

FROM PRICES FORMED BY THE MOVEMENT OF CAPITAL TO PRICES FORMED BY THE MOVEMENT OF LABOUR TIME.

This posting was inspired by a debate which took place in the comments section on Michael Roberts Blog concerning the transition to the measurement of output by means of labour time. I share a reluctance to engage in these kinds of discussion on the supposition that the only thing worse than living in the past, is living in the future. Nonetheless, just as Marx was forced to intervene around the Gotha Programme so we have to Critique what took place in the USSR which has so damaged the arguments for socialism. The link to the posting and comments is, <https://wordpress.com/read/feeds/313842/posts/2016954524>

The pricing system under capitalism is not fraudulent nor illegitimate. Rather it is shaped by the movement of capital attracted and repelled by differing rates of profit. It is this restless movement of capital which continuously shifts market prices by its movement and its magnitude. Commodities therefore circulate as products of capital at prices that tend to reward capitalists with a profit proportional to their investment. It is this equity of exploitation that harmonises the interests of the capitalist class.

This pricing scheme may suit the needs of capital, but it cannot serve the needs of labour. The distortions in price means that planning would be impossible, because the compulsory foundation of planning is accurate costing. And as there is only one cost of production, labour time, this means the accurate costing of labour time. Achieving this goal is the principal object of socialist economics and the purpose of this posting.

Identifying and overcoming the obstacles.

There are five complications that need to be overcome when moving from a pricing system based on the movement of capital to an objective pricing system based on the movement in labour time.

1. Differences in the intensity of labour.
2. Differences in productivity.
3. Differences in skill
4. Deviations between price and market value caused by the composition of capital.
5. The conversion of money into labour vouchers.

Each of these obstacles will be dealt with logically beginning with the intensity of labour. The question of harmonising the intensity of labour is much less of a problem these days compared to Marx and Engels' day. Differences in muscle power have been minimised. Studies of job descriptions show that the fastest decline in jobs have been those dependent on muscle power alone. Today, power-steering, power-tools, pneumatics, fork-lift trucks, combine harvesters and so on have removed any advantages a strong man has had over a weaker competitor. Of course, in less developed capitalist economies, muscle advantage is still sought by employers in a number of areas but even here it is declining.

It is however important not to confuse the capacity to work with the intensity of work. Intensity is a function of capacity and differences in capacity remain. Nevertheless, it is possible in every instance, through negotiation, to adapt intensity to conform with differences in capacity. For example, an aging worker with a declining capacity to work will work with a proportionately reduced intensity or given lighter duties, similarly a worker with a disability or a woman during her monthly cycle.

Why is the setting of a common standard of intensity so important? It is important to make the expenditure of labour commensurable. If intensities differ within and between industries, then output would be a factor of both effort and productivity. By homogenising and universalising intensity, the expenditure of effort is removed from the equation leaving only duration and productivity.

It could be argued of course that this is an artificial problem because the combination of intensity and productivity can be measured from the output side. For example, the amount of water flowing through a pipe in a given period is the product of the size of the pipe and the pressure of the water within the pipe. The pressure here is analogous to the intensity of labour. The higher the pressure in the pipe for a given size of pipe, the faster the water will be flowing, the quicker the tank will fill up. All we have to measure how quickly the tank is filling up.

This would be true if there were only two elements instead of three. If there are three then only one can be a variable. Time of course is a constant. One hour of labour is sixty minutes whether it is spent in Tokyo, Prague, London or New York. It does not vary and can be measured currently to an accuracy of a billionth of a second. But if intensity and productivity remain as two variables, it is impossible to separate them out.

In any case expecting workers to work with different intensities is asking for trouble. It allows for shirking and for resentment to build up and is a recipe for endless squabbling. It is much fairer to set a universal intensity which every worker understands is fair because it has been negotiated and agreed democratically and without coercion. When needed there are established scientific methods available to measure intensity in the case of disputes. They have long since been the stock in trade in sport where equipment has been developed to measure the inhalation of oxygen against the exhalation of carbon dioxide in order to determine the level of exertion.

