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# Francois Quesnay: Interpreters and Critics Revisited

# By GUSTAV SCHACHTER\*

ABSTRACT. Francois *Ouesnay* is held by many to be the first truly modern economist. In 1750, Quesnay outlined a framework for input-output analysis, perfected by Leontief in 1930's; he developed a general equilibrium theory perfected in the 20th century by Walras and Keynes; and Ouesnay was among the first to analyse economic growth theory as a function of capital accumulation. As the main representative of the Physiocrats he proclaimed the libertarian motto of laissez faire. But his "libertarian ideas" were quite limited to domestic agricultural trade. The Physiocrats were tied with the aristocratic and autocratic "ancien regime" and Quesnay himself did not promote individual freedom and abhorred class struggle. By proclaiming "laissez faire la nature," the physiocrats believed in the natural order of things, with governments enforcing this natural order. In this order, *agriculture* is the source of all wealth and everything else is sterile: agricultural development means economic development. The physiocratic philosophy contributed to the 18th century "enlightenment" from the outside; it was too tied with the past to induce radical changes. The Physiocrats were forerunners of much of the economic theory and tools used today; but the economics system they envisioned was not meant to widen welfare or economic freedom.

#### I

#### Introduction

By THE MID 1700's France had seen the tumultuous rise and quiet decline of a relatively radical movement, formed by the Physiocrats and led by Francois Quesnay (1694–1774). Popular folklore imputes to the Physiocrats the push for freedom and justice for all. The Physiocrats' philosophy was actually far more restrictive; they were still aligned with and did not challenge the absolutism of the ruling aristocracy.

True enough, the Physiocrats, refining mercantilist ideology, were the first to develop a credible theory of economic growth based upon capital accumulation. The Physiocrats, and especially Francois Quesnay through his general equilibrium scheme, were the pioneers in macroeconomic theory, econometrics, and

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input-output analysis. On the other hand, the Physiocrats' avowed belief in free trade and in free markets was quite limited in practice. Quesnay did not promote individual freedom and abhorred class struggle. Indeed, Physiocracy itself was not an isolated event, but rather a by-product of the particular time period when a strong intellectual movement, mostly related to the Encyclopedists, took place.

Π

# Mercantilism, Physiocracy and Natural Law

QUESNAY is best known for his *tableau*, and physiocracy is mostly connected with the 1700's reaction to mercantilism. In France, mercantilism developed in the second part of the sixteenth century under Henry IV. At the very heart of the mercantilist system stood the proposition that nations must strive for a favorable balance of trade in order to increase national treasure. A government must protect its industry by enacting restrictive policies towards outsiders while providing incentives for national entrepreneurs. Mercantilists believed that a country accumulated wealth through its export surplus, arguing that just as individuals amass wealth by adding more gold to their kitty, so do nations. How *all* nations can have a concomitant surplus is never seen as necessary to be explained. [Beer 1966]

The apex of mercantilism occurred under Louis XIV in the 1660's when for a while France, benefitting from a favorable balance of payments and trade, amassed wealth. The war with Holland after 1667 terminated these conditions quickly, the public debt skyrocketed and the standard of living declined. These events paved the way for the rapid and short lived Physiocratic movement which reacted to the "national" mercantilism by offering instead a universalist philosophy. Physiocracy was inspired by Richard Cantillon (1680(?)–1734), whose works were not published until 1755 even though he died in 1734. To be sure, the manuscript *Essai sur la nature du commerce en general* was circulated in the 1730's and seems to have influenced Quesnay. [Schumpeter 1954, p. 217] Cantillon carried the ideas of political economy farther than anyone before him by examining the concept of wealth, its creation and distribution.

But, Quesnay put the final touches on the structure of Physiocracy. This period in the history of economic thought stands out prominently because physiocracy is the first real school of economics. Physiocracy, as a theory of economic behavior, is based on "the natural order of things" and believes in a harmonious existence in which everything is interdependent. In a way, Quesnay was an important figure in the 18th century enlightenment, but, even though he published in the Encyclopedia, he could not be included among the Encyclopedists who were in the forefront of 18th century movement for change. Their fight

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against scholasticism and clericalism was not joined by Quesnay. [Pribram 1983, pp. 101–102] Indeed, Quesnay reformulated the scholastic doctrine of natural law, as expounded by St. Thomas Aquinas in the Middle Ages. Belief in natural law is based upon the proposition that there must be an order in the universe and, if this is so, there must be an order in human societies.

