Piero Sraffa and The Production of Commodities by Commodities.

It is not necessary to read the whole of this slim volume. Within the first few pages, Sraffa assumptions are shown to be fatally flawed and it is therefore not necessary to proceed any further. He provides just enough detail to show that in real life, not in the twilight world sustained by mathematics, his world would break down immediately. His treatise is therefore without any merit and should not have survived the collapse of material planning which shares the same avoidance of labour time. In the case of the bureaucrats in the Soviet Union this was to obscure their parasitism, in the case of Sraffa it was unforgivable. All ratios in this critique are those of Sraffa.

Sraffa leads us down that winding rural path trodden by so many economists which leads to a hypothetical and simple economy where only wheat and iron tools are produced at first. The tools are necessary to farm and the reward for both the farmers and forgers are wheat. (For simplicity we will measure output on both sides in tons rather than quarters for wheat.) He implies an exchange relationship of 10 parts of wheat to 1 part of farming tools. He does not explain how these balances are arrived at but we must assume that in order to produce 400 tons of wheat 20 tons of iron are needed with 12 consumed in farming and 8 in producing the iron tools.

Immediately we encounter a problem. It is more likely that wheat is consumed producing wheat than iron is consumed producing iron. We think of the seed crop. If all the wheat is consumed there would be no crop the following year and Sraffa would have had to abandon his example. It would have been better to say that 20 tons of iron is needed to produce 400 tons of wheat, to balance both sides. This is the first evidence of sloppiness.

We further assume that 400 tons of wheat are needed to nourish the forgers and farmers (including their families) each year. Of this 400 tons of wheat, 280 tons are consumed by the farmers and 120 tons are consumed by forgers due to the fact that the forgers provide 12 tons of iron tools to the farmers and receive back 120 quarters of wheat.

Immediately our attention is drawn to the fact that forgers and farmers do not share the same level of productivity. In his first table Sraffa gives a technical ratio of 10 tons of wheat to 1 ton of tools (we shall avoid quant quarters). As a result, the output of both industries can be measured in wheat. In the case of the farming it is 400 ton of wheat and in the case of forging it is 200 ton of wheat. In other words, two thirds vs one third. It follows that the consumption of wheat should also be in the order of 2:1 or 268 tons for farmers to 132 tons of wheat for the forgers, not the 280:120 postulated by Sraffa. As a result, when we look at the ratio of the consumption of wheat to output we find amongst the farmers that wheat consumption as a percentage of output is 70% but this falls to 60% amongst the forgers.

Now if we assume the biological necessity that each labourer requires ½ ton of wheat each year equivalent to 2million calories, it follows that 400 tons of wheat can feed 800 members of this community though the proportion of labourers cannot be determined. These labourers are divided between the two spheres so that 70% are farmers and 30% are forgers (Sraffa's ratios). However, the farmers produce 400 tons of wheat or 1.4 tons each, whereas the forgers produce 200 tons of wheat equivalent or 1.2 tons. The average for all production is 1.33 ton per worker which means the farmers' productivity is above average and the forgers' productivity is below average.

If each labourer received the same amount of wheat regardless of productivity, then the farmers would be underpaid and the forgers overpaid. Conversely, there could be a movement of labourers from the forge to the farm raising productivity in the forge and reducing productivity on the farms.

But if the amount of wheat in payment was unaltered, farmers would receive less than a ½ ton because their number had increased while forgers would receive more than ½ ton because their numbers are reduced. Farmers and their families would in this case become undernourished which negates the assumption that all labourers are fed by the 400 tons.

So even when only two products that are treated as things rather than as products of labour we see what foolish conclusions can be drawn. The fact is this. The technical relationship between objects, in this case the requirement for twenty tons of iron tools to produce 400 tons of wheat tells us nothing about the distribution of labour time between these two sectors. There is only one condition that could sustain Sraffa's example and that is the absence of a division of labour. The population of workers are not divided between forgers and farmers. In Spring and summer they are farmers and out of season they are forgers. The same labour alternates between farming and forging voiding any consideration as to differences in productivity. But this could not be allowed because in this case there is no exchange relation between these two spheres of production merely the alternation of labour. In any case Sraffa describes the market following the harvest where the exchange between wheat and tools takes place annually.

