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LEVEL OF INCOME AND INCOME DISTRIBUTION IN MID-18th CENTURY FRANCE,
ACCORDING TO FRANÇOIS QUESNAY

Branko Milanovic¹

1. Introduction

François Quesnay's *Tableau Économique* is well known and much studied (e.g., Kuczynski and Meek 1972, Vaggi 1987). The figures given by Quesnay in the *Tableau* are illustrative and hypothetical. They were supposed to illustrate the economic mechanism taking a form of a circular flow such that at the end of each period the economy and the agents return to the initial position. Hypothetical are various parameters assumed by Quesnay, as, for example, that for the equilibrium to be maintained one-half of expenditures have to be made on agricultural and one-half on manufactured goods.

Less well known is that in a book by Mirabeau entitled, *La philosophie rurale*, published in 1763, Quesnay wrote Chapter VII where he undertook to draw a broadly plausible picture of the French economy in the mid-18th century and to describe a one-shot (static) functioning of the economy.² He also contrasted the economies of France and England although his depiction of England, in the amount of detail provided, falls far short of France. A comprehensive numerical approach to the French economy justified the title of

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² Kuczynski and Meek (1972, p. xxxiii, note 4) write that Quesnay's numbers, used in his entry "Grains" published in Diderot's and d'Alambert's *Encyclopaedia* and which is often referenced in *La Philosophie rurale*, are indeed "estimates of the existing economic conditions." This is also Schumpeter's view; see his quote from Quesnay's *Du commerce* (1766): "The functioning of this trade between the different classes and its essential conditions are not at all hypothetical. Whoever wants to think, will see that they are faithfully copied from reality" (my translation from the text given in its French original by Schumpeter, 1980, pp. 232-3, note).

Grand Tableau Économique that, according to Eltis (1975), Quesnay and Mirabeau had in mind before they settled on the actual title.³

Quesnay used realistic, albeit stylized, figures for the production levels of seven agricultural sectors, then included rural commerce and non-agriculture as well, and discussed in detail the distribution of total income into wages, entrepreneurial income, interest on capital, and surplus. Considerable effort was expended in presenting for each sector of the economy its quantitative output, costs, utilization of labor, animals and mechanical tools. It is very clear that the author's objective was to convey a picture of the French economy as it actually functioned. This unique source therefore allows us to glimpse a picture of a large predominantly agricultural European economy as it was a few decades before the French revolution and about half-a-century before the spread of industrialization. Moreover, and crucially for our objective here, it allows us to obtain both the functional income distribution (between labor, capital and land), and to create a social table, containing what Quesnay thought were the salient social classes at the time, and thus to address the issue of income distribution in a "rich agricultural kingdom". A derivation of new functional and personal income distributions for mid-18th century France, based on a contemporary and unused source, is therefore the key objective of this paper.

2. Process of production and factoral distribution of income

Process of production. In *La philosophie rurale*, the economy is divided into seven sectors: production of grains, wine-making (viticulture), forestry, production of fields (*prés*), mining, livestock production, and rural commerce. There are four sources of income: wages of workers, compensation of agricultural entrepreneurs (tenant-farmers) for their management, interest on capital, and rent from property of land combined with taxes. In all sectors tenant-farmers are also capitalists, so the class composition reduces to three: workers, tenant-farmers,⁴ and property-holders (*propriétaires*).⁵ Property-holders receive their

³ According to Cartelier (2009, p. 423) all of Chapter VII ("Les rapports des dépenses entre elles") was written by Quesnay (with the exception of the first and last paragraphs written by Mirabeau). Meek (1962, p. 278) draws attention to *La philosophie rurale* and attributes Chapter VII to Quesnay.

⁴ Perhaps that the term capitalist-farmer may be more appropriate to describe their position. Quesnay uses different terms: *maîtres, entrepreneurs, fermiers*.

income either because they own the land, and thus receive rent, or because they are an administrative or spiritual “elite” (the word never appears in Quesnay) and receive respectively taxes and tithes. Property income is in principle divided into 4/7 which belong to landlords, 2/7 which is a tax (*impôt*) presumably paid for government administration, and 1/7 which is a *dîme* or tithes paid to clergy (pp. 160, 171).⁶ However the three groups of proprietors can be, for simplicity, subsumed under the class of owners, and Quesnay does so. The term *propriétaires* is an interesting choice since it covers not only land-owners but administrators and priests. With some justice, one can see these “owners” as really being the “owners” of the country itself, a ruling elite.⁷

It is this property income that Quesnay labels “net product” (*produit net*) and its maximization is held to be the objective of economic activity of a country. Paying laborers (at, or close to, subsistence), compensating entrepreneurs for their management, and guaranteeing a “normal” return on capital is not considered part of net product. Furthermore, it is only agricultural activity that, according to Quesnay produces net product: it represents in essence land’s natural “bounty”. But it is wrong to remain focused on, what seems from today’s perspective, Quesnay’s strange fixation on the productivity of land only and “sterility” of manufacturing. The essential point, as already Marx noticed, is the existence of a surplus, that is of an income that is strictly speaking unnecessary to bring forth the output.⁸ And indeed, if we take a slightly more modern approach, and assume away the compensation of labor and capital at “normal” and “usual” rates, then the generation of surplus is indeed something that the economic process is all about. It matters not that the surplus is not, as Quesnay thought, generated in agriculture only.

⁵ In viticulture, tenant-farmers-capitalists also own land and work on it so the three factors of production are combined in the same person.

⁶ All the references to *La philosophie rurale* are based on Quesnay (2009, pp. 153-206).

⁷ The terms proprietors, property-holders and property-owners are used interchangeably.

⁸ “Though wrong in thinking that only agricultural labour is productive, the Physiocrats put forward the correct view that from the capitalist standpoint only that labour is productive which creates a surplus-value; and in fact a surplus-value not for itself, but for the owner of the conditions of production; labour which produces a net product not for itself, but for the landowner.” (Marx, 1969, p. 153). And “[b]ecause agricultural labor is conceived as the only productive labour, the form of surplus-value which distinguishes agricultural labour from industrial labour, *rent*, is conceived as the only form of surplus-value” (p. 47; emphasis in the original).

The process of production takes place through short term capital advances (*avances annuelles*) which are made by tenant-farmers. These advances are supposed to cover the cost of wage-labor and to defray compensation of tenant-farmers themselves. To understand them better, one can visualize advances as being in form of seeds, fertilizers etc. but also food and wage goods that need to be available both to the hired labor and to the tenant-farmers to cover their consumption while the process of production takes place. In addition to working capital, tenant-farmers also own fixed (long-term) capital in the form of livestock and machinery (*avances primitives*). Thus, tenant-farmers act both as entrepreneurs and capitalists: they do not borrow capital or machinery from somebody else (see e.g., Rubin, 1979, p. 119).

