

THE PHYSIOCRATS' CONCEPT OF ECONOMICS

SUMMARY

Introduction, 532. — I. The nature and scope of physiocracy: a normative and mathematical science based on "natural law," 534. — II. The theory of innate economic ideas, 538. — III. A mathematically exact science deduced from first principles, 540. — IV. Quesnay's own view of the new science, 544. — V. Quesnay's use of the inductive method and of mathematics, 549. — VI. The gulf between Quesnay and his disciples, 551.

Historians of economic thought generally hold that the Physiocrats were founders of "the first strictly scientific system of economics."¹ There was economic thought before the Physiocrats, to be sure, but this previous thought consisted of scattered theories, like Gresham's law, and it was generally treated as part of ethics or of politics. Such subordination of economic thought to ethics is only to have been expected in a medieval and early modern society which looked upon social activity as moral and therefore subject to the ethical teaching of the Christian churches. It was likewise natural that economic thought be considered a branch of politics in the sixteenth and seventeenth centuries when the absolute state had established itself in European society and succeeded in embracing or controlling most facets of human activity.

In the mid-eighteenth century, however, in that period known as the "Age of Enlightenment," there occurred an intellectual revolution which was directed against the traditional control of both Church and State over social activity. And out of that revolution there seemed to emerge a new science. Such, at least, was the pronouncement of an anonymous Physiocrat who wrote that "economic science has at last penetrated the sanctuary of the Muses . . . First because of the importance of its object, in the chronological order it is the last human branch of knowledge to be discovered."² This seems to have been the general opinion of men of the Enlightenment. The gossiping Baron Grimm, for example, wrote from Paris to his German subscribers that "political economy has become *la science à la mode* in

1. The phrase is Auguste Oncken's. See his compilation, *Oeuvres économiques et philosophiques de F. Quesnay* (Paris, 1888), ix. It is a statement that is as universally agreed to as any broad generalization in the history of economic theory.

2. "De l'utilité des discussions économiques," in *Physiocratie* (Paris, 1768), IV, 3. *Physiocratie* is a six volume collection of essential physiocratic writings made by Pierre-Samuel Dupont. Authorship of the individual articles is not indicated in the collection.

France," and he complained that "a sect [the Physiocrats] wishes to dominate this science."³

Certainly the Physiocrats believed that they had created a new science.⁴ They thought not only that their leader, François Quesnay, had discovered it but also that he had developed all the essential truths it could properly contain. Mirabeau considered Quesnay's *Tableau économique* one of the world's three great discoveries — equalled only by the invention of printing and the discovery of money.⁵ The Physiocrats were all content to sit at the feet of their master who, like Confucius,⁶ was the oracle who possessed the truth in all its fullness. For them physiocracy was a new discovery which, like Minerva springing from the head of Zeus, was born full-blown, completely developed. The Physiocrats thought, therefore, that their appointed task was to explain and popularize the truths discovered by Quesnay. None of the followers thought that they, themselves, had anything original or personal to contribute to the development of economic theory. The first ensemble of physiocratic doctrine, Mirabeau's *Philosophie rurale*, was built around Quesnay's *Tableau économique* with the express purpose of popularizing it.⁷ Mirabeau wrote at Quesnay's suggestion, to some extent under his supervision, and he included at least one chapter written by Quesnay himself. In like manner, Le Mercier's *L'Ordre naturel et essentiel des sociétés politiques*, which turned out to be the classic presentation of physiocratic theory, was written in Quesnay's apartment, under his direction, and with the purpose of presenting the doctor's theories in systematic, orderly fashion.⁸

3. *Correspondance litteraire, philosophique et critique* (Paris, 1813), Pt. I, Vol. V (February 1766), 480.

4. The best source of information on the Physiocrats and their contemporaries is Dupont's "Notice abrégée des différents écrits modernes qui ont concouru en France à former la science de l'économie politique," published in eight numbers of the physiocratic journal, *Éphémérides du citoyen*, in 1769.

5. Cited by Louis de Lomenie, *Les Mirabeau: Nouvelles études sur la société française au XVIII^e siècle* (Paris, 1879), II, 311.

6. Quesnay was likened to Confucius, Socrates, Zeno and other such intellectual giants whose teaching was enthusiastically received by their disciples, who in turn became missionaries of the great man's gospel.

7. Mirabeau's book, published in 1763, was a miserable failure. It did not offer the age the brilliant phraseology and the cystral-clear arrangement of ideas then in vogue. It was because of Mirabeau's failure that Quesnay looked to Le Mercier for a successful popularization of his ideas.

8. Contemporaries, both the Physiocrats and their opponents, all looked upon Le Mercier's book as the definitive statement of physiocratic doctrine. Dupont called it a "sublime book" in which the "truths discovered by Dr. Quesnay are so superiorly and so clearly developed." (*Physiocratie*, III, 15.) Adam Smith believed it was the "most distinct and best connected account of this [physiocratic] doctrine." (*Wealth of Nations*, Bk. IV, Chapter IX.)

So the Physiocrats considered themselves a "school" of theorists who differed from each other on no important doctrine. This was an age when "sects" and "systems" had fallen into intellectual disrepute, and the Physiocrats had to face the charge of blindly following a man "who had thought only of the operations of surgery and the rules of medicine, to which he added for his amusement a confused metaphysics,"⁹ But they were willing to face the charge because they were convinced of the correctness of Quesnay's doctrine — and because they thought all intelligent persons would some day come to agree with them in accepting it. Dupont tried to parry the accusation that the Physiocrats were a "sect" with countercharges which evaded the point at issue.

And now a word to the severe enemies of *sects*. If those who regard all men as their brothers, who occupy themselves peacefully and incessantly with developing their interests, their duties and their rights, who show that there are sacred and supreme natural laws, the notion of which is evident to all who reflect on it and the sanction of which is visible, pressing, imperious and inevitable, . . . if such a group is called a sect who prove methodically all these things by calculation and by measure, then we well deserve to be hated, decried and persecuted by the wicked, by violaters of the rights of others, by breakers of the natural law, by arbitrary despots and tyrants.¹

Le Trosne handled the question better by admitting frankly that the Physiocrats "form a sect, if it suffices for this [designation] to have the same opinions, the same language, to be perfectly in accord on all points, to recognize a single master."² Both the Physiocrats and their opponents, then, considered the group a small school of men sitting at the feet of a single master, men whose function was to popularize the master's thought and thus bring the blessing of the new science to the entire world, a group, therefore, in which there could be no disagreement on important points of doctrine, for Quesnay's writings were the "inspired word" to which they all looked for ultimate truth.

