

The Influence of Cantillon's *Essai* on the Methodology of J. B. Say: A Comment on Liggio*

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One of the most important areas in which Cantillon influenced J. B. Say involves a set of issues which receives no explicit treatment in the *Essai*. I refer to the distinctive and pathbreaking methodology employed by Cantillon in his treatise.

Most modern historians of economic thought, it is true, credit Cantillon with exhibiting a high degree of methodological sophistication. For example, Schumpeter pays Cantillon, what is for Schumpeter, probably the greatest compliment when he names Cantillon as the first to attempt to “. . . construct a composite instrument or engine or organon of economic analysis . . . which functions *formally* in the same way, whatever the economic problem to which we may turn it.”¹ Others have noted the dexterity with which Cantillon wielded the tool of what Schumpeter has called “generalizing abstraction” in constructing his engine of economic analysis. For example, Hayek writes:

Within the confines of his theoretical analysis Cantillon wields its most important tool, the method of isolating abstraction, as we would call it today, with true virtuosity. He displays familiarity with the device of the *ceteris paribus* clause, as had indeed some other writers before him, with the device of the ‘isolated state’ and the progression from monopoly to more complicated cases in explaining price formation. He repeatedly excludes the effects of accidental circumstances in order to avoid over-complicating an already complex problem.²

Spiegel is of the same mind as Hayek in concluding that “Like Locke, Cantillon was a model builder who used the method of abstraction and the process of gradual approximation to arrive at meaningful insights.” Moreover according to Spiegel, Cantillon went further than Petty or Locke towards forming “. . . a system, a comprehensive and consistent whole in which the various elements of the economic process would fall into place.”³

In order to fully appreciate his methodological contributions, however, it is necessary to delve into the exact nature and derivation of Cantillon's “engine of

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economic analysis." From whence come the general and abstract laws or theories which compose this apparatus? In formulating his economic theories, Cantillon utilizes the axiomatic-deductive method. According to this method economic theories or laws are logically deduced from a few fundamental axioms. The axioms, in turn, are not merely arbitrary or hypothetical but are constituted by general facts ascertained by the theorist from his experience of reality. This is not to deny, of course, that the discernment of these facts may require an extraordinary degree of perspicuity on the part of the theorist as well as some familiarity with other sciences. The realism or, if you will, the truth of economic theories is thus made to depend upon the realism and completeness of the axioms and the absence of errors in the process of logical inference.

In Cantillon's case the axiomatic basis of his theoretical system rests in large part on the following facts and relationships:

1. Population apportions itself to the available means of subsistence.
2. The amounts of land and labor necessary to produce any given good remains fixed indefinitely. (As Vickers has pointed out, this "... involves the assumption of unchanged coefficients of production and of constant returns in the several lines of production.")⁴
3. Landowners, laborers, and entrepreneurs attempt to maximize their money incomes when partaking in the production process.
4. Consumers prefer to pay a lower rather than a higher price for a given good.
5. Changes in the economic data and the consequences thereof work themselves out over a longer or shorter period of time.
6. The utility of money consists in the spending. (This is as much as implied in Mr. Liggio's statement that "Drawing from Cantillon, Smith noted men's disposition to spend quickly their income from the sales of their production . . .")⁵

Although the above listing is meant to be illustrative rather than exhaustive, the enumerated facts serve as the axiomatic base from which are drawn the major components of Cantillon's analytical organon.

At this point, I might mention that the axiomatic-deductive method had been employed in economic investigations with varying degrees of success by Cantillon's predecessors and contemporaries. For example, it is Rima's contention⁶ that "the earliest beginning of deductive analysis in economics" is to be found in Sir Dudley North's precocious free-trade pamphlet, *Discourse upon Trade*, published in 1691. She also suggests that Petty's technique "... was essentially that of deductive logic."⁷ And, as I noted earlier, Spiegel attributed the use of the "method of abstraction" to Locke as well as to Cantillon. Also noteworthy is Isaac Gervaise, who today is widely recognized as one of the earliest antecedents of the monetary approach to the balance of payments. In his brilliant little pamphlet on *The System or Theory of the Trade of the World*, published in 1720,⁸ he consciously and expli-

citly adhered to the axiomatic-deductive method. Thus, he informs his readers in the Preface that the ensuing work “. . . contains such Principles, as seem to be capable of answering any Event in trade. I draw those principles from the natural Bent of Man; and the Remarks and Conclusions I infer from them, appear to me most natural.”⁹ Finally, in the year of Cantillon’s demise, the underrated monetary and balance-of-payments theorist, Jacob Vanderlint published a tract entitled *Money Answers All Things*¹⁰ in which he argued that “. . . as the Principles of Trade, I proceed on, are founded in the Nature of Things, and Constitution of the World itself, so I doubt not that they are capable of strict Demonstration”¹¹