Quesnay frequently goes into a very great detail in his discussion of capital and its use. For example, the output that can be attributed to a single plough in the production of grain is discussed in excruciating detail (pp. 168-73).⁹ Or, in the production of wine where the production is done on owner-occupied plots of land, 150,000 “exploitants” are supposed, Quesnay writes, to own land whose average size is 10 arpents (less than 10 hectares) with working capital advances being on average 10 livres per arpent. Tenant-farmers receive, in all sectors, a return of 10 per cent annually on the value of their capital. Thus the income of tenant-farmers is composed of two parts: compensation for their work and management (where implicitly the return on working capital advance is included) and the return of 10% on their fixed assets.

Finally, workers are supposed in all sectors to be paid at the same rate. This is not explicitly stated by Quesnay, but emerges when we divide total wage bill in every sector by the number of workers employed in it. Modern economists thus readily find in Quesnay the elements with which they are well acquainted: competition brings equality across sectors both to wages and interest rate.

⁹ “Plough” (*charrue*) is arguably sometimes used to mean a “plough of land”, the amount of land that can be tilled with one plough in a year (see Kuczynski and Meek, 1972, Notes to the “Third Edition”, Note 11, p. 4). But in reality the two definitions are economically interchangeable: Quesnay in either case refers to how much can be produced with one plough annually.

Total value added (total product in Quesnay's terminology) in sector i (VA_i) can then be written as (1)

$$VA_i = wL_i + C_i + rK_i + R_i \quad (1)$$

where w =wage (equal across sectors), L_i =labor employed, C_i =compensation of tenant-farmers for their work and management (including return on advanced working capital), r =rate of return on capital (equal across sectors), K_i =long-term fixed capital owned by tenant-farmers, R_i = net product (rent, taxes and tithes) which belongs to property-holders.

Three additional relationships. In addition, Quesnay imposes three additional relationship that will not directly have an influence on our estimation of income distribution across classes, but are important to understand the production side of the equation. First, Quesnay makes working capital advance (A_i) equal to the sum of wages and compensation of tenant-farmers. The rationale for this is already explained. Thus,

$$A_i = wL_i + C_i \quad (2)$$

Then, he assumes that advances generate an equal amount of net product or rent (p. 173). Quesnay needs this assumption to impose some "order" (rules) on the amount of surplus that would be generated by each sector. While the relationship (2) is definitional (the advance is needed for the process of production to take place), the relationship between capital advances and net product is technological and structural. For France, at her then-existing level of technical development and fertility of soil, Quesnay assumes that 1 livre of advance will, in general and in the key sector of grains in particular, generate 1 livre of surplus. (Note that the advances are made by tenant-farmers while the rent accrues to property-owners, which leads to some confusion in the exposition.) In a more developed environment of England, with which Quesnay deals, albeit briefly, at the end of *La philosophie rurale*, the return will be 1.5 livres on each livre of advance. So, working capital advance and surplus are linked by a technological parameter β which varies between countries in function of their level of development and fertility of soil.¹⁰ Thus,

¹⁰ That β depends on level of development is also clear from Quesnay's statement in the third edition of the *Tableau économique* that in France, at some point, advances return only 20 or 25 percent in terms of net

$$A_i = \beta R_i \quad (3)$$

There is finally a third, less noticed, assumption: a relationship between fixed and working capital (advances). In his *Tableau économique*, Quesnay assumed the relationship to be a little over 4 to 1;¹¹ in “Analyse de la formule arithmétique du Tableau économique” (written in 1766), the relationship was 5 to 1.¹² Here, the relationship is $4\frac{2}{3}$ to 1 although, as shown in Table 1, its exact value depends on some assumptions and interpretations of Quesnay because the text is in parts murky and in a couple of instances even contradictory. Denote that relationship by γ . We can then write the expression for the value added in (1) entirely as a function of working capital advances and three parameters:

$$VA_i = A_i + r\gamma A_i + \beta A_i = A_i(1 + r\gamma + \beta) \quad (4)$$

A given advance would result in greater value added, the greater general development of the country or fertility of its soil (β), the greater the rate of return (r), and the greater the available fixed capital γ . All three quite reasonable propositions.

Quesnay will not be always fully faithful to these relationships. β will be seen to vary between the sectors, so it too should perhaps be subscripted. The overall β for France will be 0.8 (compare the totals of columns 8 and 4 in Table 1) not exactly 1 as we are led to believe by Quesnay himself. But as a very close shorthand to what Quesnay thinking was, the equation is correct (4): it highlights the key role of advances but also of β which, as we have seen, reflects the level of economic development and of γ , capital intensity of production.¹³

product, while under better administration they would yield 100 percent (see Kuczynski and Meek, 1972, Notes to the ‘Third Edition’, Note 75. p. 16). Actually, the improvement that a Physiocratic management of the economy would bring forth is measured by how much the return on working capital advance would increase.

¹¹ See Kuczynski and Meek (1972, pp. v and viii).

¹² Based on Eltis (1975, p. 173, note 2).

¹³ See a very similar derivation of the relationship in Eltis (1975, pp. 194-5).

These three relationships will prove useful in our reinterpretation of what Quesnay really meant by the “productive” sector.

Incomes of various social classes. The variability of incomes, and thus the emergence of a distribution of incomes across social groups (and ultimately, across individuals), will come almost entirely from the variability in the economic position of tenant-farmers. They do, from sector to sector, own various amounts of fixed and working capital, and although they enjoy the same rate of interest, per capita (per tenant-farmer) amounts received will differ. Those in more capital-rich branches will have higher incomes. This part is very redolent of Marx’s prices of production: an equilibrium is possible only if return per unit of capital is the same for all capitalists, but the fact that various capitalists are unequally capital-rich will introduce differentiation in their incomes.¹⁴

The two other classes are homogeneous: workers are all paid the same wage rate (with one exception, discussed below) and so are property holders. The latter are unique in the sense that their total property income is “accumulated” (as it were) across sectors and then distributed equally to all. Their number is somewhat summarily assumed to amount to 1 million (p. 188). Quesnay does not go into income differentiation within the class of property-owners. This is unfortunate for our purposes because the top class is clearly heterogeneous as it must have included very rich aristocrats but also rather modest or even poor bureaucrats and priests. This lumping together of the “elite” represents, as we shall argue below, the key reason for an overall underestimation of income inequality by Quesnay.

Total income is thus, in an eerily modern way, calculated both from the production and distribution sides. Value added of each individual sector will add up to the overall national value added; it would dissolve into factor incomes and these factor incomes will ultimately devolve to individuals or, more exactly, representative individuals from every social class. This is shown in Table 1. As mentioned, the production covers six agricultural sectors and rural commerce. These sectors are assumed to be “productive”, that is capable of producing a surplus. Total value added is 5768.8 million livres (per year). It is produced by

¹⁴ For a different interpretation which puts the emphasis on the monopoly of land held by property-owners, see Cartelier (2009, pp. 33-35).

more than 4.3 million agricultural workers and 653,000 tenant-farmers. The overall ratio between fixed and working capital is 4.5 to 1, and it varies between the sectors. It is the lowest in wine production (1), and highest in rural commerce (6) and wheat production (5.7). The overall (fixed) capital-to-output ratio is 2.1. Again, it is the highest in commerce (5.2) and lowest in wine production (0.5). High capital intensity of commerce seems to be due to the high costs of vehicles needed for transportation of goods.

