

HEA Part II From the beginnings to the first classical situation

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'By Political Arithmetick we mean the art of reasoning in figures upon things relating to government... The art itself is undoubtedly very ancient... (But Petty) first gave it that name and brought into rules and methods.' Charles Davenant(1656-1714)

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Petty was first and last a theorist. But he was one of those theorists for whom science is indeed measurement, who forge analytic tools that will work with numerical facts and heartily despise any others, whose generalizations are the joint products of figures and reasoning that are never allowed to part company... He simply proposed 'instead of using only comparative and superlative words and intellectual arguments... to express (himself) in terms of number, weight and measure.' No less obvious is it that he was acutely aware of the polemical aspects of of his methodological creed. He was quite ready to fight for it and to start what would have been the first controversy on 'method.' But nobody attacked. A few followed. Many admitted. And the vast majority quickly forgot. [What they forgot was not his name, individual views of Petty's on various practical matters and some of his theories...] It was the inspiring message, the suggestive program, that wilted in the wooden hands of the Scottish professor and was practically lost for 250 years. Adam Smith took the safe ide that was so congenial to him when he declared (Wealth, Bk 4, ch. 5) that he placed not much faith in Political Arithmetick.

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To return to Petty. All or most of his writings were prompted by the practical problems of his time and country -- problems of taxation, of money, of the policy of international trade particularly with a view to getting the better of the Dutch, and so on. he superior quality of his mind shows in all his comments and suggestions, but there is nothing very striking or original or distinctive about them: they represented the views that were then current or becoming current among the best English economists. Nor is there anything distinctive in the fact itself that Petty no doubt reasoned from a more or less clearly perceived set of principles or theoretical schema; several of his contemporaries did that, and his schema was no more articulate than were theirs. There was something however that was specifically his own and in which his mental energy and theoretical talen asserted themselves conspicuously; as already observed, he hammered out concepts from, and in connection with, statistical investigations, and in doing so he got further at some points than did any of his contemporaries. His concept of velocity of money is rightly the most famous example and will be mentioned again in chapter 6 [p 316f]. Another example is his work on national income; he did not bother about its definition, but he recognized its analytic importance and he tried to figure it out. Modern income analysis may be said, in this sense, to start with him, though it seems on the whole better to trace it to Quesnay (#3). A third example is this: everyone knows the phrase that has been repeated ad nauseam, 'labor is the father.. of wealth, as lands are // the mother. This means that he put on their feetthe two 'original factors of production' of later theorists. Illogically dropping the mother, he declared elsewhere that capital (the 'wealth, stock, and provision of the nation') is the product of past labor... But it cannot be repeated too often that in themselves, and without the developments that make them valuable, such suggestions amount to very little. What does amount to something is his research on a natural par between land and labor... his attempt to relate the values of land and labor... by equating a piece of land that will produce a day's food of an adult man (with certain corrections) to the day's labor of such a man....

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the essentials
On division of labor however we find him saying all that A Smith was to say about it, including, including its dependence on the size of markets....

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Pierre le Pesant, Sieur de Boisguillebert (1646-1714) cd. 204 283-7

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Though as a leader in the field of public finance, we have met Boisguillebert already and though as a leader in the field of money we shall meet him again, it is desirable not to miss him in the scenery we are trying to visualize now as an important figure in the field of 'general theory.' He // was one more of those authors who saw the economic organism as an equilibrium system of interdependent economic magnitudes and who constructed the system from the angle of consumption -- getting further perhaps than anyone before Cantillon. His economic sociology turned, in an almost Marxist spirit, upon two social classes, rich and poor, the existence of which he explained in a way that was to become quite common as the eighteenth century wore on. The stronger individuals, by crime et violence, get hold of the means of production and then do not want to work any more -- a very modern touch that the reader will not fail to appreciate -- these strong robbers, who have become rich, tend to stock money rather than goods (hoarded money, the 'moloch of the world'), and thereby deprecate real wealth and disturb the current of economic life. The economic principle of order he found in competition quite as clearly as did A. Smith more than half a century later. From the viewpoint of analysis this is decisive. ... But though his conception of competitive 'proportionate equilibrium' was as definite as A. Smith's, it was not more so: it did not occur to him to define it or to investigate its properties. Defining richesse, as Cantillon was to do, as the jouissance of everything that can give satisfaction (plaisir), he declared, as had Petty, that this wealth had no other source // but land and labor, and then simply went on to say that the process of incessant transformation of land and labor into consumers' goods will normally function without hitches if all commodities and services are produced on the unfettered initiative of competing producers -- as if this did not require any proof.

