Michael Heinrich's 'New Reading' of Marx—A Critique

Sam Williams, July-September 2013

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The April 2013 edition of Monthly Review published an article entitled "Crisis Theory, the Law of the Tendency of the Profit Rate to Fall, and Marx's Studies in the 1870s" by German Marxist Michael Heinrich. Michael Heinrich teaches economics in Berlin and is the managing editor of "PROKLA A Journal for Critical Science." His "new reading" of Marx apparently dominates the study of Marx in German universities. The publication of Heinrich's article brought about a wave of criticisms on the Internet from Marxists such as Michael Roberts who base their crisis theory precisely on Marx's law of the "tendency of the rate of profit to fall," or TRPF for short.

Today on the Internet, partisans of two main theories of capitalist crisis—or capitalist stagnation—are struggling with one another. One theory attributes crisis/stagnation to Marx's law of the TRPF that Marx developed in "Capital" Volume III. The rival theory is associated with the Monthly Review school, which is strongly influenced by John Maynard Keynes and even more by Michael Kalecki. Unlike the supporters of a falling rate of profit theory of crisis, the Monthly Review school, like Kalecki, puts the question of monopoly and monetarily effective demand at the center of its explanation of capitalist crisis/stagnation.

In addition to publishing Heinrich's attempt to prove that there is in fact no tendency for the rate of profit to fall, Monthly Review Press published an English translation of Heinrich's "An Introduction to the Three Volumes of Karl Marx's Capital," originally published in German under the title (in English) "Critique of Political Economy—an Introduction."

Is Michael Heinrich a new recruit to the Monthly Review school? In fact, we will see later that the Monthly Review school and Heinrich have radically different views on the questions of capitalist monopoly and imperialism. So at this point, it is more a question of an "alliance" between the Monthly Review school and Heinrich's "new reading of Marx" trend against the TRPF school, whose leading academic representative today is Andrew Kliman, a professor of economics at Pace University.

The first thing I must say about Heinrich is that it is clear that he knows his Marx at least as well as any writer whose works have been published in English. He is also a remarkably clear writer. This reflects the fact that he has thoroughly mastered his material. This does not mean that Heinrich agrees with Marx on all questions. Indeed, Heinrich is more than willing to express his disagreements with Marx. And as we will see, Heinrich disagrees with Marx on some very important issues.

Heinrich's 'new reading of Marx' versus 'world-view Marxism'

Heinrich advances the claim, hardly unique among academic Marxists, that even before the death of Marx in March 1883, his co-worker Frederick Engels (1820-1895) (1) was beginning to simplify Marx's thought, laying the foundation for what Heinrich calls "world-view Marxism." This "world-view Marxism" was to dominate the left-wing workers' movement through the era of the pre-World War I Second International and then the Third or Communist International, and after Lenin died in 1924 came to be called "Marxism-Leninism."

In the guise of Marxism-Leninism, "world-view Marxism" was to rule supreme in the left-wing workers' movement at least up to the destruction of the Soviet Union during the 1980s and early 1990s. Are the roots of the disastrous events of the 1980s and 1990s perhaps to be found in "world-view Marxism"? And can Heinrich's "new reading" of Marx form the foundations of a Marxism more in line with the spirit of Marx's own thought and perhaps prevent similar disasters in the future?

Heinrich traces the roots of "world-view Marxism" back to Frederick Engels' "Anti-Duhring," first published in book form in 1878. A later "short edition," as Heinrich calls it, was published in 1882 under the title "Socialism Utopian and Scientific" and remains to this day a popular introduction to Marxism. Engels' work was a polemic directed against the otherwise long-forgotten German university instructor Eugen Duhring, who had developed his own system of political economy and socialism, and and was gaining influence during the 1870s in the German Social Democratic Party.

Heinrich blames Engels for supporting a simplified form of Marxism that under the banner of "Dialectical Materialism" and "Historical Materialism" was to form the foundation of "world-view Marxism." Following the death of Engels in 1895, things only got worse when Karl Kautsky (1854-1938) emerged as the world's most authoritative expert on Marxist theory. Things went further downhill beginning in 1914 when Lenin became the leading figure and thinker of the revolutionary wing of the workers' movement that was breaking away from the reformists and centrists of the Second International.

'Western Marxism'

Heinrich broadly identifies himself with the tradition of such "heterodox" Marxists as Karl Korsch, Georg Lukacs, Antonio Gramsci and Anton Pannekoek, as well as such Frankfurt school (2) thinkers as Max Horkheimer, Theodore W. Adorno and Herbert Marcuse. Left out of Heinrich's list is another member of the Frankfurt school, who was actually the one most interested in economics, Henryk Grossman. Heinrich describes the views of these diverse thinkers, who often disagreed with each other, as representing a "Western Marxism." Why Heinrich leaves out Grossman from his list of Western Marxists will soon become clear.

Since their views "widely diverge," as he puts it, Heinrich's "Western Marxists" cannot represent a coherent alternative to "world-view Marxism." However, Heinrich clearly believes that the way forward can be found somewhere in the tradition of "Western Marxism," and not in traditional "world-view Marxism," which would include all the shadings of post-Lenin Marxism-Leninism and Trotskyism and their present-day descendants—including Maoism—that draw their inspiration from the traditions that grew out of the Russian Revolution.

Western Marxism, as Heinrich explains, has generally concentrated its criticism of "world-view Marxism" on its philosophical foundations, namely dialectical and historical materialism. Heinrich, in the spirit of Western Marxism, as he defines it, extends the criticism of dialectical and historical materialism to the sphere of political economy, which would establish him as the leading economic theorist of Western Marxism—replacing Grossman.

Did Engels misunderstand Marx's economic theory?

Heinrich puts forward the thesis that Engels in his editing of Volume III of "Capital" failed to realize that Marx had largely given up on his law of the tendency of the rate of profit to fall, which was to become such an important fixture in "world-view Marxist" economics as well present-day attempts to develop a full Marxist theory of capitalist crisis. Next month, I will examine the evidence that Heinrich presents to support his claim that Marx revised his views during the 1870s on the tendency of the rate of profit to fall.

Why Western Marxist Heinrich failed to mention Henryk Grossman

We now see why Heinrich failed to mention Henryk Grossman, who was after all the leading economic thinker of the Frankfurt school among his Western Marxists. Grossman built an entire economic theory of "capitalist breakdown," as he put it, on Marx's law of the TRPF. Indeed, as far as I know, no major 20th-century Marxist put as much emphasis on the law of the TRPF as did the Western Marxist Henryk Grossman.

But as we will see, Heinrich takes strong objection to this theory and attempts to refute it, both in his Monthly Review article and in his introduction to the three volumes of "Capital." If Grossman can be considered a "Western Marxist," then Heinrich is determined to take Western Marxism down a very different path, at least as far as political economy is concerned, than did Grossman.

I will first examine the views of Heinrich *as an economist* and only at the end will I draw from that generalizations about the significance of Heinrich's "new reading of Marx," freed from the historical and dialectical materialism that forms the philosophical foundations of "world-view Marxism." The reason is that before we can view Heinrich's "new reading of Marx" from the heights of philosophy, it is necessary to descend into the trenches of economics.

Was Marx's theory of value a 'monetary theory of value'?

Heinrich makes the interesting claim that Marx's theory of value is what he calls a "monetary theory of value." He accuses other Marxist economists of failing to grasp this. As regular readers of this blog should realize by now, I, too, have devoted a lot of attention to Marx's theory of money and the role it plays in Marx's theory of value.

While a strong case can be made that I should begin with Heinrich's "monetary theory of value" interpretation of Marx's value theory, I will instead begin with the TRPF, if only because it has attracted so much attention from the opponents of the Monthly Review school who support the falling rate of profit theory of crisis. But rest assured, I will in due course get to Heinrich's interpretation of Marx's theory of value as a monetary theory of value.

The theory of the TRPF and its relation to crisis theory

Unlike many Marxists, including both the supporters of Marx's TRPF and its opponents, which include Heinrich, I do not think it is correct to equate Marx's TRPF with crisis theory. Though the historical tendency of the rate of profit clearly has implications for crisis theory, as well the ultimate fate of the capitalist mode of production, the study of the historical trend of the rate of profit is by no means identical to what causes cyclical economic crises that recur at more or less regular 10-year intervals. Let's see why this is so.

As Heinrich himself points out in his introduction to Marx's "Capital," virtually all schools of political economy in Marx's time assumed a downward historical tendency in the rate of profit. In those days, it was considered a simple empirical fact. The disagreements among economists did not involve the downward historical trend but why the rate of profit showed this downward tendency.

This seems to have been true, as Heinrich points out, because the history of the rate of interest, which in the 19th century was widely considered to be a proxy for the rate of profit, was indeed a downward one. If we assume the division between the rate of interest and the profit of enterprise has been more or less fixed, this implies that the historical trend of the rate of profit has been downward as well. Marx, however, did not accept this view and believed that the rate of interest actually had a tendency to fall independently of the rate of profit. Therefore, the empirical fact of a downward tendency in the rate of interest does not itself *prove* that the trend of the rate of profit is downward. Even if the rate of interest falls over time, the rate of profit could either remain more or less unchanged as capitalism develops, or within certain limits the rate of profit could even have an upward tendency.

What the rate of profit does do is to establish an *upper boundary* beyond which interest rates cannot rise in the long run. If interest rates equal or exceed the rate of profit, the industrial as well as commercial capitalists will be able to make more money with less risk by turning themselves into money capitalists. More money will be lent at interest as opposed to being directly transformed into new productive capital—or invested in trading companies that deal in what Marx called commodity capital—causing the rate of interest to once again fall below the rate of profit. Therefore, the falling rate of interest observed by the economists both before and during Marx's day hints at a downward tendency in the rate of profit but does not prove it.

The tendency of the rate of interest since Marx

Since Marx's time, the general tendency of the rate of interest has continued downward, if we leave aside the spectacular spike of interest rates that resulted from the currency/stagflation crises that lasted from 1968 to 1982. The recent extremely low rates of interest (3) rival the extremely low rates that occurred during the immediate aftermath of the Great Depression, and therefore provide fresh empirical confirmation of Marx's views on the downward historical tendency of the rate of interest.

Rate of profit as defined in Volume III of 'Capital'

When Marx discusses the rate of profit, he means the ratio of the total mass of surplus value over the total mass of (advanced) productive capital. By productive capital, Marx refers to the means of production, raw and auxiliary materials, and labor power, as opposed to commodity capital—inventories of finished commodities—and money capital. If we take into account money and commodity capital when we calculate the rate of profit, that rate will be lower than if we calculate the rate of profit on productive capital alone.

Constant and variable capital

Marx divided the total *productive* capital into constant capital—all forms of productive capital except labor power, and labor power itself, which Marx called variable capital. Variable capital is often defined as the money that the industrial capitalists use to purchase workers' labor power, or ability to work. But from the viewpoint of the industrial capitalists, the money they—or it, if the

capitalist is a single corporation—use(s) to purchase the workers' labor power is actually money capital, or the money form of variable capital. Real variable capital is the workers' labor power *after* it has been purchased by an actual industrial capitalist. (4)

Fixed versus circulating capital

We have to distinguish between the productive capital that is used up in each turnover cycle and the total productive capital. As Heinrich explains in his "Introduction," in addition to the division between constant and variable capital, there is the division between fixed and circulating capital. (5) Circulating capital includes all the raw materials that physically become part of a commodity, as well as auxiliary materials such as the electrical power, for example, that powers factory machinery. As is the case with commodities that are physically transformed and become part of a new commodity, auxiliary materials, though they do not pass their physical substance into new commodities, do transfer their entire value all at once into the commodities that are being produced. Therefore, the raw and auxiliary materials represent capital that is both constant and circulating, and so is called circulating constant capital.

In addition, variable capital reproduces its own value—as well as producing an additional surplus value—within each turnover cycle. Variable capital along with circulating constant capital—raw and auxiliary materials—is also a form of circulating capital. The total circulating capital is therefore the sum of raw materials and auxiliary materials plus the labor power purchased by the industrial capitalists.

It important to realize that money capital, called by Marx capital of circulation, is not what Marx means by circulating capital. For example, the money that the capitalists use to purchase labor power is not "circulating capital" as defined by Marx. Circulating capital refers to real capital, not money capital.

Fixed capital is represented by factory buildings, machines, tools and so on that last beyond one turnover cycle. Instead of passing their value all at once to the commodities they help produce, they pass only a fraction of their value during each individual turnover cycle. If all goes well, these durable productive forces have only passed on all their value to the newly produced commodities when they are completely worn out and can no longer function as means of production. Next month we will see what happens when things do not go well and the elements of constant capital lose a portion of their value before they have fully transferred their value to the commodity capital they help produce. As we will see, the latter situation is actually the rule and not the exception.

Two ways to calculate the rate of profit

We can calculate the rate of profit for each turnover cycle. We simply divide the total surplus value produced by the variable capital by the variable capital plus the circulating capital plus the portion of the fixed capital that is used up. This is sometimes called the "flow method." Heinrich prefers this method—or even abstracts the fixed capital altogether for reasons that will become apparent in due course.

However, for the capitalists, it is the surplus value divided by the total productive capital that matters. Naturally, the rate of profit is considerably lower when we divide the surplus value over the entire productive capital stock as opposed to only the capital that actually turns over within a given turnover cycle. This latter approach is sometimes called the "stock method."

When Marx developed his theory of the downward tendency of the rate of profit, he was referring to the ratio of the total surplus value produced by the working class over the total productive capital. This ratio is not actually the same thing as the rate of profit as calculated by the industrial and commercial capitalists. Why not?

In addition to the profit proper, the total surplus value includes ground rent. Profit is also divided into two sub-fractions—interest, which goes to the owners of money capital, and the profit of enterprise, which goes to the owners of productive and commodity capital.

This gives rise to four primary incomes: the rent of land, the interest on money capital, the profit of enterprise, and finally the wages of labor. From these primary incomes, there arise various derivative incomes.

For example, a landowner might purchase the labor power of servants—not to produce surplus value but to perform personal services. Therefore, some of the landowners' rental income appears a second time in the form of wages of the landowners' personal servants. The same thing is true of capitalists who in addition to purchasing the labor power of workers to produce surplus value also purchase the labor power of workers to perform personal services. Even better-paid productive-of-surplus-value workers might occasionally hire a maid to help out with household chores. The maid's wages would be a derivative of the wages of the productive-of-surplus-value worker who hired her.

On a far larger scale, there are the labor powers purchased by the state, either out of taxes or borrowed money—the debt on which must be serviced with tax revenues—which range from the labor power of teachers, librarians, social workers to soldiers, police officers, "intelligence agents" and so on. When we calculate the rate of profit, we have to be careful to include all surplus value, including, for example, the portion of the rent that the landowner uses to purchase the labor power of a personal servant. However, it must be only counted once and not twice as rent and then again as the wages of the servant.

The other, far more serious, difficulty that confronts any attempt to empirically calculate the rate of profit is that we must calculate the profit on all capitals that are operating on the world market over a considerable period of time. Otherwise, we are only guessing at what the actual historical tendency of the rate of profit really is.

For example, if we calculate the rate of profit yielded by the productive capital used by U.S. Steel—before any rent, interest or tax payments—since its organization by J.P. Morgan in 1901 to the present, there is no way of knowing whether changes in the rate of profit yielded by this particular industrial capital will actually coincide with the changes in the average rate of profit yielded by all industrial and commercial capitals. Indeed, it almost certainly will not.

While attempts have been made to calculate the trend in the rate of profit since World War II or since the 1960s—the rate of profit in Britain and the United States, for example—we cannot be sure that a fall in the rate of profit in these countries that these studies generally document really reflects a fall of the general rate of profit on all the productive capital that operates on the world market. It might merely reflect the end of the historical monopoly that the U.S. and Britain had in industrial production, causing the rate of profit to fall in these particular countries.

The difficulty in calculating the evolution of the global rate of profit

Whether the rate of profit on the total global productive capital has risen or fallen in a given period is a quite different question. As far as I know, nobody has ever even attempted to calculate the evolution of the rate of profit globally. While it is possible in principle to test empirically whether the global rate of profit as defined above has actually fallen, risen or been essentially trend-less across the evolution of capitalism, to actually do this, given the problems of collecting reliable statistics, makes it to say the least virtually impossible in practice. To make a reasonable estimate, we would have to open the books of every industrial and commercial capitalist operating on the world market over a period of many decades—ideally over the entire lifetime or at least a substantial fraction—of the capitalist system. The reason why we must "open the books" is that we cannot trust the capitalists' own estimates of their profits; we need to see their books. (6)

At best, only rough estimates can be made of the evolution of the global rate of profit, and these estimates are liable to huge errors. Therefore, unlike the evolution of the rate of interest, we *can not actually observe* the rate of profit as defined by Marx in Volume III of "Capital." At most, we can say that the observable fall in the rate of interest hints at a downward historical trend in the rate of profit.

Rate of turnover of capital and the rate of profit

Heinrich points out that the rate of turnover plays an extremely important role in determining the rate of profit. What he overlooks in his "Introduction"—which doesn't mean he is unaware of it or didn't deal with it somewhere else, of course—is that it is the turnover *of variable capital alone* that influences the rate of profit. This goes counter to the way individual industrial or commercial capitalists look at it. (7)

From the perspective of everyday capitalists engaged in the daily battle of competition, it is the speed of turnover of the total capital that counts, and not simply the turnover of the variable

capital. And the view of the everyday industrial or commercial capitalists engaged in competition is also the view of the (bourgeois) economists.

The reason things appear as they do to the everyday capitalists—and the economists—is the equalization of the rate of profit. Competition among individual capitals tends toward the situation where equal capitals yield equal profits to their owners in equal periods of time. However, if we calculate the rate of profit in terms of value—or direct prices—as opposed to prices of production that equalize profits, we find that it is only the variable capital that yields a profit to the collective global capitalist. The rate of profit on the constant capital—assuming that the value of the constant capital is fully transferred to the commodities it helps produce—is exactly zero. No matter how many times you multiply the rate of turnover by zero, you get zero. The rate of profit is measured over a certain period of time, generally on an annual basis. Therefore, the faster the turnover of variable capital the higher the annual rate of profit, all other things remaining equal.

What determines the rate of turnover of variable capital?

The rate of turnover of capital, including variable capital, is determined both by technical factors of production, including transportation, and the state of business. For example, fine wines as opposed to cheap wines may have to be aged for many years. The turnover of capital, including the variable component of the capital that is used to produce fine wines, is extremely slow compared to most other branches of production. While the quantity of labor necessary to produce fine wines may be no more than the quantity of labor necessary to produce cheap wines, the production period is far longer for fine wines than for cheap wines. This is why the price of fine wines is so much higher than it is for cheap wines.

