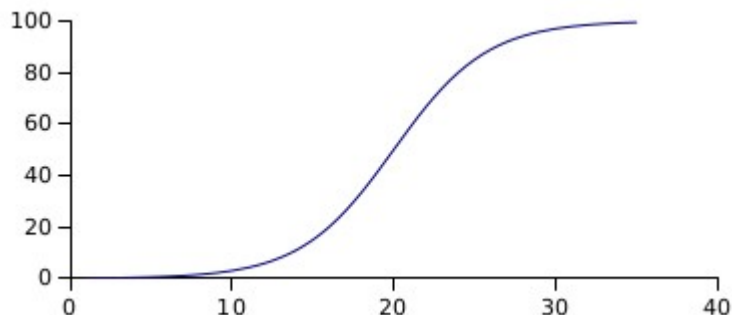


Paul Cockshott's Blog

Comments on economics and politics

SOCIALISM, TECHNOLOGY

Big Data and Super-Computers: foundations of Cyber Communism



Date: July 24, 2017 **Author:** Paul Cockshott  **20 Comments**

I shall be elaborating on the following theses:

- The inability of 20th century socialism to progress to communism led to the crisis of the USSR.
- Communism requires a definite stage of development of technology.
- This stage was only reached at the very end of the 20th century.
- But this problem of technical adequacy can not be understood in just humanist terms of 'plenty' or in terms of 'the realm of necessity'.

In the process I will address what I see to have been misconceptions about communism on the part of the Soviets, before going on to look at the transitional stages a modern economy would need to achieve communism.

1 What is a mode of production

Is Socialism a mode of production?

The standard account, derived from Stalin, is that a mode of production is a combination of productive forces and production relations:

Mode of production = productive forces + production relations

This was summarised by Stalin as

the productive forces are only one aspect of production, only one aspect of the mode of production, an aspect that expresses the relation of men to the objects and forces of nature which they make use of for the production of material values. Another aspect of production, another aspect of the mode of production, is the relation of men to each other in the process of production, men's relations of production. [19]

This has been the orthodoxy, but I think it is wrong. Another meaning of the phrase mode of production is, according to Marx, the mode of material production. This mode of production, according to Marx's 1857 preface, conditions the social and political life. The relations of production only have to be appropriate to the productive forces.

In the social production of their existence, men inevitably enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production of material life conditions the general process of social, political and intellectual life.[12]

This conception had been expressed by Marx ten years earlier in his pithy phrase :

The hand mill gives you society with the feudal lord; the steam mill, society with the industrial capitalist. [11]

In this conception the essential feature of capitalist production is that it is machine industry, production by means of (steam) powered machines. But this should give us pause to think, for is not socialism also characterised by machine production, by the use of artificial forms of energy?

Recall that Lenin expressed this very idea when he gave the following equation:

Socialism = Soviet power + Electrification

Since the difference between steam power and electrical power is secondary, and we know that capitalist economies also use electricity, the important point is that capitalism and socialism share the same mode of production.

We can summarize this in two equations defining the mode of production:

Capitalist mode of production = powered machine industry.

Socialist mode of production = electric machine industry.

So the socialist mode of production is a subset of the machine mode of production – that which uses nationwide electric grids. Hence the first aim of the USSR was to set up GOLERO the electricity plan.

Socialism and capitalism differ not so much in mode of production as in the social relations.

Capitalist production relations =

Commodity production +

Private ownership +

Wage labour+

Market anarchy

Socialist production relations =

Commodity form of consumer goods+

Public ownership +

Wage labour +

Planning

The significant differences are firstly that socialist production relations can restrict the commodity form to the consumer goods market. Within the publicly owned sector there is no change in ownership as means of production go from one state factory to another – hence these goods are not commodities. Secondly the socialist economy substitutes public for private ownership. Third it replaces the anarchic market with directive planning. These are differences in production relations but not in the mode of production.

2 Marx vs USSR on Communism

Marx, in Critique of the Gotha Programme presents a three stage process of transition to communism.

1. Capitalism
2. First stage communism No commodities or money, no private owners, payment in labour tokens according to physical work done. Public services paid for by an income tax on labour incomes.
3. Second stage communism Payment according to need, large families etc get higher incomes.

Note that even in the first stage Marx assumes the abolition of money. There is also – contrary to the impression spread originally by Bukharin[1] – no mention in Marx of the idea that all goods will be distributed for free in a communist system. Distribution according to need is based on an objective assessment of need – life saving healthcare may be freely available to those who need it, but cosmetic surgery -no.

Now let me contrast this scheme with what became the Soviet orthodoxy derived variously from the Bukharin text mentioned earlier and from Stalin[18]. Again we have a 3 stage model

1. Capitalism
2. Socialism: Commodities and money are kept, state+coop ownership, payment in money wages according to work done and status of work (male jobs paid more than female), indirect taxes on sales not income tax provide the main state revenue.
3. Communism: Commodity production replaced by barter, free distribution of many goods, full state ownership.