Workers are all paid at the same rate of 500 livres annually with the exceptions of female servants (*servantes de basse-cour*) engaged in livestock production.¹⁵ They number 800,000 persons, and are the only group assumed not to have families to maintain. These 800,000 female servants combined with 400,000 shepherds (*bergers*) make livestock production the second most important sector in terms of employment, following grain production which employs more than 1.5 million workers. In all sectors but wine production, this particular scheme, *viz.* tenant-farmers vs. workers, holds. Only in wine production, does Quesnay assume that the production is done by worker-owners: they do receive remuneration for management and return on their capital like other tenant-farmers but in addition they also receive wages. In the overall summation of his discussion, Quesnay (p. 188) opts to treat them as workers and this is the approach we follow here. Thus total income received by agricultural workers, as shown in Table 2 below, includes also 105 million livres that are in effect interest and entrepreneurial income.

What is a “productive” sector? After finishing with agriculture and rural commerce, and as an after-thought, Quesnay introduces in a summary table of all French population (p. 188), a new class: workers, artisans, and personal servants (*domestiques*) who work outside agriculture in the non-surplus producing (or “sterile”) sector. They are shown with their incomes coming from the value added produced in the non-agricultural sector. It is this introduction of gainful non-agricultural occupations that allows Quesnay’s theory of surplus to be recast in a slightly different way. The non-agricultural sector does produce value added, even if it is not “productive” in Quesnay’s sense—where being productive means generating a surplus for property-owners. The use of “productive” or “sterile” is thus not indicative of

¹⁵ Marczewski (1965, Table 20, p. 117) reports an INSEE estimate of the average annual wage in Paris around 1760 (based on 300 working days) of 452 livres. Thus Quesnay’s wage was not far off the mark.

whether the sector produces value added or not, but whether the sector generates a surplus or not.

Now, going back to relations (2)-(4) will show us why Quesnay was interested only in surplus-producing sectors. He viewed the working capital advance that would be simply used up to pay subsistence wages and compensate entrepreneurs, and the provision of a “normal” return on capital, as not adding anything to wealth since no surplus emerges. The key to a growing economy is the emergence of a surplus, that is the requirement that β be greater than 0. In French agriculture’s key activities (grain production, viticulture and forestry), Quesnay assumed, as we have seen, $\beta=1$,¹⁶ in English grain production β is taken to be 1.5 (p. 195, 198), and outside agriculture β is always 0. And indeed if one takes that wages must be always equal to the subsistence and that owners of capital must receive a “normal” return on their capital, there is no additional value generated in the process. We are in a state of Marxian “simple reproduction”. In other words, there is no growth. It is only if there is an extra, a surplus, that the economy can grow. Why return on capital cannot be used for savings from which to finance investment is never explained by Quesnay. It could be, as argued by Rubin (1979), that Quesnay saw the return on capital basically as a compensation for depreciation and tear and wear, and not as a “net” additional income.

Similarly, Quesnay did not imagine that the surplus could be used either to increase wages above subsistence or to pay higher profit to capitalists. He saw it as by definition accruing to the residual claimants, the top classes—those who are often, but not always, landowners. For they could also be government officials (like himself) or priests. This last point emerges very clearly in his treatment of viticulture, the only sector where *propriétaires-exploitants* in addition to owning fixed and working capital also own land. Were the surplus to be received only by landlords, they would have received it in full. However, this is not the case: the sector generates net product for the proprietors (see Table 1), and this net product logically must have been distributed in the form of taxes and tithes (p. 175).

¹⁶ “...we assume a kingdom...where farmers maintain a rich cultivation of land which gives at least one hundred of net product or income for one hundred of annual advances to defray expenses” (p. 173, my translation; see also p. 160).

In his treatment of surplus as a residual income, Quesnay reaches the same point as Ricardo, but draws entirely different conclusions.¹⁷ While for Ricardo, the point where more and more of surplus accrues to landowners is occasioned by the action of diminishing returns and is regarded as threatening further economic growth (because landowners, unlike capitalists, do not invest), Quesnay reaches that point by an institutional assumption that any surplus belongs to the class of owners. The existence of a large surplus, and large owners' incomes, is thus not a negative, but positive, development for Quesnay because the very existence of a surplus indicates that the economy has evolved beyond hand-to-mouth primitive production where it is merely able to pay incomes of workers and capitalists directly engaged in production. Indeed, existence of a surplus is a sign of development. He writes: "In order to get an income from land, agricultural work must produce a net income above the wages paid to workers, for it is this net product that allows other classes to exist."¹⁸ Marx (1969, p, 68) saw this point very clearly: "agricultural labour thus forms the natural basis...not only for surplus-labour in its own sphere, but also for the independent existence of all other branches of labour, and therefore also for the surplus-value created in them." Without a sufficiently high productivity in agriculture, there cannot be development of manufacturing.

Now, to return to the non-agricultural classes: they consist of workers, worker-owners and entrepreneurs, and are called *gagistes* (wage-earners). Quesnay divides them into two groups: the rich *gagistes* who make, on average, 2,000 livres annually (that is, four times as much as an agricultural worker), and poor *gagistes* who make exactly as much as agricultural workers (500 livres). The same wage rate across sectors is thus maintained even when non-agricultural labor is introduced. Competition between laborers is implicitly assumed to hold across all sectors.

¹⁷ Similarities and differences between Quesnay and Ricardo are well illustrated with respect to their position toward free trade. Both are in favour, but for the opposite reasons. Quesnay wants free trade so that the price of grain can be increased (France being a surplus producer of grain), agriculture thus becoming more attractive for investment and net product greater (see p. 252, Note sur la Maxime VIII). For Ricardo, free trade should bring about lower grain prices, reduction of nominal wages, higher profits and hence higher investments and growth.

¹⁸ Quesnay (p. 265, *Maximes du gouvernement*, my translation).

Note that in Table 1, the relationship (2), namely advances that exactly match workers' wages and compensation of tenant-farmers, holds for grain production and viticulture. For the other sectors, the relationship is often close but not exact. Similarly, the relationship (3) with $\beta=1$ holds for grain, wine production and forestry, but in field production, β is 5,¹⁹ in mining $\beta=0.4$ while livestock and rural commerce do not generate any surplus, thus implicitly setting β to 0. In Quesnay's terminology, they are "sterile."

