative implications of the struggle to defend working people against predatory resolutions of the crisis, and to advance toward more fundamental solutions to the core problems of job and social security.

When we realize that the current and looming battles over health care, housing, etc. are at bottom basic challenges to the entire system of capitalist power and priorities, that does not (or should not) mean we should desist from engaging them. It does suggest, however, that the social and structural aspects of this crisis make the usual paths to capitalist renewal highly problematic. For this reason the eventual formal transcendence of the crisis and re-emergence of growth will not resolve the underlying social tensions that have been brought to the surface by the Great Recession. The crisis will, in effect, extend into the recovery phase, requiring the left to think about its tasks in a genuinely long-term and structural way rather than as a series of emergency responses. And that is as it should be.

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The World Economic Crisis and Transnational Corporations

JERRY HARRIS

IS THE WORLDWIDE ECONOMIC CRISIS the end of globalization? There certainly has been a retreat of trade, foreign direct investments, cross-border mergers and other indicators of the transnational economy. But the real question is whether or not national economies are growing stronger as the global economy shrinks. Are transnational capitalists bringing their investments home like returning immigrant workers after losing their foreign jobs? One way to examine these questions is by analyzing the neo-Keynesian poli-

cies proposed in the aftermath of the U. S. elections (Harris and Davidson, 2009). Has there developed a nationally centered recovery policy, or has the crisis been used to reconfigure corporate combinations that strengthen the transnational character of the global economy?

The auto industry is a good avenue to explore the capitalist response. Cars have a particularly strong national identity. General Motors (GM), Ford and Chrysler are seen as uniquely U. S. corporations. After all, millions of Americans grew up with the slogan, "What's good for GM is good for America." As *The New York Times* noted, "GM factories churned out . . . muscle cars with taut, sculptured body panels that were rolling displays of American DNA" (Maynard, 2009). This national identity extends to Japan with Honda and Toyota, Germany with BMW and Mercedes Benz, Jaguar and Rolls Royce for Britain and more recently Kia/Hyundai for South Korea. But the auto industry has long been transnationally integrated through mergers, buyouts and joint ventures. Looking back to 2001, we see that GM owned Fiat, Subaru, Isuzu, Daewoo, Saab and Suzuki; Ford held Jaguar, Aston Martin, Land Rover, Mazda and Volvo; Volkswagen acquired Audi, Bentley, Bugatti, Lamborghini, Seat and Skoda; Daimler Benz took over Chrysler and Mitsubishi; and Renault controlled Nissan and Samsung (Harris, 2001). These particular sets of transnational relationships come and go but the global nature of the system remains. The current crisis, for all its nationalist rhetoric, is simply reshuffling the deck and deepening transnational capitalism.

The government's investment into GM and Chrysler has been characterized as saving the U. S. auto industry and has even been labeled socialist by conservatives. But exactly what is meant by a U. S. auto industry in an era of globalization? Are we talking about a nation-centric corporate policy committed to maintaining a large base of good paying American jobs? Do we mean corporations pledging allegiance to protect and build the national economy first and foremost before their global interests? Are these corporations expected to have a majority of their sales, employment and assets in the United States? Or do definitions narrow to U. S.–located headquarters linked to an assumption of national economic loyalty? None of these definitions fits GM or Chrysler.

What concerns most Americans is saving jobs, not the particular national identity of their employer. Foreign automakers have flocked

to the U. S. South, in part attracted by large incentives offered by state governments. When Washington was debating the Detroit bailouts Southern senators opposed the plan based on their loyalty to Honda and Toyota. Here we have different arms of government authority backing different transnational players. Kia recently moved to open a factory on the Georgia–Alabama border receiving 43,000 applications for work. A front lawn sign on the main city drag says it all: "Thank You Jesus For Bringing Kia to Our Town" (Luo, 2009).

Unfortunately for union members who benefited from wage and benefit levels hammered out within the confines of a nation-centric economy, the Southern auto industry brought global competition inside the United States. The bankruptcy proceedings for GM and Chrysler were the final blows molding UAW members to labor relations based on transnational production. As ex-UAW local president Frank Hammer remarked, "In a global economy we're all foreign workers." To truly have a *national* industrial policy the state must do more than aid U. S.–headquartered corporations. It must also craft a social contract that privileges the national working class, not one that forces workers to accept lower standards based on global competition.

The point, of course, is that transnational auto companies are as much part of the U. S. economy as GM and Chrysler. Honda began U. S. operations in 1979 and has major facilities in 31 cities in 16 states. Its investments have created 367,000 jobs, 27,000 directly employed by Honda in all 50 states and another 100,000 in dealerships with $17 billion in annual wages (Honda, 2009). Toyota has $17.4 billion in direct U. S. investments, spending $30 billion annually with U. S. suppliers. They have ten production facilities in seven states, operations that include research, development, design and engineering in 40 states, and 1,502 dealerships. Toyota directly employs 35,838 people and claims indirect employment of 1,117,511 (Toyota, 2009). Its market capitalization is now $123 billion, compared to $683.8 million for GM.

In comparison, look at GM and Chrysler. Before bankruptcy Chrysler claimed to employ 100,000 workers in all 50 states, held about 4,000 dealerships and maintained relationships with 6,000 suppliers. Direct employment in manufacturing and warehouse facilities was just over 60,000 in 16 states. Additionally, Chrysler employed 9,350 manufacturing workers in Canada, where 25% of its production takes

place, plus another 5,711 factory workers in Mexico (Chrysler, 2007). About 70% of Chrysler's world sales are in trucks and SUVs and 75% of its sales take place in the United States. Relying on the national market and pushing America's big vehicle culture are the very elements that put Chrysler into an untenable competitive position. Survival depends on greater global reach and small car technology, exactly what the Fiat takeover is designed to correct.

As for GM, it reported 47 manufacturing and warehouse facilities in 13 states, 21 of those in Michigan. Working in these facilities are 82,849 employees. GM also claims to be "Mexico's single largest employer," with some 78,151 workers and production plants in four states exporting five different brands to the United States. Their Canadian profile is much smaller, with just 12,000 directly employed (GM, 2009a). The data clearly show that GM and Chrysler have a bigger U. S. footprint in terms of employment and dealerships than either Toyota or Honda.[1]

Global Accumulation

The above figures cover GM's and Chrysler's NAFTA base, but we still need to examine their broader global integration. Chrysler has operations in 125 countries, mostly in sales, marketing, communications, service and distribution support. It also has seven manufacturing operations in countries that include Austria, Germany, Venezuela, Taiwan, and China, and joint ventures with Mercedes, the Egyptian government and state-owned Beijing Automotive. Joint partnerships include the development of hybrid technology with GM, Mercedes and BMW, and production of four-cylinder World Engines with Hyundai and Mitsubishi. Chrysler also buys transmissions from an affiliate of Nissan. Joint ventures in auto manufacturing include Hyundai, building compact Dodges in Korea for markets in Mexico; China Motor Corporation, producing Chrysler Town & Country and vans for markets in Taiwan; Mitsubishi, building pickup trucks for U. S. markets; Volkswagen, minivans for sale in North America; and GAZ in Russia, engines for Mexico. Consequently, while its sales abroad are limited, Chrysler is deeply imbedded in the global assembly line. Cerberus Capital Management owns 80.1% of Chrysler and

1 GM's crisis is due in part to its financial arm, a major subprime lender which "became one of the biggest players in that segment of the mortgage industry" (Andrews, 2009).

as a leading global private investment firm has worldwide assets and relationships. The German auto maker Daimler AG still owns 19.9% (Chrysler, 2007).

According to GM, in 2009 they have manufacturing plants in 34 countries employing 244,500 people. Of the 13 brands they own and produce, six come from foreign mergers and acquisitions. These include Daewoo, Holden, Opel, Saab, Vauxhall and Wuling. GM has joint ventures in advanced technology with Chrysler, Daimler, BMW and Toyota and major vehicle manufacturing ventures with Toyota, Suzuki, Shanghai Automotive, AVTOVAZ of Russia, and Renault (General Motors, 2009b).

GM's global holdings include joint ventures in Latin America with CIADEA in Argentina, OBB in Ecuador and 84.3% of Colmotores in Colombia. They manufacture in Argentina, Brazil and Chile and assemble in Colombia, Ecuador and Venezuela. By 2012 GM plans to invest $2.5 billion in Latin America, financed from local operations and a $500 million loan from state banks in Brazil. In Africa operations include joint ventures with local or state corporations in Kenya, Egypt, Nigeria, Tunisia and South Africa. Linked partners include Isuzu, Itochu and Saudi private investors. In the Middle East they employ 33,000 workers in dealerships selling 46 different models (*ibid.*). These regions earned $1.3 billion in 2008, while operations in North America lost $14.1 billion in the same year.

GM's Asian–Pacific operations are active in 11 countries. In China the corporation is involved in seven joint ventures and two wholly owned foreign affiliates with more than 20,000 workers. After receiving bailout money, GM expanded its Chinese presence with a $293 million buy-in to the FAW Group creating a 50–50 joint venture to produce light trucks. In Australia they merged with Holden's Motor Body Builders, producing 18 local models. GM in India acquired the CK Biria Group in 1999, manufactures seven models and is adding R&D facilities in Bangalore. In Indonesia GM acquired PT Garmak Motor in 1997, and now assembles Blazers and imports GM vehicles, not from the United States, but from Thailand and Korea. In Japan they operate through their 50.9% ownership of Suzuki, and in South Korea GM has majority ownership in Daewoo along with co-owners Suzuki and Shanghai Automotive. South Korea has become the world center for GM's small car design and Daewoo produces eight models in four manufacturing sites and also assembles in Vietnam, China,

India and Thailand. Finally, in 1996 GM built a state-of-the-art plant in Thailand that now makes six models (*ibid.*).

GM's operations in Third World markets are growing and have "survived virtually unscathed" in the global downturn. In 2008 sales increased 10% in Brazil, 9% in India, 6% in China and 44% in the Asian–Pacific region. As pointed out by Heather Timmons, "GM has often acted like an entirely different company from the one that is collapsing in Detroit." Rather than gas guzzling SUVs, they build fuel-efficient affordable cars in China, flexible-fuel engines running on ethanol in Brazil and a new small car in India to compete with Tata's Nano (Timmons, 2009).

Throughout Europe GM sells autos and trucks and operates ten production and assembly facilities in seven countries. Their Opel/Vauxhall plant in England also builds vans for Renault and Nissan. Moreover, in examining GM's production, administrative and engineering facilities we find activity in 21 countries employing 54,797 workers (General Motors, 2009c). A little further east, GM has stakes in three Russian assembly plants building Cadillacs, Hummers and Chevrolets and holding 15.2% of the market.

In 1995 foreign sales became larger than GM's domestic market, which went into sharp steady decline after 1999. In this same period the corporation began to aggressively enlarge its foreign holdings, expanding its transnational character. While the United States is still its largest single market, 78% of GM sales are abroad, China and Brazil being the two countries after the USA with the largest shares. GM maintains sales and services in 140 countries. The point of all this data is to show that both auto corporations are deeply integrated into the global assembly line, are financially connected to other transnational players, and base their corporate strategy on global accumulation patterns, not the national market.

In a study done before the global crisis by the United Nations Conference on Trade and Development (UNCTD) on the world's top 100 non-financial transnational corporations (TNCs), GM ranked fourth in foreign held assets. Table 1 presents figures for the auto corporations covered in this article plus Ford. The Transnationality Index (TNI) figures refer to the ratio of foreign held assets, sales and employment to the total figures.

As clearly indicated by their TNI percentages, the national investments of GM and Chrysler were of greater importance than the

Table 1
Auto Corporations Ranked by Foreign Assets, 2004 (UNCTD)

Corp.	*World Rank*	*Foreign Assets*	*Total Assets*	*Foreign Sales*	*Total Sales*	*Foreign Employed*	*Total Employed*	*TNI %*	*Foreign Affiliates*
Ford	3	179,856	305,341	71,444	171,652	102,749	225,626	48.7	130
GM	4	173,690	479,603	59,137	193,517	114,612	324,000	34	166
Toyota	8	122,967	233,721	102,995	171,467	94,666	265,753	49	129
Honda	21	65,036	89,483	61,621	79,951	76,763	137,827	68.5	76
Daimler/Chrysler	25	54,869	248,850	68,928	176,391	101,450	384,723	29.2	324

three other companies. But what will remain after bankruptcy? The Obama $15.5 billion deal for Chrysler will save about 35,000 jobs. On the other hand, there will be about 38,000 layoffs and buyout offers for the remaining 26,000 UAW members. Plans also include closing 25% or nearly 800 dealerships while GM will shut down 2,369 or 40% of its 5,969 dealers. Between GM and Chrysler 187,000 dealership workers will lose their jobs. Among GM hourly workers 60,000 took cash buyouts in 2006. Of the remaining 61,000 another 22,000 are slated for layoffs when GM closes 14 plants and three warehouses, leaving just 33 U. S. facilities. After $50 billion in support, when the dust settles GM expects to employ only 38,000 union workers, compared to 395,000 in more than 150 plants at its peak in 1970 (Vlasic and Bunkley, 2009). After all these cuts, the U. S. operations of Toyota and Honda will match those of GM and Chrysler. Thus the U. S. footprint and identity of GM and Chrysler will be significantly reduced; their U. S. operations are becoming simply one entity among many in their network of global accumulation. The so-called effort to save the "American auto industry" has furthered its transnationalization.