In order for a given quantity of capital invested in the production of fine wines to yield the same annual rate of profit as a quantity of capital invested in the production of cheap wines, fine wines have to sell at a higher price. Therefore, while the direct price of the fine wine may be no higher than the direct price of cheap wine, the price of production of the fine wine will be higher than the price of production of the cheap wine.

Ricardo and his supporters, who failed to distinguish between values and prices of production, were stumped by this fact. It seemed that wine was acquiring value independently of the labor that was used to produce it. This fact was used by the opponents of the Ricardian law of (labor) value and continues to be used by some modern opponents of Marx's theory of value who fail to understand how Marx's theory value differs from Ricardo's theory of value.

The turnover period of capital, including the turnover of variable capital, is also affected by the time the commodity takes to make the journey from its place of production to the hands of the final consumer. Shortening the period of transportation, which is part of the production period of commodities—for example, faster trains and the shortening of shipping routes by building canals such as the Panama and Suez canals—increases the number of turnover periods of variable capital in a given period of time, which with all other things remaining equal will raise the rate of profit on an annual basis.

The other factor that determines the turnover period of variable capital is the pace of business. During a period of more or less depressed business, the time that commodities spend sitting in warehouses and on store shelves increases compared to a period of booming business when commodities are "flying off the shelves." This largely explains the difference between the depressed profit rates of the crisis-depression phase compared to the high-profit-rate boom phase of the industrial cycle—though the fluctuations of market prices around prices of production play an important role here as well.

When analyzing changes in the rate of profit that occur within a 10-year industrial cycle, it is important to keep the effect of the technical factors on the turnover of variable capital compared to the effects of the state of business on that turnover separate in our minds.

The turnover of capital in Keynes and Kalecki

Keynes and Kalecki, who had no notion of value and surplus value in the Marxist sense, believed that the key to increasing profits is to increase the turnover of capital through increasing monetarily effective demand. The more the capitalists and their dependents; the productive workers; and the government and its dependents collectively spend—making up aggregate

demand—the stronger the pace of business will be, both Keynes and Kalecki believed, and therefore the higher the rate of profit will be as well. Keynes and Kalecki saw here that something was being multiplied, but they didn't understand what was being multiplied, namely surplus value—the unpaid labor of the collective worker. Those Marxists who want to derive crises and the lesser fluctuations in business activity directly from changes in the rate surplus value and the ratio of constant capital to variable capital sometimes seem to overlook the huge influence that the pace of business has on the rate of profit. Other Marxists, for example, John Bellamy Foster in the article that I criticized the month before last, make a far more fundamental mistake.

Keynesian Marxists like Foster "forget" that it is surplus value—the unpaid labor of the working class—that is being multiplied by the rate of turnover of variable capital. This "forgetting" led Foster in his article that appeared in the April 2013 issue of Monthly Review to draw the false conclusion that industrial and commercial capitalists have common interests in raising the wages of the working class. This erroneous view led Foster to draw completely false political conclusions.

In order to analyze the evolution of the rate of profit in the way that Marx did in "Capital" Volume III, we have to abstract changes in the rate of turnover that are caused by fluctuations in the pace of business. We have to assume that the rate of turnover is determined only by the technical conditions of production. In other words, we have to abstract all fluctuations in business, including the most dramatic of all fluctuations—crises. This is why the study of the historical tendency of the rate of profit is by no means the same thing as crisis theory.

Marx's assumptions about the value of variable capital

In order to isolate the effect of a rise in the organic composition of capital—the ratio of constant to variable capital—it is necessary to assume, at least initially, that the rate of surplus value and the value of labor power remain unchanged.

The Okishio theorem

One school of criticism of Marx's law of the tendency of the rate of profit to fall, called "neo-Ricardians," base their rejection of this law on the so-called Okishio theorem. The supporters of the Okishio theorem replace Marx's assumption of a constant value of labor power and an unchanged rate of surplus value—the ratio of paid to unpaid labor—with the assumption of *a constant real wage*. The Okishio theorem then goes on to prove that under these assumptions, completely different than those made by Marx, the industrial capitalists will never select a method of production that will result in a lower rate of profit but only select methods of production that result in a higher rate of profit.

The assumption of an unchanged real wage is completely different than the assumption of an unchanged value wage and rate of surplus value. As Andrew Kliman has pointed out in his "The Failure of Capitalist Production" and his earlier work "Reclaiming Marx's Capital," these Marx critics perform their calculations not in terms of an embodied quantity of abstract human labor as Marx did but in physical terms.

The assumption of a constant real wage cannot be scaled up to the real world over an extended period of time, because the material use values that make up the real wages of the workers change with the development of the productive forces. For example, TVs, microwave ovens, smart phones, and tablet computers were not part of the real wage of workers in the days of Marx, because such material use values had not yet been invented. You cannot compare *quantitatively* the different use values of commodities.

What mid-19th-century commodity—remember the telephone hadn't been invented—would compare to a present-day Android smart phone? I won't be saying anything more about the Okishio theorem in this critique, because Heinrich is not a neo-Ricardian and does not use the Okishio theorem in his critique of Marx's TRPF.

Part 2, August 4, 2013

In this post, I examine two questions: One is whether Heinrich's critique of Marx's theory of the tendency of the rate of profit to fall—TRPF—is valid. After that, I will examine Heinrich's claim that Marx had actually abandoned, or was moving toward abandoning, his theory of the TRPF.

The determination of the rate of profit

If we assume the turnover period of variable capital is given and assume no realization difficulties—all commodities that are produced are sold at their prices of production—the rate of profit will depend on two variables. One is the rate of surplus value—the ratio of unpaid to paid labor. This can be represented algebraically by the expression s/v. The other variable is the ratio of constant to variable capital, or c/v—what Marx called the composition of capital.

Composition of capital versus organic composition of capital

The composition of capital will change if wages, measured in terms of values—quantities of abstract labor measured in some unit of time—changes. For example, if wages fall in terms of value, everything else remaining unchanged, there will be relatively more constant capital and less variable capital than before. The composition of capital c/v will have risen.

However, though less variable capital relative to constant capital will have been used than before, a given quantity of variable capital will now produce more surplus value. All else remaining equal, a rise in the composition of capital produced by a fall in the value of the variable capital will result in a rise in the rate of profit.

Suppose, however, that the capitalists replace some of their variable capital—workers—with machines. Remember, we are measuring the machines here in terms only of their *value*. Here, in contrast to the first case, we assume the value of variable capital and the rate of surplus value s/v remains unchanged.

Now, more of the total productive capital will consist of constant capital, which produces no surplus value, and less will consist of variable capital, which does produce surplus value. Since here, unlike in the first example, the rate of surplus value has remained unchanged, the fall in the portion of the capital that produces surplus value will produce a fall in the rate of profit.

In order to differentiate between these two very different cases, which produce opposite effects on the rate of profit, Marx called a rise in the composition of capital produced by a rise in the use of machinery a rise in the *organic* composition of capital.

Capitalist competition forces the individual industrial capitalists to do all they can to lower the *cost price* of the commodities they produce. The term cost price refers the cost to the industrial capitalist of producing a given commodity, not the cost to society of producing it. (1) The cost price represents the amount of (abstract) labor that the industrial capitalists actually *pay* for. It is in the interest of the industrial capitalists to reduce as much as possible the amount of labor that they pay for while increasing as much as possible the amount of the labor that the industrial capitalists *do not pay for*—surplus value.

The cost price of the commodity is, therefore, the capital—constant plus variable—that industrial capitalists must productively consume to produce a given commodity of a given use value and quality.

As capitalism develops, the amount of capital that is used to produce a given commodity of a given use value and quality progressively declines. But capitalist production is a process of the *accumulation* of capital. Leaving aside temporary crises, the quantity of capital defined in terms of value must progressively increase over the life span of the capitalist mode of production.

Therefore, the fall in the capital used to produce the individual commodities must be compensated for by a rise in the total quantity of commodities produced if the value of total social capital is to grow. Outside of crises and a war economy, the history of capitalist production sees a continuous rise in the total quantity of commodities produced. This is why the capitalists *must* find new markets or enlarge old ones if capitalism is to continue. Contrary to Say's Law, the increase in commodity production *does not* necessarily equal an increase in markets.

Two types of depreciation of fixed capital

Fixed capital, unlike circulating capital, transfers its value little by little to the commodities it helps produce. If all goes well, the entire value of a given piece of fixed capital should be transferred to the commodities by the time it can no longer physically function. But what happens if the value of commodities changes during the lifetime of the elements of fixed capital?

Circulating capital has as a rule a short lifetime, and while prices can sometimes change dramatically even over short periods, changes in values—outside of agriculture—should be more or less insignificant during the lifetime of most circulating capital. But this is not the case with fixed capital.

Therefore, in addition to the gradual transfer of value from a piece of fixed capital to the commodities being produced, the value of a machine, for example, will fall as the quantity of abstract human labor necessary to produce that machine falls. Marx called this second type of depreciation moral depreciation, or what is called by accountants functional depreciation. Periodically, individual industrial capitalists or corporations are obliged to "write off" a considerable amount of the value represented by their fixed capital.

A similar effect occurs if more powerful machines are invented that though they have the same value as the existing machines will increase the quantity of commodities produced. These newer machines transfer the same quantity of value as the older machines to the commodities they help produce, but the same quantity of value is spread out over a greater quantity of commodities. As a result, the value of each individual commodity falls.

For example, with the newer machine it might be possible to produce twice as many commodities as it was with the old machine. Once the newer machine has become generalized in industry, the old machine will only be able to transfer half the value to the commodities it helps produce than before. Competition will see to it that the commodities produced with the old and new machines will sell at exactly the same price. As a result, the value of the older machines will fall in half, obliging their owners—if they do their bookkeeping correctly—to write off half their value on their books.

For reasons of simplification in his discussion of the evolution of the rate of profit in "Capital" Volume III, Marx assumed that fixed capital transfers its full value to the commodities it helps produce once it has been fully consumed by its industrial capitalist owners. This assumption, though it has great value as an abstraction, ignores the fact that capitalist production involves a *continuous revolution in the means of production*.

Sharp changes in the values of agricultural raw materials can also occur before the capital they represent is productively consumed by their industrial capitalist owners. For example, a harvest failure in a major cotton-growing region will cause the value—as well as the market price—of cotton to rise. If there is a bountiful harvest the following year, the value of the capital represented by the cotton will fall. If industrial capitalist spinners had purchased the cotton at a price that reflected its value during a bad year for growing, they will likely incur a major loss.

However, what is a mere possibility with the value of short-lived commodities that represent circulating capital becomes a *certainty* in the case of the long-lived commodities that represent fixed capital. With the progress of science and technology and its inevitable application into capitalist production, the value of the existing fixed capital must fall *independently* of the physical wear and tear on machines.

Realistically, the industrial capitalists can hope to recover only a fraction of the value of their fixed capital. As a result, they attempt to consume the value of that capital as fast as possible—for example, by running factories around the clock. Here we find that a major internal force that checks the fall in the rate of profit—the cheapening of the elements of fixed capital—also causes major losses for the industrial capitalists. The cheapening of the commodities that make up fixed capital holds down the growth of the organic composition of capital c/v by lowering the value of c.

The rise in the organic composition of capital is therefore considerably less than an examination of the technical composition of capital would suggest at first glance. When we are inside a modern factory packed with highly computerized machines but employing far fewer workers than in former times, we might get the impression that the organic composition of the capital represented by the factory is higher than it actually is.

To visualize in our mind's eye the organic composition of the capital that is represented by the factory, we have to imagine these machines as quantities of (abstract) human labor and not the physical machinery. It is the ratio of the abstract labor—value—that the machine and the elements of constant circulating capital represent, on one hand, to the value represented by the purchased labor power of the workers who work in the factories, on the other, that determines the organic composition of the capital of the factory.

However, the same force that holds in check the rise in the organic composition of capital—the devaluation of the existing mass of fixed capital independently of its physically wearing out—also leads to major losses for the industrial capitalists and thus *reduces their rate of profit* independently of the organic composition of capital at any fixed instant in time.

Therefore, in order to fully understand the forces in the real world that determine the rate of profit, we have to think in terms not only of fixed quantities but also *rates of change*. Here crises play a major role. During a crisis, market prices will fall to levels that reflect the new lower value of the commodities, including those commodities that make up fixed capital. The social value represented by the total social capital that has been expanding suddenly contracts, and the social value of the the capital of individual factories and whole firms can even vanish entirely. (2)

Over time, however, the amount of capital that vanishes during crises *must* be less than the amount of capital that is accumulated between crises if capitalist production is to continue.

What regulates the growth in the organic composition of capital?

The maximum rate of growth in the organic composition of capital is determined by the development of science and technology at a given point in time. In reality, the rate of growth in the organic composition of capital will be much less because the industrial capitalists are interested only in *minimizing the labor they actually pay for*.

On average, the industrial capitalists pay for the entire quantity of dead labor they productively consume but pay for only a fraction of the living—or direct—labor. This gives capitalism its vampire-like nature, where dead labor—represented by a capitalist—exploits living labor—represented by workers. Therefore, the higher the rate of surplus value—the less living labor the industrial capitalists actually pays for—the slower will be the rate of increase in the organic composition of capital. Indeed, if the rate of surplus value increases sufficiently, the organic composition might even fall.

Therefore, the higher the rate of surplus value s/v, the lower will be the rate of growth of the organic composition of capital c/v. But the lower the rate of growth of the organic composition of capital, the higher will be the growth in the demand for labor power. At some point, the growing demand for labor power will shift the balance of forces on the labor market from the buyers of labor power—the capitalists—to the sellers of labor power—the workers. The rate of surplus value will stop growing and even start to fall. At this point, we would expect to see a renewed rise in the rate of growth in the organic composition of capital.

How crises raise the rate of profit

A crisis—once the problems of realization that caused the crisis in the first place are resolved by the crisis—will raise the rate of profit in three ways. One, directly through a rise in the rate of surplus value. Remember, if the organic composition of capital is given, the higher the rate of surplus value the higher will be the rate of profit.

Second, a crisis lowers the value of the existing constant capital in terms of market prices, and it is market prices that count for the capitalist. And third, a crisis raises the rate of profit by slowing the rise in the organic composition of capital in the period that follows the crisis. The rising rate of surplus value encourages the capitalists to use more “labor-intensive” methods of production—to use the slang of the (bourgeois) economists—which checks the rise in the organic composition of capital.

All else remaining equal, the deeper a crisis and the longer the mass unemployment created by the crisis lasts, the slower will be the growth in the organic composition. The result will be that the *more the value of old fixed capital that has been destroyed is written off*, the higher will be the rate of profit in the post-crisis period. (3)

Therefore, in the wake of a crisis it is likely that the rise in the rate of surplus value will exceed the rise in the organic composition of capital for a certain period of time. These forces work in the exact opposite way during a boom. As the demand for the commodity labor power rises, wages rise, and the rate of surplus value stagnates or even falls. The capitalists respond by increasing the role of machinery in production, which leads to a rise in the organic composition of capital. The combination of a falling rate of surplus value and an accelerating rate of growth of the organic composition of capital puts downward pressure on the rate of profit. This downward pressure

becomes considerably greater once the turnover of variable capital approaches the maximum allowed by the technical conditions of production and transportation.

Therefore, the more rapidly capitalist production develops the greater will be the downward pressure on the rate of profit. Since the *tendency* of capitalism is to develop production without limit—a tendency that is held in check in the real world by the periodic crises of generalized overproduction of commodities—the *tendency* of the rate of profit is indeed, contrary to Heinrich, downward. But crises and the post-crisis periods of depression and stagnation that crises breed provide a powerful check on the tendency of the rate of profit to fall.

Heinrich's attack on the law of the tendency of the rate of profit to fall

Heinrich, as we know, does not accept the above arguments. Contrary to Marx, Heinrich claims that there is no downward tendency in the rate of profit. Ignoring the *tendency* of capitalism to develop without limit, which creates a *tendency* for the organic composition of capital c/v to develop more rapidly than the rise in the rate of surplus value s/v, Heinrich holds that it is purely a matter of chance whether it is the rate of surplus value s/v or the organic composition of capital c/v that rises faster. The rate of profit, Heinrich insists, is just as likely to rise as it is to fall. Heinrich concludes that the historical tendency of the rate of profit is indeterminate. Therefore, Heinrich concludes that Marx's law of the *tendency* of the rate of profit to fall is false.

Heinrich without knowing it produces a mathematical model of the collapse of capitalism

As part of his attempt to refute Marx on the historical tendency of the rate of profit to fall, Heinrich takes an example from Marx himself. Suppose 24 workers perform two hours of surplus labor every day. The total amount of surplus labor—surplus value—produced every day will come out to 48 hours. Now suppose due to a radical rise in the productivity of labor, only two workers are employed in place of the previous 24. Even if the two workers were to "live on air," as Marx liked to say, and never slept, they could only perform 48 hours of unpaid labor in a day.

In other words, in the face of a *decline in the number of productive of surplus value workers*, the mass of surplus value cannot grow indefinitely. That is, if the number of workers declines, sooner or later the mass of profit measured in terms of value must stop growing and then decline.

"Marx," Heinrich writes, "thought that he had sufficiently proven the law of the tendency of the rate of profit to fall using this consideration." "But," Heinrich concludes, "that was not the case." (p. 153) And why not?

Here Marx is using the example of the 48 workers as a representative of the total social capital. We should imagine many zeros after the numbers 48 and 2. Keeping this in mind, Heinrich provides the following example.

"If constant capital does not increase strongly enough to compensate the reduction of variable capital, then the total capital advanced declines. In this case, we have a declining mass of surplus value and declining capital." (p. 153)

In other words, the mass of profit declines, but as long as the total capital of society *contracts* sufficiently, a smaller mass of profit will represent a higher rate of profit because it will be calculated on a smaller total advanced capital.

Arithmetic is correct, but attempted refutation is invalid

The arithmetic is correct. So hasn't Heinrich proven his point? In their review of Heinrich's "The Unmaking of Marx's Capital," entitled "Heinrich's Attempt to Eliminate Marx's Crisis Theory," Andrew Kliman, Alan Freeman, Nick Potts, Alexey Gusev, and Brendan Cooney point out, "Heinrich's attempted refutation is invalid because it presumes that capital is dis-accumulated and thereby violates a crucial premise of the LTFRP."

I would go even further. It not only violates a crucial premise of the LTFRP, it stands in contradiction to the *very essence of the capitalist mode of production*. The capitalist mode of production is above all a process of the *accumulation of capital*. And remember, capital is measured not in terms of the use values that make up the commodities that represent capital but *in terms of value*. Therefore, the kind of development of the productive forces that Heinrich imagines in the above example is simply not compatible with the capitalist mode of production.