I

What did the Physiocrats think of this wonderful new science? What was its object? Its nature? Its method? What was it to embrace? How was it to discover all facets of social truth? What,

9. Abbé Gabriel Bonnet de Mably, "Du commerce des grains," *Collection complète des oeuvres de l'abbé de Mably* (Paris, 1794-95), XIII, 295.

1. From the *Éphémérides du citoyen* of 1769, the official physiocratic journal edited by Dupont. The selection is found in Eugène Daire (ed.), *Physiocrates* (Paris, 1846), 315-316. Daire's collection of physiocratic writings remains the most complete in any language.

2. *De l'ordre social* (Paris, 1777), 312.

if anything, was to be put aside as foreign to itself and properly the object of another science? These are questions the Physiocrats had to answer for themselves in an age of rationalism so that their new science could obtain a recognized and clearly defined position. The answers they formulated are of some importance in the history of economic theory, for it is partly upon their answers to these questions that the Physiocrats are to be considered either the first contemporary economists or the last of the earlier modern economists.

Writing, as they did, in an age of intellectual confusion,³ the Physiocrats did not have as clear-cut a picture of the scope and the object of economics as did their successors of the early nineteenth century. In the first place, they did not cut entirely free from the older concepts which put economics down as a branch of ethics or of politics. They called themselves *philosophes économistes*, and they looked upon their new science as a social philosophy including economic, political, ethical, and social activity. It was a normative social science, apparently, for it was based on natural law, as the word *physiocratie* indicates. Baudeau significantly entitled the work in which he tried to sum up physiocracy *Introduction à la philosophie économique*, and he concluded this work by stating, "*Voilà le droit naturel et la philosophie morale*," a science which is to be perfected by "*l'instruction morale économique*, that is to say, instruction in the natural law of justice in its essence."⁴

The Physiocrats bound their new science tightly to "natural law," sometimes making it a part of the laws of nature,⁵ sometimes identifying the two. Dupont states, for example, that "with a little reflection one can see with certitude that the sovereign laws of nature include the essential principles of the economic order."⁶ Again, he writes to J.-B. Say that economics "is the science of natural law, applied, as

3. It is important that one remember how confusing things intellectual were in this age when almost every thinker tried, above all, to bring order to his subject. It is an age when Cartesian rationalism, long accepted by advanced thinkers, has fallen into decline. Cartesianism becomes the officially accepted philosophy of the Sorbonne, however, only in this age, replacing the even more decadent scholasticism. Empiricism, imported from England, had come to be accepted by the more daring thinkers by 1775. Romanticism, meanwhile, was beginning to undermine any form of rationalism. It should also be remembered that these methods and these systems were not mutually exclusive in all respects. It is difficult, therefore, to find any one thinker who uses one system and belongs to one school exclusively.

4. Daire, *op. cit.*, 819-820.

5. The younger Physiocrats are not consistent in differentiating between "natural law" as a moral law and "law of nature" as a Newtonian physical law. The two concepts have merged in their minds, as we shall indicate later in this article, and it is only occasionally that they distinguish them from each other.

6. In Oncken, *op. cit.*, 362.

it should be, to civilized society."⁷ This same definition is offered by the author of the article *De l'utilité des discussions économiques* when he states that economics is "nothing but the application of the natural order to the government of society."⁸

Although Quesnay makes no specific statements on the nature or the scope of economics, the younger Physiocrats thought their definitions were implied in his writings and were derived from his conversations.⁹ In his *Despotisme de la Chine*, which was the closest Quesnay ever came to arranging his physiocratic teachings into a unified piece, he tells how in that ideal country of China "ethics and politics form a single science."¹ This science is the model for his own physiocracy. Quesnay goes on to tell how the Chinese U-King, apparently a combination constitution and bible, governs all man's social and religious conduct.

These sacred books [of U-King] include a complete ensemble of religion and the government of the empire, of civil and political laws; both are dictated irrevocably by the natural law, the study of which is very searching and is, indeed, the capital object of the sovereign and the scholars charged with the details of administration.²

So the new science, which is based on natural law, is wide in scope. Apparently it is to include all social conduct, all of man's dealing with man. This was held as late as 1815 when Dupont condemned Say for restricting economics to the "science of wealth, which is only a collection of calculations."³ "You see, my dear Say," Dupont went on, "that our science is very extensive, that it includes a great number of objects. Why do you restrain yourself to that of wealth? . . . Your genius is vast. Do not imprison it in the ideas and the language of the English. . . . Economics is the science of enlightened justice in all its domestic and foreign social relations."⁴ In 1777, when the physiocratic school was twenty years old and there was little doubt as to its official teaching, Le Trosne had indicated the scope of physiocracy in more specific terms: "This science, taken

7. In Daire, *op. cit.*, 397.

8. *Physiocratie*, IV, 9.

9. Gustave Schelle, who has done more work on the activity of the physiocratic school than anyone else, observes: "It was in his [Quesnay's] apartment that economics was founded, more by Quesnay's conversations than by his writings." *Le Docteur Quesnay* (Paris, 1907), 122.

1. In Oncken, *op. cit.*, 605. Quesnay's *Despotisme de la Chine* has recently been translated into English and is published as the second volume of Louis A. Maverick's *China, A Model for Europe* (San Antonio, 1946).

2. *Ibid.*, 605.