His second example, introducing pigs makes even less sense in the real world. Yes, the population does not have to consume so much wheat when they can add pork to it, so that the individual consumption of wheat declines. Looking more closely he states that 5 units of wheat = 1 pig and as there are now 60 pigs that is equal to 300 units of wheat. With 450 units of wheat now being produced that adds up to 750 units compared to just 400 in the earlier example. Does this mean there are now 1500 members of the community compared to the 800 before, or has their standard of living gone up by the inclusion of pork? In other words, we could be talking of a total labour force of anything between 800 and 1500. We are clueless. But we must assume that because the conditions are held constant that there is an increase in labourers.

It gets even more confusing. Take the production of iron. Before 120 units of wheat allowed 20 tons of iron to be produced, including the8 tons consumed internally. Now an equivalent of 150 units of wheat (90 tons of wheat plus 12 pigs) yields only 21 tons of iron. In other words, an increase of 25% in labour inputs yields only a 5% increase in output, not very efficient. So here we have a reduction in productivity. Or perhaps we could have the same number of workers who now produce 5% more iron but go on to enjoy 25% more calories. We don't know either way.

In the production of iron, iron is consumed (tools and forges for example wear out). But now it takes 2 tons less iron to produce 1 ton more iron. (8 tons down to 6 tons producing 21 tons up from 20 tons). So either the pork fat has gone to the brains of the forgers allowing them to think up better ways of producing tools or perhaps they are using this pork fat to lubricate their tools so reducing friction and therefore wasted iron. We are clueless. Whatever the case it is not logical. All we know from the physical world laid out by Sraffa, is that more calories but less iron was consumed producing the new iron.

It gets worse. Total personal consumption is now 450 tons of wheat and 60 pigs annually (ignoring the 21 tons of iron). If we adjust using Sraffa's own proportions of 5 tons of wheat to 1 pig, as previously stated we arrive at the equivalent of 750 tons of wheat equivalent entering into consumption compared to 960 tons of wheat equivalent produced when we reintroduce the iron used up. We could also surmise that pork is substituted for wheat in fixed proportions except that it is not. If we compare the forgers to the farmers, they consume relatively more pork than the farmers. Does this imply they have a higher status than mere farmers? Not really because the biggest consumers of pork are the pig farmers themselves.

The only conclusion to be drawn is this. Since the introduction of pork, and therefore the possibility of triangulation, it can clearly be seen that wages are not proportionate, something we could not discern with only two products. Wages so to speak, measured in wheat equivalents based on exchange ratios set by Sraffa (10 ton wheat = 1 ton iron = 2 pigs) translates as follows:

Farmers 240 wheat + 90 wheat (pigs) = 330 wheat consumed yielding 450 wheat (wages 73% of output)
Forgers 90 wheat + 60 wheat (pigs) = 150 wheat yielding 210 wheat (wages 71% of output)
Pig farmers 120 wheat + 150 wheat (pigs) = 270 wheat yielding 300 wheat (wages 90% of output)

It is clear we have wage differentials. The new labour aristocracy are the pig farmers who consume 90% of their output compared to around 70% for the rest. What we have here is a wage differential based on differential consumption of pigs. If we assume that pigs exchange for wheat in proportions needed for sustenance, so that each labourer ingests sufficient calories, and we assume the population is now up to 1500, then clearly the pig farmers would be over nourished and everyone else undernourished. The production of commodities by commodities over the heads of the producers would end up causing severe damage to parts of this primitive community. But never mind how the maths works out, what would happen instead is that the wheat farmers and the tool makers would all become pig farmers rendering the maths irrelevant.

Next we turn to Chapter ll, which includes for the first time a surplus. Let us give Sraffa the benefit of the doubt. Let us assume the surplus is not the result of magic but an exceptional year for agriculture just as in the case in the USA 2014. The sun shone, the rain fell, and the wind was subdued. All ideal growing conditions. As a result, the output of wheat using the same inputs increased from 400 tons to 575. So far so good. The result was a surplus of 175 tons of wheat which in turn was exchanged for only 15 tons of tools and not 20 tons. In other words, measured by iron wheat has depreciated, whereas measured by wheat, iron had appreciated. This is the only condition that allows for some of the additional wheat to find itself being redistributed back to the forgers to allow both to share in the good fortune of nature. This alteration in exchange rates allows each sphere to show a surplus which results in a rate of profit of 25% in both.

The rate of profit however is irrelevant because we are not dealing with classes. This is and remains a society based on labourers whose only concern would be an alteration in exchange rates in order to retain the tradition or convention where output is exchanged for output. The farmers could very well keep the extra wheat for themselves, though this is likely to result in the forgers pounding ploughshares into swords. There is no such thing as examples outside history.

