

History of Political Economy: Physiocracy

Source: Chapter two of *Keizaigaku shi* (History of Political Economy), Tokyo: Iwanami Shoten, 1954;

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The following is the second chapter from Kuruma's book *Keizaigaku shi* (History of Political Economy) first published in 1948 by Kawade Shobō and reissued in an expanded edition in 1954 by Iwanami Shoten. My translation is based on this latter edition. Kuruma's history consists of three chapters: Chapter one which provides a short overview of the history of political economy as a science; Chapter two on Quesnay and the Physiocrats; and Chapter three on the thought of Smith and Ricardo, particularly as it concerns the labor theory of value. Chapter three has been published separately in the 2007 issue of *Research in Political Economy* as an article entitled: "A Critique of Classical Political Economy."

Introduction

Physiocracy is a school of thought founded by François Quesnay (1694-1774), a court physician to King Louis the 15th. At one point in time Physiocracy constituted a sort of religious movement that attracted a number of outstanding and extremely fervent believers, and exerted no small influence on real politics. The history of the Physiocratic movement is thought to have begun in 1757, when Quesnay met Mirabeau the elder (1715-89), and come to an end in 1776, with the fall of Turgot (1727-81). The actual members of the Physiocratic school referred to themselves not as Physiocrats but as *économistes*. The term "physiocracy" apparently came into general use after having first appeared in 1767, with the appearance of a collection of Quesnay's works published by Pierre du Pont under the title *Physiocratie, ou Constitution Naturelle du Gouvernement le Plus Avantageux au Genre Humain*. The term is of course a combination of "physio" (nature) and "cracy" (rule), thus meaning the "rule of nature." This expresses the school's fundamental idea that there is a natural order, as opposed to artificial systems, and that the mission of scholarship and politics being to understand this natural order and bring it into existence, thereby bringing about this rule of nature.

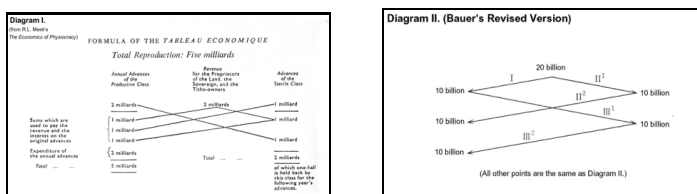
[1]

Tableau Economique

Quesnay's *Tableau Economique*, which is the essence of his system of political economy, is a diagram that depicts the process of social reproduction under the "natural

order.” It was printed at Versailles in 1758, with a print run of just four copies. Initially Quesnay had intended to present it along with *Extraits des Economies royales de M. de Sully* but gave up this idea on the advice of Madame de Pompadour. But the manuscript containing it, written in Quesnay’s own hand, was discovered among the papers of Mirabeau in 1890 in the Archives Nationales by Professor Stephan Bauer. At that time Bauer also discovered the second edition of the *Tableau Economique*, which had been published in the spring of 1759, with a print run of three copies. At the end of that year a third edition of three copies was published, which was later discovered by Gustave Schelle. In addition to these editions, there is the *Tableau Economique avec ses Explications* included in Mirabeau’s *L’Ami des Hommes* (1760), as well as the table in Mirabeau’s *Philosophie Rurale* (1763) and *L’Elements de la Philosophie Rurale* (1767), and the tables that appear in other works. The figures in the various tables are somewhat different, but the basic structure is the same.

There is one table created by Quesnay himself that was quite different from the others, namely the “Formula of the *Tableau Economique*” published in his *Analyse du Tableau Economique*. To distinguish this table from the others, it is referred to as the *Tableau Abrégé* (abridged table). Quesnay set out in *Analyse du Tableau Economique* to clarify the true significance of his economic table, in a manner accessible to the general public, and the table was revised accordingly. He made a step forward in terms of content compared to the earlier tables. Most importantly, whereas previous tables had depicted the circulation between the three main classes as circulation between individuals belonging to each of those classes, the *Tableau Abrégé* depicts this from the outset as circulation between classes as a whole. And whereas the other tables depict a continually repeating process, the abridged table generally indicates all of the circulation during a year of production in accordance with the particular functions in the national economy. Furthermore, the relations of reproduction for each type of “advance” (capital) are clarified to a much greater extent. Thus, although the *Tableau Abrégé*, as its name indicates, is much more simplified, Quesnay’s simplification eliminated the extraneous and held on to the necessary. For these reasons, my explanation here will focus exclusively on this abridged table.



Quesnay’s *Tableau Abrégé* in *Analyse du Tableau Economique* is displayed above (Diagram I), and below it is the revised version of Prof. Bauer (Diagram II). [2]. In the *Tableau Economique*, the country is broadly divided into three classes: the productive class (*classe productive*), the class of proprietors (*class des propriétaires*), and the sterile (or unproductive) class (*classe sterile*).

The *productive class* comprises those involved in agriculture. We should note, however, that the term refers to capitalist entrepreneurs who rent land and hire workers, so it is premised here that agriculture is conducted under capitalistic methods. This class is said to be “productive” because it alone is thought to produce the *produit net* (net

product), which is the surplus over and above what is consumed in production. The *class of proprietors* includes proprietors in a particular sense, i.e. landowners, as well as the lords and the tithe-owners who earn a ten percent tax (*décimateur*). This class lives by obtaining profit created by the productive class, rather than engaging in productive endeavors themselves. Finally, the *sterile class* includes those engaged in affairs outside of agriculture. This class is called “sterile”—or unproductive—because they were thought to only add to the value of the raw materials—which are supplied by the productive class—the value of the materials of livelihood that they also received from the productive class.

