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Adam Smith on Capital and Income

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ABSTRACT

In this paper I critically analyze Smith's thesis in book I, chapter 6 of the "*Wealth of Nations*" that the replacement of the capital goods consumed in production becomes fully income. I argue that Smith's argument is defective and does not imply this, and that, once it is properly corrected, it implies that the full value of commodities does not become income; in other words: that GNP is not equal to aggregate income. On this basis, I proceed to analyze Smith's definitions of gross and net income in book II, chapter 2. I hold that they contradict Smith's previous and fallacious argument of book I, chapter 6, and imply, rightly, that the value of aggregate output is not equal to aggregate income. There is a fourth part in the price of commodities which is not income at all, but capital. In book II, ch. 2 Smith makes contradictory statements about wages and does not reach a definition of gross and net income. The cause of these contradictions is the extension of the error about capital consumption to wages. If Smith had kept to the Physiocratic *brut-net* distinction, he would have seen that the capital of the economy is made up not only by the investments on productive means other than labor, but also by the investments on labor (wages), which do not belong in income even though they represent a part of the value of the output of consumption goods. Finally, I clear up a mistake in Marx' comments upon Smith on the subject of capital and income.

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*Introduction*

In book I, chapter 6 of his "*Wealth of Nations*", Smith holds that the price of commodities has three parts, namely, wages, profits and rents. Wages is the income of labor; profits is the income of capital, and rent is the income of the owner of land. The sum of these three incomes, says Smith, is equal to the full value of commodities. There are no more parts in the price of commodities in addition to these three: once the incomes of labor, capital and land have been paid, there remains nothing of the value of commodities. On this basis, Smith defines the "natural price" of commodities in book I, chapter 7 as the sum of wages, profits and rent, each income being at its "natural" level.

In book I, chapter 6, Smith makes an objection to his own view on the parts of price, and asks: is there not a fourth part in the price of commodities that pays for the value of the capital goods consumed in production? It is clear that production involves a consumption of production goods, and that this consumption has to be made good out of production itself. Does this imply that there is a fourth part in the price of commodities in addition to wages, profits and rent?

Smith answers that the replacement of the capital goods consumed as a result of production, of depreciation, does not give rise to a fourth part in the price of commodities. The reason is that the value of the production goods consumed, the price of the capital goods that replace the ones used-up, has three parts as well, namely, wages, profit and rent. Accordingly, the replacement of the capital goods consumed in production gives rise ultimately to wages, profits and rent, and nothing more. The production of capital goods, the value of these goods, becomes income entirely, because it becomes either wages, profits or rent. Therefore, the price of commodities has three parts, wages, profits and rent, and not four. The hypothetical "*fourth part*" is shown by Smith to become wages, profits and rent. Therefore, the full value of commodities becomes entirely income in the aggregate.

The goal of this paper is to show that the answer of Adam Smith to the question as to whether there exists a fourth part in the price of commodities is defective. Contrary to Smith, I am going to argue there is a fourth part in the price of commodities, but that this fourth part is not income, but capital, or better, the part of the capital of the economy that does not consist in labor-power. Therefore, it is not true that the addition of the money payments to labor, capital and land is equal to the value of the national product: the value of the output of the economy is not equal to the aggregate income of the economy. Some part of the value of output must represent the capital of the economy.

In order to show the fallacy in Smith's argument in book I, I contrast his theory of price of book I with his distinction between gross and net national income in book II. I contend that this distinction contradicts the view of book I that the price of commodities has three parts, and that the three are income. I try to show that Smith's gross-net distinction in book II assumes tacitly that there is a fourth part in the price of commodities and that this fourth part is not income. I examine Smith's formulations of this distinction and show that they are defective and mutually incoherent because they involve a further mistake, namely, that of holding that wages are income. On the basis of Smith's texts, I attempt to show that wages are not income, but capital, the part of the capital of the economy that consists of labor-power.

The conclusion arrived at in this paper on the basis of the critical analysis of Smith is of fundamental importance not only for the Historian of Economic Thought, but also for the Economic Theorist in general, for Smith's erroneous view has made its way into current Macroeconomic Theory and lies at the heart of one of the basic identities of current national accounting, namely, that GNP is equal to aggregate income. The criticism of Smith's texts shows that GNP must be greater than aggregate income, because it must include aggregate capital in addition to aggregate income. The adoption of this view has far reaching implications and involves, among other things, the need to reelaborate our conceptions on the very notions of capital and income and on the whole process of capital accumulation.

The idea of contrasting the theory of price of book I with the gross-net distinction of book II came to me from Marx. I came to Marx in a later stage of my work, which started by Smith. When I first studied Smith's theory of price of book I, I was not convinced by his thesis that the full value of commodities becomes income, and decided to examine it in detail. Consequently, as I developed my own thoughts on the subject, I started to look around for opinions by commentators of Smith, but I was surprised to find out that nobody touched on the subject, except Cannan, and even

Cannan did not devote much attention to the question, and gave it no importance.

I was glad to find out that Marx conceded a great relevance to the question that worried me and that he had examined it in detail. First I studied Marx' comments on Smith in "*Theories of Surplus Value*", volume I. From this study, which is mainly made up of notes of Marx for his own use and is rather sketchy, I concluded that there was truly a problem in Smith, and formed my own views. I contrasted them with "*Capital*", volume II, which I read when my work was at a later stage of development. I also tried to test my then still preliminary views with authors after Smith, an exercise that I have found very instructive and the results of which are presented in a series of papers that I hope to publish in the next future.

As I just said, the study of Marx has played an important part in the development of my view. However, though I was greatly helped by the study of Marx, I was also puzzled by it; in particular, I had the recurrent feeling that I had not fully understood his position. The reason was the many references of Marx to wages as the income of the laborers. Since, in a capitalistic economy, the only income is the income of capital, how is it that Marx says so many times that wages are the income of the laborer? A salaried worker can have no income in Marx's system, because his work is part of the capital of the capitalist. Marx said very often himself that the wages of the worker are the variable capital of the capitalist. Then, how can he say that wages are income at all? Does it not contradict his own statement that they are capital?

I came to the conclusion that, though Marx held the right view on the subject of the capital-income distinction, he had at times, and at many times indeed, made the same mistake as Smith, namely, to confuse "flow of money" with "flow of income". This confusion is not dominant in Marx: it appears often, but it is clearly at odds with his core ideas on the capital-income distinction. Nonetheless, it makes very difficult to read Marx, for the scholar has to rewrite the text in his mind constantly, to make sure that he is understanding what he is reading, and he is often perplexed by icoherent statements. In order to present more clearly my criticism of Smith, I deemed it convenient to devote a short section to Marx right after treating in detail of Smith, in order to show Marx's mistake and thus define better my position.

The paper has a very simple structure: first, I comment on Smith's relevant texts; secondly, I show Marx' mistake, and, thirdly, I summarize my findings in a section devoted to conclusions.

