

Deductive economic methodology in the French Enlightenment: Condillac and Destutt de Tracy

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I. Introduction

This article argues that two early French theorists, Condillac (1714–1780) and Destutt de Tracy (1754–1836), were sophisticated deductivists in economics. The historical investigations of economic methodology recognize the deductivist tradition in classical economics and its continuation into the neoclassical era. The nineteenth-century leaders—Nassau Senior, J. S. Mill, and J. E. Cairnes—and the twentieth-century developers—Lionel Robbins, Frank Knight, and Ludwig von Mises—have received much attention in this literature (J. N. Keynes 1955, 11–20, 216–51; Hutchison 1965, 36–40, 131–43; Schumpeter 1954, 533–40, 577, 824; Blaug 1980, 55–94). The forerunners Condillac and Tracy, however, have been almost entirely overlooked.

In short, what is meant by the deductive methodology of economics is the establishing of economic laws by deductions from first principles (or axioms). The economic deductivist believes these principles to be true and proceeds with the assumption that his readers will readily accept them as true because the ideas are so familiar. The first principles are said to be known with certainty from either introspection or from the most casual observation of fellow human beings. In establishing these principles the process of induction may have a role, but deductive writers consider the truth of these principles so obvious that accepting them hardly requires an inductive reasoning process at all. From the first principles the entire con-

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1. Hector Denis is an exception to this general oversight. The discussion of Condillac in his *Histoire des systèmes économiques et socialistes* (1904, 153–64) shows a fine appreciation of Condillac's deductive methodology; he says of Condillac's work on economics: "it is one of the best applications of Condillac's analytic method and furnishes, in the history of the Science, one of the purest examples of *deduction* in social science. In this work, he sought to simplify the study of complex economic phenomena by reducing the phenomena to precise elementary ideas. After arriving at these irreducible principles by penetrating analysis, the science, as Condillac says, will develop itself: 'the propositions follow one from the other just as identical consequences or propositions follow in succession,' in other words, Condillac deduces from them the fundamental explanation of the economic order" (pp. 154–55, emphasis in the original). Unfortunately, Denis does not show the same appreciation of Destutt de Tracy.

tents of the 'economic toolbox' can ostensibly be derived, and while the deductivist attempts to do so, he emphasizes and elucidates the logical relationships between his findings and their ultimate dependence upon the first principles.²

As Senior concisely put these ideas:

his [the political economist's] premises consist of a very few general propositions, the result of observation, or consciousness, and scarcely requiring proof, or even formal statement, which almost every man, as soon as he hears them, admits as familiar to his thoughts, or at least as included in his previous knowledge; and his inferences are nearly as general, and, if he has reasoned correctly, as certain, as his premises [1965, 2-3].

Ceteris paribus assumptions may be used in conjunction with the first principles to arrive at further economic laws, but these will be laws which are then conditional on the assumptions. This nature of the conditionally derived laws prompted John Stuart Mill to point out that "the mere political economist, he who has studied no science but Political Economy, if he attempt to apply his science to practice, will fail."³ We will see how Condillac and Destutt de Tracy eagerly prescribed policies, but remained consistent with Mill's idea because their prescriptions in the main rest upon non-conditional conclusions.

In 1776 a study of economics appeared in France by the abbé Etienne Bonnot de Condillac called *Le Commerce et le gouvernement considérés relativement l'un à l'autre*. Appearing during the intellectual reign of physiocracy, the work was quickly investigated by critics to determine whether it was worthy of being considered part of the school. Interestingly, there was a divergence of opinion on the matter. Opponents of the physiocrats,

2. A body of economic thought can be built with this sensitivity to deduction but still not fit our description of deductive economics. Economic statements may be derived from primary postulates which are not self-evident, universal truths and, therefore, not presented as such (either because the author sees them as only hypotheses, not to be adopted as the absolute truth, or because he does see them as the truth, but the readers, so he believes, are not yet enlightened in the matter, and accordingly he presents his primary principles as fresh revelations). Examples of this approach are the physiocrats Quesnay and Mirabeau. Their fundamental principles concerning the economic divisions of society, the sterility of the manufacturing class, and other things were not just an organization and articulation of common ideas. They were aware of this, and though they believed the principles to be true (not just working assumptions), they presented their ideas as freshly discovered truths. Conclusions were then derived. As Condillac and Destutt de Tracy would have it, this is the erroneous method of proceeding from the unknown to the known which they associated with Descartes and Malebranche. Many features of physiocracy closely parallel Cartesian philosophy, and these made Condillac quick to expose the problem therein. For these important parallels, see Pribram 1983, 103-7, 113.

3. *Essays on some unsettled questions of political economy* (1844), in *Collected Works*, ed. J. M. Robson (Toronto), 4:331; quoted in Blaug 1980, 65.

such as Grimm, recognized the physiocratic laissez-faire policy in Condillac, and concluded that he was a member of the school. The physiocrats themselves, however, had a very different understanding. Baudeau and Le Trosne vehemently denied that Condillac had any place with the physiocrats.⁴ Since Condillac disagreed with the basic physiocratic notions on value, exchange, production, the origin of social order, and who 'le maître'⁵ of economic science was, the physiocrats were quite correct in not considering him an adherent of their doctrine.

Condillac's economic ideas were different because they flowed more from a philosophical basis than from a familiarity with social and economic matters. Relying on only a few works, notably those of Cantillon and contemporaries Galiani and Turgot,⁶ he "applied his power of analysis with the natural clarity of his mind" (Lefort 1911, 258)⁷ to the principles of economics. What we find there is a sophisticated deductive approach to economics where the method and the rudimentary axioms come directly from his philosophy. Condillac's economics have received little attention. When the physiocrats were generally discredited, there was a tendency to view physiocracy as the sole doctrine in France. Accordingly, his work just got brushed away with the obsolete material.⁸

While Condillac's economics did not endure, his philosophy did, at least for another generation. The Condillacian, liberal thinkers known as the ideologists (*idéologues*) were influential throughout the Revolution and the initial phases of the Empire.⁹ This group, led by Pierre Jean Georges Cabanis and Antoine Louis Claude Destutt de Tracy, sought to establish a unified body of scientific knowledge encompassing the spectrum from the physical to the moral, by employing the sensationalist philosophy and method of Condillac. Some historians have seen the *idéologues* as forerunners of French positivism because of the close affiliation of the physical and the moral in their work. The language of the *idéologues* does indeed often suggest this and left room for later misunderstanding, yet their main thrust was actually to make separate sciences. The mode of analysis is the same in all endeavors: to establish primary principles which come from the most simple ideas (hence the name 'ideology'), which in turn come

4. For an account of the contemporary reception of the work see Lebeau 1970, 26–44.

5. Baudeau scoffs that the master of economics (Quesnay) is totally foreign to Condillac. See Baudeau's 'Observations économiques à M. l'abbé de Condillac,' reprinted in Lebeau 1970, 422–45.