In any case the intensity of labour is always on the agenda of any negotiation between organised workers and their bosses. There is always a general agreement on the pace of work, which workers are expected to adhere to if they are to be paid the rate for the job. All socialism does is to complete this process and secure it democratically.

Leaving intensity to one side, productivity measures the mechanical or electronic amplification of labour power, both physical and mental, as an acceleration of the speed at which useful things or effects can be produced or processed. Conversely, an increase in productivity means more work being done within the same period. A labourer working with a spade is working more intensely than a driver using a mechanical digger with power controls, but because the driver's labour power is amplified hundreds of times, he or she can move more earth than two hundred labourers fully exerted in the same time reference. Or, two operatives work equally hard, but one supervises two pieces of machinery while the second supervises three pieces of more automated machinery, making the second operative more productive than the first.

A socialist pricing system is now beginning to take shape. By establishing a common intensity of labour through negotiation and agreement under workers' control, by way of freely elected commissions, universal labour time comes into being. All labour is commensurable and is expressed by a common standard, time. On this basis, the total price of output, divided by the total hours devoted to its production, will yield a representative hour of labour. This means, to begin with, after the revolution, that we take as our starting point the existing system of national accounts in order to price output (stripped of its duplications), and hours stripped of unproductive labour, to achieve our unit of account. For argument sake, let us assume that the price of the output is \$100 billion, and the number

of hours expended by productive labour is 1 billion, then the representative hour of labour is priced at \$100.

This simple average is the standard against which everything else will be measured. Can it change. This answer is best left to the end. In the mean time the reader may have become aware of the term “productive workers” being used. Only the hours of work of those workers who are needed to produce and distribute goods, both material and immaterial, what could be called essential labour will enter into the calculation which prices labour time.

Only now can we understand Marx’s socially necessary labour time, the hormone that drives capitalist production, that gets capital out of bed in the morning. Socially necessary labour time embodies both intensity and productivity. Competition homogenises intensity. It forces employers to match the pace of their competitors by whipping their workers into line. While this does not reduce market prices it does reduce cost price and hence improves profit margin. If productivity rises elsewhere in the industry this expresses itself through market price competition, forcing companies to invest or sink. Competition takes no prisoners and cannot be avoided.

In this way, changes in socially necessary labour times makes capitalism dynamic. But this result is achieved coercively, disruptively and often destructively especially during recessions. In contrast, the same result is achieved co-operatively, voluntarily, seamlessly, systematically and consciously in a socialist society. This contrast is nothing less than the comparison between a higher mode of production and history’s first elemental and crude industrial society – capitalism.

What about productivity?

The amount of equipment and machinery that workers set in motion varies widely, both within an industry and especially between industries. The only way to set the same level of productivity is to ensure that every worker everywhere uses the same amount of equipment and machinery with equal efficiency all over the world. This may be the goal in the distant, distant future, but the situation we inherit from capitalism is very mixed. It is not uncommon for some workers to be equipped with ten times more machinery, for example a barber versus an airline pilot. The only way we could equalise this, is for the airline pilot to work ever so slowly, which means the plane falls out the sky, or the barber to work so fast the client’s hair is set on fire.

What may appear to be a problem has already been solved by capitalism. In Chapter 10 of Volume 3, Marx describes the highest and most complete form of value, which he called market value. Market value is weighted average labour time, often described a socially necessary labour time in its less complete form. In Chapter 10 Marx abandons the concept of simple average labour times which served him so well in his earlier more abstract elaborations on the question.

He recognises that concretely, in the real-world, production within an industry is not uniform. Workers are not equally productive. In some industries he recognised there were a preponderance of more productive firms, while in others a preponderance of less productive firms. In other words, the weight of production in one industry can be skewed towards the more productive side while in others to the less productive side. In the former the weighted average labour time would fall below the simple average for the industry while in the latter it would rise above the simple average. In short what he was saying was that if we multiplied the number of products by the simple average time of their production, the total labour time reached this way would either exceed or fall below the actual labour time expended. Only when we multiply the weighted average labour time by the products produced do we always arrive at the actual total expenditure of labour time.