*1. Smith*

In book I, chapter 6, Smith writes:

> "As soon as stock has accumulated in the hands of particular persons, some of them will naturally employ it in setting to work industrious people, whom they will supply with materials and subsistence, in order to make a profit by the sale of their work, or by what their labour adds to the value of the materials. In exchanging the complete manufacture either for money, for labour, or for other goods, over and above what may be sufficient to pay the price of the materials, and the wages of the workmen, something must be given for the profits of the undertaker of the work who hazards his stock in this adventure. The value which the workmen add to the materials, therefore, resolves itself into two parts, of which the one pays their wages, the other the profits of their employer upon the whole stock of materials and wages which he advanced." (Smith, 1988, 133)

The materials and subsistence that the undertaker supplies to the workmen are the "stock" of the undertaker, that is, his capital, or, in other words, the investment that he advances. Smith says in the final sentence of the quotation that the undertaker gets a profit "upon the whole stock of materials and wages which he advanced". However, right before saying this, he also says that the workmen add value to the materials, that is, to the value of the materials. Then, they do not add value to the "whole stock" of the undertaker, but only to the part of it consisting in materials. Is there a contradiction here? Do the workmen add value to the whole stock of the undertaker or only to the part of it consisting in materials?

If the undertaker makes profit "upon" his "whole stock", then the labor of the workmen must add value to the whole stock of the undertaker, not only to the part of it consisting in materials. Since the profit of the undertaker is the excess value of his commodity over the expenses on labor and materials, the labor of the workmen must add value to the value of the materials *and of the subsistence* advanced by the undertaker. The point is that while the labor of the workmen re-produces the part of the capital stock consisting of subsistence, it does not re-produce the part of the capital stock consisting of materials. This carries the suggestion that the part of the stock consisting of materials need not be re-produced, or, in other words, that it is infinitely lived, in contrast to the part of the stock consisting of subsistence, which is re-produced in each production period. Since, in actual fact, production involves a consumption of production means, a theory of value that starts from the premise that production does not involve any consumption of production means in necessarily incomplete and will lead to false results. In this paper, I want to focus on Smith's theory about the consumption of production means.

The workmen consume the subsistence advanced by the undertaker as they do their work; thus, their labor re-creates the fund that they destroy. The value of the subsistence advanced by the undertaker ceases to exist because the goods that make it up cease to exist: they are consumed, destroyed. But the labor of the workmen re-produces this value, that is, that the workmen add value with their labor of a magnitude equal to the value of the subsistence that they consume, and even a surplus over it. It may be that the labor of the workmen does not produce subsistence for the workmen, but, say, luxury goods. According to what Smith says, the value in use of the good produced by the workmen is irrelevant for the question at hand: the relevant thing is value in exchange, and Smith's point is that the labor added by the workmen is greater than the labor required to produce the subsistence that they destroy as consumers.

The labor time given by the workmen to the undertaker is greater than the labor time required to re-produce the subsistence consumed by the workmen. This surplus, which does not make up for any consumption or destruction of goods, is the profit of the undertaker. Thus, the undertaker advances a fund of subsistence that is destroyed as the labor process goes on but that is being replenished at the same time and by the same labor process. Thus, the labor added by the workmen makes up for the labor consumed by the workmen, and there even remains a surplus. That the labor added by the workmen makes up for the labor that they consume shows in the fact that the price of the commodity produced by the workmen allows the undertaker to get back the money or goods that he advanced as subsistence. The re-production of the subsistence or wage fund by the workmen shows the return to the undertaker of the capital invested as wages.

There is profit for the undertaker to the extent that the workmen add more labor to that which is required to produce the subsistence that they destroy. This is why Smith says that the value added by the workmen is divided into two parts: first, the wages of the workmen, and, secondly, the profits of the undertaker. Good, but, what about the materials? Does not the labor process affect them? Are not they consumed by production?

As Smith's text stands, the capital invested as materials, that is, on raw materials, machinery, tools, buildings, and, in general, in productive goods other than labor, stands unchanged forever. This means that it does not ever return to the undertaker. An investment that does not return to the investor is a contradiction in terms. As I shall try to show, Smith's occasional statement that the workmen add value to the materials, and not to the materials and the subsistence, reveals the existence of a problem in his price theory about the capital invested on goods other than labor. In what follows, my goal is to formulate the problem, as accurately as possible, which is not an easy task, and to solve it.

In order to do this, let us go on reading Smith. After having explained profit as redundant labor time, Smith writes:

> "As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed, and demand a rent even for its natural produce. The wood of the forest, the grass of the field, and all the natural fruits of the earth, which, when land was in common, cost the labourer only the trouble of gathering them, come, even to him, to have an additional price fixed upon them. He must then pay for the licence to gather them; and must give up to the landlord a portion of what his labour either collects or produces. This portion, or, what comes to the same thing, the price of this portion, constitutes the rent of land, and in the price of the greater part of commodities makes a third component part." (Smith, 1988, 134)

According to this text, the rent of land is a third distributive share, in addition to wages and profits, in the value added by the workmen to the capital invested by the undertaker; therefore, when the private property of land enters the picture, the value added by the workmen resolves itself into three parts, namely, wages, profits and rent. Wages make up for the capital invested as payment for labor; profits and rent do not make up for any investment, and are shares in the surplus labor rendered by the workmen to the undertaker.

Smith goes on and writes:

"In every society the price of every commodity finally resolves itself into some one or other, or all of those three parts (KMO: wages, profits and rent); and in every improved society, all the three enter more or less, as component parts, into the price of the far greater part of commodities" (Smith, 1988, 135)

This quotation seems to contradict the statement that the workmen add value to the stock of the undertaker, for the full value of the commodity was said to comprise the value added by the workers to the value of the whole capital invested by the undertaker and now it is said to be only the value added by the workmen. In other words: if the price of commodities has three parts, and if these three parts are wages, profit and rent, who makes up for the consumption of materials? A price theory built on the premise that materials are eternal does not seem to be the best example of scientific accuracy.

Smith develops further the idea laid down in the text just quoted and says that wages, profits and the rent of land are the "original sources of income". This implies that there are sources of income which are not original, and Smith cites as examples interest, pensions, taxes and annuities. In contrast to wages, profit and rent, the "original sources", these other four sources of income are called by Smith "derived" (see, Smith, 1988, 136-7)

Smith explains that the reason why he says that interest, for instance, is a "derived" source of income is because interest is paid either from wages, profits or rent; in other words, the existence of interest requires the previous existence of wages, profits or rent, and consists of a redistribution of wages, profit and rent, whereas wages, profit and rent do not require the previous existence of any other source of income. Having made it clear that the focus is on the original sources of income, let us return to our original question: what about the materials? Does the price of commodities have a fourth part in addition to wages, profit and rent, the end of which is to make up for the consumption of materials? Smith goes straight to the point and writes:

"In the price of corn, for example, one part pays the rent of the landlord, another pays the wages or maintenance of the labourers and labouring cattle employed in producing it, and the third pays the profit of the farmer. These three parts seem either immediately or ultimately to make up the whole price of corn. A fourth part, it may perhaps be thought, is necessary for replacing the stock of the farmer, or for compensating the wear and tear of his labouring cattle, and other instruments of husbandry. But it must be considered that the price of any instrument of husbandry, such as a labouring horse, is itself made up of the same three parts; the rent of the land upon which he is reared, the labour of tending and rearing him, and the profits of the farmer who advances both the rent of this land, and the wages of this labour. Though the price of the corn, therefore, may pay the price as well as the maintenance of the horse, the whole price still resolves itself either immediately or ultimately into the same three parts of rent, labour, and profit" (Smith, 1988, 137)

This text is a mess, but it provides a very important key; therefore, let us analyze it carefully. Smith starts by asking whether his previous statement that the price of commodities has three parts, wages, profits and rent, is true or false. He poses the question in the particular instance of the price of corn, and asks whether the price of corn has three or four parts. In principle, the reader expects Smith to hold that the price of corn has three parts, not four, but look at what he writes:

"Though the price of the corn, therefore, may pay the price as well as the maintenance of the horse…" (Smith, 1988, 137)

The price of corn pays the price of the laboring horse. The laboring horse is the "material" advanced by the farmer to his workmen: it is the value of the capital invested on production means other than labor. The text says that the price of corn, in addition to providing for the wages of the workmen, the rent of the landlord, and the profit of the farmer,… pays for the materials! Smith acknowledges that the price of corn has *four* parts.