Transnational Bail-Out

Not only are these corporations left more dependent on their transnational networks; their dismantling was also a sell-off to transnational corporations. This is most obvious in the case of Chrysler, in which saving an American auto company meant selling it to Italy's Fiat. The government was forced to court to fight off a challenge from a group of powerful lenders who opposed the Fiat takeover and argued that a breakup of the company would benefit them better. The lender steering committee included JPMorgan Chase, Citigroup, Morgan Stanley, Goldman Sachs and four other investment firms representing a wider group of 45 hedge funds and banks. Of course these are transnational firms, but if the argument for nation-centric economies holds true why would the U. S. government oppose U. S. financial institutions for the benefit of the Italians? The only way to understand the battle over Chrysler is to see it in transnational terms. Washington saves jobs, thereby maintaining political legitimacy, but only by adjusting the internal market to globalization through a transnational deal.

Fiat will get Chrysler without paying in cash or stocks but by offering world- class technology. Financial analyst Max Warburton says: "Maybe, just maybe, [Fiat] has got a once-in-a-lifetime chance to pick up car companies for free; it's almost too good to be true" (Schwartz, 2009). Fiat's advantage is its fuel-efficient engines, which consume 10% less gasoline and emit 20% less carbon dioxide than commonly used engines. In effect, the key to the deal was the government forcing Chrysler to meet global standards in auto production while junking the more backward U. S. technology. Additionally, management teams are being sent to Fiat's factory in Tychy, Poland to learn the latest robotic technology. The Tychy plant produces a car every 55 seconds, about twice as fast as Chrysler's facility in Belvedere, Illinois.

Fiat's overall plan was to also obtain GM's Opel with the help of the German government. The plan was to create an Italian/German/U. S. corporation that would rank among the top five global automakers, but the deal for Opel fell through. Already well placed in Brazil, Fiat will now use Chrysler factories in Mexico to make the 500, its competitor to the Mini Cooper. Chrysler will also begin to sell seven Fiat models in their network of U. S. dealerships. In turn, Fiat will take Chrysler's Jeep into Brazil, Russia and India. Fiat already is a major player in the U. S. farm equipment market, with its CNH division headquartered in Chicago. The UAW will hold 55% of the corporation by accepting stock and a $4.6 billion government loan to take over Chrysler's pension fund. But this comes with only one board seat and little control over corporate decisions.

Another transnational aspect of the White House plan took place in the Rose Garden, where Obama gathered ten global auto companies to announce his proposal for a national standard of 35.5 miles per gallon by 2016. To push the proposal along, the Energy Department began lending money from its $25 billion fund to develop fuel-efficient cars. Underlining the transnational nature of the program, $241 million went to GM, $151 million to an affiliate of South Korea's largest chemical corporation LG Chem, $100 million to the French/Japanese TNC Nissan, $93 million to Ford and $70 million to Chrysler. This transnational pattern was repeated in the government's $3 billion cash-for-clunkers program. The three U. S. automakers accounted for 38.6% of the sales, while Japanese corporations took 46%. Toyota led with 19.4%, followed by GM with 17.6%.

The General Motors Plan

When loaning taxpayer dollars to GM, President Obama portrayed it as an effort to save an iconic American company. As he stated, "This industry is like no other – it's an emblem of the American spirit, a once and future symbol of America's success" (Maynard and Merced, 2009). But he made it clear that the government is eager to sell its 61% ownership of GM back to private shareholders, has no desire to run the company and will stay out of most business decisions. The UAW takes a similar approach to the 17.5% ownership it will hold through its retiree health care fund. As one local union president in Michigan stated, "We don't run corporations. We represent people" (Greenhouse, 2009). A better statement of U. S. trade union philosophy would be hard to find. A simple focus on distributive policy and a rejection of strategic involvement in social and economic planning has long been the hallmark of mainstream unionism. UAW national president Ron Gettlefinger stated that he wants to sell the union's stock in GM as soon as practical, being more interested in administering the health fund than the auto company. With both the government and union refusing a role in forming strategic market decisions, an industrial policy for auto is hard to imagine. In fact, *The New York Times* reported, "the Obama administration structured the GM and Chrysler plans to lessen the union's voice in management" (*ibid.*). There may be some minor battles over a factory closing or the importation of a foreign made model, but a neoliberal belief in the market is clearly dominant. This plays to a transnational strategy of recovery rather than a U. S.–based economic plan. Fritz Henderson, former GM CEO, is the personal embodiment of the global experience, having served as head of GM in Brazil, then all of Latin America, then as head of the Pacific–Asian region and lastly as head of GM Europe.

The heart of the GM recovery plan is to sell off a number of subsidiaries to the highest transnational bidders. The most important is Opel, a German company bought in 1929, whose subsidiaries include Vauxhall, produced in Britain. The story of Opel involves government, union and transnational interests plus 29,000 workers in Germany and another 20,000 in Europe. The GM plan included getting a $6.4 billion loan from the German government, so it's not surprising that European political rhetoric was similar to sound bytes in the United States. Social Democratic leader Frank-Walter Steinmeier

stated: "We are not just talking about Opel but we're talking about Germany's position as an industrial center" (Dougherty, 2009). In order to save German industry, the union and government turned to a consortium of transnational corporations. Magna International, an Austrian/Canadian auto engineering company that assembles Jeeps for Chrysler and SUVs for BMW and Mercedes-Benz, would hold 27.5% of the new company. Additionally, Russia's state-owned bank Sberbank was to own 27.5%. This played well into Putin's policy of economic expansion into Western Europe to balance European investments into Russian oil and gas. GM was to maintain another 35% and Opel employees would hold the remaining 10%. Losing out were Fiat, a Chinese automaker and a Belgian private equity fund.

In its effort to save jobs, the German government turned to transnational capital in both its statist and private forms, maneuvering between competitive blocs to make the best deal within the context of globalization. The Merkel administration, in a move similar to the policy of the Obama White House, rejected a nation-centric option, instead defining national well being as deeper insertion into the transnational economy. Opel would not be an American car, nor a German car, but rather a product of a American/Austrian/Canadian/German/Russian TNC. Clearly global competition is not nationally based, but the result of the transnational capitalist class (TCC) creating alliances and competitive blocs out of former national industries. As for national governments, they maintain some measure of political legitimacy by saving jobs within a structure of global capital accumulation while serving to facilitate transnational deals through large loans and public rationales. Each government delivers its rhetoric in nationalist language, while serving TCC interests.

But Germany's plan ran into trouble with the European Union. Merkel's six-billion-dollar bailout was attacked as favoring Germany over Opel's operations in Spain, Britain, Sweden, Belgium and Poland. Italian and Chinese interests were also at work. Here we see the complex interplay of transnational production conflicting with nationally based manufacturing. Each government seeks to maintain its political base with workers and support from local capitalists, fearing the loss of business. The EU, attempting to maintain a level playing field, had to step in and criticize Germany's bailout.

As GM's business began to recover it abruptly pulled out of the entire arrangement, saying that Opel was too important to its "global vehicle development strategy" to let go (Vlasic, 2009). GM was now in the position of putting pressure on governments wherever they had production. Nick Reilly, chief of European operations, stated that GM will be "looking for support of any government that feels willing to be able to provide us some financial support" (Dempsey, 2009). GM is seeking another $5 billion in loans while it announces plans to cut 20 to 25% of its capacity and implement 9,500 lay-offs. In order to save jobs, Spain and Britain have already promised aid. The European plan is now looking very much like the U. S. bailout. In the end GM has received billions from the U. S., Canadian and German governments, shrunk its U. S. footprint and maintained virtually all of its global structure.

Perhaps the most interesting deal is the sale of that hulking American symbol of patriotism, the Hummer, to a private Chinese company, the Sichuan Tengzhong Heavy Industrial Machinery Company.[2] The Chinese will continue production at two U. S. plants, keep open 100 dealers and close down Hummer's South African factory and move those jobs back to the United States. The Chinese intend to maintain a U. S. chief executive, locate headquarters in Michigan and save about 3,000 U. S. jobs. Consequently, the Chinese have an American industrial policy even if GM lacks one.

Conclusion

There are many who characterize the world system as a collection of nation-centric economies in competition with each other. If this were true, one would expect, in response to the crisis, a protectionist dismantling of globalization similar to the nationalist reactions during the Great Depression. Indeed, there have been some protectionist measures in countries around the world. But auto is an indicator of a broader trend in which TNCs are increasing their monopoly over the world economy. Moreover, through all the global wheeling and dealing we see how government bailouts help promote transnational investments that blur the identity of national ownership.

2 At the time of writing the Chinese government has not yet approved this deal.

There are many different policy choices by which to promote a nationalist economic strategy. One would be to close down foreign operations, limit imports, bring production home and compete through exports. Essentially this would return us to the nation-centric era, but in a globalized economy nobody is advocating this idea. As Ron Bloom, head of Obama's auto industry task force, pointed out, the government had no intent to "use its GM ownership 'as an instrument of social policy,' either by encouraging the production of certain vehicles or requiring that GM build more vehicles in, and buy parts for them from manufacturers in, the United States" (Bunkley, 2009).

To maintain political legitimacy there will be some minor compromises. For example, GM agreed not to import small cars from China and instead committed to keeping open two plants in Michigan. Other protectionist policies have appeared. In Japan, Toyota refused to renew the contracts of foreign workers and most of the 16,400 foreign residents of Toyota City returned home. Responding to growing political unrest in automotive-centered cities, Russia increased import fees on foreign cars, only to see new protests in Vladivostok where the economy is built around foreign autos. However, none of these incidents amounts to a nation-centric industrial policy.

It took Flint's prodigal son, Michael Moore, to propose a reasonable industrial policy that would use auto factories for light rail and bullet trains, cleaner buses, hybrid and electric cars, windmills, solar panels plus other alternative energy technologies. As Moore points out, after the attack on Pearl Harbor under government direction GM halted all car production and immediately began assembling tanks and planes. A wholesale conversion today is possible and would save jobs as well as our industrial infrastructure (Moore, 2009). Nothing like this has come out of Washington, the auto industry or the UAW. Robert Reich notes that the Obama plan focuses on a finance-engineered recovery, not on projects that would bring new industries to cities losing auto jobs.

Matthew Slaughter, economist and senior fellow at the Council on Foreign Relations lays out the dilemma for the U. S. auto industry in clear global terms:

It is important to understand that any future success of the Big Three will depend a lot on their ability to make — and sell — cars outside the United

States, not in it. A big reason Chrysler has fallen bankrupt is its narrow U. S. focus. It has not boosted revenues by penetrating fast-growing markets such as China, India and Eastern Europe. Nor has it lowered costs by restructuring to access talent and production beyond North America. Chrysler and GM will be stronger if they can become more global, not less so. (Slaughter, 2009.)

As seen above, Obama's bailout does precisely what Slaughter argues is necessary. Former New York governor Eliot Spitzer actually makes a much stronger argument for a neo-Keynesian industrial policy, one that calls for electric cars, recharging stations and a high-speed rail system:

We have had a fundamentally misguided industrial policy over the past decade. . . . to leverage up and guarantee the bets of a financial services sector that has now collapsed and left nothing of value in its wake. What would be a better approach? A policy to support those sectors that actually create goods and values. . . . So why not start with a government order for 500,000 electric cars. . . . It should be open to *any* manufacturer, as long as 75 percent of the value of the car is domestically produced. I don't care if the name on the plate is GM or Toyota as long as the value added is here. (I prefer a "Toyota" produced in Tennessee to a "GM" produced in China. Why struggle to save the shell of a company — GM — that intends to ship jobs overseas anyway?) (Spitzer, 2009.)

Spitzer understands that in a global economy there is no corporate national identity. Therefore the key is not saving this or that TNC, nor as Obama called on people to do, "buy an American car" — a car that does not exist and upon which a national industrial policy cannot be built. Only a total overhaul of the industry with an expansion of public transportation in rail and bus, plus a renewal of private transportation based on green technologies will build the national economy. Rather than an auto industry we need a mass transportation/green energy industry.