¹⁹ "The production of the fields appears therefore to require an exception in the general relationship between the annual advances and net product" (p. 180). The reason why production of the fields does not require high advances is because the work is done by workers who are already engaged elsewhere (p. 178).

Table 1. Production and distribution in *La Philosophie rurale*

	Tenant-farmers					Workers		Property-holders	Output
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Income	Income	Capital		People	Income	People	Income	Total income
	Compensation of tenant-farmers for work and management (in million livres)	Profit from capital (with r=10%) in million livres	Total fixed capital (in m livres)	Total working capital: (1)+(6)	Number of tenant farmers (in 000)	Wage payment (in million livres)	Number of workers (in 000)	Surplus (net product), in m livres	Total value added = (1)+(2)+(6)+(8)
Grains	300	608	6080	1071	250	771	1542	1071	2750
Wine production	75	30	300	300	---	225	450	300	630
Forestry	28.8	60	600	300 ^{2/}	24	225	450	300	613.8 ^{1/}
Production of the fields	14	24	240	50 ^{2/}	24	50	100	250	338
Mining	20	Included in compensation	Not given	200 ^{2/}	20	200	400	80	300
Livestock production	85 ^{3/}	215	2150	385	215 ^{4/}	200	400	Nothing	600 ^{5/}
Livestock (servants only)						100	800		
Rural commerce	120	240	2400	220	100	100	200	Nothing	460 ^{6/}
<i>Total</i>	<i>642.8</i>	<i>1177</i>	<i>11770</i>	<i>2526</i>	<i>633</i>	<i>1871</i>	<i>4342</i>	<i>2001</i>	<i>5691.8</i>

Notes to Table 1

Derivation of total fixed capital in column (3)

Grain production: Not explicitly mentioned in the text, but obtained as column (2) divided by the rate of return of 10%.

Wine production: Not explicitly mentioned in the text, but obtained as column (2) divided by the rate of return of 10%. The sector is composed of 150,000 *propriétaires-exploitants* possessing on average land the size of 10 arpents from which they gain a total profit of 15 million.²⁰ (So the value of the land must be 150 million.) 300,000 independent vignerons (*petites entreprises d'exploitation*, p. 175) own as much land (implicitly, also worth 150 million) and receive also 15 million in return on their assets. Both of these classes are treated by Quesnay in the summary table (p. 188) as workers and their total number (450,000) is thus included in column (7).

Forestry: 24,000 tenant farmers owning each a capital worth 25,000 livres.

Production of the fields: 24,000 tenant-farmers owning each a capital worth 10,000 livres.

Livestock: Given as "more than 2,000 million".

Rural commerce: Obtained as interest (240 million) divided by the rate of return of 10% per annum.

1/ Quesnay gives output of 688.8 million but that number is impossible to obtain.

2/ The advance does not exactly match the sum of wages and compensation of tenant-farmers.

3/ Not mentioned in the text. Calculated so that total value added of 600 million be equal to wages (300 million), income from capital (215 million) and compensation of tenant-farmers (85 million). The last amount is obtained as a residual. Advances are then made equal to wages plus compensation of tenant-farmers.

4/ Mistakenly given as 200,000 in Quesnay's Table (p. 183) but the correct number of 215,000 appears in the text (p. 184).

5/ Total product is given as 900 million minus 600 million spent for the feeding of animals (intermediate consumption). However the latter amount cannot be correct because the value added would be less than the sum of its components. It seems likely that the intermediate consumption should be 300 million, the same amount of intermediate consumption as assumed by the way for rural commerce.

6/ Excluding 300 million spent for the feeding of animals (intermediate consumption).

²⁰ This part of the text (p. 175) is quite unclear because Quesnay almost implies that the profit is received from their annual advances (100 livres by arpent) and not from the value of the land.

Factoral income distribution. Overall factoral income distribution which includes incomes from agriculture (from Table 1) and incomes outside agriculture is shown in Table 2. Labor incomes compose 48.3 percent of total value added, interest 15.9 percent, entrepreneurial income (combined with management wages) another 7.9 percent, and rent, taxes and tithes take 27.8 percent. Of more than 8 million persons who are remunerated, just short of 80 percent are laborers.²¹ Two-thirds of them are employed in agriculture and one-third outside of it.

As expected, workers' average income is lower than the overall mean. In agriculture, worker's average income is 455 livres (less than 500 livres on account of the badly paid servants in livestock production, but recall that it includes also interest and entrepreneurial income earned in viticulture), while outside agriculture, it is 714 livres.²² Tenant-farmers earn on average more than 2,700 livres, and property-owners (pell-mell: nobility, state functionaries and clergy) make, on average, just a bit over 2,000.

In roughest terms possible, the socio-economic structure of France *circa* 1760 as presented by Quesnay is that of a three class society. Nobility, clergy and tenant-farmers, accounting for approximately 20 percent of the remunerated population are rich with an average income in excess of 2½ times the mean. Non-agricultural workers and artisans (the bourgeoisie?), representing a quarter of the remunerated population, are in the middle with an average income slightly below the mean. Agricultural workers (more than ½ of all remunerated population) are on the bottom. This rough picture can be made more nuanced thanks to the differentiation within each of these classes that can be teased out of Quesnay's tables. To this—the creation of a social table for France around 1760—we turn next.

²¹ It seems more appropriate to speak of the remunerated population rather than of the employed because some of those income-recipients, like landlords, are clearly not working nor looking for a job.

²² Note that this does not invalidate wage equality across sectors. In agriculture, we deal with two classes of laborers who are unequally paid; and outside agriculture, income of workers includes entrepreneurial and capital income since we deal there with owner-worker production.

Table 2. Factoral distribution of value added and distribution of the remunerated population

	Total income (in m livres p.a.)	Share of total income (in %)	Number of persons receiving that factor income (in 000)	Share of total remunerated population (in %)	Average remuneration per person (in livres p.a.)
Agricultural wages	1976	27.4	4342	53.8	455.1
Non-agricultural wages	1500	20.9	2100	26.0	714.3
Entrepreneurial income	567.8	7.9	633	7.8	2709.0
Interest (return on fixed capital)	1147	15.9			
Rents, taxes and tithes	2001	27.8	1000	12.4	2001.0
<i>Total</i>	<i>7191.8</i>	<i>100</i>	<i>8075</i>	<i>100</i>	<i>890.6</i>

Note: Total is equal to agricultural value added from Table 1 (5691.8 million) plus non-agricultural value added received by *gagistes* (1500 million). Agricultural wages include also 105 million livres of entrepreneurial income and interest earned in viticulture.

3. Towards personal income distribution: creation of a social table

Data displayed in Table 2 allow us to create a social table that has the estimated population sizes and average incomes by social class. In Quesnay's picture of France, one can find 12 social classes with distinct average incomes: six types of tenant-farmers who, as argued above, will have different incomes in function of how much capital they own; owner-workers from viticulture; two classes of agricultural workers; two classes of non-agricultural laborers/self-employed, and one class of property-owners. For our purposes, it is unfortunate that this last class is undifferentiated because it clearly contains socially very heterogeneous *couches* (layers), from state functionaries to the nobility of various ranks and wealth to ecclesiastical orders who similarly covered vastly different portions of the income distribution (village priests being surely in a different position than bishops and cardinals).