Although the technique of formulating economic theories may not have set Cantillon far apart from his immediate predecessors and contemporaries, the use he made of this technique in essaying to develop a systematic and integrated explanation of the entire economic process made his a distinctive contribution. But this is by no means all. There are a number of other important features of Cantillon’s methodology which serve to further distinguish him from those who had gone before as well as from those who, for a long time, would come after. These distinctive features of Cantillon’s methodology include his emphasis upon the individual as the focal point for the analysis of the economic process as well as upon the subjective nature of the individual’s wants and desires which, as expressed through market demand, constitute the motive force of this process. Also, Cantillon was as concerned with explaining the dynamic processes by which market outcomes succeed one another as with the description and comparison of the initial and ultimate equilibria which bound market processes on either side. Finally, Cantillon seemed to grasp the essential value-freedom of the analytical propositions of economics.

To begin with, pervading the *Essai* is the modern subjectivist insight that, in the words of Professor Kirzner, “. . . consumer demand constitutes a vibrant, active market force, with a powerful positive impact on resource allocation, prices, and other market phenomena.”¹² According to Cantillon, it is the ever-changing “Humours and Fancies of men”¹³ which ultimately determine market prices and productive incomes and through them the allocation of land and labor resources. Moreover, in the case of labor, the subjective factor of demand plays a dual role. The pattern of relative demands for consumer’s good not only determines the equilibrium distribution of available labor resources but, as exercised by the land-owning class in particular, also regulates the secular trend of population growth and therefore the optimal size of the labor force itself. Thus, Cantillon entitles his chapter on population “The Increase and Decrease of the Number of People in a State chiefly depend on the Taste, the Fashions, and Modes of Living of the Proprietors of the Land.”¹⁴

Complementing Cantillon’s emphasis on subjective factors as the ultimate and active determinants of the direction and extent of economic activity is his focus on individual actors in analyzing the economic process. Cantillon’s methodological individualism marked a radical break with the crude macroeconomic theorizing

which marred the works of the most able and enlightened of contemporary writers including, e.g., Locke, Gervaise, and Vanderlint particularly in their treatment of monetary phenomena. The regnant macroeconomic approach of Cantillon's day attempted to explain economic phenomena and processes as the results of disembodied economic aggregates operating upon and interacting with one another. In its stead, Cantillon espoused an approach which aimed to render intelligible these same phenomena and processes by tracing them back to the individual choices and actions from whence they originated and of which they are ultimately composed. It is not too much to claim that Cantillon's greatest theoretical achievements such as his Austro-Wicksteedian treatment of market-price determination, his recognition of the crucial role of the entrepreneur in the market process, and his analysis of the monetary adjustment process are inseparably linked up with his individualistic methodology.

Cantillon's methodological breakthrough, especially as it bears upon his monetary theory, has been well-described by Vickers:

In Cantillon, as opposed to other writers of the first half of the century, the move in theory and in explanation toward a dynamic as opposed to a definitional and static description of monetary affairs took on a microscopic, micro-economic form. His economic analysis always started from individual economic magnitudes and quantities. The market place was the arena of economic action. Cantillon was interested in the same sense as Locke in the effect on market prices of changes in the relevant and determinant economic forces. But the logic of his *Essai* rested on the analysis of individual markets and prices¹⁵