Quesnay’s economic table seeks to elucidate the manner in which simple reproduction is carried out in a closed-off nation that comprises these three classes. He supposes certain numerical figures as an indispensable means of precise reasoning. These figures were apparently based on the results of a survey of capitalist-run agriculture in one region of France, with Quesnay supposing that the same production methods are carried out nationwide. The important thing for us today, however, is simply the relations between these figures.

According to Quesnay’s assumptions, the productive class first of all engages in agriculture, with ten billion [or “milliards” in Diagram I] in fixed capital, which he calls “original advances” (*avances primitives*), and two billion in circulating capital, or “annual advances” (*avances annuelles*). Of course, the ten billion in fixed capital is not used up every year, and the annual cost of maintaining this fixed capital is estimated to be one-tenth of its total value, or one billion (which Quesnay calls *les intérêts des avances primitives*). The productive class, therefore, expends a total of three billion on production every year.

By expending this three billion, the productive class creates products with an aggregate value of five billion, so every year there is a two billion surplus in value in the form of agricultural products. This surplus of two billion, or rather the surplus agricultural products valued at two billion, is what Physiocrats call the “net product” (*produit net*). This net product is subsequently paid to the class of proprietors in the form of rent, the 10-percent tax, etc. It is assumed, however, that this is a monetary, not an in-kind, payment. So it is also supposed that at the end of the year of production, the productive class will have, in addition to an agricultural product with a value of five billion, two billion in money that can be used to pay rent.

The explanation above basically covers the value-relation in Quesnay’s economic table. Turning to its material content, the three billion in money the productive class spends during a year of production is made up of two billion in agricultural goods and one billion in manufactured goods, which by the end of the production process has been transformed into five billion in agricultural goods. Thus, comparing the beginning and the end of annual production, we see first of all that the two billion in agricultural goods has been reproduced in that same form, as agricultural goods, and the one billion in manufactured goods has been replaced by one billion in agricultural goods, while there are two billion in newly created agricultural goods as well.

Incidentally, for the total product of five billion, the first, two billion component does not enter circulation and is used instead to replenish one part of the capital of the

productive class. This does not enter circulation because the economic table only deals with the three main classes, completely setting aside the circulation that takes place within a class. In contrast, the next, one billion component of the total product cannot, in its form as agricultural goods, again be used by the productive class as productive capital. In order to return this capital of the productive class to a form that is useful in production, it needs to be exchanged for one billion in manufactured goods. Finally, the remaining two billion component of the product, which represents the surplus, covers the two billion in value that must be paid as rent. Therefore, the nature of this two billion in money used to pay rent is such that after it has flowed back to the productive class it is exchanged with that other class. Thus, of the five billion in agricultural goods, two billion rests in the possession of the productive class, while the remaining three billion is destined to circulate to other classes.

Next, it is supposed that the class of proprietors receives two billion in income every year. This yearly income, as noted already, represents the net product (surplus in value) created through agriculture in a year, and is payment for the use of land. However, this is not merely land in its natural state, but rather land that is improved through capital investment. Therefore, this two billion in revenue also includes the value to replace the capital invested in the land (which Quesnay calls *les avance forciers*—i.e. the capital invested for the initial reclamation of the plot of land, the construction of buildings needed for cultivation, and the creation of irrigation canals, drainage, and roads). It is assumed that this revenue is paid in money, not in-kind.

Finally, it is assumed that the sterile class invests one billion of capital on raw materials and consumes one billion in materials of livelihood during the course of the year of production, thereby creating two billion in manufactured goods. Furthermore, because it is also assumed that these raw materials and materials of livelihood are composed of agricultural products, it is necessary for the total product of this class to enter circulation and be exchanged for the one billion in raw materials and one billion in materials of livelihood.

The circulation depicted in the economic table, under the conditions outlined above, begins with two billion in rent being paid by the productive class to the class of proprietors. This rent comes from the two billion surplus in value created in a year by the productive class, and is paid in money as is suitable to capitalistic production.

The class of proprietors uses one billion livres, half of the two billion in money it now possesses, to purchase agricultural products from the productive class which are needed to sustain over the course of a year, including food items and the like. One billion of money is thus returned to the productive class, which has now disposed of one-fifth of its total product (in Bauer's diagram the downward I arrow represents the flow of money, while the commodity the money is exchanged for flows in the opposite direction).

With its remaining one billion livres, the class of proprietors purchases manufactured goods from the sterile class, such as furniture, clothing, etc. So the sterile class converts half of its product into money. This money is then used by the sterile class to purchase needed agricultural goods, such as food, which results in a further one billion in money returning to the productive class, which has thus disposed of the second fifth of its total

product (II^1 and II^2).

The productive class then spends the one billion in money received to purchase manufactured goods from the sterile class, such as agricultural implements to replace those worn out in the course of production^[3]. As a result, one billion in money flows to the sterile class, which thus discards the remaining one billion of its total product that was worth two billion. The sterile class then uses the one billion in money to purchase from the productive class the food items needed over the course of a year. This means that one billion in money again flows to the productive class, which has unloaded the third fifth of its total product (III^1 and III^2).