In Heinrich's example, once the losses the capitalists suffer as result of the moral devaluation of their constant capital is subtracted from their profits, the capitalists are not only not successfully raising the rate of profit in the face of a rising organic composition of capital, they are *operating at an actual loss*. In his attempt to refute Marx, Heinrich has actually produced a mathematical model—without realizing it—*of the collapse of capitalism*! (4)

In fact, Heinrich's example—borrowed from Marx—implies the opposite of what he thinks he is demonstrating. It shows that while it is possible to create mathematical examples that show a faster rise in the rate of surplus value than the rate of growth of the organic composition, the rate of profit of the system as a whole is *biased* in the other direction, toward a fall in the rate of profit. Hence the TRPF. This, however, does not mean that there cannot be periods where the rate of profit indeed rises as we will see below.

Marx's laws of motion of capitalist development

The competition between workers and capitalists, combined with the progress of science and technology, means that the organic composition will rise over time. However, the unemployment that is both directly created by mechanization and today's computerization and indirectly created through the crises that are caused in part by the destruction of part of the value of the existing, mostly fixed, capital, along with the cheapening of the means of subsistence, makes possible the reduction of wages in terms of value. The latter causes the rate of surplus value to rise. The rising rate of surplus value holds in check the rise in the organic composition—and saves capitalism from the fate that befalls it in Heinrich's model.

Instead, over long periods of time we will probably see a gradual decline in the rate of profit that is compensated for by a *tremendous growth in the mass of profit*. If the mass of profit fails to grow for any extended period of time, capitalism will end. Therefore, we can expect the capitalists and their governments to stop at nothing to keep both the rate and mass of surplus value growing. These in a nutshell are Marx's laws of motion of capitalist development.

The tendency of the rate of profit since 1970

Marx's theory of the evolution of the rate of profit implies that if capitalism can find vast new quantities of cheap labor to exploit, the rate of profit will likely rise until the cheap labor is exhausted. Isn't this exactly what has been happening since the "Volcker shock" of 1979-82?

First, we have seen a shift of industrial production from the old centers of capitalist production—the imperialist countries of the United States, Western Europe and Japan—to low-wage, high-population countries located mostly in Asia that possess huge peasant populations. These peasants are accustomed to an extremely low standard of living and hard manual labor. They therefore provide an ideal recruiting ground for factory workers largely absent in the imperialist countries, including the traditional "white colonies" of the British Empire—Australia, Canada and New Zealand.

Indeed, the tendency of capitalist industrial production to shift from Western Europe and Japan to Asia has been going on since before the First World War.

First came the rapid industrialization of Japan that began well before the outbreak of World War I and reached its climax in the generation that followed World War II. Towards the end of the 20th century, the rapid industrialization that had completely transformed Japan finally led to a substantial rise in wages.

The rise in Japanese wages was followed by the development of economic stagnation in Japan as industrial production shifted to areas where cheap labor remained abundant. First, we saw the rapid industrialization of South Korea and Taiwan. However, the amount of potential new recruits from the peasant populations of those countries to the industrial working class was limited by their relatively small size.

As a result, we saw first a considerable rise in the wages of South Korean and Taiwanese workers and now signs of industrial stagnation in those countries. In order to fight the tendency toward declining profit rates, capital has been obliged to shift industrial production to countries with far larger populations—India and, above all, mainland China.

The rapid industrialization of China has, however, begun to cause a noticeable rise in wages in that country. There are now growing signs of slowing economic growth in China as the business press

begins to complain about shortages of labor and rising wages. In order to resist the fall in the rate of profit, capital is being forced to look for even cheaper labor, which can be found in the Indian subcontinent.

Fleeing rising wages in the, at least until recently, rapidly industrializing countries of Asia, capital has developed a huge garment industry in Bangladesh, where wages and working conditions are rock bottom and therefore ideal from the viewpoint of capital. As a result, on April 24, 2013, a whole block of factories and an associated shopping center simply collapsed, killing at least a thousand people. By cutting so many corners in the construction of these factory buildings, the garment capitalists held down the value of their constant capital—buildings are, after all, a part of constant capital—that, combined with the rock bottom wages they pay their largely women workers, effectively resisted the tendency of the rate of profit to fall.

Or at least it did until the factories simply collapsed. This is an example of capitalist production taken to the extreme—collapsing quite literally and taking the lives of a thousand or more workers with it. This horrible event shows to what extent the capitalists will go to resist the tendency of the rate of profit to fall! Not for nothing did Marx describe the falling tendency of the rate of profit as the most important law in all political economy.

Only two weeks later, an additional eight workers were killed in Bangladesh in a factory fire.

The law of the tendency of the rate of profit to fall explains why capital is so hostile to wage increases or improved working conditions and why the industrial capitalists have been driven from country to country in a never-ending search for ever lower wages and even worse working conditions.

To its great credit, Monthly Review has published many articles—for example, John Smith's article in the July-August 2012 issue, which illustrates to what extent capital has shifted industrial production from the old imperialist countries, where wages are relatively high, to the "global South," where wages are horribly low. As it stands, there is a growing gap between Monthly Review's empirical view of the world and the economic theories that Monthly Review has been supporting. (5)

As we saw last month, the rate of profit, unlike the rate of interest, is not directly observable, which explains why there can be so much disagreement among Marxists about the actual direction of the rate of profit over the last four decades. Andrew Kliman believes that the rate of profit has failed to recover from its fall in the 1970s. Bill Jeffries draws the opposite conclusion, holding that the rate of profit has risen because of growth in the rate of surplus value.

Let's imagine an alternate history. What would have happened to the rate of profit if the Soviet Union and Eastern Europe had maintained the path of socialist construction and China and Vietnam had developed along the lines of the Soviet economy rather than along the capitalist lines that they have done in reality. Let's further assume that India and Bangladesh had joined the socialist bloc, something that many believed would soon happen in the revolutionary years that followed World War II. In that case, the rate of profit would be far lower today than it actually is.

Therefore, Marx's theory of the tendency of the rate of profit to fall, which Heinrich and the editors of Monthly Review dispute, provides powerful clues as to why the policies of the U.S. and its world empire are what they are. Isn't the key to much of U.S. foreign policy found precisely in the tendency of the rate of profit to fall?

The law of the tendency of the rate of profit to fall and the fate of capitalist production

If the rate of profit continues to fall, won't this eventually cause capitalist production to break down due to the fall forcing the working class to make a revolution? This idea has been a subject of much debate in the Marxist movement for more than a century.

Rosa Luxemburg denied that the fall in the rate of profit would ever cause capitalism to collapse because, according to her, the fall in the rate of profit would always be compensated for by the rise in the mass of profit. Instead, she sought the inevitable end of capitalism in the alleged impossibility of realizing surplus value in a pure capitalist economy where simple commodity production has disappeared. Other Marxists, including Heinrich, deny that there is any tendency for the rate of profit to fall at all.

Marx, however, did believe that the tendency in the rate of profit to fall had implications for the inevitable transformation of capitalism into socialism. He wrote: "the main thing about [the horror expressed by economists like Ricardo] of the falling rate of profit is the feeling that the capitalist mode of production meets in the development of its productive forces a barrier which has nothing to do with the production of wealth as such; but this peculiar barrier testifies to the limitations and to the merely historical, transitory character of the capitalist mode of production…." ("Capital," Volume III, Chap. 15)

I will not deal with this question any further here. Instead, I will deal with it when I examine Heinrich's critique of the economics of "world view Marxism" as a whole.

Did Marx abandon his theory of the tendency of the rate of profit to fall?

In his article published in the April 2013 Monthly Review, Heinrich attempts to show that Marx "probably" pretty much gave up on his LTRPF. We, of course, cannot be certain what was in Marx's head. Heinrich believes that Marx's coworker Frederic Engels failed to realize it and edited Volume III of "Capital" to make it appear that Marx had to the end of his life upheld a theory that he had in reality largely given up on. The blundering, if well-meaning, Engels therefore helped lay the foundation of the "world view Marxism" that was to dominate the left wing of the world working-class movement for the following century.

A lot of what Heinrich writes is mere speculation. Marx lived quite close to Engels in London during his final years and presumably the two men had many discussions on political economy among other things that have not been preserved. (6) If Marx had growing doubts about the falling tendency of the rate of profit, he apparently failed to get this point across to Engels. In the end, we have no idea what thoughts occurred to Marx unless he wrote them down.

But Heinrich does refer to an obscure note by Marx meant for a later edition of "Capital" Volume I that Heinrich thinks indicates that Marx had indeed abandoned the LTRPF. Here, Marx leaves a written trail so we can examine it. As Heinrich documents, the note was written after the manuscript that became Volume III of "Capital" was written. Unlike Heinrich's *speculations* on what Marx was thinking, here we have something concrete that we can work with.

Marx writes: "Note here for working out later: if the extension is only quantitative, then for a greater and a smaller capital in the same branch of business the profits are as the magnitudes of the capitals advanced. If the quantitative extension induces a qualitative change, then the rate of profit on the larger capital rises at the same time." (Marx, Capital, Vol. 1, 781, as quoted by Heinrich)

The phrase "are as the magnitudes of the capitals advanced" indicates that Marx has in mind the rate of profit.

The context of the quote makes clear that in using the term "quantitative extension" and "qualitative change," Marx is referring to the organic composition of capital. Marx indicates that if we have two capitals of different sizes working in the same branch of industry but of equal organic compositions they will have equal rates of profit, though the larger capital will yield a larger mass of profit.

But, and here Heinrich thinks he has found something of a "smoking gun," Marx also indicates that if the larger capital has a higher organic composition, it will realize a *higher* rate of profit. But since the larger capital has a *higher* organic composition of capital, shouldn't the larger capital have a *lower* rate of profit, though it might still have a higher mass of profit?

But Marx draws opposite conclusions. Instead of seeing the rise in the organic composition of capital leading to a lower rate of profit, Marx here assumes that the higher organic composition of capital leads to a higher rate of profit. Heinrich reasons that by the time Marx wrote this note, he no longer believed in the law of the tendency of the rate of profit to fall.

Marx never got around to developing his idea. So, let's attempt to develop Marx's idea here. I am forced to do this in order to see whether the note gives any support to the claim that Marx had abandoned his theory of the tendency of the rate of profit to fall.

The context of the quote makes clear that Marx here had in mind a situation where we have two different capitals that are producing commodities with identical use values and qualities. One

capital is larger than the other. Let's call the owner of the smaller capital capitalist number one and the owner of the larger capital capitalist number two.

In this case, one where the two capitals have identical organic compositions and identical labor productivities, the larger capital will exploit more workers and will therefore realize a larger *mass* of profit for its owner, capitalist number two. But the rate of profit yielded to its owner will be *identical* with the rate of profit on the smaller capital, just as Marx indicates in the text of the note.

But suppose the second larger capital has a higher organic composition of capital. Marx here indicates that the larger capital with a *higher* organic composition of capital yields a *higher* rate of profit to its owner than the smaller capital with a lower organic composition. Heinrich reasons if Marx still believed in his law of the tendency of the rate of profit to fall, he wouldn't have written this.

What Heinrich forgets is that in formulating his law of the tendency of the rate of profit to fall, Marx had in mind the organic composition of the *total social capital*, not separate competing capitals. In the passage under consideration, Marx had in mind two different organic compositions of two different *individual* capitals operating in the same branch of industry.

Let's examine the case where the two capitals have two different organic compositions of capital. The laws of competition require that our two fellows have to sell their commodities at exactly the same price. In Volume I, Marx assumes that the industrial capitalists sell their commodities at prices that directly reflect their values. For the most part in Volume I, and indeed in Volume II as well, Marx in effect assumes that all industrial capitals have the same organic composition of capital, and have the same turnover periods of their variable capitals.

Under these admittedly highly unrealistic assumptions, the direct prices of commodities will equal their prices of production. As long as commodities sell at their direct prices, equal capitals will realize equal profits in equal periods of time.

The other consequence of the above assumption is that the commodities produced by different individual capitals have the same *individual* values. Competition indeed *tends* toward such a situation, since it forces each individual capital under pain of ruin to adopt the cheapest possible method of production—that is, produce with the lowest possible cost price.

However, competition never achieves this in practice, because the means of production are *continuously* being revolutionized, so what is the cheapest method today will not be the cheapest method tomorrow. At the same time, competition among workers and among the capitalist buyers of labor power will mean that the workers with the same skills will sell their labor power at the same price. Therefore, despite their different organic compositions our two capitalists have to pay exactly the same wage to their workers.

Since capitalist number two works with a capital with a higher organic composition of capital, we must assume that the productivity of labor of his workers is higher than the the productivity of labor of the workers who work for capitalist number one.

Under these assumptions, implicit in Marx's note, the *individual* values of commodities must diverge from their *social* values. Since the second capital with the higher organic composition of capital is assumed to be larger, we can assume that the social value will be somewhere in between the individual values of commodities produced by the two capitals but closer to the lower individual value of capitalist number two, who works with a capital that is both larger in terms of value and has a higher organic composition of capital.

Therefore, our second capitalist will be able to sell his commodities at prices that are somewhat above their individual values, yielding him a *super-profit*, while the first capitalist will be forced to sell his identical commodities well below their individual value. He will therefore realize a profit that is markedly *below* the average rate profit.

But since the productivity of the labor of the workers employed by the second capitalist whose capital has a higher organic composition will be higher, a given amount of concrete labor of those who work for the second capitalist will represent a greater amount of abstract human labor than the same amount of concrete labor performed by a worker who works for the smaller industrial capitalist, who uses a capital with a lower organic composition.

That is, a worker who works for capitalist number two will in terms of abstract human labor have a longer work day than the workers who work for capitalist number one, even though in terms of concrete labor they will have identical work days. Remember, the wages of the workers who work for capitalist number one and capitalist number two are identical. Therefore, the second, larger capitalist with a higher composition of capital will employ relatively fewer workers, and the workers he does employ will produce *more surplus value*.

It is important here to note that our second capitalist with a higher productivity of labor will enjoy a higher rate of surplus value for reasons that are different than the general tendency of the rate of surplus value to grow due to the cheapening of the means of subsistence that is the consequence of the growth of the productivity of labor. If the means of subsistence are cheapened, a capitalist boss can pay his workers less in terms of value while the real wages—the wages in terms of the use values of commodities—remains unchanged or even rise.

However, *this is not* the reason why the capitalist who works with a higher organic composition of capital enjoys a higher rate of surplus value in the case of competing capitals with different organic compositions of capital. Here we assume that our two capitalists pay the workers the same money wage, the same real wage, and, what really interests us here, the same value wage.

However, as we saw above, while the workers who work for our second capitalist—the one who works with capital with a higher organic composition—perform the same quantity of labor in terms of concrete labor, that labor counts for more abstract labor because of its greater productivity. Therefore, in terms of abstract labor—value production—the workers who work for capitalist number two perform more hours of unpaid labor and therefore produce more surplus value.

The same argument restated in the language of simple bookkeeping

In the language of bookkeeping, the cost price per commodity unit of our second capitalist c + v will be less than the cost price c + v of the first capitalist. We assume that our second fellow has a higher c, but this will be more than compensated for by a lower v. If it were otherwise, our second fellow would not work with a higher organic composition in the first place. He only uses the method that employs a higher organic composition of capital because it lowers his cost price. Like all industrial capitalists, he is interested in achieving the cheapest possible cost price to defeat the competition and maximize his profit.

Despite being able to produce commodities of a given use value and quality at a lower cost price, our second capitalist will be able to sell them at exactly the same price as the first smaller capitalist who works with a capital that has a higher cost price. Therefore, our second fellow will not only have a higher mass of profit due to having more capital but a higher *rate* of profit because his cost price is lower than capitalist number one.

Therefore, capitalist number two, who works with a capital with a higher organic composition of capital, will realize in addition to the average rate of profit an additional profit, a super-profit. Our first capitalist will have to settle for a rate of profit that is below the average rate of profit. If in time, he cannot correct this situation, he will sooner or later be forced out of business.

This does not mean, however, that if the higher composition of capital becomes generalized throughout the branch of industry in which our capitalists are working—which under the pressure of competition will indeed be the case sooner or later—the rate of profit throughout capitalist industry will rise, which is Heinrich's implicit assumption here.

Remember, thanks to competition the rate of profit will tend to be equalized not only within the branch of industry in which our two capitalists are working but between that branch of industry and all other branches of industry.

Therefore, as soon as the superior method of production employed first by capitalist number two becomes generalized, the higher rate of surplus value enjoyed by the *second capitalist will disappear*. Our second capitalist will then be obliged under the pressure of competition to lower the price of his commodities to their individual values. The *temporary* super-profit he enjoyed will disappear and he will only realize the average rate of profit. Not only that but if we assume the average rate of surplus value remains unchanged, this new general rate of profit will now be lower than before. Our second capitalist will have lost in two ways. The super-profit that he realized above and beyond the average rate of profit will have vanished, and the average rate of profit will be lower than it was before.

Therefore, contrary to Heinrich, Marx's note in fact gives *no support whatsoever* to the theory that Marx had abandoned his theory of the tendency of the rate of profit to fall. In the future, Heinrich would be well advised to drop this argument.

Some final thoughts

Not surprisingly, Heinrich is eager to choose examples that draw attention away from the huge growth in the quantity of fixed capital that marks the real-world history of the capitalist mode of production. He prefers to calculate the rate of profit by the "flow" method that divides the surplus value by the capital that is used up instead of dividing the surplus value by the total mass of accumulated productive capital.

An example of Heinrich playing down the role of fixed capital, and indeed constant capital in general, is provided by the following quote from his "Introduction":

"At the beginning of this chapter," Heinrich writes, "it was pointed out the rate of profit can be raised through the economization of constant or through the acceleration of capital turnover…." (p. 150) Heinrich leaves out the fact that the rate of profit can be raised only by an acceleration of the turnover of *variable* capital.

There is nothing very original in Heinrich's critique of Marx's law of the tendency of the rate of profit to fall. These arguments have been repeated by many academic Marxists and other Marx critics for decades. Indeed, Paul Sweezy made the same basic arguments in his "Theory of Capitalist Development," published in 1942. The real question is why Heinrich is so obsessed with disproving Marx's law of the tendency of the rate of profit to fall even to the point of committing absurdities such as assuming the dis-accumulation of capital. And why did the editors of Monthly Review choose to publish and prominently display Heinrich's far from fresh critique of Marx in their April 2013 issue?

Before we can answer these questions, we still have more work to do. We have to examine Heinrich's interpretation of Marx's theory of value as a "monetary theory of value."

Part 3, September 1, 2013

In this month's post, I will take a look at Heinrich's views on value, money and price. As regular readers of this blog should realize by now, the theory of value, money and price has big implications for crisis theory.

As we have seen, present-day crisis theory is divided into two main camps. One camp emphasizes the *production* of surplus value. This school—largely inspired by the work of Polish-born economist Henryk Grossman, and whose most distinguished present-day leader is Professor Andrew Kliman of Pace University—holds that the basic cause of crises is that periodically an insufficient amount of surplus value is produced. The result is a rate of profit too low for the capitalists to maintain a level of investment sufficient to prevent a crisis.