The significant differences are that the Soviets identified the first stage of communism with something much less radical : socialism. They forget that Socialism was a much wider trend than communism, and that in the Communist Manifesto a whole chapter was devoted to explaining how the Communists were different from socialists. The socialism of the USSR was essentially the 1902 socialism of the still revolutionary Karl Kautsky[17,10]. All the key elements were in that work by Kautsky. The pretence that a socialist monetary economy was the same thing as a non monetary communist one, was a misrepresentation.

3 Why did USSR not reach communism?

The material and technical basis of communism will be built up by the end of the second decade (1971-80), ensuring an abundance of material and cultural values for the whole population ; Soviet society will come close to a stage where it can introduce the principle of distribution according to needs, and there will be a gradual transition to one form of ownership-public ownership . Thus, a communist society will in the main be built in the U.S.S.R . The construction of communist society will be fully completed in the subsequent period. (Programme CPSU 1960)

The USSR in 1960 was still very ambitious. They had a very optimistic time table for overtaking US and in many key industries this goal was in fact achieved. The transition to communism was seen solely in terms of quantity of output not in terms of changed social relations. A key technical development was still seen to be electrification: Electrification, which is the pivot of the economic construction of communist society, plays a key role in the development of all economic branches and in the effecting of all modern technological progress. It is therefore important to ensure the priority development of electric power output. It is notable that no particular attention was paid to information technology as an enabling technology for communism.

How well did they actually do? Well table 1 shows that in their key goal of electricity the USSR was already by 1990 doing better than the leading European capitalist countries had achieve a quarter century later.

Table 1: Comparison of power available to different economies converted into human labour effort equivalents per head of population. Assumption is that a manual worker could do 216 KWh per year of work.

	year	Gwh	human labour
			equiv per head

China	2014	5665000	19.2
US	2014	4331000	63.1
EU	2014	3166000	19.7
USSR	1990	1728000	27.3
USSR	1940	48000	1.2
USSR	1931	8800	0.3
Russia	1913	1300	0.0
GB	2014	338000	24.8
GB	1907	61320	7.3

Was this enough power for communism?

What about food production?

How well did the USSR achieve its goals there?

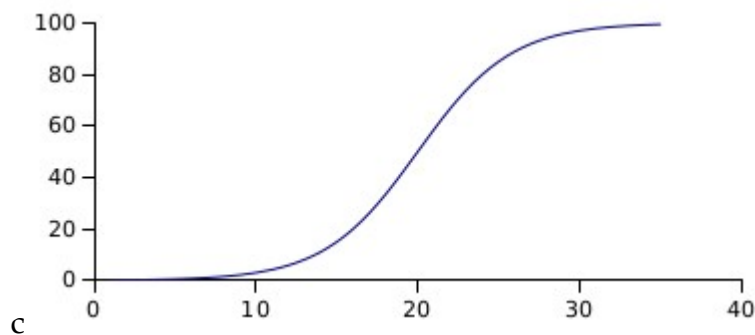
Pretty well according to Table 2.

Table 2: Comparison of late Soviet with UK, Brazil and US annual per capita output of major protein foods. Note that for all categories the late USSR had better figures. Sources [14], FAOSTAT and USDA databases.

	Year	Meat	Milk	Eggs
		Kg	Kg	Units
USSR	1988	69	375	299
Brazil	1988	49	96	163
UK	1988	55	265	201
USA	1988	58		
USA	1990			236
USA	1995		259	

Was this enough food for communism?

But Soviet growth slowed down. The Khrushchev era had assumed continued exponential growth and had defined communism in terms of achieving exponential growth. The assumption of exponential growth was unrealistic. Actual growth can not be exponential for long, it inevitably starts to slow down. Actual growth tends to follow a logistic curve like this.



Khrushchev s Communism downplayed social change

Under communism there will be no classes, and the socio-economic and cultural distinctions, and differences in living conditions, between town and countryside will disappear ; the countryside will rise to the level of the town in the development of the productive forces and the nature of work, the forms of production relations, living conditions and the well-being of the population. (Programme CPSU 1960)

But the concrete programme gave no measures to abolish classes or abolish money and commodities. When the impossibility of continued 10% growth made itself felt, this was seen as the failure of communism, since social change had not been at its core. If society was not moving forward, it failed to morally inspire people and by the late 1980s communists could not resist the pressures from capitalist ideology.

4 Bourgeois theorists said Communism impossible

Von-Mises

Only money provides a rational basis for comparing costs Calculation in terms of labour time impractical because of the millions of equations that would need to be solved.