It is this weighting of average labour times that solves the conundrum of differences in productivity. A weighted average labour time accounts for all the variations in productivity together with the weight of output at each level of productivity. This means that if the weighted average labour time is used to price that product, total prices for the product will yield the total hours expended.

Thus, if price is set by the weighted average labour time prevailing at any moment in any industry, it does not matter if productivities differ between industries or within an industry. These prices which blend differing productivities ensures that no worker benefits or suffers from differences in productivity. After all, why should they, when by accident of birth or location one set of workers find themselves in the best equipped factory in the world while others find themselves in poorly equipped factories.

The purpose of the socialist pricing system tied to weighted average labour times is manifold. But two main features stand out. It not only unites workers but it incentivises them. If the purpose of raising productivity is to increase the volume of production which uplifts the working class, this can only be expressed through the pricing system. Whenever the productivity of labour is increased, the weighted average labour time is reduced. Products cost less labour time and their prices therefore fall.

Falling prices are to socialism, what profits are to capitalism, their respective driving motives. When workers become more productive and efficient, they are rewarded by falling prices. Assuming that the hours worked and skills do not change, then workers standards of living will rise, not because their income has risen, but because prices are falling generally. (Exactly the opposite to capitalism where income has to rise faster than prices.) Things become cheaper. A voucher withdraws more products from production than before. The same time working results in more products rewarding the worker.

Falling prices avoids sectional demands. If a new machine is invented or developed which doubles the productivity of shoe production, who should benefit. Should it be the designer of the machine? Should it be the producer of the machine, or, should it be the operator of the machine. The designer may argue, I want the lion's share of the change in productivity because without me the new machine would not exist, the producer could say without my engineering expertise your idea could not be made to work and so on and so forth. The arguments would rage back and forth wasting valuable time.

Never mind, all the workers including those designing, building and operating the new machine benefit equally because of the fall in the price of shoes. They are rewarded equally with cheaper shoes. Moreover, they may even choose to work fewer hours. If prices keep falling throughout the economy, then the same standard of living can be maintained even when working fewer hours.

Falling prices are the collective reward for collective labour. There is no other incentive possible. If productivity bonuses are used instead they become disruptive and divisive. Let us assume the following example. An average hour of labour is priced at \$100. If total output costs ten million hours then the price of that output would be \$1 billion. Now let us assume that in the course of a year the weighted average rise in productivity is 5%. The price of that output would still be \$1 billion, the average hour of labour would still be \$100 and total vouchers will still amount to \$1 billion covering 100 million hours. The only difference is that there has been a general fall in prices amounting to 5% offset by their volume going up by 5%. The expenditure of labour is unchanged, but because it is more productive, workers are better off.

Now let us see what happens if vouchers are issued in the form of productivity bonuses. Now total vouchers will exceed \$1 billion. Measured in labour time there will be more vouchers than products. The result is that prices will be bid up by these additional vouchers, demand and supply will reappear, prices will become divorced from costs of production making planning impossible.

What happened in the USSR? In this peculiar mode of production, prices were not used to reward workers for their efforts. Instead their wages were tied to piece rate targets. The more they produced the more wages they received. The result of this piece rate incentive was predictable, it was chaotic. Workers did everything they could to increase their own production even if it made life difficult for other workers, even if they misused materials and abused machinery. In the end these piece rate incentives resulted in a rise in labour time rather than a fall in labour time throughout the economy. The economy became less efficient and more wasteful. The most extreme example of this was the Stakhanovite movement which was quickly and quietly abandoned when its results were shown to be counter-productive.

What about skills??

Thus far we have addressed the issue of the expenditure of labour only quantitatively. It is now necessary to introduce the qualitative expenditure of labour. We move from intensity to capability. We address the historical fact that we inherit a working class shaped by capitalism which is divided by skill.

Only a socialist society, can in time, create the wealth needed to overcome this hierarchy of skills. In the mean-time, if that wealth is to be developed, we need to unite this unequal class. This requires an equal right; defined as the right to receive in proportion to one's contribution to production. Each worker receives back from society what they have put in. In simple language, each worker works communally, but for themselves.

