

# WILLIAM NASSAU SENIOR AND DAVID RICARDO ON THE METHOD OF POLITICAL ECONOMY

BY  
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*This paper reconsiders the supposed agreement of David Ricardo and William Nassau Senior on the question of the method of political economy. The first part shows that Senior was very critical about Ricardo's approach to economic phenomena and considered that this question of method had important consequences on theoretical points. The second part analyzes the way Ricardo was dealing with economics. It shows that though Senior was right in considering that their respective methods were different and led to important analytical divergences, he nevertheless misunderstood Ricardo's method with a hypothetico-deductive one. The consequence is that Senior's criticisms on Ricardo's theories of rent, natural wages, and of the tendencies of agricultural returns to decrease and of profit to fall are ill-founded, being based on a misunderstanding of the way they were established.*

## I. INTRODUCTION

Many historians of economic thought seem to consider the method of political economy expounded by William Nassau Senior (1790–1864) as the method used by classical economists in general and by David Ricardo (1772–1823) in particular. This is the case of Blaug (1992, p. 72), who associates Ricardo's method with the “Senior–Mill–Cairnes tradition” and of Hutchison (1994, p. 18), who considers that

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I thank Ghislain Deleplace for commenting extensively on earlier drafts of this article and the two anonymous referees whose useful advice has significantly improved the paper.

ISSN 1053-8372 print; ISSN 1469-9656 online/13/0100019-42 © The History of Economics Society, 2013  
doi:10.1017/S1053837212000612

“the deductive, abstract method of Ricardo and Senior came to dominate English classical orthodoxy.” The same position is shared by O’Brien and de Marchi. Both of them, nevertheless, stress that, though Senior and Ricardo seem to agree on methodological procedure, they disagree on important analytical points. Indeed, according to O’Brien, Senior, “despite rejection of the two fundamental props of the Ricardian system, the Malthusian population thesis and secular diminishing returns in agriculture, acknowledged that Ricardo’s analysis was formally correct” (1975, p. 70). In the same vein is de Marchi’s position that Senior, though he “belonged to the band of eminent economists of the second quarter of the 19th century who may be called respectful dissenters from Ricardo’s doctrines ... did not dissent on methodological grounds” (1987, pp. 303–304).

This conclusion of a general agreement of Ricardo and Senior on the method of political economy, coupled with important analytical divergences, may appear surprising. Indeed, without considering that the analytical conclusions reached by an economist are solely determined by his approach, if the same method can lead to theories as different as those of Ricardo and Senior, this means that this “method” had no substantial influence on theoretical conclusions.

Nevertheless, several elements lead us to question the thesis according to which Senior formulated a method already implicitly used by Ricardo. In this respect, Dugald Stewart, professor of moral philosophy at the University of Edinburgh from 1785 to 1810, appears as a key character. Indeed, Senior inherited, from Copleston and Whately, a deductive method that constituted a defensive strategy intended to preserve the Oxford curriculum and the role of logic in philosophical and scientific investigation (Corsi 1987, p. 105). As Corsi showed, this method was inspired by crucial features of the epistemology developed by Stewart (especially in the second volume of his *Elements of the Philosophy of the Human Mind* of 1814) “with appropriate modifications and reinterpretations” (Corsi 1987, p. 98). On the other hand, Ricardo’s method also has been connected with the teaching delivered by Stewart at the University of Edinburgh (Depoortère 2008a). However, this connection runs through a different channel. This is through Stewart’s pupils, among whom were James Mill and Francis Horner, that this affinity is likely to have happened. That Senior and Ricardo inherited from two different versions of Stewart’s methodological precepts raises a problem for the common interpretation of a general agreement between Senior and Ricardo on the question of the method of political economy. Indeed, those two interpretations of Stewart’s thought, that of Oxford for Senior and that of Edinburgh for Ricardo, appear difficult to reconcile.

It seems, therefore, that the supposed agreement between Ricardo and Senior on the method of political economy has to be questioned. The first section will show that Senior developed an “empirico-deductive” approach, and that he was very critical of Ricardo’s method. Indeed, according to Senior, Ricardo was led, because of his method, to “false” conclusions. The second section will focus on the difference of method between Ricardo and Senior, and will show that if Senior was right in stressing a difference between his approach and that of Ricardo, he didn’t rightly understand Ricardo’s method. The third section will study the different criticisms that Senior addressed to Ricardo on analytical points, and how Senior was misled by his misunderstanding of Ricardo’s way of doing economics.

## II. SENIOR ON THE METHOD OF POLITICAL ECONOMY

Though he was not the first to deal with the method of political economy,<sup>1</sup> Senior is usually mentioned on this question.<sup>2</sup> Furthermore, it seems that, on this subject, he put his predecessors in such a shade that Blaug introduces him as the author of “the first conscious discussion of the problems of economic methodology” (1992, p. 56). This phenomenon, as well as the interest that has been shown for the method he developed in *An Introductory Lecture on Political Economy* (1827) and later in *An Outline of the Science of Political Economy* (1836), seems to come from the importance he attached to deduction.

Indeed, Senior belonged to a group of Oxford intellectuals, including Edward Copleston (1776–1849) and Richard Whately (1787–1863), who contributed to the development of an axiomatic-like formulation of political economy. As Corsi showed, this group, known as the “Oriental Noetics,”<sup>3</sup> developed a method that intended to preserve the Oxford curriculum and the role of logic from the attacks of Dugald Stewart and of the *Edinburgh Review*:

in a series of ‘replies’ to the Edinburgh Reviewers, and in a pamphlet *Examiner Examined*—which was published anonymously in 1809 and which was well known to Stewart . . . Copleston defended the Oxford curriculum. He asserted that the allegation that Bacon introduced induction to suspend syllogism represented unphilosophical and ‘vulgar’ opinion. No one doubted that induction was the method by which the ‘principles’ or ‘premises’ of reasoning were collected, but Aristotle and the schoolmen were mistaken only insofar as they selected premises with insufficient induction (Corsi 1987, 95).

This position found a direct application in political economy, and gave birth to Senior’s well-known statement that the theoretical branch of political economy rests “on a few general propositions, which are the result of observation, or consciousness” (Senior 1827, p. 7). A rigorous deductive procedure was then applied to those propositions, and the conclusions were true as far as the deduction was correctly drawn. In their 1836 version, these “few propositions” from which Senior intended to deduce the whole science of political economy were the following:

1. That every man desires to obtain additional Wealth with as little sacrifice as possible.
2. That the Population of the world, or, in other words, the number of persons inhabiting it, is limited only by moral or physical evil, or by fear of a deficiency

<sup>1</sup>At least, this question was treated by Dugald Stewart during the *Lectures on Political Economy* he delivered at the University of Edinburgh as soon as 1799 (1854–60, 8, pp. 9–58), by Jean-Baptiste Say in the *Discours Préliminaire* of his *Traité d’économie politique* (1803, 1, pp. i–xlvi), by Thomas Robert Malthus in the Introduction of his *Principles of Political Economy* (1820, pp. 1–24), and by John Ramsay McCulloch in *A Discourse on the Rise, Progress, Peculiar Objects and Importance of Political Economy* (1824).

<sup>2</sup>On Senior’s method, see Bowley (1936), Corsi (1987), Arena (1992, pp. 511–512), Waterman (1994), Rutherford (1998, pp. xi–xiv), and Hutchison (1998).

<sup>3</sup>On the Oriental Noetics, and especially on Edward Copleston, Richard Whately, and Nassau Senior, see Bowley (1937), Levy (1970), Rashid (1977), McKerrow (1981), Corsi (1987; 1988, pp. 85–95), and Waterman (1991, pp. 171–216; 1994).

of those articles of wealth which the habits of the individuals of each class of its inhabitants lead them to require.

3. That the powers of Labour, and of the other instruments which produce wealth, may be indefinitely increased by using their Products as the means of further Production.
4. That, agricultural skill remaining the same, additional Labour employed on the land within a given district produces in general a less proportionate return, or, in other words, that though, with every increase of the labour bestowed, the aggregate return is increased, the increase of the return is not in proportion to the increase of the Labour (Senior 1836, pp. 26–27).<sup>4</sup>

The Oxford curriculum and the use of logic were preserved by Senior insofar as he considered that the deduction, rather than the establishment of the premises, was the most important part of the work. Senior (1836, pp. 4–5) concluded on this point that political economy “depends more on reasoning than on observation,” and that its principal difficulty “consists not in the ascertainment of its facts, but in the use of its terms” and in “the drawing from them correct conclusions.”