Hayek

Market is like a telephone system exchanging information to tie up economy Only the market can solve problem of dispersed information

There was some limited truth in this. Marx s communism was not yet possible in 1960 due to limitations in information processing. Marx s Communism stage 1 assumed

- No money
- Calculation in terms of labour time and use values
- Payment in labour credits

But to work out the labour content of every good required the solution of millions of equations. 1960s computers were not powerful enough. This had its effects in limitations of Soviet Socialism.

Money was still needed for economic calculation even in the planned sector. There was a problem of aggregation in planning which required setting monetary objectives. There was an inability to handle disaggregated plans at all Union level. Money was still needed for wage payments. But cash led to black markets, corruption and pressure to restore capitalist relations.

5 Key developments in productive forces since 1960

But since 1960 there have been a set of technical advances that allow us to remove these old objections to communist economics.

Internet

which allows real-time cybernetic planning and can solve the problem of dispersed information – Hayeks key objection

Big-data

allows concentration of the information needed for planning.

Super-computers

can solve the millions of equations in seconds – von Mises objection

Electronic payment cards

allow replacement of cash with non transferable labour credits.

Computational complexity

How easy is it to solve the millions of equations. There are some problems that become computationally intractable even for the largest computers. Is economic planning or the use of labour accounting like that?

No it is not. In a series of papers[2,6,5,4,9,8], Allin Cottrell, Greg Michaelson and I have shown that the computational complexity of computing labour values for an entire economy with N distinct products grows as $N\log(N)$ This means that it is highly tractable and easily solved by modern computers

Direct Democracy

It is also possible to harness computer networks and mobile phone voting to allow direct democratic control by the mass of the population over the economy. This allows major strategic decisions taken democratically, questions like: How much labour to devote to education? How much to health, pensions, sick? How much to environmental protection? How much to national defence? How much to new investment?

All this can be done by direct voting using computers or mobile phones every year. We have prototyped software to aggregate the wishes of the public this way[7,15,16,3].

Equivalence

Marx s principle was that non-public goods should be distributed on the equivalence principle – you get back in goods the same amount of labour – after tax – that you perform. Hence goods are priced in labour hours. Cybernetic feedback from sales to the plan adjusts output to consumer needs as shown in Figure 1.

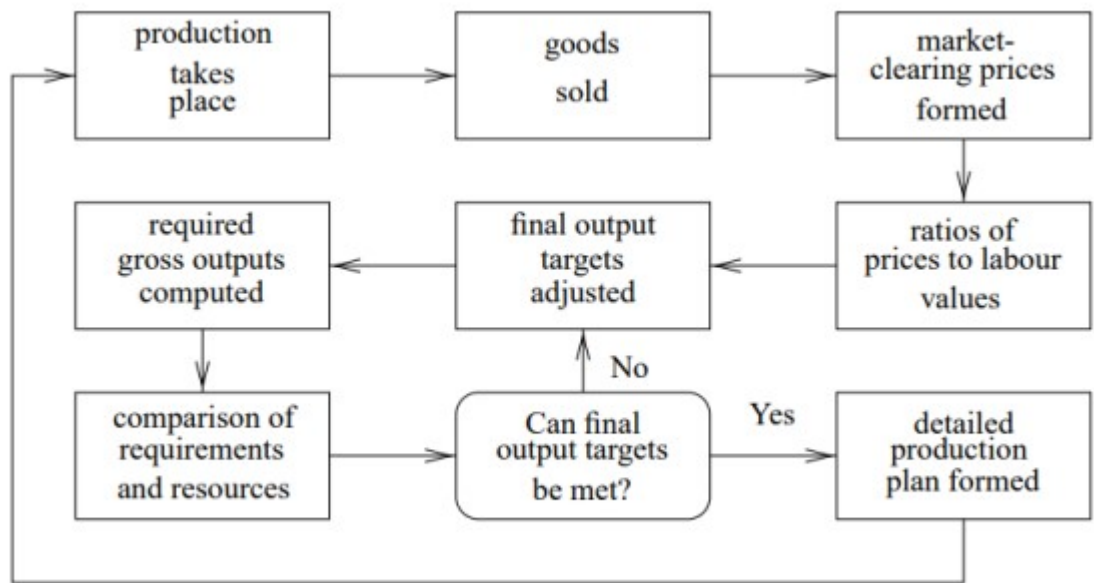


Figure 1: Cybernetic planning

Marx argued that calculation in terms of labour time would lead to greater efficiency. The wages system undervalues the real social cost of labour and deters the use of the most modern machinery. Transition to communist calculation will lead to the rational use of labour time, and faster growth of labour productivity.