The TCC response to the world crisis is to expand transnational accumulation through a deeper integration of the national into the global. For the TCC there is no national industrial policy that is not a transnational policy. Economies at home and abroad have merged in ways that intractably link the profits and strategies of TNCs. U. S. auto manufacturers can't survive without their global footprint. The same is true of every auto corporation, no matter their perceived national identity.

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Marx and the Mixed Economy: Money, Accumulation, and the Role of the State

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1. *A Heterodox Perspective on Money*

AS IS WELL KNOWN, Marx provided a critique of political economy in his major works, especially *Capital* (1967). Within this major work he provided a profound analysis of the role of money in the capitalist system, based on the opposition of use value and exchange value and the contradictions of the commodity form. He did not provide extensive analysis of the role of the state in association with money, however. The goal of this paper is to extend Marx's analysis of money to include the role of the state, and to achieve a greater understanding of the complexities of that role, particularly in modern mixed economies.

This approach focuses particularly on the role of institutions related to finance and the state role in economic stabilization. While there is a well-developed Marxian theory of money as a quantitative expression of labor time (Foley, 1986; Moseley, 2005, 2008), the present approach is more institutional. That is, it is important to account for the institutional origin of money, in terms of its issue and management by the nation–state, as well as the operations of fractional reserve banking, the management of currency and credit by the central bank, and the fluctuations in its "credibility."

The paper proceeds by presenting an overview of Marx's circuits of capital. By adding a circuit explicitly for the state, the issue of money and its use in economic stabilization can be better understood within a Marxian framework. The capacities of such tools for economic management as well as their limits can be analyzed using the example of international currency, where money corresponds to its "ideal concept" (Marx, 1967 I, 142). In concluding, the paper will show how the current financial crisis can be grasped more clearly by using such a framework.

2. *Marx's Theory of Money*

Within his analysis of the capitalist system, Marx developed a comprehensive and sophisticated theory of money.

2.1. *Money as a Universal Equivalent.* Money is a "universal equivalent" in relation to all other commodities, expressing their common feature, being the result of production by social labor. That is, money is a "socially recognized form" which reflects their common element that commodities are the result of the "expenditures of human labor-power" (Marx, 1967, I, 66–69, 73). The quantitative dimension of the exchange value of commodities is expressed in the money price of each commodity relative to the others. This comparative value of various commodities expresses the relative extent of the labor time necessary to produce them. This explicit focus on the quantitative relationship of equivalents is developed in Section 3 of Chapter 1, Volume I.

In addition to a strict quantitative dimension, there is also a symbolic role for money. Paper money can represent gold, which in turn symbolizes the value of commodities. Money represents the value of commodities that are in the process of circulation, and in the pro-

cess of transformation of form within the financial circuits. This value of commodities is capable of expression in symbolic form (Marx, 1967, I, 127).

> The independent existence of the exchange-value of a commodity is here a transient apparition, by means of which the commodity is immediately replaced by another commodity. . . . Being a transient and objective reflex of the prices of commodities, it serves only as a symbol of itself, and is therefore capable of being replaced by a token. One thing is, however, requisite; this token must have an objective social validity of its own, and this the paper symbol acquires by its forced currency . . . the compulsory action of the State. (Marx, 1967, I, 128.)

2.2. *The Role of the State*. Marx notes the role of the state in the issue of money. "Coining, like the establishment of a standard of prices, is the business of the State" (Marx, 1967 I, 124–125). Because money is "purely conventional" and must have "general acceptance," "it is in the end regulated by law" (Marx, 1967 I, 100). While the development of the money form in Chapter 1 of *Capital* refers to the role of gold and silver as the typical substances of the universal equivalent, the symbolic role of money as representing social labor can be performed by paper currency as well, so long as it is "issued by the State and having compulsory circulation" (Marx, 1967 I, 126–129). While this responsibility of the state to designate legal tender is essential, there is also a quantitative dimension to the supply of money. The volume of paper money would need to approximate the appropriate quantity of gold, or else "there would no longer be any standard" (Marx, 1967 I, 128).

As explored in *Capital*, the Bank of England was a "semi-government institution" which was able to issue notes in excess of the bullion on reserve in its vaults, thus creating "fictitious capital." Not only was all government tax revenue deposited with the Bank, but its notes were also backed by the total wealth of the nation (Marx, 1967 III, 540–541). The centralization of the credit system in national banks and large money lenders increased the "velocity of circulation" (Marx, 1967 III, 520–525), but also gave "this class of parasites . . . fabulous power" (Marx, 1967 III, 545). During the expansionary phase of the business cycle, credit can expand, with the central bank as the "pivot of the credit system." At times of crisis, however, there is a "mad demand" for gold and silver (Marx, 1967 III, 573–574).

> With the development of the credit system, capitalist production continually strives to overcome the metal barrier, which is simultaneously a material and imaginative barrier of wealth and its movement, but again and again it breaks its back on this barrier. (Marx, 1967 III, 574.)

That is, money must be managed by the state to be in proper proportion to the value of gold, but must also be flexible to allow the growth of credit along with the business cycle. The state's declaration of legal tender, and its credit backed by its taxing authority, are powerful means of managing money and credit.

2.3. *Hoarding*. The use value of the money commodity is to express the exchange value of all other commodities. Once the role of a particular commodity or paper currency is well established, the money token can represent the entire power of total social labor. That is, "money itself is a commodity, an external object, capable of becoming the private property of any individual. Thus social power becomes the private power of private persons" (Marx, 1967 I, 132). Money in this context can represent "the social wealth of its owner" and desire for it becomes "insatiable" (Marx 1967 I, 131–133). The capacity for hoarding to potentially disrupt the circulation of money was also noted by Keynes (Keynes 1964, 194–209, 342–344), as well as by Marx in his analysis of crises (Marx, 1967 I, 114, 138; III, 572–574).

3. *Financial Circuits*

While money appears to be the medium of circulation, the circuits of money are actually an expression of the changing form of the value of the commodity (Marx, 1967 I, 116, 153–155). Circulation, and the expansion of value, is an end in itself, and therefore without limit (Marx, 1967 I, 151–152).

Marx identifies two types of financial circuits in *Capital*: First, the workers' circuit, by which a worker sells the commodity labor-power, C, for money, M, to exchange for wage goods, C. There is no expansion of value in this circuit.

$$C — M — C \qquad \text{workers'/consumers' circuit} \qquad (1)$$

Second, the capitalist firm begins with a cash balance, M, which is exchanged for commodity inputs, labor-power and means of produc-

tion, then sells the product for an increment of money over the cost of the inputs, M'.

$$M — C — M' \qquad \text{capitalists' circuit} \qquad (2)$$

As the circulation of commodities becomes extended, "credit-money" arises as a means of transferring debts to others. Money becomes the manner in which all contracts are settled, including taxes as well as payments for wages and commodities. This extended use of money encourages the accumulation of reserves in anticipation of future payments (Marx, 1967 I, 139–142).

The existence of a powerful state is assumed in Marx's analysis. But the ability of the state to finance the military, for the expansion of markets abroad and for the discipline of labor at home, must be developed. In fact, capitalist competition and success at imperialist wars has often been determined by relative fiscal capacity (Ferguson, 2001). Further, the currency in which the circuits (1) and (2) are intermediated would not exist without the imprint of the state, the "sovereign," as Polanyi (1944) stresses.

To Marx's two interlocking circuits above, I would add a third, the state's financial circuit. In contrast to Marx's discussion in *Capital*, the issue and management of the currency is now fully incorporated into the state in advanced capitalist countries. For example, in the United States, management of the currency is a function authorized by the Constitution. After several unsuccessful attempts in the 19th century, a central bank was established in the early 20th century (Davis, 2008). The state issues money, M, whether commodity or fiat currency, as a liability of the state (this discussion draws upon and extends the Chartalist approach; Tcherneva, 2007; Wray, 1998, 23, 69; Lerner, 1947). In turn, the state pledges to accept this money as legal tender, in payment of taxes. The state can also make use of these cash balances to purchase commodities, C, to perform state functions. The state is the only issuer of debt which is bound to receive its own debt token as repayment in taxes.[1]

This can be formalized as a third circuit, where $M^{\$}$ is denominated in national currency.

1 Because of its legal powers and broad taxing authority, the state manages the clearing-house function, and is the apex of the pyramid of credit. See Mehrling, 2000.

$$M^{\$} — C — M^{\$} \qquad \text{state's financial circuit} \qquad (3)$$

In fact, the circuits (1) and (2) above should also be denominated in the domestic currency, which is designated as legal tender.

$$C — M^{\$} — C \qquad \text{workers'/consumers' circuit} \qquad (1')$$

$$M^{\$} — C — M^{\$'} \qquad \text{capitalists' circuit} \qquad (2')$$

The state's circuit (3) differs from the capitalist circuit, (2') above, in three respects: a) there is no expansion of value; b) the commodities purchased are not necessarily means of production for the production of surplus value, but can represent provision of state services, infrastructure, defense, and other public goods deemed important to the competitive health of the national capitalist economy; and c) while there is no expansion of value, ultimately the government budget must balance, or at least tax revenues must cover debt service. That is, there must be a sufficient return flow of funds to maintain the creditworthiness of the state.

The purpose of the state's purchase of commodities, C, is to stabilize and to expand the capitalists' circuit, (2'). The expansion of value of the capitalists' circuit, $M^{\$'}$, is partially shared with the state as tax revenue. Additional tax revenue, in turn, allows expansion of the state's financial circuit, and stabilizes and strengthens the national currency, in a mutually reinforcing process. While not explicitly producing commodities for sale, like the capitalist firms, the state must nonetheless remain mindful of its budget balance.

> As the national debt finds its support in the public revenue which must cover the yearly payments for interest &c., the modern system of taxation was the necessary complement of the system of national loans. The loans enable the government to meet extraordinary expenses, without the tax-payers feeling it immediately, but they necessitate, as a consequence, increased taxes. (Marx, 1967 I, 756.)

In the 19th-century United States, some states and local governments built canals, toll roads, and railroads, explicitly charging fees to cover the issuance of debt, often successfully as in the case of the Erie Canal. In the 20th century, the national government engaged in deficit fi-

nancing of strategic projects, with the intention of stimulating economic growth sufficiently, via the "multiplier," to repay with tax revenues the initial debt outlay. That is, the government budget was intended to balance in the long run.

Marx discussed aspects of this role of the state, such as the role of debt to aid accumulation. For example, the Bank of England was empowered by Parliament to issue coin, which it then loaned to the state. The bonds issued by the state in turn created the public debt, "one of the most powerful levers of primitive accumulation" (Marx, 1967 I, 754–755), and the expansion of the international credit system. Further, the imposition of taxes is one method of mobilizing resources to become monetized in circuits, the so-called "cash nexus." The insistence of payment of taxes in money instead of real terms had the capacity to transform farming (Marx, 1967 I, 140–141). As Marx expressed this idea,

> Over-taxation . . . [is] the best system for making the wage-labourer submissive, frugal, industrious, and overburdened with labour. . . . The public debt, and the fiscal system corresponding with it, has played [a great part] in the capitalisation of wealth and the expropriation of the masses. (Marx, 1967 I, 756.)

As Marx noted, the Bank of England "gave with one hand and took back more with the other" (Marx, 1967 I, 755). According to Marx, the total wealth of the nation backs up the banknotes of the Bank of England, which function as a "symbol of value" (Marx, 1967 III, 540, 555).

> Is there anything more absurd, for instance, than the Bank of England (1797–1817) — whose notes have credit only thanks to the state — taking payment from the state, *i.e.*, from the public, in the form of interest on government loans, for the power granted it by the state to transform those same notes from paper into money and then to lend it back to the state? (Marx, 1967 III, 542.)

Both government securities and gold specie were held as reserves by the Bank of England as backing for the issue of banknotes (Marx, 1967 III, 554). In fact, the domestic market had no need for metal (Marx, 1967 III, 517), which was most useful in balancing international

accounts.[2] The issue of paper currency with the backing of the state can facilitate the process which is now termed "financialization." That is, the direct exchange of financial instruments can simplify and shorten the financial circuit, and increase the velocity of circulation. The development of the credit system also exacerbates the tendency for the financial circuits to decouple from real commodity production (Marx, 1967 I, 155; III, 315–322, 368–369, 479–484, 508).

$$M^{\$} — M^{\$'} \qquad \text{circuit of "fictitious capital"} \qquad (2a')$$

In Marx's terminology, financial instruments are "fictitious capital," in which a projected stream of revenue becomes capitalized at the going rate of interest, and subject to speculation and fluctuating values (Marx, 1967 III, 465–470, 493). Recent analysis has emphasized the process of "financialization" (Harvey, 2005; Epstein, 2005), especially given the deregulation in domestic and global financial markets since 1980. Where money flows are perceived as the essence of value, the power of money takes on its most fetishistic aspects.