3. In Daire, *op. cit.*, 397.

4. *Ibid.*, 397, 415.

in its ensemble, includes all parts of the administration: agriculture, commerce, industry, taxation, justice, the police, legislation, peace and war: everything that is related to the security, the tranquillity and the welfare of men is its province."⁵

The Physiocrats, then, thought that they had discovered a new science, that it was an elucidation of natural law, and that its scope extended to all of man's dealing with man and with nature. It was therefore a moral science governing man's social activity, much the sort of thing that John Locke once hoped to achieve for ethics by applying to that subject the laws discovered by his friend Newton. But physiocracy was also thought to be an exact science. Just as God had reserved to the French (in the person of Descartes), the honor of making an exact science out of philosophy, Dupont told the readers of *Éphémérides du citoyen*, so the honor of molding morality and politics into a mathematical science had been given to the same people in the person of Quesnay.⁶ That he was stating the official physiocratic position is evident from all their references to the new science, "a true science," says Baudeau, "which perhaps does not cede anything to geometry itself."⁷ "Economic science," according to another Physiocrat, "is as constant in its principles and as susceptible of demonstration as the most certain physical sciences."⁸ And Le Trosne calls it "an exact science subject to invariable rules."⁹

In thus defining and describing physiocracy the Physiocrats appear to have put themselves in an anomalous position. They can consistently believe it to be both normative and mathematical only if they hold that human conduct is susceptible to the same physical laws that govern the physical universe. Such a deterministic belief was not unknown in the eighteenth century, and although Quesnay had specifically written in defense of freedom of the will¹ and had written nothing directly to encourage a deterministic approach to economics, nevertheless the younger Physiocrats all show a tendency to eliminate the variable human factor from their calculations. They were convinced that Quesnay had discovered the secret that would make all men act rationally in the future: the utility of conforming

5. *De l'ordre social*, 346-347.

6. In Oncken, *op. cit.*, 716.

7. *Première introduction à la philosophie économique*, in Daire, *op. cit.*, 655.

8. "De l'utilité des discussions économiques," *Physiocratie*, IV, 9.

9. *De l'ordre social*, 320.

1. His most extensive defense of free will is his chapter "La liberté" in his *Essai physique sur l'économie animale*. His stand here is essentially the same as that of the medievalist schoolman. He also asserts freedom of the will in his *Droit naturel* and *De l'immortalité de l'âme*. These are all in Oncken's collection of Quesnay's writings.

to "natural law." This, said Dupont, was Quesnay's great contribution to humanity;² "a principle of the greatest fertility," Le Trosne called it, "which decides all questions of political economy, dissipates all prejudices, undergoes neither exception nor modification."³ The philosophical problem of free will was therefore unimportant to the Physiocrats,⁴ for they believed they had discovered the law of self-interest to which all men were as much subject as a stone is to the law of gravity. They were therefore unembarrassed by proposing that their science which dealt with human actions was both normative and mathematical.

II

Each science imposes its own proper discipline upon those who work in it. Each science has its own method of reasoning, its own rules of procedure, its accepted way of arriving at valid conclusions. Perhaps the Physiocrats' concept of economics can be clarified, then, by seeing what method of reasoning they considered proper for the elucidation of economic truths. As typical Cartesian rationalists,⁵ the Physiocrats subscribed to the theory of innate ideas. "Our knowledge of this law [natural law, which includes all economic laws]," Le Mercier writes, "is written in all our hearts."⁶

The justice and the necessity of these natural laws are of a certitude which they themselves show to all men, without the help of any sensible sign. . . . It is in the code of nature itself that they are found written, and we distinctly read them all there with the aid of reason, this light which *illuminat omnem hominem venientem in hunc mundum*.⁷

Dupont goes even further and insists that economic truths manifest themselves to the simple savage as fully and certainly as to

2. Dupont states this in a letter to J.-B. Say. See J.-B. Say, *Cours complet d'économie politique* [17th. ed., edited by Horace Say (Brussels, 1844)], 582.

3. *De l'intérêt social*, 713. This second work of Le Trosne's is published in the same volume as his *De l'ordre social* (Paris, 1777).

4. The younger Physiocrats did not deny free will. They dismiss it quickly, however, to concentrate on what they call "social" or "physical" freedom, which is the liberty to do as one likes with his property.

5. It is not generally appreciated that Cartesianism was the "new" and "daring" philosophy in France until the middle of the eighteenth century. It did not receive official status at the University of Paris until after the de Prades scandal of 1751-52. Only the most "advanced" thinkers in the 1760's had revolted from the Cartesian system in favor of English empiricism, presented most effectively to the French thinker by Condillac's *Traité des sensations* (1754) and Helvetius' *De l'esprit* (1759).

When we say the Physiocrats were Cartesian rationalists, exception must be made for Quesnay, and to some extent for Mirabeau, as we shall show later in this paper.

6. *L'ordre naturel et essentiel des sociétés politiques* (London, 1767), II, 434.

7. *Ibid.*, I, 120-121.

the educated man. "These evident principles of the most perfect constitution of society," he says, "manifest themselves, of themselves, to man. I do not mean to say only to an instructed and studious man, but even to the simple savage."⁸ In the same vein the physiocratic journal, *Éphémérides du citoyen*, condemned the Italian economist and criminologist Beccaria for using the inductive method in the sociological sciences.

We can know these sciences [the moral, political, and economic sciences comprising physiocracy] in their full extent, because their fundamental principles are by nature quite evident to those of us who wish to reflect a bit, and sometimes even despite ourselves. In applying ourselves to a thorough knowledge of these principles and always taking them as our point of departure, we arrive easily and with the greatest certitude at their most remote conclusions: an invincibly clear logic conducts us there rapidly by a series of incontestable deductions.⁹

Le Trosne, writing in 1777 when physiocracy was fully formulated as a science, handles the question of method and the origin of knowledge of economic principles more fully than does any other Physiocrat. In the introductory chapter of *De l'ordre social* he likens knowledge of economics to a "light" which floods the soul of the economist. "Struck by the certitude of these principles," Le Trosne continues, "he is firmly convinced that they will one day be made manifest to all men."¹ Economic laws are known innately because economics is "a science derived from the first principles of justice which enlighten all men."² It is not made known to man by a particular act of revelation on God's part; instead "it is simple, certain, laid bare to all eyes, it is written in obvious characters in the great book of nature."³

The Physiocrats seem confused in referring now to "the great book of nature" and then to "the heart" as the repository of economic truth. One naturally asks whether the Physiocrats looked for truth outside themselves in "nature" or in their own minds. The solution of this difficulty lies in the age's identification of "nature" with one's own mind. For it is by reflection rather than by observation that one reads in the "great book of nature."⁴ Le Trosne demonstrates

8. "Discours de l'éditeur," *Physiocratie*, I, xix.