This means that more skilled workers, who contribute more because their labour is more capable, receive back more. Less skilled workers receive back less. There is no such thing as an "average wage for all" unless more skilled workers voluntarily opt for it. This difference in contribution and receipt is not the problem, measuring the difference accurately and fairly is. Here we are not interested in the rights and wrongs of skilled workers, who contribute more, receiving back more than lesser skilled workers. Workers understand that production is impossible without the mix of skills inherited from capitalism. What they would object to, correctly, is the mismeasurement of these differences. If we mis-measure these contributions it will mean some workers receiving more while other receive less than their contribution to production.

There are two elements to take into consideration when formulating the methodology behind this measurement. First, experience. Workers who are familiar with and at ease with the work process are more productive than new arrivals. But this is a minor point. The major point is that the entrance level for certain kinds of jobs requires a set period of education including study, together with training. Only through systematic study do workers come to embody the intellectual wealth accumulated over three hundred years, knowledge which is not innate but has to be acquired, and, without which modern industry would grind to a halt or be destroyed.

As in all matter labour, capability can be measured by the amount of labour provided by educators and trainers that went into its production. Here we think of the teachers then later the professors. Each of these educators in turn had labour injected into them from earlier educators. Teachers have had less and professors more. This is the stuff loved by statisticians, but it entirely possible to measure these injections accurately.

The starting point as always is the total number of life-time hours of education and training divided by the total number of hours of life-time work. Let us assume that the life-time number of years of work for both educators and producers is forty years. Let us assume further that the total hours of education + training amounts to 420 million and the total amount of hours worked equals 1,200

million then we know the average worker who works 40 years receives 14 years of education. That 14 years of education produces an averagely skilled worker with a coefficient of 1. Anything less than 14 years produces a less skilled worker resulting in a coefficient of less than 1 and any education over than 14 years a worker with a coefficient above 1. (We will see later what happens when workers receive education or training while working.)

Every worker thus has a coefficient of labour. This means that adjusted for their coefficient, workers working the same number of hours will be contributing more or less depending on their co-efficient. The spread of these coefficients will not be great because they are spread over the total number of yearly hours worked and to be worked. Thus, if someone has 20 years of education-training compared to someone with 10, it means their capability is twice that of the less skilled worker. In reality, the bands will not be as numerous and as wide as in the capitalist labour market which is influenced by the labour market where skilled workers tend to be in under-supply and unskilled workers in over-supply. This is the reason the gap between the higher and lower paid is between 400% to 500%

Moving away from morality to measurement, individual products cannot be accurately costed without accounting for skill. Both the following statements are true. "Total labour time expended in the economy is equal to the total hours worked regardless of skill". "Total labour time expended in the economy is equal to the total hours worked adjusted by the various coefficients of labour." The second is true because the weight of lower coefficients cancel out the higher coefficients reducing it to 1.

However, what is true for the economy as a whole is not true for individual products or individual industries. Some industries are more technically complex than others. It only takes a day or two to train someone to make coffee, but it takes years to train an aeronautical engineer. Thus, in the more advanced industries there is found a preponderance of workers with higher skills compared to more basic industries, all of which we need in our lives. Thus, in the coffee sector the weighted average coefficient of labour will be below 1 while in aerospace it will be well above 1.

The price of the labour time in the coffee sector will be below the average hours worked, while in the aerospace industry it will be above. We note again that all the industries above 1 are balanced by the weight of industries below 1 resulting in the total labour time expended in the economy being equal to the labour times registered for each industry. The importance of this observation is dealt with in the next section under the title "ending prices of production".

But before investigating how prices of production are transformed it is necessary to deal with the most important aspect of skill and its pricing. This aspect is revealed when we pose the following question: what happens when workers are upskilled especially less skilled workers? How are the coefficients reorganised? A skilled worker may respond, that is simple, just multiply the number of hours worked by the new coefficients. It does not matter if the indicated number of hours rises above the actual number of hours because no one is out of pocket.

This is true, and it is one of two ways the problem can be solved. Each one has its own merits and demerits and so we will leave it to future and wiser communist statisticians to decide upon. These merits and demerits will be taken in turn.

Before commencing the discussion, it is best to first introduce an arithmetical example to show the effects from employing either method 1 or method 2. Table 1 below is the starting point.