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The French literature offers, among others, the most noteworthy example of all -- Boisguillebert's (Dissertation sur la nature des richesses cf 216), which is the more interesting because, like Quesnay, he was in principle a free trader and laissez-faire advocate. He did not invoke state management to secure the steady flow of monetary values (expenditures), but on the contrary pointed to the state-made impediments to it: the export duties, the internal barriers to trade, regulative interference with agriculture and manufactures, the vicious operations of the most important direct tax, the taille -- all of which desolated the countryside and impoverished the towns // because they restricted consumers' expenditures. Also, while we look upon wage earners as the most dependable spenders, Boisguillebert in the social pattern of his time assigned this role to landowners. But these differences serve only to emphasize the fundamental similarity both of his theory and of his outlook upon practical problems with those of our own time. Consumers' expenditure was the active principle of economic life. Equilibrium was an equilibrium of reciprocal demand, in terms of money, of all groups, for the products and services of other groups; it would realize itself only if every seller immediately became a buyer. Anything that interfered with prompt expenditure on consumers' goods would induce a fall in prices, hence a fall in incomes, then in turn another fall in consumers' expenditure, and thus result in cumulative depression. Therefore his horror, never surpassed by anyone's outside the United States Senate, of that worst of all disasters -- cheap bread. With delightful naivete he warned lawyers, physicians, actors, and so forth not to clamor for low prices of agricultural products: in doing so they were 'digging their own graves'; for the landowners who are nothing but intermediate spenders would then find their own incomes reduced and have to reduce their own expenditure...

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repeated below after page 284 f.

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Richard Cantillon (? 1680-1734) Essai sur la nature du commerce en general, about 1730, MS circulated soon after, published 1755; Harvard reprint 1892; English trans. 1932 Royal Economic Society. H. Higgs, 'Richard Cantillon,' Economic Journal, June 1891. Joseph Hone, Biographical Note on., Economic Journal, April 1944.

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Cantillon fared better than Boisguillebert both because his work was circulated promptly, because of its/systematic and even didactic form, and because it had the good fortune to gain the enthusiastic approval and the effective support of two very influential men, Gournay and Mirabeau.

us/

What Petty failed to accomplish -- but for what he had offered almost all the essential clues -- lies before/accomplished in Cantillon's Essai. True, it was not accomplished in the style of a pupil..., but in the style of an intellectual peer who strides along confidently according to his own lights. Likewise Quesnay strode along according to his own lights and was no more a pupil of Cantillon than Cantillon was of Petty. Nevertheless, few sequences in the history of economic analysis are so important for us to see, to understand, and to fix in our minds, as is the sequence: Petty-Cantillon-Quesnay. Cantillon's econometric zeal derived its direction from Petty. The supplement to his Essai, which contained his computations, has unfortunately been lost. But as we shall presently see, the results presented in its text suffice to show that it was Petty's problems -- mainly the par between labor and land -- and Petty's methods that inspired them. Moreover, dependence or possible dependence -- there can be no certainty about it -- extends beyond such individual points as the theory of the velocity of circulation or or the theory of population to the fundamental features of the general theoretical set-up. Exactly the same conclusion will be seen to apply to the relation of Quesnay's work to Cantillon's. Affinity is obvious, differences being not less revelatory of it that agreement: for a man may learn from another by criticizing him just as well as by accepting his teaching, and some of Quesnay's views look indeed as if they had been derived from Cantillon by the former method.. And again, it is precisely the fundamental features of Quesnay's analytic that are unmistakably foreshadowed in Cantillon's work.

The only way to raise all this above vague generalities is to take a bird's-eye view of Cantillon's work or, to phrase it differently, to present a Rader's Guide. This is what I proceed to do.

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The First Part contains the fundamentals of the analytic structure. In the first chapter we get the general layout by means of of the key concepts -- land, the source of material, and labor. Exactly as with Petty, and just as misleadingly, land, the source of material, and labor, the form-giving or productive agent, enter on equal terms wo turn out wealth which n'est autre chose que la nourriture, les commodites et les agrements de la vie (Boisguillebert's definition). Chapters 2-6 present what to all intents and purposes is an economic sociology. We first get a theory of social classes: ownership of land -- itself based upon conquest and violence as with Boisguillebert -- creates the three fundamental natural classes of landlords, farmers, and laborers (traders and entrepreneurs do come in along with artists, robbers, / lawyers, beggars; but they are added to this schema, not really fitted into it. Then we get a very interesting theory of the origin of villages, the origin of townships (Cantillon adopted a 'market theory' of towns, the theory that makes

makes them develop first from periodical, then from permanent markets) cities, and capital cities. Besides creating the form in which many a nineteenth-century textbook was cast..., Cantillon thus clearly proved his awareness of the fact, which smaller minds so often fail to grasp, namely, that the problems of any analytic social science necessarily divide up into two methodologically different groups: the group that centers in the question how the actual behavior of people produces the social phenomena we observe, and the group that centers in the question how the behavior came to be what it is. In chapter 3 we also learn something about location -- this is perhaps the first attempt (if we neglect embryonic considerations in the agricultural literature) at making some headway in this field.