> The relations of capital assume their most externalized and most fetish-like form in interest-bearing capital. We have here M — M', money creating more money. . . . The result of the entire process of reproduction appears as a property inherent in the thing itself. (Marx, 1967 III, 391–392).

4. *The Role of the State in Macro-Stabilization*

Marx understood the important ideological division between the market and government in the liberal state (Marx, 1970), what can be termed a "public–private divide" (Habermas, 1989). Short of complete "human emancipation," however, the state would maintain the separation between the general, public interest of the citizen and the narrow self-interest of the bourgeoisie (Marx, 1978, 33–46). Marx articulated the irony of using the market as a "steering mechanism" (Habermas, 1973), where there are "material relations between persons and social relations between things" (Marx, 1967 I, 73). The contemporary mantra of "letting the market decide" is essentially allowing the "social action [of producers to] take the form of the

2 The international clearinghouse function is not clearly assigned, but is often managed by the hegemonic nation (D'Arista, 2005).

action of objects, which rule the producers instead of being ruled by them," or the equivalent of "commodity fetishism" (Marx, 1967 I, 75). In this inverted context, money appears as a phenomenon of the market, created strictly to facilitate transactions as a "medium of exchange." Within this institutional setting, the role of the state is to protect private property and to maintain capitalist profitability, and to reinforce the apparent public–private divide.

In the post–World War II modern economy, the government has assumed an extended role to stabilize volatile investment decisions, much as Keynes had prescribed (Keynes, 1964, 376–381). While government spending does not add directly to surplus or profit, it is still possible to smooth the business cycle by deficit financing (Mattick, 1969, 155–164). Government can contribute to profitability by undertaking pre-competitive research and development to launch new industries, stimulating effective demand by income redistribution, or by funding capital-intensive infrastructure which lowers the overall cost of production. Similarly, contributions towards training and education of labor can promote profitability by increasing productivity. Ultimately the contribution of government spending towards profitability must exceed its costs, or it will result in a deduction from total profit. For Mattick, the production of surplus is a clear criterion for the public–private divide.

The state is constitutionally responsible for coinage of the currency and management of its value (Polanyi, 1944). Once the currency is designated as legal tender, the operation of a fractional reserve banking system and open market operations by the central bank can further expand and contract the money supply, to achieve the goal of economic stabilization. According to Keynes' basic insight, the role of money in a modern economy can facilitate manipulation of the rate of interest, to stimulate investment and to achieve full employment (Keynes, 1964, 375). With such macroeconomic policies determining the level of aggregate output, markets would determine the composition of output.

The ability of the state to contribute to profitability also depends on the period and the particular institutional arrangements. Throughout the 19th and 20th centuries, a recurrent focus on "hard currency" and sound money enabled the state to resist populist demands (Davis, 2008). During the postwar period of "embedded liberalism," an expanded role of government contributed to profitability and

growth (Harvey, 2005, 10–12). After 1980, a turn towards neoliberalism and a reduced role of government sought to restore profitability by greater support of privatization and free markets (Harvey, 2005, 76–81, 90–94).

5. *Public Finance*

In more modern terms, public finance and double-entry bookkeeping provide the detailed accounting (Poovey, 1998) by which confidence in this state money can be assured, while it is also a creation of the state. State money utilizes a public–private divide, a form of double-entry bookkeeping (where the terms "public" and "private" may actually lose consistent meaning). That is, on the one hand, a) the state issues debt; it borrows from the public in the form of issuing currency and bonds, repayable in the present and future. The state also b) creates a credit for itself; a sovereign state can assign a tax liability to the public, levied by constitutional processes. The extent and effectiveness of its taxing authority is one determinant of the international confidence in its currency. That is, the fiscal balance and credibility of a state tend to affect its currency value, in aggregate.

As shown in Table 1 below, any given financial instrument, tax capacity (currency) is at once an asset (liability) for the state and a liability (asset) for the public.

As such, state debt, consisting of currency and treasury bonds, is essentially a highly secure asset, which provides a means of intertemporal intermediation, and serves as ballast for the financial system as a whole (Davis, 2008). Using double-entry bookkeeping to "balance" the accounts, the total size of the government balance sheet is relatively elastic, responsive to the need for macroeconomic stabilization and management of credit.

Table 1

Financial Instrument	Public	State (including central bank and treasury functions)
Tax capacity	Liability	Asset
Fiat currency, bonds	Asset	Liability

The taxing authority of the liberal state provides a guarantee of future resources to support the issue of national debt, and to provide a highly liquid asset to support private financial markets. Taxes also monetize and mobilize resources which might otherwise remain in non-market uses (Ferguson, 2001; Wray, 1998, 37, 155–156). As the "division of labor depends on the extent of the market" (Smith, 1994), the entire market system can improve in productivity as a consequence of the expansion of the scale of financial circuits, which is a common interest of both the state and private firms. That is, although the financial circuit of the state (3) does not expand value, the extension of scale facilitates the expansion of the financial circuits of private firms (2'). The private firms produce surplus value, in turn, which is subsequently shared with the state as tax revenue, and becomes a source of revenue for interest payments on the national debt.

As elucidated in this institutional framework, the capacity to issue money is complementary with other roles of the state, including the protection of private property, adjudication of conflict based on that property, and the development and protection of foreign markets. The state benefits by seignorage, that is, the acquisition of real assets by issue of its own debt. With expanded fiscal capacity, the state can also support a military, rendered on a cash expenditure basis instead of feudal obligation (Ferguson, 2001). The modern state also recognizes the commodity form of labor-power, with the associated authority of the capitalist firm, while still managing labor relations by means of legislation, such as the Factory Acts (Commons, 1995; Marx, 1967 I, 264–302). That is, the firm's ability to command labor is a form of coercion, as opposed to the ostensible "free agents" which the liberal state equally protects according to the "inalienable rights of man" (Marx, 1967 I, 302). The resulting commodities provide real consumer goods and financial profits, which are then shared with the state as tax revenue. If the production of commodities were not roughly commensurate with the stock of currency, according to a basic quantity theory of money (Marx, 1967 III, 546-548), the value of the currency would change, upsetting intertemporal intermediation with either inflation or deflation. That is, management of the value of the currency has become an important responsibility of modern central banks, in an effort to avoid crises.

Once a crisis occurs, from a variety of possible contradictions (see for example Davis, 1983), such as from a falling profit rate or

a realization problem, there is desperate pursuit of exchange value, at the expense of use values. That is, surplus labor, capital, or commodities are devalued in pursuit of completion of the monetary circuit (2') above, $M^{\$} — C — M^{\$'}$.

> In times of a squeeze, when credit contracts or ceases entirely, money suddenly stands as the only means of payment and true existence of value in absolute opposition to all other commodities. . . . The value of commodities is sacrificed for the purpose of safeguarding the fantastic and independent existence of its value in money. . . . As long as the *social* character of labour appears as the *money-existence* of commodities, and thus as a *thing* external to actual production, money crises — independent of or as an intensification of actual crises — are inevitable. (Marx, 1967 III, 516–517; italics in original.)

That is, as Marx emphasizes, in times of crises, the "fantastic and independent existence" of value as money is highlighted, in "absolute opposition to all other commodities" (see also Marx, 1967 III, 572–574).

6. *Commodity Fetishism*

These magical qualities of money are part of the phenomenon of "commodity fetishism." That is, this mere token of value takes on associations of power that are due to the division of labor, the exchange of the commodity labor-power, and the extent of the market, a "social hieroglyphic" in Marx's terms (Marx, 1967 I, 74). The gains from "cooperation," the social organization of the market system operating as a whole (Marx, 1967 I, 322–335), are often attributed to the power of money itself, in its token form. Analyzing the sphere of circulation alone, according to "vulgar economists," money appears to "beget money" (Marx, 1967 I, 155). This assignment of the power of the whole to a concrete manifestation of a part is an example of fetishism (Marx, 1967 I, 71–83; Kaplan, 2006). "As, in religion, man is governed by the products of his own brain, so in capitalistic production, he is governed by the products of his own hand" (Marx, 1967 I, 621).

> How are gold and silver distinguished from other forms of wealth? . . . By the fact that they represent independent incarnations, expressions of the *social* character of wealth. . . . It is faith in the social character of production

which allows the money-form of products to assume the aspect of something that is only evanescent and ideal, something merely imaginative. . . . The fact that social production is not really subject to social control is strikingly emphasized by the existence of the social form of wealth as a thing external to it. (Marx, 1967 III, 573–574, italics in original.)

The aspects of a "modern fact" are also relevant in this context. That is, the power of a money token is a self-fulfilling belief, and powerful as a result of that very belief (Poovey, 1998). A state with a powerful currency can also expand its fiscal capacity. The fiscal capacity of the state then allows the expansion of military power, which in turn facilitates the extension of markets, the production of surplus value, followed by the further increments of tax revenue and military capacity, a so-called "square of power" (Ferguson, 2001). That is, the "power" of money is based on various factors: 1) the productivity of labor; 2) the exchange of the commodity labor-power (and the associated institutional conditions for the existence of labor-power as a commodity); 3) the extent of the market; 4) the military power of the state; and 5) the fiscal credibility of the state (Table 1, above).

These factors are ultimately related to the social nature of capitalist production, the power of which appears to be a "fantastic" characteristic of money itself.

7. *International Dimensions*

In the "markets of the world . . . money acquires to the full extent the character of the commodity whose bodily forms is also the immediate social incarnation of human labor in the abstract" (Marx, 1967 I, 142). By contrast, mainstream economic theory has several explanations for the international value of a currency: 1) equilibration of international balances of payments; 2) currency as a type of interest-bearing asset; 3) in the long run, purchasing power parity (Krugman and Obstfeld, 2009). That is, in mainstream theory, national currencies are perfectly fungible, differentiated only by yield and liquidity. Nonetheless, some institutionalist historians, game theorists, and post-Keynesians — such as Eichengreen and Hausmann, 2005; Aizenman, 2007; and Terzi, 2006 — have acknowledged the "hierarchy" of currencies. The hegemonic state is often the guarantor of the hegemonic or key currency (Block, 1977; Wachtel, 1986).

The U. S. dollar has served as the hegemonic fiat currency since 1973, when dollar convertibility into gold was revoked by the Nixon administration. In spite of the absence of "backing" by a precious metal like gold, the dollar continues to maintain its role as the world's largest reserve currency. That is, the use value of the U. S. dollar is to represent the abstract exchange value of global commodities. Rather than an exact quantitative reflection of labor time, however, the value of the dollar is also influenced by relative military power, as well as by the size and international reach of domestic multinational corporations (Frank, 2003).

In the international context, the role of currency and credit as a tool of concentration and centralization is also more apparent (Marx, 1967 I, 626–628). That is, the role of the U. S. dollar as a key currency provides several functions. The ability to issue debt denominated in the national currency conveys specific benefits (Morgan, 2009; Roubini, 2009). For example, issuing debt in one's own currency transfers currency risk to the lender. Unable to issue debt in their own currencies, or subject to "original sin," developing countries must continue to export to the United States to earn dollars, in order to borrow internationally (D'Arista, 2005; Eichengreen, 2007). Further, the demand for U. S. dollars as "hard" currency maintains its value, providing terms-of-trade advantages for U. S. corporations operating abroad. Such international expansion of scale by U. S. firms provides an offsetting tendency for the rate of profit to fall (Marx, 1967 III, 223–225).

For example, a multinational corporation (MNC) with a foreign affiliate in an emerging country has an expansion of value based in the domestic currency, M*, as shown in the circuit (4) below, modifying circuit (2') above:

$$M^* — C — M^{*\prime} \qquad (4)$$

Further, the initial borrowing may occur in the hegemonic currency, $M^{\$}$, and the complete circuit includes the return to that hegemonic currency. If the purchasing power of the hegemonic currency is greater than that of the domestic currency of the emerging country, there is an even greater expansion of value with the translation back into the hegemonic currency. Combining (4) and (2'),

$$M^{\$} — M^{*} — C — M^{*'} — M^{\$'} \quad (5)$$

In this fashion, the role of the state in the issue and maintenance of the hegemonic currency improves the profitability of the hegemonic nation's MNCs with global production affiliates.

This key role of the dollar as a reserve currency can be expressed in terms of the central bank balance sheet of an emerging country (see Table 2 below).