If we examine the outcome of this circulation, the entirety of the two billion product of the sterile class and three-fifths of the five-billion product of the productive class have been successfully sold, reaching the hands of the intended consumers. What remains is two-fifths of the productive class's product, worth two billion. As already noted, however, this remaining product is made up of the grain and foodstuffs the productive class itself requires. Instead of entering the circulation between the three main classes, this is used as is straight away in order for the capital of the productive class to again assume a productive form. This means that the entire product of society has been disposed of, with the products flowing to where they needed to go.

That is not all, however. At the same time, two billion in money has returned to the hands of the productive class, and the two billion in yearly advances and the one billion that is the worn-out part of the original advances are covered and replenished. Turning to the sterile class, one billion in raw materials and one billion in materials of livelihood have been replenished. Finally, the class of proprietors possesses the one billion in agricultural goods and one billion in manufactured goods that make up its yearly materials of livelihood. This means that the conditions for a year of life are fully in place, for each of the classes of society, thus ensuring their continued existence, while at the same time putting in place the necessary conditions for production to be carried out on the same scale as initially premised. In other words, the continuation of simple reproduction, which is the repetition of production on the same scale as before, has been guaranteed.

Here we have presented the gist of Quesnay's economic table. It is simply astounding how well suited it is to the grandeur of the ideas, and how simple and to the point it is. Mirabeau may miss the mark in various ways when he says that "there have been, since the world began, three great inventions" with the first being the "invention of writing" the second the "invention of money" and the third the "*Oeconomical Table*,"^[4] but it is an undeniable fact that Quesnay's table is one of the most revolutionary achievements within the history of political economy, representing the moment when this field of study finally reaches the point of constituting a scientific system. Not only was the *Tableau Economique* the first *system* of political economy, it is also remarkable in the sense that it was the only attempt, prior to Marx, to depict the reproduction of the total social capital.^[5] Marx appropriately noted that:

[Quesnay's *Tableau Economique*] was an attempt to portray the whole production

process of capital as a process of reproduction, with circulation merely as the form of this reproduction process; and the circulation of money only as a phase in the circulation of capital; at the same time to include in this reproduction process the origin of revenue, the exchange between capital and revenue, the relation between reproductive consumption and final consumption; and to include in the circulation of capital the circulation between consumers and producers (in fact between capital and revenue); and finally to present the circulation between the two great divisions of productive labor—raw material production and manufacture—as phases of this reproduction process; and all this depicted in one *Tableau* which in fact consists of no more than five lines which link together six points of departure or return, this was an extremely brilliant conception, incontestably the most brilliant^[6] for which political economy had up to then been responsible. ^[7]

In Quesnay's economic table, instead of each type of economic relation being abstractly observed in isolation, they are observed synthetically. I have just mentioned that Quesnay and Marx were the only ones in the history of political economy to seek to comprehensively consider this issue, but I should note that the former was the creator of political economy as a system whereas the latter brings political economy to its culmination. Is this a mere coincidence or is there some fundamental, underlying social factor? It seems to me that the need to comprehensively consider the economic movement of society is first keenly felt when the economic structure of society as a totality first comes to be an issue. For this reason, it seems natural that within the history of modern political economy—which begins in the midst of the deadlock of the feudal system with the desire to establish capitalism, and comes to an end with a comprehensive critique of capitalism that coincides with the broad unfolding of its contradictions—the desire to consider the process of reproduction would appear at the beginning and then at the end. I think it could be said this desire gradually recedes from the time of Quesnay to that of Smith, and even further from the time of Smith to Ricardo, as a reflection of the steady establishment of capitalist production and the situation where the inner contradictions of the capitalist system had yet to be broadly exposed.

Contradictions of Physiocracy and the Emergence of the Classical school

The previous section introduced the main content of Quesnay's economic table, indicating that it was a most remarkable system in terms of considering the reproduction process of social capital; an effort not pursued subsequently until the arrival of Marx. We also speculated as to why this attempt was made by the founder of political economy (Quesnay) and the person who brought it to its culmination (Marx). In other words, we focused primarily on the magnificent way the problem is grasped in Quesnay's economic table, emphasizing the points in common between Quesnay and Marx. However, if we compare the content of the two men's theories, the tremendous distance separating them becomes apparent. Just as the trajectory from the sudden rise of capitalism to its period of decline was propelled forward by the real developmental

process of capitalistic relations of production, the progress from the starting point of political economy to its culmination was made possible by the theoretical development of the English Classical school, based first and foremost on the analysis of exchange-value.

If we are to understand the great significance of the theoretical development of the Classical school within the history of political economy, particularly the analysis of exchange-value as the fundamental element, we need to go back to the Physiocratic system, examine its content, and clarify its contradictions. The contradiction particular to this school of thought, which eventually led to its collapse, can be found in its over-emphasis on agriculture.

We have seen that Quesnay's economic table divides production into a "productive" department and a "sterile" one—with the former including productive endeavors centered on agriculture, whereas everything else is said to be sterile (unproductive). The Physiocrats viewed agriculture alone as productive because a "net product" over and above what is consumed for production is generated, whereas this is not said to be the case in other spheres of production. Their argument contains two assertions: (1) a net product must be produced to merit the description "productive" and (2) only agriculture generates this net product. Here I would like to deal with each of the two assertions.