The real issue though is whether this surplus is consumed productively or unproductively. If the community decides to exchange it with adjacent communities for wine against pork or wheat, then undoubtedly their evenings would be improved (kebabs, wine and bread as opposed to bread yet again) but the conditions of production, their day time jobs, would be unaltered.

Now consider the alternative if the surplus is invested. The wheat is converted into more labour time through the hiring of labourers. We now have the emergence of employers and classes. As a result, there will be a proportionate increase in iron and wheat the following year. Now here is the rub. Let us assume that next year the freakishly good weather reverts back to normal. Now it may be the case that maintaining the production of 575 tons of wheat depends on the expenditure of additional labour time not favourable weather. There is thus a reduction in productivity. The rise in the number of mouths to feed now extinguishes the surplus.

The point that is being made is that Sraffa cannot simply conjure up 175 tons of extra wheat without accounting for its increase. On the one hand its increase is due to freakishly good weather, on the other hand its increase is due to more labourers: on the one hand 575 tons of wheat yielded a surplus and on the other it yielded no surplus. But mark, 575 tons of wheat = 575 tons of wheat but the old social conditions do not equal the new conditions. It is likely the new labourers would be sent packing, for while they require supervision, they do not produce surplus labour. As a result, should the weather revert back to normal, it is likely that the production of wheat will fall back to 400 tons the following year and we would be back to square one.

So we can see figures that have no attachment to reality, are just that, figures, and the fact they can be balanced and accounted for, does not render them anything other than figures. In Sraffa's world, we do not have productive labour but productive figures. What Sraffa is engaged in is a forced abstraction. A forced abstraction means a detachment from the reality it is trying to describe. 575 tons can describe better weather or more labourers, a surplus or no surplus.

A real abstraction on the other hand is a simplification of existing reality. Marx's abstract labour is a real abstraction. When the community divided between forgers and farmers, they would have done so on the basis of the technical requirement required to produce wheat, a trial and error process which would have revealed that 20 tons of iron had to be produced in order for the farmers to produce the 400 tons of wheat needed to feed this community. But this technical relationship should not be confused with the exchange relationship which would have been based on the exchange of labour time.

We saw in our earlier explanation that 20:1 or 10:1 would have yielded unequal labour times in each sphere by giving an advantage to the farmers. Hence the exchange relationship between wheat and iron in fact should have been 18.5:1 rather than the 20:1 or to put another way, the maximum amount of iron that could be produced would have been 18.5 tons which means that only 10.5 tons would be available for exchange. But this is impossible as the underlying assumption is that each labourer family requires ½ ton of wheat per person to live. The redistribution of wheat from the farmers to the forgers in order to equalise labour time needed to produce 20 tons of iron would have left the farmers hungry. But of course if you are conjuring up figures this does not matter, and had Sraffa realised how sloppy his figures were, he could have arrived at a ratio of 18.5:1 but that would have negated the whole purpose of what he was trying to do, which was to render labour time irrelevant to his calculations.

Hence what Sraffa has introduced with his forced abstraction is an impossibility. His plucking of figures from thin air has produced an incongruity between technical relationships and human relationships. It is not commodities that produce commodities it is labour that produces commodities and any abstraction has to proceed from what is common to all commodities, which makes them commensurate and what determines the proportions in which they exchange in a simplified world, and that is socially necessary labour time. Any other approach, which we may deem to be forced, allows no return back to reality, which is always and everywhere, the complex whole. Sraffa is not a political economist, he is as Bill Jefferies has written elsewhere - a magician.

Finally, Sraffa belongs to the world of material balances, planning devoid of its social element. In the USSR goods produced goods and as long a material inputs balanced material outputs all was well, or was it? Clearly the collapse of the USSR demonstrated that producing quantitatively is not the same as producing economically and that in the end, it results in a diminished surplus and with it collapse. The tragedy of course is that any adherence to Sraffa makes it impossible to understand what felled the USSR - its inability to economise on labour time and allocate it efficiently. The renaissance of Marxism requires the setting aside of Sraffa and his legacy. He has no place in the Marxist Lexicon.

<u>Short note on the standard commodity.</u>

Sraffa's standard commodity is the national income divided by the total number of commodities which yields the average labour time (price relation). National income is merely the monetisation of labour time, therefore it is the same as dividing the total labour time by the total number of commodities to yield the average labour time (value relation). Hence Sraffa's standard commodity is labour time expressed in a use value. Gold was so much more efficient. No pocket or wheelbarrow is big enough to hold Sraffa's standard commodity.

Brian Green, December 2014