From the viewpoint of this school, a lack of demand is a secondary effect of the crisis but by no means the cause. If the capitalists find a way to increase the production of surplus value sufficiently, investment will rise and demand problems will go away. Heinrich, who claims there is no tendency of the rate of profit to fall, is therefore anathema to this tendency of Marxist thought.

The other main school of crisis theory puts the emphasis on the problem of the *realization* of surplus value. This tendency is dominated by the Monthly Review school, named after the magazine founded by U.S. Marxist economist Paul Sweezy and now led by Monthly Review editor John Bellamy Foster.

The Monthly Review school roots the tendency toward crises/stagnation not in the production of surplus value like the Grossman-Kliman school but rather in the realization of surplus value. The analysis of this school is based largely on the work of the purely bourgeois English economist John Maynard Keynes, the moderate Polish-born socialist economist Michael Kalecki, and the radical U.S. Marxist economist Paul Sweezy.

Kalecki's views on markets were similar to those of Keynes. Indeed, it is often said that Kalecki invented "Keynesian theory" independently and prior to Keynes himself—with one exception.

Kalecki, like the rest of the Monthly Review school, puts great emphasis on what he called the "degree of monopoly." In contrast, Keynes completely ignored the problem of monopoly.

Needed, a Marxist law of markets

A real theory of the market is necessary, in my opinion, for a complete theory of crises. Engels indicated in his work "Socialism, Utopian and Scientific" that under capitalism the growth of the market is governed by "quite different laws" than govern the growth of production, and that the laws governing the growth of the market operate "far less energetically" than the laws that govern the growth of production. The result is the crises of overproduction that in the long run keep the growth of production within the limits of the market.

This, however, is not a complete crisis theory, because Engels did not explain exactly what the laws are that govern the growth of the market. Unfortunately, leaving aside hints found in Marx's writings, Marxists—with the exception of Paul Sweezy—have largely ignored the laws that govern the growth of the market. This, I think, would be a legitimate criticism of what Heinrich calls "world view Marxism." As a result, the theory of what does govern the growth of the market has been left to the anti-Marxist Keynes, the questionably Marxist Kalecki and the strongly Keynes- and Kalecki-influenced Sweezy.

Was Kalecki really a Marxist?

In his article "Marx, Kalecki, and Socialist Strategy," published in the April 2013 edition of Monthly Review, John Bellamy Foster called Kalecki a "great Marxist economist." For purposes of this blog, I consider any person who considers himself or herself a Marxist, or is widely considered to have been a Marxist, to be a Marxist. Using this definition of "Marxist," Kalecki is a borderline case. There are considerable differences among Marxist economists as to whether Kalecki should be considered a Marxist. Many Marxist writers don't consider Kalecki a Marxist at all, viewing him as more of a Keynesian. (1)

The present-day U.S economist Paul Krugman's views have evolved leftward in recent years from a mixture of Friedmanism and pro-business neo-Keynesianism toward a radical form of Keynesianism that is now not that far from the Monthly Review school. Recently, Krugman, who has become very interested in Kalecki, wrote in his August 8, 2013, piece for the New York Times, "Kalecki was a declared Marxist (although I don't see much of Marx in his writings)." From what I have seen of Kalecki's writings, I agree with Krugman on this point.

As we saw in my post on Foster's April 2013 Monthly Review piece, Kalecki's views are very far from Marx's on the relationship between wages and prices, for example. I see little evidence that Kalecki accepted and based his work on Marx's theory of value and surplus value.

In fact, neither Keynes, Kalecki nor Sweezy based their theories of the growth of the market on Marx's theories of value, money and price. These theories were simply beyond the comprehension of Keynes. Kalecki, as far as I can see, at best completely ignored Marx's theories of value, money and price.

Paul Sweezy, in contrast, was a supporter of Marx's theory of value and surplus value. However, in his "Theory of Capitalist Development," first published in 1942, Sweezy specifically stated that he would not deal with Marx's theory of money. This did not prevent Sweezy from attempting to develop a theory of crisis in that work, an attempt largely doomed because Sweezy did not deal with Marx's theory of money and price. (2)

Sweezy (and co-author Baran) ignored Marx's theory of money—and value theory in general—in "Monopoly Capital" as well. As a result, Sweezy in analyzing the laws that govern the growth of the market was not to go much beyond Keynes and Kalecki. This is why Sweezy is often considered to be a "Keynesian Marxist."

It is certainly true, in my opinion, that the work of Keynes, Kalecki and Sweezy on markets is far superior to the work of modern "orthodox" marginalist economists. Nor of course should we deny the vast political differences that separate the pro-capitalist and pro-imperialist Keynes from the socialist Kalecki or the more radical socialist Paul Sweezy. Keeping this in mind, I think it is still possible to speak of a Keynes, Kalecki and Sweezy theory of the market.

Why can't we just combine the Marxist theory of the tendency of the rate of profit to fall—which Heinrich rejects—with the Keynes, Kalecki and Sweezy theory of the market to achieve a complete

theory of crises? The reason is that Keynes, Kalecki and Sweezy's theory of the market is not really rooted in Marx's theories of value, money and price. It is, in my opinion, simply inadequate as it stands.

Michael Heinrich's contribution

In contrast to the lack of Marx in Kalecki, we see a lot of Marx in Heinrich. This is true even where Heinrich disagrees with Marx—for example, on the historical tendency of the rate of profit. The same is true of Heinrich's theory of value, money and price. If Kalecki ever wrote anything on Marx's value or monetary theory, I am unaware of it.

Heinrich, however, in his "Introduction" has quite a lot to say on these subjects. Indeed, he calls Marx's theory of value a "monetary theory of value" in contrast to a "labor theory of value." This raises the hope that Heinrich might develop, or at least provide hints of developing, a theory of the growth of the market that finally goes beyond the Keynes-Kalecki-Sweezy model. For example, Heinrich does not ignore Marx's theory of money. For the first time in decades—maybe ever—Monthly Review Press has published a writer that deals with Marx's theory of money seriously.

If Heinrich had done this correctly, he would have plugged a huge hole in the theory of the Monthly Review school and at least helped to lay the foundation of a truly Marxist theory of the laws that govern the size and growth of the market. A huge step forward would therefore be taken toward a complete theory of crises. This would be true even if Heinrich is wrong—like I think he is—on the tendency of the rate of profit to fall.

Heinrich on value

"[T]he commodity," Heinrich writes, "is use value and value, value is an objectification of human labor, the magnitude of value depends upon the 'socially necessary labor-time' required for the production of a commodity. …" Does this pretty much summarize Marx's theory of value? Heinrich doesn't think so. "If that were actually all there is to it," Heinrich writes, "then Marx's value theory would not have gone very far beyond classical political economy." (p. 44) I agree with Heinrich on this. If this were all there was to Marx's theory of value, there would be little difference between the Ricardian and Marxist theories of value.

What is missing here, Heinrich correctly points out, is the concept of abstract labor. I believe that Marx's concept of abstract labor is the biggest stumbling block to fully understanding Marx's critique of political economy. If we fail to grasp the concept of abstract labor, as I believe Paul Sweezy pointed out somewhere, we end up reading Marx in a "Ricardian" way. We still have a powerful theory of value. But, as we know, Ricardo's theory of value was incomplete, which enabled the post-Ricardian vulgar bourgeois economists to use the contradictions of Ricardian value theory to remove any labor-based theory of value from political economy altogether, bringing classical political economy to an end.

If we do not go beyond Ricardian value theory, we will not be able to fully answer the "neo-Ricardian" critiques of Marx. More importantly, on the basis of a purely Ricardian theory of value, we will not be able to really grasp the nature of money and price. And, therefore, we will not be able to develop a complete theory of crisis. Ricardo himself supported Say's Law, after all, a mistake that flowed in part at least from the limitations of his theory of value, money and price.

Heinrich, therefore, appears to be off to a promising start in plugging a major hole in present-day Marxist theory—call it "world view Marxism" if you want. But does he deliver on his promises?

Concrete versus abstract labor, the great stumbling block

When it comes to distinguishing between abstract and concrete labor, the classical economists—or any other school of (bourgeois) economics—are of little help. In constructing his critique of political economy, Marx was generally able to build his critique on the discoveries of the bourgeois economists themselves. There was, however, one major exception: the distinction between concrete and abstract labor. There Marx had to turn to the philosophers, not to the economists. Marx, a philosophy major in college, had a great advantage here, because during his youth Germany was passing through a philosophical revolution.

The ancient idealist Greek philosophers—especially Plato (3) and Aristotle—created the concept of ideal forms. Every material object, according to the Greek idealists, is an imperfect copy of the ideal form that, according to the idealists, is the essence of reality.

This led to the idea that the material is inevitably an imperfect or corrupt copy of the ideal, at best. These ideas caused St. Paul and Christian theologians who followed him to conclude that the "present" material world is an evil copy of the true ideal heavenly reality. In contrast, the materialist philosophers, including Marx, held that the real is always the concrete—the material.

However, classification of objects and relationships—finding through abstraction the things that different objects belonging to a common class have in common—is a powerful and necessary tool for comprehending reality. Without abstraction, the world appears as a chaotic collection of unrelated objects and relationships.

The pre-Darwinian Swedish biologist Carl Linnaeus (1707-1778) created a classification system for living organisms that is used by biologists to this very day. Though Linnaeus, unlike Darwin, did not realize that all mammals are descended from a common ancestral species that lived sometime during the geological era scientists call the Triassic (252.2 ± 0.5 to 201.3 million years ago). Though not an evolutionist, Linnaeus realized it was possible to group mammals together in a common class.

For example, all animals that are classified as mammals produce milk to nourish their young. Of all the animal species on earth, no non-mammal nourishes its young with milk. (4)

Another example we can take from classical political economy itself. Adam Smith was able to group all human beings operating in a pure capitalist economy—itself an abstraction—into three social classes: the landlords, who live off rent; the capitalists, who live off profit; and the workers, who live off the wages of labor. Individual landlords, capitalists and workers as human beings differ in many ways from one another. But by abstracting everything about these individuals except the nature of their income—rent, profit or wages—Smith was able to group them into the three main social classes of modern capitalist society.

In sharp contrast, Smith's present-day "neoclassical-marginalist" successors avoid this abstraction in order to conceal the class nature of modern capitalist society to which Adam Smith drew attention.

We can apply the same method of abstraction to classify human labor. Labor as a conscious activity—as opposed to the unconscious activity of social insects like ants and bees—is essentially unique to humans, at least as far as our planet is concerned. At most, we can find only embryonic forerunners of conscious labor in certain animals such as our closest relatives, the chimpanzees.

Therefore, all forms of human labor have something in common, just like all mammals have something in common. But just as there is no abstract "mammal" except in our thought, there is no "abstract labor" as such. All actual labor is concrete labor. However, whenever we write or speak about human labor without qualifying it, we are, whether we know it or not, using the category of abstract human labor. We are leaving out the differences that distinguish one act of living labor from all others acts of living labor. This as Heinrich points out can be done not only consciously by a giant of human thought like Karl Marx but unconsciously by all people engaged in the exchange of the products of their private labors.

"Abstract labor," Heinrich writes, "is thus not a special type of labor expenditure, such as monotonous assembly-line labor as opposed to artisanal, content-rich carpentry." (p. 49)

Can abstract labor be measured?

"*[A]bstract* [Heinrich's emphasis] labor, Heinrich writes, "cannot be measured in terms of an hour of labor. …" (p. 50) Here, after a promising start, Heinrich stumbles badly. If it is true that abstract labor cannot be measured quantitatively, Marx's theory of value is in deep trouble. For example, if we cannot measure abstract labor in quantitative terms, how can we say that the value of one commodity is greater or lesser than the value of another? In what sense can a diamond be more valuable than a candy bar?

In reality, we can measure both concrete labor and abstract labor in terms of some unit of time. What is true is that in any particular instance, a given amount of concrete labor measured in terms of time will almost certainly represent a different quantity of abstract labor, also measured in terms of some unit of time. But the *total* quantity of concrete labor in a commodity-producing society will in any given period of time still equal the total quantity of abstract labor. In failing to realize that concrete labor can be measured quantitatively in terms of time, Heinrich commits a

grave error. It is at the root of all the other errors he makes in his analysis of value, money and price.

Is the magnitude of value determined in the sphere of circulation or in the sphere of production?

If, for the sake of argument, we accept Heinrich's view that abstract labor cannot be measured in terms of time, how can we say then that a diamond is more valuable than a candy bar? True, if we measured the concrete labor that it takes on average to produce a diamond and the concrete labor it takes to produce a candy bar, we would certainly find that, on average at least, it takes a vastly greater quantity of labor to produce the diamond than the candy bar. But Marx and Heinrich both agree that the value of a commodity *is not* measured in terms of concrete but abstract labor.

"Value-constituting labor-time (or the magnitude of abstract labor)," Heinrich writes, "cannot be measured before, only during exchange. …" (p. 65) In other words, according to Heinrich we know just what every child knows, that a diamond is far more valuable than a candy bar because it has a higher price. To draw this conclusion, we don't need economic science at all. Heinrich has now gone badly off track.

An important conclusion drawn by Marx in his writing on value is that you can't have value without having a value form. Next to the question of concrete versus abstract labor, this has proven the most difficult aspect of Marx's economic theory to grasp. How does Heinrich do here?

Human labor only takes the form of value in an economy based on the exchange of the products of private labor. The exchange of the products of private labor is only characteristic of a certain phase in the history of production where the products of human labor take the form of commodities.

The producers perform their labor independently of one another. They only come into contact with one another through exchange. Therefore, you cannot have value without exchange value. This much Heinrich understands, and when he understands things he explains them quite well.

Heinrich then reproduces in his "Introduction" Marx's equation of the exchange 20 yards of linen equal one coat. The exchange value of 20 yards of linen is measured in terms of coats, in this case one coat. "The coat," Heinrich writes, "counts of as an embodiment of value, but only within the form of [the] expression of value." (p. 59)

The above sentence is an awkward expression at best. Heinrich has a great gift for explaining things clearly *when he understands them*. Therefore, when Heinrich resorts to difficult sentences like this, it is a warning that he is missing something. What is embodied value? Can there be such a thing as *non-embodied value*? No there cannot. Labor is a process, so there is indeed non-embodied labor, but there can be no such thing as value that is not embodied in a commodity or service.

The 20 yards of linen is being measured here not in terms of hours of abstract labor—value—but in terms of the *use value* of the coat—in terms of its *exchange value,* not its value. It is exchange value—not value—that the very material coat represents. Value must always take the form of exchange value—some specific commodity measured in terms of that commodity's *use value*. (5)

The use value of every commodity has a unit of measurement that is appropriate for that specific commodity. With linen it is yards—or meters or some other unit of length. With gold it is troy ounces, grams, metric tons or some other unit of weight. With coats, it is the number of individual or discrete coats.

Therefore, the value of 20 yards of linen—or any other commodity, as far the producers engaged in exchange are concerned—is not measured in terms of abstract labor—the social, not the physical, substance of value embodied in a commodity, which is completely hidden from them—but in something completely different, the *use value* of a coat of given type and quality. Heinrich does understand Marx's discovery that value must take the form of exchange value. So far so good. But he does *not* grasp that the exchange value of one commodity *must always be measured in the use value of another commodity* with a different use value.

In his "Introduction," Heinrich reproduces in his book three equations of exchange from Volume I of "Capital". First, 20 yards of linen equal one coat. Then 20 yards of linen equal 10 pounds of tea. Notice that, like the coat, tea is measured in a unit appropriate to its use value, in this case a unit

of weight. Then 20 yards of linen are worth 40 pounds of coffee. Coffee also has a use value as its appropriate unit of measure—in this case as is the case with tea a unit of weight.

In principle, we can extend the list until the value of 20 yards of linen has been measured in terms of the *use value* of every commodity except linen itself, since the equation 20 yards of linen equal 20 yards of linen is a mere tautology.

"However," Heinrich explains, "the expanded form of value is inadequate: the expression of the value of commodity A is incomplete and without closure." (p. 60) Here, Heinrich is in good form again.

But what happens if we reverse our equations of exchange so that the left side becomes the right side. This, as Heinrich explains with his usual great clarity, is exactly what Marx does. 1 coat is worth 20 yards of linen. 10 pounds of tea are worth 20 yards of linen and 40 pounds of coffee are also worth 20 yards of linen. This looks very much like a price list, except instead of using some unit of currency like U.S. dollars, we are using a length of linen measured in a unit of use value that is appropriate for linen—in yards.

Marx calls this the "general form of value." Marx then replaces the 20 yards of linen with an ounce of dazzling gold, and we get the money form of value. If we define dollars in terms of a weight of gold, we get the everyday form of value expressed in dollars and cents—that is, commodity prices expressed in units of currency, whether the units are dollars, euros, yen, Swiss francs, yuan or some other currency.

But Heinrich does not reproduce the equations in his book—or at least the English version published by Monthly Review Press. And there is a reason why Heinrich leaves Marx's final equations out. The reason is his concept of "non-commodity money"—money that somehow represents value directly rather than through the *use value* of a special money commodity measured in terms of units appropriate to its use value, such as ounces of gold. We finally understand why Heinrich fails to clearly explain that the exchange value of one commodity must be measured in the use value of another.

Heinrich collapses

"Marx," Heinrich writes, "could not imagine a capitalist money system existing without a money commodity, but the existence of such a commodity is in no way a necessary consequence of his analysis of the commodity and money." And further, "But that the general equivalent must be a specific commodity was not proven by Marx, merely assumed." (p. 70)

First, Heinrich fails to understand that abstract human labor (the social not material substance of value) can indeed be measured in the unit that is appropriate for it—some unit of time. He fails to see that the value of a commodity must be measured in terms of the use value of another commodity in a unit that is appropriate for that commodity—for example, the weight of some precious metal.

In fact, if we can follow Marx's logic, we see that no matter how far the capitalist credit system develops, money in the final analysis must be an actual commodity with a unique use value that is measured in terms of the unit that is appropriate for that commodity's particular use value. This explains why gold continues to exercise its seemingly mysterious power over capitalist production and why the financial press is so obsessed with fluctuations in the dollar "price of gold," whether upward or downward.

Marx's theory of value is, according to Heinrich, "a *monetary theory of value* [Heinrich's emphasis]. …" (p. 63) Heinrich has reached a dead end. Indeed, the "monetary theory of value" is the most naive value theory of all. The very first thing we learn about commodities as small children—long before we learn the term commodity—is that they are valued in terms of money. Marx's theory of value is therefore not a monetary theory of value but among other things a theory of monetary value.

For example, 20 yards of linen equal one coat. I can actually carry around the exchange value of the 20 yards of linen by simply carrying around—or even wearing—a coat. But what I cannot do is carry around, wear or deposit in a bank an hour of abstract human labor time that is not embodied in a particular commodity of a given use value. Therefore, there can be no such thing as an isolated commodity that has a value but no exchange value.