When men violate the laws of the social order, which are equally natural, they destroy themselves; when they conform to the natural order, they secure the greatest benefits. [Bell 1967, p. 108]

Quesnay perceived this order, which he believed was necessary for a modern society to function properly, from utilitarian, atomistic and harmonic perspectives. Quesnay, accepting the "law of nature" (*droit naturel*), was in search of a structure of the society that would respect this law. [Gray 1963, p. 85]

Societies are formed for the advantages of their members. Each individual is equally involved because each one strives to increase his welfare with the least effort (labor). This assertion precedes Adam Smith's theory of the "economic man" and the "atomistic principle," which envisions the welfare of a society as the sum of the welfare of all individuals. [Gray pp. 100–1] Laws must not change this "natural order" but enforce it by protecting individual rights and regulating interactions in a society.

It appears that Quesnay was in search of the "perfect society," which makes him resemble later utopians. However, his economic analysis was quite practical. His social views might have been clouded because of his allegiance to the royal court and because (thanks to his patron, Madame de Pompadour) he was eventually recognized as a member of the establishment. His social philosophy remains tied to the "old order" with no clear concept of a government based on a vague idea of "liberty." His acceptance of *laissez-faire* did not echo the sentiments of his contemporaries who struggled against absolutism and clericalism; Quesnay advocated free trade just for agricultural products, but did not preach libertarian ideas.

#### IV

# Laissez Faire in an Agricultural System

THE PHILOSOPHY OF *laissez-faire* was proposed before the development of Physiocracy and it inspired Quesnay to develop the idea of free trade. Because of Quesnay's emphasis on achieving higher prices for agricultural products, his "liberalism" could be questioned. Indeed, Quesnay's free trade argument was based upon an agricultural system; it was the cornerstone of his analysis. Agriculture, he contended, was the only source of wealth.

Wealth, in Quesnay's eyes, consisted of goods that satisfy human needs. The satisfaction of need is a measurement of wealth. Needs are satisfied by natural

goods: food, shelter and clothing. Goods are turned into wealth by the degree of need, demand and utility. Raw materials are the most needed of all goods because they are the basis of everything that is sold as either a consumer good or as an input in manufacturing.

In a counterposition of modern "base theory," Quesnay believed that when a country exported its raw materials, because of increased income from abroad, domestic production of manufactured goods would naturally follow. To be sure, foreign trade is deemphasized by Physiocrats. While the Physiocrats proclaimed free trade as a philosophical principle, they believed that foreign trade is sterile since the same values are exchanged, therefore only *domestic* (agricultural) production can increase wealth. [Grav 1963, pp. 97–98] The Physiocrats "were Free Traders primarily because they desired the freedom of domestic trade . . .''. [Gide and Rist 1948, p. 47] Ouesnay believed, along with others writing in the first half of the 18th century, that agriculture was the source of all wealth because he felt that real value emanates only from natural resources. France was still exporting luxuries and good farm land was being used for growing mulberry trees for silk. According to Quesnay's doctrine exactly the opposite was needed, that is, luxuries and specialized goods should be imported. Also, the Physiocrats begrudgingly admitted "that some foreign trade in raw materials was a necessary evil." [Bell 1967, p. 110]

Large farms would increase efficiency, induce a rise in population and economic activity. The Physiocrats viewed France of the 1700's as a poor, underdeveloped country (compared with England of the time). They attributed these conditions to a lack of capital for farmers, because of low profits. Instead, Physiocrats argued that public policies should be directed to induce free trade in agriculture, that ". . . will greatly reduce the power of merchants in the sphere of circulation of commodities. The farmers should be able to sell their products directly to the consumers . . .". [Vaggi 1985, p. 933]

The Physiocrats viewed land as the only source of real wealth. In this sense, they go further than the "just price" accepted in the Middle Ages that allowed a return for an increase in value of a good (value added). Therefore, Quesnay categorized society into three classes: 1) the productive class 2) the proprietors and 3) the sterile class. The productive class comprised the farmers, the proprietors class comprised the rent receiving landowners, and the sterile class comprised those engaged in manufacturing (artisans and tradespeople) and commerce. Quesnay seems plagued by sophistry when he wanted to demonstrate that industrial workers and artisans are as sterile as merchants. [Gray, p. 92]