In the first row, the balance sheet is much like that of the hegemonic nation. The issue of domestic currency as a liability of the central bank must be met by the asset of a domestic tax capacity. In the context of international currency exchange, however, the ability of the emerging country central bank to support its domestic currency depends on its reserves of "hard" currency. In turn, these hard currency reserves are earned by domestically produced exports. That is, the task of supporting a non-hegemonic currency is more costly, in terms of the commitment of domestic resources, for export as well as for tax capacity. The requirement that the emerging country maintain a balance of payments surplus, with exports exceeding imports, is a form of "saving," which is particularly burdensome in countries with low incomes and deficits of domestic capital.

In the international context, the U. S. dollar retains the symbolic value of its hegemonic nation of origin (Gao, 2009), which is self-reinforcing. The market for U. S. Treasury bonds by the central banks of emerging countries helps to maintain cheap credit in the United States, even as the U. S. government deficit expands. This access to

Table 2
Emerging Country Central Bank

Origin	Asset	Liability
Domestic	Domestic Tax Capacity	Domestic Currency, Bonds
International	Hegemonic country currency, T-bonds	International circulation of emerging country currency
International	Export capacity to hegemonic country	

credit enables the United States to continue to wage foreign wars and to stimulate its domestic economy. In return for its financial assets (or "fictitious capital"), the USA can import real resources from other nations (McKinnon, 2005, 2007a).

Endeavoring to explain the position of the USA as the world's largest net debtor, mainstream economists suggest that it provides a global service in intermediating capital flows denominated in dollars (Lucas, 1990; Hausmann and Sturzenegger, 2006a; Eichengreen, 2007, 14, 20, 22), benefitting its domestic financial services industry. The preferred mainstream explanation for these "perverse" capital flows is based on inadequate protection of property rights and underdeveloped capital markets in developing countries. An alternative approach is to stress the comparative advantage of the United States in financial services (Caballero, Farhi, and Gourinchas, 2008) or to abandon entirely the notion that capital *should* flow from rich to poor countries, and merely to maintain that the United States receive a portion of capital commensurate with its share of world capital markets (Higgins and Klitgaard, 2007).

Ironically, even as the latest financial crisis originated in the United States, its global unfolding has generated a demand for the U. S. dollar, as a "flight to quality," driving down U. S. interest rates on U. S. Treasury bonds. While this facilitates increased U. S. government borrowing in the short run, anxiety about continuing bond purchases by the central banks of China and other surplus countries has increased. That is, there is at once a continued focus on the dollar as the world's key currency, even as the limits of U. S. fiscal capacity to support it become more apparent.

In times of financial crisis, the active role of the state in securing national and international money becomes even more apparent, by means of guarantee and direct bailout (Harvey, 2004, 73–74). There is an expectation that the government budget will expand sufficiently to compensate for the shortfall in private spending (Krugman, 2009). Yet there are limits to the state's capacity to manage the extensively globalized capitalist circuits. International financial meetings in 2009 continue to address the issue of the U. S. Gross Domestic Product compared with its increasing burden of government debt (Thomas, 2009). Attempts will be made to distribute the cost of financial support among advanced capitalist countries, effectively bailing out the USA, even as it was the origin of the most recent financial crisis. Popu-

list anger is growing inside the United States at bailing out the financial system at taxpayer expense. As Polanyi points out in his discussion of the 1930s, there is a considerable potential for political unrest and shifting forms of governance, from communism to fascism, in these desperate efforts to "save the currency" (Polanyi, 1944, 228–233).

8. *Conclusion*

Building upon the institutional Marxian analysis of money above, the role of the state is integral to the issue and management of money. This connection between money and the state can also help account for the observation that currencies matter; that is, currencies are not perfect substitutes, as mainstream theory would suggest, but rather encode the characteristics of the issuing nation-state, with a clear and demonstrable hierarchy. This hierarchy of currencies, in turn, tends to perpetuate global inequality, compounding systemic tendencies for concentration and centralization.

The national currency can be a tool of capitalist accumulation and the projection of state power. Confidence in that currency can facilitate the financing of the state, through taxes and debt, enabling the military expenditures which reinforce that power. On the other hand, if confidence in that national token currency, a form of fetishism, permits overextension, by accumulation of international debt, financial "innovation," and military overreach, then the international financial system based on that national currency is at risk. The role of the dollar as the universal equivalent is confronted by the discrete limits of its backing, the U. S. national tax capacity and emerging-country export capacity in the midst of a steep global downturn. At this point, the role of the U. S. dollar as a key currency becomes a source of global instability, instead of the opposite.

The role of the state is more apparent in currency crises, in spite of "free market" rhetoric and the rules of the public–private divide (which are then flagrantly violated). International currency values, in particular, can only be maintained by an explicit international bargain regarding the "rules of the game." Legitimacy may require equity and participation, which may be inconsistent with the competitive and uneven nature of capitalism. Ironically, efforts to protect the financial system at the expense of the state can only disturb

the foundations of the currency. According to Marx, the prospects for illuminating the "hieroglyphic" of money, and clarifying its social nature, rely ultimately on the transformation of the commodity form of labor-power into communities of freely associated producers.

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Rising Profitability and the Middle Class Squeeze

EDWARD N. WOLFF

THE EARLY YEARS OF THE 21ST CENTURY have witnessed a struggling middle class, despite robust growth in the overall American economy. During the first six years of the George W. Bush administration, from 2001 to 2007, GDP in real dollars expanded by 16.4%, despite a brief recession in 2001; labor productivity (real GDP divided by full-time equivalent employees) grew at an annual pace of 2.2%. Both figures were close to their post–World War II highs for similar periods.

1. *Income and Earnings Stagnate While Poverty Remains Unchanged*

Despite the booming economy, the most common metric used to assess living standards, real median family income (the income of the average family, found in the middle of the distribution when families are ranked from lowest to highest in terms of income), actually *rose by a paltry 1.9%* from 2001 to 2007.[1] Indeed, from 1973 to 2001,

1 The data source is the U. S. Bureau of the Census, "Detailed Historical Income and Poverty Tables from the March Current Population Survey 1947-2007," available at http://www.census.gov/hhes/www/income/histinc/. Figures are in 2007 dollars unless otherwise indicated. It would actually be preferable to use *household* income rather than *family* income. Unfortunately, official U. S. Bureau of the Census series on household income begins only in 1967, whereas family income data are available from 1947 onward. I also use the standard consumer price index (CPI-U) to deflate incomes and wages over time, since it is the only price series in the United States that runs from 1947 to the present.

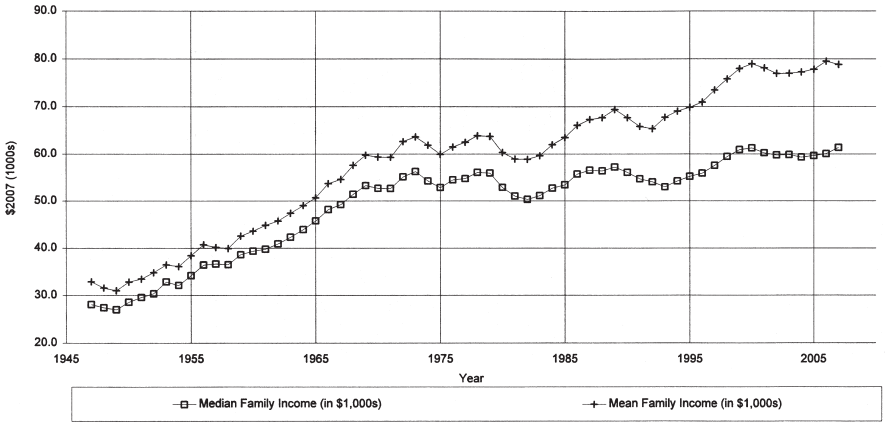

Figure 1: Median and Average Family Income, 1947–2007 (2007 dollars, CPI-U Adjusted)

it gained a mere 7.0%, so that from 1973 to 2007 its total percentage gain amounted to 9.0%. In contrast, between 1947 and 1973, median family income almost exactly doubled (see Figure 1).

Mean family likewise doubled between 1947 and 1973, but then increased by 23% from 1973 to 2001. It then rose by a mere 1.0% from 2001 to 2007, for a total gain of 24% from 1973 to 2007. This is less than the increase over the preceding quarter century, but greater than the rise in median family income. The disparity between the two series means that while mean and median income rose at about the same pace before 1973, mean income grew at a much faster rate than median income after 1973. The discrepancy reflects rising inequality since the early 1970s (see below).

Another troubling problem is poverty. Between 1959 and 1973, there was great success in reducing poverty in America, with the overall poverty rate declining by more than half, from 22.4% to 11.1% (see Figure 2). After that, the poverty rate has stubbornly refused to go any lower. After 1973, it generally trended upward, climbing to 15.1% in 1993, then fell back to 11.3% in 2000, only slightly above its nadir, but it since rose to 12.5% in 2007.

Another indicator of the well-being of lower income families is the share of total income received by the bottom quintile (20 percent) of families (see Figure 3). At first, their share fell, from 5.0% in 1947 to 4.7% in 1961, but then rose rather steadily over time, reach-

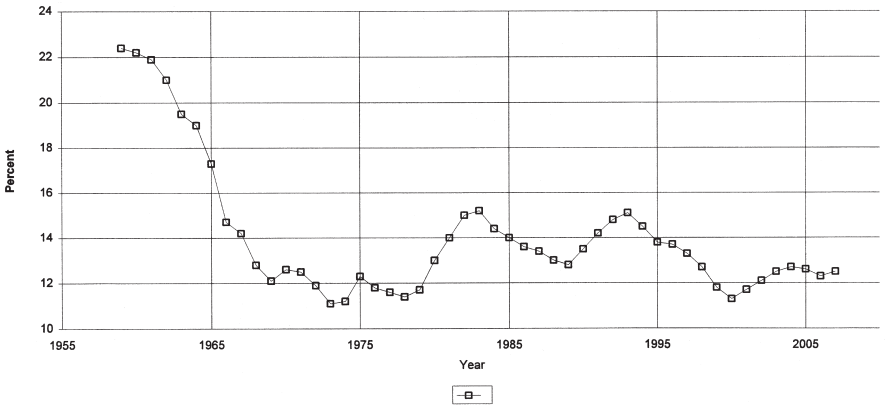

Figure 2: The Official U. S. Poverty Rate, 1959–2007

ing 5.7% in 1974. Since then it fell off sharply, to 4.1% in 2007. A related statistic is the mean income of the poorest 20 percent of families (in 2007 dollars), which shows the absolute level of well-being of this group (the share of income shows the *relative* level of well-being). Their average income more than doubled between 1947 and 1974, from $7,600 to $15,500, but then gained almost nothing more by 2007 (at $16,500). The difference in post-1974 trends between this series

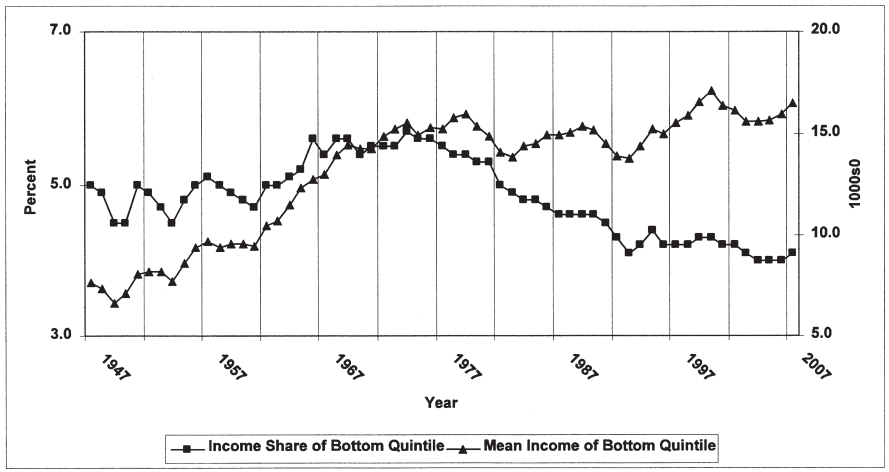

Figure 3: The Share and Mean Income in 2007 Dollars of the Bottom Quintile, 1947–2007

and the share of income of the bottom quintile, which fell sharply, is that mean income was rising in the general population after 1974.

The main reason for stagnating family incomes and recalcitrant poverty is the failure of wages to rise significantly. From 2001 to 2007, real hourly wages gained a measly 2.6%.[2] Indeed, between 1973 and 2000, real hourly wages *fell by 6.8%*, so that between 1973 and 2007 real wages were down by 4.4% (see Figure 4). This contrasts with the preceding years, 1947 to 1973, when real wages grew by 75%. Indeed, in 2007, the hourly wage was $17.42 per hour, about the same level as in 1971 (in real terms).