If the predominant role of logic was preserved, Senior nevertheless considered that his premises were empirically stated. In this respect, Schumpeter (1954, p. 575) is wrong when he considers Senior’s propositions as postulates, and awards him the fatherhood of axiomatic economics.<sup>5</sup> Indeed, as it is clear from Copleston’s reaction to Stewart’s criticisms and from Senior’s writings, the premises of the reasoning were neither axioms nor hypotheses stated *a priori* but empirical data:

premises [of Political Economy] 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 (Senior 1836, pp. 2–3).<sup>6</sup>

This distinction between postulate and empirical proposition is important in Senior’s thought, for it constituted the response of the Oriel Noetics to the criticisms from Edinburgh. Moreover, this question is also the subject of a criticism that Senior addressed to Ricardo on the method of political economy. In this respect, an extract from the review that Senior wrote in 1848, on Mill’s *Essays on Some Unsettled Questions of Political Economy* (Senior 1848, pp. 301–304), and reproduced in his fourth *Introductory Lectures on Political Economy* (Senior 1852, pp. 62–65), is all the more significant. In these writings, Senior attacked Ricardo on the question of method. He considered that “Ricardo dr[ew] all his illustrations not from real life, but from hypothetical cases” and that he “treat[ed] Political Economy as a hypothetical science” (1848, p. 302). Senior was resolutely opposed to this “hypothetical” conception of political economy that he judged neither “necessary” nor “desirable.”

<sup>4</sup>See also Senior (1827, pp. 35–36). On Senior’s behavioral assumptions, see Karayiannis (2001).

<sup>5</sup>See Arena (1992, p. 512).

<sup>6</sup>See also Senior (1827, p. 7). More precisely, Senior considered that “the first of these Propositions is a matter of consciousness, the three others are matter of observation” (Senior 1836, p. 26)

Senior called this method unnecessary because he thought it was possible to put facts in the place of hypothesis:

but neither the reasoning of Mr. Mill nor the example of Mr. Ricardo induce us to treat Political Economy as a hypothetical science. We do not think it necessary, and, if unnecessary, we do not think it desirable. It appears to us that if we substitute for Mr. Mill's hypothesis that wealth and costly enjoyment are the *only* objects of human desire, the statement that they are universal and constant objects of desire, that they are desired by all men and at all times,—we shall have laid an equally firm foundation for our subsequent reasonings, and have put a truth in the place of an arbitrary assumption (Senior 1848, p. 302).

Then, Senior gave three reasons why he considered hypothetical premises undesirable. The first one is that such an approach renders political economy “obviously unattractive” because it would then treat of “what might be the state of things under given but unreal conditions” rather than of “what is actually taking place” (1848, p. 302). Another reason is that “when a writer takes his premises from observation or from consciousness, and infers from them what he supposes to be real facts, if he have committed any grave error it generally leads him to some startling conclusion” (1848, p. 303). At the opposite, “the strangeness of the results of an hypothesis gives no warning. We expect them to differ from what we observe; and lose therefore this incidental means of testing the correctness of our reasonings” (1848, pp. 303–304). A last reason advanced by Senior against the use of the “hypothetical method” was that “a writer who starts from arbitrary assumed premises is in danger of forgetting from time to time their unsubstantial foundation, and of arguing as if they were true” (1848, p. 302). According to Senior, this was the great mistake of Ricardo:

This has been the source of much error in Ricardo. He assumed the lands of every country to be of different degrees of fertility, and rent to be the value of the difference between the fertility of the best and the worst land in cultivation. The remainder of the produce he divided into profit and wages. He assumed that wages naturally amount to neither more or less than the amount of commodities necessary to maintain the labourer and his family in health and strength. He assumed that in the progress of population and wealth agricultural labour becomes less and less proportionally productive. And he inferred that the share of the produce of land taken by the landlord and by the labourer must constantly increase, and the share taken by the capitalist diminish.

This was a logical inference, and would consequently have been true in fact, if the assumed premises had been true. The fact is, however, that almost every one of them is false. It is not true that rent arises in consequence of the difference between the fertility of the different qualities of land in cultivation—it might exist if the whole territory of a country were of uniform quality. It is not true that the labourer always receives precisely the necessaries, or even what custom leads him to consider as the necessaries, of life. In civilised countries he almost always receives much more; in barbarous countries he sometimes obtains less. It is not true that as wealth and population advance agricultural labour becomes less and less proportionally productive. The corn now raised with the greatest labour in England is raised with less labour than that which was raised with the least labour 300 years ago, or than that

which is now raised with the least labour in Poland. It is not true that the share of the produce taken by the capitalist is least in richest countries (Senior 1848, pp. 302–303).

The analytical content of this long quotation will be considered in detail in the last section of the article. However, two points can already be stressed from Senior's criticism of Ricardo. First, Senior does not see in Ricardo's work the application of the method he advocated. Secondly, he judges that this difference of method has analytical consequences in their respective theories. On those two points, his position seems relevant. However, this does not mean that Senior clearly understood what Ricardo's method was, or that he pointed out what actually distinguishes his theory from that of his predecessor.

### III. RICARDO'S METHOD AND SENIOR'S MISUNDERSTANDING OF IT

Senior's criticism of Ricardo's method was that his premises were hypothetical and "untrue." Therefore, though the deduction was formally correct, Ricardo's conclusions were "false." That Ricardo's principles of political economy are not "general propositions which almost every man, as soon as he hears them, admits as familiar to his thoughts" is clear for Senior. However, it will appear that if he is right on this point, he is wrong when he considers Ricardo's principles as assumptions or arbitrary premises.

Ricardo's method has been connected to the teaching delivered by Dugald Stewart at the University of Edinburgh and popularized by his pupils (Depoortère 2008a). Among them, two may more likely have familiarized Ricardo with Stewart's teaching. The first one is James Mill, whose influence on Ricardo's method rests nevertheless unsettled in the absence of definite textual evidences.<sup>7</sup> The second one is Francis Horner, who, before being president of the Bullion Committee, wrote between 1802 and 1806 the first articles dealing with economical subjects in the *Edinburgh Review*. According to Ricardo himself (1951–73, 7, p. 246), it was through Horner's articles and *The Wealth of Nations* that he was first introduced to political economy.

Stewart's position on the question of logic and of the Oxford curriculum is clearly established in the second volume of his *Elements*, which, according to Stewart (1854–60, 3, p. 3), was intended "to aid [his] readers in unlearning the scholastic errors which, in a greater or less degree, still maintain their ground in our most celebrated seats of learning." This was a direct criticism of the Oxford curriculum.<sup>8</sup>

Stewart also criticized the belief conveyed by Etienne Bonnot de Condillac (1715–1780) and Gottfried Wilhelm Leibniz (1646–1716) that the certainty of mathematical conclusions could be obtained in the other sciences "if we knew how to give them *signs* equally perfect" (Condillac, in Stewart 1854–60, 3, p. 104). Stewart argued that the peculiarity of mathematics with respect to other sciences is that the propositions that are demonstrated assert logical connections only between the premises and their consequences. In mathematics, our reasonings are then "directed to an object essentially

<sup>7</sup>Though the two men probably got acquainted with each other in 1808, the known correspondence between Ricardo and Mill began in December 1810. Then, the influence Mill exerted on Ricardo's method before Ricardo started writing in political economy cannot be definitely established.

<sup>8</sup>On the debate between Copleston and Stewart on aristotelian logic, see Corsi (1987, pp. 94–96).

different from what we have in view, in any other employment of our intellectual faculties,—not to ascertain *truths* with respect to actual existences, but to trace the logical filiation of consequences” (Stewart 1854–60, 3, p. 114). In other sciences, even if one supposes that all the ambiguities of language are removed and the deduction accurately drawn, “our conclusions would still be attended with more or less of uncertainty, being ultimately founded on principles which may or may not correspond exactly with the fact” (Stewart 1854–60, 3, p. 115). Thus, Stewart concluded:

if the account which has been given of the nature of demonstrative evidence be admitted, the province over which it extends must be limited almost entirely to the objects of pure mathematics. A science perfectly analogous to this in point of evidence may, indeed, be conceived . . . to consist of a series of propositions relating to moral, to political, or to physical subjects; but as it could answer no other purpose than to display the ingenuity of the inventor, hardly anything of the kind has been hitherto attempted (Stewart 1854–60, 3, p. 153).

Stewart acknowledged that theoretical mechanics occurs as an exception to this position (1854–60, 3, pp. 115, 153). Nevertheless, the coincidence between its conclusions and facts comes from the peculiarity of its object, and cannot “be expected in any other theoretical process of the human mind” (Stewart 1854–60, 3, p. 153). As a consequence, sciences such as moral or political philosophy, which deal with a variety of complex phenomena, cannot be organized according to the mathematical model. The consequence was that

the intellectual superiority of one man above another, in all the different branches of moral and political philosophy, will be found to depend chiefly on the success with which he has cultivated these *silent habits of inductive interpretation*<sup>9</sup>—much more, in my opinion, than on his acquaintance with those rules which form the great objects of study to the professed logician (Stewart 1854–60, 3, p. 107. See also 2, p. 203).