This discussion naturally leads into another salient feature of Cantillon's methodology which warrants attention. It involves Cantillon's seminal insight into the crucial role played by the time element in the working out of economic phenomena. In applying this key insight to the explanation of the economic process, Cantillon fashioned an analytical technique which was later "rediscovered" by Carl Menger and perfected and formalized by subsequent Austrian economists, notably Ludwig von Mises and Hans Mayer. This analytical technique was aptly dubbed "causal-genetic" by Mayer. In Mayer's view, the causal-genetic theorist proceeds from the knowledge ". . . that the assignment of changes in the magnitudes at issue . . . occurs over time and indeed often over considerable periods of time, that the links of the series in which it occurs *are arrayed over time in a non-interchangeable order (causal relation!)*."¹⁶ Interestingly, Mayer argues that of the two approaches—the causal-genetic approach of Menger and the Austrians and the functional approach associated with the Lausanne School of Walras and Pareto—the latter is much the older and its adherents include not only precocious mathematical economists such as Cournot but mainstream classical economists. Mayer points to the view of John Stuart Mill ". . . that there is no one-way causal relationship between demand, price, and supply, but that these magnitudes mutually condition each other like elements of a mechanism."¹⁷

According to Mayer, it was only "the discovery of the importance of the subjective factor" which led in turn to the discovery of causal-genetic theorizing by Carl Menger.¹⁸ Mayer's doctrinal insight leads to an understanding of Cantillon's time-embracing analytical method as an outgrowth of his great emphasis upon the subjective factor of demand as the motive force of the economic process.

As I have noted above, Cantillon's stress upon the significance of the temporal element in economic life manifests itself in his overriding concern to move beyond a mere elaboration of the properties of comparative states of equilibrium to an explication of the dynamics of market processes. For instance, Cantillon's theory of market price centers upon an analysis of the *process* of price formation à la Wicksteed and the Austrians. This is clearly recognized by Hayek who argues that

The achievement of Cantillon's value and price theory derives its significance first and foremost from the fact that, instead of being satisfied to establish some rules and formulae, say, for the 'normal' relationship between the value and price of different goods, he consistently attempts to show what forces and process are involved, according as the normal relationship is necessarily restored.¹⁹

Moreover, Hayek characterizes Cantillon's explication of the process of market-price determination²⁰ as "directly reminiscent of the famous horse fair example of Böhm-Bawerk."²¹

Also, as Vickers has pointed out, Cantillon's discussion of the labor market²² proceeds within the dynamic context of ". . . the migration of labor resources throughout the economy in response to changing pressures of demands for commodities, and of the differential wage rewards payable throughout the hierarchy of labor types and units . . ." ²³ However, nowhere is Cantillon's mastery of causal-genetic or process analysis better illustrated than in his delineation of the process by which the purchasing power of money adjusts to a change in the money supply. It would be perhaps tedious and certainly superfluous for me to attempt to render yet another account of Cantillon's marvelous discussion of the monetary adjustment process.²⁴ Nonetheless, I believe it is of great importance to stress the methodological advances which characterize Cantillon's contribution. On this score, I can do no better than to quote a passage by Vickers wherein is revealed a deep understanding and appreciation of the methodological individualism as well as the causal-genetic nature of Cantillon's analysis:

This represents clearly a considerable theoretical advance. We are here confronted by a dynamic conception of the *working out* of a relationship of economic forces. Locke had clearly defined the nature of certain fundamental economic and monetary relationships. He had even indicated what empirically were the most likely directions of causation subsisting in them. But his work was definitional, equational, static, and his analysis did not at any point become a truly causal one . . . The important thing in the theoretical description of the movement of the economy such as the eighteenth-century authors envisaged was not simply the nature or the design of the opposing ends of the economic process. The movement between the positions involved, between the underemployment of resources on the one hand and a fuller utilization on the other, or between one level of prices and another, became as important for analysis as the

respective positions themselves. But this conceals a conception which is vital to the meaning of Cantillon's *Essai*. Market prices, money prices, and levels of activity and employment were not to be regarded as homogeneous variables. The *Essai* is interested in the *structure* of market prices, the structure of market supply conditions, and the structure of activity in the economy. The corollary of this is that the movement of the economic process itself depended on the structure of its own determining forces. As Cantillon argued at length, the description of the process will necessarily differ, following, for example, an increase in the supply of money, depending on the direction from which the stimulus to change has come, and depending also on the differing dispositions, notably consumption habits, of the persons through whose hands the higher flow of money and incomes passes. Cantillon is concerned, we might say, with pointing out the nature of the time-path along which the economy moves following a disturbance of a position of rest. His argument is that the structure and description of the time-path is not independent of the direction of its own inception and movement.²⁵