Two other measures of worker pay are shown in Figure 4.[3] The results are quite consistent among these alternative series. Average wages and salaries per full-time equivalent employee (FTEE) grew by 2.3% per year from 1947 to 1973 and then by only 0.4% per year from 1973 through 2007; and average employee compensation per

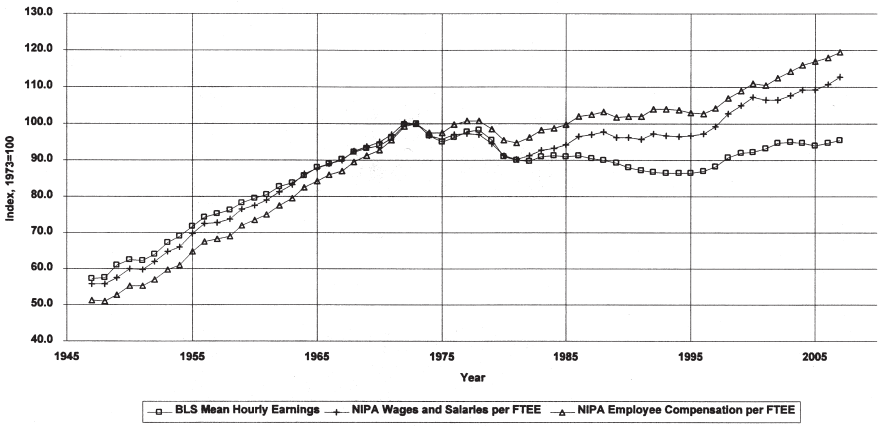

Figure 4: Labor Earnings Indices, 1947–2007 (1973 = 100)

2 These figures are based on the U. S. Bureau of Labor Statistics (BLS) hourly wage series for production and non-supervisory workers in private, non-agricultural industries. The source is: U. S. Council of Economic Advisers, *Economic Report of the President, 2009*. This is the most widely used wage series. The BLS converts nominal wage figures to constant dollars on the basis of the Consumer Price Index (CPI-U).

3 These two are the National Income and Product Accounts wages and salaries per full-time equivalent employee (FTEE) and employee compensation (the sum of wages and salaries and employee benefits) per FTEE. Both series are deflated to constant dollars using the CPI-U price index. A third, not shown here, employee compensation plus half of proprietors' income per person engaged in production (PEP), shows very similar time trends.

FTEE increased by 2.6% per year during the first of these two periods and then by 0.5% per year in the second.

Despite falling real wages, living standards were maintained for a while by the growing labor force participation of wives, which increased from 41% in 1970 to 57% in 1988.[4] However, since 1989, married women entered the labor force more slowly and by 2007 their labor force participation rate increased to only 61%; this slowdown brought about a corresponding drop in the growth of real living standards.

2. *Inequality Rises Sharply*

The United States has also seen rising inequality during the early 21st century. I first look at the Gini index for family income (Figure 5). The Gini index is the most widely used measure of inequality and ranges from a value of zero to one hundred, with a low value indicating less inequality and a high value more. Between 1947 and 1968, the Gini index generally trended downward, reaching its lowest value in 1968, at 34.8. Since then, it experienced an upward ascent, gradually at first and then more steeply in the 1980s and 1990s, reaching a value of 43.5 in 2001. This represents a huge increase in income inequality! Inequality

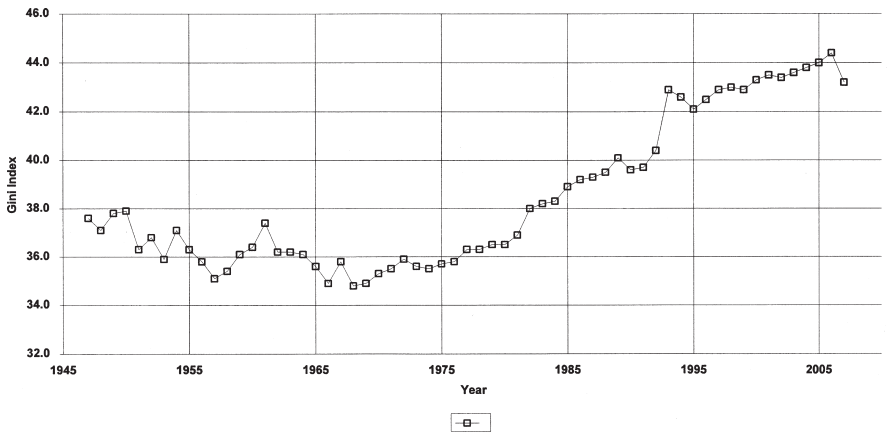

Figure 5: Income Inequality Trends, 1947–2007 (Gini Index)

4 The source for these data is the U. S. Bureau of the Census, *Statistical Abstract, 2009*, Table 576.

continued to rise from 2001 to 2006, with the Gini index reaching a value of 44.4, but then dropped off in 2007 to a value of 43.2.[5]

A second index, the share of total income received by the top five percent of families, has a similar time trend. It declined gradually, from 17.5% in 1947 to 14.8% in 1974, and then rose after this point, especially in the 1990s, reaching its highest value in 2006, 21.5% (see Figure 6). It then fell off to 20.1% in 2007. A third index, the ratio of the average income of the richest five percent of families to that of the poorest 20 percent, measures the spread in income between these two groups. This index generally dipped between 1947 and 1974, from 14.0 to 10.4, and then trended steadily upward, reaching 21.3 in 2006, but again fell off in 2007 to 19.7, still about double its level in 1974.

3. *What Has Happened to Tax Rates?*

I next show trends in marginal tax rates of the personal income tax, since this also affects the well-being of families as well as inequality (see Figure 7).[6] The first series is the top marginal tax rate (the marginal tax rate faced by the richest tax filers). In 1944, the top marginal tax rate was 94%! After the end of World War II, the top

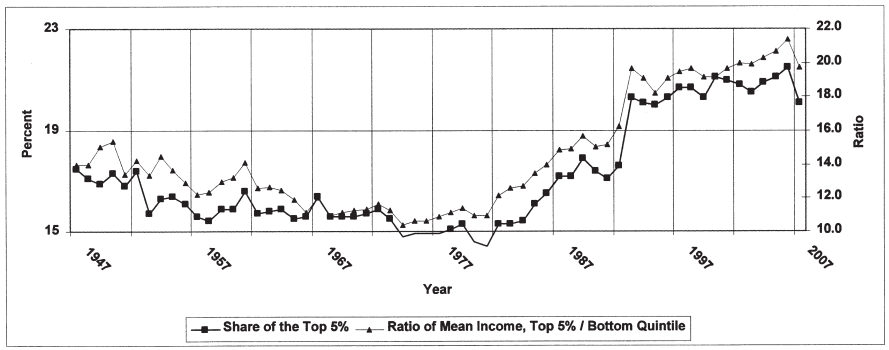

Figure 6: Income Shares of the Top and Bottom, 1947–2007

5 The data source for this series is the U. S. Bureau of the Census, "Detailed Historical Income and Poverty Tables from the March Current Population Survey 1947–2007" (see footnote 1). These figures are based on unadjusted data.

6 The rates quoted here are for married couples, filing jointly. The data source is: http://www.irs.gov/.

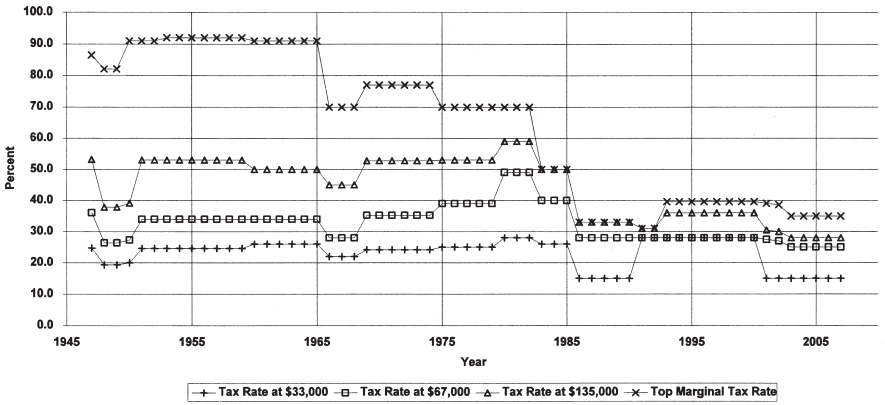

Figure 7: Marginal Tax Rates, Selected Income Levels in 1995$, 1946–2007

rate was reduced to 86.5% (in 1946), but during the Korean War it was back to 92% (in 1953). Even in 1960, it was still at 91%. This generally declined over time, as various items of tax legislation were implemented by Congress. It was first lowered to 70% in 1966, then raised to 77% in 1969 to finance the war in Vietnam, then lowered again to 70% in 1975, then to 50% in 1983 (Reagan's first major tax act), and then again to 28% in 1986 (through the Tax Reform Act of 1986). After that, it trended upward to 31% in 1991 (under the first President Bush) and then to 39.6% in 1993 (under President Clinton) but by 2007 it was back down to 35.0% (under President George W. Bush).

The second series shows the marginal tax rate faced by filers with an income of $135,000 in 1995 dollars. This income level typically includes families at the 95th percentile (the top five percent). This series generally has the same trajectory as the first, declining in 1966, rising in 1975, falling in 1983 and 1986, increasing in 1991 and again in 1993, and then trending downward from 2001 through 2007.

The last two series show the marginal tax rates at $67,000 and $33,000, respectively, both in 1995 dollars. The time patterns are quite a bit different for these than for the first two. The marginal tax rate at $67,000 (about the 60th percentile) was relatively low in 1946, at 36%, generally trended upward, reaching 49% in 1980, before declining to 28% in 1986, where it remained until 2000 before falling to 25.0% by 2007. The marginal tax rate at $33,000 (about the 30th

percentile) was also relatively low in 1946, at 25%, but it actually increased somewhat over time, reaching 28% in 1991 where it also remained through 2000 before dropping to 15% from 2001 onward.

All in all, tax cuts over the postwar period have generally been more generous for the rich, particularly the super-rich. Since 1946, the top marginal tax rate has fallen by a huge 51.5 percentage points (or by 60%), the marginal rate at $135,000 by 25.2 percentage points (47%), and the marginal rate at $67,000 by 11.1 percentage points (31%), while the rate at $33,000 dropped by only 9.7 percentage points (39%).

4. *The Middle Class Becomes Saturated with Debt*

Another dimension of well-being is household wealth. Wealth is a stock measure and indicates the value of assets owned by a household (housing and real estate, a business, bank accounts, money market funds, stocks, bonds, etc.) less outstanding debt (both mortgage and consumer debt). Wealth is an indicator of well-being independent of the direct financial income it provides. There are three reasons. First, owner-occupied housing provides services directly to their owner. Second, wealth is a source of consumption, independent of the direct money income it provides, because assets can be converted directly into cash and thus provide for immediate consumption needs. Third, the availability of financial assets can provide liquidity to a family in times of economic stress, such as occasioned by unemployment, sickness, or family break-up.

The 1990s witnessed some remarkable events with regard to wealth. The stock market boomed. On the basis of the Standard & Poor (S&P) 500 index, stock prices surged 171% between 1989 and 2001. Stock ownership spread and by 2001 over half of U. S. households owned stock, either directly or indirectly.

However, 2001 saw a recession (albeit a short one). Moreover, the stock market peaked in 2000 and dropped steeply from 2000 to 2003 but recovered somewhat in 2004, so that between 2001 and 2004 the S&P 500 was down by 12.0% in real terms.[7] On the other hand, housing prices rose sharply. The median sales price of existing one-family homes rose by 16.9% in real terms nationwide.[8]

7 The source is Table B-96 of the *Economic Report of the President, 2009*, available at http://www.gpoaccess.gov/eop/tables09.html.

8 The source is Table 935 of the *2009 Statistical Abstract*, U. S. Bureau of the Census, available at http://www.census.gov/compendia/statab/.

From 2004 to 2007, the stock market rebounded. The S&P 500 rose 19% in real terms. Over the period from 2001 to 2007, the S&P 500 was up 6% in real terms. From 2004 to 2007 housing prices slowed, with the median sales price of existing one-family houses nationwide advancing only 1.7% over these years in real terms. Over the years 2001 to 2007 real housing prices gained 18.8%.