Table 1.

COLUMN	1	2	3
Band	Coefficient	Hours % of total	Adjusted hours (1) x (2)
1	0.6	11%	6.6%
2	0.7	18%	14%
3	0.8	31%	24.8%
4	1.0	10%	10%
5	1.2	4.8%	5.8%
6	1.4	11%	15.4%
7	1.6	8%	12.8%
8	1.8	5%	9%
9	2.0	1%	2%
TOTALS	Average 1.2	100% (rounded)	100% (rounded)

We note a number of features in Table 1. Firstly, the weight of hours worked is weighted towards the lower bands. 60% of the hours worked is located in bands 1 to 3, and only 30% in the higher bands above band 5. This is consistent with the dispersion of skills today resulting in the majority of workers being trapped in less skilled work. Secondly, the totals found in columns 3 and 4 both add up to 100%. This is due to the fact that the adjusted hours in column 3 adds up to 45% for bands 1 – 3, as does the adjusted hours for bands 5 - 9. The balance of 10% is provided by band 4 workers with an average coefficient of 1.

Now the most important factor to consider is that the adjusted hours equal to 45% of the total above 1 or band 4 and 45% below 1.0 (column 1) or below band 4, balance out. This makes band 4 the average band. Workers who work in band 4 will not have their input adjusted because their coefficient is 1 or neutral. It is this band that provides the standard of labour. In other words, one hour of labour with a coefficient of 1 equals the average unit of labour time against which all labour is measured. In choosing which method to use, the consideration of keeping this band immutable, allowing it to act as a measure, is important.

Now let us see what happens if we upskill band 1 to band 2. All the workers in band 1 are retrained and now reach skill levels found in band 2. In addition, some of the workers in band 2 are trained to band 3 levels as are workers in band 4. Table 2 shows the effect on the totals.

Table 2.

COLUMN	1	2	3
Band	Coefficient	Hours % of total	Adjusted hours (1) x (2)
1	0.6	0%	0%
2	0.7	25%	17.5%
3	0.8	35%	28.0%
4	1.0	5%	5%
5	1.2	9.8%	11.8%
6	1.4	11%	15.4%
7	1.6	8%	12.8%
8	1.8	5%	9%
9	2.0	1%	2%
TOTALS	Average 1.2	100% (rounded)	102% (rounded)

Table 2 embodies the first method, where a change in the weight of labour expended in each band is registered as an increase in adjusted hours. Adjusted hours increase because skilled work is measured in multiples of average hours and less skilled as a fraction of average hours. Hence if unskilled work is diminished by means of upskilling then total adjusted hours will rise. This is the case in Table 2 where they have increased to 102% from 100%.

What are the advantages and disadvantages. The advantage as we have stated before is that the coefficients do not change. This is not the case as we will see with method 2. Both methods in terms of reward. In both cases there is a redistribution away from the more skilled workers. For example, whereas band 9 originally shared 2% of output this has now fallen to 1.96% (equal to 2% divided by 102%). Their loss forms the gain enjoyed by the upskilled workers. Now to disadvantages. Firstly, actual hours and adjusted hours are no longer equal. If the priority is to plan on the basis of actual hours this could be an issue. Secondly, an increase in adjusted hours will raise prices or reduce their fall because price is based on output divided by hours, in this case adjusted hours.

Turning to method 2. If we are guided by the rule that adjusted hours cannot exceed actual hours, as this will create an artificial number, the question is how to return adjusted hours back to 100%. The answer is through adjusting the coefficients themselves by this 2% difference. So, a coefficient of 2 becomes 1.96 and a coefficient of 0.7 becomes 0.686 and so on. This has been done in Table 3 below.

Table 3.

COLUMN	1	2	3
Band	Coefficient	Hours % of total	Adjusted hours (1) x (2)
1	0.6	0%	0%
2	0.686	25%	17.15%
3	0.784	35%	27.44%
4	0.98	5%	4.9%
5	1.176	9.8%	11.53%
6	1.372	11%	15.09%
7	1.568	8%	12.55%
8	1.782	5%	8.91%
9	1.96	1%	1.96%
TOTALS	Average 1.3	100% (rounded)	100% (rounded)

Once the actual hours are adjusted by these reduced coefficients then 102% is reduced to 100%. The effect on workers does not differ from Method 1. Band 9 workers will still receive in return 1.96% of total output just as if they received 2% from an output now priced at 102%.