6. For the relation between Condillac, Turgot, Galiani, and Graslin see Marchal 1938. For Condillac on Cantillon see n. 29 below.

7. I did the translating of passages from French sources with the aid of Anne Cordero. When borrowed translations are used, the English source is given in a footnote.

8. See Lebeau 1970, 50–52; Marchal 1938, 300–301.

9. Of course, in such politically volatile periods any group will have their low points. The *idéologues* had notable ones during the Terror and the later part of the Empire.

directly from our sensations. What distinguishes the different sciences is the object being investigated, and the *idéologues* definitely believed that the social sciences give way to a very differently structured body of thought than do the physical sciences.¹⁰

For methodological and social studies, Destutt de Tracy was the leader of the group. In his *Elémens d'idéologie* (Paris, 1801–1815) he hoped to exposit the manner of obtaining certainty in science and the true foundations of social science. The *Elémens* consisted of four volumes: *Idéologie proprement dite* (1801), *Grammaire* (1803), *Logique* (1805), and *Traité de la volonté et de ses effets* (1815). The first three volumes deal with method, psychology, grammar, and logic. The fourth volume is a study of political economy, and is the first of a projected (but unaccomplished) three-volume set on society which was to include a treatise on morals and a treatise on legislation. This work was translated by Thomas Jefferson and was given the title, *A treatise on political economy* (Georgetown, D.C., 1817). Jefferson also supervised the translation of Tracy's quasi-treatise on political theory, called *Commentary and review of Montesquieu's Spirit of Laws* (Philadelphia, 1811; French original first published in Liège, 1817).

Like Condillac, Tracy employed his own philosophy in his study of economics. Tracy, however, having the advantage of reading Smith and Say,¹¹ cultivated a more profound deductive treatment of economics. The economic methodology of both Condillac and Tracy is intimately connected with their philosophy, so that to illustrate the deductive nature of the former, we must first investigate the fundamental elements of the latter. An understanding of Condillac's ideas, which will be examined first, will cover the key characteristics of the methods of both theorists, yet the substantial improvements by Tracy in both philosophical and economic matters will demonstrate the fecundity of the general approach. In the conclusion, I briefly compare the method of these early Frenchmen with a representative of modern deductive economics, Lionel Robbins; a strong similarity exists there, illuminating the relevance of this article's argument to the historical development of economics.

II. *Condillac and His Methodology*

Condillac believed that while "this universe is nothing but a system, that is to say, a multitude of phenomena which, being related to one another as causes and effects, all spring from a first law," man is unable to seize this

10. See Picavet 1981, 314, 250; Hayek 1964, 112–16; Staum 1980, 161–62, 171–72, 176–223.

11. On the subject of production, Tracy states: "It has been treated by many able men, at the head of whom we should place Turgot and Smith. But, in my opinion, no one has thrown so much light on it as Mr. Say, the author of the best book I know on these matters, although he leaves still something to be desired" (1970, 19).

first law and, hence, unable to understand the whole "system."¹² Man's understanding is limited to segments of this universe, in each of which there lie related concepts that, taken together, make up a system. But, just as the grand universal system (unknowable in its entirety to man) is based on a first law or truth,¹³ so are the systems (or sciences) developed by man. Condillac defines a system as "a body of knowledge with mutually dependent parts, which is derived from a single principle, so that a good system is simply a principle successfully explained."¹⁴

Condillac did not believe that all scientific reasoning *began* with deriving laws by deductions from a fundamental axiom.¹⁵ The task of establishing the first principle has priority, and this priority is achieved by adhering to the dictum of proceeding from the known to the unknown:¹⁶

The order that analysis makes imperative for us implies first of all that we work with known factors, because if we do not begin by determining them, it will be impossible for us to determine the value of the unknown factors. Secondly, analysis makes it imperative for us to seek out among the known factors the one that must be first; because if the first one is not determined, one will not determine the others. Therefore, let us look for the first factor [Condillac 1947b, 248].

The data of experience are our starting point; sensations provide the knowns—"Well-established facts can alone be the true principles of the sciences."¹⁷

12. Condillac, *Dictionnaire des synonymes in Œuvres phil. de Condillac*, 3:511-12; translated passage from Knight 1968, 52. The lucid works of Isabel F. Knight and Robert McRae (1961, 89-106) were very helpful in this section and greatly expedited my understanding of these matters; I have spared myself much burden by borrowing translated passages from them.

13. Condillac makes an analogy: "Now as all machines, from the simplest to the most complicated, are only one and the same machine which assumes different forms in order to produce different effects, in the same way the properties we discover in a series of machines, each more complicated than the previous, reduce to one first property which in being transformed is at once one and multiple. For if there is in the end only one machine, there is in the end only one property. To be convinced you need only to consider that we have ascended from knowledge to knowledge only because we have passed from identical proposition to identical proposition. Now, if we were able to discover all possible truths and to be assured of them in an evident manner, we should produce a succession of identical propositions equivalent to the succession of truths, and as a result we should see all truths reduced to a single one." *Cours d'études, De l'art de raisonner in Œuvres*, 1:676b; translated passage in McRae 1961, 101-2.

14. Condillac, *Dictionnaire des synonymes in Œuvres*, 3:511-12; translated passage in Knight 1968, 52.

15. Such a method was the first one he examined and rejected in his *Traité des systèmes* (1749) for making the error of proceeding from the unknown to the known.

16. "The object of a science, is properly speaking, a problem which like all problems to be solved, contains known and unknown factors" (Condillac 1947b, 247; translated passage in Knight 1968, 227).