But this is not the end of the story. Indeed, Smith has made an interesting switch. Remember that he posed the problem as being whether the *price of corn* has three or four parts; look, however, at his answer:

"Though the price of the corn, therefore, may pay the price as well as the maintenance of the horse, the whole price still resolves itself either immediately or ultimately into the same three parts of rent, labour, and profit" (Smith, 1988, 137)

The initial question was not about the parts of the "whole price", but about the parts of the price of corn. Smith has switched to another question in the course of his argument. He acknowledges that the price of corn has four parts; his point is rather that the "whole price" does not have four parts, but three. But, what is the "whole price"? It is the price of what?

My answer to this question is that “the whole price” is the price of the corn and of the laboring horse taken together; in other words, the total value of the corn and of the laboring horse. If I am right, then Smith’s answer to the question as to how many parts the price of commodities has seems to run as follows: the price of corn has four parts, but the price of corn plus the price of the laboring horse has three parts, not four, because the price as well as the maintenance of the horse becomes wages, profits and rent in the hands of the producers of laboring horses.

We can give an alternative wording of this thesis: the price of any commodity regarded in isolation from the rest of the commodities of the economy has four parts, but the price of all the commodities in the economy taken together, that is, the aggregate value of output, has only three parts, not four, because the fund that provides for the re-production of the productive means destroyed in production resolves itself ultimately into wages, profits and rent. Note that Smith has ceased to build his theory of value upon the assumption that the production means other than labor are infinitely lived.

In other words: the value of the capital invested on materials does not constitute a fourth part in the value of aggregate output, because the value of the materials consumed in production becomes wages, profits and rents in the aggregate. The reason is that the replacement of the productive means used up is carried out by means of purchases of productive means to the producers of these means; thus, what in the hands of a particular producer is a fourth part in the price of his commodity, becomes wages, profit and rent in the hands of the producer from whom the former producer purchased the necessary productive means. In the aggregate, the whole capital advanced by the undertakers of the economy becomes wages, profits and rent in the hands of those who produced the productive means of the economy. Pa part of the aggregate output of the economy represents the re-production of the value of the production means consumed in production, but this value does not consitute a fourth part in the value of aggregate output: it becomes wages, profits, and rent.

It is not the case that the value of the national product has three parts and nothing more because the price of all the individual commodities has three parts and nothing more; Smith’s view is rather that even though the price or value of particular commodities has four parts, once the price or value of the commodities is considered in the aggregate, then the fourth part becomes wages, profit and rent. Smith’s view is not that the fourth part is annihilated, but that it changes appearance.

Is Smith right? Has he shown that the value of corn and the horse taken together has three parts? Has the sshown that the amortization of the value of the means consumed in production does not consistute a fourth part in the national accounts and becomes income? My contention is that he has not. The reason is that he omits that, if the reasoning applied to corn is consistently followed, then there must also be a fourth part in the price of the laboring horse. The money paid by the farmer to the producer of horses does not become wages, profits and rent of land only, but also a fourth fund of money necessary to replace the means of production employed by the producer of horses, unless he is able to operate the miracle of growing horses without any means of production, that is, without any food or implements.

Once this omission is taken into account, we find ourselves in the same situation as we were in the case of corn: there is a fourth part in the price of the horse that is neither wages nor profit not rent. It is no good to continue the chain and to appeal to a hypothetical third producer which produces the productive means consumed in the horse industry, for this sets in motion an infinite regression which has no final point, that is, no conclusion.

This point can be made from another standpoint. Smith's argument would succeed in proving that the fourth part finally resolves itself into wages, profits and rent if he discovered a productive sector in which no means of production whatsoever were employed, and which provided in the end for all the productive processes of the economy, a not very likely occurrence in this cruel world. Whenever the price of the product of the next supplier of means of production in the chain has a fourth part too, as it must needs be, then we are over again in the same situation as in the very beginning of the story with the producer of corn, that is, with the burden of a fourth part which is neither wages, nor profit nor rent, and which is transferred from industry to industry. That just rolls over the problem without solving it.

Smith does not consider that the producer of horses consumes production means; this amounts to assume that there can be some undertaker in the economy whose workmen add value to no materials. If there were such a producer, and if all the productive processes in the economy could be redirected to him, then Smith would be right, and the capital of the corn farmer would become income in the horse industry, so that the value of the entire output of an economy comprised by the farmer and the magic producer of horses would become wages, profits and rent in the aggregate. However, as soon as the producer of horses consumes productive means in order to rear horses, Smith's example does not allow us to tell whether the entire output of the economy becomes incomes or not, because we have a fourth part in the value of the output of horses. If we tried to solve the problem by following the same logic as with the farmer, we would be inevitably led to an infinite regression.

But, from whom can the producer of horses obtain the materials required to rear horse?. The number of producers in the economy is finite. We cannot extend the chain forever. In fact, as is well know, the chain is closed because, ultimately, the structure of social production is circular: there is a mutual re-production of the production means. In the example of the farmer and the horse, this amounts to saying that the corn farmer gets his laboring horses from a producer of horses while the producer of horses gets the means required to rear horses from the corn farmer. Here we would have here a mutual replacement of productive means, which, indeed, is the most general production structure. Contrary to Smith's example, the truly general case *à la* Leontief does not give rise to an infinite regression. Is Smith's thesis still true in an economy in which the farmer and the producer of horses supply mutually with productive means? Does the full amortization of the investment on materials become income?

The price of corn has four parts; this Smith himself acknowledged. This fourth part is the value of the laboring horse consumed. But the price of the laboring horse has also four parts, because some part of the value of the laboring horse must make good the consumption of corn involved in rearing horses. Thus, some part of the output of corn is consumed in the production of horses, and some part of the output of horses is consumed in the production of corn. These parts can be consumed neither by the workmen, nor by the undertakers nor by the landlords. In other words: some part of the value of aggregate output (corn + horses) cannot become wages, or profit, or rent, for, if it did, then production would stop or, at least, be impaired: there would be no accumulation of capital, but annihilation of capital or diminution of capital. The reason is simple: there would not be enough horses to keep the production of corn going at the same level, nor enough corn to keep the production of horses going at the same level.

An input-output table would show that Smith was wrong: the aggregate value of output must have four parts.

We can look from another standpoint at the mistake made by Smith. Smith is baffled by the intermediation of money. This intermediation is not a substantial feature of the problem as to whether the full value of commodities becomes income. Imagine, therefore, that the materials of the farmer do not consist of horses, but of seeds: the farmer must make good his consumption of seeds. Suppose that the amount of wheat produced by the farmer is 100 quarters. Out these amount the farmer must pay the rent of his landlord, the wages of his workmen and his own profits. If these payments took the 100 quarters, it would be impossible for him to restart production: he would cease to be a farmer. I more general terms, we could say that he has ceased to be a capitalist. Of course, a capitalist may choose to cease to be so, but, for obvious reasons, I do not study capitalist production upon the premise that capitalists choose to cease to be capitalist.