As Corsi (1987, p. 102) observed, Stewart’s description of theoretical mechanics could be used against his main thesis of the uselessness of building a science of morals or politics according to the mathematical model. Indeed, authors such as Copleston, Whately, and Senior opened the breach and “redeployed Stewart’s arguments to support a position very much at odds with that reached in the *Elements* concerning the possibility of a science of political economy” constructed on the mathematical model (Corsi 1987, p. 105; see also p. 108). This led to Senior’s definition of the method of political economy as a deductive science.

However, commentators such as Rashid (1985) and Coleman (1996) maintain that for Stewart—as for Whately and Senior—“*the principles of political economy are general facts apparent from everyday life*” (Coleman 1996, p. 219), or even go so far as to ask: “if Senior is the parent of the methodology of the Austrian School should not Stewart be reckoned as a grandparent?” (Rashid 1985, p. 257). Those interpretations rest on two passages of Stewart’s *Elements* (Stewart 1854–60, 2, pp. 234–235; 3, p. 333). In the first one, the old conception of political wisdom is compared with the one

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<sup>9</sup>Here, as in all subsequent quotations, italics are in the original.



developed by the Economistes. Stewart noted that the latter “have aimed at accomplishing a reformation in politics, similar to what Kepler and Newton accomplished in astronomy . . . by subjecting to that common sense which guides mankind in their private concerns, those questions, of which none were supposed to be competent judges but men initiated in the mysteries of government” (2, p. 235). Stewart concluded that the Economistes, in appealing “to the maxims upon which men act in private life,” and by calling into question the utility of certain institutions, “may be said, in one sense, to indulge in theory” (2, p. 235). Furthermore, he considered that they adopted a philosophical approach in opposing “to the false theories of statesmen, the common sense of mankind, and those maxims of expediency of which every man may verify the truth by his own daily observation” (2, p. 235).

In the second passage (3, p. 331), Stewart opposed the “political arithmeticians” or “statistical collectors” “supposed to have the evidence of *experience* in their favour,” while “political philosophers” were “considered as little better than visionaries.” Stewart reaffirmed the empirical feature of political economy in arguing that “the facts which the political philosopher professes to investigate are exposed to the examination of all mankind” (3, p. 331). Of such a character were, according to Stewart, the leading principles of Smith’s *Wealth of Nations*:

The premises, it is perfectly obvious, from which [Smith’s] conclusions are deduced, are neither hypothetical assumptions, nor metaphysical abstractions. They are practical maxims of good sense, approved by the experience of men in all ages of the world; and of which, if we wish for any additional confirmations, we have only to retire within our own bosom, or to open our eyes on what is passing around us (3, p. 333).

These two passages are interpreted by Rashid and Coleman as proofs of Stewart’s considering principles of political economy as general facts almost evident by themselves. Though it is possible that Senior and the Oriel dons genuinely understood Stewart in this way, such an interpretation deserves some comments. Indeed, Rashid and Coleman’s thesis rests on an interpretation of Stewart’s terms “maxims of common” or of “good sense” as principles that are true and evident by themselves, and from which the conclusions of political economy can be deduced. Now, it is not obvious that they should be interpreted in this way. A brief survey of the different meanings attached to these terms in Stewart’s writings shows that they may be understood differently.

That there are “principles of common sense” that are true and evident by themselves in Stewart is not disputed. These, he called “fundamental laws of human belief.” However, it cannot be these principles that Stewart had in mind in the two quotations considered, for these “fundamental laws of human belief” “are not *principles* or *data* . . . from which any consequence can be deduced; but form a part of those original *stamina* of human reason, which are equally essential to all the pursuits of science, and to all the active concerns of life” (3, p. 44). Among these are “the belief which all men entertain of the existence of the material world . . . and their expectation of the continued uniformity of the laws of nature” (3, p. 44).

The very same expression of “good or common sense” is used by Stewart with another meaning: to qualify “vulgar” or “unenlightened” opinions. When describing the “two opposite extremes into which men are apt to fall, in preparing themselves for the duties of active life,” Stewart distinguishes



habits of abstraction and generalization carried to an excess . . . , from a minute, an exclusive, and an unenlightened attention to the objects and events which happen to fall under their actual experience. . . . It is this last turn of mind, which I think we have, in most instances, in view, when we speak of good sense, or common sense, in opposition to science and philosophy (2, pp. 217–218).

Such are, for example, the particular facts of statistical collectors, which rest “solely upon the good sense and good faith of individual witnesses” (3, p. 332), and lead to calculations that may be “wide of the truth” (3, p. 332), or to institutions that are “credulously regarded as monuments of the superiority of unsophisticated good sense” (3, p. 334). Once again, it appears that it is not with this meaning that the expression “common or good sense” is used in the two passages referred to by Rashid and Coleman.

Finally, Stewart sometimes uses the terms “good or common sense” in opposition to those maxims that are not empirically stated, such as the “theories of statesmen initiated in the mysteries of government” or “the plans proposed by Utopian projectors, that . . . proceed on the supposition of a miraculous reformation in the moral character of a people” (2, p. 233).<sup>10</sup> It is this meaning that appears to be attached to the terms “good or common sense” in the passages quoted by Rashid and Coleman. Indeed, when dealing with the doctrine of the Economistes, Stewart explains that

another mistaken idea concerning the economical system is, that it is founded entirely upon theory, and unsupported by facts . . . it may be safely affirmed, that [its doctrines] rest on a broader basis of facts than any other political speculations which have been yet offered to the world; for they are founded . . . on those laws of human nature, and those maxims of common sense, which are daily verified in the intercourse of private life (2, p. 234).

Then, what Stewart actually meant in the considered passages appears to be, as Collini, Winch, and Burrow interpreted it, that “compared with earlier conceptions of political wisdom, the modern view concentrated on the natural mechanisms governing the everyday life of men in society, rather than on ‘the conduct of mankind in their political capacity’ alone” (Collini, Winch, Burrow 1983, p. 34). However, this does not mean that these mechanisms are obvious or that the principles of political economy are evident by themselves. As Stewart stressed in his *Account of the Life and Writings of Adam Smith*, “nothing can guard us effectually against error, but a comprehensive survey of the whole field of discussion, assisted by an accurate and patient analysis of the ideas about which our reasonings are employed” (10, p. 67).

It is, then, this insistence on the necessity of an “accurate and patient analysis of our ideas” that distinguishes Stewart’s approach to political economy from that of Whately and Senior. The same attitude also appears in Stewart’s pupils: Horner and Mill. In the review of Canard’s *Principes d’Economie Politique* he wrote in 1803 for

<sup>10</sup>The connection between good sense and induction appears also when Stewart discusses Lord Kames’ *Sketches*. There, Stewart speaks of “the progress of good sense, or of that quality of the intellect which is very significantly expressed by the epithet enlightened. To what is this progress . . . to be ascribed? Not surely to any improvement in the art of reasoning. . . . The principle [sic] cause, I apprehend, has been the general diffusion of knowledge (and more especially of experimental knowledge)” (3, p. 213).

the *Edinburgh Review*, Horner echoed Stewart's concern while criticizing Canard's method: "in the *first* chapter, the author gives an explanation of fundamental principles; or rather of the sense in which he employs certain terms: for they are stated more in the manner of definitions that are assumed, than of truths to which we are conducted by analysis" (Horner 1957, p. 58). This necessity of abstract principles, derived from an accurate analysis, to study political questions, and the empirical character of these principles, was also stressed by James Mill in 1813 while reviewing Robert Grant's *Expediency of Continuing the Indian System*:

in disposing of political questions, it is either folly or wickedness, he [Grant] says, to have any thing to do 'with abstract or elementary principles.' . . . When abstract principles are mentioned, good abstract principles, of course, are those which are meant. Now, good abstract principles are neither more nor less than the accurate results of experience, presented in an exceedingly condensed and concentrated state. If Mr. Grant, therefore, wishes political questions to be decided without abstract principles, he wishes them to be decided without the benefit of experience. Accurately speaking, he would have them be regulated by a narrow and empirical instead of a comprehensive and profound experience; by a very imperfect instead of a very perfect guide (Mill 1813, pp. 411–412).