As a result, median household wealth grew rapidly in real terms from 1983 to 2001, rising by 24% (see Table 1).[9] Much of this increase can be traced to the booming U. S. stock market of the late 1990s. Moreover, from 2001 to 2007, it grew by another 19%, largely due to the robust real estate market. Mean real wealth skyrocketed by 65% from 1983 to 2001 and then rose by another 20% from 2001 to 2007. Here, too, the divergence in these two series indicates rising wealth inequality. Between 1983 and 2007, the Gini index for household wealth climbed from 79.9 to 83.4 and the share of the richest five percent from 56 to 62%. The share of total wealth owned by the top 20% of wealth holders also increased from 81.3 to 85.0% over the period. In contrast, the shares of all the other groups declined. The share of the next 20% fell from 12.6 to 10.9%, the share of the middle quintile from 5.2 to 4.0%, and the share of the bottom 40% from 0.9 to 0.2%.

Nowhere is the middle class squeeze more vividly demonstrated than in their rising debt. I look at the asset composition of the middle three wealth quintiles (see Table 2). There are two ratios that are typically used. The first, the ratio of their debt to net worth, rose from 37% in 1983 to 46% in 2001, and then jumped to 61% in 2007! The second ratio, that of debt to income, rose from 67% in 1983 to 100% in 2001 and then zoomed up to 157% in 2007! This new debt took two major forms. First, because housing prices went up over these years, families were able to borrow against the now enhanced value of their homes by refinancing their mortgages and by taking out home equity loans (lines of credit secured by their home). In fact, mortgage debt on owner-occupied housing (principal residence only) climbed from 29% in 1983 to 47% in 2007, and home equity as a share of total assets actually fell from 44% to 35% over these years. Second, because of their increased availability, families ran up huge debt on their credit cards.

9 The source of the data is the Federal Reserve Board's Survey of Consumer Finances (SCF), which was conducted in 1983, 1989, and every three years thereafter to 2007 (the last year currently available).

Table 1
Wealth Trends, 1983–2007
(In thousands, 2007 dollars)

Wealth Trends	1983	1989	1998	2001	2004	2007	Percentage Change 1983–1989	1989–2001	2001–2007	1983–2007
1. Median net worth	69.5	74.3	77.2	86.1	85.5	102.5	7.0	15.8	19.1	47.5
2. Mean net worth	270.4	309.8	343.8	445.1	472.5	536.1	14.6	43.7	20.4	98.2
3. Gini index for net worth	79.9	83.2	82.2	82.6	82.9	83.4				
4. Wealth share (%) of										
a) Top 5%	56.1	58.9	59.4	59.2	58.9	61.8				
b) Top 20%	81.3	83.5	83.4	84.4	84.7	85.0				
c) Next 20%	12.6	12.3	11.9	11.3	11.3	10.9				
d) Middle 20%	5.2	4.8	4.5	3.9	3.8	4.0				
e) Bottom 40%	0.9	–0.7	0.2	0.3	0.2	0.2				

Source: Author's computations from the *Survey of Consumer Finances.*

Where did the borrowing go? Some have asserted that it went to invest in stocks. However, if this were the case, then stock value as a share of total assets would have increased over this period, which it did not (it fell from 13% to 7% between 2001 and 2007). Moreover, they did not go into other assets. In fact, the rise in housing prices almost fully explains the increase in the net worth of the middle class from 2001 to 2007. Of the $16,400 rise in median wealth, gains in housing prices alone accounted for $14,000 or 86% of the growth in wealth. Instead, middle-class households, experiencing stagnating incomes, expanded their debt almost exclusively in order to finance consumption expenditures.

The question remains whether the consumption financed by the new debt was simply normal consumption or was there a consumption binge (acceleration) during the 2000s emanating from the expanded debt? That is, did the enhanced debt simply sustain usual consumption or did it lead to an expansion of consumption? To provide an answer, I examine two sources of consumption expenditure data. The first is the personal consumption expenditures data provided in the National Income and Product Accounts (NIPA).[10] This is the most comprehensive and reliable data on consumption in the

Table 2
Wealth Composition of the Middle Three Wealth Quintiles, 1983–2007 (percentages)

Ratios	1983	1989	1998	2001	2007
Debt/equity ratio	37.4	41.7	51.3	46.4	61.1
Debt/income ratio	66.9	83.0	101.6	100.3	156.7
Net home equity/total assets	43.8	39.2	33.3	33.8	34.8
Principal residence debt/house value	28.8	36.5	44.4	42.9	46.6
All stocks/total assets[a]	2.4	3.3	11.2	12.6	7.0

Source: Author's computations from the *Survey of Consumer Finances.*
a. Includes direct ownership of stock shares and indirect ownership through mutual funds, trusts, and IRAs, Keogh plans, 401(k) plans, and other retirement accounts.

10 The data are available from table 1.1.3 of the national accounts at: http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable/.

United States. However, its drawback for our present purposes is that it covers all households, not just middle-class households. The data show that total personal expenditures grew at 3.38% per year from 1989 to 2001 but only 2.93% per year from 2001 to 2007. Thus, according to these data, there was actually a modest slowdown in the growth of consumer spending during the 2000s in comparison to the 1990s.

The second source is the Bureau of Labor Statistics' Consumer Expenditure Survey (CEX).[11] Its advantage is that it provides data on consumer spending by income class group. On the other hand, this data set is subject to sampling error and reporting error. I use the same three years as before. Since the income classes are designated in dollars rather than percentiles, I choose the income class that lies in the median of the distribution of consumer units in each year. The average expenditure of the median income class was virtually unchanged from 1989 to 2001 and also from 2001 to 2007. Thus, the CEX data, like the NIPA data, show no acceleration in consumer spending during the debt splurge of the 2000s. As a result, it can be concluded that the debt buildup of the 2000s went for normal consumption, not enhanced consumption.

A somewhat rough update of the wealth figures to July 1, 2009, based on the change in housing and stock prices, shows a marked deterioration in middle-class wealth. House prices fell by 23.5% in real terms,[12] and the S&P 500 index was down by 40.9% in real terms. According to my estimates, while mean wealth (in 2007 dollars) fell by 17.3% between 2007 and 2009 to $443,600, median wealth plunged by an astounding 36.1% to $65,400 (about the same level as in 1992!).

We can see how the rising debt of the middle class made them vulnerable to income shocks and set the stage for the mortgage crises of 2008 and 2009 and the resulting financial meltdown. The rapid decline in house prices over these two years (on the order of 24%) left many middle-class families (I estimate 16.6% of homeowners) "under water" (greater mortgage debt than the value of their homes)

11 The data are available at: http://www.bls.gov/cex/csxstnd.htm#2007.
12 This figure is based on the National Association of Realtors Median Sales Price of Existing Single-Family Homes for Metropolitan Areas.

and, coupled with a sharp spike in unemployment, unable (or unwilling) to repay their mortgage loans.[13]

5. *Rising Profits is the Key*

Where did the increased output go during the Bush years? To understand this, we must consider another anomaly that arose regarding the relation between productivity and earnings. In particular, the historical connection between labor productivity growth and real wage growth also appears to have broken down after 1973.[14]

From 1947 to 1973, average real worker compensation (a broader concept than wages, including social insurance and fringe benefits) grew almost in tandem with overall labor productivity growth (see Figure 8).[15] While the latter averaged 2.4% per year, the former ran at 2.6% per year. Labor productivity growth plummeted after 1973. The period from 1973 to 1979, in particular, witnessed the slowest growth in labor productivity during the postwar period, 0.5% per year, and the growth in real employee compensation per worker actually turned negative during this period. From 1979 to 2001, the U. S. economy experienced a modest reversal in labor productivity growth, which averaged 1.1% per year, while the growth in real employee compensation per worker (full-time equivalent employee) recovered to only 0.5%

13 Two papers which appeared subsequent to the first draft of this paper have also called attention to the growing debt during the 2000s and have reached conclusions similar to mine. The first, Mian and Sufi (2009), using data from a national consumer credit bureau over the years 1997 to 2008, reported that the debt-to-income ratio for U. S. households roughly doubled between 2002 and 2007. They also found that money extracted from increased home equity loans is not used to purchase new real estate or pay down credit card balances, but rather for real expenditures (though they do not estimate whether the new debt maintained existing consumption or enhanced it). The second, Khandani, Lo, and Merton (2009), simulated the effect of the housing price decline from June 2006 to December 2008 and estimated a total loss of $1.5 trillion in the U. S. housing market. They also found that a significant percentage of home owners wound up with negative home equity.

14 In the case of an economy characterized by competitive input markets and constant returns to scale, it follows that wages and labor productivity should grow at exactly the same rate. In particular, $w = \partial X/\partial L = \varepsilon_L X/L$, where w is the wage rate, X is total output, L is total employment, and ε_L is the elasticity of output with respect to labor, which equals the wage share in this special case.

15 Results are shown for employee compensation per FTEE. Results are almost identical for employee compensation plus half of proprietors' income per Persons Employed in Production, PEP. The data source is: U.S. Bureau of Economic Analysis, National Income and Product Accounts, Internet, at http://www.bea.gov/bea/dn/nipaweb/SelectTable.asp.

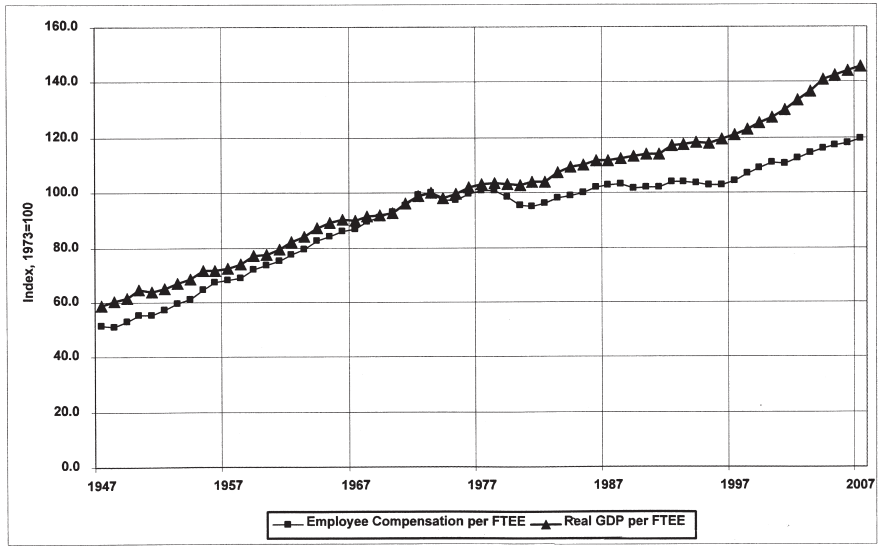

Figure 8: Real Labor Earnings and Labor Productivity, 1947–2007

per year. From 2001 to 2007, labor productivity growth surged upward to 2.2% per year while compensation rose by only 1.6% per year.

If productivity rose faster than earnings after 1973, where did the excess go? The answer is increased profitability in the United States. The basic data are from the U. S. Bureau of Economic Analysis' National Income and Product Accounts. For the definition of net profits, I use the U. S. Bureau of Economic Analysis' definition of total net property-type income, including corporate profits, interest, rent, and half of proprietors' income. (The definition excludes the Capital Consumption Allowance or CCA).[16] The net rate of profit is defined as the ratio of total net property income to total private net fixed capital. The net profit rate declined by 7.5 percentage points between 1947 and its nadir, 13.1%, in 1982 (see Figure 9). It then climbed by 6.0 percentage points from 1982 to 1997 but fell off by 1.7 percentage points between 1997 and 2001. However, after 2001, it surged upward, reaching 21.2% in 2006, close to its postwar high of 22.7% in 1948, though it dipped a bit to 20.7% in 2007.

16 This definition of capital income excludes the pay of CEOs and other top management, bonuses, stock options, and the like, which are counted as labor compensation. If these components were included in capital income instead, the rise in the capital share over the last 10 years or so would be even greater than reported below.

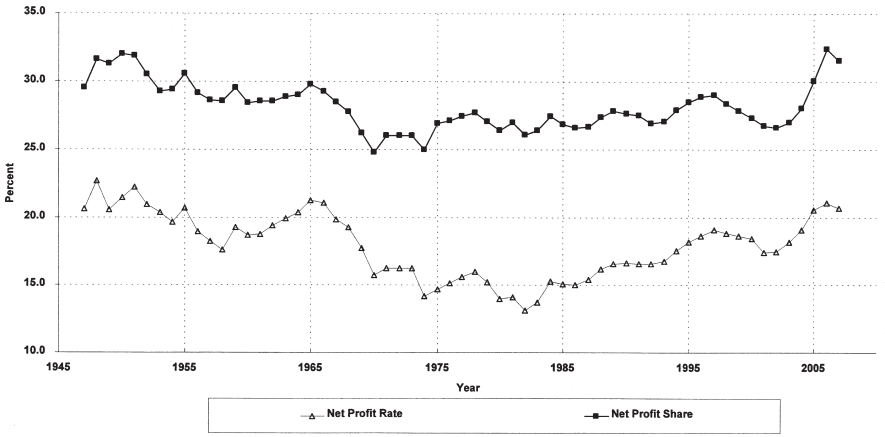

Figure 9: Trends in the Net Rate of Profit and the Net Profit Share, 1947–2007

Figure 9 also shows trends in the net profit share in national income, which is defined as the ratio of total net property income to net national income. The net profit share rose by 2.4 percentage points between 1947 and its earlier high point of 32.0% in 1950 and then fell by 7.2 percentage points between 1950 and its low point of 24.8% in 1970 (see Figure 9). It then generally drifted upward, rising by 1.9 percentage points between 1970 and 2001. During the G. W. Bush years, from 2001 to 2006, the profit share jumped up by another 5.7 percentage points to reach 32.4% in 2006, its highest point during the postwar period, though it slipped slightly to 31.6% in 2007. The results clearly show that the stagnation of labor earnings in the United States since the early 1970s has translated into rising profits in the economy.