17. Condillac, *Œuvres*, 2:13; translated passage in Frankel 1948, 45.

We use the knowns to formulate our working identities, just as equations are used in algebra, and then we combine the statements to arrive at a solution to the unknowns. With the progressive uncovering of the unknowns we formulate a network of knowledge in which each principle is an identity and all are related to one another. When the system is complete we can ascend the steps involved to arrive at the primary identity (or first principle), or we can descend from the primary identity to the secondary ones. As Condillac explains:

To demonstrate is then to translate an evident proposition, to make it take different forms until it becomes the proposition we wish to prove. It is to change the terms of the proposition, and to arrive, by a succession of identical propositions, at a conclusion identical with the proposition from which it is immediately drawn.¹⁸

The device of reasoning is therefore the same in all the sciences. Just as in mathematics the question is established by translating it into algebra, so in the other sciences it . . . is established by translating it into the simplest expression, and when the question is established, the reasoning which solves it is itself only a series of translations in which a proposition translating the one preceding it is in turn translated by the one which follows it.

In this way evidence passes with identity from the statement of the question to the conclusion of the reasoning.¹⁹

All systems then have the same basic nature, while the principles relevant to each are separate:

this method is the only one, and . . . it must be absolutely the same in all our investigations, for to study the different sciences is not to change the method, but to apply the same method to different objects.²⁰

How can such a system, seemingly just one great tautology, containing only analytic knowledge, be instructive? As Isabel Knight has explained, “the answer lies in the limited capacity of the human mind” (1968, 61). The human mind cannot effortlessly trace out all the ramifications of a principle. The same truth may appear as something very different when discussed with a different intent or after different suppositions. And even if each analytic connection had at one point been successfully made, man could not perfectly retain that knowledge nor reproduce it at a moment’s notice. If we could simultaneously retain all the parts, we would compre-

18. *De l’art de raisonner* in *Œuvres*, 1:623a; translated passage in McRae 1961, 97.

19. *La Logique* in *Œuvres*, 2:411a; translated passage in McRae 1961, 99.

20. *La Logique* in *Œuvres*, 2:381b; translated passage in McRae 1961, 92.

hend the entire system as an identity and would never bother articulating the structure of propositions. Condillac regards God's knowledge as such: "Each truth is for him like 'two and two make four.' He sees them all in a single truth, and doubtless nothing is so frivolous in his eyes as this science with which we inflate our pride."²¹ But this view does not really belittle our scientific achievements, because we proceed in science handicapped with human limitations. We cannot at once reduce all our understanding to the tautology that knowledge really is. Condillac gives an example: "A child who learns to count thinks he has made a discovery the first time he notices two and two make four. He is not mistaken. For him it is a discovery."²²

While Condillac puts the utmost emphasis on certainty based on the facts of experience and the operations of logic, he does reserve a place for hypothesis. He admits that conjecture can be an instructive approach to problems, but warns us that we cannot, just because hypotheses may have a felicity in explaining, adopt them as principles. "Since suppositions are only suspicions, they are not established facts. Therefore they cannot be the principle or beginning of a system; otherwise the whole system would reduce itself to a suspicion."²³ If, however, there is some way of establishing a hypothesis as fact, it can be adopted as a principle. Such a way does exist when two requirements are met: (i) that we exhaust all other possible suppositions, and (ii) that we thoroughly investigate the application of each supposition with language as lucid as mathematics, hence determining the capacity of hypotheses for explanation. Once these two requirements are met, we can adopt a hypothesis which faultlessly explains the matter or, in other words, which perfectly agrees with the facts (which such a reduction implies), as a principle. Because these requirements are so stringent, Condillac claims that the ability of hypotheses to uncover principles is limited to mathematical investigations. Not even in physics are hypotheses suitable, because of the multitude of causes and our inability to determine the first cause. It is not a surprise to us, then, that Condillac ignored the procedure of beginning with hypothesis in his economics if we consider the even greater complexity of events and the even lesser precision of language in the social realm.

It is thus evident that Condillac's articulation of his method does not offer deduction as the exclusive means of scientific discovery. He does believe that once the primary principle is established, we can deduce the rest of the system from it; but this first principle is not always immediately

21. *L'Art de penser* in *Œuvres*, 1:748; translated passage in Knight 1968, 6.

22. *Ibid.*

23. Condillac, *Traité des systèmes* in *Œuvres*, 1:1236; translated passage in McRae 1961, 91. For a discussion of Condillac on hypothesis see also Hine 1979, 122–46, or the more compendious Knight 1968, 71–73.

known to us. He does recommend, however, that we search for the primary principle first, since this will clarify and expedite the rest of our work. We will see that in his economics Condillac did not use hypotheses to arrive at his first principle. Instead it is established by deductions from empirical facts. But, significant for our claim that Condillac is a deductivist, these facts are so commonsensical and readily accepted that he presumes that his readers will accept them without his even making the empirical, inductive case for them. Hence, somewhat paradoxically, the leading French figure in the reaction against Cartesian rationalism turns out to be one of the first and truest deductivists in economics.

Condillac's 1776 piece on economics, *Le Commerce et le gouvernement considérés relativement l'un à l'autre*, is important to an understanding of his thought because it is the only substantive project in which he actually employed his ideas on science. The rest of his works are chiefly concerned with discussing science and epistemology. "In his study of economics, on the other hand, Condillac was using his method—by now surely in its most mature and evolved state—to discover and expound the principles of a subject which did not itself have anything to do with the principles of method" (Knight 1968, 233).

The economic methodology of Condillac's *Commerce* follows his philosophy of science and is essentially deductive. *Le Commerce et le gouvernement* is by no means either a brief or a scattered work. In the original 1776 edition it filled a hefty 586 pages. The first and longer of its two sections is a thorough (for the period) treatise on economic principles; the second is an investigation of the relationship between these principles and specific governmental activities.²⁴ The book is profound and can generate much discussion.²⁵ We cannot here delve into all of its interesting features, but will limit ourselves to observations on its methodology.

24. Condillac planned a third section, but it was never produced. It was to be a study in economic history, with which he would "support [himself] as much on experience as on reasoning" (1947b, 242).