9. 1769, VI, 62. Quoted in Leon Cheinisse, *Les idées politiques des physiocrates* (Paris, 1914), 179.

1. *De l'ordre social*, 10.

2. *Ibid.*, 13.

3. *Ibid.*, 23.

4. It is generally appreciated that Rousseau reasoned in this way, because of his strongly constructed case for subjectivism and for his pithy way of stating it: "What I feel is right, is right; what I feel is wrong, is wrong." The rationalists were not different from Rousseau in all respects. Their book of nature, like

this point well:

The first principles of the social order [physiocracy, or the good economic society for Le Trosne] that reveal themselves to us are simple; they conform to the constitution of man; they have always been known implicitly. . . . They are incontestable, and their certitude is easy to know. They are established partly on moral notions generally admitted and expressly dictated by instinct (*par le sentiment intérieur*), and partly on the laws of nature itself, the results of which lie before our eyes. This social order is at the same time prescribed by justice and indicated by self interest; it has for its basis the rights and the duties of man as a moral and physical creature, of man fitted with intelligence and capable of discerning the true from the false, the good from the evil, the just from the unjust, of man subject to [physical] needs and forced to make use of the means that the laws of reproduction offer him, laws which he discovers by experience and reflection.⁵

These ideas are independent of the world about the thinker. Le Mercier, for example, begins his classic exposition of physiocratic doctrine with an analysis of man — not too far removed from Descartes' *je pense, donc je suis* — and from it he deduces what the natural order should be, what man's rights and duties are, what political and economic laws flow from man's nature and from the physical laws regulating the universe. Le Mercier describes his method of reasoning accurately when he asserts: "I do not lay my eyes on any nation or any century in particular; I seek to describe things as they should be essentially, without bothering how they are or how they have been in any country whatsoever."⁶ Again, he insists:

As truth exists by itself and is the same in all places and all times, so by reasoning and examination we can arrive at it and all the practical consequences which result from it. Examples which appear to contradict these consequences prove nothing, for it is only that men have lost the way and do not have certitude and full knowledge of the truth.⁷

III

The physiocratic theory of innate economic ideas should not be misunderstood and oversimplified on the basis of a few quotations like the above, as Locke had unjustly oversimplified Descartes' theory of innate ideas. The Physiocrats realized that babies were not born mumbling that a smaller supply means a higher price, or that agriculture is the source of all wealth. These things are innate, according to the Physiocrats, insofar as they are deduced from the Quesnay's China, was pretty much a product of their own minds where they found "proof" of their principles.

5. *De l'ordre social*, 315–316.

6. *L'Ordre naturel*, I, 194.

7. *Ibid.*, I, 194–195.

first principles of knowledge with which all normal men are born. They are in the mind potentially at birth; they can be brought to the light of conscious knowledge by the right method, and without the intrusion of any information outside the mind itself.

The Physiocrats therefore sought to begin with incontestable first principles and to deduce from them, in typically rationalist, deductive fashion, their whole body of economic doctrine. Done in this method, they believed, their science would be foolproof. Here again Quesnay stands apart from his disciples. Except for him, however, the Physiocrats all subscribed to the deductive method of elucidating detailed laws of economic behavior from innate principles. Even Mirabeau, who was temperamentally incapable of being a rationalist, tried futilely to use the deductive method.⁸ Le Mercier, however, was so successful in using it that his book is a rationalistic chain, each point being rigidly deduced from the preceding one, with the result that one weak link causes the whole argument to collapse. That is why contemporary critics condemned him for "his geometric step-by-step pace, his solemn stiffness, his abuse of the words *évident* and *nécessaire*."⁹ This is an indictment which puzzled the Physiocrats, for they constructed their chain of reasoning knowingly, in the full belief that it was the only correct method of procedure. Le Trosne, for example, introduces his *De l'intérêt social*, wherein he deals with specifically economic subjects, by telling the reader that he proposes to follow "*une logique exacte*" in deducing economic consequences from first principles stated in his *De l'ordre social*. "This theory," he continues in justification of his method, "constitutes an ensemble so united by a series of necessary and coherent deductions, that when the chain is broken one can present nothing more than scattered parts, isolated and disordered truths, parts of principles that are as obscure as the language is inexact."¹

So the Physiocrats adopted the rationalistic system of deducing all truth from innate ideas. It was not a system into which they inadvertently fell, for they wanted to do for economic thought what Descartes had done for philosophy. They wanted to use his criterion

8. Mirabeau informs the reader of *L'Ami des hommes* that he wishes to begin with "general ideas" and "well-fixed definitions." His description of this work given in the last chapter indicates how poorly he followed the rationalist method of orderly deductive reasoning. There he says, quite correctly, that there is order only in the chapter titles, that the work is "inégal, sans goût, négligé, souvent diffus, et amphibologique . . . fatigue et étouffe." *L'Ami des hommes* (4th. ed.; Hambourg, 1758), 426.

9. The remark is Edgard Depitre's in his introduction to a later edition of Le Mercier's *L'Ordre naturel* (Paris, 1909), xviii.

1. *De l'intérêt social*, in *De l'ordre social*, 492-493.

of the clear and distinct idea for measuring the truth of each law they deduced, and they wanted to start, as he had done, with nothing except a few incontestable first principles. Then their conclusions would be irrefutable. Theirs would be the foolproof social science. One of the Physiocrats approvingly quotes the *Éloge de Descartes* by Thomas, in which the latter tells how the Cartesian system had been applied successfully to social thought as well as to philosophy. "This would be a grand project," the Physiocrat concludes, "to apply Descartes' doubt to these objects, to examine them one by one, as he examined all his ideas, and to judge everything only according to his great maxim of certitude."²

This is a procedure with which the other Physiocrats agree. All truths comprising the new science, Le Trosne insists, are to be decided as valid on the basis of *évidence*, "a sure and infallible guide,"³ which he defines in Descartes' own terms: "a clear and distinct discernment of the ideas [*sentimens*] which we have, of all the perceptions which depend on them, and of all the relationships between these perceptions."⁴ Le Mercier offers exactly the same definition of *évidence*, and then he goes on to insist that the new science accept as true only what is known with the certitude of *évidence*.⁵ In this way, he believed, physiocracy would be demonstrable in the same way as was Euclid's geometry and it would hold sway over enlightened minds as sovereignly as Euclidian geometry then seemed to do.