A social table is shown in Table 3. The first column shows the number of income-recipients (remunerated population) from Table 2. The next column gives total population associated with each. Quesnay assumes a uniform family size of 4, with only one earning head of household. This is a very, perhaps excessively, simplifying assumption which is abandoned only in the case of women-servants who are supposed to be single. The implication of this assumption is that the employment rate is probably unrealistically low, at only 27 percent of the total population. The group per capita average incomes are shown in Column 3. The poorest three groups are all workers: servants and agricultural workers and a group of non-agricultural *gagistes* each earning 125 livres per capita annually.

The next poorest group are owner-workers in wine production (183 livres per capita). It is interesting that they are assumed poorer than any other tenant-farmers: tenant-farmers average incomes range from 250 to 925 livres per capita. The latter (tenant-farmers in forestry) are also the richest social group. Their size however is small: only 24,000 are supposed to be occupied in that activity. The bulk of tenant-farmers (those in grain production), 250,000 of them, are quite well-off with an average family per capita income of 908 livres, similar to that of entrepreneurs engaged in commerce.

Somewhat surprisingly, property-owners, both because of their heterogeneous nature, and perhaps of somewhat cavalier simplifying assumption about their total income and particularly their numbers (1 million even), are estimated to make about 500 livres per capita annually which is a little over twice the mean.

The overall range of incomes, expressed in terms of the mean, is 0.52 to 3.85, so that the top-to-bottom ratio is 7.4 to 1. The Gini coefficient is 37.4. The Lorenz curve is shown in Figure 1, panel a.

Overall per capita income works out as 240.4 livres per year. How much above subsistence was it? We take the bare-bones subsistence minimum per person to be around 400 kg of wheat-equivalent (see e.g. Scheidel and Friesen, 2009, Table 2).²³ Quesnay mentions that he assumes the price of wheat to be “the current price of wheat quoted between the trading nations” (pp. 169, 194) which was 21 livres for a *setier* of wheat.²⁴ A *setier* contained 240 *livres de Paris* the weight of each being about 490 grams. Therefore, a bare-bones subsistence requires, in money, 72 livres annually. It follows that the average income was 3.3 times the subsistence. We shall consider next how that amount compares with other estimates of French incomes made for around the same period.

²³ The exact amount they give is 390 kg of wheat-equivalent (see Scheidel and Friesen, 2009, Table 2). A higher “respectability basket” would involve 940 kg of wheat-equivalent (ibid). One kilogram of wheat contains just over 3,100 calories and thus some 390-400 kg of wheat-equivalent would be, in terms of calories alone, sufficient for yearly survival.

²⁴ The price given by Quesnay somewhat disconcertingly oscillates between 18 and 21 livres per setier (compare pp. 169 and 194). In a very detailed paper on wheat prices in France, Usher (1930, Table 4, p. 162), presents the reported prices for a setier of wheat in Albi (Provence). In the two decades 1760-1779, the prices ranged between 53 and 101 grams of pure silver, with the average of 80. A livre contained then 4.5 grams of silver and thus the price of setier expressed in livres was about 18, not far off from Quesnay’s figure.

Table 3. Social table for France around 1760, according to Quesnay

	(1)	(2)	(3)	(4)	(5)
	Number of income recipients (in 000)	Number of people (in 000)	Average per capita income (livres, p.a.)	Total income per group (in million livres p.a.)	Average per capita income in terms of the mean
Servants in livestock production	800	800	125	100	0.52
Agricultural workers (outside viticulture)	3092	12368	125	1546	0.52
Poor non-agricultural workers (<i>gagistes inférieurs</i>)	1800	7200	125	900	0.52
Owner-workers in viticulture	450	1800	183	330	0.76
Tenant-farmers in mining	20	80	250	20	1.04
Tenant-farmers in livestock production	215	860	349	300	1.45
Tenant-farmers in fields (<i>prés</i>)	24	96	396	38	1.65
Rich non-agricultural workers (<i>gagistes supérieurs</i>)	300	1200	500	600	2.08
Property-owners	1000	4000	500.2	2001	2.08
Entrepreneurs in commerce	100	400	900	360	3.74
Tenant-farmers in grain production	250	1000	908	908	3.78
Tenant-farmers in forestry	24	96	925	88.8	3.85
<i>Total</i>	<i>8,075</i>	<i>29,900</i>	<i>240.4</i>	<i>7,191.8</i>	<i>1</i>

Note: Classes ranked by per capita income. Number of people receiving income from a given sector is obtained by multiplying income recipients in column (1) by 4 (Quesnay's uniform assumption about the family size) except for the (female) servants in livestock production (*servantes de basses-cour*) who are supposed to be single.

4. Confrontation of Quesnay's with other estimates

Table 4 contrasts Quesnay's values with those of another contemporary writer (Achille Isnard, writing around 1781), and two modern estimates of French pre-revolutionary incomes and/or income distribution: Toutain (1987) and Morrisson and Snyder (2000). It is noticeable that Quesnay's GDP tends to be on the high side, some 20 percent greater than the next one by Toutain. In part, this is due to Quesnay's assumption of a greater population (almost 30 million), some 2 million in excess of what, according to Morrisson and Snyder (2000, p. 68) seems the currently generally accepted number for the closing decades of the 18th century. But even Quesnay's average per capita income is rather high. One can hypothesize that Quesnay's relatively high numbers derive from a slightly embellished picture of France, and in particular French agriculture. Quesnay repeatedly mentions that in his calculations he assumes that we are dealing with a rich, well-administered kingdom where prices (and hence nominal incomes) are high.²⁵ High prices were, according to the Physiocrats, a good thing—indicative of the overall wealth, as summarized in the famous dictum: *abondance et cherté est opulence*.²⁶ So Quesnay might have erred by intention, representing to his readers a French economy that could exist were the Kingdom ruled in the best possible manner, presumably by following Physiocratic policy principles.

Consistently with this high-income, high-prices approach, Quesnay's bare-bones subsistence is also higher in nominal terms than what can be deduced from Morrisson and Snyder, and Isnard. The outcome of both high incomes and even higher (relatively to the other two authors) subsistence minimum is that Quesnay's estimate of French pre-revolutionary income in terms of the subsistence minimum is lower, but within the same general "ballpark" as Morrisson and Snyder's, and Isnard's. The three estimates range from 3.3 to 3.8 times the subsistence. For England and Wales, for approximately the same period

²⁵ "One should always keep in mind that we assume a kingdom such that a good and faithful administration makes it flourish, where the nation lives at ease, where the essential goods are at an advantageous price, where the farmers maintain a rich agriculture, which yields at least one hundred of net product or revenue for each one hundred of annual advances or expenses" (p. 173; my translation). For similar statements see pp. 169, 176.