This process of analysis, alluded to by Stewart and Horner, is connected with the theory of the human mind that Stewart derived from the teaching of Thomas Reid. Following Descartes, Locke, and Reid, Stewart opposed materialism in distinguishing two branches of knowledge, one relating to matter, the other to mind (including political economy). The former is "the appropriate field and province of *observation* . . . the other fall[s] exclusively under the cognizance of *reflection*" (1, p. 18)—reflection being "the power of attending to the subjects of our consciousness" (2, p. 419).<sup>11</sup> Though these two powers of observation and reflection were "diametrically opposite" (1, p. 18), the first one being directed outward, the other inward, the rules of inductive logic were nevertheless the same in these two provinces of knowledge:

it does not follow from this, that there is no analogy between the rules of inquiry, according to which they are to be studied. On the contrary, it is from the principles of inductive philosophizing, which are applicable to both in common, that we infer the necessity of resting our conclusions in each upon its own appropriate phenomena (Stewart 1954–60, 3, p. 296).

Stewart's inductive method included three steps: (1) the application of the powers of observation or of reflection (according to the kind of phenomena considered) to facts; (2) an 'analysis' of these facts, that is their reduction to general laws or principles; and (3) the 'synthesis,' that is the explanation of particular phenomena and the deduction of further conclusions from these principles. As summarized by Stewart, this process leads "*first*, to resolve particular facts into other facts more simple and comprehensive; and, *secondly*, to apply these general facts (or, as they are usually

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<sup>11</sup> Stewart followed Reid in stating that "attention to things external, is properly called *observation*; and attention to the subjects of our consciousness, *reflection*" (2, pp. 122–123). On this "induction by reflection," see Maas (2002, p. 103; 2005, pp. 38–40).

called, these *laws of nature*) to a synthetical explanation of particular phenomena” (1854–60, 3, p. 244; see also 1854–60, 2, p. 7).

Of those three stages, the analysis appears as the most important. It implies recourse to the power of abstraction, defined as “the faculty by which the mind separates [or *analyzes*]<sup>12</sup> the combinations which are presented to it, in order to simplify the objects of its consideration,” and enables focus on “some of the qualities, or circumstances of objects and events, and of withdrawing the attention from the rest” (1854–60, 2, p. 22).<sup>13</sup> This operation was crucial because for Stewart, as for Reid, experience, whatever its origin may be (observation or reflection on the objects of our consciousness), is complex, and cannot lead to perceptions that would immediately be simple:

nature presents no object to the senses, or to consciousness, that is not complex. Thus, by our senses we perceive bodies of various kinds; but every body is a complex object; it has . . . various . . . sensible qualities, which are blended together in the same subject; and I apprehend that brute animals, who have the same senses that we have, cannot separate the different qualities belonging to the same subject, and have only a complex and confused notion of the whole. Such also would be our notions of the objects of sense, if we had no superior powers of understanding, by which we can analyse the complex object, abstract every particular attribute from the rest, and form a distinct conception of it. So that it is not by the sense immediately, but rather by the powers of analysing and abstraction, that we get the most simple and most distinct notions even of the objects of sense (Reid 1863, 1, p. 376).

This analysis is followed by synthesis, which has two functions. First, it enables the accounting of particular phenomena by showing how a particular combination of the laws of nature previously established can produce an observed fact. Secondly, it leads, by recourse to “synthetic reasoning,” to deduction of facts, “which we have no access to examine by direct observation” (Stewart 1854–60, 3, p. 251). This synthetic reasoning thus allowed the drawing of conclusions on the consequences of supposed events in determining the result “of any hypothetical combination of them, whether total or partial” (Stewart 1854–60, 3, p. 249). Once again, this point is illustrated in Horner’s review of Canard in considering the consequences of the establishment of taxes of every description on the different classes of society. Indeed, Horner considered that “the equable diffusion, or exclusive incidence of taxes, cannot be ascertained by any direct induction of particular facts; but must be obtained synthetically, after a just analysis, both of price and of the order according to which the annual produce is distributed among the people” (Horner 1957, p. 58).<sup>14</sup>

Thus, according to Stewart, synthesis exemplified in an illuminating manner the practical superiority of general principles obtained by way of analysis over the particular facts of statistical collectors:

<sup>12</sup>Stewart’s brackets and italics.

<sup>13</sup>See also Stewart (1854–60, 2, p. 162).

<sup>14</sup>A few pages later, Horner writes that “the most correct and regular demonstration, therefore, of the territorial incidence of taxes, would consist in a deduction of that evidence on which the fundamental principle of Quesnay’s system exists” (Horner 1957, p. 73).

The facts accumulated by the statistical collector are merely *particular results*, which other men have seldom an opportunity of verifying or of disproving; and which, to those who consider them in an insulated state, can never afford any important information. The facts which the political philosopher professes to investigate are exposed to the examination of all mankind; and while they enable him, like the general laws of physics, to ascertain numberless particulars by *synthetic reasoning*, they furnish the means of estimating the credibility of evidence resting on the testimony of individual observers (Stewart 1854–60, 3, p. 331).

Finally, as the end of the last quotation suggests, Stewart was very circumspect about the possibility of invalidating general principles on the basis of particular facts. This skepticism was due to his conception of nature as something complex. Indeed, as general principles are reached by means of abstraction, they necessarily overlook elements that have an influence on actual facts. As a consequence, a general principle could be considered erroneous while it is only modified by a particular set of circumstances. Then, instead of judging the validity of a general principle by confronting it with particular facts, as political arithmeticians do, Stewart advocated the reverse procedure. Theoretical principles were then considered as a means to interpret particular facts in order to discover the combination of circumstances that gave birth to the considered particular fact:

little, if any, regard is due to a *particular phenomenon*, when stated as an objection to a conclusion resting on the *general laws* which regulate the course of human affairs. Even admitting the phenomenon in question to have been accurately observed, and faithfully described, it is yet possible that we may be imperfectly acquainted with that combination of circumstances whereby the effect is modified; and that, if these circumstances were fully before us, this apparent exception would turn out an additional illustration of the very truth which it was brought to invalidate. If these observations be just, instead of appealing to political arithmetic as a check on the conclusions of political economy, it would often be more reasonable to have recourse to political economy as a check on the extravagancies of political arithmetic (Stewart 1854–60, 3, pp. 331–332).

The method of induction established by Stewart and applied by his pupils, especially Horner, offers a general framework that enables the understanding of Ricardo's way of doing economics. Furthermore, it leads to an interpretation of Ricardo that can be connected with the one expounded by Piero Sraffa in the *Preface* (1960, p. v) and in *Appendix D* of *Production of Commodities by Means of Commodities* (1960, pp. 93–95).<sup>15</sup>

Indeed, the second step of Stewart's method—analysis of facts by way of abstraction—deals, in Ricardo, with the determination of the relative prices of commodities and of the shares of distribution other than wages. During this analysis, Ricardo abstracts from all the causes that may act on: 1) the level of the real wages; 2) the size and composition of the social product; as well as 3) the techniques of production in use. This approach is summarized by Ricardo in his famous letter to Malthus, dated 9 October 1820, on the object of political economy:

<sup>15</sup>On Sraffa's interpretation, see Eatwell (1977, pp. 62–64), Garegnani (1983, pp. 310–312; 1984, pp. 292–299), and Roncaglia (2001, pp. 209–211).

Political Economy you think is an enquiry into the nature and causes of wealth—I think it should rather be called an enquiry into the laws which determine the division of the produce of industry amongst the classes who concur in its formation. No law can be laid down respecting quantity, but a tolerably correct one can be laid down respecting proportions. Every day I am more satisfied that the former enquiry is vain and delusive, and the latter only the true objects of the science (Ricardo 1951–73, 8, pp. 278–279).

Though he considered the law respecting proportions the only true object of political economy, and abstracted from the causes acting on quantities during the analysis, Ricardo nevertheless treated these causes. However, this was during the third stage, when he had recourse to the synthetic reasoning to study the consequences of the causes abstracted from during the analysis. Moreover, to determine clearly what the consequences of these causes were, they were studied *ceteris paribus*. This led Ricardo to develop his theories of capital accumulation, of the gravitation of market prices around the natural price, and of technical progress. As Roncaglia sums up: “we have a range of fields of analysis within each of which variables taken as given in other theories are to be accounted for, while variables explained in other ‘pieces of analysis’ are taken as given” (2001, p. 215).