The point is that the farmer cannot devote his full output to wages, profits and rent. He must keep a part of it as seeds, for he must make up for the consumption of seeds. His stock of seeds is a part of his capital: it is what Smith would call the part of his stock consisting of "materials". The other part consists on subsistence, or of the equivalent in money wages. Let us focus on materials. The farmer must keep a part of his output of wheat in order to be able to sow again. This part of his output goes back to land right after having being reaped. It does not give rise to any income. It does not become wages, profits or rent. It is a forth part of his output, or of the value of his output. It is a part of his output, or of its value, that must remain enclosed within production.

Note that the part of the output that just makes up for the consumption of seeds cannot be brought to the market. It cannot be sold for consumption. This is why society does not have to pay for it: the body of workmen, undertakers and landlords do nt pay the fourth part of the price of commodities. They do not pay for it because it cannot be sold to them. The fourth part represents the capital of the economy invested on materials, or, more accurately, the re-production of these goods, and, therefore, of their value. Such a re-production represents the return of the capital invested on materials. It is no income for any class in the economy.

The fact that then the farmer does not make up for his consumtion of seeds out of his own output but, rather, out of the outut of a fellow farmer specialized in the production of seeds, does not alter the validity of the previous result. However, Smith is confounded by the presence of money and says, mistakenly, that the replacement of materials becomes fully income because it gives rise to an equivalent flow of money. He fails to see that this flow of money does not represent flow of income, but flow of capital.

Smith takes it that his answer to the question is satisfactory, and, in the rest of book I, he does not raise it up anymore. He maintains all long this book that the price of commodities has three parts, and nothing more: wages, profits and rent; this is the basis on which he introduces the well known concept of "natural price" in book I, chapter 7. However, some two hundred pages after, in Book II, chapter 2, the question about the fourth part arises again and Smith takes it up. He begins by restating what he supposedly demonstrated in book I, chapter 6:

> "It has been shown in the first book, that the price of the greater part of commodities resolves itself into three parts, of which one pays the wages of the labour, another the profits of the stock, and a third the rent of the land which had been employed in producing and bringing them to market. Since this is the case, it has been observed, with regard to every particular commodity, taken separately, it must be so with regard to all the commodities which compose the whole annual produce of the land and labour of every country, taken complexly. The whole price or exchangeable value of that annual produce must resolve itself into the same three parts, and be parcelled out among the different inhabitants of the country, either as the wages of their labour, the profits of their stock, or the rent of their land." (Smith, 1988, 346).

Note that book I, chapter 6 did not say that the price of commodities taken separately has three parts; indeed, it said the contrary: in the example of the laboring horse, Smith said that the price of corn, which is the price of a "particular commodity taken separately", had four parts, not three. What has three parts is the price of commodities *taken complexly*, to use Smith's expression. The example of the laboring horse ended up, unexpectedly for Smith, in the conclusion that the price of commodities taken separately has four parts, whereas the price of commodities taken complexly has three parts. Despite the fact that the price of corn must pay for the price of the laboring horse, in addition to the wages, profits and rent of the factors engaged in producing corn, the price of the corn and of the laboring horse taken together (Smith's "whole price") has three parts, not four. Smith is still happy about his position, but notes:

> "But though the whole value of the annual produce of the land and labour of every country is thus divided among and constitutes a revenue to its different inhabitants, yet as in the rent of a private estate we distinguish between the gross rent and the net rent, so may we likewise in the revenue of all the inhabitants of a great country. The gross rent of a private estate comprehends whatever is paid by the farmer; the net rent, what remains free to the landlord, after deducting the expense of management, of repairs, and all other necessary charges; or what, without hurting his estate, he can afford to place in his stock reserved for immediate consumption, or to spend upon his table, equipage, the ornaments of his house and furniture, his private enjoyments and amusements. His real wealth is in proportion, not to his gross but to his net rent." (Smith, 1988, 347).

Smith introduces here the distinction between gross and net income. He makes the distinction in the particular case of the landlord, and defines his net income as his net rent. Smith tells us that not all the money that the landlord receives as payment of rent is actually such, because the landlord must share in this payment with different kinds of workmen to whom he must pay their wages. This money, although paid to the landlord as rent, cannot remain with him and must be transferred to the workmen as wage payments. This implies that not all that the landlord got as rent was actually such; some part of it was actually wages. This is shown by the fact that the landlord cannot retain for himself some of the money that he gets as "rent": some of that money has to be transferred to other classes of people.

Smith is implying that what is nominally paid to the landlord as rent can be called "gross rent". Note, however, that what he actually means is that not the whole of gross rent is actually rent, because gross rent includes something that is not rent at all, namely, wages. Thus, to call "gross rent" simply rent is equivocal, for gross rent is not rent, but a mixture of rent and of something else that is not rent, namely, wages. What is rent and only rent is "net rent"; thus, "net rent" is the same as "rent" simply, and Smith's definition of net rent is a definition of rent simply, because the wages that the landlord pays to his workmen are no rent at all.

If we follow Smith's analogy between the rent of the landlord and national income, then we do not have to lose sight of the fact that gross income will include something that is not income at all, just like gross rent included something that was not rent at all. Logic implies that, just like the only rent is net rent, then the only income is net income; in other words: the definition of net income must be the definition of income simply.

The question then is: what is the part of gross aggregate income that is not net income, that is, that is not income at all? In order to answer this question, Smith applies what he just said about rent to national income and writes:

> "The gross revenue of all the inhabitants of a great country comprehends the whole annual produce of their land and labour; the net revenue, what remains free to them after deducting the expense of maintaining first, their fixed, and, secondly, their circulating capital; or what, without encroaching upon their capital, they can place in their stock reserved for immediate consumption, or spend upon their subsistence, conveniencies, and amusements. Their real wealth, too, is in proportion, not to their gross, but to their net revenue." (Smith, 1988, 347).

Smith takes two reference points in this text for defining net income: first, production cost; secondly, consumption. In terms of production cost, net income is what remains after deducting production cost from gross output. In terms of consumption, net income is what can be devoted to consumption without encroaching upon capital. Of course, the two definitions must ultimately refer to the same thing, and we have to check whether this is the case.

Note that both definitions contradict the conclusion of Smith's example of the laboring horse of book I, for they imply that there is some part of the aggregate output that cannot be consumed outside of production, and, therefore, that cannot become wages, profit or rent for anybody in the economy. Gross income, just like gross rent, contains something that is not income at all: this is the fourth part, the capital that gave rise to revenue. The deduction of capital from gross income means that a part of gross income is not income; in order to avoid this nearly contradictory mode of expression, it would be more accurate to say that a part of the aggregate value of output does not represent income, but capital. If the example of the laboring horse had succeeded in showing that the value of materials becomes income, then there would not be any room for a deduction such as the one upon which Smith establishes his distinction between gross and net income.

The concept of net income or of "*produit net*" had been already introduced, at least, by the Physiocrats. In order to assess with accuracy the arguments of Smith, it is very convenient to recall what the Physiocrats meant by this distinction. The Physiocratic distinction was aimed at separating that which is increment in value from that which is not so; in other words, that which is surplus value ("*produit net*") from that which is value but not surplus value, and this is capital ("*avance*s"). The returning value which is not surplus value is the capital value, the capital advanced that has given rise to some surplus value the magnitude of which is to estimated. To estimate surplus value, net income, it is necessary to deduct from the total returning value what is not new value, but the capital value that returns to the form of money within the time period in question, which is another way to refer to production cost.