The Physiocrats argue that a sphere of production must generate a net product to be productive, but we need to consider their understanding of the term "net product." In the economic table, the productive class expends three billion livres every year and ends up creating an agricultural product with a value of five billion livres. In other words, the net product is the surplus agricultural product of two billion livres created during the year. Therefore, even though the net product, to some extent, is understood as arising from the bounty of nature, and is thus grasped in terms of use-value, it is not mere use-value but rather use-value as the bearer of two billion livres, signifying this value component within a total agricultural product worth five billion livres. It is precisely because of their value that the products are sold to become two billion in money. This money in turn is handed over as rent to the class that enjoys exclusive ownership of the land, which is the fundamental labor requirement for agriculture, and the money makes up the revenue of that class of proprietors. Thus, the net product, which the Physiocrats posited at the center of their doctrine as the sole source of a nation's net revenue, is grasped as use-value and as a surplus product, but in the relation above it is understood in the sense of value or surplus-value instead. In other words, their "net product" can be described as value grasped in the form of a material thing, and at the same time as surplus-value cognized in the form of a surplus agricultural product.

Surplus-value is of course the pivot of the capitalist economy, the ultimate objective and fundamental impetus of capitalist production. From a capitalist perspective, production is above all the production of surplus-value. Thus, Quesnay gets to the heart of modern production when he places net product at the center of his system, making a distinction between productive and unproductive labor on the basis of whether a net product is generated or not.

This basic idea is not particular to Quesnay and his school of thought alone, but rather is a keynote of modern political economy in its various forms. The doctrine of

Mercantilism, first of all, which belongs to the prehistory of political economy, advocated the policy of promoting greater exports than imports paid for in gold and silver in order to use the funds generated to subsidize the protection of export-oriented commerce and industry. This position is an expression of the aforementioned view, in its crudest form. The balance of trade, in the form of an increase of gold and silver, is the most visible form of a national surplus in value, and what brings it about, directly speaking, is export-related commerce and industry. The fact that Mercantilists held fast to this highly visible form, overlooking the ultimate source, reveals their theoretical crudity and that they were unable to shake free of the realm of practical affairs. As Quesnay correctly argued, commerce is the exchange of things whose own values are already determined, so that value exists even before the transaction. In the case of commerce, as long as equivalents are exchanged, no surplus of profit can be generated, while in the case where non-equivalents are exchanged, the gain on one side is a loss on the other. Exchange is merely the realization of already existing value in the form of money, or the transfer of value that is in the hands of another individual or nation. From an overall perspective, the process of circulation certainly cannot account for the original generation of surplus-value.

Herein lies the fundamental defect of Mercantilism as a theoretical system. In order for political economy to constitute itself as a science, it was necessary to move from a partial, to an overall perspective, advancing from the subjective standpoint of merchants and politicians to an objective and theoretical standpoint, tracing our way back from matters concerning the mere realization and distribution of value, to arrive at its original creation. The focus of attention shifted from the process of circulation to the process of production. And here we have the groundbreaking significance of the Physiocrats' distinction between productive and unproductive labor. As Marx notes, "The Physiocrats transferred the inquiry into the origin of surplus-value from the sphere of circulation into the sphere of direct production, and thereby laid the foundation for the analysis of capitalist production." [8]

The Physiocrats managed to raise this issue, but at the same time they failed to clarify what constitutes value. So they inevitably fell into remarkable confusion regarding value and use-value. On the one hand, they grasped relations pertaining to value in the form of use-value, while on the other hand they confused problems inherent to use-value with problems that pertain to value. As a result, numerous contradictions and a great deal of confusion arose within their doctrine, as is manifested most clearly in their view on the productive character of agriculture.

First of all, when Physiocrats insist on the productive character of agriculture, this character refers to the production of surplus-value; at the same time, however, as long as it is not made clear what value stems from, it is impossible for them to clarify the general law of the production of surplus-value. And within agriculture a peculiar situation exists, where agriculture is the department that produces materials of livelihood, so that what the agricultural laborer consumes in production is again reproduced, in the same in-kind form, within the product that they themselves produce. They consume agricultural products to create agricultural products. Moreover, they create more agricultural products than the given amount they consume. Therefore, the difference between the

two amounts, without being mediated by the concept of value, can be recognized as a surplus product. ^[9] This is not the case in the realm of industry, where the things workers consume and what they create are of a completely different nature. Therefore, the surplus-value created by industrial workers cannot be recognized in its given form of use-value. Just as ten kilograms of wheat cannot be deducted from one carpet, the materials of livelihood of industrial workers are only first replenished through the exchange of their products. The difference between what the industrial workers consume and what they produce is something abstract and hard to pin down, which can only first be understood through the value-analysis of simple labor. It is this circumstance that is the primary factor underlying the belief of the Physiocrats that only agriculture is productive.