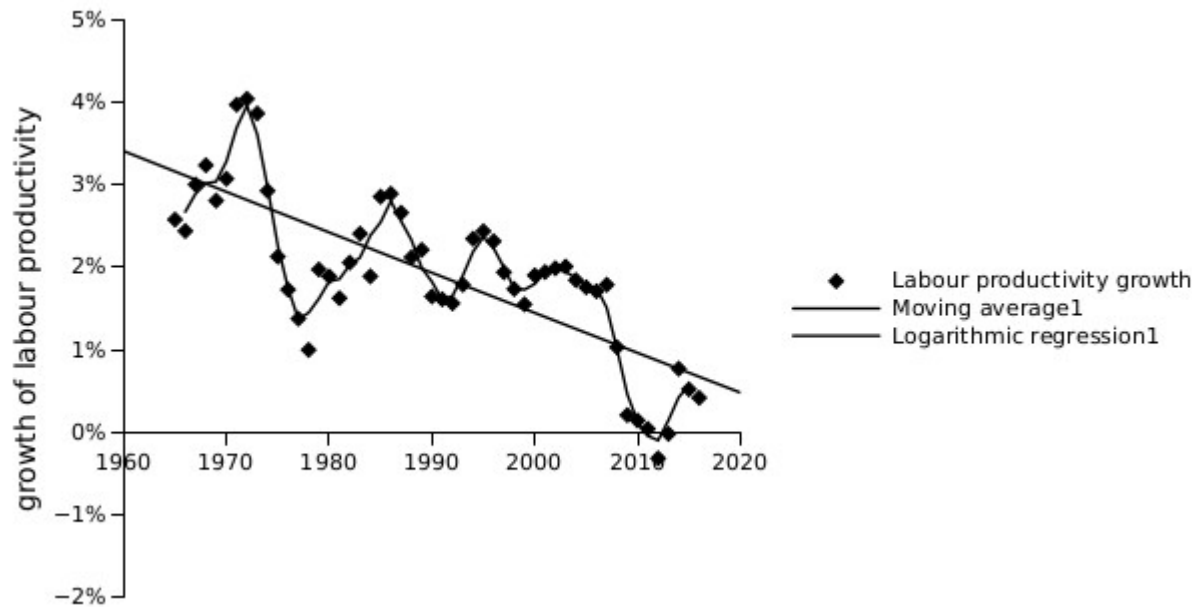


Figure 2: The growth of labour productivity has been shrinking over the last half century in the UK. Growth rates computed as moving average over last 5 years from ONS data for output per worker for the whole economy.

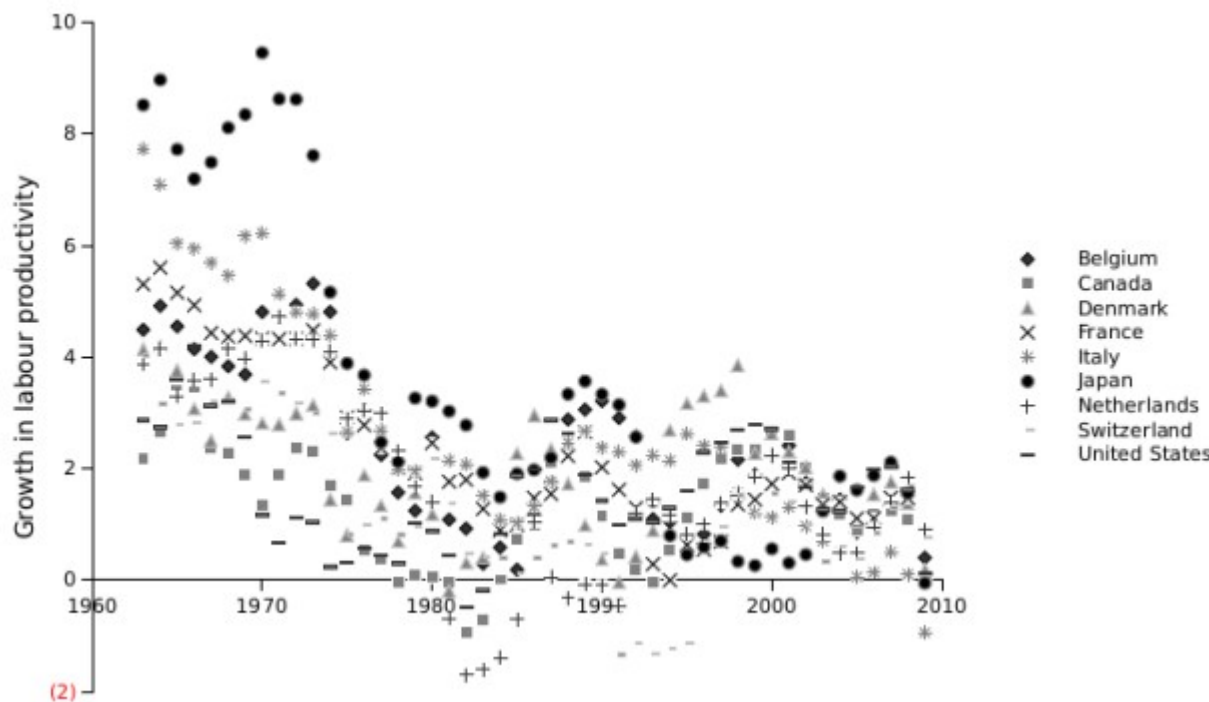


Figure 3: The decline in productivity growth is an international phenomenon. Data obtained from Extended Penn World Tables. Note that this data only goes up to the start of the 2008 recession.