The sterile class did not contribute to wealth because their manufacture did not produce a profit. The gains of this class were made by exploiting the farmers by not paying them the real value of their products. The only value that the

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sterile class added to the good was the cost of materials and their own subsistence, the price of their labor. This class took the raw material and merely changed its shape and reassembled it, not adding anything to its value. The income of the sterile class served only to take away from the productivity of the soil thereby decreasing the wealth of the nation. [Pribram 1983]

# V

# The Tableau

THIS PHILOSOPHY is incorporated in Quesnay's *Tableau Economique* in a most striking analytical fashion for those times. Indeed, even then the *tableau* was considered by many to be "the most penetrating piece of economic thinking to date; and Mirabeau the elder, went even so far as to categorize it with the invention of writing and of money as one of the most important discoveries of the human mind." [Roll 1956, p. 137] Schumpeter believed that the "*tableau* was the first method ever devised in order to convey an *explicit* conception of the nature of economic equilibrium." [Schumpeter 1954, p. 242] On the other hand, the *tableau* found many detractors who considered it a quaint way of presenting national economic interrelationships "and a literary curiosity." [Bell, p. 125] Yet, one must recognize the contribution of the *Tableau Economique* to the development of national income analysis, quantitative methodology, and the conceptualization of the general equilibrium theory.

To be sure, Sir William Petty (1623–1687) gave the first impulse to the use of quantitative analysis and national accounts in economic analysis. He felt that argumentation alone was not enough. To him, one needed empirical proofs based on "numbers, weights or measures". Most economists believe that he is the founder of statistics. While Adam Smith was not impressed with Petty's quantitative approach to economics, Cantillon and Quesnay adopted it, expanded it and refined it. Cantillon believed that the basis of any science must be numerical. Yet, while Cantillon presented a circular flow to demonstrate the economic process, he failed to organize it in a systematic table as Quesnay finally did. [Schumpeter 1954, pp. 217–8]

The *Tableau Economique* is the tool devised by Quesnay to "quantitatively" indicate how the productive process flow creates a "gross national product" that is distributed to various classes: landowners, farmers and the sterile (non-producing) classes. This mechanistic theory evolves around agricultural production and return to land. The distinction made between land and capital is subtle. The Physiocrats treat "the return to land as comparable with the rate of return (to) capital." [Bell 1967, p. 119] Land alone (no capital or labor) can create a surplus. But, the net product that is paid to the landlord is "basically a return

to capital and not labor, and it varies with the capital intensity of agriculture." [Eltis 1975, p. 178]. Indeed, it appears that the entire process of development (that is, the increase of net product in agriculture) is based on capital accumulation; [Brewer 1987, pp. 426] and since the net product originates with farmers, then the farmers have to become rich. [Vaggi 1987, p. 933] The *tableau* aims at showing a circular flow where the equilibrium is achieved normatively by a multiplier of two, with the assumption that agricultural output is twice the agricultural input. The *tableau*, with regard to agricultural inputs and outputs, makes it conditional to have a stationary state equilibrium, otherwise the circular flow will be disturbed and unable to show continuous reproduction. [Eltis 1975, pp. 187–197] The dangers of not following this path induce economic decline.

The Tableau is based upon an assumption that each group will spend one half of what it receives upon the other two groups. Should they not spend this amount, then the net disposable income for all would decline. If they expended more than one half, the proper shares would not be returned to perpetuate production. The former would make for a progressive decrease in the wealth of the state, and the latter would seriously menace it. The exact balance of expenditures was absolutely necessary. [Bell 1967, p. 112]

Similar to a modern input-output table, the *tableau* illustrates in a succinct fashion the flow of expenditures and production, but—differently than in inputoutput—the flows do not run among sectors but among classes. In minute detail and using many dotted zigzagging lines, Quesnay calculates the flow of money between classes for a year. For ease in understanding the table, Quesnay assumed a perfect socioeconomic system, that is, a ". . . kingdom in a flourishing state of cultivation, where the reproductive expenses yield the same income from year to year, . . . one hundred percent profit . . .". [Quesnay 1970, p. 22–23]<sup>1</sup>