²⁶ Maxim XVIII (*Maximes du gouvernement*), p. 243. The same point is brought up by the next Maxim XIX as well: "One should not believe that a low price of foodstuff is good for ordinary people because low price of foodstuff reduces wages of people, lowers their well-being, provides them with less work and lucrative occupations, and destroys the treasury of a nation" (p. 243; my translation).

(1759), Joseph Massie's numbers imply an average income of 5.9 times the subsistence (see Milanovic, Lindert and Williamson, 2010, Table 2), thus placing England's per capita income some 70-75 percent above French.²⁷

Quesnay's social table produces a Gini coefficient of only 37.4. In a very detailed recent paper on French inequality over two centuries (18th and 19th), Morrisson and Snyder (2000), using a number of sources, produce a social table benchmarked in the year just before the revolution (1788). They divide the population in nine social classes, ranging from the poorest, agricultural day-laborers, to the richest, nobles and clergy. The Gini coefficient obtained from their social table is significantly higher, 54.6 Gini points.²⁸ Isnard (1781) divided the French population in eight income brackets, but, as pointed out by Morrisson and Snyder (2000, p. 68), left out the poorest classes, probably because his interest lay in showing the effect that the introduction of a flat tax would have on royal revenues. He was not interested in the situation of the poorest who, in any case, would not be assessed taxes. The Gini coefficient calculated from Isnard's data is 48.8.²⁹ It is reasonable to hold that the main source of what could be Quesnay's underestimate of inequality comes from not having disaggregated the property-owners into at least three classes that are explicitly mentioned by him as belonging to that large 1 million-strong group: landlords, government administration, and clergy. Furthermore, it is likely that the introduction of very rich aristocrats would have further pushed inequality up.

Using again as comparator Massie's social table for England and Wales for the year 1759, we find English Gini to have been 46.³⁰ Now, it is highly unlikely, as argued by

²⁷ Quesnay would have probably agreed: "The level of prosperity which we suppose [for France] is much below what is a reality for a nation of which we just spoke [England]" (p. 160).

²⁸ Morrisson and Snyder income distribution by social group is given in their Table 3 (p.66). In the calculation of the Gini, we use their "high" income estimates (for the top two classes) which also yield higher inequality numbers. The difference from "low" estimates however is not substantial. In their paper (p. 80), they report a Gini of 59 but this seems to me to have been based on a miscalculation.

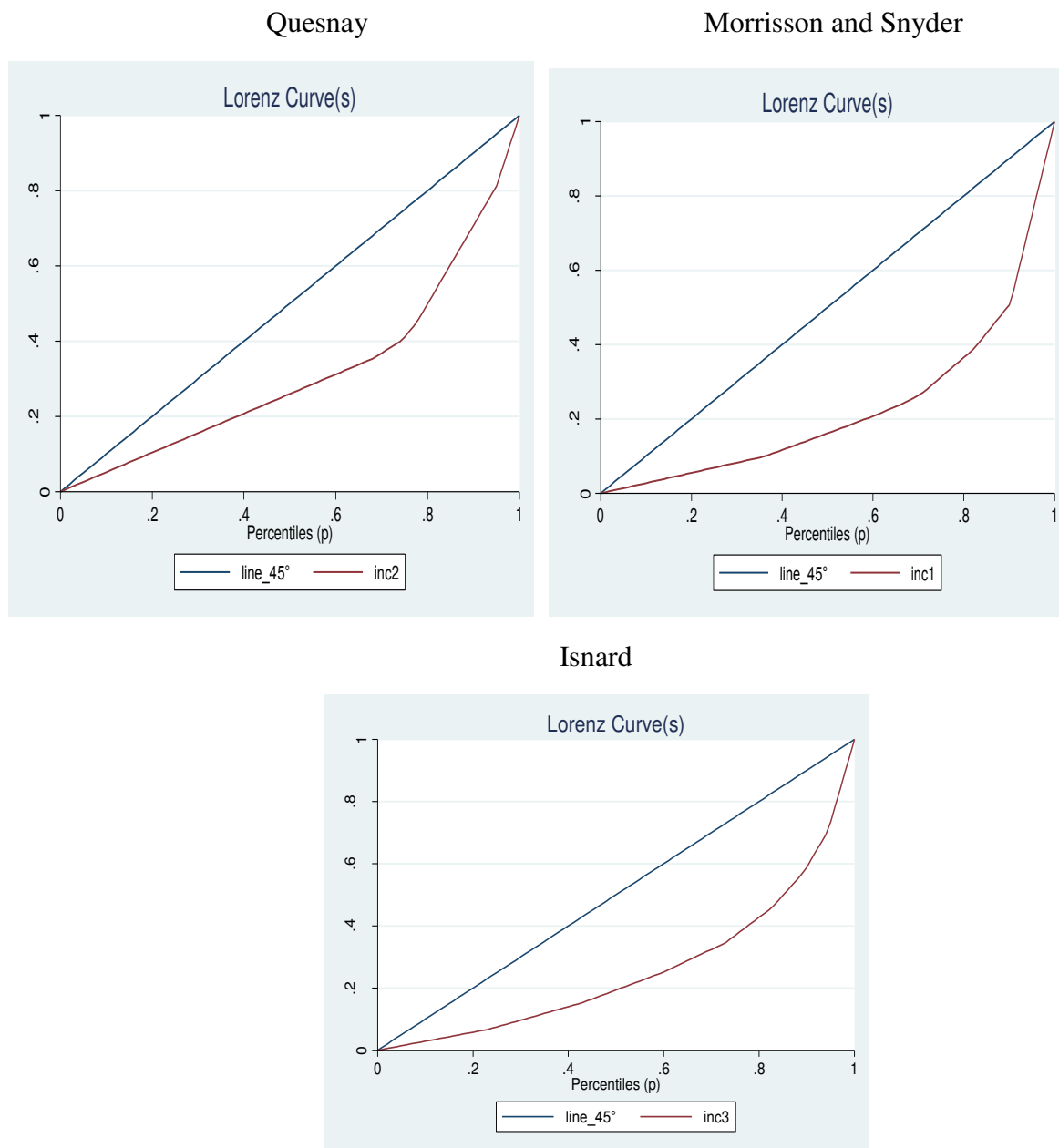
²⁹ In all cases, we calculate the Gini just across social groups, assuming that inequality within each group is zero. This, of course, is unrealistic and imparts a downward bias to the calculated vs. the actual Gini. But we have no basis on which to assume what is the distribution within each social or income group in these tables.

³⁰ See Milanovic, Lindert and Williamson (2010, Table 2).