25. Though not common, there have been some strong endorsements of Condillac. Michel Chevalier said, "It would be a lack of justice not to remark here that in the same epoch that appeared *The Wealth of Nations*, in the same year, Condillac published a volume in which he rectified, more completely than Adam Smith, errors of the Physiocrats of reserving the name and quality of wealth to the products of the land" (*Journal des Economistes*, Jan. 1874, p. 29; passage reproduced in Lebeau 1970, 47). Henry Dunning Macleod said: "Condillac's is a very remarkable work and deserves attention." "It is true that Condillac's work can by no means be considered as a complete treatise, and it requires an immense development. But it lays down the broad general outlines of true Economics. . . . Smith's [work] obtained universal celebrity in a very short time. Condillac's was utterly neglected, but yet in scientific spirit it is infinitely superior to Smith. It is beyond all question the most remarkable work that had been written on Economics up to that time and it plays a most important part in the history of the science. The whirligig of time is now bringing about its revenges, for all the best European and American Economists are now gravitating to the opinion that Condillac's is the true conception of Economics. The beautiful clearness and

“At the base of economic science, Condillac places value: it is in effect the irreducible element to which analysis links all economic phenomena” (Lebeau 1970, 163). In Condillac’s system free exchange leads to the result that “each one of the contractors always gives a lesser of it [value] for a greater” (Condillac 1947b, 255), and thus necessarily augments the well-being of the parties involved. It does so because value is for Condillac a purely subjective phenomenon. Such are the central principles from which he deduced virtually all of his analytic statements, and besides basic definitions, such statements constitute the bulk of his work. He had to establish the principles first, though they are not our primary knowns. His procedure relies on other knowns which stem directly from his philosophical and epistemological beliefs. Remembering that his philosophical beliefs are built upon the irreducible knowns of sensation, we see why Lebeau has claimed: “Despite the complexity of economic phenomena, the elementary fact of the science, value, was exactly recognized by Condillac without the aid of hypothesis” (Lebeau 1970, 135).²⁶

Condillac, the leading figure of sensationalist philosophy during the French Enlightenment, borrowed from the epistemological beliefs of Locke, embracing his notions of a *tabula rasa* and of the ability of the external world to leave its imprint on the brain through the sensations.²⁷ Since the mind is the product of those impressions the external world makes, each mind develops its individuality through its exposure to occurrences that differ from one mind to another. Condillac transferred this principle to his economic thought. Once personal individuality has been established, objects have a different significance for different people. Hence, there is subjectivism in all evaluation.

How, specifically, does value arise for each individual? Condillac unravels a logical sequence from sensation to need to utility and finally to value.

simplicity, the instinct of the true physicist are visible throughout; at length he will receive justice and, after the neglect of 120 years, he will emerge as the true founder of modern Economics” (pp. 69–70; emphasis added). W. S. Jevons described Condillac’s book as “original and profound” (Palgrave 1925, 385). Auguste Lebeau concludes that Condillac deserves, with “Quesnay, Turgot, and Adam Smith, an eminent place in the history of political economy” (1970, 426). René Gonnard said “Although the title is a little specialized, this work [*Le Commerce*] really embraces the whole of economic science. . . . the name of Condillac should stay inscribed among the founders of modern economics, maybe a rank below that of Quesnay and Smith, but equal or even superior to that of the other economists of the time” (1943, 257). And finally, Say had ambivalent comments: “Many useful hints may be collected from amidst the ingenious trifling of this work” (1832, xxxv–xxxvi).

26. For an analytically thorough and historically enlightening treatment of Condillac’s economics consult Auguste Lebeau’s *Condillac économiste*.

27. Naturally, there was variation on these ideas from thinker to thinker. Diderot, for example, ridiculed the idea of *tabula rasa*. Condillac himself, while being a proclaimed believer in *tabula rasa* actually cannot be considered one because of his ideas on the origin of language. See McRae 1961, 92–96; Frankel 1948, 52–53.

Though man begins life as a passive receptor of sensations, this inactivity does not persist:

But the nature of his sensations does not permit him to stay enshrouded in this lethargy. As they are necessarily agreeable or disagreeable, he is interested in seeking the first ones and in escaping the others [Condillac 1947a, 324].

This relationship between subject and object in turn gives rise to need: "Then the privation of an object that we judge necessary for our happiness, gives us this uneasiness, this inquietude that we call *need*" (ibid. 324). Now,

We say that a thing is useful when it fulfills some of our needs; and that it is useless when it does not fulfill any, or that we cannot use it all. Its utility is therefore founded on our need for it [Condillac 1947b, 244–45].

Value in turn stems from utility, but value is an even more subjective variable matter because it depends not only on the usefulness of the good (which Condillac sees as more of a physical or physiological relation—*besoins naturels*) but also on our estimation of its ability to serve us:

We value it more or less according to its utility; that is to say, we consider it more or less fit for the uses we want to make of it. This estimation is what we call *value* [1947b, 245].

It must be remembered that, although things have a value only because they have qualities which make them fit for our use, they would have no value at all for us if we did not judge that they in fact have these qualities. Their value, therefore, is principally in the judgment we make of their utility.²⁸

Such are the steps that Condillac takes to establish subjective value, from which the notion of reciprocity, tirelessly repeated in his work, immediately follows. The initial claims of this ratiocination are knowns which are so fundamental to us that in merely asserting them they are accepted by all as self-evident. It is a truth which *tout le monde* has by experience (ibid. 281).

With value as the cornerstone of his analysis, Condillac discusses the economic operations of an isolated community, and here he develops a conception of the goal of economic science. He moves from value to exchange to price by integrating the ideas of abundance and scarcity, supply and demand, competition, uncertainty, and entrepreneurship. Much of this

28. 1947 b, 247; translated passage in Knight 1968, 238.

matter is borrowed from Cantillon,²⁹ but much shows brilliant originality. Condillac reasons that with *laissez-faire*, an economic order of mutual interdependency will evolve among the individuals.³⁰ It is by the process of voluntary exchanges alone that society can produce as much wealth as it is capable of. Ultimately Condillac deduces these conclusions from the notion of reciprocal advantage in voluntary exchange.

Economics, for Condillac, is a science because of its utilitarian function of discovering the means of augmenting wealth:³¹

The object of a science is, properly speaking, a problem which like all problems to be solved, contains known and unknown factors. In the science of economics the known factors are the means that we know to be effective in producing abundance in some areas, the unknown factors are the means remaining to be discovered for producing abundance in all. . . .