Throughout the capitalist world this law is in effect, slowing down the growth of labour productivity. The capitalist class seek cheap labour, which systematically holds back technical progress. They show chronic unwillingness to invest. Orthodox economists call this secular stagnation .

You can see the effect clearly in the decline in the improvement in labour productivity shown in Figs 2,3.

6 Transition steps to first stage of communism

The proletariat will use its political supremacy to wrest, by degree, all capital from the bourgeoisie, to centralise all instruments of production in the hands of the State, i.e., of the proletariat organised as the ruling class; and to increase the total productive forces as rapidly as possible.

Of course, in the beginning, this cannot be effected except by means of despotic inroads on the rights of property, and on the conditions of bourgeois production; by means of measures, therefore, which appear economically insufficient and untenable, but which, in the course of the movement, outstrip themselves, necessitate further inroads upon the old social order, and are unavoidable as a means of entirely revolutionising the mode of production.

These measures will, of course, be different in different countries.[13]

Nevertheless, in most socialist countries, the following communist measures will be pretty

generally applicable.

Immediate measures

1. Monetary unit converted to the labour hour set at the average value created per hour.
2. Move from state funding from profits of state enterprises to state entirely funded by progressive income tax.
3. Legislation to give employees right -before tax to full value created in enterprise
4. Conversion of remaining private firms to cooperatives
5. Develop centralised internet system to track all purchases and sales.
6. Withdraw all paper money and coins, replace with electronic cards

During the preparation commodity exchange between enterprises still exists, and monetary transactions still possible, but exploitation is eliminated. In the next stages the following measures might be appropriate:

- Private circulation of money eliminated, and money only used by consumers to purchase final goods from public stores.
- Commodity exchange between enterprises replaced by computerised directive planning
- Equalisation of pay rates between men and women and between different professions and trades

Technical advance on a world scale is being held back by the wages system. There is a growing contradiction between the social relations of capitalism and the potential of the new productive forces. The new information technology permits a direct transition to communist mode of calculation. The new communist relations of production will abolish class differences and allow technical and humanitarian progress to resume.

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Political Economist and Computer Scientist View all posts by Paul Cockshott

20 thoughts on “Big Data and Super-Computers: foundations of Cyber Communism”

Add Comment

1. Anders Axelsson says:

July 25, 2017 at 8:26 am

Dear Paul,

This is a most interesting article. But I have some questions:

1. We now have the technology needed for communism in the form of internet, super computers and models for calculation of big data. But will it not still be a problem how to collect all the information that is needed to do the calculations? How transparent will the process of information collection be? What happens if the workers on a firm overestimates och underestimates the labor time and other resources needed for production of specific goods?

2. How do you – in a communist economy – handle a situation where two or more firms that produce the same goods but have different productivity?

/Anders

Reply

2. **Paul Cockshott says:**

July 25, 2017 at 12:12 pm

Question 1. You have to do it by having standardised software packages used for stock control and forward planning within the units of production such that these are linked both to the forward planning computers of the equivalent of GOSPLAN and to the stock control computers in the logistics hubs.

All planning at an enterprise level is already done using spreadsheets and all ordering in large institutions is done via standardised purchase authorisation software, it would be a matter of defining net standards – presumably SOAP based to allow the information to be exchanged. Under estimation of resources is likely to occur in all systems due to the difficulty of foreseeing future difficulties. This can only be avoided if those doing the estimating have lots of experience in the branch of production they are estimating for.

For example, estimates by the British shipbuilding industry in the early 20th century were almost exact when tendering for ships. Now estimates tend to be seriously low and you have big cost overruns. The difference is that 100 years ago the output was much higher and the experience of those tendering was much better. Also the private shipyards had to compete with state yards so it was much harder to inflate the costs.

Question 2. It is probably a good idea to have several state enterprises proposing tenders for big projects otherwise it is difficult to know if what is being proposed is a good plan.

The Soviet aircraft industry followed this approach with several design bureaus : Tupolev, Illushin, Mikoyan etc tendering for state projects.