According to this conception, the Physiocrats excluded from net income not only the maintenance of the productive equipment of the economy, but also the wages of the workmen and the profits of the undertakers. The reason why they excluded the latter is simply that they regarded the profits of capital as a kind of wages; their view was that only the rent of land is net income, that is, surplus value, because only land has the ability of multiplying matter. For our present discussion, the interesting feature is that the Physiocrats excluded wages from net income despite the fact that wages provide for the consumption of the workmen. Net income was not simply the surplus of the total value of the national product over the cost of maintenance of the equipment, but the surplus over this cost and over wages (profits were conceived as wages) because wages are but another element of aggregate production cost. The capital of the economy, or, as the Physiocrats said, the "*avances*" of production, were not only the funds devoted to the production and maintenance of machines, raw materials and the like, but also the funds devoted to the production and maintenance of the labor power.

In the Physiocrats, Smith's two definitions of net income, in terms of consumption and in terms of production cost, have the same reference, that is, they are two approaches to the same thing, namely, surplus value. Thus, the Physiocrats conceived income or revenue as surplus value.. What can be consumed without encroaching upon capital is exactly the same as the surplus of aggregate output over aggregate production cost. In the Physiocratic system, the surplus value is represented by the rent of land. The aggregate production cost is made up of: 1) amortization of productive means other than labor; 2) wages; 3) profits (which, according to the Physiocrats, are wages). These are the three basic parts of the capital of the economy.

In rejecting the example of the laboring horse, Smith admits, with the Physiocrats, the presence of a fourth part in the price of commodities. This fourth part includes, no doubt, the amortization of the investments on productive means other than labor: this is what Smith calls "the value of materials". It is also clear that it does not include profits, for Smith's theory of value implies that profits are surplus value, no part of the capital advanced. Therefore, the income of the economy is not made up of rent only, but of rent and profits. So far so good: all we have is the Physiocratic theory about the distinction of capital and income modified by Smith's labor theory of value, but consistently modified. The problem arises now: what about wages? On the one hand, wages represents the consumption of the working class; on the other hand, wages are commonly reckoned as a production cost. Do they belong in income or in capital? Before tackling this question, I would like to make another comment upon the relationship between Smith and the Physiocrats.

After having rejected the Physiocratic view on the parts of price, Smith takes a surprising move and wants to make room for the Physiocratic distinction between "*produit net*" and "*produit brut*", which is what he does in the text I am commenting upon. His move suggests that he thought for some reason that the Physiocratic distinction was helpful to his theory. But far from helping Smith, his appeal the Physiocratic distinction only makes worse his position. Smith stumbles on the fact that the distinction between gross and net income is actually a distinction of capital and income, and that his example of the laboring horse, in the end, did away with it. Smith's view that the full price of commodities is equal to wages, profits and rent led him to hold that the full price of commodities is equal to the sum of the three incomes of the three social classes: of course, the sum of incomes is income. But if the full value of commodities is income, then, nothing is capital. Since the distinction "*brut-net*" is given by capital, the implicit statement that no part of the value of commodities represents capital carries with it the implication that there is no distinction between gross and net income.

Instead of rejecting the Physiocratic distinction, which is the position coherent with the example of the laboring horse, Smith tries to differentiate net income from gross income. Thus, he is implicitly admitting that the example of the laboring horse concealed a fallacy somewhere. Now the question is to define the elements of aggregate capital, of the production cost which is to be deducted from gross income.

The net income of the nation is either what remains for the consumption of its inhabitants after having provided for the replacement of the productive means consumed in production, or what the inhabitants of the nation can consume without encroaching upon the capital of the nation. Smith focuses on aggregate production cost to define net income and analyzes the maintenance of the fixed and circulating capital of the economy separately. He begins by fixed capital and writes:

> "The whole expense of maintaining the fixed capital must evidently be excluded from the net revenue of the society. Neither the materials necessary for supporting their useful machines and instruments of trade, their profitable buildings, etc., nor the produce of the labour necessary for fashioning those materials into the proper form, can ever make any part of it. The price of that labour may indeed make a part of it; as the workmen so employed may place the whole value of their wages in their stock reserved for immediate consumption. But in other sorts of labour, both the price and the produce go to this stock, the price to that of the workmen, the produce to that of other people, whose subsistence, conveniences, and amusements, are augmented by the labour of those workmen." (Smith, 1988, 347).

Smith distinguishes two parts in the expenses of maintaining the fixed capital of society: the expense on materials and the expense on labor. The expense on materials is explicitly excluded by Smith from net income; note well: it is an expense, a flow of money, that represents no income, neither net nor gross. This contradicts again Smith's position in book I, chapter 6, where the expense of maintaining the stock of laboring horses did become income in the aggregate.

The money invested on materials by the undertakers that produce production goods would give rise to its equivalent in incomes only if the producers of these materials would have no capital to maintain, or, what amounts to the same, only if they did not consume productive means in order to produce materials. But the producers of materials do not make miracles, at least as a rule, and consume materials in order to produce materials. Accordingly, they must devote some of their sale proceeds, which represents a part of the value of their output, to purchase inputs from other producers. Thus, we have a mutual re-production of production means.

Let us call A the producer of production goods and B the producer of the materials consumed by A. Since materials are production goods, B can be said to be a producer of production goods with all propriety, just like A. The infinite regression is avoided as soon as we notice that A depends to some extent on B and, at the same time, B depends to some extent on A, no matter how many transactions there might be in between both producers. If A gets materials from B and B gets machinery from A, for instance, then A invests on B and B invests on A.

Some part of A's investment on materials becomes wages, profits and rent for the agents involved in B, but B must devote some of its sale proceeds to the replacement of his productive means. This fourth part is sent back to A by B in exchange for machinery: this is investment on A by B. Part of this money becomes wages, profits and rent for A, but A must keep some of his sale proceeds for the replacement of his capital: this money is sent back to B. The conclusion is that, in the end, there is a perpetual flow of money between A and B going forth and back. This money stands for the continued investment and amortization of the capital that A and B invest on productive means other than labor. This flow of money never becomes a flow of income: to the extent that it did, the flow of capital must be impaired. The example of the laboring horse equivocated Smith: there is a fourth part in the price of commodities that represents the advancement and return of the capital invested on productive means other than labor, which is what Smith calls "materials", and which never becomes wages, profits or rent. It is as part of price, but it is not income. The full value of commodities does not consist of income.

When Smith says that the expense on materials is not net nor gross income for anybody in the economy, what he actually means is that this value is not income at all, that it must always be kept within production, that it can never abandon production and go to consumption. It if did so, then we are outside capitalism, the economic system the end of which is the accumulation of capital.

So much for the investment on materials by the producers of materials, but, what about the investment on the labor employed in producing productive means? Contrary to the money invested on materials by the producers of materials, Smith says that the money that they invested on labor does belong in net income because it is exchanged for goods that can enter immediate consumption. The goods produced by the labor employed on producing production means does not belong to net income, but the price of this labor, that is, wages, does. In other words: the laborers engaged in the production of productive means get not productive means but consumption means.

From this indisputable fact, Smith concludes that the consumption of these laborers is a part of net income.

Against Smith I hold that logical consistency demands to say that the wages of the workmen employed in production materials are not net income, or better, that they are not income at all, because, if the end of production is the accumulation of capital, they are a production cost. I do not know what the economic determination of labor might be in a society that is not capitalist, but I do know that in capitalism, the expenses of producing and maintaining the labor-force are a production cost. Smith overlooks that, just as the producers of production means get consumption means, the producers of consumption means destroy production means. The two phenomena are coordinated, and their coordination is a substantial part of general equilibrium: the workmen that produce materials get consumption means in exchange for materials, while the producers of consumption goods consume materials, which implies that they get materials in exchange for consumption goods.