Secondly, with the development of commodity production long before it reaches the level of capitalism—generalized commodity production where labor power itself becomes a commodity—one or a few commodities inevitably emerge as *universal* equivalents—money. If it were otherwise, every commodity would have n–1 prices where n is the total quantity of commodities of a given use value and quality. With this understanding, we break though to the surface of economic life and see that commodities have and indeed must have a monetary value. And we understand exactly what money is.

Marx's theory is therefore not a monetary theory of value but a theory of value that explains the everyday surface phenomenon of monetary value.

Heinrich goes so far as to lump together the incomplete but extremely powerful labor theory of value of the classical economists—especially Ricardo—with the marginalist theory of value. He writes, "Both the labor theory of value of classical political economy and the theory of marginal utility of neoclassical economics are pre-monetary theories of value." (p. 64) For good measure, Heinrich alleges that the view that "value is already completely determined by 'socially necessary labor-time' is also a pre-monetary theory of value."

While the view that "value is already completely determined by 'socially necessary labor-time'" does not in itself explain all aspects of value, it is still far superior to the "marginal utility of neoclassical economists" (6), not to speak of Heinrich's infantile "monetary theory of value."

Crisis theory and Heinrich's failure to understand Marx's theories of value, price and money

In his "Introduction to the Three Volumes of Karl Marx's Capital," Heinrich could and perhaps should have ignored the question of crisis theory. Marx's "Capital" was not designed to deal with crisis theory—a subject that lay beyond the work. Heinrich claims that late in his life Marx abandoned his plans to write separate books on landed property, wage labor, and the world market and crises. Instead, Heinrich believes, as the end of his life neared, Marx planned to incorporate all the other books he planned to write, with the exception perhaps of his planned book on the state, directly into "Capital." This may have been at least partly the case. It does seem that Marx included a good deal of what might have gone into a separate book on landed property in Volume III of "Capital."

But it is still true that there is no systematic treatment of crises in any of the three volumes of "Capital" or in Marx's planned book on the history of political economy of which as far as we know he drafted only one part—a history of the theories of surplus value. Notwithstanding this, Heinrich does have quite a lot to say about crisis theory in his "Introduction to the Three Volumes of Karl Marx's Capital."

Because of the extreme importance of crisis theory for the fate of modern society, it is crisis theory that overshadows both Heinrich's discussion of the theory of the tendency of the rate of profit to fall and his views on value and money. "Marx never ceased to develop his thinking on the phenomena of crises in capitalism," the Monthly Review editors write in their introduction to Heinrich's article on the rate of profit, "and never ceased to discard earlier formulations; for example, at the end of his life he was focused on questions of credit and crisis."

Obviously, the editors of Monthly Review are interested in Heinrich because they think he has something important to say on crisis theory. Essentially, the editors are using Heinrich's "refutation" of the TRPF to argue that the causes of crisis should not be sought in downward movements in the profit rate.

As we saw last month, Heinrich rejects Marx's law of the tendency of the rate of profit to fall. Heinrich, if I understand him, accepted that in the late 1850s and early 1860s Marx believed that the tendency of the rate of profit to fall due to the rise in the organic composition of capital over time was the fundamental cause of crises.

But later on, Heinrich believes, Marx became increasingly doubtful that there was in fact any tendency of the rate of profit to fall over time. Marx, therefore, was moving toward a theory of crisis based on credit. This is why Heinrich thinks that Marx filled what became Volume III of "Capital" with observations on banking, interest rates and credit. At the end of his life, Marx believed, if we are to believe Heinrich, the roots of the periodic crises that hit capitalism are to be found in the sphere of credit. It is credit, Heinrich claims, that drives the expansion of the

market, so if the market cannot keep up with rising production, the root of the problem must lie in the credit system.

In reality, Marx considered the view that the causes of crises are to be found in the sphere of currency and credit to be the most superficial theory of crisis of all.

Let's look at various theories that purport to explain the relationship between the production of commodities and market demand.

1) One such theory is based on Say's Law (of markets). It claims that it is the level of commodity production that determines the demand for commodities. In the final analysis, Say held, commodities are used to purchase commodities. Double production and, according to Say, you double demand.

A *general* overproduction of commodities is therefore impossible. At most, there can be partial overproduction of some commodities backed up by an under-production of other commodities. For example, there might be an overproduction of the means of production—Department I, the department that produces producers goods—compared to the means of consumption—Department II, the department that produces items of personal consumption.

This view is implicit in marginalism and is supported explicitly to this day by right-wing "neo-liberal" economists such as the Austrian school. Therefore, if crises occur they must involve some type of disproportionate production but never a generalized overproduction of commodities. The problem with Say's Law is that it ignores the existence of money.

2) Next is what I will call the Keynes-Kalecki-Sweezy school. This school admits that due to the existence of money an overproduction of commodities is possible. Total spending—the market—can be divided into three parts: spending by the capitalists, spending by the workers, and spending by the government. Spending by workers is pretty stable. The workers are obliged to spend their entire incomes in order to live and raise the next generation.

The capitalist with their huge incomes, however, have to decide how much of their incomes to consume and how much to save or invest. This is where difficulties begin. The supporters of Say's Law—liberal and neo-liberal economists—claim that every act of saving is also an act of investment—in Marxist terminology, productive consumption. For example, if I am a capitalist and save a lot of my income in a bank account, the bank will lend the money to another capitalist who will use the borrowed money to expand his or her business.

The same will be true if I invest a portion of my income in bonds or stocks. The reason that is true, the economic liberals argue, is that this is exactly how the capitalists grow rich. Capitalists who do not invest every cent that they do not use for personal consumption are missing an opportunity to get richer. The economic liberals hold that no capitalist can behave that way without sooner or later being eliminated through market competition.

The Keynes-Kalecki-Sweezy school rejects this. It holds that it is quite likely that capitalists collectively will attempt to save more than they invest. The capitalists can always hold on to their money as opposed to spending it on either items of personal consumption or on capital goods. If the capitalist class for whatever reason behaves this way, there will either be overproduction—crisis—or stagnation. You get unemployed workers on one side and idle factories, mines and machines on the other.

Kalecki and Sweezy explained that monopolies are much more likely to attempt to "save" without "investing" than are small capitalist producers engaged in "free competition." Therefore, both Kalecki and Sweezy held that with the growth of the centralization of capital the tendency toward crises and/or stagnation grows.

In contrast to Marx, however, the Keynes-Kalecki-Sweezy school believes that in theory it is quite possible to eliminate crises/stagnation without abolishing capitalism. The solution lies in the third part of total spending—government.

If the capitalists for whatever reason refuse to consume or invest sufficiently, the government should step in and increase its spending to whatever level is necessary to achieve "full employment" of both workers and machines. Therefore, even under the domination of monopoly capital, with its strong tendency toward crises and stagnation—excess capacity and unemployment—lack of demand is ultimately a technical problem that can be solved through a

correct policy by the government. If there is a shortage of money, the "monetary authority" can always print sufficient additional money without causing dangerous inflation right up to "full employment."

Therefore, government can always solve the problem of insufficient market demand and resulting mass unemployment as long as it is *willing to do so*. Kalecki and Sweezy believed that because the capitalists fear that government spending to achieve "full employment" will undermine their hold over society, the capitalists will use their vast political power to resist "full employment" policies. Keynes, Kalecki and Sweezy saw this resistance coming primarily from the money capitalists—or rentiers, as Keynes called them.

The rentiers alone have an *economic* interest in avoiding "full employment" policies because such policies tend to cause inflation, which though not dangerous overall does tend to erode the fixed incomes of those living off interest. In contrast, the industrial and commercial capitalists can potentially benefit from such policies because "full employment" means high sales and therefore higher profits. Also, inflation reduces real wages, which increases profits.

But because of their political fears, the industrial and commercial capitalists tend to be pulled along by the rentiers' faction of the capitalist class. A political alliance between the workers and the industrial and commercial capitalists against the money capitalists around a "full employment" policy is therefore difficult to achieve but not entirely impossible, as the U.S. New Deal under Franklin Roosevelt showed.

3) The falling tendency of the rate of profit theory of markets, largely inspired by Marxist economist Henryk Grossman, with the main leader today being Andrew Kliman, agrees with the Keynes-Kalecki-Sweezy school that the capitalists may very well not spend enough money on personal consumption and investment to ensure the full employment of the workers and means of production.

But unlike the Keynes-Kalecki-Sweezy school, the Grossman-Kliman school believes that whether the capitalists invest sufficiently to achieve capitalist prosperity is determined by the *rate of profit in terms of value*—value as defined by Marx. Keynes did not accept Marxist value theory and almost certainly did not understand it. So the Grossman-Kliman school would have had no meaning to him. It is not at all clear to what extent, if at all, Kalecki understood or accepted Marxist value theory. Only Sweezy was a supporter of the Marxist theory of value. Therefore, unlike the Keynes-Kalecki-Sweezy school, the Grossman-Kliman school, whether it is correct or not, offers a specifically Marxist theory of crises.

If profits in value terms are too low, the Grossman-Kliman school reasons, the capitalists will hold on to their money, leading to the appearance of overproduction and/or stagnation as a secondary reaction. Crises are, therefore, not so much crises of overproduction, as Marx and Engels described them, but rather crises of profitability that take the form of crises of overproduction. Therefore, the Grossman-Kliman school believes, in contrast to the Keynes-Kalecki-Sweezy school, that if the rate of profit is high enough in terms of value, the capitalists will *always* invest productively the portion of the profits they do not use for personal consumption in order to generate still more profits.

It follows, according to the Grossman-Kliman school, that increasing government spending *is not* the solution to crisis/stagnation. The reason is that in a situation of deep crisis or stagnation, the rate of profit is already too low in value terms. If the government attempts to end the crisis/stagnation by increasing spending, it must sooner or later increase taxes to finance these increased expenditures or to service its debts if it resorts to deficit spending.

If the taxes hit the workers, no increase in demand will occur because the income that is taxed away would have been spent by the workers on consumer commodities in any case. If rising taxes hit the capitalists, they will only further reduce their investments, which will only worsen the crisis/stagnation.

The only way out of a major crisis/stagnation within capitalism, according to this school, is through a radical rise in the rate of profit in terms of value. This can be brought about either through the destruction and devaluation of a great mass of the existing constant capital or by a sharp rise in the rate of surplus value. The only alternative to this is to replace capitalism with socialism.

Therefore, any "popular front" or "New Deal" attempts to form alliances between the industrial and commercial capitalists and the workers around a program to end a crisis/stagnation through increasing demand is doomed to fail.

4) In this blog, I have been developing a fourth theory that does not reject the points made in numbers 2 and 3 above but consider them inadequate as they stand. Capitalist investment is indeed very unstable as the Keynes-Kalecki-Sweezy school points out and certainly depends on an adequate—from the viewpoint of the capitalists—rate of profit in value terms, as the Grossman-Kliman school holds. An adequate rate of profit in terms of value is therefore a necessary condition for capitalist prosperity and "low" unemployment.

However, in contrast to the Grossman-Kliman school, I don't believe that production of surplus value is sufficient. In addition to producing surplus value, it is necessary to *realize the surplus value in money terms on the market*. And unlike the Grossman-Kliman school, I don't believe that an adequate rate of profit in terms of value guarantees such a "happy" outcome.

The reason is that real money must ultimately be a commodity, and the quantity of money *in terms of purchasing power* is therefore ultimately limited by the quantity of real money in existence—gold bullion. Whether enough real money exists depends in turn on the profitability—both relative to all other industries and absolutely—of the gold bullion-producing industry.

This comes down to a relationship between market prices and the prices of production that equalizes the rate of profit in all branches of industry. The prices of production are themselves forms of exchange value—direct prices modified by equalization of profits—just as much as market prices are.

Like market prices, prices of production are ultimately measured in weights of precious metal—gold bullion. This is true whether or not a gold standard is in effect. In the absence of a gold standard, the units of currency—dollars, euros, yen, yuan and so on—represent fluctuating rather than constant amounts of gold bullion, the actual money commodity.

If market prices in terms of real money—gold—are below the prices of production, capital will tend to migrate toward gold bullion-producing industry. The real money supply will swell. Since periods of low commodity prices, measured in terms of the use value of the money commodity, tend to be periods of depression and mass unemployment, the rate of surplus value will rise in such periods boosting the rate of profit in value terms. In addition, the mass of constant capital in terms of price is, to a large extent, being devalued—ultimately reflecting a devaluation of the mass of capital in value terms.

Therefore—assuming revolution does not intervene—sooner or later a new economic boom will develop as profits in both value and monetary terms soar. As Marx put it, there are no permanent crises.

However, the boom when it comes will cause prices in terms of real money—gold—to rise. Sooner or later, market prices will rise above their prices of production. This will cause capital to flow out of the gold-producing industry, causing gold production to decline. This won't lead to an immediate crisis, because first the velocity of turnover of the currency that represents gold bullion in circulation will increase, and then the expansion of the credit system system will allow the market to keep expanding for awhile.

But ultimately, the expansion of the credit system depends on the expansion of the quantity of real money. Sooner or later, a stagnation in the quantity of real money will lead to a contraction of credit and a crisis. The crisis followed by a more or less extended period of stagnation will be accompanied by a growing centralization of capital. Therefore, crises are exactly what Marx and Engels called them—crises of the overproduction of commodities relative to the ability of the market to expand.

Eventually, however, prices in terms of gold will fall below their prices of production in terms of gold, which will, combined with the destruction of real capital, both commodity capital and productive capital, and the rise in the rate of surplus value brought about by the pressure of mass unemployment on wages, lead to a situation where the demand for commodities exceeds their supply at prevailing market prices and the cycle will repeat. Capitalist production is therefore profoundly cyclical.

During the crisis, increasing government spending won't work, because there is an acute shortage of cash, and government spending will only shift the overall inadequate level of demand towards some industries and away from others. However, after the crisis, government spending that is financed through borrowing can indeed increase total demand in the economy but risks a renewed outbreak of the crisis if it is done prematurely. Even if deficit spending is not done prematurely, if the economy recovers rapidly as a result of a deficit spending program, the next crisis will come all the sooner and be more violent.

Therefore, the capitalist class and the policymakers who serve it resist policies that threaten to "overheat" the economy. As a result, during the favorable phases of the industrial cycle, reforms *can be won* but only through hard class struggle with the capitalists. The workers would be little better off than the slaves of the ancient world if they did not take *full advantage* of the favorable stages of the industrial cycle. However, over time the recurring crises will tend to grow worse, making the transition to a socialist economy the only way out.

Heinrich on crisis theory

Heinrich admits that crises are inevitable, and so despite his false theory of money he rejects theory number 1 above, based on Say's Law. Heinrich rejects number 3, the Grossman-Kliman school theory as well, because he does not believe in a downward tendency of the rate of profit. He would also reject theory number 4 because he believes that non-commodity paper money can replace real money as the measure of value of commodities. This leaves him with number 2, the Keynes-Kalecki-Sweezy school theory.

The Keynes-Kalecki-Sweezy school is, however, far from monolithic. Keynes was not a socialist of any kind and hoped his more realistic analysis of the capitalist economy—compared to traditional marginalism and supporters of Say's Law—would help to prolong capitalism indefinitely. Unlike Kalecki and Sweezy, Keynes ignored the problem of monopoly. The growth of monopoly, after all, implies that the capitalism of "free competition" is evolving towards a higher form of society and that capitalism cannot go on forever as Keynes hoped it would. Therefore, it is not surprising that Kalecki and Sweezy, who were both socialists, emphasized the role of monopoly in their analysis while Keynes did not

Interestingly enough, though Heinrich is a socialist, his views are in crucial ways closer to Keynes than they are to either Kalecki or Sweezy, as we will see in our next and hopefully final post of this series.

Part 4, September 29, 2013

Heinrich on crises—some background

A century ago, a discussion occurred in the Second International about the "disproportionate production" theory of crisis. This theory holds that crises arise because of disproportions between the various branches of industry, especially between what Marx called Department I, which produces the means of production, and Department II, which produces the means of personal consumption.

This led to speculation on the part of some Social Democrats that the growing cartelization of industry would be able to limit and eventually eliminate the crisis-breeding disproportions. This could, these Social Democrats speculated, give birth to a crisis-free capitalism, at least in theory. The revisionist wing of the International, led by such figures as Eduard Bernstein—the original revisionist—put its hopes in just such a development.

Assuming a rising organic composition of capital, Department I will grow faster than Department II. The Ukrainian economist and moderate socialist Mikhail Tugan-Baranovsky (1865-1919), who was influenced by Marxism, claimed there was no limit to the ability of capitalism to develop the productive forces as long as the proper relationship between Department I and Department II is maintained. The more capitalist industry grew and the organic composition of capital rose the more the industrial capitalists would be selling to their fellow industrial capitalists and relatively less "wage-goods" to the workers.

Tugan-Baranovsky held that capitalism would therefore never break down economically. Socialism, if it came at all, would have to come because it is a morally superior system, not because it is an economic necessity. This put Tugan-Baranovsky sharply at odds with the "world-view Marxists" of the time, who stressed that socialism would replace capitalism because socialism becomes an economic necessity once a certain level of economic development is reached.

Sweezy and Tugan-Baranovsky

In his "Theory of Capitalist Development," Paul Sweezy was horrified by Tugan-Baranovsky's arguments. Sweezy was aware that a growth of Department I relative to Department II implied that the process of capitalist expanded reproduction would gain ever greater momentum over time. This was especially true because Sweezy, like Heinrich, did not believe that there was any particular downward tendency in the rate of profit. If the tendency of the rate of profit is downward, this implies a limit of capitalist accumulation in terms of value, since new capital is overwhelmingly formed out of accumulated profits.

Sweezy, who was a child of the Depression, had good reason to assume that the kind of crisis-free, ever-accelerating economic growth foreseen by Tugan-Baranovsky was simply impossible under capitalism. The industrial capitalists, Sweezy assumed, would not be able to find markets for the tremendous rise in the quantity of commodities that would be required by Tugan-Baranovsky's model. Didn't the Depression provide proof enough? But Sweezy found that he could not prove mathematically that Tugan-Baranovsky was wrong. As a result, Sweezy found himself unsatisfied with the chapters on crisis theory contained in the "Theory of Capitalist Development."

Sweezy's big mistake: trying to explain crises without explaining money

The big mistake Sweezy made in the "Theory of Capitalist Development" was his attempt to explain crises without examining Marx's theory of money. In fact, a strong case can be made that Sweezy in this work should simply have stated that crisis theory lay beyond the scope of the work. This is especially true because the "Theory of Capitalist Development" was aimed at explaining the basic ideas of Marx's economic theory to English-speaking economics students who, like Sweezy, had been educated in marginalist theories.