Reply

3. **tallredfox says:**

July 26, 2017 at 4:28 pm

Great article, as always. But I do think that the proposed transitional measures need some further work. Those you outline may indeed be TECHNICAL economic/legal preconditions for realising communism as you describe it. But POLITICALLY it is difficult to envisage them (at least, some of them) being instituted without a very powerful movement being in existence; and perhaps many years of entrenched Social Democracy. Perhaps one can imagine contemporary China instituting reforms like this, some decades down the line.

So for example, abolishing profit (workers get full value); cooperativisation of all private firms. Do you have any suggestions as to the means by which we might get a political movement capable of this attack on capitalist privilege? I can only imagine it happening during something like a war.

Reply

1. **Paul Cockshott says:**

July 26, 2017 at 5:08 pm

It is intended to be delivered to an audience of Vietnamese and Chinese Communists so it is tailored to their stage of development

Reply

4. Anders Axelsson says:**July 26, 2017 at 8:15 pm**

About question nr 1: I am reading Pat Devines book "Democracy and economic planning". Devine describes how the information process in the soviet type economies not was transparent: "The information supplied by self-interested enterprise directors and senior management to the next level in the hierarchy is inevitably shaped by their perceptions of their self-interest. Typically, they understate productive potential and overstate input requirements so that their output targets are more easily achieved, they avoid any penalties associated with non-fulfilment, and they reap the rewards associated with fulfilment." (p. 63)

Is it not a realistic risk that the same happendes in the model you suggest and that this may result in undistorted information, ineffective use of resources and possibly a black market? How can a communist economy avoid this without a massive control apparatus?

/Anders

Reply

1. Paul Cockshott says:**July 27, 2017 at 12:04 pm**

What you point out is a genuine danger, and indeed any system of social relations results in people adapting their behaviour to what that system incentivises. So the crucial factor is what would a communist system incentivise?

What we propose is that collectives have centrally allocated labour budgets from which their use of living and dead labour are deducted. Incentives to improve productivity have to come from two possible mechanisms:

1. In most industries, where there are multiple units of production, it is possible to get access to data on who is the most efficient collective, who is the worst. More efficient collectives have their recruitment requests granted, whilst recruitment to the least efficient is restricted, so if you want your group to grow or at least stay the same size you try to be efficient.

2. Where there is no ready basis for comparison because there is a single integrated production unit – say for the electricity industry then technically determined long term targets for improvement in efficiency have to be set. We know from the western semi-conductor industry that long term technical efficiency targets can be held to over decades, similar achievements in the improvement of technical efficiency over decades was shown by the Central Electricity Generating Board in the UK when it was publicly owned from the 1940s to the 1980s.

Reply

5. jlowrie says:**July 27, 2017 at 10:34 am**

"The hand mill gives you society with the feudal lord; the steam mill, society with the industrial capitalist." I know Marx wrote this in French, but I wonder if he was thinking in German. I take his meaning here to be that where the use of the hand mill is predominant, there one will find the feudal system etc. It cannot mean that the introduction of the hand mill gives rise to feudalism and the steam mill to capitalism. After all the water mill was known in the Roman World and Marx himself quotes

(CapitalVol.I. p532) the poem of the Greek Antipater "Spare the hand that grinds the corn, oh miller girls,... the work of girls to be done by nymphs, and now they skip lightly over the wheels...and pull round the load of revolving stones...and let us rest from work." I suspect this is a decidedly utopian vision, but it is indicative that the mill is seen as liberating the slave girls from hard labour so as to rest more, and not for the purpose of increased production.

Further, the principle of steam propulsion was known to the ancient Greeks ("The Pneumatics of Hero of Alexandria" London 1971). Steam power was used for toys and gimmicks like opening temple doors (P57). There is some evidence for a Roman flour-milling factory using water-power in Provence. The simple argument usually advanced for the failure of ancient Rome to undergo an industrial revolution was the presence of slavery. The argument itself is anachronistic, but I think we must see the relations of production not only as barriers to the introduction of certain technologies but also as facilitating it. After all the factory and its wage labourers predate the widespread introduction of steam mills.

Reply

1. **Paul Cockshott says:**

July 27, 2017 at 11:51 am

This is an interesting point, it is defininately an over simplification to say that feudalism rested on the hand mill. There were large numbers of water mills – thousands recorded in the Domesday book. But the crucial factor was the development of steam power.

I will post some stats on this if I have not already done so.

I think you are right that relations of production can favour the development of the productive forces, but the mere existence of wage labour is not decisive since wage labour exists in the ancient world as well. Robert Allen argues here (<http://onlinelibrary.wiley.com/doi/10.1111/ehr.12079/full>) that the crucial factor was the relatively high wages or low rate of exploitation in Marxist terms, of 18th century Britain which meant that for the first time in history powered machinery was worth employing.