The main advantage is that actual and adjusted hours match. The second advantage is that there is a narrowing of the gap between the top band (9) and bottom band (2) from 1.3 to 1.274. Ultimately, when all workers are equally skilled the gap will have disappeared reducing all labour to 1. The disadvantage is that the average coefficient on which the unit of account is based is no longer 1. It is now 0.98 and it will continue to change as workers skills are uplifted.

If the unit of labour based on this band changes it would mean that the unit of measurement is variable. For this reason and this reason alone, it may be better to adopt Method 1. The fact that adjusted hours will grow is less important. After all it could be argued that if skilled labour is a multiple of simple or average labour, then adjusted hours must grow in any case as workers become more

skilled. The reader is returned to an earlier point. It is this. After the revolution and at a time when resources allow, the initial aggregate account will set the simple average labour time and it will be given a coefficient of 1. For the duration of the pricing system that average labour time will endure and remain a fixed unit of account not dissimilar to a metre or a litre.

I have given this unit of account the acronym UNILAT, which stands for “universal labour time”. A worker occupying the band with a coefficient of 1 will receive a voucher for 10 UNILATs after working 10 hours. A worker with a coefficient of 1.2 will receive 12 UNILATs while a worker with a coefficient of 0.7 will receive 7 UNILATs. In turn the aggregate total of these vouchers will equal the price of the social product in terms of labour time newly added.

From prices of production to objective prices.

Only now are we able to cost production. Every industry is governed by specific technical requirements which in turn sets the average mix of skills. These mixes of skills vary between industries with some being above average and some below. As long as intensity has been homogenised and skills are measured in terms of multiples of simple labour there is no problem. What we have settled is both the quantity and quality of labour thus allowing a future society to use labour time to accurately cost production.

The price system inherited from capitalism is most unsatisfactory. We know that prices deviate from market values. However, they do not do so indiscriminately. Prices rise above market value in industries with above average composition and fall below market value in below composition industries. Above average composition industries tend to have a higher technical level hence the mix of skills tends to be higher as well.

There is another factor to consider. Prices rise above market value to achieve an average rate of profit in industries with an above average composition. It is the average rate of profit which finances each industry. It means that in each industry, provided the rate of profit is not depressed, sufficient money returns to repay debt, refinance reproduction and if accumulation takes place, to do so on an expanded scale.

However, when prices no longer reflect rates of profit, these industries may not be self-financing to begin with because of price falls within them. On the other hand, price rises in below average composition industries may be over-sufficient for their financing needs. Thus, the banking system cannot be abolished overnight as it will have a role of taking finance where it is in surplus and providing it where it is in deficit. This will have to endure until the planning bodies start allocating means of production and labour power in accordance with the wishes of consumers on the basis of accurate costs of production.

Returning to the question of costing. The statistical bodies will need to apply labour time not only to living labour, but to past labour in the form of inputs as well as depreciation which will be based on historical data. This will take time and it will be dynamic. But that is what computer chips and algorithms are there for. As long as the correct assumptions are made, everything is eminently doable.

Of course, the statistical unpicking of prices and their reassembly will go hand in hand with setting up the structures needed for planning. This means setting up the planning bodies. Creating direct links with factories, plants etc so an audit can be done of capacity and capability. In parallel international data bases will be set up, whose cell structure will be secure individual labour accounts tallying in labour being contributed measured by UNILATs on the one side, against the products being withdrawn from production on the other. Finally, the overriding democratic structure needed to agree the

deductions from the social product and its disposition will be needed and it will become the beating heart of working-class power and democracy.

While all this is happening we still have an economy to run. The structures we inherit from capitalism cannot be abolished overnight. Rather they will become the scaffolding which enables us to build the new. With the exception of arms production and a number of luxury goods like jets and yachts, workers will still be producing much of the old. Demand and supply will still be in operation. Market prices will prevail before yielding to planned prices. Money will still circulate before being subdued by vouchers.