Finally, Ricardo’s position on the use of particular facts as the means of evaluating the validity of general principles totally agrees with that developed by Stewart. Ricardo rejected such a procedure, considering that “there are so many combinations,—so many operating causes in Political Economy, that there is great danger in appealing to experience in favor of a particular doctrine, unless we are sure that all the causes of variation are seen and their effects duly estimated” (Ricardo 1951–73, 6, p. 295). Furthermore, he demonstrated in his *Reply to Bosanquet* the bias of men who are “all for fact and nothing for theory. Such men can hardly ever sift their facts. They are credulous, and necessarily so, because they have no standard of reference” (Ricardo 1951–73, 3, p. 181).<sup>16</sup>

It appears, then, that the difference of method between Ricardo and Senior does not come, as Senior thought, from the hypothetical or empirical feature of their premises but from recourse to abstraction.<sup>17</sup> This difference can be stated as such: while Ricardo tries to state a theoretical representation of the economical system in abstracting from several elements (those relating to quantities), the consequences of which are studied *ceteris paribus* during the synthesis, Senior’s method consists in deducing this representation from a few principles derived from common experience. This specificity of Ricardo with regard to Senior has important analytical consequences, for it leads to an analysis of prices and of the distributive variables other than wages, which abstracts from the causes that may act on quantities.<sup>18</sup> At the opposite, Senior’s method is not grounded on such an abstraction, but rests on a few

<sup>16</sup>On Ricardo’s refutation of Bosanquet’s facts, see Depoortère (2008a, pp. 96–103).

<sup>17</sup>On Ricardo’s use of abstraction in the context of the British establishment identified as the system of “Old Corruption,” and on the misunderstanding of this use by his contemporaries, see Dixon (2008, pp. 237–240).

<sup>18</sup>As stressed by Dixon (2008, p. 247): “Since questions of quantity were subsumable under questions of demand and other accidental causes, we can get a true picture of the gulf between the different perspectives in Ricardo’s own judgment that studies of quantity, that is, the temporary, were ‘vain and delusive’ while studies of ‘proportion’ might lay down a ‘tolerably correct [law]’ and was thus subsumable under science.”

empirical propositions derived from common experience, to which is then applied a logical process of deduction. This different approach led Senior to misunderstand Ricardo's method and, as the next section will show, to criticize him unwisely on important points of theory.

#### IV. SENIOR'S CRITICISMS OF RICARDO

As we have seen,<sup>19</sup> Senior was very critical of Ricardo's method, and raised a number of analytical points where he considered that Ricardo's method led him astray. Senior's argument was the following: Ricardo's theories of rent, natural wages, and diminishing returns are hypotheses unsupported by facts. Therefore, the conclusions that Ricardo deduced from those hypotheses, the tendencies of agricultural returns to diminish and of profit to fall, were "false" and not confirmed by facts.

##### *Rent*

The first criticism of Senior deals with the question of rent. According to him, Ricardo's theory implied lands of different degrees of fertility. His objection was that rent might exist if the whole territory of a country were of uniform quality. Senior's criticism may appear surprising because he seems to share Ricardo's theory on the rent of the land. Indeed, according to Senior, this kind of rent was only differential. Senior even defended Ricardo on this point in his *Outline* against the criticisms that Jean-Baptiste Say formulated in his notes on Ricardo's *Principles* (Say, in Ricardo 1819, 2, p. 182). Say's objection to Ricardo was that even the worst cultivated land pays a rent. However, as Senior stressed, this criticism fell flat because Ricardo explained this phenomenon by recourse to the intensive rent theory instead of the extensive one.<sup>20</sup> Senior (1836, pp. 116–118) concluded that Say was wrong, for Ricardo's position, in the passage commented on by Say, was that the "price is every where regulated by the return obtained by this last portion of capital, for which no rent whatever is paid" (Ricardo 1951–73, 1, p. 329).<sup>21</sup>

Say's misunderstanding, nevertheless, was not commented on further by Senior, who preferred, in an "oxfordian" style, to put the charge on Ricardo's (supposed) methodological deficiencies; among them, his inaccuracy of language and lack of knowledge of logic:

Mr. Ricardo, who, though not its discoverer, is its best known expositor, was led, both by his merits and his deficiencies, into frequent inaccuracy of language. He was not enough master of logic to obtain precision, or even to estimate its importance. His sagacity prevented his making sufficient allowance for the stupidity or carelessness

<sup>19</sup>See *supra*, the last quotation of the second section.

<sup>20</sup>See Ricardo (1951–73, 1, pp. 81–84).

<sup>21</sup>Senior (1836, p. 118) commented that Ricardo "frequently used the expression 'the corn raised *on land* paying no rent,' as an equivalent for 'the corn raised without the payment of rent.' And when his opponents reply, as is true, that 'in old Countries all land pays a rent,' he has sometimes denied the truth of the reply, instead of showing, as he has done in the passage which we have quoted, that the doctrine is just as true when applied to a small district in which all the land is highly rented, as when applied to a colony where rent is the exception and freedom from it the rule."



of his readers; and he was too earnest a lover of truth to anticipate wilful misconstruction. Under the influence of these causes he is, perhaps, the most incorrect writer who ever attained philosophical eminence; and there are few subjects on which he has been guilty of more faults of expression than on rent (Senior 1836, p. 118).

The important difference between Senior and Ricardo on the question of rent comes from the fact that Senior's definition of rent conserved Ricardo's differential element (the rent of the land) and added to it a scarcity aspect (three cases of monopoly profit or absolute rent). Indeed, Senior defined rent as "all that nature or fortune bestows either without any exertion on the part of the recipient, or in addition to the average remuneration for the exercise of industry or the employment of capital" (1836, pp. 91–92).<sup>22</sup> This definition implied two kinds of rent: 1) the differential one: "THE GREAT MONOPOLY OF LAND" (Senior 1836, p. 105)<sup>23</sup>; and 2) three cases of monopoly profits and of absolute rent.<sup>24</sup> As Bowley (1937, p. 126) concludes, "although in treating the rent of land Senior accepted the ordinary account of its differential aspect, he did not in fact derive rent solely from this characteristic."

This difference between Senior and Ricardo is the origin of Senior's main criticism of Ricardo on the question of rent:

he [Ricardo] has often spoken of the existence of rent as dependent on the cultivation of land of different degrees of fertility, or on the fact that the same land repays, with a proportionably [sic] smaller return, the application of additional capital. And yet it is clear that if we suppose the existence of a populous and opulent district of great but uniform fertility, giving a large return to a given expenditure of capital, but incapable of giving any return whatever on a less expenditure, or any greater return on a larger expenditure, such a district would afford a high rent though every rood of land and every portion of the capital applied to it would be equally productive (1836, p. 118).

Senior's point is that the rent of the land may appear even in the case of lands of a uniform fertility if the production is pushed to a maximum. In such a situation, there would be no differential rent, because all the lands bear the same fertility, but an absolute one. In other words, if raw produce cannot be increased, it is sold at a monopoly price and will, therefore, afford a rent even in the case of a uniform fertility of lands. This criticism of Senior appears quite unfair for, at least, two reasons.

<sup>22</sup>The *Edinburgh Review* of October 1837 commented in dealing with Senior's *Outlines*: "it is obvious that, under this nomenclature, all that in common language is termed *monopoly profit*, is in future to be ranked as *rent*" (Merivale 1837, p. 99). According to *The Wellesey Index to Victorian Periodicals 1824–1900* (Houghton 1966–89, 1, p. 484), the author of this review was Hermann Merivale.

<sup>23</sup>"4) *The fourth and last class of monopolies exists where production must be assisted by natural agents, limited in number, and varying in power, and repaying with less and less relative assistance every increase in the amount of the labour and abstinence bestowed on them*" (Senior 1836, p. 105).

<sup>24</sup>"1) *Where the monopolist has not the exclusive power of producing, but only certain exclusive facilities as a producer, and can increase, with undiminished, or even increased facility, the amount of his produce. . . .*

"2) . . . *the opposite extreme. It exists where price is checked neither by the hopes nor by the fears of the producer, where no competition is dreaded, and no increased supply can be effected.* The owners of some vineyards have such a monopoly. . . ."

"3) *A third and more frequent kind of monopoly lies between these two extremes. . . . This comprises those cases in which the monopolist is the only producer, but, by the application of additional labour and abstinence, can indefinitely increase his production.* The book trade affords an illustration" (Senior 1836, pp. 103–105).

First, Senior himself (1836, p. 105) admitted that “the soil of every extensive district is of different degrees of fertility and convenience of situation”; and, except for a few cases (regions that lie within the limits of perennial snow, or consist of rock or loose sand, or precipitous mountain), “the produce of every extensive district seems capable of being almost indefinitely increased by constantly increasing the labour bestowed on it” (1836, p. 82). It seems, therefore, that Senior committed the fault with which he reproached Ricardo, of forgetting the unsubstantial foundation of his premises and of arguing as if they were true.