Net income was defined by Smith as what can be consumed without encroaching upon capital; note: not simply as what can be consumed, but as this plus the condition that the capital of the economy, at least, does not diminish. In saying that the price of the labor of the workmen employed on producing materials belongs to net revenue, Smith forgets his own condition, and, as a matter of fact, equates net income with consumption simply. However, though wages are certainly a part of the total consumption of consumption goods in the economy, they are not a part of what can be consumed without encroaching upon capital, because they provide for the maintenance of the labor power of the economy.

Smith fails to understand the place of the consumption of the working classes in a capitalistic economy. It is not the case that the full output of consumption goods is the same as net income. The point is that some part of the value of this output represents capital, not income, just like some part of the value of the output of production goods represents income, not capital. What Smith labels as "income" of the workmen is the part of the investment of the undertakers that is devoted to labor, and not to materials. In other words: the wages of the workmen, no matter on which sector of the economy they may be employed, represent an investment of capital by the undertakers, a capital which circulates through the hands of the workmen. The payment of wages to the workmen and the spending of wages by the workmen in exchange for consumption goods have nothing to do with income: they are two stages in the process of circulation of capital, not of income. It is true that wages and profits are equally exchanged for consumption goods, but this has nothing to do with the economic significance of wages and profits as defined by Smith himself in the context of an economy the aim of which is the accumulation of capital. Wages are a part of the capital of the undertakers, whereas the profits of the undertakers are not the capital of anybody else, and are the source not only of the consumption of the undertakers, but of the accumulation of capital which is the end of all economic activity under capitalism.

Having examined fixed capital, Smith takes up circulating capital. From what I have said, this task is relatively easy. Let us sum up what we have seen so far. We have seen that investment gives rise to capital, not to income. Investment is the transformation of revenue into "*avance*", of income into capital. There can be saving to the extent that there is surplus value, that is, to the extent that there is income. Investment shows the starting of a new turnover of capital on an expanded basis: part of the income obtained in a previous cycle is added to capital, becomes capital value, and enters the cycle of capital. Investment gives rise to income not when it is advanced, but when it returns to the investor: the only income to which investment gives rise to is profit. Investment on labor gives rise to wages, and wages are capital, not income. Investment on materials gives rise to investment on labor and on materials. The investment on labor represents, as I just said, an increase in the production cost; an increase that, certainly, is worth undertaking, because it is profitable.The point, however, is that it is capital, not income. The investment on materials is the part of the flow of capital that does not flow directly through the workmen. Therefore, investment does not give rise to any income because of giving rise to a flow of money. The income that investment gives rise to is profit. Profit is income for the investor, not for the receivers of the investment of the investor. On these principles, let us look at what Smith says about the maintenance of circulating capital:

> "But though the whole expense of maintaining the fixed capital is thus necessarily excluded from the net revenue of the society, it is not the same case with that of maintaining the circulating capital. Of the four parts of which this latter capital is composed -money, provisions, materials, and finished work- the three last, it has already been observed, are regularly withdrawn from it, and placed either in the

fixed capital of the society, or in their stock reserved for immediate consumption. Whatever portion of those consumable goods is employed in maintaining the former, goes all to the latter, and makes a part of the net revenue of the society. The maintenance of those three parts of the circulating capital, therefore, withdraws no portion of the annual produce from the net revenue of the society, besides what is necessary for maintaining the fixed capital." (Smith, 1988, 348).

As we have just seen, it is not the case that the whole expense of maintaining the fixed capital was excluded from the net revenue of society by Smith: recall that he said that the wages of the workmen employed in producing fixed capital were a part of net income. The reason why the wages of the labor employed in producing production goods was included under net income is that wages are exchanged for the equivalent in consumption goods. I showed why this reasoning was erroneous, and that some part of the value of the output of productive means represents income, not capital. Now, Smith agrees with me and says that the wages of the workmen employed in the production of production goods do not belong to net income. It would be better if he said that they do not belong to income at all, but to capital.

He now notes that, by way of contrast, the labor of the workmen employed in the industries that produce consumable goods does produce consumable goods, indeed. He concludes from this that, excepting the maintenance of money, the expense of maintaining circulating capital belongs to net income. In other words: the investments on materials and labor for the production of consumption goods give rise to net income, or become net income: the reason is that the goods produced by these investments are consumption goods, not production goods. This is the symmetric version of the same mistake as before. Smith is forgetting that the producers of consumption goods destroy production goods when producing consumption goods. They have to make up for this destruction or consumption, that is, they have to get back the capital that they invested on productive means. Thus, some part of their output of consumption means, or better, of the value of this output, does not represent income, but the return of the capital invested. The value of this capital can be seen in the money that flows constantly from the industries that produce consumption goods to the industries that produce production goods. This money flows back from the latter industries to the former in exchange for consumption goods.

The value in use of the goods produced by a capital is not what determines the magnitude of income and capital. This determination has to do with value in exchange. The accumulation of capital is not an accumulation of goods, but of money, that is, of general and unspecific value in exchange. I do not mean in any way that the value in use of the goods produced is indifferent for the process of capital accumulation. All the contrary: my view implies that there must be an equilibrium between the production of consumption goods and the production of production goods with which these consumption goods are produced. My criticism to Smith is radically different, and is about the concepts of capital and income. My point is that goods do not belong in income or capital in virtue of their value in use.

Let me stress that the reason why wages in relation to total output are to be minimized and profits in relation to total output are to be maximized is not that the goods consumed by the workmen are substantially different from the goods consumed by the undertakers: indeed, both classes of people might eventually live on exactly the same goods. The key is that if capital accumulation is the end of production, as Smith acknowledges it to be, then wages cannot be an element of net income, or of income simply, as the Physiocrats rightly maintained in the terms of their particular system. In Smith's terms, if the goal of the undertaker is to make a profit by the sale of what the workmen produce, then the investments on materials and on money for the workmen that they exchange for consumption goods, is but investment, and therefore, the capital of the undertakers that must return to them with the corresponding profit. Sometimes Smith thinks according to this view; look at this text, for instance:

> "The circulating capital of a society is in this respect different from that of an individual. That of an individual is totally excluded from making any part of his net revenue, which must consist altogether in his profits." (Smith, 1988, 348)

The fact that Smith refers to circulating capital only is of no importance for the matter at hand, because what he says applies equally to fixed capital. Smith says neatly that the only true revenue or income is profit. The capital of the undertaker, that is, what he invests either on materials or either on labor, is not income for him. Nor is it for society as a whole, as far as social production aims at the accumulation of capital. Aggregate net income, accordingly, should be the sum of all the incomes in the economy, that is, of the profits of the different capitals that make up the capital of the economy. The fact that landlords can claim a share in income, rent, is of no relevance: it just shows that the undertakers have to share in the fruit of their investments with a class founded on a different property right.

Bearing in mind that Smith should have said that wages are a part of aggregate production cost and that they do not belong to net income, let us go back to the text that we were examining.