Because the Physiocrats did not clarify the character of value, they only grasped the production of surplus-value in the form of the production of surplus use-values. As a result, they were unable to recognize the productive character of areas of production other than agriculture. Meanwhile, they directly confused matters inherently related to use-value with those related to value, thus generating even more confusion regarding the distinction between the concepts of productive and unproductive. They believed that agriculture occupies a special place within a society's economy, as the sphere that produces the foodstuffs that are the key requirement for human life. Accordingly to this view, without agriculture, and therefore without the production of foodstuffs, people would be incapable of maintaining their existence. This means that agriculture is the most fundamental of all the spheres of production, and the reason that some can live without engaging in agriculture is the result of the fact that those engaged in agriculture have created a surplus product in excess of their own consumption. In other words, the surplus agricultural product ("net product") is the foundation for the lives of all the other classes, with the independent existence of commerce, industry, and other endeavors merely being flowers that bloom thanks to those agricultural roots. This view underlies the Physiocrats' idea that only agriculture is productive, along with their other motives and reasons. Quesnay also says that the productive class is always independent through the outcome of their own labor, whereas the other classes are isolated because they are unable to obtain the materials of livelihood through their unproductive labor. He sees manufacture as a mere offshoot of agriculture, saying that the expansion of the "sterile class" that occurs along with the increase in population and national wealth is made possible by the productive class and the wealth it creates."

Granted, such views in and of themselves are not mistaken. Indeed, they reflect an extremely interesting viewpoint, both theoretically and historically (although the Physiocrats did not develop them in a sufficiently conscious or accurate form). Still, these are problems that clearly pertain directly to *use-value*, and cannot be the direct criteria for a distinction between the concepts of productive and unproductive in terms of *value*. It is inappropriate and conceptually confusing to introduce such a view into the discussion of the distinction between productive and unproductive. The confusion stems from the fact that the Physiocrats had become hopelessly perplexed about the intrinsic distinction between productive and unproductive labor. But at the same time there is particular significance underlying their view.

From the perspective of the historical process of capitalist development, there is great significance in the line Quesnay drew between agriculture (as the production sphere of the fundamental materials of livelihood) and the other spheres of production, and in his emphasis on the development of the former being the necessary premise for the development of the latter. This historical significance needs to be underscored, in light of the commonly held view that the agriculture-centered position of the Physiocrats was nothing more than a valuing of agriculture for its own sake, attributed as a mere reaction against Mercantilism. In fact, however, the journey of history is not a sort of meaningless repetition of action and reaction, but rather a developmental journey that unfolds by means of action and reaction. Likewise, the history of schools of thought cannot be understood if this relation of development is overlooked. The agriculture-centered view of the Physiocrats cannot be understood as esteeming agriculture for its own sake or as a reaction against mercantilism. The true historical significance of Physiocracy can first be grasped in line with the necessity of capitalistic production as a developmental process. We need to consider the exact significance of this agriculture-centered characteristic of the Physiocrats, which may at first glance seems anti-capitalistic, from the perspective of the development of capitalistic production. Since the sphere of production particular to the development of capitalism is industry, not agriculture, what possible relationship could there be between the Physiocrats' emphasis on agricultural development and the development of capitalistic production?

Certainly capitalism did first spring forth within industry, and ultimately achieved its own particular development within industry. But in order for the capitalistic production that sprang forth within industry to achieve its own development therein, it had to make use of agriculture and was able to achieve the capitalistic transformation of agriculture to some extent. Still, the premise and indispensable precondition for the large-scale development of capitalistic production in the industrial sector is the existence of large numbers of property-less laborers and the materials of livelihood that their wages are converted into. These human and material elements only come into existence as the result of the capitalistic transformation of agriculture. This transformation means an increase in the productive power of agricultural labor and at the same time a curbing of the consumption of the agricultural laborers themselves. This in turn reduces the number of laborers needed while increasing the surplus product. Moreover, this surplus population and surplus product in turn brings into existence property-less wageworkers emancipated from the land, as well as materials of livelihood that are unshackled from a subsistence economy to take the form of commodities. Thus, the wage-laborers and materials of livelihood that emerging industry requires are "separated" from agriculture. We can see, then, that the Physiocrats' emphasis on agriculture, which was the exterior trait of their doctrine, does not signify a mere penchant for agriculture for its own sake as many supporters of this doctrine themselves thought and later historians mistakenly imagined. Rather, quite contrary to its feudalistic appearance, the Physiocratic position was a manifestation of the need for the capitalistic transformation of agriculture, as a necessary stage in the development of capitalistic production. Indeed, the primary concern of Quesnay was not the particular interests of landed property in the sector of agriculture, nor the interests of the feudal landowning class, but the accumulation of capital within agriculture and the interests of capitalist agricultural entrepreneurs.

Moreover, capital was not to be limited essentially to the domain of agriculture. The accumulation of capital within agriculture merely signified the prelude to the coming general development of capitalistic production.

The capitalistic essence of the Physiocratic school is also manifested in the two main policies it advocated: (1) A single tax on rent (*impôt unique*) and (2) and a laissez-faire economic approach. It hardly merits further mention that both of these policies were clear expressions of the pressing demands of capital at the time. ^[10]

In the discussion thus far, we have analyzed the Physiocrats' view that only agriculture is productive, which ultimately led to the collapse of this school of thought. We saw that they considered the character of being productive in terms of producing surplus-value, and that they were quite correct as far as grasping the gist of surplus-value. Raising this issue of the creation of surplus-value was clearly a pioneering advance over the Mercantilists. At the same time, though, their understanding was inevitably limited due to the defects in their analysis of value, and their inability to recognize the production of surplus-value in non-agricultural spheres was the natural outcome of not reducing value to general labor. We have also seen that this same defect led them to confuse problems pertaining to use-values with problems pertaining to value, thus introducing, within the fundamental distinction between productive and unproductive, another distinction based upon a separate perspective. The confusion between value and use-value not only muddled the distinction between what is productive and unproductive, but also meant that the particular significance of that separate perspective could not be appropriately developed. Finally, we looked at the historical significance of the Physiocrats' viewpoint for their own era, which was the dawn of capitalistic production.