Second, it is clear that in the case advanced by Senior, Ricardo would admit that an absolute rent would take place. Indeed, as he explained in chapter 17 of the *Principles*, whenever an agricultural commodity cannot be reproduced, it is sold at a monopoly price, and yields an absolute rent. This is the case of rare wines and would be the case of raw produce if it became impossible to increase its quantity:

Raw produce is not at a monopoly price, because the market price of barley and wheat is as much regulated by their cost of production, as the market price of cloth and linen. The only difference is this, that one portion of the capital employed in agriculture regulates the price of corn, namely, that portion which pays no rent; whereas, in the production of manufactured commodities, every portion of capital is employed with the same results; and as no portion pays rent, every portion is equally a regulator of price: corn, and other raw produce, can be augmented, too, in quantity, by the employment of more capital on the land, and therefore they are not at a monopoly price. There is competition among the sellers, as well as amongst the buyers. This is not the case in the production of those rare wines, and those valuable specimens of art, of which we have been speaking; their quantity cannot be increased, and their price is limited only by the extent of the power and will of the purchasers. The rent of these vineyards may be raised beyond any moderately assignable limits, because no other land being able to produce such wines, none can be brought into competition with them.

The corn and raw produce of a country may, indeed, for a time sell at a monopoly price; but they can do so permanently only when no more capital can be profitably employed on the lands, and when, therefore, their produce cannot be increased. At such time, every portion of land in cultivation, and every portion of capital employed on the land will yield a rent, differing, indeed, in proportion to the difference in the return (Ricardo 1951–73, 1, pp. 250–251).

Though it is ill-founded, Senior’s criticism nevertheless reveals an important difference between him and Ricardo on the definition of their respective object. Indeed, contrary to Senior, Ricardo focused on “commodities only as can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint” (Ricardo 1951–73, 1, p. 12). Insofar as raw produce was such a commodity, Ricardo had no interests in those monopoly profits that Senior included in rent.

### *Natural Wages*

The second criticism that Senior addressed to Ricardo deals with the question of natural wages. According to Senior, Ricardo supposed a level of wages that maintained a laborer and his family in health and strength. Senior commented that it was not true

that laborers always receive precisely the necessaries of life: in civilized countries, they often receive much more and in “barbarous countries” they sometimes receive less. This criticism was not new, for it had already been formulated by Malthus in 1817 while charging Ricardo of “falling into the errors of the taylor of Laputa.”<sup>25</sup>

A writer may, to be sure, make any hypothesis he pleases; but if he supposes what is not at all true practically, he precludes himself from drawing any practical inferences from his hypothesis. In your essay on profits you suppose the real wages of labour constant; but as they vary with every alteration in the prices of commodities, (while they remain nominally the same) and are in reality as variable as profits, there is no chance of your inferences being just as applied to the actual state of things. We see in all the countries around us, and in our own particularly, periods of greater and less prosperity, and sometimes of adversity, but *never* the uniform progress which you seem alone to contemplate (in Ricardo 1951–73, 7, p. 122).

Ricardo’s theory of natural wages established that the part of the product retained by the laborer amounts to a “subsistence level” determined by historical rather than physiological conditions. Then, the fact that the natural wage is lower in poor countries than in rich ones, as Senior argued, was not a problem for Ricardo. As he stressed in chapter 5, “On Wages,” of the *Principles of Political Economy*: “it is not to be understood that the natural price of labour, estimated even in food and necessaries, is absolutely fixed and constant. It varies at different times in the same country, and very materially differs in different countries. It essentially depends on the habits and customs of the people” (Ricardo 1951–73, 1, pp. 96–97).

Ricardo’s theory of natural wage has to be considered in relation to his analysis of a system where quantities are given. Indeed, during his analysis, Ricardo abstracts from all the causes that may act on quantities, and, among them, those that may increase or decrease the size of the population and the quantity of labor. Because of this abstraction, the natural wage is defined as the level at which the quantity of labor and the population are constant: “the natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and to perpetuate their race, without either increase or diminution” (Ricardo 1951–73, 1, p. 93).

Ricardo described this process of abstraction in the letter to which Malthus’ quotation constituted the answer. There, Ricardo explained that he fixed his attention on the “permanent state of things,” and abstracted from the secondary causes (those relating to quantities) that he called accidental or temporary<sup>26</sup>: “you have always in

<sup>25</sup>Malthus alludes here to the third part of *Gulliver’s Travels* where Swift describes the “taylor of Laputa” in the following manner: “Those to whom the king had entrusted me, observing how ill I was clad, ordered a tailor to come next morning, and take measure for a suit of clothes. . . . He first took my altitude by a quadrant, and then, with rule and compasses, described the dimensions and outlines of my whole body, all which he entered upon paper; and, in six days, brought my clothes very ill made, and quite out of shape, by happening to mistake a figure in the calculation” (Swift 1814, pp. 207–208).

<sup>26</sup>As Marcuzzo and Rosselli noted: “when reference is made to natural or normal values in Ricardo’s theory, a distinction is made between ‘permanent’ and ‘temporary’ causes of economic events. This distinction pertains to the nature of the forces involved and not to the time sequence in which they are assumed to operate, and it therefore cannot be interpreted—although it often is in the literature—as a distinction between long and short-period equilibria” (1994, p. 1258). On this point, see also Garegnani (1983, p. 313), Rosselli (1985, p. 243), and Depoortère (2008b, pp. 145–146).

your mind the immediate and temporary effects of particular changes—whereas I put these immediate and temporary effects quite aside, and fix my whole attention on the permanent state of things which will result from them” (Ricardo 1951–73, 7, p. 120).

However, and this is probably why Senior misunderstood Ricardo, this natural wage is neither an hypothesis nor an observable variable. Indeed, in point of fact, Ricardo admitted that the actual wage almost never stands at its natural level (even in the long run). This, he clearly stated in his *Notes on Malthus* while explaining that he defined natural wage in a way that furnishes

one common language to apply to all cases which are similar. By natural price I do not mean the usual price, but such a price as is necessary to supply constantly a given demand. The natural price of corn is the price at which it can be supplied affording the usual profit. With every demand for an increased quantity the market price of corn will rise above this price and probably is never at the natural price but either above or below it,—the same may be said of the natural price of labour (Ricardo 1951–73, 2, pp. 227–228).<sup>27</sup>

Actually, the concept of natural wage is useful when reasoning in static or in comparative statics; that is, as Ricardo generally does, in situations where quantities are given. However, while considering dynamics, such a concept appears unsuited. Indeed, in a situation of constant accumulation of capital, for example, Ricardo admitted that because of the constantly increasing demand for labor, the actual (market) wage rate would stand above its natural level for an indefinite period:

notwithstanding the tendency of wages to conform to their natural rate, their market rate may, in an improving society, for an indefinite period, be constantly above it; for no sooner may the impulse, which an increased capital gives to a new demand for labour be obeyed, than another increase of capital may produce the same effect; and thus, if the increase of capital be gradual and constant, the demand for labour may give a continued stimulus to an increase of people (Ricardo 1951–73, 1, pp. 94–95).<sup>28</sup>

Senior’s criticism of Ricardo on the question of natural wages comes from his narrow conception of what is empirically founded, understood in the sense of what is “actually observable.” Insofar as the actual wage is never, or only “accidentally,” at its subsistence level, he denied natural wages any empirical feature, and considered it as an hypothesis. In this respect, he overturns into a “vulgar” turn of mind, as Karl Marx labeled it, overlooking that “all science would be superfluous if the outward appearance and the essence of things directly coincided” (Marx 1966, p. 817).

<sup>27</sup>As Hollander noted, “the assumption of long-run constant commodity wages does *not* represent Ricardo’s position” (1979, p. 396). However, it does not follow, as Hollander maintains, that the natural wage is “nothing but a limiting value” (1979, p. 639), relevant only when the stationary state is reached (Hollander 1983, p. 220). For a recent discussion of the different interpretations on this question, see Depoortère (2008b, pp. 144–149).

<sup>28</sup>According to Dixon, this was the kind of situation that Ricardo wanted to realize, and that led him to support extension of the franchise to the working class: “he saw workers’ interests coinciding with accumulation as essential to his argument for extension of the franchise” (Dixon 2008, p. 241; see also pp. 242 and 248).

*The Tendencies of Agricultural Returns to Decrease and of Profit to Fall*

Senior's last criticism of Ricardo deals with the tendencies of agricultural returns to decrease and of profit to fall. According to Senior, Ricardo assumed diminishing returns in agriculture, and deduced from that a tendency of profit to fall. Senior commented that it is not true that agricultural returns decrease with the advance of wealth and population, and that it is not true that the share of the produce taken by the capitalist is least in richest countries (1848, pp. 302–303). Senior's criticism, though not dealing with Ricardo's analysis anymore but with the use of what Stewart called synthetic reasoning, appears once again unfair because of his misunderstanding of Ricardo's method.