Sweezy should either have tackled Marx's theory of money, which would have put him in a position to develop crisis theory if he chose to, or, alternatively, he should have avoided crisis theory altogether. Considering the nature of that work, the latter would probably have been the best course. If he had followed either of these two alternatives, the "Theory of Capitalist Development" would have been, in my opinion, a better book.

Sweezy also failed to tackle monetary theory in "Monopoly Capital." Indeed, this work, unlike "The Theory of Capitalist Development," largely ignores value theory altogether. In "Monopoly Capital," Baran and Sweezy actually say very little about crisis theory. They were more interested in explaining "stagnation"—the persistence of unemployment and excess capacity across the industrial cycle—than they were in examining the industrial cycle and crises.

Heinrich and crisis theory

In contrast, Michael Heinrich in his "Introduction to the Three Volumes of Karl Marx's Capital," unlike Sweezy in either of his two books, does analyze money. He even calls Marx's value theory a "monetary theory of value." The problem is, as we saw last month, that Heinrich analyzed money incorrectly, beginning with his failure to understand Marx's admittedly difficult—especially for the philosophically uneducated—concept of "abstract labor." Therefore, while Sweezy's failure to analyze money in developing his theory of crisis left the door open to a correct theory of crisis once an analysis of money is added to it, Heinrich's false theory of money closes the door to a correct theory of crisis.

In my opinion, Heinrich should not even have tackled crisis theory in his "Introduction." He should have limited himself to saying that while Marx provides many clues to crisis theory in "Capital," crisis theory as such lies beyond the subject matter of that work and consequently of any introduction to it.

However, since Heinrich did choose to tackle crisis theory in his "Introduction," as in his polemic against the tendency for the rate of profit to fall that Monthly Review chose to publish in its April 2013 issue, some comments on what Heinrich did have to say on crises is appropriate here.

Heinrich, despite his grave mistakes in Marxist value and monetary theory, does make some correct points about crises. First, he realizes that crises involve the overproduction of commodities. Unlike most Marxists these days, who often talk about the "over-accumulation of capital"—presumably referring to crises of overproduction—Heinrich is not afraid to use the term "overproduction" when describing the nature of capitalist cyclical crises.

Heinrich also realizes, despite his false theory of money, that the existence of money does make crises possible. He explains quite correctly that neoclassical theory implicitly assumes an economy without money. If we assume that money does not exist, then it is indeed impossible to explain how there can be a "general glut" of commodities. Heinrich explains that neoclassical economists who either explicitly or implicitly deny even the possibility of the generalized overproduction of commodities—that is, Says Law—are obliged to blame real-world crises on incorrect government policies or factors that are external to capitalism. All this is very good.

Heinrich also correctly stresses, unlike the Social Democratic "disproportionality theorists" of the era of the Second International, that crises are indeed inevitable under capitalism. Since his "Introduction" is, after all, an introduction to the three volumes of "Capital," a work that itself does not deal with crises in a systematic way, one would hardly expect Heinrich to develop a full theory of crises in his short book. Indeed, if anything, a strong case can be made that he should have avoided the subject altogether or simply limited himself to a statement that a fully developed theory of crises lies beyond the three volumes of "Capital."

Heinrich, crises, and the fate of capitalism

"In crises," Heinrich writes, "the unity between spheres (such as production and consumption) that belong together but become independent of one another (production and consumption follow different determinations) is violently restored." (p. 174) Therefore, since crises solve in their own way the contradictions of capitalism, don't crises actually strengthen capitalism in the long run? This indeed is Heinrich's position. Crises, he explains, occur under capitalism, and they are not mere accidents but are inevitable. But, according to Heinrich, crises have no revolutionary implications. Instead, they periodically strengthen capitalism by freeing it of the contradictions between production and consumption that build up between crises.

What Heinrich ignores here is the role that crises play in the *centralization of capital*. Because the ability of all existing independent industrial capitals to develop production at any given time exceeds the ability of the market to expand, each successive economic upswing must end in a crisis of generalized overproduction. (1) When after a period of prosperity and overproduction a crisis inevitably breaks out, a number of the independent capitals must be eliminated. True, with the inevitable next upswing new capitals can again appear as the market expands for awhile more rapidly than production does. This is especially true in new branches of industry. Today or at least until the very recent past, smart phones and tablet computers were examples of this.

In the very near future, this will likely be the case with fully electric cars and perhaps three-dimensional printers as well. For the moment, the markets for these commodities is not very big, but these markets will likely in the not too distant future expand dramatically. If these markets (2) turn out to be duds, no doubt other new types of commodities will appear where the market for them will for awhile grow much faster than the ability of the industrial capitalists to produce them.

In the recent past, personal computers, both desktop and laptops, were examples where capitalist industry struggled to keep up with demand. But this is no longer the case. In this branch of industry, the phase of "consolidation"—the centralization-of-capital phase—has now arrived, and some very large industrial capitals such as the Hewlett-Packard Company, the world's largest producer of personal computers, is now fighting for survival.

Indeed, when the period of the market growing faster than production in a new branch of industry ends—as it has now done in the personal computer market—the business press speaks of the industry "going through a period of consolidation"—that is, the centralization of capital increases after a period of decentralization.

Therefore, there are tendencies for both the decentralization and the centralization of capital. Marx pointed out somewhere that capitalism would quickly collapse if the tendencies toward the decentralization of capital did not exist. To understand capitalism, we must examine the

tendencies toward the decentralization of capital as closely as the tendencies toward the centralization of capital.

However, as crises show, the ability of capital to increase production overall is much stronger than its ability to expand the capitalist market. As a result, the forces that work toward the centralization of capital are over time much stronger than the tendencies toward decentralization. In "Socialism Utopian and Scientific," Engels viewed the successive crises as a spiral that is gradually closing, pointing toward the inevitable transformation of capitalism into a system of planned production by the associated producers—what we call socialism.

Capitalism comes into the world as a highly decentralized system of production where the producers relate to each other only through exchange. The system works best when it is highly decentralized. The presence of highly centralized production and monopolies undermines it. This is why the economists like to assume "free competition" and either deny altogether or at least play down the tendency toward the centralization of capital and monopoly. A good example is Keynes' "General Theory," which completely ignored this tendency.

Incredibly, as we will see, Heinrich *denies* the tendency toward the centralization of capital. This puts him at odds not only with "world-view Marxism," but with Marx himself, and above all the Monthly Review school of Paul Sweezy, Paul Baran, Michael Kalecki, Samir Amin, Harry Magdoff, and John Bellamy Foster, who all put monopoly at the very center of their analysis of contemporary capitalism. This brings us to Heinrich's theory of imperialism, or rather Heinrich's denial of imperialism.

Heinrich versus Lenin on imperialism

Heinrich explains that while there were various theories of imperialism, it is the theory of Lenin that has proved most influential. I agree. What is Heinrich's attitude toward Lenin's theory of imperialism?

"His [Lenin's—SW] analysis," Heinrich writes, "was largely borrowed from the left-liberal author Hobson [1902] and presented in a Marxist guise." Therefore, according to Heinrich, Lenin's theory of imperialism is not a Marxist theory at all but really a left-liberal one. Though he was indeed influenced by Hobson, who was a bourgeois underconsumptionist crisis theorist who also influenced Keynes, Lenin was also influenced by the German Marxist Rudolf Hilferding, particularly his book "Finance Capital." (3) This work, despite Hilferding's mistakes on the theory of money, was the first book-length attempt from a Marxist perspective to deal with the developing phenomenon of monopoly capitalism. Lenin did not hide his admiration for "Finance Capital" in his own pamphlet, "Imperialism," first published in 1916.

The fact that Lenin went on to lead the Bolshevik revolution, of course, has something to do with the influence of "Imperialism." But even if the Russian Revolution had not occurred, I think "Imperialism" would still have been an extremely important work in the history of the development of the Marxist theory of modern imperialism. To ignore the influence that Hilferding had on Lenin's theory of imperialism represents a considerable falsification of Lenin's work and the development of 20th-century Marxism—call it "world-view Marxism" if you want to.

Heinrich then summarizes Lenin's theory of imperialism as follows. Lenin, as Heinrich correctly points out, argued that an increasing number of branches of industry are dominated by a handful of corporations that are closely linked to a few giant banks, giving rise to what Lenin called "finance capital." As a result, monopolies are often in a position to slow technical progress.

In addition, the export of capital as opposed to the export of commodities grows tremendously. By the turn of the 20th century, a handful of imperialist powers had completed the division of the the entire world among themselves. From then on, re-divisions of the globe were possible. This led to World War I, and, after Lenin's death in 1924, to World War II, as the imperialist powers fought one another to re-divide the world.

Under imperialism, an upper layer of the working class, or "labor aristocracy," shares in super-profits of the monopolies, providing a material basis for opportunism. Heinrich, paraphrasing Lenin, puts the term "corrupted" in inverted quotes. Heinrich thus indicates that he disagrees with Lenin on this point. This criticism has been made by other Marxists as well, especially Marxists who live in the imperialist countries. (p. 214)

Heinrich's falsification of Lenin

Heinrich then passes from (inaccurately) paraphrasing Lenin to completely falsifying him. According to Heinrich, Lenin concluded that "a change in the capitalist mode of socialization" meant that it was "no longer value, but rather the will of the monopolists that was supposedly dominating the economy." Heinrich concludes, "What Lenin intended as Marxist analysis has ultimately *almost nothing* [emphasis added—SW] to do with Marx's critique of political economy." (p. 215) On the contrary, Lenin argued that while the growing socialization of production under monopoly capital undermines the law of value, the law of value still reigns.

Marxist criticism of Lenin's 'Imperialism'

Lenin's pamphlet "Imperialism" has been criticized by various Marxists ever since it was written almost a century ago. A common criticism of Lenin—and Hilferding—is that he overestimated the role of banking capital. That is why a tendency developed to drop the term "finance capital" in Marxist writings on imperialism after World War II. Since the crisis of 2008, however, this criticism of Lenin has faded. John Bellamy Foster has revived the use of the term "finance capital" in part by coining the new term "monopoly-finance capital."

Sweezy's criticism of Lenin's 'Imperialism' in his letters to Baran

In his letters to Paul Baran that Monthly Review published posthumously in its July-August 2012 issue, Sweezy indicated that he was confused when he first read Lenin because he assumed that Lenin was saying that pre-monopoly capitalism was not characterized by the exploitation of poor capitalist countries by rich capitalist countries. As Sweezy deepened his study of capitalism, he found that this was far from the case.

These kinds of criticism of Lenin, whether or not they are correct, have nothing in common with Heinrich's "criticism" of Lenin, which essentially claims that Lenin's "Imperialism" is virtually worthless and then falsifies what Lenin actually wrote.

Leaving Heinrich's falsification of Lenin aside, his criticism of Lenin amounts to the denial that there is any tendency for the centralization of capital. Heinrich writes: "First of all is the *alleged* [emphasis added—SW] transition from competitive to monopoly capitalism. Trends, by the way, that are not at all universally dominant and that sometimes even reverse." What Heinrich overlooks is that the tendencies toward *centralization dominate the tendencies toward decentralization*. As for an empirical refutation of Heinrich's claims, I strongly recommend "Monopoly and Competition in Twenty-First Century Capitalism," by John Bellamy Foster, Robert W. McChesney and R. Jamil Jonna," which appeared in the April 2011 issue of Monthly Review.

The export of capital and imperialism

Heinrich distorts Lenin when making a point also made by Ernest Mandel among other post-World War II Marxists (4) that "the export of capital supposedly necessitated by imperialist *policies* [emphasis added—SW] did in fact occur, but the greater portion of this capital export went not to colonies and dependent territories but to other developed capitalist countries that also pursued imperialist policies." (p. 215)

First, Lenin stressed that imperialism is not a policy at all but monopoly capitalism itself. Leaving that not unimportant point aside, no matter how much of the total capital exported goes to other imperialist countries, the capital that is exported to oppressed countries—colonies, semi-colonies and neo-colonies, where the value of labor power is far lower and the rate of surplus value consequently far higher—extracts super-profits that can be shared through various mechanisms with the upper layers of the working class. Therefore, the export of capital to oppressed countries has an economic, social and political significance that the export of capital among the imperialist countries does not have.

Finally, Heinrich tries to dismiss Lenin's analysis of imperialism by pointing out that the United States has become the world biggest capital importer. If an imperialism based on the export of capital actually exists, Heinrich implies, why is the world's most powerful imperialist power a net importer of capital?

What Heinrich overlooks is that most of the "capital" the U.S. imports is actually recycled dollars generated by the U.S. trade deficit that finances the government's budget deficit and goes mostly for the U.S. government's non-productive consumption—such as for war. This capital largely takes the form of U.S. government securities that are held by the central banks of China, Japan and a few other countries. Actually, it is what Marx called *fictitious capital*. It represents not capital at

all but merely claims on tax revenue that are capitalized at the prevailing rate of interest. If the fictitious capital represented by government bonds is excluded, the U.S. remains very much a capital exporter.

Also overlooked by Heinrich is the fact that every time the U.S. allows the dollar price of gold to rise—allows inflation to occur—it in effect repudiates part of its debt. When this happens, the U.S. ends up exploiting the nations that it "imports" capital from. This is quite the opposite of what Lenin meant by export of capital!

"Finally," Heinrich writes, "the characterization of imperialism as 'parasitic' is problematic (5) not only due to the moralistic undertone, but also it is not readily apparent why the exploitation of a foreign working class should be worse than the exploitation of a domestic working class." (p. 215) After monopoly, and closely linked to monopoly, the main feature of imperialism, according to Lenin, is parasitism. One example is today's stock market culture. Another is the decay of industrial production in the imperialist countries—though this decay is less advanced in Germany than in Britain and the U.S. So perhaps Heinrich hasn't noticed it.

Heinrich on the national question

As for why "the exploitation of a foreign working class should be worse than the exploitation of a domestic working class," we need only remind Heinrich, a German, of the lessons of the not-so-distant history of his own country—the Third Reich—not to mention pre-Nazi Germany's genocidal crimes against the peoples of Africa. Frankly, considering Germany's history, a German Marxist expressing such views is extremely disturbing.

What Heinrich is overlooking is that capitalism develops the contradiction not only between exploiting and exploited classes but between exploiting and exploited *nations*. This is a point that, to their credit, the Monthly Review school has always emphasized. We who live in the imperialist countries, whether in the United States, Germany, Japan, France, Australia and so forth, must be particularly on guard against the indifference to the national question that Heinrich exhibits here.

The reasons that Marxists since the days of Marx and Engels have supported the right of all nations to self-determination is that until national oppression is ended, there is no way that the workers of the exploited nations will understand that it is the capitalist class rather than simply its various agencies—the Nazis in the days of the Third Reich, the British, French, Yankees, Zionists and so on—that is their ultimate enemy. That is why the struggle against national oppression is such a crucial part of the "battle for democracy." If we leave out the struggle against national oppression and all racism, the whole struggle against capitalist exploitation is reduced to so many empty words.

Is capital a barrier to production?

"In the history of the workers' movement," Heinrich writes, "the notion that economic crises would ultimately lead to the collapse of capitalism, that capitalism was marching towards its 'final crisis' was widespread." (p. 175) This sentence actually contains two quite different ideas. One is the *correct* idea that crises point toward the collapse of capitalism, or as I prefer to put it, to the transformation to a higher mode of production, because crises accelerate the *centralization of* capital. Successive crises move capitalism further way from "healthy" free competition toward a highly centralized socialized system of production that is ripe for being taken over by the associated producers. After each successive crisis, capitalism becomes ever more the "Empire of the mega-corporations," as free software movement leader Richard Stallman—who is himself not a Marxist—calls it.

The other idea is the *wrong* idea that one fine day there will be a crisis of overproduction so severe that it will lead more or less automatically to capitalism being replaced by socialism. Perhaps, as Rosa Luxemburg put it, business will be so bad that the capitalists will give up and willingly hand over the keys to the factories to the workers. If we have learned anything from the "super-crisis" of 1929-33, it is that there will be no such friendly "automatic transition to socialism," even if the future brings, as it likely will, one or more crises that dwarf 1929-33 in severity and duration.

"The true barrier of capitalist production," Heinrich quotes Marx, "is capital itself." (p. 176) "A barrier," Heinrich explains, "should be understood here as a restriction: capital develops the forces of production, but this development merely serves the small-minded aim of the valorization

of capital." If this means anything, it means that capital does not in fact limit the development of production but rather simply serves the small-minded aim of "valorization of capital"—in plain language, making the rich richer.

In reality, capital acts as a major barrier to production and is far more than simply the subordination of production to the "valorization of capital," though it is, of course, that as well. The most obvious restriction of production occurs during periods of crisis such as we saw most recently in 2007-09. But even between crises, capital restricts production. The crisis proper is always followed by a more or less prolonged period of depression/stagnation where many factories and machines lie idle and the level of production is far below the physical capacity to produce. Moreover, during both the crisis and the post-crisis stagnation phase, a good deal of society's productive forces are destroyed.

Even during the phase of average prosperity that follows the crisis/stagnation phase, there is considerable amounts of excess capacity and unemployed workers—what the Monthly Review school calls "stagnation." Though the restriction on production is less dramatic than in the crisis or post-crisis stagnation phase, the forces of production are being developed at a rate far below what would be possible with a full application of the primary productive forces of labor and science.

During the boom phase that succeeds the phase of average prosperity, the forces of production develop far more rapidly and draw as close as they can, as long as capitalism exists, to what would be possible if the forces of production were being developed in the interest of the associated producers. But the boom phase under capitalism is the precursor of the next crisis.

There is another way that capitalism acts as a barrier to the development of the productive forces that Heinrich himself acknowledges. The higher the rate of surplus value—or the lower the wage in value terms—the more capital will rely on living labor and the less it will rely on developing the forces of science and technology—machinery. Therefore, the low wages in value terms that the capitalists are always striving toward act as a major brake on the "intensive" development of production.

Capital's alternatives to crises

Crises are so threatening to the capitalist social order as well as to individual capitalists that the capitalists are forced to develop alternative methods of restricting development in order to keep even worse crises at bay for as long as possible. One such method is the restriction of production. We see with cartels and trusts that production—and sometimes the application of new technology as well—is restricted in order to produce monopoly super-profits for a group of capitalists. Opposition to trusts and cartels over many decades has obliged capitalist governments to pass "anti-trust" laws that supposedly outlaw such combinations in most circumstances. Therefore, today cartelization is often carried out in the guise of enforcing so-called "intellectual property" rights.

An example of this kind of modern cartel is the British ARM corporation. ARM chips are extremely energy efficient and are becoming very powerful, threatening the Intel Corporation's x86 chip monopoly. Today, ARM chips, which most often run various versions of the UNIX or UNIX-like operating systems (6) are used in smaller computers—smart phones and tablets. These small computers are taking on many functions previously performed by PCs, and not so many years ago—large in terms of physical size but not processing power—mainframe computers.