Morrisson and Snyder (2000, p. 80), that France was at that time less unequal than England, and thus the reliability of Quesnay's Gini of 37.4 is further undermined.

Figure 1 shows the Lorenz curves obtained with Quesnay's, Morisson and Snyder's, and Isnard's social tables. The first contains twelve, the second nine, and the third, eight social classes. Despite fewer groups (and thus possibly less granular social structure) than Quesnay's, the Lorenz curve based on the Morisson-Snyder data shows a significantly more unequal distribution, and particularly much lower income share of the bottom classes. Thus the bottom quintile in Morisson-Snyder data receives 5 percent of total income while according to Quesnay its share is in excess of 10 percent. Isnard's social table stands, both in terms of the overall inequality and the income share of the bottom, between the other two.

Figure 1. Lorenz curves with Quesnay's, Morriison and Snyder, and Isnard's social tables



Sources: Quesnay: Table 3 above. Morriison and Snyder (2000, Table 3). Isnard from Morriison and Snyder (2000, Table 5).

The estimate of income distribution and average income, helps us also to situate the calculated Gini coefficient in its social context, *viz.*, allows to find out how much of maximum feasible inequality (inequality that would exist if all population but a tiny elite lived at the subsistence minimum, and the elite kept the entire surplus above subsistence for itself) was “extracted” by the elite. More intuitively, the inequality extraction ratio shows how close to the maximum feasible inequality is a society at a given point in time. With an

average income of about 3.3 times subsistence (according to Quesnay), the maximum feasible Gini is 70,³¹ and Quesnay's Gini of 37.4 thus "extracted" only 53 percent of maximum inequality. This is sizeably less than what the other two estimates imply: their inequality extraction ratios are 69 and 74 percent (see Table 4). The English inequality extraction ratio, based on Massie's social table for 1759, was only 55 percent, and thus noticeably lower than the French.³² The inequality extraction ratio magnifies the difference which existed between England and France because the higher English income implies a higher maximum feasible inequality. As English actual inequality, measured by the Gini, was probably less than the French, the ratio (actual/maximum inequality) was even further lower.

³¹ For the derivation and calculation of the maximum feasible inequality and the inequality extraction ratio, see Milanovic, Lindert and Williamson, 2010.

³² Milanovic, Lindert and Williamson (2010, Table 2).

Table 4. Comparison between Quesnay's and other estimates

	Quesnay (1763)	Morrisson and Snyder (2000)	Isnard (1781)	Toutain (1987)
Year of estimation	Around 1760	1788	1781	1781-90
Population (in 000)	29,900	27,970	24,140	27,000
Total GDP (in m current livres)	7,191.8	4,009	4,170	5,941
GDP per capita (livres p.a.)	240	143	173	220
Minimal per capita income (in livres p.a.) in social tables and % of population receiving it	125 (3%)	39 (36%)	50 (23%)	n.a.
Maximal per capita income (in livres p.a.) in social tables and % of population receiving it	925 (0.5%)	724 (9.65%)	950 (5.5%)	n.a.
Bare-bones subsistence (in livres p.a.)	72	38	50	n.a.
GDP per capita in terms of subsistence (α)	3.3	3.8	3.5	n.a.
Share of agricultural income (in %)	33.8	32.4	n.a.	n.a.
Gini coefficient	37.4	54.6	48.8	n.a.
Maximum feasible Gini	70	74	71	n.a.
Inequality extraction ratio (in %)	53	74	69	n.a.

Notes to Table 4.

Sources: Quesnay (previous tables). Morriison and Snyder: the “high case” social table in Morriison and Snyder (2000, Table 3, p. 66). See also Milanovic, Lindert and Williamson (2010, Annexes). Isnard (1781) as reported in Morriison and Snyder (2000, Table 5, p. 68). The original data come from Isnard (1781, volume 2). Toutain (1987): Table 1 (p. 56) and Table 12 (p. 76).

Calculation of bare bones subsistence: Quesnay: 400 kg of wheat-equivalent multiplied by the price of wheat which is given as 21 livres per setier (1 setier = about 117.6 kg). Morrison-Snyder: French GDP per capita in the year 1800 was estimated by Maddison (2004) at \$PPP 1,135. The Morrison-Snyder (2006) average income estimate of 143 livres per capita for the approximately same period implies that the current livre-equivalent for a subsistence minimum of \$PPP 300 was 38 livres. This matches almost perfectly the income for the bottom class assumed in Morrison-Snyder social table. Isnard: the average income of the bottom social class.

Share of income received by agriculture. Quesnay: includes income of all tenant-farmers and workers in agriculture but not rural commerce (see Table 3). Morrison-Snyder: includes incomes of small scale farmers, large scale farmers, agricultural day laborers and servants, and one-half of income of mixed workers. (Note that in general the output produced in agriculture will be less than the output that “remains” among those working in agriculture because rents are paid to landlords who are not treated as part of agriculture).

Maximum feasible Gini calculated as $(\alpha-1)/\alpha$ where α is GDP per capita in terms of minimum subsistence. See Milanovic, Lindert and Williamson (2010).

5. Conclusions and some thoughts on Quesnay's influence

Mirabeau's and Quesnay's *La Philosophie rurale* is a much less well-known work than *Le Tableau économique* (in its many different formulations) or even *Maxims of M. de Sully*. Yet all of them do compose a whole because the logic and spirit of the *Tableau* permeate *La philosophie rurale*. However, *La philosophie rurale* had an additional objective: to present the economy of France as it actually was, or perhaps with a slight touch of embellishment, how it could be made if the policies of the Physiocrats were adopted. It thus sharply, and for us crucially, moves from the illustrative and hypothetical arithmetic examples of the *Tableau*, from the income and money zig-zags that have left puzzled and exhausted generations of the economists.

But the absence of the famous ziz-zags does not make *La philosophie rurale* an easy read, even if it had some advantages over the *Tableau*. For example, in *La philosophie rurale*, Quesnay, for the first time to my knowledge, gives simple modern-day looking tables which summarize his verbal discussion of each individual sector. Toward the end of the chapter (as will be recalled, *La philosophie rurale* is the 7th chapter in the eponymous book) he provides two summary tables with the key results from the agricultural sector, and to the delight of the modern reader, even introduces the wages of those employed outside agriculture. It thus gives us an almost complete income distribution, broken by 12 social groups, of the mid-18th century France.