Smith says in it that the whole expense of maintaining the circulating capital is not excluded from the net revenue of society, but only some part of it, namely, the expense of maintaining the stock of money. What Smith has in mind is that materials, provisions and finished work are consumable goods, in contrast to production goods, or to materials more specifically. But he is equivocating himself and the reader once again, for he is saying that the reason why provisions, materials and finished work are not excluded from net income is that they are consumable goods. This is an equivocation because, as I showed above, the fact that the goods produced by labor are consumable or not has nothing to do with the question as to whether their value in exchange is to be counted in or out of income. Net income is not the whole output of consumption goods, but only the part of it which can be consumed without impairing production, that is, the part that the undertakers and the landlords may chose to consume.

Summing up: the maintenance of circulating capital is not excluded from net income because provisions, materials and finished work are consumable goods and net income is the stock of consumable goods produced by the economy. Whether consumption is with a view to consumption itself or with a view to the production of fixed capital is unimportant, because in both cases the goods are consumed. By contrast, the maintenance of fixed capital is excluded from net income because production goods are not part of the stock of consumption goods. I have tried to show the fallacies contained in these statements. The basic one is to forget that wages cannot be a part of net income because they are an investment of the undertakers and, thus, a production cost.

We can look at Smith's problem whether capital becomes income fron another standpoint. His ground for holding in book I, chapter 6 that the full value of aggregate output becomes income is that every expenditure of money must accrue to somebody, and, therefore, that every flow of money must involve, by definition, a flow of income.

According to this idea, there is an income wherever there is a flow of money. This view ignores that the return of the capital invested to the investor does not constitute any income for the investor: it is a flow of money which is not a flow of income, but of capital. In a capitalistic economy, there is a flow of income not when a flow of money stands for a flow of value, but when a flow of money stands for a flow of *surplus* value. This the Physiocrats understood clearly. In a capitalistic economy, income necessarily means "income of capital", and it is the excess of the value obtained by capital over its own value. In other words: income is the change in capital, the growth in capital.

*2. Cannan*

Cannan does not see the difficulty that troubles Smith. He writes:

> "Very possibly when Adam Smith divided the total produce into wages, profits, and rent, he was thinking of his 'net produce', and when he divided produce into profits, rent, and the part of produce destined for replacing a capital, he was thinking of his 'gross produce'." (Cannan, 1917, 60)

Smith's 'gross produce' does not have three parts, as Cannan mistakenly says, but four, as the reader can see in the texts that I have quoted above: profits, rents, wages and amortization of depreciation. Contrary to what Cannan says, the difference between 'gross revenue" and 'net revenue' is not that net revenue includes wages and excludes depreciation, whereas gross revenue excludes wages and includes depreciation. The question that Smith was discussing is which of the four parts of gross revenue are to be kept in net revenue. This is why he asked whether the value of "the part of produce destined for replacing a capital" does or does not become income in the aggregate.

> "But this does not make it much easier to say what the part of produce destined for replacing a capital is, for Adam Smith's gross revenue or gross produce is a mere chimaera. It is impossible to form any conception of the aggregate of products, intermediate and ultimate, all jumbled together. We cannot think of a country's annual produce as consisting of *x* qrs. of wheat + *y* sacks of flour + z Ibs. of bread. We cannot make an aggregate of the coal, iron, oil, cotton, and other things used to make a calico shirt, and add them to the shirt itself." (Cannan, 1917, 60)

The problem posed by Smith's price theory is not to make an estimation of depreciation, but to tell whether the amortization of depreciation becomes income in the aggregate, a problem which has nothing to do with the estimation of the magnitude of depreciation. Cannan does not understand the problem against which Smith is fighting. This is shown further by his accusation that Smith's concept of gross revenue is a "chimaera", that takes it for granted that Smith was trying to establish a measure for heterogeneous goods. For all I see in the texts quoted in this paper, Smith was not interested in doing such a thing in his price theory. Cannan fails altogether to see that Smith was concerned with *value in exchange*. "Gross revenue" or "gross produce" is the value in exchange of the output of an economy within a given time period. Smith did not view the price of shirts as the sum of the calicoes and oil consumed in its production, but as the value in exchange of the shirt. His problem was to explain how prices are determined in an economic system which produces wealth in the form value in exchange.

> "Adam Smith was misled by the fact that an individual carrying on a business has a gross revenue, or, as we should say, gross receipts, consisting of two parts, one of which 'replaces his capital', or, as we should say, pays his working expenses, while the other constitutes his profits. This, of course, does not show that the world in general has similar gross receipts divisible into what replaces a capital on the one hand and what constitutes profit on the other." (Cannan, 1917, 60)

Does not it, really? Then, what on Earth does show the fact, acknowledged even by Cannan himself, that, in any individual firm, part of the value of output must make up for productive consumption of the capital of the firm? If each firm in the economy must devote some part of the value of its output to amortize capital, the logical conclusion is that, in the aggregate, or, as Cannan says, in the "world in general", some part of national produce represents the capital of the economy and does not become income for anybody. In fact, Cannan himself ackowledges this fact; shortly before the text just quoted, he contradicts himself, and writes:

> "The materials fashioned into proper form which 'support' useful machines and instruments of trade are clearly intermediate, not ultimate, products. Such things as new tyres for wheels, machine-oil, and coal used in steam-engines *form part of nobody's income*." (Cannan, 1917, 60; italics mine)

If the value of the output of means of production that makes up for productive consumption "forms part of nobody's income", then it is clear that, in the "world in general", some part of total production "forms part of nobody's income".

*3. Blaug*

Like Cannan, Blaug does not see the contradiction between the price theory of book I, chapter 6 and the gross-net distinction of book II. However, he comes very close to it; he writes:

"Book II, chapter 2 contains the bulk of Smith's theory of money and defines gross and net revenue. Gross revenue is apparently equal to what we now call gross national product; net revenue is equal to our net national product or gross revenue minus depreciation on fixed capital. At one point, Smith suggests that we should deduct the expenses of maintaning both fixed and circulating capital, that is, depreciation on buildings and equipment as well as the whole of the wages bill, but in the end he does not go as far as Ricardo who did confine net revenue to profits plus rent." (Blaug, 1996, 53)

That is: total surplus value, or the total income yielded by the capital that has turned over within the time period in question, is distributed as profits and as rents.

"But as a matter of logic, if the capital stock is defined to include human capital and wages are believed to tend towards subsistence levels, consistent social accounting demands that we net out all payments necessary to keep human capital intact, consisting of charges to maintain the labor force in the firm of subsistence wages and depreciation and replacement allowances in the form of expenditures on the training of old workers and the rearing and education of new workers. All these may be said to represent 'real costs' in the sense of necessary outlays to make production physically possible. The Physiocrats, and Ricardo after them, were quite right to deduct the whole of wages paid out from the final product to arrive at the 'net product', thus treating workers' consumption simply as intermediate products." (Blaug, 1996, 53)

Which means that the value of intermediate products cannot be consumed outside production. This implies that part of output just makes up for the capital goods consumed within production and, accordingly, that it is false that the aggregate value of output becomes income. But Blaug does not go this way, and, suddenly, he directs his attention to welfare:

> "If this sounds drastic to modern readers, it is only because we regard the net national product as a measure of social welfare, however, inadequate, and value an increase in consumers' expenditure as an improvement in welfare even if it is unaccompanied by an increase in investment." (Blaug, 1996, 53)

To sound drastic is not the question, but to be true. The question as to whether an increase in consumers' expenditure does or does not involve an improvement in welfare has nothing to do with the question at issue, which is whether the full value of output becomes income. Blaug approaches this question in the right way, noting that part of production cannot be consumed outside production, but the argument derails and the question is left unanswered.