Among the means of producing abundance, I see first the cultivation of land. But, if agriculture seems necessarily to begin before commerce, it is certain that it can be perfected only insofar as commerce is established and extended. Thus a perfected agriculture, that is to say, one which produces the greatest abundance, presupposes commerce. Commerce presupposes exchange, or, what is at bottom the same thing, purchases and sales. Purchases and sales presuppose that things have a price, and price presupposes that they have a value.

These are the known factors. However confused they still are, I at least see clearly in what order they rest upon one another; and this order . . . shows me that the value of things is the first idea to be developed and defined.³²

By the process explained above, Condillac first develops and defines the idea of value and then, by applying this principle, concludes that the unknown means of maximizing abundance is simply a liberty "full, entire and permanent." By employing his method of analytic system building, he proclaims at the end of his work, "I believe to have proved it" (1947b, 367). It is Condillac's concern with economic policy (with maximizing the wealth of the whole society), rather than with spinning out logical impli-

29. Condillac footnotes Cantillon many times and says of Cantillon's *Essai sur la nature du commerce en général*, "It is on this material one of the best that I know; but I do not nearly know them all" (1947b, 276).

30. Condillac's exposition of spontaneous order is very sophisticated and is a clean break from the physiocratic notion of natural order. See Lebeau 1970, 66–67.

31. Condillac believed that the proper material in all science is determined by man's utilitarian considerations. These set the scope for any particular science, enabling man to categorize and systematize. Since utilitarian considerations are general and universal, they give science a natural and objective form, as well as an underlying unity. See Knight 1968, 68–70; McRae 1961, 102–6.

32. 1947b, 247–48; translated passage in Knight 1968, 227.

cations for the sake of doctrinal completeness, that limits his scientific discoveries.

In his logical progression running from need to laissez-faire, crucial steps are missing, principally in the jump from value to price. There he accepts the ideas of scarcity and abundance as general conditions, rather than remaining on the individual level:

I consider that something is rare when we *judge* that we do not have as much of it as we need for our use, that it is abundant, when we *judge* that we have as much as we need, and that it is superabundant, when we *judge* that we have more than we need [1947b, 246–47].

Condillac saw relative scarcity as arising from our judgment of the suitability of the entire stock of a good to our usages, rather than from individuals valuing incremental units of the goods. Unfortunately he did not treat supplies with discrete units and analyze exchange on the margin. While he displayed much appreciation for the importance of relative scarcity, he ended up either merely asserting the ideas involved or providing at best a nebulous explanation.³³ Since he went on to speak in more macro-oriented terms, this missing step did not later hinder his analysis.

III. *Destutt de Tracy and His Methodology*

Destutt de Tracy considered Condillac's most famous exposition of his theory of science, the *Traité des systèmes*, "un coup de lumière" and maintained that "before Condillac we hardly had anything on the operations of the human mind, other than some scattered observations more or less faulty. He was first to gather them and incorporate them into a doctrine."³⁴ Tracy's ideas on general methodology largely coincide with those of Condillac, yet he did have some interesting variations on them. These variations will partially explain some of the minor differences between the similar economic thoughts of the two.

Like Condillac, Tracy insisted that we base our body of knowledge on elementary principles which we deem certain by our only criterion: sensation. Beyond simple facts of sensation there are our abstract or theoretical ideas, which must receive their character and certainty from the first principles; they are contained (*renfermé*) in the original knowledge. "It is thus that always by remounting, or rather by descending step by step, we are inevitably led to the study and observation of our intellectual faculties,

33. He gets himself into an unfortunate mess by considering the exchange between an owner of grain and an owner of wine, and stating that what each gives up is his "superabundance" of the good (1947b, 248–49). Condillac doesn't dispel the confusion.

34. Destutt de Tracy, *Eléments d'idéologie. Première partie. Idéologie proprement dite*, 2d ed. (Paris, 1804), 175; the passage, in the original language, is found in Hine 1979, 3.

whenever we wish to penetrate to the bottom of whatever subject engages us" (1970, 36a).³⁵

Then this grand idea of Condillac, that all the truths are one and that they are all contained in a first, will be realized, and it will be evident that it is so only because the attributes of all our possible propositions—when they are true—are but secondary attributes of a definite first proposition [ibid. 160].³⁶

Despite this propounding of Condillac's ideas, Tracy did modify a central element of Condillac's system. Although he saw a necessity in nature,³⁷ he did not envision an immaculate, all-encompassing tautological structure of knowledge. For Condillac this fluid comprehension resided in God's mind; but Tracy was probably an atheist.³⁸ Condillac conceived of all reasoning, which is ultimately situated in a frictionless context, as synonymous with calculation or algebraic expression. All the apparent snags and obstacles wash away when we discover the ideal mathematical form of the knowledge we hold. For Tracy, however, the complications and qualifications involved in non-mathematical reasoning are real and constitute a definite difference between the two sorts of propositions:

. . . the *langue des calculs* of Condillac, so eminently remarkable for the excellence of its author's method and the perfection it shows in stating his ideas, does not satisfy me completely, and appears to rest on a principle that is not quite correct. It is related to our discussion of the subject and predicate of the same proposition. They are not perfectly equal; but the one contains the other. . . . A calculation is not only a reasoning; it is a reasoning on the ideas of quantity, and susceptible, by that circumstance, to be done with particular signs; in a word, it is a reasoning having the characteristics which are typical for it. This is why one can say, a calculation is a reasoning, and one cannot say reasoning is a calculation. Reasoning is the genus; calculation is only the species. Therefore, you can transform all calculation into a reasoning, but you cannot transform all reasoning into a calculation [Destutt de Tracy 1818, 321–22].

35. In Destutt de Tracy's *Treatise on political economy*, the first ninety pages (containing the "Supplement" and the "Introduction") have a separate pagination. References from these pages will be followed by an "a." References to the 254-page main body ("Of Our Actions") will be cited as they appear.

36. See, for related and crucial ideas in short expression, Destutt de Tracy 1818, 159–161, 299–300; 1817, xiii, 1–16.

37. 1818, 479.

38. Tracy certainly seems an atheist, to judge from his work. He wisely never addressed the question directly because of the severe and potentially violent reactions that might have followed. Bonaparte and others in their condemnations of the *idéologues* accused them of being atheists.