Through our analysis I think we were able to clarify a number of points. Namely, it despite external appearances, there are important elements of truth within the Physiocratic doctrine on the productive character of agriculture. However, these elements became entangled—due to confusion between problems pertaining to value and those pertaining to use-value—with a bias towards agriculture that at first glance seems nonsensical. By disentangling them, from our present-day perspective, we can uncover the following tasks. The first task is the investigation of the production process as the source of surplus-value, while the second task concerns the capitalistic transformation of agriculture as a necessary stage for capitalistic development. The latter, practical task, was subsequently forcefully achieved on a global scale through the development of history itself, but the first task is inherent to political economy, and therefore its satisfaction remained necessary for the further development of political economy. How was this second task achieved? We have already clarified that the root cause of the Physiocrats' failure to solve this problem was the defect in their analysis of value. Thus, the higher development required to solve this problem must of course begin with the analysis of value. It was the Classical school, developed in England, that analyzed value to reduce it to "labor" and clarified that surplus-value could be generated in any sphere of production.

Endnotes

1. This fundamental view of Quesnay is expressed in the following passages:

“Positive legislation consists, then, in the enunciation of the natural laws constituting the order which is self-evidently the most advantageous possible to men joined together in society. It is only the understanding of these supreme laws which can ensure the continuing peace and prosperity of an empire; and the more a nation applies itself to this science, the greater will be the sway of the natural order in it, and the more correct will its positive order be. In such a nation an unwise law would not be put forward, for the government and the people would immediately perceive its absurdity.

“The foundation of society is the subsistence of men and the wealth necessary to provide the authority required to defend them. Thus it could only be ignorance which would, for example, approve of the introduction of positive laws which militated against the order of the reproduction and the regular annual circulation of the wealth of a kingdom’s territory. If the torch of reason illuminates the government, all positive laws harmful to society and to the sovereign will disappear.” (from Meek, R.L., *The Economics of Physiocracy*, Harvard University Press, Cambridge, pp. 54-5)

“It is very much in the interests of the proprietors, the sovereign, and the nation as a whole that all taxes should be directly laid on the revenue of the land; for any other form of imposition would be contrary to the natural order, since it would be detrimental to reproduction and to taxation, and the taxes would fall on the taxes themselves. Everything in this world is subject to the laws of nature: men are endowed with the intelligence required to understand and observe them; but the great number of factors involved demands that they should be grouped together in comprehensive patterns, which form the foundation of a very far-reaching and self-evident science, whose study is indispensable if we are to avoid mistakes in policy.” (Ibid., p 154)

2. Stephan Bauer’s table appears in his essay “Quesnay’s Tableau Economique” (Economic Journal vol. V. p. 17)

3. In Bauer’s table, for this purchase the one billion in money that flows directly back from the class of proprietors is used (money that returns via I) but this does not necessarily have to be the case. The money that returns from the class of proprietors via the sterile class (via II) could likewise be used; it might also be supposed that the other one billion in money the class of proprietors is holding is used; or it could be supposed that the sterile class, rather than the productive class, is holding one billion in money which is used at the outset to buy products from the productive class (Although in this case instead of III² following after lines III¹ it would be II² following after II¹. In any of the above cases, however, money flows back into the hands of the class that initially released it into circulation by traveling back and forth between both classes.) It would also be fine to suppose that each of the two classes separately holds one billion in money that is then simultaneously used to purchase one billion in goods from the other side. (But in this case, instead of money traveling back and forth to flow back to its starting point, it would be transferred to each side.) In Quesnay’s own table, this last situation can be said to have been supposed.

4. Quoted in Smith, *The Wealth of Nations*, Book I-III, Penguin Books, Middlesex, p. 200.

5. Because the economic table at first glance seems to have not six, but rather five points of departure and arrival, some may have doubts about what Marx has written, but these doubts should dissolve immediately upon considering that the line expressing the money for the advance of rent is omitted.