But by degrees, with the least disruption possible, planning will emerge. Producer-consumers will get to know how many UNILATS of labour they are contributing, and, this will enable them to inform the planning bodies what they want to have produced. The more these choices and output match, the more market prices will wither. And finally, when this happens, money will pass into history.

In a previous posting I explained why vouchers in the end cannot cohabit with money and why therefore market prices cannot cohabit with prices based on actual costs of production. The link to this posting is <https://theplanningmotivedotcom.files.wordpress.com/2017/12/comprehensive-planning-article-pdf.pdf> which frees this posting of further elaboration.

Discussion.

I think there's a real conflict in assessing "skill" and basing compensations on "skill." First "skill" is generally a collectively determined attributed in anything but handicraft production; is a result of collective individual inputs, but not any individual input. For example, railroad crew A consisting of 3 persons, couples up 16 tracks of classified cars and sets them onto departure yard tracks for inspection in 8 hours. The conductor on the job is what we call a "drummer," fast, efficient, and.....20 years younger than the conductor of Railroad crew B which "only" sets out 11 tracks of classified cars in the same 8 hours. Is there any distinction of skill here that should be used as a basis for recompense? I'd say not as there are an infinite number of variables besides the age of the two conductors— there's the efficiency of the locomotives, the inevitable conflicts between the movements of the two crews in a single yard, the number of cars that didn't make the automatic coupling on each track and need another "manual" effort, the differences in weather, the schedule times for "closing out" and allowing the crew to "pull" the classified tracks of cars, etc. etc.. So, said Anti-capital.

Anti-capital is describing a unique work place and one open to the weather, and because it is complicated, challenges the methodology set out here. One thing has to be got clear to begin with. In mathematics there is a difference between complicated, which is solvable, and complex which is not. By saying that there are a "infinite number of variables" I believe *Anti-capital* is confusing complex with complicated. I believe the variables are finite not infinite and that therefore socialism is complicated not complex.

First point - Capacity. *Anti-capital* points to the 20-year gap in age. Now it is clear that intensity is a function of capacity and can be adjusted to take account of this. So, a fifty-year rail person would not be expected to walk the distances walked by a thirty-year rail person. The thirty-year old would be expected to walk x metres a day coupling and uncoupling wagons, while a fifty-year old would walk x – y metres a day.

Next the efficiency of locomotives. Again, the locomotives are variable in his example. This gives rise to uneven productivity in the yard. That is true of any industry. But it is the weighted average productivity that is key here, not the individual productivity. If one rail person is continuously assigned

the oldest loco while another is assigned the loco recently bought, it would be unfair for the one driver to benefit at the expense of the other. Instead it is the mixed productivity that counts.

This is the whole issue with piece rate payments. Workers have always rebelled against piece rate payments for a number of reasons, but also because they recognised that some workers are advantaged against others and that it destroys their collective bargaining power. That is why the unions insisted on being paid for the time worked, the rate for the job, regardless of differences in their stamina, strength, or output. Socialism just completes this process.

In this case the conductors would be treated not as individuals but as a block provided they were equally skilled, let us say band 4 with a coefficient of 1. The commission in discussion with the conductors would determine how many wagons, given the state of the locomotives, and factoring in for weather and for the incidence of failed couplings, 20 “drummers” of differing age, could be expected to hook up in an average working day. Let us say that this amounts to 150 “tracks”. In this case 150 tracks costs 160 hours of labour on average with a coefficient of 1 yielding 160 UNILATs. That is the costing the planning bodies will use, and it will become part of the overall cost of running the railways measured in labour time. If these average changes because conductors are supplied with better couplings or more responsive locos or improved tools so that more can be done by the same number of conductors, or the same by fewer, then so does the costs of hooking up trains.

With regard to getting in each-others way, this speaks of competitive disorganisation. And it begs the question, is it because of piece rate payments. In other words, are the drummers incentivised by the number of tracks they set out. I suspect this is the case, because workers who are paid the rate for the job tend to co-operate better. I therefore think, that instead of an infinite number of variables, the variables have been covered, but if not, then this discussion can proceed to the comments section.