Thus we see Tracy objecting to Condillac's belief in equating calculation and reasoning. While Condillac saw reasoning as a nexus of identities, Tracy sees it as a network of contingencies: "it is always only a matter of seeing what is, and to draw from it what it contains; of having perceptions and judging them; of feeling and making deductions" (*ibid.* 479). Of identities Tracy says that "two beings or two ideas are *identical* only when they are completely equal and similar in every respect" (*ibid.* 139). Once we reject Condillac's ideal conception of knowledge, Tracy's criterion for identities clearly is not satisfied for the sequential propositions in a chain of non-mathematical reasonings.

My discussion of method and philosophy has much more relevance to the history of economic thought than might at first appear. Both in philosophy and in economics (as we shall see below) Tracy relieved much of Condillac's thought of a persistent remnant of Scholasticism, while salvaging and modernizing many valuable elements. Historians of economic thought such as H. D. Macleod, J. Schumpeter, E. Kauder, R. de Roover, and M. Grice-Hutchinson have suggested that ideas on subjectivism and social order had been established prior to the modern era of economics. A path is marked out from the Greeks to the Scholastics to later more secular seventeenth- and eighteenth-century thinkers. Some claim further that the marginalist and subjectivist era of the later nineteenth century can be traced back to this earlier tradition. We must keep in mind that Condillac was an *abbé*; he probably studied in the Collège des Jésuites in Lyons;³⁹ he studied theology in Paris and was ordained a priest in 1740. Remember also that well into the eighteenth century, the "system of scholasticism had tenaciously maintained [a] grip upon French thought" (Van Duzer 1935, 20). Condillac can thus be seen as a link from the Scholastics to the secular Enlightenment theorists of economics. Destutt de Tracy, in turn, helps carry the tradition through the nineteenth century by influencing many French and American economists.⁴⁰ One French historian of thought asks:

Is there not between Condillac and Jevons or Böhm-Bawerk an uninterrupted connection of economists who found value on desire: Louis Say in 1822, Auguste Walras in 1831, Dupuy in 1844 and 1848? We know that all these men were familiar with Condillac, whose philosophy was prevailing during their youth [Morand 1912, 317].⁴¹

39. Such is the belief of Georges Le Roy, *La Psychologie de Condillac* (Paris, 1937), p. 5; and his Introduction, *Œuvres philosophiques de Condillac*, 1:vii.

40. For Tracy's substantial influence on the American South (for instance, Thomas Jefferson and George Tucker), see O'Connor 1944; Kennedy 1978, 208–14, 227–32. In France he had a direct influence on Charles Dunoyer, Charles Comte, Louis Say, and Joseph Garnier. See Hayek 1964, 115; Allix 1912, 448–49; Kennedy 1978, 232, 270–71.

41. Similarly, Gonnard says (1943, 435): "The psychological point of view in political economy has never been completely abandoned, since A. Smith and Condillac, in France notably, where one finds it, more or less affirmed in the works of numerous authors, G. Germain, Massias, Ganlih, Destutt de Tracy, A. and L. Walras, Dupuit, Cournot, etc."

Tracy's role was crucial in this tradition, owing to his popularizing of Condillac's philosophy and, as we shall now see, for continuing his economic ideas.

Destutt de Tracy was first a philosopher of logic and of the human faculties and second a classical liberal social philosopher. He was not a political economist by training or livelihood, yet he considered a grasp of the subject crucial to an understanding of society. We find that when he does dip into political economy, transferring his methods from other disciplines, his acumen is quite sharp.⁴²

Tracy's economic methodology is essentially that of Condillac. Both authors first establish characteristics of individual beings and then explain economic situations with these as principles. Tracy launched forth from the same base as Condillac, but in both features of the method his exposition is more thorough and modern.

Tracy, of course, like Condillac, begins with people as sensate beings, gathering knowledge and forming desires from their perceptions. He thus set the stage for the introduction of the will, the faculty from which he saw all social phenomena stemming. Man "is a being *willing* in consequence of his impressions and of his knowledge, and acting in consequence of his will" (1970, 34a-35a):

will is really and properly the general and universal faculty of finding one thing preferable to another, that of being so affected as to love better such an impression, such a sentiment, such an action, such a possession, such an object than such another [1970, 38a].

The will determines what things we strive for and, in conjunction with our knowledge, what means we use to attain them: "It is [the will] which causes him to have *wants* and *means*"; "all our wants, from the most purely mechanical to the most spiritual, are but the want of satisfying a desire" (ibid. 35a, 56a). The will is the faculty of sorting out among our impressions those that are the most desirable at the moment of action. A desire is only the wishing to be delivered from a "state of uneasiness," while the want is the actual object or course of action which is believed by the

42. Thomas Jefferson so strongly felt this to be the case that in comparison to the works of Smith and of Say he said of Tracy's *Treatise on political economy*: "The work of Senator Tracy, now announced, comes forward with all the lights of his predecessors in the science, and with the advantages of further experience, more discussion and greater maturity of subject. It is certainly distinguished by important traits; a cogency of logic which has never been exceeded in any work, a rigorous enchainment of ideas, and constant recurrence to it, to keep it in the reader's view, diction so correct, that not a word can be changed but for the worse" ("Prospectus" in Destutt de Tracy 1970, iv). Jefferson, too, is properly considered a social philosopher, rather than political economist, and his thought drew much from the French Enlightenment. Therefore it is no surprise that he had such praise for Tracy's systematic and interdisciplinary ideas, which continued French Enlightenment philosophy. (Keith Michael Baker calls the *idéologues* "the true heirs of the Enlightenment," 1975, 112.)

individual to be capable of such a delivering. The will then is an intelligent, evaluating, and deciding faculty which determines the palpable goals of our actions. Goods are "all those things that contribute to do us good, to augment our *well being*" (1970, 63a).

Notice that what Condillac calls 'needs,' Tracy calls 'wants.' This is a significant improvement because it is a step toward the modern language of subjectivist economics. The 'need' of Condillac is an element from Scholastic thought. The normative and theological connotations of the term go hand in hand with the Aristotelian ethic of man fulfilling his potential, which was prevalent in Scholastic thought. Such improvements on Condillac show that differences between Tracy and Condillac on philosophical matters were important in the historical development of economic thought.