ARM itself produces no chips. Instead, it owns the patents for the chips. The industrial capitalist corporations that actually produce ARM chips can do so only with the permission of ARM. Unlike the case with a private cartel, if a company sells ARM chips, or chips that ARM claims "steals" its "intellectual property," ARM can go to court—remember, the courts are an arm of the capitalists state—and demand that the state forcibly prevent the company from selling the chips. If the courts decide in ARM's favor, their decision is enforced not simply within a nation but internationally through the World Trade Organization. And behind the WTO lies the muscle of the military machine of the U.S. and its NATO satellites.

The ARM chip cartel is only one example. There are many others. The life span of patents is regularly being extended. As a result, the development of the productive forces is increasingly hobbled because an "innovative company" that wants to introduce some new technology has to be concerned that it will be sued in court for "stealing" some other company's—perhaps a company that simply owns patents and carries out no production of its own—"intellectual property."

But the system of "intellectual property" is not the only method that contemporary imperialism uses to hold back the development of the productive forces. Experience shows that when previously underdeveloped countries enter into a period of rapid growth of capitalist production they are transformed into engines of crisis-breeding overproduction. Therefore, imperialism—defined as the most powerful monopoly corporations and their associated banks—aims to prevent the emergence of new independent countries engaged in *capitalist* production.

The most obvious example in the world today is the current crisis in the Arab world, which at the moment is centered on the U.S. drive to overthrow the Baath Party government of Syria. Reader Alex recently raised questions about my view of the Arab revolution, so this part of my critique of Heinrich's work can be considered a reply to the questions Alex has raised.

I agree with Alex on one thing. The achievement of a united Arab republic in fact and not simply in name will not be easy. But neither was the creation of the Peoples Republic of China. Between the Taiping Rebellion in the 1850s, which can be considered the start of China's modern revolution, and China "standing up," in the words of Chinese leader Mao-Zedong, in 1949, almost a century of struggles—with many defeats along the way—intervened. The October Revolution in Russia in 1917 made the Chinese Revolution far easier—though far from easy—while the victory of the Gorbachev-Yeltsin counterrevolution has made the already difficult struggle for a united Arab republic even harder than it was before.

Many on the Internet have pointed out, correctly in my opinion, that the Arab world is now attempting to carry out a bourgeois-democratic (7) revolution, much like the U.S. carried out through both the War of Independence in 1775-1783 and the Civil War of 1861-1865 against British-backed rebel slaveholders. The Arab revolution is not yet a socialist revolution, and the prospects for an early transition from the bourgeois-democratic to the socialist revolution has been considerably set back by the counterrevolutionary destruction of the Soviet Union.

For historical perspective, the U.S. bourgeois-democratic revolution that unfolded between 1775 and 1865 took 90 years and cost the lives of more than 600,000 soldiers during the Civil War phase of the revolution alone, on top of those who died in the original war for independence. And who knows how many Black people died in their struggles against slavery that formed a crucial part of the U.S. bourgeois-democratic revolution between 1775 and 1865? Therefore, there is nothing surprising about Egypt's failure to achieve a stable bourgeois-democratic republic in the wake of the fall of the Mubarak dictatorship in 2011.

Among the results of the victory of 90-year-long U.S. bourgeois-democratic revolution was the powerful growth of U.S. capitalism, which played no small role in the successive crises of overproduction that culminated in the super-crisis of 1929-33 and, finally, the transformation of European imperialism into a satellite of U.S. imperialism.

A successful Arab bourgeois-democratic revolution would have to accomplish what the U.S accomplished between 1775 and 1865—the era of bourgeois-democratic revolution that created the United States. First, the Arab world from Algeria to Iraq would need to be united under a common government with a common currency and a common tariff policy—much like the U.S. was united and a common currency established through the revolutionary war of independence and the Civil War. The Zionist entity of Israel, which is essentially a Western "white colony" (8), needs to be abolished.

This does not exclude by any means the possibility of the Israeli Jews learning to live side-by-side with their Arab brothers and sisters, as unlikely as this may seem today as world reaction continues to reign. But this will depend largely on the willingness of the Israeli Jews, or at least a considerable fraction of them, to make a clean break with their present Zionist misleaders and their alliance with the U.S. world empire and imperialism in general—from the beginning the basis of the Zionist movement. No nation including the Arab nation can tolerate a hostile outpost in its midst. We in the West have no right to make demands on the dispersed Arab population to make any concessions in this regard.

The Arab revolution also means the removal of the oil monarchies, Saudi Arabia, Kuwait, Qatar and the so-called United Arab Emirates, whose only real purpose is to steal the nonrenewable natural resources—oil and natural gas—of the region. The longer these oil monarchies remain, the more the natural wealth is squandered, reducing the possibilities for future accelerated capitalist development in the region. It also means the separation of religion from the state and the right of

the people to support any religion or oppose all religions—which is the ultimate solution to the religious sectarian movements imperialism is using as part of its struggle to prevent the Arab nation from consolidating.

And last, but certainly not least, it means the full freedom of the workers to organize unions, political parties and a workers' press.

If this were actually accomplished—and remember, I am speaking of a *bourgeois*-democratic revolution, *not* a socialist revolution—a tremendous impetus would be given to the development of capitalist production in the region. For example, a considerable portion of the revenues that are now being unproductively consumed by the incredible high living of Saudi and other oil princes of the oil-producing regions would be converted into productive capital. A common currency would encourage trade within the United Arab Republic—or whatever it would be called. Tariffs would be used to provide protection for developing Arab industries for a transitional period, much like the fast-developing young United States used tariffs to provide protection for emerging U.S. industries.

The growth of capitalist industry in the Arab world, supported by a pro-development capitalist government, would expand the home market and inevitably compete in the world market. Arab capitalism would then become an engine of crisis-breeding overproduction that would inevitably accelerate the revival of the revolutionary workers' movement and socialist revolution on a global level.

Not surprisingly, the U.S. government and its NATO satellites are doing all they can to frustrate every move toward Arab unity. For example, in Libya they supported a "rebel" movement that has thrown that oil-rich, once developing country into chaos. In Syria, the capitalist media is openly discussing how the country is breaking up into different regions based on religious communities that have their roots in the pre-capitalist past. All this shows that the Arab world will not be able to realize its bourgeois-democratic revolution without a struggle to the death against the U.S. world empire and any other imperialism that might in the future attempt to step into its shoes, as the current events in Syria are illustrating. (9)

Though the crisis is most acute in the Arab world at the moment, the same analysis holds good for Latin America. The U.S., for exactly the same reasons, is opposed to what is called the Bolivarian revolution by progressive and revolutionary leaders in countries like Venezuela, Bolivia and Ecuador. Simon Bolivar (1783-1830), known as the "liberator" in Latin America, put forward the idea of a united Latin America, and this is what the Bolvarian leaders are putting forward today. Though the idea of a united Latin America in no way goes beyond capitalism, it is unacceptable to the Empire for the same reasons that a united Arab republic is unacceptable.

Ultimately, this applies to U.S. policy in Africa as well. Washington's arch-reactionary foreign policy does not stem from the evil nature of Americans—or English, French, German, Australian or Israeli people—but ultimately from the fact that the leading barrier to capital is capital itself.

The breakdown theory

Heinrich quotes Marx in the manuscript he wrote during the crisis of 1857-58 that was later published under the title of "Grundrisse"—not the title Marx gave it: "As soon as labour in its immediate form has ceased to be the great source of wealth, labour time ceases and must cease to be its measure, and therefore exchange value [must cease to be the measure] of use value. The *surplus labor of the masses* has ceased to be the condition for the development of general wealth, just as the *non-labour of the few* has ceased to be the condition for the development of the general power of the human [brain]. As a result, production based on exchange value collapses." ("Crisis Theory, the Law of the Tendency of the Profit Rate to Fall, and Marx's Studies in the 1870s," Monthly Review, April 2013)

Marx writing during the London winter of 1857-58 was well aware of capitalism's tremendous and continuing development of the productivity of human labor. Marx was writing before the widespread application of electrical power to production, and when the computer revolution was still largely a theoretical idea of British inventor and mathematician Charles Babbage (1791-1871) (10) and his female mathematician co-worker Ada Lovelace (1815-1852), who is often considered the world's first computer programmer. Together they are considered the world's first computer scientists. The field of artificial intelligence and robotics, which is making so much progress in our own day, was a century into the future when Marx wrote his 1857-58 manuscript.

Marx foresaw a future productivity of labor so high due to the continued growth of science—today we would put special emphasis on computer science—that humans would be free of all mind-numbing routine work. In the past, class divisions could be justified because it freed up a small portion of society to develop philosophy, art, mathematics and science.

But Marx foresaw a future where labor productivity had developed far beyond the levels of 1857-58 and even today where all human beings will finally be able to develop to their full potential and not just a few lucky members of the ruling classes. Or as Marx in his "Critique of the Gotha Program"—his last major work—indicated, it will be possible in the "higher phase of communist society" to free human beings from the enslaving division of labor, and men and women will be able to realize their full potential while being "paid" according to their full material needs. Once the productive forces reach this stage of development, direct labor in any form ceases to be the measure of wealth, and classes cease to exist.

Once society has reached this stage of development—even sometime before it—no Gorbachev or Yeltsin will be able to return society back to capitalist relations of production; such a reversal will be no more possible than a return to medieval guilds and serfdom is possible today.

Capitalism, by developing the productive forces without apparent limit, is driving society in this direction foreseen by Marx. This is the historical justification for capitalism, and this why in the final analysis bourgeois-democratic revolutions are progressive. But like the Biblical Moses, capitalism will never be able to reach the "promised land." Before we can reach the promised land where the productive forces are developed to the level that will make possible a society where all work according to their abilities and are "paid" according to their needs, capitalism as the final form of class society must be overthrown and buried.

Though capital, as Heinrich points out, has indeed developed the productive forces to levels unimaginable in any pre-capitalist era, it also has created at a high level of development barriers to production of its own. Exploring these barriers has indeed been the main subject of this blog. These barriers prevent capitalism from being the final form of human society. The task of freeing production from the specifically capitalist "barriers" to production falls to the working class.

Heinrich accepts all of Marxism–accept the revolutionary part

Heinrich specifically rejects the idea that capitalism cannot go on forever, which is so central to Marx's entire theory of capitalist economy. He concedes that the "young" Marx held such ideas, even as recorded in the 1857-58 "Grundrisse" manuscript. But in "Capital," Heinrich claims, written mostly during the 1860s, an older and wiser Marx abandoned such ideas. We saw this when we examined Heinrich's critique of Marx's famous "law of the tendency of the rate of profit to fall." Heinrich has made a considerable effort to demolish what Marx considered to be the most important law of all political economy.

"Even disregarding all detailed objections," Heinrich writes, "theories of collapse are confronted with the fundamental problem that they claim an inevitable developmental tendency that capitalism is so unable to deal with that its further existence become impossible—regardless of whatever happens in history."

If these words have any meaning at all, they mean that Heinrich is claiming, in contrast to Marx, that capitalism can last forever. Heinrich believes that while a communist society without private property and commodity production—without market relations—is morally superior and preferable to present-day capitalist society, it is not an economic necessity.

Heinrich's "new reading of Marx" is not, after all, new at all. On the contrary, it is old and moth-eaten. Bernstein, Tugan-Baranovsky and their ilk taught this exact doctrine—that socialism is above all a moral idea—more than a century ago. If this is true, according to the historical materialism of "world-view Marxism," as Heinrich calls it, capitalism will indeed last forever, or at least, as Rosa Luxemburg liked to say, "until the sun burns out."

In order to prove that capitalism can in principle last forever, Heinrich has had to put forward patent absurdities. For example, as we saw several months ago in his attempt to refute Marx's law of the tendency of the rate of profit to fall, Heinrich ended up describing a capitalism with a negative rate of accumulation—in plain language a capitalism that runs at a loss. Now that is indeed a utopia, as any practical businessperson will tell you!

If capitalism is to last forever, the number of workers who produce surplus value must grow forever, without limit. In other words, the mass of the working class—in the sense defined by physics as the resistance of a body to acceleration in response to a given force, applied to the living human beings that make up the working class—must increase without limit.

In reality long before the "mass of the workers" reaches the limits of the quantity of mass-energy in the universe, the growing centralization of capital puts a definite limit—even if we can not in advance calculate it in years—on how long capitalist production can last.

Did Marx abandon his 'breakdown theory'?

If Marx abandoned what Heinrich calls the "breakdown theory" by the beginning of the 1860s, what are we to make of this famous passage from Volume I of "Capital," published in 1867, 10 years after the "Grundrisse" manuscript was written, and then republished several times during Marx's lifetime.

"As soon as this process of transformation has sufficiently decomposed the old society from top to bottom, as soon as the labourers are turned into proletarians, their means of labour into capital, as soon as the capitalist mode of production stands on its own feet, then the further socialization of labour and further transformation of the land and other means of production into socially exploited and, therefore, common means of production, as well as the further expropriation of private proprietors, takes a new form. That which is now to be expropriated is no longer the labourer working for himself, but the capitalist exploiting many labourers. This expropriation is accomplished by the action of the immanent laws of capitalistic production itself, by the centralization of capital. One capitalist always kills many. Hand in hand with this centralization, or this expropriation of many capitalists by few, develop, on an ever-extending scale, the cooperative form of the labour process, the conscious technical application of science, the methodical cultivation of the soil, the transformation of the instruments of labour into instruments of labour only usable in common, the economizing of all means of production by their use as means of production of combined, socialized labour, the entanglement of all peoples in the net of the world market, and with this, the international character of the capitalistic regime. Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself. The monopoly of capital becomes a fetter upon the mode of production, which has sprung up and flourished along with, and under it. Centralization of the means of production and socialization of labour at last reach a point where they become incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated." (Ch. 32: "Historical Tendency of Capitalist Accumulation")

Now this is "world-view Marxism" with a vengeance!

Final thoughts on Heinrich

Heinrich, like many academic Marxists over the decades, seems to takes a dim view of dialectical materialism—often abbreviated as "Diamat"—and historical materialism. It is true that Marx didn't specifically use these terms, though Engels did. It is also true as Heinrich points out that individual Marxists sometimes explain away complex phenomena that they don't understand with sweeping expressions such as "you have got to look at things dialectically." There is also the school boy and girl type of Marxism that believes that complex scientific questions like the nature of "quantum" reality can be explained by referring to dialectical materialism without a thoroughgoing study that takes many years of the physics and associated mathematics necessary to fully grasp our present-day understanding of these questions.

But none of these observations negates either dialectical materialism or historical materialism. Dialectics is a study of the contradictions that are found in both human society and nature—on this planet and throughout the universe. Such contradictions are the basis of all motion, change and evolution, both in nature and in human affairs.

Historical materialism is the application of dialectical materialism to human society. It explains that the forces of material production make certain classes necessarily come into existence in a

particular epoch. Social classes arise not by accident, or the ill will or revelations of certain individuals, but because of the inner needs of production.

The productive forces of the classical world of ancient Greece and Rome gave rise to ancient slave society. The productive forces of medieval Europe necessarily gave rise to the relations of production that we call feudalism, while the productive forces of the civilizations of pre-Columbian America, Africa, India and China gave rise to the modes of production and class structures that characterized those civilizations in different phases of their development.

Similarly, the development of the modern productive forces has given rise to the very different relations of production and associated classes of capitalists and wage workers that dominate present-day society that we call capitalism. But Marx showed that the further development of today's productive forces will of necessity bring about the downfall of capitalist rule and the end of class society, a negation of the negation.

Starting about 10,000 years ago, the development of the productive forces of at first a few human societies began to negate the traditional communistic clan-tribal relations of production. The negation of the negation means that a new society based on productive relations that are now coming into existence will resemble the human society of 10,000 years ago insomuch as all human societies before that date lacked classes and the state. But the classless society of the future will be on a vastly higher level than the ancient society of clans and tribes based on what are by today's standards an extremely low level of labor productivity and its consequent universal poverty and ignorance.

In examining Heinrich's work, we see a consistent pattern. Heinrich has a rare if not flawless grasp of Marx's economic theory. And he also has a rare ability to explain ideas clearly—when he understands them. As long as Marx's economic research doesn't seem to point to any immediate or obvious revolutionary conclusion, Heinrich is willing to follow him. Therefore, even the well-educated Marxist can learn a lot from Heinrich's writings. But once Marx's scientific work begins to point to revolutionary conclusions, Heinrich takes flight. This is true on the question of the falling tendency of the rate of profit; the theory of value, price and money; and above all, the inevitable end of capitalist production.

There is an old expression for this kind of thing: "trimming Marx's beard." Heinrich gives Marx a close shave, making the 19th-century revolutionary with his unruly beard fit for the respectable bourgeois society of the early 21st century. Heinrich's Marx is a worthy successor to Ricardo and certainly far superior to what passes as the "economic science" taught in university economics departments. In addition, Heinrich's Marx offers a penetrating critique of present-day society, its injustices, false appearances and illusions. But the Marx who has been given a close shave by Heinrich is not a revolutionist. In his speech at Marx's funeral in March 1883, his co-worker, Frederick Engels, explained that Marx was "above all, a revolutionist." But that was, after all, the "world-view Marxism" of the workers' movement.

Notes Part 1

1 Marx and Engels agreed on a general division of labor. Marx concentrated on studying and criticizing bourgeois political economy, while Engels emphasized philosophy and the study of natural science. These included the major discoveries that were made in the natural sciences during the 19th century, the most important of which was Darwin's theory of the origin of species through natural selection and the implications this has for the origin of our own species.

Many "intellectual" Marxists—the creators of what Heinrich calls "Western Marxism"—have claimed that Engels' ideas on philosophy—dialectical and historical materialism—were at odds with Marx's own ideas. However, if this is so, Marx, who was Engels' closest personal friend, failed to notice it, or at least comment on it in any known written document. Marx and Engels did have occasional disagreements but not as far as we know on any basic philosophical questions.

2 The Frankfurt school is named after the University of Frankfurt in Germany where the Institute for Social Research, which provided employment to the members of what became known as the Frankfurt school was originally based. After the rise to power of Adolf Hitler, the Institute for Social Research re-located first to Geneva, Switzerland, and then in 1935 to Columbia University in New York City.

3 In recent weeks, long-term interest rates have begun to rise again as the central banks led by the U.S. Federal Reserve Board are attempting to end their "quantitative easing" policies without triggering a renewed economic crisis. If the attempts to withdraw from the quantitative easing policies do lead to renewed recession, or in the case of Europe a deepened recession over the next year or so, long-term interest rates might well fall below their recent lows.

4 Strictly speaking, the industrial capitalists purchase the workers' labor power with credit, not money. Only after the workers have finished their work—or to put it differently, after the industrial capitalists have consumed their labor power—do the capitalists pay the debt to the workers they incurred when they purchased the workers' labor power on credit. This is an example of money being used as a means of payment as opposed to a means of purchase. The same is true when the capitalists purchase the labor power of workers for reasons other than the production of surplus value.