Because they believed that men's minds naturally turned toward certitude and because they considered *évidence* irresistible,⁶ all they asked for was liberty of discussion with which to expose their teachings. "It is of the very nature of truth to need only time for spreading itself and liberty for explaining itself. Its lawyer is *évidence* and its judge is reason."⁷ It is mainly for this reason that the Physiocrats optimistically believed they had discovered a science and a method which would usher in the perfect society within a relatively short time.

2. "De l'utilité des discussions économiques," *Physiocratie*, IV, 46.

3. *De l'ordre social*, 305.

4. *Ibid.*, 306.

5. *L'Ordre naturel*, I, 84-86.

6. Dupont, for example, writes: "Il a vu qu'on ne pourroit résister à l'évidence et à l'autorité de ces lois souveraines quand elles seroient suffisamment connues et manifestées." "Discours de l'éditeur," *Physiocratie*, I, lv. And Le Mercier tells the reader: "Nos esprits ont une tendance naturelle vers l'évidence; et le doute est une situation importune et pénible pournous. Aussi pouvons nous regarder l'évidence comme le repos de l'esprit; il y trouve une sorte de bien-être qui ressemble fort à celui que le repos physique procure à nos corps." *L'Ordre naturel*, I, 100.

7. "De l'utilité des discussions économiques," *Physiocratie*, IV, 23-24.

This Cartesian certitude was a mathematical certitude which ruled out anything like prudential decisions for the economist. There was no longer to be any question of taking the better of two courses, no more weighing of advantages and disadvantages of alternatives. Things were right or they were wrong, and the clear and distinct idea separated the true from the false as mechanically as a grain grader separates little kernels from big. Descartes had applied mathematics to philosophy to create modern rationalism, and in the same way the Physiocrats had applied mathematics to social matters to come out with the exact science of physiocracy. It was a science, they insisted, which was subject in all respects to the laws of mathematical calculations, whether one dealt with the question of freedom of commerce, the "natural price" of grain, taxation, or wages. The laws of this science are clearly discerned, in Dupont's words, "by reflection, by judgment, by physical and moral arithmetic, by certain calculation."⁸ Mirabeau, in the same way, looked upon Quesnay's *Tableau économique*, the basis of the new science in his opinion, as "the first rule of arithmetic, which was invented in order to reduce this elementary science [physiocracy] to an exact, precise calculus."⁹ Le Trosne explains more fully how the new science is based on "*l'évidence mathématique*":

Calculus is a formula by which one works on measurable and comparable quantities, between which one seeks to discover some relationship. The result presents the unknown that was sought and which could be found only with a great deal of difficulty without this formula. Economic science, operating on measurable objects, is susceptible of being an exact science, of being subject to calculus.¹

Such was the view the Physiocrats held of their new science, a mathematically exact science which properly treated of all man's social activity. Their writings, by and large, are consistent with their formal definitions of physiocracy. Le Mercier is probably the purest Cartesian rationalist of the school. Dupont and Baudeau rank close behind him. Le Trosne is undoubtedly a rationalist, but he uses historical examples and factual material to back up his arguments from time to time,² something Le Mercier disdains to do. Le Trosne's

8. "Discours de l'éditeur," *Physiocratie*, I, iii.

9. *Philosophie rurale* (Amsterdam, 1763), xix.

1. *De l'ordre social*, 320.

2. Le Trosne shows he has not completely disassociated his theory from the factual world about him by citing England as the great agricultural country of the time, Poland as the outstanding example of political disorder, and certain American colonies where he thinks one or another of the physiocratic principles is working out. He also appeals to history from time to time for additional proof of a point he seeks to make.

reasoning, however, stands independent of the factual material to which he alludes; it is brought in only by way of illustration or exemplification of the point he is making logically and deductively.

IV

It has already been observed that the Physiocrats thought themselves to be nothing more than popularizers of Quesnay's discoveries. In their treatment of specific economic questions of the day, such as freedom of commerce, taxation, and the advantages of large farms over small, they adhere closely to the doctor's writings, and they occasionally invoke his authority. But when they deal with their concept of the new science they do not refer directly to his works or his conversation. As a matter of fact, Quesnay had written nothing on the subject as such. Students of economic thought have quite naturally — but incorrectly — assumed that the Physiocrats were accurate popularizers of their master's thought, and that he therefore agreed substantially with all their works. Auguste Oncken, the only student of physiocracy to think otherwise, observed late in the last century that he could not help believing that Quesnay was not "completely and consequently justly understood by any of his disciples. Various observations make us conclude that Quesnay, especially toward the end of his life, had the same feeling."³

It is therefore worth investigating whether Quesnay held the same concept of the new science of economics as did his followers. Since he never wrote on the subject itself, we must find his attitude toward economics by the indirect method of seeing how he handled economic questions, what method of reasoning he pursued, what proofs he used, how he arrived at conclusions. A word of caution is necessary at the beginning, if we would keep Quesnay's view of economics in proper perspective. The "new science" was just one phase — and a passing one at that — in Quesnay's intellectual life. He wrote his first economic article in 1756, when he was sixty-three years old and when he was already famous in France as a physician and a writer on both medical and philosophical subjects. His last article on economic matters appeared in February of 1768. After that time Quesnay showed no interest in physiocracy. He had transferred his speculation and his enthusiasm to mathematics, principally to intricate geometric problems. These last years were

3. *Op. cit.*, 721. Oncken does not enlarge upon this observation. The point is indicated in summary form, but not developed in Thomas P. Neill, "Quesnay and Physiocracy," *Journal of the History of Ideas*, IX (April 1948), 153-173.

a period of senile mathematical speculation — or at least so the Physiocrats thought.⁴

Quesnay's earlier writings throw some light on his ideas on the method proper to economic investigation. They reveal him as a typically well-rounded thinker of the eighteenth century, one who is saved from the accusation of diletantism only by the sober good sense he always exhibited and by the relative profundity of his various essays. His nonphilosophical writings show him to be an independent thinker who stands above any one method or any system.⁵ He lets the subject matter dictate the method he employs; he does not impose the same discipline on all subjects, as the true rationalist did. His articles "Évidence" and "Fermiers," for example, which appear in the same volume of the *Encyclopédie*, do not seem to have been written by the same man. They differ in method of reasoning, in style, even in temper. His essays on medical subjects, again, stress the value of observation and experience for arriving at new theories in medicine. His philosophical articles reveal a man versed in the rationalism of the Cartesian school, in Locke's empiricism, and in the older traditionalist philosophy of the Schoolmen.