There is nothing one could add to this except to note that Cantillon's profound insight into the monetary adjustment process was not to be matched until over a century later when Cairnes published his justly famed *Essays toward a Solution of the Gold Question*.²⁶ Another generation was to pass before Ludwig von Mises gave Cantillon's and Cairnes' analyses a firm foundation in the marginal utility theory of money. Not coincidentally, the method which Mises himself used in analyzing the monetary adjustment process closely parallels Cantillon's method. Referring to his classic work on *The Theory of Money and Credit* initially published in German in 1912, Mises writes:

On all its pages I used the 'step-by-step' method which is allegedly being rediscovered today [1940] as 'period analysis' or 'process analysis'. It is the only permissible method, which renders superfluous the argument between short-run and long-run economics. It also makes the distinction between statics and dynamics an idle question.²⁷

The step-by-step analysis must consider the lapse of time. In such an analysis the time-lag between cause and effect becomes a multitude of time differences between single successive consequences. Reflection on these time-lags then leads to a precise theory of the social consequences of changes in the purchasing power of money.²⁸

At this point, I wish to point out that Cantillon's *Essai* implicitly anticipates the latter day subjectivist critique of mathematical economics. In fact, in his description of the higgling or "altercations" which constitute the market process of price formation, Cantillon remarks ". . . this method of fixing Market prices has no exact or geometrical foundation, since it often depends upon the eagerness or easy temperament of a few Buyers or Sellers . . ." ²⁹ Cantillon makes the same point regarding the determination of the exchange rate or "ratio" between gold and silver. "It often depends," he says, "on the humour of men: the bargaining is done roughly and not geometrically."³⁰ Moreover, let us not forget that Cantillon's monetary process analysis, in demonstrating that a change in the money supply does not effect an equiproportional change in prices, overthrew the quantitative pretensions of the crude quantity theory. More generally, however, the critique of mathematical economics is logically implied in a mode of analysis which is time-filled and causal-

genetic in the Misesian-Mayerian sense and which is therefore poles apart from the essentially timeless, mathematical-functional approach of the Walrasian-Paretian type.

This discussion may shed some light on an issue which has recently arisen regarding Cantillon's doctrinal status. While admitting its obvious merits, some modern commentators on the *Essai* have argued that it does not contain a developed general equilibrium view of the economic system. Thus, Ekelund and Hebert, in their recent text on economic theory and method, contend that,

Cantillon attempted to construct a general equilibrium economic system encompassing all the important variables of the economic system including money Unfortunately, he failed in his quest to develop a cogent description of an interrelated system.³¹

Now this criticism is right on the money if one equates the concept of inter-relatedness among economic magnitudes with the concept of their mutual determination; and if one understands by general equilibrium analysis the construction or description of a system of simultaneous equations whose functions are reversible at will. However, as Mayer points out, in this conception of economic interrelationships,

all elements which balance each other in a state of rest are assumed to exist simultaneously. There is *no one-way causal connection* between them, but a *universal reversible dependence*, the so-called general economic interdependence. This makes possible the treatment of the totality by equations, which together yield a *simultaneous system excluding time and causality*.³²

Now the suppression of the categories of time and causality in general equilibrium analysis thus construed hardly recommends it as a standard of comparison for Cantillon in the first place. Still, if Ekelund and Hebert wish to disqualify Cantillon as a doctrinal antecedent of Walras, Pareto, Hicks, and Samuelson, I heartily concur. On the other hand, it is precisely because Cantillon's analysis stresses one-way, irreversible, cause-and-effect interrelationship among economic phenomena which unfold over time that it is more amenable to verbal-logical than to mathematical-functional statement. It is for this reason that I would rank Cantillon as an important forerunner of a school of theorists which includes Menger and the early Austrians, Wicksteed, Robbins, Hayek, and Mises. For lack of a better term and in full awareness of the oxymoron I am perpetrating, I would call this the "dynamic" general equilibrium school to set it off from the "static" Walrasian school as well as from the Marshallian partial equilibrium school.