Transition to pure economics - the economic^s that deals with behavior within the social framework described - is effected in chapters 7-9 where Cantillon for future reference settles a number of preliminary questions concerning (a) differences in remuneration as between laborers and artisans and as between artisans in different employments, and (b) population. The former subject as to be a favorite with later writers, particularly A. Smith, and became a standard topic in the standard text of the nineteenth century. The latter subject will have to be dealt with in the chapter on population, wages, and employment which follows. But it is just as well to add here, by anticipation, that Cantillon (clearly developing views of Petty) lets population on the one hand adapt itself to the demand for labor and on the other hand be regulated by a law of minimum-of-existence wages, so that his authority might be claimed for a Malthusian view were it for the fact that he also (in this still more like Petty) looked upon Petty as the natural riches of a nation (ch. 16). The last points in a different direction, though there is really no contradiction between the two ideas. Both had become common doctrine in the seventeenth century.

Having thus prepared the ground, our author presents (ch. 10) a cost theory of normal price or value.... This, if anything, falls short of the theory of the scholastics except that Cantillon, going through with Petty's theory, defined his cost in terms of the quantities of land and labor which enter into the production of each commodity. The obvious problem thus raised -- we might call it Petty's problem -- which Ricardo tried to dodge by eliminating land (cf. 933f) by the alternative expedient: labor is reduced to land by the consideration that the labor du plus vil Esclave adulte vaut au moins... la quantite de terre that must be employed to provide for his needs. Or, rather, since according to Halley's tables about half the children died before reaching the age of 17 (and also for other reasons) it was roughly double that quantity.... Let us repeat, however, first, that the really important thing is the message of econometric research that comes to us from this attempt -- the message that numerical calculations must be at the basis of any science, however 'theoretical,' that is quantitative by nature; and second that the arpents of land (1 arpent = 330 sq. ft.) played exactly the same role in Cantillon's analysis, that days of labor played in Ricardo's. And let us add that we have here the positive kernel of Quesnay's theory of normal value: his philosophies about the value-creating powers of nature added as little to the operative content of the Petty-Cantillon theory as Marx's theories about the value-creating powers of labor added to the operative content of the Ricardo theory.

220 With the deviations of actual prices from this norm -- that he reduced from cost in terms of land and labor to cost in terms of land alone -- Cantillon dealt very carefully.... One feature of his treatment is worth noting because it persisted practically to J. S. Mill. Like all 'classics' of the nineteenth century, Ricardo especially, Cantillon never asked himself the question how market price is related to normal price and precisely how the latter emerges -- if indeed it does emerge -- from the supply and demand mechanism that produces the former. Taking this relation for granted, he was led to treat market price as a separate phenomenon and to restrict the supply and demand phenomenon to it. Thus emerged the superficial and, as the later development was to show, misleading formula -- normal price is determined by cost, market price is determined by supply and demand -- of which we shall see more in Part III.

221 Going on, we see Quesnay's figure still more clearly looming in the future, and Boisguillebert's still more looming in the past. All the classes of society and all the men in a state subsist or enrich themselves at the expense of the landowners (ch. 12). In the light of Chapter 14, this will be seen to mean no more than that, whereas every other/item is being balanced by a cost item, including in the costs the necessary living expenses of the receiver, the landowners' rent is the only one that is not so balanced because, to use a later phrase, it is a return to a costless, that is, non-produced, natural factor. Therefore income from land, not being bound to certain more or less predetermined uses, can be spent in any way that the whims of the landowners may suggest. Its expenditure is the undetermined and, precisely because of this, the determining and active factor in the total of national consumption -- hence also in the total of national production, so that everyone's economic fate depends upon the whims les humeurs, les modes, et les facons de vivre of the prince and the landowning aristocracy. These humeurs determine les usages auxquels on emploie les terres, and, in particular, how many people will be employed and able to make a living in a country (ch. 15), and how its balance of trade will look if both sides of it are measured in terms of land -- which is the criterion to be employed for judging the advantage or disadvantage a country derives from foreign trade. Not all of this reappears in physiocrat writings, not, for example, the last-mentioned point. But most of it does, and it is therefore desirable to make it quite clear what we are to think of it.

income/

Several aspects must be distinguished. First, there is the theorem that pure rent is a net return that is explained by the productivity of scarce natural agents: this is a true and valuable proposition to which, after many wanderings, theory returned about 1870.

