judge from the historical context and the implications of their writing, the mercantilists were as a rule thinking in terms of short-run effects and the classical school in terms of long-run effects. Appraisal by economists of the comparative analytical merits of the mercantilists and their classical school critics should therefore give careful consideration to the distinction between short-run and long-run analysis, if they regard this, as does the writer, as a crucial distinction.

The classical school doctrine with respect to international trade became dominant for a while in England and obtained a wide degree of qualified acceptance elsewhere. There followed in England over half a century of approximately complete free trade, and elsewhere it led to a substantial liberalization of foreign trade policy. The restrictions on foreign trade which continued to be imposed were supported on grounds which were largely non-mercantilist in character; they were often designed, in fact, to protect agriculture rather than manufactures. Survival into the present of mercantilist doctrine and practice is by no means rare. There are, however, important differences between mercantilist doctrine and the doctrines by which present-day state regulation of foreign trade are mainly supported, and major differences also in the respective patterns and techniques of regulation. As far as scholars are concerned, support of mercantilism as it operated in its prime, based on express acceptance of its objectives, its doctrine, and the appropriateness of its practices to its doctrine, seems today to be confined to a minority, mostly economic historians. The analytical grounds on which mercantilism has been supported or criticized are in both cases sometimes of very disputable merit. Where policy is concerned, final appraisal, here, as generally in the social sciences, needs to deal expressly, as it often fails to do, with political, ethical, and socioeconomic values, as well as with the abstract logic of relations between actual and supposed matters of fact. It needs to call, therefore, on the resources of all the major social disciplines.

## PHYSIOCRATIC THOUGHT

"Physiocrats" denotes the économistes, those who subscribed to the tenets of physiocratie (derived from physeikratia) and

advocated governance of economic and political activity "in keeping with the laws implanted in Nature by Providence." Constituting the first "school" of political economy to emerge in the history of that science, they exercised considerable influence, mainly in France, where most lived, in the 1760s and early 1770s.

The climate of opinion in France in the 1750s was favourable to the ascendancy of a promise-laden set of principles such as the physiocrats put forward. The country's main industry, agriculture, was poorly carried on and generally in a bad way. Its system of taxation was vexatious, burdensome, and wasteful. Mercantilist policy and practice interfered with internal and external trade, retarded agriculture, and sustained privilege. It was believed in some quarters that adverse economic policies had brought about a diminution in population. Early in the century and again in the 1740s a number of works had appeared in which French agricultural and commercial policies were criticized and the country's economic experience was contrasted unfavourably with that of a progressive England. The merits of economic freedom and competition, though still poorly understood, had come to be appreciated by some administrators. Economic analysis was improving under the stimulus of such authors as Hume and Cantillon.

The beginning of the school may be dated as 1756, when Frangois Quesnay published in the *Encyclopedic* his first economic article, "Fermiers," to be followed in 1757 by "Grains," in which the partially transitory influence of Cantillon's "rent" theory is present; these essays foreshadowed much of what was to become the school's body of principles. The formation of the school was facilitated by Quesnay's enjoyment of the patronage of Mme. de Pompadour and the sinecure of physician-in-ordinary to Louis xv. In 1757 the already famous Victor Riqueti, marquis de Mirabeau, author of the popular *L'ami des hommes, ou traité de la population* (1756–1760), after an interview with Quesnay at his *entresol* at the Palace of Versailles, became his first disciple and shortly his most enthusiastic and energetic co-worker.

The fundamental principles of the school were first set

down in the Tableau économique, of which three "editions seem to have been issued in 1758-1759, the last accompanied by explanations and maxims. Most of the later editions of the Tableau illustrated the advantages of compliance with physiocratie principles. By the middle 1760s Quesnay had acquired a number of faithful disciples, attracted by his and Mirabeau's writings, by discussions at their lodgings, and by the belief that in their principles might be found solutions for some of the nation's economic ills. Outstanding among these were Nicolas Baudeau, Pierre Paul Mercier de la Rivière, Guillaume François Le Trosne, Pierre Samuel Du Pont de Nemours, and Anne Robert Jacques Turgot, who subscribed to many, but not all, the tenets of the school. They, along with lesser members of the school, produced a stream of publications that popularized and clarified Quesnay's economic views, at first without modifying their fundamental content significantly. In time, however, some of Quesnay's disciples found themselves under pressure to make certain physiocratie economic tenets more compatible with current reality and to develop a doctrine of judicial control to balance that of legal despotism and thereby preserve the social order.

The intellectual influence of the physiocrats, great in the 1760s, underwent a rapid decline after 1770. A combination of circumstances generated political and intellectual opposition. Many special interest groups believed that they would be disadvantaged economically by physiocratic policies, among them tax farmers, financiers, manufacturers, landowners, possessors of exclusive privileges, and those who feared an increase in the price of bread. Turgot, who had risen to the office of comptroller-general, was relieved of his office in 1776, not long after he had introduced a number of physiocratie reforms; nearly all of these were suspended, and the remaining physiocratie journal was suppressed. The tenets and recommendations of the physiocrats were subjected to attack by both economic writers (e.g., Forbonnais, Galiani, Graslin, Mably) and non-economists (e.g., Linguet, Necker, Voltaire). The residual authority of these tenets was gradually undermined by Smith's Wealth of Nations, which appeared in 1776, two years after Quesnay's death and eight years after he stopped writing on economic matters.