Before concluding this discussion of Cantillon's methodology, it should be pointed out that Cantillon recognized that value judgements are or should be beyond the pale of analytical economics. Thus, according to Hayek, Cantillon engaged in a ". . . conscious and unremitting pursuit of 'pure theory,' of explanation of relationships divorced from value judgements . . ." ³³ Cantillon's strict adherence to *Wertfreiheit* in his economic analysis is explicitly indicated at two places in the *Essai*. First, during the course of his discussion of entrepreneurship, Cantillon

remarks that "It may perhaps be urged that Undertakers seek to snatch all they can in their calling and to get the better of their customers, *but this is outside my subject.*"³⁴ (Emphasis added.) Further on in the *Essai*, at the conclusion of his discussion of population, Cantillon states that "*It is also a question outside of my subject* whether it is better to have a great multitude of Inhabitants, poor and badly provided, than a smaller number, much more at their ease . . ." ³⁵ (Emphasis added.) These two statements certainly demonstrate that Cantillon possessed a good grasp of the crucial distinction between positive economic propositions and normative evaluations relating to them and that he was determined to refrain from confounding the two.

It now remains for me to briefly indicate the influence that Cantillon's methodology had on Say. This task is easier than at first sight might appear. This is true for two reasons. First, Cantillon's general influence on Say through Quesnay and the Physiocrats, Turgot and Condillac has been ably documented by Schumpeter in his great *History of Economic Analysis* and is now beyond dispute.³⁶ Second, Say explicitly addressed himself at length to methodological concerns in his *Treatise on Political Economy*³⁷ and it is not difficult to detect Cantillon's influence in these discussions.

To begin with, like Cantillon, Say conceived economics as a fully integrated structure of abstract and general principles. The greatest confirmation of this point can be found in Say's blistering methodological criticisms of Smith's *Wealth of Nations*. For instance, at one point Say graphically characterizes the work as

. . . a promiscuous assemblage of the soundest principles of Political Economy, supported by the clearest illustrations, and ingenious statistical speculations, blended with instructive reflections; it is not a complete treatise . . . but an ill-digested mass of enlightened views and accurate information.³⁸

Say also says of the book that ". . . almost every portion of it is destitute of method."³⁹ And in a passage which was deleted from his *Treatise* in the sixth edition, Say labeled the *Wealth of Nations* "a chaotic collection of just ideas thrown indiscriminately among a number of positive truths."⁴⁰ In fact, according to Say, despite Smith's brilliant contribution, political economy had not yet received a rigorous, scientific treatment. It was just this deficiency which inspired Say to write the *Treatise*. Thus, he writes:

Nevertheless, we are not yet in possession of any acknowledged text-book on the science of Political Economy, in which the fruits of an accurate and enlightened observation are referred to general principles, which will be admitted by all judicious individuals; a work in which these results are complete, and so connected as to afford each other mutual support, and which every where, and at all times, may be studied with advantage.⁴¹

In undertaking "the execution of so useful a labor," Say ". . . only wished to unfold the manner in which wealth is produced, distributed and consumed."⁴² According to Gide and Rist, in this work, Say exhibited the scientific qualities of "a delight in uniformity, love of universality, and contempt for isolated

facts"⁴³ Lastly we might note that Schumpeter rated as Say's greatest contribution to analytic economics his conception of economic equilibrium.⁴⁴ Thus, Say did indeed conceive economics as a unified structure of analytical principles.

In formulating economic theories, Say adhered to the axiomatic-deductive method. But he advanced farther than Cantillon by explicitly describing and defending this method. According to Say:

Political Economy being composed, like the exact sciences, of a few fundamental principles and a great number of corollaries drawn from these principles, it is of importance . . . that its principles should be strictly deduced from observation⁴⁵

Hence the advantage enjoyed by all, who, from distinct and accurate observation can establish the existence of these general facts, demonstrate their connexion and deduce their consequences. They are as certainly derived from the nature of things as the laws of the material world⁴⁶

Say is careful to specify the fundamental axioms as broadly empirical and not merely hypothetical. Political economy " . . . does not rest upon hypothesis, but is founded upon experience."⁴⁷ Furthermore, Say argues,

. . . an hypothesis may, it is true, be resorted to, in order to exemplify and elucidate the correctness of the general reasoning, but can never be sufficient to establish a fundamental truth. Political Economy has become a science, only since it has been confined to the results of inductive investigation.⁴⁸

Say dismisses those who would attempt to confute the conclusions of economic theory by appealing to the facts. Noting that " . . . there is not an absurd or extravagant opinion that has not been maintained by an appeal to the facts . . . ," he argues that "a knowledge of facts, without a knowledge of the affinities which binds them together, is of no more value, than the crude information of a public clerk"⁴⁹ For Say, then, "political economy, . . . whenever the principles constituting its basis are the rigorous deductions of undeniable facts, rests upon an immoveable foundation."⁵⁰

In terms of conciseness, clarity, and consistency, the exposition of the axiomatic-deductive method which is contained in these passages certainly rivals the later treatments of Senior and Cairnes.