Second, there is the statement that this net return is the only one, and that it is agriculture which produces the whole net income of society, no other economic activity producing any of it. This on the face of it is wrong but -- like the labor theory of value -- it can be made true by the introduction of a sufficient number of auxiliary assumptions or postulates -- such as absolutely perfect, stationary state, absence of urban rent, minimum-of-existence wages so that labor becomes a product of what the laborer consumes, and others -- which however destroy the statement's value.

Third, there is the emphasis upon the importance of this income's being promptly spent in order to keep the economic process going. This point played a small role with Cantillon but more with Boisguillebert before him and with Quesnay after him.

221 And fourth there is the emphasis -- that is specifically Cantillon's upon the way in which the net income is spent. A common sense case can obviously be made out for this, especially for the society that stood before Cantillon's eyes.

222 Now, the produit de la terre is, so Cantillon asserted, divided into three approximately equal parts (les trois rentes), one third replacing the farmer's outlays, including his own necessary keep, another third going to him as profits, and the last third to the seigneurs. These landlords spend the equivalent of their third of the product of land in the towns where approximately half of the total population is supposed to live. The farmers also spend something on the manufactures produced in the towns, namely, one-fourth of their two-thirds. Thus, the equivalent of one half ($1/3 + 1/6$) of the total product of agriculture finds its way into the towns, into the hands of the marchands et entrepreneurs, who expend it in turn on foodstuffs and raw materials and so on. Interpretation of this schema, for which Cantillon himself claims no more than the value of a very rough thumb-and-nail sketch, presents various difficulties into which we cannot enter. But it also presents many points of interest, of which we shall mention two.

First, Cantillon had a clear conception of the function of the entrepreneur (ch. 13). It was quite general, but he analyzed it with particular care for the case of the farmer. The farmer pays out contractual incomes, which are therefore certain, to landlords and laborers; he sells at prices that are 'uncertain.' So do drapers and other merchants: they all commit themselves to certain payments in expectation of uncertain receipts and are therefore essentially risk-bearing directors of production and trade, competition tending to reduce their remuneration to the normal value of their services. This, of course, is scholastic doctrine. But nobody before Cantillon had formulated it so fully. And it may be due to him that French economists, unlike the English, never lost sight of the entrepreneurial function and its central importance. Though presumably Cantillon had never heard of Molina, and though there is nothing to show that he actually influenced J.B. Say, it is none the less true that 'objectively' his performance on this point -- and this was not suggested by Petty nor developed by Quesnay -- is the link between these two.

223 Second, if we look once more at Cantillon's sequence of payments and deliveries, which starts from tripartite division of the gross product or revenue of farming -- the trois rentes -- and, through a number of definite stations, takes us back again to the starting point, the farmers, we immediately feel that we are beholding something that is novel, something that is not explicitly present in the schemes of Cantillon's predecessors or contemporaries -- not even in Petty's -- or in fact in the schemes of most theorists of any time. From them we get indeed statements of general principles that govern the economic process. But they leave it to us to visualize this process itself as it runs its course between social groups or classes. Cantillon was the first to make this circular flow concrete and explicit, to give us a bird's-eye view of economic life. And barring differences that hardly affect essentials, this tableau is the same as Quesnay's, though Cantillon did not actually condense it into a table. Cantillon's priority is thus beyond question as regards the 'invention' that Mirabeau, indulging// as usual his generous ardors, compared in importance to the 'invention' of writing. But since Quesnay's formulation is so much more famous we shall add what there is to add in connection with his work.

It stands to reason that the tableau method offers special opportunities for investigating monetary phenomena, especially velocity of circulation -- this is one of its chief advantages. In fact, Cantillon is at his best in this field. Chapter 17 of Part I, which presents the fundamentals of monetary theory, is not particularly original: we get pretty much the old stuff, including the divisibility, portability, &c., of gold and silver that recommend them for the monetary function. But the whole of Part II (which also includes the theories of barter, market price, and so on) is mainly devoted to money, credit, and interest, and so is much of Part III (mainly on foreign trade), where we find Cantillon's analysis of banks, bank credit, and coinage. Consideration of the main items of this performance, which in most respects stood unsurpassed for about a century -- the automatic mechanism that distributes the monetary metals internationally is, for example, almost faultlessly described, an achievement usually credited to Hume -- will however be reserved for subsequent chapters.

318-20 Credit and the Concept of Velocity: Cantillon