Quesnay independently accepts or rejects various theories from each of these groups. In the main he agrees with Locke's stress on the role of property as a basis for society, for example, but he rejects Locke's empirical epistemology because he thinks it leaves the mind too passive. Again, he accepts many of Descartes' conclusions, but he decisively rejects his theory of innate ideas and his methodical doubt. In similar fashion, he shows independence in accepting much of Malebranche's reasoning about "order," but he rejects his occasionalist explanation for the interaction of the body and the soul. Thus the man who first wrote on economics in 1756 and was credited by his followers with discovering a "new science" was recognized as an eclectic who was competent to deal with medical, philosophical, and social subjects. His recognized competency in these fields is indicated by the articles he was assigned for inclusion in the famous *Encyclopédie*: "Évidence," "Fermiers," "Fonctions de l'âme," "Grains," "Hommes," "Impôts," "Intérêt de l'argent." He would likely have

4. In 1773 Quesnay published his *Recherches philosophiques sur l'évidence des vérités géométriques*, a work of quite low caliber mathematically that Turgot referred to as "scandal of scandals" [Gustave Schelle, *Du Pont de Nemours et l'école physiocratique* (Paris, 1888), 124.]

5. It is worth noting that the three *éloges* on which most information about Quesnay's life depends treat him as an eclectic philosopher who excelled in speculative medicine, wrote philosophical articles, and finally worked in agricultural economy. None of them looks upon him simply as the founder of physiocracy. All three *éloges* are contained in Oncken, *op. cit.*

received additional assignments if he had not severed relations with Diderot's publishing venture in 1759.⁶

The founder of physiocracy, then, was not a rationalist. In his article "Évidence," published in the *Encyclopédie* in 1756, he specifically and vigorously attacks the Cartesian theory of innate ideas subscribed to by the younger Physiocrats. "Innate ideas," he writes, "or ideas that the mind produces of itself without the action of any extrinsic cause, do not create in the mind any proof of the reality of anything else."⁷ Reason alone is not sufficient to arrive at a knowledge of the outside world and "natural laws" governing both man and the universe. Quesnay tells us in another place that "reason is to the mind what the eyes are to the body."⁸ Knowledge sifts into the mind through reason and is acted on by it, but reason alone cannot procure knowledge of itself.

Consequently, Quesnay did not indulge in chain reasoning, as did Le Mercier and the rest of his disciples. In his economic articles, indeed, it is almost impossible to find any of the typically rationalist phrases, such as *évident* and *nécessairement*, or any of the "it-therefore-follows" transitions. Both Quesnay's background and his temperament militated against his succumbing to the rationalist form of reasoning, either in philosophy or in social science. By the time he began to write on economic subjects he was too old and too wise, too experienced and, as Baron Grimm put it, too "cynical"⁹ to trust the Euclidian thinking which so intrigued his disciples.

That Quesnay did not look upon economics as a mathematically exact science is to be implied from his treatment of "natural law," the law on which his economics is based. His analysis of natural law shows clearly that he did not subscribe to the trend then current of converting the normative moral law into a Newtonian law of nature, as the other Physiocrats tended to do. He treats the subject

6. License to publish was withdrawn from the *Encyclopédie* in 1759 as a result of the commotion caused by Helvetius' *De l'esprit*. The government had revoked the *Encyclopédie's* license originally in 1752 as a result of the de Prades affair, but permission to publish was granted again in about a year. Because the *Encyclopédie* was always suspect and because Quesnay held a court position, the doctor could not continue his collaboration with Diderot after 1759. His three articles, "Évidence," "Fermiers," and "Grains," appeared under a pseudonym; "Fonctions de l'âme" should have appeared before "Grains," but for some reason Diderot never published it — mainly, this author believes, because of his disagreement with Quesnay's religious views expressed in the article. The other three articles were returned to Quesnay in 1759, at his request, and he gave them to Dupont for publication in the physiocratic journal.

7. In Oncken, *op. cit.*, 777.

8. "Droit naturel," in Oncken, *op. cit.*, 376.

9. *Op. cit.*, Pt. I, Vol. V, 481.

of natural law descriptively and analytically in two places: in his article "Droit naturel," first published in the September 1765, issue of the *Journal de l'agriculture, du commerce et des finances*,¹ and later included as the first article in Dupont's *Physiocratie*; and in the eighth chapter of his *Despotisme de la Chine*, wherein he tries to give a "systematic digest of the Chinese doctrine."

In both places Quesnay introduces his discussion of natural law by dividing it into physical laws and moral laws.² He then describes the former in terms which seem derived from Shaftesbury more than from anyone else. "By physical law is here meant the ordered course of all physical happenings most advantageous to the human race."³ This is the law that the Creator has ordained for the operation of the universe, much as a designer may be said to have ordained the laws by which a jet-propulsion motor operates. It is the law which governs such things as agriculture, animal husbandry, the distribution of wealth, the operation of commerce and industry. When men follow this law faithfully they secure the greatest material benefits possible, as, for example, when they plant the right crops at the right time, use the right fertilizer and lay away the right amount for capital investment the following year.

Thus Quesnay optimistically believed that everything works properly for mankind's best material interests. All man need do is understand the law and work in harmony with it. This physical law is mathematically exact in its working out. Man is free to violate it, of course, but his doing so works out to his material disadvantage. These physical laws can be reduced to a science, Quesnay believed, just as Newton had collected and collated all the laws discovered by his predecessors to explain the working of the universe in his *Principia*.