While the *tableau* reflects scholastic (and deterministic) bias in terms of prices and Quesnay's antagonism to merchants [Blough, pp. 29–30], "the background of the *tableau* was provided by the idea of distributive justice which was given a mathematical formulation." [Pribram 1983, p. 106] Vaggi attempts to demonstrate that in Quesnay's analysis with relative constant prices the share of farmers' profits would increase at the expense of workers' wages, assuming that wealthy farmers could purchase equipment for cultivation.<sup>2</sup> This will allow for economic development, if capital accumulation is on the side of the farmers rather than that of the merchants, but this process of accumulation and income redistribution could lead to class conflict. [Vaggi, pp. 941–5]

While the *tableau* is the first attempt ever to analyse distribution, it is doubtful that Quesnay's advocated public policies could have achieved an efficient and/ or equitable income redistribution or whether this sort of equity would have accelerated the process of development in France. [Gide and Rist 1948, p. 37] Even though public policies would favor agriculture, the class struggle between

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cultivators (productive class) and landlords (proprietors) would remain or even increase. Under the Ancien Regime institutional system, the landed aristocracy had political supremacy. "Income" did not necessarily go to investment in agriculture but rather to debauchery and war, therefore productivity via capital accumulation could not increase and the productive class remained poor. Some of the roots of the French Revolution could be found in these circumstances.

There is a great similarity between Karl Marx's labor theory of value and Cantillon-Quesnay's land theory of value. Marx claimed that the Physiocrats were the first to discuss "surplus value" when they conceptualize the "unearned increment" as the returns of the "sterile class." [Marx, 1905] Yet, Blough does not see the Physiocrats' single tax to be a tax on "the unearned increment" but "a species of land value taxation in the form of a levy on pure rent, which Quesnay estimated to be about one third of the 'net product'." [Blough 1985, p. 28] The very hypothesis of "net product" advocates that only this net product can be taxed and Quesnay attempts to demonstrate that all other taxes would harm rather than benefit the farmers. [Gray 1963, pp. 98-99] This is not very different from the analysis of Gide and Rist who maintain that "the net product was just an illusion. The essence of production is not the creation of matter, but the accretion of value" (1948, p. 35). Indeed, Ouesnay stated that land owners should pay taxes on the rent they get for the use of their land. He argued that the *taille* (an agricultural tax) should come from rent because rent is above and beyond the costs of production. This seems to have influenced Henry George. a century later. "In the single tax advocated by Henry George we have a curious revival of the Physiocrats' *impot unique*." [Gide and Rist 1948, p. 591]<sup>3</sup>

Being a normative deterministic tool, the *tableau* calls for a series of rigidities in terms of circular flow that allows for ambiguities and misinterpretations by 18th century "philosophers" and, later on, economists. It is obvious that once no other source of wealth besides agriculture is recognized, such a system produces many inconsistencies in terms of payments to factors (workers), return to investments (land, landlords), and the particular call for capital accumulation. [McCulloch 1967, p. 435]

The conceptual reassurance on economic development, capital accumulation, net product, income (or class) distribution and taxation were not as maturely and rigorously put forward as the basis for the type of economic analysis with which we are accustomed today. Quesnay's *tableau* is not convincing in demonstrating the net product of agriculture and the sterility of manufacturing. He is hard put to show how the sterile sector acquires its capital, or how rents are not reduced to zero through competition among farmers for workers and other inputs. It is the unexplained that creates ambiguities and criticism. [Blough 1985, p. 28]

Yet, through the *tableau* Quesnay advanced concepts that were finally incorporated into macroeconomic theory over the following two hundred years. First, he succeeded in simplifying an economy composed of millions of interactions to a readily revealed system. The *tableau* indicates how production is put together and how it is then allocated to the various parts of the economy (not very different from modern input-output tables). Secondly, he went further than Cantillon in econometric analysis by initiating input-output techniques that Leontief eventually perfected. Quesnay used numerical behavior analysis in a rudimentary form but he furnishes a solid basis for quantitative inquiry. Finally, Quesnay preceded Walras and Keynes by identifying ". . . general equilibrium, that is equilibrium in the economy as a whole in contrast to the equilibrium in any particular small sector of it, with the equilibrium of social aggregates—exactly as do the modern Keynesians." [Schumpeter 1954, p. 243]