Indeed, Senior's criticism was of a factual order: he considered Ricardo's view of tendencies of agricultural returns to diminish and of profit to fall as predictions on the future course of events.<sup>29</sup> As those predictions were contradicted by facts, he concluded that Ricardo's theory was simply "false." Senior's criticism actually overlooks what appears clearly in Ricardo: that the synthetic reasoning consists in deducing from the principles of political economy, and with the help of the *ceteris paribus* clause, the consequences of the causes abstracted from during the analysis.

In the cases raised by Senior, it is an accumulation of capital that is supposed. Then, Ricardo considers the consequences of this accumulation on the determination of the relative prices of commodities and on the shares of distribution other than (real) wages, apart from causes that may act 1) on the technique of production (especially in agriculture); and 2) on the level of the real wages. Ricardo was quite clear on this point in his *Essay on Profits*:

we will . . . suppose that no improvements take place in agriculture, and that capital and population advance in the proper proportion, so that the real wages of labour, continue uniformly the same;—that we may know what peculiar effects are to be ascribed to the growth of capital, the increase of population, and the extension of cultivation, to the more remote, and less fertile land (Ricardo 1951–73, 4, p. 12).

However, this doesn't mean that Ricardo thought those suppositions were near the truth or nearly to happen. As he explained to Malthus in a letter of 4 May 1820, dealing with the inverse case of an improvement in agriculture, Ricardo's object was to "elucidate principles." To do this, he deduced the consequences of the causes considered as given during the analysis (capital accumulation, changes in the techniques of production, and changes in supply and demand). Moreover, in order to establish clearly the consequences attributable to these causes, they were considered *ceteris paribus*:

<sup>29</sup>Many commentators support this kind of interpretation. Though there is a large spectrum between those who considered the stationary state as "imminent" and those who viewed the fall of profitability as "glacially slow" (Peach 1993, pp. 295–296), the interpretation of the tendency of profit to fall as a prediction on the future course of event appears in Schumpeter (1954, p. 57), Blaug (1956, p. 157), Gootzeit (1975, p. 67), O'Brien (1975, p. 69; 1981, p. 166), de Marchi (1970, p. 223), Peach (1993, pp. 8–9), and Davis (1998, pp. 423–424). For a different interpretation, see Tucker (1960, p. 162) and Hollander (1979, pp. 599–629).

my object was to elucidate principles, and to do this I imagined strong cases that I might shew the operation of those principles. I never thought for example that practically any improvements took place on the land which would at once double its produce, but to shew what the effect of improvements would be undisturbed by any other operating cause, I supposed an improvement to that extent to be adopted, and I think I have reasoned correctly from such premises (Ricardo 1951–73, 8, p. 184).

The consequence, in the case of a capital accumulation, and in absence of technical progress in general and in agriculture in particular, is that nothing can counteract the diminishing returns in agriculture. Because of the causes that may act on real phenomena but are supposed not to intervene in the reasoning, the consequences of this capital accumulation (the tendencies of agricultural returns to decrease and of profit to fall) were considered as particular facts. Furthermore, as nothing warrants that the conditions implied in the reasoning by the *ceteris paribus* clause will be observed in the future course of events, Ricardo called these consequences “tendencies.”

Then, contrary to Senior’s interpretation, the tendencies of agricultural returns to decrease and of profit to fall should not be considered, in Ricardo, as predictions of the future course of events that could be subject to empirical verification. In other words, if one keeps in mind the distinction established by De Marchi (1970, p. 219) between two possible meanings of the word “tendency,” envisaged as analytical propositions or as historical generalization, this is the first of these two meanings that must be ascribed to Ricardo’s propositions.<sup>30</sup> His correspondence with Malthus is clear on this point. Indeed, as the letter Ricardo wrote on 17 August 1813 testifies, the fact that the rate of profit greatly increased during a long period of time (1793–1813) did not at all invalidate his conclusion. The increase of the rate of profit only showed that other causes—and, in particular, improvements in agriculture—operated on the rate of profit, and that their effects more than compensated for the consequences of the accumulation of capital:

I have little doubt however that for a long period, during the interval you mention, there has been an increased rate of profits, but it has been accompanied with such decided improvements of agriculture both here and abroad . . . that it is perfectly reconcilable to my theory. My conclusion is that there has been a rapid increase of Capital which has been prevented from shewing itself in a low rate of interest by new facilities in the production of food (Ricardo 1951–73, 6, pp. 94–95).

This early statement of Ricardo’s position was repeated in an illuminating manner in 1821, in reaction to a criticism expressed by Malthus. In his *Principles* (1820), Malthus argued:

<sup>30</sup>“For example, the law of diminishing returns may express the idea that, *given* the state of the ‘arts’ of production, the application of successive ‘doses’ of capital-plus-labour to units of land of decreasing fertility will result in a lower marginal product. Alternatively, Ricardo may be saying that, although technical progress may occur, or new sources of supply be discovered, these probably will be only occasional, and temporary in their effects; in the long run, the force of diminishing returns will in fact prevail” (De Marchi 1970, p. 219).



Mr. Ricardo has never laid any *stress* upon the influence of permanent improvements in agriculture on the profits of the stock, although it is one of the most important considerations in the whole compass of Political Economy, as such improvements unquestionably open the largest *arena* for the employment of capital without a diminution of profits (Malthus, in Ricardo 1951–73, 2, p. 293).

Ricardo's reaction appears in his *Notes on Malthus*. It confirms that the absence of technical progress in agriculture in Ricardo's deduction of the consequences of capital accumulation was not justified on empirical grounds, but derived from the kind of reasoning he pursued:

once more I must say that I lay the very greatest stress upon the influence of permanent improvements in Agriculture. The passage quoted<sup>[31]</sup> refers to a state of things when no improvements are taking place, and therefore the argument built upon it which supposes improvements has no foundation (Ricardo 1951–73, 2, p. 293).

Hence, it is not surprising that, facing Malthus' prediction of a higher rate of profit at the beginning of the twentieth century than in the 1820s, Ricardo did not express any definite position but only commented that it would depend on improvements in agriculture and on the legislation regarding importation of corn (Ricardo 1951–73, 1, p. 284).

Once again, it appears that Senior misunderstood Ricardo's use of abstraction when dealing with the synthetic reasoning. Indeed, he failed to identify clearly the elements considered as given in Ricardo's deduction, and, consequently, did not recognize in Ricardo the real feature of the tendencies of returns to decrease and of profit to fall. This misunderstanding on the "content" of the *ceteris paribus* clause led him to consider Ricardo's tendencies as a prediction on the future course of events or historical generalization, while they are mere analytical propositions.

## V. CONCLUSION

Contrary to an opinion held by many historians of economic thought, Senior's position on the method of political economy is quite different from Ricardo's. Indeed, while Senior, in accord with the role attached to logic by the Oriel Noetics, tried to deduce the principles of political economy from a few premises obtained by simple observation of facts, his predecessor intended to establish the principles of the determination of prices and of the distributive variables other than wages by abstracting from causes that may act on quantities, the consequences of which are studied *ceteris paribus* during the synthesis. If Senior felt clearly that a difference existed between his method and that of Ricardo, he did not clearly identify it, and misinterpreted Ricardo's approach to economic phenomena as an hypothetico-deductive one. This misinterpretation led Senior to criticize Ricardo unwisely on several points of analysis, such as his theories of rent, wages, and capital accumulation. In this respect, it seems that Senior contributed, through his criticisms, to popularizing the view of Ricardo as an *a priori* theorist deducing predictions

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<sup>31</sup>Ricardo 1951–73, 1, p. 126.

contradicted by facts. This view still has a hold on many commentators but it is one totally at odds with Ricardo's actual method.