Quesnay defines his second kind of natural law as "the rule of every human action in the moral order, conforming to the physical order evidently most advantageous to the human race."⁴ These are

1. This was the first number of the *Journal* edited by Dupont, who, incidentally, was later fired for making it a physiocratic journal instead of the objective organ it was supposed to be. In his introduction to Quesnay's article on natural law, Dupont tells the reader that "this is the solid foundation on which the edifice [of economics] should rest." Oncken, *op. cit.*, 363. It is worth noting that in this introduction Dupont shows how Quesnay's distinction between physical and moral natural law made no impression on him. His first sentence is typical: "C'est la connaissance de l'ordre et des lois physiques et naturelles qui doit servir de base à la science économique." *Ibid.*, 362.

2. "Les lois naturelles sont ou physiques ou morales." "Droit naturel," Oncken, *op. cit.*, 374. The same distinction is made in the same words in the article on China. See *ibid.*, 637.

3. *Ibid.*, 375.

4. *Ibid.*

actions which had traditionally been considered "human" or "moral" or "ethical" acts, the dealings of man with man, such as the sale of a horse or the payment of a contract, acts which come under the heading of "commutative justice" with Quesnay. The rules governing such action are ordained by the Creator, he tells us, and man can promote his own prosperity, as well as that of mankind in general, by obeying these divine ordinances.

These two divisions of natural law, with Quesnay, have much in common. They are both discerned by the light of reason. They are both objective rules, absolutely independent of man's will, both ordained by the Creator for man's governance on earth. Their purpose is to promote man's happiness, which Quesnay seems to identify with his material welfare. They can both be disobeyed by man, for he has free will, but the penalty in each case is a material, physical punishment.⁵ This "discovery" of the physical sanction attached to the moral law, indeed, was thought by his disciples to have been Quesnay's great discovery.⁶ The fact remains, however, that Quesnay distinguished between the two kinds of natural law and he did not think them identical in all respects. The moral law dealt with what we can call "human actions." Nowhere does Quesnay try to reduce these actions to mathematical formulas, as he does the material comprised under physical law. He refused to believe that men would ever be sufficiently enlightened to follow their self-interest in such deterministic fashion as to surrender their freedom to make economically bad decisions — as the younger Physiocrats did. Nor did he believe that moral actions could be so "scientifically" classified as to rule out prudential decisions. Quesnay insisted on keeping man a free agent⁷ — a point which his followers seemed anxious to overlook.

5. "Les transgressions des lois naturelles sont les causes les plus étendues et les plus ordinaires des maux physiques qui affligent les hommes." Oncken, *op. cit.*, 369. Quesnay stated in several places, however, that moral transgressions are visited with moral punishment as well. See his "De l'immortalité de l'âme," *ibid.*, 760-761.

6. It is true that the Physiocrats sometimes referred to the *Tableau économique* as Quesnay's great discovery. Dupont, Le Mercier, and Le Trosne all mention his discovery of a physical sanction attached to the moral law as a turning point in civilization.

7. "Il est de sa nature d'être libre et intelligent, quoiqu'il ne soit quelquefois ni l'un ni l'autre." "Droit naturel," Oncken, *op. cit.*, 370.

It is in his essay "La liberté," that Quesnay makes a thorough analysis of free will. On this point he is in almost perfect accord with the medieval Schoolmen. He indicates that free will is one of the two faculties distinguishing men from the lower animals. He then asserts that free will does not consist merely in freedom of choice between alternatives, but of a number of steps of the intellect from which a decision results.

V

Quesnay's method of arriving at economic theories is in keeping with his epistemology and his analysis of natural law. Any economic theorist of the mid-eighteenth century who rejected innate ideas and refused to subscribe to the deterministic concept of natural law then becoming popular in enlightened circles⁸ would logically have to use the inductive method to arrive at economic laws, which, instead of being mathematical formulas, would be descriptive of tendencies. This is what Quesnay did. He used the inductive method knowingly, for he had shown his appreciation of this method of acquiring knowledge more than a decade before he published his first article on economics. In his preface to the *Mémoires* of the Royal Academy of Surgery (of which he was the secretary), Quesnay stated that "there are two sources for discovering truths which can enrich our art: observation and physical experiment."⁹ In an essay on method which sounds surprisingly modern Quesnay goes on to tell how observation and experiment should be used as checks upon each other, how the observations of past generations and of a wide circle of contemporaries should be gathered for comparison, how research should never stop, and how practice and theory should be correlated for mutual support and mutual correction, since neither can be neglected without the other suffering.

Quesnay's articles on those economic subjects which involve man's free, human actions are also inductive in approach. In his article "Fermiers," for example, he starts out by warning the reader that "if one considers agriculture in France only under its general aspect, one can form only vague and imperfect ideas about it."¹ Therefore, he says, "consult the farmers themselves."² His article is a descriptive study of how farms are managed in the various parts of France, where horses are used instead of oxen, under what conditions it pays to use them, and how farming is conducted in England. From this description and comparative study of different farming techniques, Quesnay draws his conclusions. His article "Grains" is a similar kind of study, full of statistics and comparisons, in which he

8. Helvetius, for example, insisted in 1759 that "man is a machine" and that "the propositions of morality, politics, and metaphysics are as susceptible of demonstration as the propositions of geometry." Holbach reached the final conclusion of this trend in his *Système de la nature*, in which he claimed: "The same necessity which regulates the physical, also regulates the moral world, in which everything is in consequence submitted to fatality."

9. In Oncken, *op. cit.*, 724.

1. *Ibid.*, 159.

2. *Ibid.*, 160.

presents strong economic arguments for large farms rather than the *petite culture* which was one of the principal obstacles to an agricultural revolution in France similar to the one which had already made England the model farming country of Europe. Quesnay's writings are full of acute observations and of hardheaded realistic statements which stand in striking contrast to the deductive method advocated by his disciples. He shows himself aware that his reasoning is frequently in generalizations which have only limited value, as is the case with all abstractions. "We should not reason against the facts," he says in one place, "facts are realities. But a generic name, like the word 'commerce,' which confounds a multitude of different realities, is not itself a reality."³ This is the very opposite of Le Mercier's advice to "ignore the facts."