Interest in physiocracy did not completely disappear. Traces of it remain in early nineteenth-century economic literature. Physiocratic concerns continued to stimulate discussion, and some physiocratic reforms were finally introduced during the French Revolution. Physiocracy exercised some influence throughout Europe, particularly in Austria, Baden, Poland, Sweden, and Tuscany.

## Presuppositions and Theories

The physiocratic presuppositions and theories were largely imbedded in physiocratic models, the famous Tableaux économiques. Underlying the self-sustaining interclass flow of money, goods, and services incorporated in the idealized tableaux was a class structure more advanced than that then found in France. In the structure of the tableaux, the largest of the three classes, the productive, comprising one-half the population, engaged in agriculture, fishing, and mining. The proprietary class, made up of landed proprietors and those supported by proprietary income, comprised one-fourth the population, as did the sterile, or artisan, class, which included the balance of the population. In time, France's class structure presumably would correspond to this ideal; for the physiocrats, especially Turgot, were alert to evolutionary forces which, having generated the existing structure, could also generate its successor.

Aggregate national interclass flow of product and income was summarized in the Tableau. The productive class produced 5,000 million livres of output; it did this with the aid of land rented from the proprietors, an investment of 2,000 million livres avarices annuelles in seeding, cultivation, etc., and a longer-period past investment of 10,000 million livres avarices primitives in durable instruments, animals, etc., of which one-tenth was annually replaced. For expositive convenience, constant returns were assumed, with an increment of two units avarices annuelles always resulting in an increment of five units in output. It was recognized that the response of output to increased avances annuelles was conditioned by the state both of avances primitives and of avances fondères (i.e., relatively permanent investments in buildings, clearing, drainage, etc.) made by proprietors in the past. Only Turgot

discussed increasing and decreasing returns to inputs, but a quite different connection. Of the 5,000 million livres annual reproduction, or output, 3,000 million constitute reprises, or the return of expenses incurred by land-renting fermiers, 2,000 million in the form of avances annuelles an 1,000 million as outlay upon the maintenance of the avance primitives. The remaining 2,000 million represented the ne product, the approximate monetary equivalent of which passes to the proprietors from the farmers who cultivated the land under a competitively determined lease that normally stipulated an annual rent of approximately the anticipated net product, this money was in effect used by the proprietors to purchase 1,000 million livres of produce from the productive class and of output from the sterile class. The sterile class got from the productive class 2,000 million livres of produce, which it consumed or worked up into wrought goods and services for the other two classes and its own needs. It utilized little or no fixed capital and replaced its working capital in the current production period; for this reason Turgot compared its advances to the avances annuelles of the productive class.

Underlying the Tableau is the school's key postulate, that only the productive class cultivating the land produced a net product, whereas the sterile class merely recovered its outlay and the proprietary class, being disposable (i.e., not being actively involved in the continuation of the circular economic flow), could serve essentially public purposes. Expansion of the economy and the population therefore depended upon expansion of the expenditure of the productive class and the resultant expansion of the net product; hence the composition of expenditure was as important as its growth and stability. The physiocrats therefore condemned luxe de décoration, or excessive expenditure with the sterile class, but not luxe de subsistance, or heavy expenditure with the productive class; for usually diversion of expenditure from the productive class to the sterile class reduced the net expenditure of the former and thereby reduced the net product, and conversely. They also condemned man-made restrictions upon the sale of produce (among them duties and other barriers to internal and external trade in farm products); hoarding; the outflow of funds to foreign lands; and diversion of money

into circuits that did not enter into agricultural markets. Some of these restrictions, they believed, had their origin in tax farming, flotation of government loans, monopolies and special privileges, and the absence of a regime of economic liberty. They noted that the demand for produce tended to rise as its quality improved and as the incomes of the masses rose above bare subsistence; and they sought to show that if produce commanded a bon prix, agricultural income, net product, and the economic condition of the population inclusive of the masses would improve.

The physiocrats' theory of taxation and such theory as they had of factor pricing and distribution were corollary to their postulate that only the product of land included a surplus. All taxes therefore were ultimately incident upon the net product. From this it followed that this surplus should be taxed immediately; then the cost of collecting revenue for the support of the state, together with the adverse side effects of taxation, would be minimized. Not more than the completely disposable one-third of the net product should be devoted to state and church functions, among them avances souveraines for public capital; otherwise, investment in agriculture would be too little. The proprietors needed to invest about one-third of their rent (i.e., net product) in the repair and improvement of their property and to retain another third as compensation for avances foncières and the bearing of the risks and cares associated with ownership. Only the gross income of the productive class included a surplus. While the current price of labour might temporarily exceed its fundamental (or longrun supply) price, much as the current price of a product might temporarily exceed its fundamental price, the price of labour did not normally include a surplus; it corresponded to the conceivably upward-elastic subsistence and other costs of population replacement.

Although Quesnay's scheme could not with consistency allow the farmer's income (or that of other entrepreneurs) to include a profit or surplus, his followers tried inadequately to explain away what appeared to be such a surplus, and Turgot went so far as to include a normal return on capital in "fundamental" price. Quesnay and some of his followers tried