Reply

6. **jlowrie says:**

July 27, 2017 at 11:04 am

Marx had already in 1870 argued, "The English have all the material necessary for the social revolution. What they lack is the spirit of generalisation and revolutionary fervour." Marx is an economic

determinist, not an economic reductionist. Unfortunately, under the influence of the Russian Revolution some Marxists were led astray

by the Soviet debates about laying the material foundations of socialism for which the transformation of the social relations would necessarily have to wait. The most pernicious advocate of this thesis was Trotsky, who in "The Revolution Betrayed" argued that "Marxism.... constructs the communist program upon the dynamic of the productive forces. If you conceive that some cosmic catastrophes going to destroy our planet in the fairly near future, then you must of course reject the communist perspective...The material premise of communism should be so high a development of

the economic powers of man that ...the distribution of life's goods, existing in continual abundance ...will not demand any control except that of education, habit and social opinion." and "By the lowest stage of communism Marx meant a society which from the very beginning stands higher than the most advanced capitalism." and "The strength and stability of regimes are determined in the long run by the relative productivity of their labour."

As Paresh Chattopadhyay has demonstrated the Leninists confused juridical forms of property with relations of production, and "commodity production and wage labour are wished away as merely formal on the basis of proletarian state ownership of the means of production." (The New Value Controversy 2004 Pp219-231).

Reply

7. **jlowrie says:**

July 27, 2017 at 11:31 am

How did they get away with this? Part of the problem in my opinion is Marx's own division of communism into a lower and a higher stage. It is better to posit one transitional stage between capitalism and communism without designating this as socialism, and to point out that capitalism can always make a comeback, as Trotsky observed of Russia and Mao of China(and so it has come to pass!).

Roman law distinguishes property (dominium) from possessio i.e. who is in control. What you found in the old Soviet Union was that while the means of production were legally codified as property of the whole people , possessio belonged to the one -man managers and the party bosses. The expropriation of the bourgeoisie is only the first step, being merely juridical. As Mao argued by analogy, "in China we have given women equality in law. So what? Nothing has changed. All the old ideas still dominate and the New Chinese woman has yet to appear."

Let us recall that the restoration of capitalism in Russia, China and Vietnam was led by the Communist Party leaders. This is not in retrospect so surprising, because a Leninist party is an oligarchy, and capitalist relations of production are those most appropriate to an oligarchy sustaining its dominance. So I hope Paul will be giving a lot more emphasis to the political opposite of oligarchy, namely democracy. It was the absence of this that mainly led to the collapse of 'socialism' in the aforementioned countries, I believe, rather than economic failures, which were no worse than elsewhere.

Reply

1. **Paul Cockshott says:**

July 27, 2017 at 11:54 am

I am giving two talks in Hanoi, but the one on democracy is not so original – contains lots of stuff from previous academic papers, so I have not yet chosen to put it up on the blog.

Reply

8. **jlowrie says:**

August 1, 2017 at 10:59 am

"Marx 's principle was that non-public goods should be distributed on the equivalence principle – you get back in goods the same amount of labour – after tax – that you perform."

I should like Paul and others to address the question of the intensity of labour. Clearly one hour of labour at a production line is not the equivalent to one hour of labour as, say, a carpark attendant. How is labour under socialism to be distributed among the various departments of the economy?

Reply

9. **Paul Cockshott says:**

August 1, 2017 at 3:06 pm

You need to be more precise in what you are asking. Are you asking how many parking attendant jobs there would be, or are you asking how an individual gets a job as a parking attendant?

The glib answer is that there are likely to be no parking attendants -there are none at NHS hospitals in Scotland for example.

But the question still remains if you substitute gardeners in public parks.

The local council will have a budget in person years and will decide how many of them will be used to employ park keepers. It would be up to the council to decide how many park keepers they want.

Reply

10. **jlowrie says:**

August 3, 2017 at 10:25 am

"The local council will have a budget in person years and will decide how many of them will be used to employ park keepers. It would be up to the council to decide how many park keepers they want."

Do the workers get a choice in becoming park keepers or are they directed to this labour according to their ability and not according to their wish? If it is the latter, then the point I am trying to make is this: why would a boy become a fisherman rather than a seller of fish in Tesco's; or a girl become a surgeon rather than a hospital receptionist, if these very unequal labours are to be recompensed equally? Some labours are decidedly more physically and mentally taxing than others. In a regime of strict rationing, which I believe is inevitable given the imminence of agricultural collapse in some regions due to climate change, would it not be the case that miners and other heavy duty labourers would receive greater rations than librarians? The theoretical solution I believe would be for the budget in person years for any enterprise or institution to be granted to the workers to divide democratically among themselves as they see fit, and such a procedure would quickly result in a situation of "to each according to their needs."

Reply

11. **Paul Cockshott says:**

August 3, 2017 at 11:30 am

Well as in any existing society you would have to apply for a job, and there would only be so many places. You would not necessarily get the job you most want.