There is one other aspect of Quesnay's economic thought which cannot be ignored: its mathematical aspect, seen for example in his *Tableau économique*, which so impressed his followers. Here Quesnay assumes that his perfect economic society has been established, and he shows how the annual product of the land would flow from the productive class through the hands of the proprietary and sterile classes back into the hands of the agricultural class again. This is one of the doctor's "economic problems" which deals with the working out of the physical division of natural law — and for which he showed a strong inclination.⁴ It is, he wrote to Mirabeau, "a fundamental table of the economic order, [drawn up] in order to represent expenses and products in a way easy to understand, so as to judge clearly the order or the confusion that the government can cause [by its tax laws, its regulations on commerce and the like]."⁵

There is no doubt that Quesnay believed certain economic problems were subject to mathematical solution. And it is no less certain that he considered other economic subjects suitable only for descriptive and normative treatment. Using our more modern terminology, we can say that Quesnay treated some economic problems as properly parts of a social science and others as mathematical. He implicitly divided the subject matter of economics, then, into a physical or mathematical science on the one hand and a moral science on the other. This is a division which Quesnay never mentions explicitly, for he does not deal with the nature or the province of the

3. "Du commerce," in Oncken, *op. cit.*, 459.

4. Various people around the court, such as Marmontel, relate how Quesnay spent hour after hour tracing "zig-zag" lines on paper and working out mathematical problems. Ironically, his published tables and problems quite frequently contain simple mistakes of addition.

5. Quoted in Schelle, *Le Docteur Quesnay*, 389–390.

new science in any of his writings. And it is a division which his disciples never comprehended.

VI

The younger Physiocrats took up the mathematical aspects of Quesnay's thought with even greater enthusiasm than their master. And they failed to maintain Quesnay's rounded outlook on economic questions, for, as Oncken has put it, they did not completely understand him. A comparison of Le Mercier's work with Quesnay's various writings clearly shows how the disciple produced an entirely different product than the master had in mind.⁶ Le Mercier's analysis of liberty is typical. He treats liberty as one of the rights man enjoys in the natural order, and he begins his analysis of the subject by mentioning that he is unconcerned with the subject of "metaphysical" liberty, or freedom of the will, because the only liberty of importance is the social or physical liberty to do with one's property what one wishes. Quesnay, on the other hand, considered freedom of the will a basic point from which social liberty derived as a natural right. So, whereas Quesnay grounded liberty in man's nature, Le Mercier based it on property rights. It is not too much to say, we believe, that none of Quesnay's disciples understood his philosophical writings — on which his economic thought was ultimately based.

Quesnay seems to have realized this sometime after the appearance of Le Mercier's *L'Ordre naturel* in 1767. He quit writing for the *Éphémérides du citoyen*, and his contacts with his disciples became less and less frequent. Similarly, his disciples seem to have realized that a gulf was widening between their master and themselves, a fact which they probably put down to his advancing age. Whether Quesnay was growing senile by 1768, as may well have been the case, is beside the point. It is with his previous writings that the Physiocrats dissented, whether they were willing to face the fact or not. The fate of Quesnay's then unpublished manuscripts indicates that his disciples realized their master's economic thought was not as clear-cut and rationally arranged as their own. Quesnay had placed in Dupont's hands those articles which he had withdrawn from the *Encyclopédie* when it fell under government censure. Dupont was

6. In 1788 Mirabeau wrote to his friend Longo: "I have seen the author of *L'Ordre naturel et essentiel des sociétés politiques* work six whole weeks in the doctor's apartment writing and rewriting his work — and then deny his father and his mother." Since all the Physiocrats insisted Le Mercier interpreted Quesnay, we can interpret this statement only as meaning that the interpretation by Le Mercier was not a faithful one.

supposed to publish these articles, three of which dealt with economic subjects. The one on interest he published in January, 1766, but the school was embarrassed by the fact that it did not fit into their rigid theory. They always passed this article by in silence when discussing interest. The other two articles, "Hommes," and "Impôts," were not published until early this century.⁷ Although Dupont had over five years in which to publish them, he never let them appear in print. There seems no adequate reason for this omission except his belief that they were not good physiocracy.

In that respect, Dupont was right. For it was the old story, repeated with the Physiocrats as with so many other schools of thought, of the master not being faithfully followed by his disciples. If Karl Marx could protest to his son-in-law, "I am no Marxist," Quesnay could claim with greater vehemence that he was no Physiocrat. The doctor had written in an age of transition. He was an older man who knew the traditional thought coming from the Schoolmen which was taught in the Sorbonne until the middle of the eighteenth century. He was not immune to newer influences, but he was independent in selecting some items and some methods from them while rejecting others. Thus in his treatment of natural law Quesnay offers a mixture of old attitudes and new. He looks on the law as being moral, but at the same time he seeks to add the modern element of a physical sanction to its observance. Quesnay never thought his position through to ultimate conclusions, nor did he ever push back to ultimate presuppositions. For that reason he never created a system, properly speaking. His doctrines were a mixture of ideas and theories which he handled with consummate common sense. It remained for his followers, particularly Le Mercier, to reduce those theories to a system, subject them to a single method, and place them upon frankly recognized basic assumptions.⁸

We are inclined to think that the younger Physiocrats would have privately nodded in agreement if they had read the contrasting estimate made of Le Mercier and Quesnay by those collaborating Encyclopedists, Diderot and Grimm. Of Le Mercier's exposition of physiocratic doctrine Diderot observed: "I admire the certitude and the fertility of his principles, the easy manner in which he solves the

7. "Hommes" was published in 1908 in the first number of the *Revue d'histoire des doctrines économiques et sociales*, edited by Étienne Bauer. "Impôts" was published later in the same volume, edited by Gustave Schelle.

8. In 1939 Max Beer published his *Inquiry into Physiocracy*, in which he tried to establish the essential similarity of physiocracy and the economic teaching of the Schoolmen. It is worth noting that Beer used Quesnay's writings almost exclusively to establish his point.

gravest difficulties, and the simplicity with which he resolves objections."⁹ Of Quesnay Grimm wrote: "He is not only naturally obscure, he is even systematically obscure and he pretends that truth should never be stated clearly."¹ Quesnay had not succumbed to the rationalistic deductive method of building the new science of economics. His disciples had.

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9. *Oeuvres complètes de Diderot* (Paris, 1875), XVIII, 273.

1. *Op. cit.*, 481.