The next aspect of Cantillon's methodological impact on Say involves the recognition of the importance of the subjective factor which pervaded both of their works. In Say's case, this can readily be seen in his pathbreaking definition of production as " . . . the creation, not of matter, but of utility."⁵¹ Insight into the subjectivity of value also leads to Say's rejection of Smith's notion of "unproductive" labor and his conception of services as immaterial products possessing utility. I might also point to Say's well-known utility-oriented explanation of price determination as further evidence that he absorbed the subjectivist influences emanating from the *Essai*.

Precisely because of his subjectivist frame of reference, Say viewed economics as a qualitative science whose theories and propositions are incapable of exact quantitative formulation. In this vein, he writes:

It would be, however, idle to imagine that more precision, or a more certain direction could be given to this study from the application of mathematics to the solution of its problems. The *values* with which Political Economy is concerned, by admitting of the application of the terms *plus* and *minus* to them, are, indeed, within the province of the mathematics; but being, at the same time, subject to the influence of the faculties, the wants and the desires of mankind, are not susceptible of any rigorous appreciation, and cannot, therefore, furnish any *data* in absolute calculations. The essential requisite in political as well as in natural science, is the knowledge of the connexion between causes and their consequences.⁵²

Say's methodological individualism is an obvious concomitant of his subjectivism in value and price theory since it is the capacity to satisfy individual wants that ultimately endows an object with utility. In distribution theory, Say's methodological individualism is reflected in the pivotal role which the entrepreneur plays in the various markets for productive services. Moreover, in explaining the prices of all productive services by supply and demand, i.e. as the aggregate results of bargains struck between individual entrepreneurs and individual factor owners, Say not only unified distribution theory but rendered it ". . . much more exact than the Physiocrats', who conceived of exchange as taking place between classes only, and not between individuals."⁵³

Say also followed Cantillon in asserting the value-freedom of scientific economics. In a letter to Malthus, Say took a strong position on the matter. The economist, he writes,

. . . must be content to remain an impartial spectator. What we owe to the public is to tell them how and why such-and-such a fact is the consequence of another. Whether the conclusion be welcomed or rejected it is enough that the economist should have demonstrated its cause; but he must give no advice.⁵⁴

While, as I have attempted to demonstrate, Say adopted most of the methodological positions of Cantillon, he failed to give the time element its analytical due. As a result, Say eschewed the process analysis of Cantillon for the long-run comparative-static approach of Smith, particularly in his treatment of monetary phenomena. In fact, in Schumpeter's opinion, it was Say who dealt the coup de grâce to "Monetary Analysis" and ushered in the classical era of "Real Analysis" in which money was treated as a veil to be cast aside whenever one wished to deal with the fundamental processes of the economy.⁵⁵

It is indeed interesting to speculate upon the course that classical and neoclassical monetary theory might have taken had a classical economist of Say's stature absorbed and elaborated Cantillon's profound insights into the "microdynamics" of the monetary adjustment process. $MV=PT$ might well have appeared to modern economists as merely a jumble of symbols of no particular consequence; while the question of whether money matters might have been understood as only rhetorical and not the subject of serious debate.