Quesnay does this in a strikingly modern fashion, showing income from both distribution and production sides. The entire value added (both in agriculture and outside agriculture) is distributed between the factors of production, and then further to the rather well-diversified and precisely-defined social classes. Perhaps the gravest omission in the definition of classes is Quesnay's decision to treat proprietors as a single class, although they are composed of three functionally different "layers": landlords, government administrators, and the clergy, and must have contained people with vastly different incomes. This omission biases downward the Gini coefficient that is obtained from his social table, and shows inequality in pre-revolutionary France some 10 to 15 Gini points less than it probably was. Yet the factorial distribution where some 80 percent of the population are workers and the share of labor income is about $\frac{1}{2}$ is plausible. So is the income gap of 1.5 to 1 between urban

and agricultural workers. And so seems to be the share of income that accrues to landlords, administrators and the clergy: almost 30% even if they account for only 12 percent of the population. The overall output (value added) is also close both to the contemporary and modern estimates. Quesnay's estimate is indeed at the upper range of the GDP per capita values that go from 143 to 240 livres for the period preceding the French revolution, but it is less than 10 percent off the very recent and detailed estimate by Toutain (1987). Moreover, in terms of subsistence minimum, the estimates converge to the range of 3.3 to 3.8. It is unfortunate that we do not have at least equally reliable numbers for a slightly more remote period, or more exact and frequent measurement of national income for the period just before the Revolution in order to try to pass a tentative judgment on a century-and-half old Tocqueville's contention that the period before the Revolution was one of economic upswing.³³ Total population estimated by Quesnay seems also to be somewhat higher than the modern estimates, but again the discrepancy is within 10 percent. Overall, therefore, Quesnay's description of the pre-revolutionary French economy seems to substantially agree with the recent estimates, and although we cannot claim for it accuracy (since we obviously do not know what the accurate numbers for that period really were), we can at least claim for it a very high degree of plausibility.

François Quesnay is not much read today which is not altogether surprising because the economic profession has lost the habit (and interest) to read its classics. Thus, he is not an exception. His style of course does not help his case. Reading Quesnay, even in *La philosophie rurale*, which is an easier work to read than the *Tableau*, is like climbing up a steep mountain on a day of deep fog. From time to time, the fog breaks and allows us to behold the beautiful landscape that lies all around us, but then the fog redescends, often with vengeance, and without much help from the guide (that is, from our author), we continue the climb, at times despairing of ever reaching the summit or even knowing where we are going. The fog is not due solely to the style of the author which is indeed often dense, abstruse, and clumsy, but also to the numerous and complicated arithmetic examples, figures written out in their entirety with as many as nine zeros, calculations that are some times inexact, or have been made inexact by mistakes in transcription. Or even by mere forgetfulness, as when in *La*

³³ See in particular Part III, Chapter IV in his *L'ancien régime et la révolution* (1856). Incidentally, Tocqueville was scathingly, and probably somewhat unjustly, critical of the Physiocrats.

philosophie rurale's summary table Quesnay simply forgets to include workers employed in rural commerce.

However, once the fog dissipates and our understanding of what Quesnay was trying to say and show improves, we cannot but be amazed by the quality and modernity of the construction. I do not speak here of the *Tableau* and its famous circular flow since this was not the subject of this paper. But the already-mentioned double-side, production and distribution, approach is entirely modern. The introduction of the surplus, for which, as argued in the text, the assumption that it exists only in agriculture, is largely immaterial, was a novelty of the first order. It is easy to see why Marx had such a high opinion of Quesnay—reflected not only in Marx's schemes of reproduction which were built upon Quesnay's circular flow—but, perhaps even more importantly, because of the innovation that the idea of surplus represents. For only two easy steps separate Marx from Quesnay: (a) assume that surplus is produced in all spheres of production, and (b) assume that is produced by unpaid labor through the wedge which exists the value of labor-power (how much is needed to restore laborers, after work, back to their initial condition) and value of labor (how much labor produces). Instead of nature being the “fairy” thanks to whose intermediation the bounty of surplus arrives, it is now, in Marx, human labor which alone is capable of producing in ten or twelve hours of work more than its maintenance during these 10 or 12 hours requires. It is labor, not agriculture, that yields a “bounty.”³⁴

There is no doubt that Marx recognized this similarity, as his copious notes in the *Theories of Surplus Value* illustrate. He deals with Physiocrats in three parts of the first volume of *The Theories*: discusses their idea of net product (surplus-value in Marx's terminology), then spends an entire chapter in often very complex discussions of the reproduction schemes from the *Tableau*, and finally presents an addendum on the *Tableau* criticizing Quesnay's assumptions. In total, the discussion of the Physiocrats takes 68 densely-printed pages (Marx, 1969, pp. 44-68; 308-350; 378-380). Compare that with just over a page Marshall dedicates to the Physiocrats in his *Principles* (1961, pp. 756-7).

³⁴ Schumpeter (1980, p. 238) makes a similar point although he argues that the similarity is less than it appears at the first sight since for Quesnay surplus was merely a physical excess over what was used in production while for Marx the surplus was from the very start a value surplus. I do not find this distinction quite convincing.

This praise of Marx has provided Quesnay with enduring fascination among Marxist and *Marxist* circles. This is, I think, obvious even from the references cited here: to Ronald Meek, Marguerite Kaczynski who “by means of a very brilliant piece of detective work”³⁵ rediscovered and published the important “third edition” of the *Tableau* in the German Democratic Republic in 1965, Isaac Rubin, the most famous Soviet historian of economic thought and an authority on Marx, Walter Eltis, and of course Schumpeter who in his *History of Economic Analysis* both ranks Quesnay very highly and explains, perceptively as ever, why Quesnay was not given sufficient recognition by other economists:

It has been remarked...that Quesnay...has to this day been receiving less than his due as a scientific economist..Especially that kind of recognition—the only serious one—that consists in the acknowledgment by competent workers of obligation, or at least of priority, in definite points, has been dealt out to him rather sparingly. One reason for this was that his analytic work was little understood and that in consequence later economists actually did not owe as much to him as some might think. Another was the presence in his teaching of what people felt to be an element of oddity. In A. Smith, both reasons seem to have been operative...Karl Marx was the only first-rate economist to give Quesnay his due.³⁶

Through the concept of the circular flow Quesnay’s influence extended and was recognized as an inspiration by Leontief in his work on input-output tables which in turn had their origin in Marxian schemes of reproduction and central planning in the Soviet Union. Quesnay’s influence was less among English classical economists (despite Smith’s several favourable mentions of him) and even less among the neo-classical economists. And when the latter turned their attention to him, they tended to disfigure his work out of all recognition. Samuelson (1982) did so when he introduced the assumption of equality of wage and marginal product of labor, dropped classes in favour of factors of production etc. As Cartelier (2009, p. 443) writes, it is not then surprising that Samuelson came to the conclusion that “the *Tableau économique* has been an interesting footnote in the history of economic thought”. But Samuelson, singularly blind to nuance and history, is famous also for an even more egregious statement on Marx.

³⁵ Meek (p. xviii) in Kaczynski and Meek (1972).

³⁶ Schumpeter (1980, p. 232).

It is a testimony to the strength of the purely economic ideas that such continuity between Quesnay and Marx may be established despite the fact that their politics could not have been more different, estranged even, as they stood at the two antipodes of the political spectrum: Quesnay with the defense of enlightened despotism and Marx with the proletarian revolution.

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