*4. Marx*

Like Cannan, Marx comments on the same texts as those quoted in this paper in, at least, "*Capital*", volume 2, and in "*Theories of Surplus Value*", volume 1. There might be other places, but in these two places he makes a thorough examination of Smith's ideas. I agree with his criticism to Smith and with his view on the subject, but there is a defect in his analysis. I will presently try to show by means of a few quotations.

> "Adam Smith's dogma that the price, or "exchangeable value", of any single commodity -and therefore of all commodities in the aggregate constituting the annual product of society (he rightly assumes capitalist production everywhere)- is made up of three "component parts", or "resolves itself into" wages, profit, and rent, can be reduced to this: that the commodity-value is equal to v + s, i.e., equal to the value of the advanced variable capital plus the surplus-value." (Marx, 1981, 446)

Thus, wages are a part of capital, which means that they are not income or revenue. The only revenue of capital is, as Marx notes, profit. Profit consists of surplus value. When there are property rights other than capital, such as, for instance, private property of land, the capital investor ceases to get the full surplus value produced by his workmen and has to share in it with the landlord. Thereby, surplus value takes on two forms of revenue, namely, profit and rent. The point is that wages are no revenue, but the opposite to revenue, that is, capital. As a further instance, look at this:

"The dogma that the price of all commodities (hence also of the annual commodity-product) resolves itself into wages plus profit plus ground-rent, assumes even in the intermittent esoteric constituents of Smith's work the form that the value of every commodity, hence also that of society's annual commodity-product, is equal to v + s, or equal to the capital-value laid out in labour-power and continually reproduced by the labourers, plus the surplus-value added by the labourers through their work." (Smith, 1981, 448)

Again the same idea: wages are not revenue at all, but capital. The laborer cannot have any revenue because he has no capital and, therefore, he makes no advance or investment. Being a laborer is the opposite of being a capitalist. But look at what Marx writes in the course of his argument against Smith:

"Thus the continuous purchase and sale of labour-power perpetuates on the one hand labour-power as an element of capital, by virtue of which the latter appears as the creator of commodities, articles of use having value, by virtue of which, furthermore, that portion of capital which buys labour-power is continually restored by labour-power's own product, and consequently the labourer himself constantly creates the fund of capital out of which he is paid. On the other hand the constant sale of labour-power becomes the source, ever renewing itself, of the maintenance of the labourer and hence his labour-power appears as that faculty through which he secures the revenue by which he lives. Revenue in this case signifies nothing else than appropriation of values effected by ever repeated sales of a commodity (labour-power), these values serving only for the continual reproduction of the commodity to be sold. And to this extent Smith is right when he says that the portion of the value of the product created by the labourer himself for which the capitalist pays him an equivalent in the form of wages, becomes the source of revenue for the labourer." (Marx, 1981, 457-8)

The laborer has a revenue because he sells a commodity, writes Marx, and this gives rise to a flow of money towards him. The laborer gets in the shape of money the value of the amount of labor-power that he sells to the capitalist: he gets in a different shape the same value that he gives out. The value of the portion of the product of his labor that he gets as wages is likewise the same in value as his wages. Wages are revenue. Marx' usage of the word "revenue" is equivocal. Now, "revenue" is not the return of a capital; that the laborer has a revenue implies that he advanced some capital, and Marx is contradicting himself and implying that the laborer was, after all, a capitalist. Since the laborer advances no capital, he cannot have any revenue. Marx' terminology is contradictory: if the laborer has a revenue, then he must be a capitalist; as far as he is a capitalist, he cannot be a laborer. After having said that wages are capital, variable capital, Marx says that they are revenue for the laborer. This contradicts his previous statement that wages represent the capital invested on labor-power, which implies that the laborer does not become a capitalist by being a seller. Wages are not the return yielded by the capital of the laborer, because the laborer is defined by Marx as the one who has no capital.

Marx contradicts himself and confounds the reader because he has equated "return" with "flow of money". He makes the same mistake as Smith. Unlike Smith, who builds his theory of price upon this mistake, Marx confuses the two concepts intermittently, at times, so that the drift of his arguments is obscured, but not fundamentally distorted. Marx' distinction of capital and income against Smith's view that the full value of national output becomes revenue is contradictory with his equation of revenue and flow of money. If there is a real distinction between capital and income in a capitalistic economy, then not every flow of money is a flow of income or revenue: part of the flow of money must represent the flow of capital, not that of income. The laborer does not have a revenue when he gets his wages, because he did not advance any capital. The fact that money flows to him does not mean that revenue flows to him. What flows to him is *variable capital*. In order to make my point clearer, let me rewrite a passage in Marx's last quotation:

> "And to this extent Smith is *wrong* when he says that the portion of the value of the product created by the labourer himself for which the capitalist pays him an equivalent in the form of wages, becomes the source of revenue for the labourer. *The portion of the value of the product created by the labourer himself for which the capitalist pays him an equivalent in the form of wages is no source of revenue for the laborer because it is no capital at all for the laborer*" (Marx, 1981, 457-8) (my changes and additions in italics)

Marx makes the same mistake in many other places which need not be quoted here. Once this mistake, which is very disturbing and makes reading very difficult, is removed, we can see Marx' theory in its true dimension, and we can see that his position and his refutation of Smith are correct.

### *3. Conclusions*

From the analysis contained in this paper, we can derive the following conclusions on substantial issues:

First, the argument of Smith in book I, chapter 6 that aims at establishing that the amortization of the value of the capital consumed in production becomes income is invalid. Smith does not succeed in establishing that the full value of commodities becomes income: his argument is conclusive only if two premises which are materially false are accepted. I first remove them, and proceed secondly to show that Smith's example, reformulated with the aid of materially true premises, is an instance of a particular case. I show that, once the general case is examined, the conclusion is the contrary to what Smith intended to establish. Against Smith, it should be said that the price of commodities has four parts, that the full value of commodities is not income and that the fourth part of the price of commodities is not income, but the value of the capital invested in their production on means other than labor.

Secondly, if the argument in book I, chapter 6 that shows that the value of aggregate output is equal to aggregate income is accepted, then aggregate capital becomes zero. If the full value of the output of the economy becomes income, then it follows that the capital os the economy is zero. If capital is zero, then there is no room for the Physiocratic "brut-net" distinction, because this distinction is given by capital. If, on the contrary, the Physiocratic distinction is accepted, then the aggregate value of output cannot be equal to aggregate income because, in addition to income, the capital invested on production must be got back by the investors, that is, it must be maintained, kept turning over. Smith, in book II, tries to make room for the Physiocratic distinction, and, in so doing, he implicitly contradicts his implicit rejection of the gross-net distinction in book I.

Thirdly, Smith, unlike the Physiocrats, fails to produce a definition of gross and net income because he fails to see that wages are not a part of net income in a capitalistic economy, because they are no income at all. Smith forgets his own definition of wages as the value of the subsistence advanced by the undertaker to his workmen. Wages are a production cost, and thus, they are a part of the capital of the economy, and not of the income produced by the capital of the economy. Wages are not income despite the fact that they are a fund of money that is exchanged for consumption goods. They are not income because, even though they are exchanged for consumption goods and represent, therefore, the value of these consumption goods, this part of output or its value is not part of the production of the economy over the consumption of productive means: wages are not part of surplus value. The only income of a capital is the surplus value that it gives rise to. Wages are part of the capital advanced, and the fact that they are money exchanged for consumption goods instead of for machinery is accidental in relation to the distinction between capital and income: net income is not the value of the stock of consumption goods, but the general surplus value over the aggregate value of capital.

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