After having laid out his conception of the operations of the human mind in the fifty-seven-page introduction to the *Treatise on political economy*, Tracy immediately makes it clear in the main body of the work (entitled "Of Our Actions") that the preceding discussion was not merely a tangential philosophical speculation. "These preliminaries were necessary, that the reader might readily follow the series of ideas and clearly perceive the connexion, of this second section of the elements of ideology with that which precedes it" (ibid. 4). The economic discussion in the *Treatise* never loses its philosophical conscientiousness or logical rigor, for, as Tracy reminds the reader on several occasions "what he has just read is not properly a treatise on political economy. It is the first part of a treatise on the will . . . and which is itself but the sequel of a treatise on the understanding. Everything here then ought to be co-ordinate with what precedes, and what will follow" (ibid. 249). With this in mind we investigate the rudiments of Tracy's economic discussion.

From the economic point of view,

Society is purely and solely a continual series of exchanges. . . . And this is the greatest eulogy we can give it, for exchange is an admirable transaction, in which the two contracting parties always both gain; consequently society is an uninterrupted succession of advantages, unceasingly renewed for all its members [1970, 6].

Members of society find that they can gain wealth through the indirect process of specializing in the production of a certain good. Following in the eighteenth-century tradition, Tracy asserts: "This employment of our force, this labour, . . . has a natural and necessary value; without which it would never have had an artificial and conventional one." The "necessary value is the sum of the indispensable wants, the satisfaction of which is necessary to the existence of him who executes this labour, during the time he is executing it." But "where we speak of the value which results from the free transactions of society, it is clearly seen that we have in view the

the free transactions of society, it is clearly seen that we have in view the convention and market value." "It is therefore on different circumstances, and on the equilibrium of the resistance between sellers and buyers, that

It is clear that Destutt de Tracy supported a catallactic view of economics, but such a view is inconsistent with any objective theory of value unless the theory can be fully integrated into the catallactic view using marginalist insights and equilibrium constructs. Tracy's notion of necessary value, based on the costs of production, does not find a significant role in his dynamic conception of economics. In places, he drives at the idea of opportunity cost being intimately involved in market price ("man exchanges one manner of occupying himself against another"),⁴³ but he fails to provide the insight of marginalism to systematically make use of this cost conception of value. He does say in one instance that the market price will approach the natural value (1969, 174) but for the most part the 'objective' value idea falls out of his discussion. He proclaims: "In every case this conventional and market value is the real one, in relation to riches" (1970, 30). Lacking the marginalist insights that spring from catallactic dynamics, he does not make the proper integration of costs into an equilibrium theory of market price; yet, he clings to a cost notion of value (the "natural and necessary value") despite his deficiency. Therefore either his catallactic vision of society or his theoretical system must be considered incomplete. I judge that it is more fitting to consider Tracy a maintainer of catallactics, albeit one with theoretical lacunas.

In the sparse attention Destutt de Tracy has received from historians of thought, he has almost invariably been sketched without qualifications as a labor theorist. This misleading treatment has made it easy to neglect his deductive and catallactic approach to economics. Edgard Allix is also misleading on this aspect of Tracy, but he does keenly point out the following: "It seems that the natural value is only for him [Tracy] a simple logical notion, an ideal conception which satisfies reason, just as the ancient canonical idea of the just price was an ideal conception which satisfied the moral sense" (1912, 441). Tracy had an intuitive feel for the importance of costs, but since he could not clearly deduce a related principle from his first principles, he felt that he should not rely on a notion of cost for an explanation of price.

Although Tracy did lack some of the tools that make the catallactic vision of society complete, he still offered an abundance of penetrating thought. Our concern being methodology, this is not the place to investigate many of the economic insights of this French thinker. Since there is no secondary treatment on this matter,⁴⁴ the following list of modern as-

43. 1970, 7. For ideas hovering about the principle of wage equaling the marginal product of labor, see pp. 31-32, 43.

44. Though I have written an unpublished analysis, 'The economics of Destutt de Tracy,' which does perform such a function.

pects of Tracy's thought provides good examples of the employment of his method: factor value imputation (1970, 30, 31, 43; 1969, 161); entrepreneurship and the Knightian idea of profit as a residual claim (1970, 35–41, 74); expectations, risk, and uncertainty (1970, 37a, 66a, 40, 74, 84; 1969, 211); the spontaneous origin of money (1970, 75–78); the non-neutrality of inflation (1970, 82–91); incidence of taxation, elasticity of demand, and Lafferism (1970, 203–31). In his conclusion, after a variety of issues have been treated, Tracy boldly proclaimed the fecundity of his method: "Such are the principal truths which follow so immediately from the observation of our faculties, that it is impossible to dispute them. They lead us to consequences no less certain" (1970, 252).

With Condillac, Destutt de Tracy advocated a policy of laissez-faire. Just as the individual must have liberty to actualize a beneficial exchange, so does the same principle apply on a general level. "Now what is true of every individual cannot be false of nations, which are but collections of individuals" (1970, 62). In Tracy we find the then prevalent French trait of associating social order with voluntary interaction. In French economics there were two groups of thinkers, each offering a different explanation of this association: first, the physiocrats, who asserted that Providence is responsible for economic order; second, the trend running through Cantillon, Gournay, Turgot, Condillac, and Say, who saw economic order as spontaneously resulting from the action of self-interested individuals. The second is the tradition Tracy continued and improved upon. His insistence on laissez-faire to allow the ordering process to work is unequivocal throughout his writing:

For it is very certain that in general the most powerful encouragement that can be given to industry of every kind, is to let it alone, and not to meddle with it. The human mind would advance very rapidly if only not restrained; and it would be led, by the force of things to do always what is most essential on every occurrence. To direct it artificially on one side rather than on another, is commonly to lead it astray instead of guiding it [1970, 234].

IV. *Conclusion*

In his famous vindication of deductive methodology, *An essay on the nature and significance of economics*, Lionel Robbins expounds his understanding of the nature of economics:

The propositions of economic theory, like all scientific theory, are obviously deductions from a series of postulates. And the chief of these postulates are all assumptions involving in some way simple and indisputable facts of experience relating to the way in which the scarcity of goods which is the subject-matter of our science actually

shows itself in the world of reality. The main postulate of the theory of value is the fact that individuals can arrange their preferences in an order, and in fact do so. The main postulate of the theory of production is the fact that there are more than one factor of production. The main postulate of the theory of dynamics is the fact that we are not certain regarding future scarcities. These are not postulates the existence of whose counterpart in reality admits of extensive dispute once their nature is fully realised. We do not need controlled experiments to establish their validity: they are so much the stuff of our everyday experience that they have only to be stated to be recognized as obvious. Indeed, the danger is that they may be thought to be so obvious that nothing significant can be derived from their future examination. Yet in fact it is on postulates of this sort that the complicated theorems of advanced analysis ultimately depend [Robbins 1935, 78–79].