On the more general point of rates of pay. In principle during a period when you still have a cooperative rather than a publicly owned economy, the only thing that is guaranteed is that the revenue to the whole coop belongs to the members collectively to dispose of as they wish. But that presupposes you still have transferable accounts – in

essence money.

In a non monetary labour accounting system any supplements for additional needs have to be met out of income taxes – whether these additional needs were extra protein supplements for pregnant women or extra calories for people doing heavy labour. This falls under the category of distribution according to need. The problem with saying that heavy work justifies more income is that at it will turn out that work done by men is judged to be ‘heavy’ and that by women to be ‘light’ so that it is very likely to be used as a cover for perpetuating differential rates of pay for men and women.

It also undermines the principle of accounting in terms of labour because you

- 1) no longer have an objective measure of the total human resource available to society – its working population. Some people count as multiple people
- 2) it replicates the confusion between labour and labour power, the idea that people who do more physical effort need to be paid more to replace the effort done is based on the logic of labour power and its reproduction not on the logic of labour.

The only consistent way to recognise differences in labour between people is by measuring the output they produce and using a work norm system whereby the worker of average productivity counts as one full worker and the worker of 75% productivity as 3/4 of a work and the one of 150% productivity as 3/2 workers etc. That way the total estimate, for planning and costing purposes, of all the workers employed in that activity is still equal to the number of workers in the activity.

Reply

12. **Jacob Richter says:**

August 6, 2017 at 3:28 am

Your inclusion of a mandatory move from paper-and-coin money to fully electronic money caught my eye!

I was wondering about two things:

Shouldn't the transition to the lower phase have more publicly-owned enterprises than coops? (I say “publicly-owned” instead of “state enterprises” as a conciliatory gesture to class-struggle anarchists and platformists.)

Can your transitional model and your maximum model incorporate many aspects of parecon and especially Pat Devine's work (while still being grounded firmly in computerized directive planning)?

Reply

13. **jlowrie says:**

August 7, 2017 at 4:23 pm

“Some people count as multiple people” and “ the worker of average productivity counts as one full worker and the worker of 75% productivity as 3/4 of a work and the one of 150% productivity as 3/2 workers etc. ” I do not see a clear difference between the two. Productivity is so much dependent on technology that it is hardly clear what exactly each worker produces. We certainly have to avoid anything that smacks of piece work. I was thinking rather of the variable intensities of different jobs, though I appreciate this also depends to an extent on the nature of the technology applied. If a thousand hours of means of consumption are to be distributed among 1000 workers ,

then if 500 workers receive 500 hours worth, 250 workers 300 hours worth, and another 250 workers 200 hours worth, the accounting by person hours is unaffected. If we recall the Chinese peoples communes, as exemplified by the village of Upper Felicity (Jack Chen 1973) each labour day was awarded 10 work points but more strenuous work got 12 and lighter work 7. This was after a basic communal distribution of grain per head, and the value of each job determined communally.

I feel two phrases by Marx have led to some confusion: "from each according to his abilities, to each according to his needs." It is immediately clear that our abilities are socially determined; it is strange then that some Marxists have interpreted needs to mean not socially determined needs but individually identified wants. I usually try to refute this by a reductio ad absurdum, and ask if that means that under communism alcoholics are to be let loose in liquor stores. One trotskyist answered me by asserting that under communism there would be no alcoholics. Apparently, alcoholism is a disease acquired by too great an exposure to a stalinist environment! It is not immediately clear however if a conversion to trotskyism confers immunity.

The other phrase is Marx's introduction of the concept of a 'lower stage of communism' where all active citizens will be treated equally. As he himself affirms, this would be a regime of bourgeois right. But this lower stage has generated a lot of confusion, some of it quite deliberate I suspect, and should be jettisoned. Already in the more advanced capitalist societies that some citizens have special needs is recognised, however inadequately. The idea that there will be a stage at which all workers are treated equally seems to me to be a needless deviation. What is clear is that even under communism the train cannot stop at every village. The planet's resources are finite, and one of the excellent aspects of electronic 'money' is that it can encode for strict rationing. In today's world communism as a limitless cornucopia is a reactionary utopianism.

Reply

14. Pingback: Big-data e Supercomputadores: Fundações do cyber-comunismo. – Realismo marxista.

15. **Robert Searle says:**

March 28, 2018 at 10:01 am

This is an interesting article. My own project is somewhat similar but from a more capitalist perspective. But it has the potential to become something like an "advanced" form of socialism, or "communism." Click on the above badge for an introduction to Transfinancial Economics.

Reply

16. **Robert Searle says:**

March 28, 2018 at 10:03 am

Apologies the name badge went to FB instead of going to.....https://wiki.p2pfoundation.net/Transfinancial_Economics

Reply

CREATE A FREE WEBSITE OR BLOG AT WORDPRESS.COM.