It is not unknown for capitalists claiming bankruptcy to purchase the labor power—whether for the production of surplus value or for some other reason—and then fail to pay the debts they owe the workers.

5 Classical political economy did not distinguish between constant and variable capital. Indeed, it treated all constant capital as variable capital in the final analysis, because if you go back far enough, all constant capital is reduced to variable capital. Classical political economy then "explained" that capital consists of the means of subsistence of the workers! Marx completely rejected this approach. The classical economists did, however, distinguish between fixed and circulating capital.

6 The industrial capitalists don't even really know what their real rate of profit actually is in any particular year. Why is this so? Every industrial capitalist sets aside an allowance for bad debts—that is, accounts receivable that will not be collected because of the bankruptcies of the capitalist's debtors. But the industrial capitalists can only make an educated guess on what portion of their debtors will actually go bankrupt in a given year. According to basic accounting principles, the capitalists and their accountants are supposed to assume the worst case possible when determining the size of their allowances for bad debt. The reported profit both in terms of the mass and rate of profit will then actually be below the actual profit.

This is fine as long as things are going well. But what happens when capitalists facing possible bankruptcy are eager to pull the wool over the eyes of their creditors in order to hide their own difficulties. Then they have a strong incentive to *underestimate* the allowance for bad debts in order to hide losses.

Another difficulty involves an estimate—and that is all it really is—of the depreciation of fixed capital. Anybody who has ever worked in an industrial enterprise knows that there are many machines in the factory that were completely depreciated on the books years, and sometimes decades, earlier but are still being used. The depreciation of fixed capital on the books is therefore at best an *approximation* of the actual depreciation of fixed capital and is often a fiction that has little relationship to actual economic depreciation of the fixed capital. Very often, the depreciation of fixed assets is calculated in a way to minimize taxes, and not to make a realistic estimate of the mass and rate of profit.

Capitalist corporations often have massive incentives to issue misleading profit reports. For example, they may deliberately understate profits in order to minimize taxes, and when unions are strong, to prevent workers from demanding wage increases. At other times, corporate managements are under great pressure to overstate profits in order to "beat their numbers on Wall Street and other stock exchanges." If they don't "beat their numbers," the stock of their corporations will plunge on the stock exchange, setting the stage for either a rebellion by the board of directors or a hostile takeover that ends in managements' ouster.

By manipulating the *estimates* of the depreciation of fixed capital, the allowance for bad debts, and expected sales, the managers of corporations can produce widely differing estimates of total profits and rates of profit.

Therefore, official profit reports from publicly traded corporations—non-public companies do not even have to issue profit reports—have to be taken with great caution in estimating the current stage of the industrial cycle and general state of business, let alone in trying to demonstrate Marx's law of the tendency of the rate of profit to fall.

7 Bourgeois Marx critics often claim that Marx made a mistake when he assumed that prices equal values—or more precisely prices equal direct prices. They claim that Marx simply overlooked or was unaware of one of the most basic laws of economics, the tendency of competition to equalize the rate of profit among different branches of production.

If Marx had made such an elementary mistake, this would show that he was at best an uneducated amateur when it came to economics. In fact, Marx knew exactly what he was doing when he assumed that prices equal values in Volume I as well as in Volume II of "Capital." By making this admittedly unrealistic assumption, Marx was able to probe far deeper into the essence of the capitalist economy than if he had assumed from the beginning that prices equal prices of production.

Not only was he able to show the real origins of surplus value in the unpaid labor of the workers—something that would not have been possible if he had assumed prices of production—but he was able to uncover the fact that it is only the turnover of variable capital that affects the rate of profit. But if we use prices of production, it *appears* that all parts of capital produce surplus value. If all parts of capital produce surplus value, then the turnover rate of all parts of capital would affect the rate of profit

Notes Part 2

1 This is what the common term "the cost of production" blurs, since we don't know whether it refers to the cost that the capitalist incurs or the cost society incurs. Marx's theory of surplus value demonstrates that these are and must be quite different things.

2 Nothing illustrates this better than the videos taken in the early 1980s of U.S. steel factories being blown up by their capitalist owners because the value of the capital that these factories once represented had vanished.

3 Here we have major pieces of a complete theory of capitalist crises. The main thing still missing is a theory of what determines the rate of growth of the markets for commodities. Once we have solved the laws that govern the expansion of markets, we have developed a full theory of capitalist crises.

4 This is not say capitalism will necessarily actually collapse like it does in Heinrich's model. If the productive forces were to develop in the way they do in Heinrich's model—labor productivity grows so fast that the number of productive workers declines—the resulting rise in unemployment would cause wages *in terms of value* to fall so sharply that the resulting rise in the rate of surplus value would once again slow the development of the productive forces sufficiently to allow the quantity of productive workers to grow once again, allowing the mass of surplus value—profit—to resume its positive growth.

However, what this does demonstrate is that if capitalism is to last forever, there must be a continuous increase in the quantity of productive workers, which means the population must grow forever—not for Malthusian reasons but because of the needs of the capitalist mode of production.

5 One of the reasons why Foster may have published the Heinrich piece was that Paul Sweezy in his "Theory of Capitalist Development" also drew the conclusion that the tendency of the rate of profit is indeterminate for much the same reasons that Heinrich gives. Foster is perhaps partially motivated by his loyalty to Sweezy's legacy. However, this hardly requires that Foster defend everything Sweezy ever wrote; Sweezy himself didn't defend everything he ever wrote. No serious thinker including Marx did that.

However, it is true that Sweezy, much like Foster today, was a supporter of the Popular Front, or its American expression—New Deal politics. I will examine this question at end of the series of posts on Heinrich.

6 If only something like the present-day U.S. National Security Agency had existed, we would probably have a virtually complete record of Marx and Engels' private conversations on political economy and all other subjects they discussed as well. Indeed, we would have records on every other private conversation likely to be eavesdropped on. But alas, Marx and Engels lived before the age of modern surveillance technology, depriving us of records of their private conversations, which might have thrown much light on this question!

Notes Part 3

1 If Kalecki did declare himself a Marxist I would have to classify him as a Marxist as defined for purposes of this blog. Kalecki spent the last 15 years of his life in his native Poland when Poland was ruled by the avowedly Marxist-Leninist Polish United Workers Party, so Kalecki would have been under some pressure to describe himself as a Marxist in that period. I am not sure whether Kalecki ever described himself as a Marxist during the period when doing the work that has so influenced the Monthly Review school. If any reader of this blog has concrete knowledge of this, they should post a comment. In any event, I think we should judge economists not by whether they call themselves Marxists but to the degree their ideas conform to the realities of the capitalist system.

2 In the 1930s, when he was in transition from the marginalist theories he learned at Harvard to Marxism, Sweezy wrote quite a lot on price theory. He is even the discoverer of the "kinked demand curve" that was part of the attempt to extend marginalist price theory to the case of monopoly. This work of Sweezy's, however, is rooted in marginalism, not Marxism.

3 Philosophy is divided into two great factions—the materialists and the idealists. The materialists believe that matter—and since Einstein matter-energy—is primary and that consciousness and mind ultimately derives from matter. The idealists, in contrast, view mind as primary and matter as secondary, derivative, and ultimately inferior.

The earliest Greek philosophers—sometimes called pre-Socratic philosophers—were materialists. But starting with Socrates, Greek philosophy made a great turn to idealism with Plato being the most consistent idealist among the ancient philosophers.

4 Birds like mammals are warm-blooded but don't nourish their young with milk, while the Australian spiny anteater and duckbill platypus lay eggs but like all mammals nourish their young with milk.

5 I think Marx chose a coat to serve as the "equivalent"—or proto-money form of the commodity—precisely because coats would make a worse money than linen. Linen is far more homogeneous than coats are—just like abstract as opposed to concrete labor is. The point Marx is making is that in principle any commodity could serve as money, though linen would make a better money than coats, and the precious metals in general make better money commodities than linen because they can be melted down, divided and then recombined. Gold is a better money than other precious metals because it does not tarnish and can therefore be hoarded indefinitely without any change in quality.

6 The marginalists themselves were forced to give up the concept of marginal utility—though it is still used in some introductory textbooks—because it proved impossible to reduce utility to a homogeneous substance like Marx was able do with abstract labor.

Notes Part 4

1 The inflation of the credit system can postpone the outbreak of a crisis but only at the cost of making the crisis worse when it does break out. While Heinrich sees the credit system as the cause of the long-term growth of the market, he cannot really explain why the market growth is necessarily less than the growth of production. This is because of the flaws in his theory of value and his consequent failure to understand Marx's theory of money. Marx held that far from being a solution to the problem of overproduction, the expansion of credit exacerbates it.

2 Three-dimensional printers take digital computer files, perhaps downloaded from the Internet, made up of ones and zeros, on one side, and some raw material like powdered plastic, on the other, and produce three-dimensional objects like plastic cutlery. There is some speculation that the machines will be sold in large numbers to consumers, who will use them to produce plastic objects at home as a hobby. Such production is not capitalist production because it is not production for sale nor does it exploit wage labor.

But these printers also have the possibility to revolutionize the production of many commodities in capitalist industry and radically cheapen many commodities—eliminating many jobs in the process. If these possibilities pan out, the now very modest demand for three-dimensional printers would explode, possibly in the very near future.

3 Rudolf Hildferding's (1877-1941) work "Finance Capital" was the first major work written from a Marxist standpoint to analyze the new phenomena of monopoly capitalism. Despite Hilferding's mistake on the theory of money, the work exercised great influence on Lenin, and all later Marxist studies of monopoly capitalism, including those of Paul Sweezy and other members of the Monthly Review school.

Hilferding, after the split in the international workers' movement growing out of World War I and the Russian Revolution, stuck with the Second International—the Social Democrats—and opposed the Communist International. Hilferding, who was of Jewish origin, died while he was in the custody of the Gestapo—the secret political police of Nazi Germany—in 1941.

4 Mandel, unlike Heinrich, never claimed that imperialism was a "policy."

5 Whenever Heinrich is stuck in an absurdity, such as denying the centralization of capital or the increasingly parasitic nature of present-day monopoly capitalism, he throws in the term "problematic." This, at least to me, is very annoying. But perhaps the text reads better in German than in English.

6 Apple Inc. uses its own proprietary version of Unix in its iThings—iMacs, iPhones, iPads, iPods—while most other smart phones and tablet computers use a variant of the Unix-like Android operating system. The only non-Unix-like operating system in contention is the Microsoft Windows operating system, which has long dominated the personal computer market but has so far been poorly received in the smart phone and tablet computer markets.

7 The term bourgeois-democratic revolution is often shortened to, simply, "democratic revolution." This is well and good as long as we know what it means. But it can lead to confusion if "democratic revolution" is conflated with "socialist revolution." As used by Marxists, the democratic revolution is aimed at establishing the best possible conditions for the development of *capitalism*, as well as the working class's struggle *against capitalism*—culminating in the majority—the working class and its allies—taking power, finally achieving victory in "the battle for democracy" as Marx and Engels put it in the "Communist Manifesto." Capitalism with all its "beauties" is the legitimate child of all bourgeois-democratic revolutions, while "winning the battle for democracy" by the working class opens the road to the construction of socialism.

The democratic revolution cannot overcome any of the basic evils inherent in capitalism such as class rule, unemployment, periodic economic crises, war, national oppression and racism. In order to achieve that, we need a socialist revolution led by the working class. Whether any section of the Arab bourgeoisie or petty bourgeoisie will be able to lead the democratic revolution, or whether the tasks of the democratic revolution will fall to the working class, as turned out to be the case in Russia, is a question that I will not examine here. I simply explored the consequences of a victorious Arab bourgeois-democratic revolution to explain why U.S. imperialism is such an enemy of the Arab revolution.

8 By white colony, I mean a population that comes from outside the country and attempts to drive out or kill off the native population rather than exploit them. An example of a "non-white" colony is India under British rule, where the colonizers viciously exploited the native population and indeed, while killing many of them, never attempted to replace the Indian population as a whole with British colonizers.

Saying Israel is a "white colony" does not mean that the Israeli rulers have no will of their own or simply passively reflect the interests of the "mother country"—in this case, currently, the United States. On the contrary, the history of Britain's white colonies has shown that most of them have shown a tendency to develop their own interests that have often been in conflict with the mother country. In the late 18th century, 13 of these "white colonies" not only developed their own interests, they threw off the rule of the "mother country" altogether and established a rival capitalist country that eventually grew into the most powerful empire the world has ever seen, completely overshadowing the old "mother country."

Could something similar happen in the case of Israel? This is the dream of the most fanatical Zionists, but it has no realistic chance of ever being realized. Why is this? In Israel, a few million Jews face hundreds of millions of hostile Arabs and perhaps a billion hostile Muslims. No wonder that Israel is obliged to look to the U.S. for protection, and indeed its dependence on the U.S. has tended to grow over time. Leaving morality aside, the only way the Israeli Jews can in the long run survive in the Middle East is to make their own peace with the Arabs by breaking with racist Zionism and welcoming the exiled Palestine Arabs back to their homeland. They must prove to the Arabs that their presence in the Middle East is a positive good from the Arab point of view and not an evil that the Arabs must reluctantly accept. If the Israeli Jews cannot rise to this level, they simply have no future in the Middle East.

9 I am no expert on Syria. I do know that many Western socialists—especially but not only those associated with what is known as the "international socialist" trend founded by the British Marxist Tony Cliff—are passionate about supporting the Syrian rebels and have expressed great hatred toward the Baath Party and its leader, the current Syrian president, Bashar Al-Assad.

As far I can tell from the Internet, there are roughly three major Syrian "parties" fighting for control. One is the current ruling Baath Party, which has existed since the 1930s and has a pan-Arab ideology. This party's stated program is broadly progressive in the sense of the Arab bourgeois-democratic revolution.

The Syrian Communist Party, the only workers' party with any significant support among Syrian workers, is allied with the Baath Party in the current armed struggle, though it is critical of many of President Assad's policies. In addition, there are two small socialist Syrian groups that strongly support the "moderate rebels." One is associated with the International Socialist Tendency and the other supports the Fourth International, headed for many years by the late Marxist economist Ernest Mandel (1923-1995). However, as far as I can tell from the Internet—and of course I am not on the scene and could be misinformed—these pro-rebel socialist groups have little support in the Syrian working class, among the rebels themselves, or in Syrian society generally.

The rebels are themselves sharply divided between what the U.S. media call the "moderate rebels" and the so-called jihadist rebels. The latter are themselves divided into two main groups: Al-Nusra and the Islamic Emirate of Iraq and the Levant. I admit I have no idea what the differences are between these two groups. The U.S. media often uses the term "moderate" as a code word for "pro-imperialist." The "moderate" rebels organized around the Free Syrian Army, or FSA, seem to be based largely on the Muslim Brotherhood.

The leaders of the "moderate rebels" are so pro-imperialist that they have called for the bombing of their own country. They have demanded a "no-fly zone" on the Libyan model. As far as I can see, the "moderate rebels" have put forward no democratic program, while their supporters have shouted such slogans as "Death to the Alawites," the religious sect that the Assad family belongs to.

This genocidal slogan is hardly democratic considering that about 10 percent of the Syrian population are from Alawite families. According to U.S. media reports, the leadership of the "moderate rebels" are extremely disappointed that President Obama did not go ahead with a threatened military strike against Syria. These "moderates" were apparently counting on U.S. and or NATO to turned the tide of battle in their favor through a massive military intervention. Instead of launching a massive military attack on Syria, President Obama agreed to a Russian proposal that involves Syria agreeing to being unilaterally stripped by the United Nations of all its chemical weapons while its neighbor Israel, not to speak of U.S. and NATO, remain armed to the teeth with chemical, biological and nuclear weapons as well as "conventional" weapons.

Reports in the U.S. media have indicated that some supporters of the rebels expressed opposition to Obama's threatened military attack. It seems likely that if U.S. or NATO air strikes actually were to occur, a considerable portion of the rebel rank and file would break with their pro-imperialist misleaders and defend their country.

The Syrian Communist Party, assuming that they are following a Marxist policy—or any other group following a Marxist policy—should facilitate this process by putting forward a program that reflects the real interests of the rural poor and tribal people that make up the rebel rank and file—if necessary in opposition to the policies of President Assad and his bourgeois-nationalist Baath Party. In this way, the rural poor can be separated from the Muslim Brotherhood and the pro-imperialist "liberals" and united instead with the urban working class and its urban poor allies in the struggle to defend Syria's independence from the imperialist efforts to eradicate it.

There are other rebels associated with various Islamic groups that want a state based on religious Sharia law—as many of the "moderate" rebels do as well. While Sharia law was a great step forward relative to the earlier rule of the Christian church in the Middle Ages, it represents a great step backward by the standards of present-day society and the gains that women have won under Baathist rule. For example, under Sharia law, my own atheistic views would be banned, and I would have to join some monotheistic religion, either Islamic, Christian or Jewish.

But the leadership of these "jihadist" rebels are reportedly less enthusiastic about the bombing of their own country than the "moderate rebels" around the FSA who are so strongly supported by the U.S. media, the International Socialist Tendency and the Fourth International. Perhaps the "jihadists" are well aware of the attacks against Muslims in the West and wonder what kind of "allies" the U.S. and NATO really are.

Oddly enough, the International Socialist Tendency, as well as the supporters of the Fourth International, have made clear that they do not support all the rebels but only the pro-imperialist rebels who want the U.S. and NATO to bomb their own country.

Unlike the FSA rebel leaders themselves, the International Socialist Tendency and Fourth International supporters are opposed to the imperialist bombing of Syria. That is all to the good, though it puts them at odds with the leadership "party" that they support in Syria.

But why should socialists support the *most pro-imperialist* party in Syria in the first place? If the analysis of this blog is correct—and this analysis is based on the examination of the laws that govern the capitalist economy and not on any special knowledge of Syrian or Arab politics and society—the pro-imperialist FSA—Muslim Brotherhood—rebels are actually the most *reactionary* of the contending parties in Syria, in the sense that their politics are most at odds with the objective needs of the *bourgeois-democratic* revolution of both Syria and the Arab world as a whole.

10 Babbage was a strong supporter of industrial capitalism. Though he supported capitalism against all forms of pre-capitalist reaction, this didn't make him a friend of the working class.

He attempted to build what would be in effect a general-purpose digital computer using steam power. While this was possible in principle, such a computer would be about as big as a football field and would be unbelievably slow by the standards of any electronic computer that has ever been built. Before the general-purpose digital computer became possible, the use of electricity had to be developed far beyond the telegraphy it was used for when Marx was writing the "Grundrisse." For example, vacuum tubes—or valves as the English call them—had to be invented. Today, all modern computers use transistors, and vacuum-tube computers have long been obsolete. None of this detracts from Babbage and Lovelace's genius, quite the contrary.