The resemblance of Condillac and Destutt de Tracy to Robbins is striking. Both the French thinkers agree that, “like all scientific theory,” economics deduces its statements from postulates. These postulates are accepted as true “once their nature is realised.” Yet, in economics, this establishment is not a complicated process, since the postulates are “so much the stuff of our everyday experience.” They even hold, in at least a crude form, postulates similar to those of Robbins. Finally, it is on these simple postulates that all “the complicated theorems of advanced analysis ultimately depend.” As Tracy confidently asserts, “common sense is sufficient to resolve difficulties which appear very embarrassing when we have not remounted to principles” (1970, 74).

The history of thought literature lacks any recognition of Condillac’s and Tracy’s contribution to deductive economic methodology. Even though no direct connections between the early British deductivists and these French forerunners are known,⁴⁵ their works are properly considered the historical cornerstones of the deductive approach.

45. Little investigation has been done to uncover any connections. Here are some things to consider in such a search: (i) The influence of the French tradition on the British through Turgot, who was friendly with Condillac and shared many of his ideas on philosophy and economics. I suspect that a thorough treatise-type work written by Turgot would have been quite deductive. Turgot’s influence on classical economics has been researched by Groenewegen (1983, 595–602), who concluded, “Although Turgot’s influence was not strong in England, it was not entirely absent, and made its appearance in the important field of value theory.” (ii) The influence of the French positivists on J. S. Mill. Though this positivism is essentially antithetical to the *idéologues*, it has its roots in laissez-faire economic thought. (On the tradition forming Comtean positivism and its dissimilarity with the *idéologues*, see Hayek 1964, 105–16). (iii) Cairnes’ familiarity with French economic literature (shown by his essays on Chevalier, A. Comte, Bastiat), most importantly his quotations from Q. E. Cherbuliez’s *Précis de la science économique* (Paris, 1862) in his *The character and logical method of political economy*, 2d ed. (London, 1888) 64, 69–70.

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References

- Allix, Edgard 1912. 'Destutt de Tracy, économiste.' *Revue d'Economie Politique* 26:424-51.
- Baker, Keith Michael 1975. *Condorcet: from natural philosophy to social mathematics*. Chicago.
- Blaug, Mark 1980. *The methodology of economics*. Cambridge.
- Condillac, Etienne Bonnot de 1947a. *Extrait raisonné du Traité des sensations* (1755). In *Œuvres philosophiques de Condillac*, 3 vols, 1947-1951, ed. Georges LeRoy (Paris), vol. 1.
- 1947b. *Le Commerce et le gouvernement considérés relativement l'un à l'autre* (1776). In *Œuvres philosophiques de Condillac*, vol. 2.
- Denis, Hector 1904. *Histoire des systèmes économiques et socialistes*. Paris.
- Destutt de Tracy, comte A. L. C. 1818. *Elémens d'idéologie*, pt. 3: *Logique*, 2d ed. Paris.
- 1969. *A commentary and review of Montesquieu's Spirit of Laws* (1811). Reprinted. New York.
- 1970. *A treatise on political economy* (1817). Reprinted. New York.
- Frankel, Charles 1948. *The faith of reason*. New York.
- Gonnard, René 1943. *Histoire des doctrines économiques*. Paris.
- Groenewegen, Peter 1983. 'Turgot's place in the history of economic thought: a bicentenary estimate.' *History of Political Economy* 15.4:585-616.
- Hayek, F. A. 1964. *The counter-revolution of science* (1955). Reprinted. New York.
- Hine, Ellen McNiven 1979. *A critical study of Condillac's Traité des systèmes*. The Hague.
- Hutchison, T. W. 1965. *The significance and basic postulates of economic theory* (1938). Reprinted. New York.
- Kennedy, Emmet 1978. *Destutt de Tracy and the origins of "ideology."* Philadelphia.
- Keynes, John Neville 1955. *The scope and method of political economy* (1891). Reprinted. New York.
- Knight, Isabel F. 1968. *The geometric spirit: the Abbé de Condillac and the French Enlightenment*. New Haven.
- Lebeau, Auguste 1970. *Condillac économiste* (1903). Reprinted. New York.
- Lefort, J. 1911. 'Condillac, économiste.' *Revue Générale du Droit, de la Législation et de la Jurisprudence* 35:256-61.
- Macleod, Henry Dunning 1896. *The history of economics*. London.
- Marchal, Jean 1938. 'L'école psychologique française et la théorie de la valeur.' In *Mélanges dédiés à Monsieur le Professeur Truchy* (Paris), 300-48.
- McRae, Robert 1961. *The problem of the unity of the sciences: Bacon to Kant*. Toronto.
- Morand, Emile 1912. *La Théorie psychologique de la valeur jusqu'en 1776*. Bordeaux.
- O'Connor, Michael J. L. 1944. *Origins of academic economics in the United States*. New York.

- Palgrave, R. H. Inglis 1925. *Dictionary of political economy*, 3 vols., ed. Henry Higgs. Article 'Condillac,' vol. 1. London.
- Picavet, François Joseph 1981. *Les Idéologues*. Paris.
- Pribram, Karl 1983. *A history of economic reasoning*. Baltimore.
- Robbins, Lionel 1935. *An essay on the nature and significance of economic science*, 2d ed. London.
- Say, Jean-Baptiste 1832. *A treatise on political economy*. Translated from the 9th ed. of the French by C. R. Prinsep. Philadelphia.
- Schumpeter, J. A. 1954. *History of economic analysis*. New York.
- Senior, Nassau 1965. *An outline of the science of political economy* (1836). Reprinted. New York.
- Staum, Martin S. 1980. *Cabanis: enlightenment and medical philosophy in the French Revolution*. Princeton.
- Van Duzer, Charles Hunter 1935. *Contributions of the Idéologues to French Revolutionary thought*. Baltimore.