NOTES

1. Joseph A. Schumpeter, *History of Economic Analysis*, ed. Elizabeth Boody Schumpeter (New York: Oxford University Press, 1968), p. 16.
2. Friedrich A. Hayek, *Introduction to Richard Cantillon, Abhandlung über die Natur des Handels im allgemeinen* (Jena: Verlag von Gustav Fischer, 1931), translation prepared by Micheál Ó'Súilleabháin for the Symposium on Richard Cantillon, Pacific Grove, California, August 1980.
3. Henry William Spiegel, *The Growth of Economic Thought* (Englewood Cliffs, N.J.: Augustus M. Kelley Publishers, 1968), p. 201 n. 58.
4. Douglas Vickers, *Studies in the Theory of Money 1690-1776* (New York: Augustus M. Kelley Publishers, 1968), p. 201 n. 58.
5. Leonard Liggio, "Richard Cantillon and the French Economists: Distinctive French Contributions to J. B. Say," paper presented at the Symposium on Richard Cantillon, Pacific Grove, California, August 1980, p. 13.
6. I. H. Rima, *Development of Economic Analysis*, rev. ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1972), p. 36.
7. *Ibid.*, p. 37.
8. See Isaac Gervaise, *The System or Theory of the Trade of the World*, ed. J. M. Letiche (Baltimore: The Johns Hopkins Press, 1954), reprinted in Leonard Silk, ed., *Mercantilist Views of Trade and Monopoly: Four Essays 1645-1720, The Evolution of Capitalism* (New York: Arno Press, 1972).
9. *Ibid.*, p. 3.
10. Jacob Vanderlint, *Money Answers All Things*, ed. Jacob H. Hollander (Baltimore: The John Hopkins Press, 1914).
11. *Ibid.*, pp. 9-10.
12. I. M. Kirzner, *Market Theory and the Price System* (Princeton, N.J.: D. Van Nostrand Co., Inc., 1963), p. 100.
13. Richard Cantillon, *Essai Sur La Nature Du Commerce En Général*, ed. and trans. by Henry Higgs (New York: Augustus M. Kelley, 1964), p. 29.
14. *Ibid.*, p. 65.
15. Vickers, *Studies in the Theory of Money*, pp. 187-88.
16. See Leo Illy, "Fundamental Problems of Price Theory" (unpublished manuscript) p. 16.
17. *Ibid.*, p. 11.
18. *Ibid.*
19. Hayek, *Introduction*, p. 13.
20. For Cantillon's analysis of market price determination, see Cantillon, *Essai*, pp. 13, 65, 117-21.
21. Hayek, *Introduction*, p. 13.
22. Cantillon, *Essai*, pp. 19-27.
23. Vickers, *Studies in the Theory of Money*, p. 201 n. 58.
24. This discussion extends over three chapters in the *Essai*. See *ibid.*, pp. 159-99.
25. Vickers, *Studies in the Theory of Money*, pp. 188-89.
26. See John E. Cairnes, *Essays in Political Economy: Theoretical and Applied* (New York: Augustus M. Kelley, 1965), pp. 1-165.
27. Ludwig von Mises, *Notes and Recollections* (South Holland, Ill.: Libertarian Press, 1978), pp. 57-58.
28. *Ibid.*, p. 59.
29. Cantillon, *Essai*, p. 119.
30. *Ibid.*, pp. 277-79.

31. Robert B. Ekelund, Jr., and Robert F. Hebert, *A History of Economic Theory and Method* (New York: McGraw-Hill Book Company, 1975), p. 43.
32. See Illy, "Fundamental Problems of Price Theory," p. 12.
33. Hayek, *Introduction*, p. 11.
34. Cantillon, *Essai*, p. 55.
35. *Ibid.*, p. 85.
36. On Schumpeter's recognition of the uniqueness of the Cantillon-Turgot-Say tradition, see Joseph T. Salerno, "Comment on the French Liberal School," *Journal of Libertarian Studies*, 2 (Winter 1978), pp. 65-68.
37. Jean-Baptiste Say, *A Treatise on Political Economy or the Production, Distribution, and Consumption of Wealth*, 4th ed., trans. C. R. Princep, 2 vols. (Boston: Wells and Lilly, 1821).
38. *Ibid.*, p. xxvi.
39. *Ibid.*, p. lv.
40. See Charles Gide and Charles Rist, *A History of Economic Doctrines from the Time of the Physiocrats to the Present Day*, 2nd ed., trans. R. Richards (New York: D. C. Heath and Company, 1947), p. 122.
41. Say, *Treatise on Political Economy*, p. lvii.
42. *Ibid.*
43. Gide and Rist, *History of Economic Doctrines*, p. 126.
44. Schumpeter, *History of Economic Analysis*, p. 492.
45. Say, *Treatise on Political Economy*, p. xxxiii.
46. *Ibid.*
47. *Ibid.*, p. lxv.
48. *Ibid.*, p. xlvi.
49. *Ibid.*, p. xxviii.
50. *Ibid.*, p. xxvii.
51. *Ibid.*, p. 3.
52. *Ibid.*, p. xxxiv.
53. Gide and Rist, *History of Economic Doctrines*, p. 129.
54. Quoted in *ibid.*, pp. 125-26.
55. Schumpeter, *History of Economic Analysis*, pp. 277-78, 282 n. 8.