Of course, the yard could be hit by a tornado or covered by snow. This kind of disruption would be paid out of the insurance fund. It would not form a cost of production. In his Critique of the Gotha Programme Marx spoke of the need for the social fund to include an element for insurance to cover disasters or rare events, which do not form a cost of production. In a capitalist society, insurance premiums are a regular cost found in most firm’s profit and loss accounts. If a named disaster hits, the whole amount does not become a cost to the firm, only the portion for which the firm is liable. Indeed, some insurance companies even cover loss of income due to named disruptions. It would be a retrograde step for a socialist society not to have a comprehensive insurance scheme in place covering all the known possibilities and then some, that could befall an individual, their place of work or the infrastructure as a whole.

This brings me to the final point. What happens about those work places where the work environment cannot be controlled or regulated. The most extreme example of this is deep sea fishing. (This in a response to a comment from J Lowrie.) It also happens to be the most dangerous profession on the planet in terms of death and injury. In circumstance where weather plays a decisive role, the intensity of labour is very difficult to set. In the middle of a storm, the pace of work, out of sheer necessity has to be intensified, driving fisherfolk to their limits.

Currently fishing is often a piece rate industry. Bonuses depend on the size of the catch. A good catch yields good pay while a poor catch causes privations and hardship. This is one of the reasons why the industry is so dangerous, because it is based on desperation, the need to find fish in all kinds of weather at any cost.

In a socialist society, all piece rate payments are abolished. Fisherfolk will be paid a regular weekly or monthly “wage” based on their skill level as anywhere else. The same applies to farmers. Or does it?

In so far as the self-employed continue to operate as the self-employed and this applies more to those who farm than those who fish, they will be paid on the basis of their output. Of course, when they see how disadvantageous this is, they may opt to join the working class to enjoy the regularity and support that provides.

In conclusion.

As long as we factor for C.I.S.P. or Capacity, Intensity, Skill and Productivity, labour time becomes real, commensurate and measurable. Capacity is a declining factor due to the multiplication of powered tools, aids and automation. Where it remains, intensity is adjusted for capacity. The setting of intensity, or the pace of work, is the essence of workers' control of production. Only the producers are allowed to determine the pace of work. Planners cannot set it as they once did in the USSR. Rather the roles are reversed. Planners are now passive, using the intensity given them to shape the costs of production.

Skill on the other hand, will need to be factored for until all workers are upskilled to the highest level. (It is a matter of the deepest and most profound unconcern whether this happens before or after there is such abundance, that the producers disregard their skills in calculating their consumption.) Skill as we have seen can be expressed in units or fractions of simple average labour time through assigning a coefficient to every level of skill. When it is done accurately, no worker is prejudiced by their skill.

Finally, different productivities are no longer divisive because weighted average labour times are used to price products. All workers benefit equally from the general fall in prices. It goes without saying that falling prices are the only true measure of the rise in productivity which is why capitalism is incapable of accurately recoding productivity gains.

This posting drips with equality. Everything developed and written here has but one purpose, to show how these equal rights and the pricing system, heals a working class born of the womb of capitalism. That a future beyond capitalism is possible not only in imagination but through codification. The former providing the energy and the latter the certainty, an unbeatable combination.

And it is needed. This last week has seen the Trump tax adrenalin rush beginning to wear off. The unofficial data coming out of China shows a rapidly deteriorating economy. Even the IMF, whose role as the jilted lover last to know, is recognising that storm clouds are gathering. The latest data on global warming from the inter-governmental panel on climate change shows that mean temperatures, even at a time when solar output is abnormally low, has already risen 1 degree.

This website is based on the need to develop the analysis, methodology and programme capable of uniting our many billion strong working class and secure its future. It was never motivated by socialism as a stimulating even romantic topic for discussion. Instead it always recognised that capitalism faces insoluble contradictions and intractable problems, that it is once again being compressed by its limitations, which in the nuclear age imperils society. Unless society is won to the idea that there is a practical alternative to capitalism, there will be no revolution and if there is no revolution we could lose everything including the planet itself.

Brian Green, October 2018.