6. *Yet Schooling Attainment Continued to Rise*

One of the great success stories of the postwar era is the tremendous growth in schooling attainment. Median years of schooling among people 25 years old and over grew from 9.0 years in 1947 to 13.6 in 2007 (see Figure 10).[17] Most of the gain occurred before 1973,

17 The data are from the U. S. Bureau of the Census, "Detailed Historical Income and Poverty Tables from the March Current Population Survey," available at available at http://www.census.gov/hhes/www/income/histinc/. "Adults" refers to persons 25 of age and over in the non-institutional population (excluding members of the Armed Forces living in barracks).

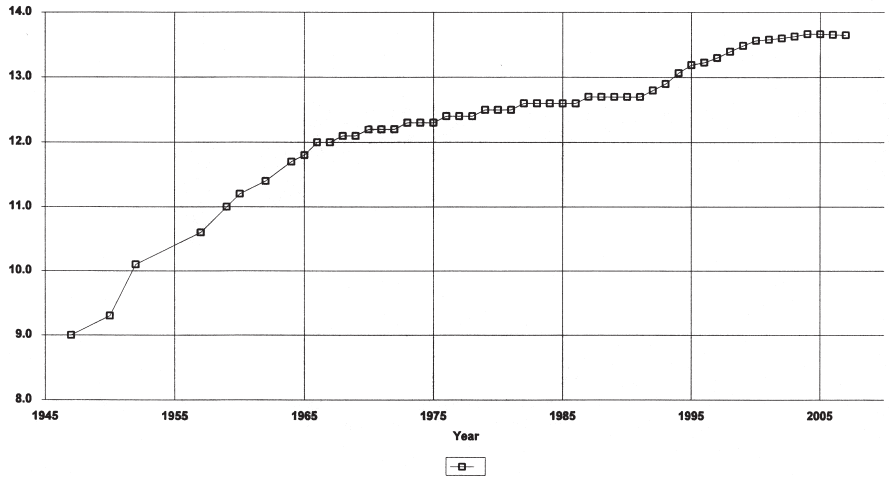

Figure 10: Median Years of Schooling Completed by People 25 Years Old or Over, 1947–2007

with median education increasing by 3.3 years before 1973 and by only another 1.3 years after 1973.

Trends are even more dramatic for the percentage of adults (age 25 and over) who completed high school (including a General Educational Development or GED degree) and college (see Figure 11). The former grew from 33% of all adults in 1947 to 87% in 2007. Progress in high school completion rates was as strong after 1973 as before — by 27 percentage points before and after 1973. The percent of college graduates in the adult population soared from 5.4% in 1947 to 29.8% in 2007. In this dimension, progress was actually greater after 1973 than before — 7.2 and 17.2 percentage points, respectively.

However, as noted above, real hourly wages rose by 75% between 1947 and 1973 and then declined by 4.4% in the ensuing 34 years. Yet, educational attainment continued to rise after 1973 and, indeed, in terms of college graduation rates even accelerated. The growing discordance between wages and schooling constitutes a real paradox from the vantage point of standard economic (human capital) theory, which posits a direct and positive association between schooling attainment and wages.

Another indicator of the country's success in education is the dramatic decline in the inequality of schooling. According to the

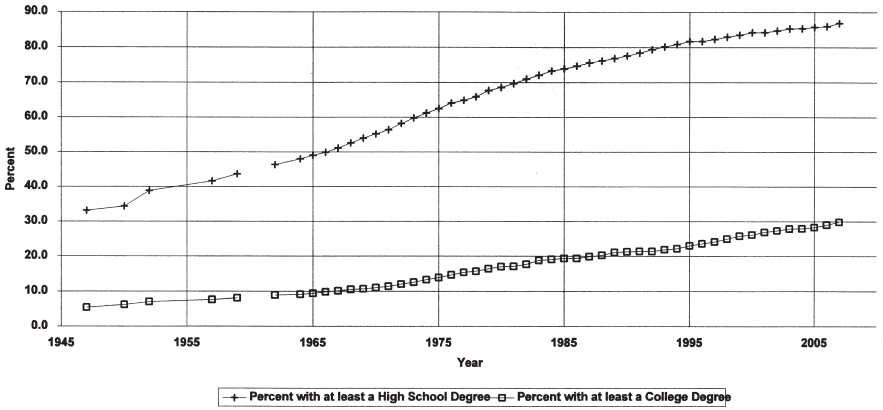

Figure 11: Percent of Adults 25 Years Old or Over with a High School and College Degree, 1947–2007

human capital model, there is a positive (actually proportional) relationship between earnings inequality and the variance of schooling. The variance of schooling (of adults 25 years of age or older, computed from CPS data) fell by 48% between 1950 and 2000 (from 12.5 to 6.9),[18] while income inequality rose since the late 1960s. In fact, the simple correlation between the two series is, in fact, –0.78. This finding leads to another paradox — the growing discord between the inequality of income and the inequality of human capital.

7. Conclusions

The last quarter of the 20th century and first few years of the 21st century saw slow-growing earnings and income for the middle class, as well as a stagnating poverty rate and rising inequality. In contrast, the early postwar period witnessed rapid gains in wages and family income for the middle class, in addition to a sharp decline in poverty, and a moderate fall in inequality. The "booming" 1990s and early and mid-2000s have not brought much relief to the middle class, with median family income growing by only 7% between 1989 and 2007. Rising debt and vulnerability to negative home equity as housing prices fall has created a fragile middle class — one that has been blown

18 Because of a change in the educational attainment categories used by the U. S. Bureau of the Census, it is not possible to update the variance of schooling series beyond 2000.

over the precipice by the mortgage meltdown and strong adverse financial tidings. Median net worth in 2009, according to my projections, has fallen back to the levels of the early 1990s from collapses in both housing and stock prices. Personal tax rates have generally fallen over time but by much more for the rich than the middle class. In sum, the middle class has become squeezed in terms of income, earnings, and wealth since the early 1970s.

The stagnation of living standards among the middle class over the last 30 years is attributable to the slow growth in labor earnings over this period. While average earnings (employee compensation per FTEE) almost doubled between 1947 and 1973, it advanced by only 20% from 1973 to 2007. From 1989 to 2007, it grew by 18%. This occurred in spite of substantial progress in educational attainment since the early 1970s. Moreover, despite incredible success in reducing disparities of schooling within the American population, the inequality of income has not only failed to decline but has actually risen sharply over the last three decades. These results suggest a growing disconnect between earnings and schooling.

The main reason for the stagnation of labor earnings derives from a clear shift in national income away from labor and towards capital, particularly since the early 1980s. Over this period, both overall and corporate profitability has risen substantially, almost back to postwar highs. The stock market has, in part, been fueled by rising profitability. While the capitalist class has gained from rising profits, workers have not experienced much progress in terms of wages. On the surface, at least, there appears to be a trade off between the advances in income and wealth made by the rich and the stagnation of income and wealth among the working class.

Simple correlations provide some evidence of this relationship. We saw strong growth of wages in the late 1990s under Clinton and reduced profitability and weak growth of wages and a resurgence of profitability under George W. Bush to 2006, followed by a rise in wages and a dip in profitability in 2007. The simple correlation coefficient between employee compensation per FTEE and the net profit rate over the 1947 to 2007 period is –0.49 (–0.50 with the net profit share).[19] Real median family income also grew strongly in the late 1990s and

19 This relationship should not be interpreted to indicate causation since the two variables are not defined independently. This is also true for the other correlations discussed in this paragraph.

weakly in the 2000s. The simple correlation coefficient between real median family income and the net profit rate over the same 60 year period is –0.52 (–0.57 with the net profit share). Income inequality generally climbed upward from the early 1980s to 2006 as did profitability, though both declined during the late 1990s and in 2007. However, here, the simple correlation coefficient between the Gini index for family income and the net profit rate over the 60 year period is only 0.07 (0.09 with the net profit share).[20]

8. What Can Be Done Now?

8.1. *Re-Empower Labor and Restore the Social Contract.* Current policy discussions in Washington have emphasized better education of the labor force and improved training as the key remedies: 1) they will lead to higher skills and thus high paying jobs and hence lead to an increase in real wages; 2) they will lead to a more equitable distribution of skills in the labor force and thus reduce wage inequality. Both sides of the political aisle appear to subscribe to this point of view. Yet the evidence presented above seems to cast serious doubt on education and training as effective policy remedies.

Perhaps the most direct route to raising living standards and lowering inequality is to re-empower labor in the United States. During the "Golden Age" of American capitalism, from 1947 to 1973 or so, unions were strong and there was an implicit social contract between capital and labor and productivity gains were equally shared between the two. As a result, real wages increased substantially. The mid- to late 1970s saw a "profit squeeze," as we saw above. These years also saw the birth of neoliberalism and a switch in corporate philosophy from "stakeholder value," whereby the different clientele of the firm — share holders, workers, and clients — were each accorded benefits from the firm to "shareholder value," wherein maximizing stock prices became the aim of the firm.[21] This period saw the beginning of wage stagnation and the middle-class squeeze. Since 1980 or so, wages have generally risen with inflation but not in real terms.

20 The correlations with the family income share of the top five percent are higher: 0.33 and 0.24 with the net profit rate and the net profit share, respectively.

21 See Lazonick, 2009, for an excellent discussion of this shift in philosophy among corporate board directors.

One major reason for these shifting norms is that unions have shriveled in the United States, particularly in the private sector. During the 1950s and 1960s, unions were strong and the unionization rate was high (it peaked at 33% of the labor force in 1953). In 2007, the overall unionization rate was down to 11% and only 8% in the private sector. Cross-national evidence compiled elsewhere suggests that one of the principal reasons for the greater level of inequality in this country and its relatively rapid rise in recent years in comparison to other advanced economies is the low level of unionization in this country and its continuing decline (see Blau and Kahn, 1996). This is also a principal factor in explaining stagnating real wages in the United States. Steps should be taken to help promote unionization in the workplace and expand the power of labor generally. This can start with reform of existing labor law. Other work has documented how existing labor law is biased against the establishment of new unions and how notoriously difficult the certification process is (see, for example, Gordon, 1996). Re-igniting the labor movement in this country may also lead to a political climate more favorable to workers and wages and help to restore the early postwar social contract between labor and capital.[22]

8.2. *Restrain the Fed.* Perhaps more fundamentally, in order to get labor back on track it is necessary to shift norms about wage setting. The norm for the last quarter century appears to be that wages should keep up with inflation. Alan Greenspan during his tenure as chairman of the Federal Reserve Board referred to the "traumatized worker" effect — that during the late 1990s and early 2000s workers were unable to bargain up wages despite historically low unemployment rates because the institutional basis of their bargaining strength had eroded. The result is a far cry from the 1950s and 1960s, when the norm was that real wages should grow at the same rate as labor productivity.

The federal government has also played a role in this transformation. It used to act as referee between labor and capital. Since the early 1980s, however, it has come to favor capital over labor. In particular, the Department of Treasury, which has historically represented the interests of Wall Street, has become the dominant player in the executive branch. The other major culprit is the Federal Reserve Board, which has raised interest rates and used moral suasion

22 As I write this, there is new legislation pending in Congress that would make it easier for workers in a plant or office to vote in favor of establishing a union.

over the last two decades to clamp down on the economy once wages begin to rise. Indeed, the Fed under Greenspan was haunted by the specter of "wage inflation" and rising labor costs and used its powers to prevent real wages from rising.

With U. S. labor productivity growth now running about 2% per year, perhaps it is time to think about boosting wages. The Fed should curtail its excessive exuberance in cracking down on wages whenever wage inflation appears. If the Fed starts to send out a positive message, that it is okay if wages grow with productivity, this may eventually help to reestablish the wage norms of the early postwar period. We will see whether Ben Bernanke is up to this task.

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