6. Such praise, needless to say, does not mean that Quesnay's economic table is perfect as a diagram of the reproduction process of social capital. Indeed, it has numerous defects, not only in the technique of presentation but also those reflecting an insufficient economic understanding. The most glaring defects include: (1) Even though it is supposed that the productive class has material advances (constant capital) five times greater than annual advances (circulating capital), this is not said to be the case for the sterile (unproductive) class; (2) Despite the sterile class having annual advances of 2 billion livres, composed of 1 billion in materials of livelihood and 1 billion in raw materials, in the right column under advances only 1 billion is written; (3) Although the total sum of reproduction is 1 billion from the 5 billion of the productive class and 2 billion from the sterile class, in the table this total is listed as 5 billion. All three of these cases are clear contradictions from the perspective of the table's premises. But the more fundamental defects are the following: (1) Quesnay does not elucidate what value is, and is thus unable to understand how surplus-value is produced, with the outcome being that in the economic table the non-agricultural production sphere involving the "sterile" (unproductive) class is said to not produce any surplus-value at all; (2) Related to this lack of understanding, by only concentrating on the distinction, based on the turnover mode of capital, between "original advances" (fixed capital) and "annual advances" (circulating capital), Quesnay overlooks the more fundamental distinction between constant capital (capital invested in means of production) and variable capital (capital invested to purchase labor-power), and therefore is unable to understand the value of the product of capital in the form of constant capital + variable capital + surplus-value (usually indicated as $c+v+s$). Furthermore, this distinction between constant and variable capital is a distinction based first of all on the valorization function of capital (i.e. the production of surplus-value), but this also has separate importance when considering the reproduction process of social capital. That is, in order for production to be continued on the same scale, the value component of the product of capital that reappears in the value of the constant capital needs to be transformed again into the form of means of production via the circulation process, and therefore represents the demand for the means of production; while the component that reappears in the value of the variable capital needs to be retransformed into labor-power after being realized in the money-form, and through ultimately being exchanged with the working class this forms, along with surplus-value, the demand for the materials of livelihood. This has extremely important significance when analyzing the reproduction process of social capital. But this is not something unconditional. For this, the production spheres that appear in the supply need to be distinguished, in line with the two major categories of demand just mentioned, into: (a) the production department of means of production and (b) the production department of the materials of consumption. (3) In the economic table, however, as already noted, instead of this making distinction, Quesnay

distinguishes between the productive class and the unproductive (“sterile”) class. This distinction is based on his lack of understanding of the production of surplus-value, but even if we look solely at the content of the distinction between the sphere of agriculture and the sphere of industry, this way of dividing the production departments—in a manner unrelated to the distinction of the elements of capital for production and unrelated to the distinction of the value components of the commodity capital provided—is, needless to say, inappropriate to the aim of analyzing the process of reproduction.

This point can be further clarified by comparing Quesnay’s economic table with Marx’s schema of reproduction. Marx discusses the reproduction and circulation of the total social capital in Part three of the second volume of *Capital*, where his schema of reproduction appears. In addition to the mode of simple reproduction, he discusses expanded reproduction, but here I think it is sufficient to only introduce the former, which is as follows:

I $4,000c + 1,000v + 1,000s = 6,000$ (means of production)

II $2,000c + 500v + 500s = 3,000$ (means of consumption)

In the case above, I. represents the department for the production of the means of production, while II. is the department for the production of the materials of consumption, and *c*, *v*, and *s* signify the constant capital, variable capital, and surplus-value, respectively. The rate of constant capital to variable capital (*c/v*) is referred to as the “organic composition of capital,” which differs depending on the level of productive power—although here we will assume that it is 4:1 in both departments. The rate of surplus-value is *s/v*, and its determination is discussed elsewhere, and here it is supposed here that the rate is 100 percent. The money unit could be 10,000 yen, pounds, dollars, etc., and the 4,000 for constant capital in I. is also merely an arbitrary figure chosen for the convenience of calculation. However, once the figure of 4,000 has been chosen, based on the assumptions above, variable capital in I. must be 1,000 so that surplus-value in I. will also be 1,000. The same is true for II. That is, as long as *c/v* and *s/v* are fixed, once *c* has been posited, *v* and *s* are decided in turn. Thus the issue ultimately revolves around the nature of the relation between the two departments. And this is what forms the crux of Marx’s schema, with this relation reducible to: I. (*v*+*s*) = II. *c*. However, since the 4,000*c* in I. is produced in the form of means of production, it is possible without exchange with the other department to use this to renew the worn-out means of production in this department solely through internal exchange; meanwhile, the *v*+*s* in II. is produced in the form of materials of consumption so this can likewise be used for the consumption of workers and capitalists within the department via exchange within the department. Therefore, the needed exchange between the two departments is limited to the exchange between the *v*+*s* in I (value component that needs to be expended on the materials of consumption for input but still exists in the form of the means of production) and the *c* in II (value component that needs to be expended to replenish the means of production but still exists in the form of the means of consumption). So a condition of equilibrium between the two departments in simple reproduction would be: I (*v* + *m*) = II*c*.

The schema of reproduction can be explained in the following manner. Suppose that the value of the product of the total capital of society is 9,000, with the *c/v* and *s/v* as assumed above, and that the total product comprising

6,000c+1,500v+1,500s. In the case of simple reproduction, the 6,000c forms the demand for means of production to replenish those that have been worn out; the total of 3,000 from the 1,500v and 1,500s forms the demand for means of consumption. Therefore, in order for supply to meet demand, of 9,000 value of the total product, 6,000 must be the product of department I and 3,000 the product of department II, so that—if the organic composition of capital and the rate of surplus-value are as assumed above—the schema would have the same figures we began with.

I 4,000c+1,000v 1,000s = 6,000 (means of production)

II 2,000c+500v+500s = 3,000 (means of consumption)

In this case, the equilibrium condition premised is: I. 4,000c+II. 2,000c = I. (4,000c+1,000v+1,000s); I. (1,000v+1,000s) + II. (500v+500s) = II. (2,000c+500v+500s). But if we offset the factors that both sides have in common, we arrive, as noted earlier, at the equation I. (1,000v + 1,000s) = II 2,000c.