Philips (1955), Meek (1962) and Barna (1975) attempted to reinterpret the Tableau Economiaue within the framework of Leontief's input-output system. While Leontief's input-output table shows the economy as its condition is (a "positive" statement), Quesnay in his tableau makes a normative statement, ". . . the *tableau* was intended to describe the French economy not as it actually was but in an idealized state." [Barna 1975, p. 487] Barna succeeds in reconstructing Quesnay's *tableau* in Leontevian terms in a 9 by 9 matrix of outlay flows. Quesnay's table could be solved by a system of simultaneous equations or by an iterative process. Leontief was the first to apply linear equations to the system. [Leontief 1951] Ouesnay relied on an iterative process, difficult, but possible to follow. To show how resources move for productive endeavors, Ouesnay developed a model that describes economic flows similar to the cardiovascular movement. Quesnay, a physician, constructed a simile in the tableau to present the macroeconomy. This was a rudimentary exercise because only with the development of sophisticated computational hardware and software did such a technique come to fruition in the 1930's, thanks to Leontief's breakthrough. Today, the input-output technique is at the heart of macroanalysis for public policy and planning, and often for business planning decisions.

# VI

#### Conclusions

WHILE THE PHYSIOCRATIC MOVEMENT was short-lived, its influence on economic analysis is still felt two centuries later. The brevity of its preeminence is due mostly to the continuing ties to the past. Rogin sees the rapid demise of Physiocracy in its adherence to despotism and the undemocratic character of their agricultural system. "This is why the Physiocrats' major contributions to the analysis of the circulatory economic system had to wait for Keynes to become respectable." [Rogin 1956, p. 49]

The 1700's signaled the changeover from feudalism to the world we have today. The intellectual sparkling of this period was a reflection of the century and it, in turn, shaped the century to a new understanding of the economic order of things in terms of capitalism. While classical economics developed at the close of the century in England where capitalism matured faster, the interaction between a strong willed intelligentsia and the public powers brewed and perhaps never settled its ferment in France.

The *tableau* was the cornerstone of the Physiocrats both conceptually and analytically. It demonstrated how the economy interacts and flows circularly to maintain stability and higher welfare regardless of how this is defined. It provided the basis to what Marx, Walras, Keynes, Leontief would perfect in the decades to come.

The Physiocratic movement, narrow in scope, continually tested the waters and debated a world to be; yet that world still was not in their grasp. They could not shake off the aristocratic and autocratic shroud of the old regime. The Physiocrats contributed to what was known as the Enlightenment but remained outsiders. This period witnessed the most intense philosophical debate with everlasting influence on the cultural development of the West. Quesnay lived through this period even though his contributions to economics were made and known only after 1750.

Quesnay's contribution to macroeconomics could be singled out, but he preceded Smith and Marx in the realization that in order to break the stasis of a feudal society (the pre-revolution feudal French system), it is necessary to have capital accumulation in agriculture. While at times muddled, he had a good understanding of the process of development. While the circular interaction among classes is the cornerstone of his theory, he never came to grips with the class struggle that would eventually wipe out the very system he wanted to change.

Thus, Quesnay was the first economist, but he was not a radical. Indeed, he exemplified the "conventional wisdom" of a decaying society that was threatened by the radicalism of the Encyclopedists. He was as much the exponent of a feudal agricultural system as Smith was the exponent of the English merchants. While the Physiocrats advanced the tools of economic analysis, they did not offer a blueprint for economic freedom.

# Notes

1. The 1970 edition is a faithful copy of the English edition published in London by W. Owen in 1766.

2. However, the definition and the role of employers' profits were muddled by Physiocrats. On the one hand they were considered to be part of production costs (the same as wages for

workers), but they could not explain profits as a payment to the "sterile" class. "The substantial profits which nevertheless accrued were attributed by the Physiocrats to the existence of monopolies and similar privileged economic positions." [Pribram 1983, p. 109]

3. See a most interesting correspondence between Turgot and Hume in 1766–1767. [Turgot 1770] The Physiocrats did contribute to France's national consolidation by effectively fighting against internal trade barriers such as local and provincial taxes and, under his brief tenure as Minister of Finance, Turgot, a recognized Physiocrat, established freedom of internal grain trade, substituted the *corvée* on roads by hired labor paid from general taxes levied on *all* groups alike, and abolished the *jurandes*, crafts corporation. [Bell 1967, p. 117]

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