The significance of Marx's schema of reproduction is not limited the explanation above, and it was a means of elucidating fundamental problems that political economy had been unable to solve since the time of Smith. But even setting this aside to just consider the elucidation of the relation of equilibrium just explained, we can see what an enormous, essential advance this was over Quesnay's economic table, and therefore what serious defects that table has. Still, it must be considered remarkable that at the outset of the history of political economy Quesnay was able to raise the issue of the reproduction process of the total capital and that he was able to grasp and express this to some extent.

7. Karl Marx, *Marx Engels Collected Works*, vol. 31, pp. 239-40.

8. Karl Marx, *Marx Engels Collected Works*, vol. 30, p. 354.

9. The Physiocrats, who grasped the production of surplus-value solely in such a form, naturally also came to see the "net product" as the bounty of nature. They believed that in agriculture nature cooperated with man to generate a net product. Needless to say, however, the possibility for surplus-value to be produced in agriculture (as in all spheres of production for that matter) is above all premised on productivity beyond a certain level for the agricultural laborers who are involved in the production of the foodstuffs that comprise the key materials of livelihood, and a high level of productive power of agricultural labor depends in large part on nature. If nature is poor so that even after a day's labor a person can only produce enough material things to barely maintain his own life, there is no question from the beginning of producing surplus-value. But, at the same time, even if nature is abundant, so that a person can produce more things than are needed to maintain his own life, if that person enjoys all of the product for himself, this will merely raise his own living conditions and the existence of a "net product" would be impossible. And it is also clear that a "net product" could not exist if this person only worked enough to produce the things needed to maintain his own existence, not laboring beyond this point. In other words, the existence of a "new product" is premised, on the one hand, on the worker's own consumption being restricted to a certain level, and on the other hand to the worker laboring beyond the labor needed to produce his own materials of livelihood. The Physiocrats, when explaining the production of a

new product in agriculture, have clearly premised a minimum wage in the theory of wages as the basis of their explanation, and at the same time they have in fact, implicitly, premised a certain working day. Yet they did not conclude that the net product is brought about by a surplus of labor that is the labor that exceeds the labor-time needed for the reproduction of labor-power. Nor, much less, did they conclude that this surplus labor is coerced through the condition where land, which is the fundamental condition within agriculture, cannot be used unless the cultivator pays rent to the certain class that exclusively owns the land. Instead of concluding this, the Physiocrats say that the use-values consumed by the workers within production are less than the use-values they create, so that there is a surplus of use-values. Instead of focusing attention on the fact that if workers only produced what was necessary for their own lives nothing above this would remain, they only assert that thanks to the productivity of the land a surplus is possible. The Physiocrats view nature as the sole basis for the production of a surplus, without looking at the social relations.

10. For example, in 15th of his “General Maxims for the Economic Government of an Agricultural Kingdom,” Quesnay writes:

“That the land employed in the cultivation of corn should be brought together, as far as possible, into large farms worked by rich husbandmen; for in large agricultural enterprises there is less expenditure required for the upkeep and repair of buildings, and proportionally much less cost and much more net product, than in small ones. A multiplicity of small farmers is detrimental to the population. The population whose position is most assured, and which is most readily available for the different occupations and different kinds of work which divide men into different classes, is that maintained by the net product. All economies profitably made use of in work which can be done with the aid of animals, machines, rivers, etc., bring benefit to the population and the state, because a greater net product procures men a greater reward for other services or other kinds of work.” (*The Economics of Physiocracy*, 1963, p. 235)

And in his explanation of the 26th maxim, he writes the following:

“Nations always believe that they do not have enough men: it is not perceived that there are not enough wages to maintain a larger population, and that men without means are of benefit to a country only to the extent that they receive assured gains there which enable them to live by their work. In the absence of gains or wages, it is true, a section of people in the countryside may generate for their subsistence certain very low-priced products which do not demand large expenses or protracted labor, and which one does not have to wait a long time before gathering in. But these men, these products, and the land on which they are grown, are worth nothing to the state. In order that the land should yield a revenue, work in the countryside must render a net product over and above the wages paid to the workmen, for it is this net product which enables the other classes of men who are necessary in a state to subsist. This should not be expected from poor men who work the land with their hands, or with other insufficient resources; for they can procure subsistence for themselves alone only by giving up the cultivation of corn, which demands too much time, too much labor, and too much expense to

be carried on by men who are destitute of means and reduced to obtaining their food from the land simply by the work of their hands.

“Thus it is not to these poor peasants that you should entrust the cultivation of your land. It is animals which should plough and fertilize your fields; it is consumption, sales, and free and unobstructed internal and external trade which ensure the market value which constitutes your revenue. Thus it is wealthy men whom you should put in charge of the enterprises of agriculture and rural trade, in order to enrich yourselves, to enrich the state, and to enable inexhaustible wealth to be generated.

“The more wealth a nation possesses for the purpose of enabling wealth to be annually regenerated, the less men does this annual reproduction employ, the more net product it yields, and the more men the government has at its disposal for services and public works; and the more wages there are to enable them to subsist, the more useful are these men to the state by virtue of their occupations, and by virtue of their expenditure, which causes their pay to be brought back into circulation.”
(*The Economics of Physiocracy*, 1963, pp. 260-1)