## REFERENCES

- Arena, R. 1992. "La pensée économique post-ricardienne avant John Stuart Mill." In A. Beraud and G. Faccarello, eds., *Nouvelle histoire de la pensée économique. Tome 1: Des scolastiques aux classiques*. Paris: La Découverte.
- Blaug, M. 1956. "The Empirical Content of Ricardian Economics." *Journal of Political Economy* 64: 41–58. As reprinted in J.C. Wood, ed. 1985. *David Ricardo Critical Assessments*. First series. Four volumes. London: Routledge, vol. I, pp. 157–177.
- Blaug, M. 1992. *The Methodology of Economics or How Economists Explain*. Second edition. Cambridge: Cambridge University Press.
- Bowley, M. 1936. "Nassau Senior's Contribution to the Methodology of Economics." *Economica* 3: 281–305.
- Bowley, M. 1937. *Nassau Senior and Classical Economists*. London: G. Allen and Unwin.
- Brennan, H.G., and A.M.C. Waterman. 1994. *Economics and Religion: Are They Distinct?* Boston, Dordrecht, and London: Kluwer Academic Publisher.
- Caravale, G.A., ed. 1985. *The Legacy of Ricardo*. Oxford: Basil Blackwell.
- Coleman, W.O. 1996. "How Theory Came to English Classical Economics." *Scottish Journal of Political Economy* 43: 207–228.
- Collini, S., D., Winch, and J., Burrow, eds. 1983. *That Noble Science of Politics: A Study in Nineteenth-Century Intellectual History*. Cambridge: Cambridge University Press.
- Corsi, P. 1987. "The Heritage of Dugald Stewart: Oxford Philosophy and the Method of Political Economy, 1809–1832." *Nuncius, Annali di Storia della Scienza* 2: 89–144.
- Corsi, P. 1988. *Science and Religion. Baden Powell and the Anglican Debate, 1800–1860*. Cambridge: Cambridge University Press.
- Cozzi, T., and R., Marchionatti, eds. 2001. *Piero Sraffa's Political Economy*. London and New York: Routledge.
- Davis, J.B. 1998. "Ricardo, David." In D.W. Hands and U. Mäki, eds., *The Handbook of Economic Methodology*. Cheltenham: Edward Elgar, pp. 422–24.
- De Marchi, N.B. 1970. "The Empirical Content and Longevity of Ricardian Economics." *Economica* 37: 257–276. As reprinted in J.C. Wood, ed. 1985. *David Ricardo Critical Assessments*. First series. Four volumes. London: Routledge, vol. I, pp. 215–234.
- De Marchi, N.B. 1987. "Nassau Senior." In J. Eatwell, M. Milgate and P. Newman, eds., *The New Palgrave Dictionary*. Four volumes. London: Macmillan, vol. IV, pp. 303–305.
- Depoortère, C. 2008a. "On Ricardo's Method: The Scottish Connection Considered." *History of Political Economy* 40: 73–110.
- Depoortère, C. 2008b. "Quel modèle d'accumulation du capital chez Ricardo?" *Cahiers d'Economie Politique* 55: 141–154.
- Dixon, W. 2008. "Ricardo: Economic Thought and Social Order." *Journal of the History of Economic Thought* 30: 235–253.
- Eatwell, J. 1977. "The Irrelevance of Returns to Scale in Sraffa's Analysis." *Journal of Economic Literature* 15: 61–68.
- Garegnani, P. 1983. "The Classical Theory of Wages and the Role of Demand Schedules in the Determination of Relative Prices." *American Economic Review* 73: 309–313.
- Garegnani, P. 1984. "Value and Distribution in the Classical Economists and Marx." *Oxford Economic Papers* 36: 291–325.
- Gootzeit, M.J. 1975. *David Ricardo*. New York: Columbia University Press.
- Hollander, S. 1979. *The Economics of David Ricardo*. Toronto: University of Toronto Press.

- Hollander, S. 1983. "On the Interpretation of Ricardian Economics: The Assumption Regarding Wages." As reprinted in S. Hollander. 1995, *Ricardo—The New View*. London: Routledge, pp. 219–225.
- Hollander, S. 1995. *Ricardo—The New View*. London: Routledge.
- Horner, F. 1957. *The Economic Writings of Francis Horner in the Edinburgh Review 1802–6*, edited by F.W. Fetter. New York: Kelley and Millman.
- Houghton, W.E. 1966–89. *The Wellesley Index to Victorian Periodicals 1824–1900*. Five volumes. London: Routledge and P. Kegan.
- Hutchison, T. 1994. *The Uses and Abuses of Economics: Contentious Essays on History and Method*. London and New York: Routledge.
- Hutchison, T. 1998. "Ultra-Deductivism from Nassau Senior to Lionel Robbins and Daniel Hausman." *Journal of Economic Methodology* 5: 43–91.
- Karayiannis, A.D. 2001. "Behavioural Assumptions in Nassau Senior's Economics." *Contributions to Political Economy* 20: 17–29.
- Levy, S.L. 1970. *Nassau W. Senior 1790–1864*. Newton Abbot: David & Charles.
- Maas, H. 2005. *William Stanley Jevons and the Making of Modern Economics*. Cambridge: Cambridge University Press.
- Maas, H., and M.S. Morgan. 2002. "Timing History: The Introduction of Graphical Analysis in the 19<sup>th</sup> Century British Economics." *Revue d'Histoire des Sciences Humaines* 7: 97–127.
- Malthus, T.R. 1820. *Principles of Political Economy Considered with a View to Their Practical Application*. First edition. London: J. Murray.
- Marcuzzo, M.C., and A. Rosselli. 1994. "Ricardo's Theory of Money Matters." *Revue Economique* 45: 1251–1267.
- Marx, K. 1966. *Capital*. Volume III. London: Lawrence & Wishart.
- McCulloch, J.R. 1824. *A Discourse on the Rise, Progress, Peculiar Objects and Importance of Political Economy*. Edinburgh: Constable and Co.
- McKerrow, R.E. 1981. "Richard Whately on the Nature of Human Knowledge in Relation to Ideas of His Contemporaries." *Journal of the History of Ideas* 42: 439–455.
- Merivale, H. 1837. "An Outline of the Science of Political Economy by Nassau W. Senior, Esq." *The Edinburgh Review* 66: 293–339.
- Mill, J. 1813. "Grant's Expediency of Continuing the Indian System." *Monthly Review* 70: 410–425.
- O'Brien, D.P. 1975. *The Classical Economists*. Oxford: Clarendon Press.
- O'Brien, D.P. 1981. "Ricardian Economics and the Economics of David Ricardo." *Oxford Economic Papers* 33: 352–386. As reprinted in J.C. Wood, ed. 1994. *David Ricardo Critical Assessments*. Second series. Three volumes. London: Routledge, vol. V, pp. 159–194.
- Peach, T. 1993. *Interpreting Ricardo*. Cambridge: Cambridge University Press.
- Rashid, S. 1977. "Richard Whately and Christian Political Economy at Oxford and Dublin." *Journal of the History of Ideas* 38: 147–155.
- Rashid, S. 1985. "Dugald Stewart, 'Baconian' Methodology, and Political Economy." *Journal of the History of Ideas* 46: 245–257.
- Reid, T. 1863. *The Works of Thomas Reid*, edited by W. Hamilton. Two volumes. Edinburgh: MacLachlan and Stewart.
- Ricardo, D. 1819. *Des principes de l'économie politique et de l'impôt*. Two volumes. Paris: J.P. Aillaud.
- Ricardo, D. 1951–73. *The Works and Correspondence of David Ricardo*, edited by P. Sraffa with the collaboration of M. H. Dobb. Eleven volumes. Cambridge: Cambridge University Press.
- Roncaglia, A. 2001. "Production of Commodities by Means of Commodities between Criticism and Reconstruction: The Given Quantities Assumption." In T. Cozzi and R. Marchionatti, eds., *Piero Sraffa's Political Economy*. London and New York: Routledge, pp. 207–221.
- Rosselli, A. 1985. "The Theory of the Natural Wage." In G.A. Caravale, ed., *The Legacy of Ricardo*. Oxford: Basil Blackwell, pp. 239–254.
- Rutherford, D. 1998. "Introduction." In W.N. Senior, *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press, vol. I, pp. vii–xxx.

- Say, J.B. 1803. *Traité d'économie politique ou simple exposition de la manière dont se forment, se distribuent, et se consomment les richesses*. First edition. Two volumes. Paris: Crapelet.
- Schumpeter, J.A. 1954. *History of Economic Analysis*. New York: Oxford University Press.
- Senior, W.N. [1827] 1998. "An Introductory Lecture on Political Economy." In W.N. Senior, *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press, vol. I.
- Senior, W.N. [1836] 1998. "An Outline of the Science of Political Economy." In W.N. Senior, *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press, vol. I.
- Senior, W.N. 1848. "J. S. Mill on Political Economy." *The Edinburgh Review* 88: 293–339. In W.N. Senior, *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press, 1998, vol. I.
- Senior, W.N. [1852] 1998. "Four Introductory Lectures on Political Economy." In W.N. Senior, *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press, vol. I.
- Senior, W.N. 1998. *Collected Works of Nassau William Senior*, edited by D. Rutherford. Six volumes. Bristol: Thoemmes Press.
- Sraffa, P. 1960. *Production of Commodities by Means of Commodities. Prelude to a Critique of Economic Theory*. Cambridge: Cambridge University Press.
- Stewart, D. 1854–60. *The Collected Works of Dugald Stewart*, edited by W. Hamilton. Eleven volumes. Edinburgh: T. Constable and Co.
- Swift, J. 1814. *Works of Jonathan Swift*. Volume XII. Constable: Edinburgh.
- Tucker, G.S.L. 1960. *Progress and Profits in British Economic Thought: 1650–1850*. Cambridge: Cambridge University Press.
- Waterman, A. M. C. 1991. *Revolution, Economics and Religion. Christian Political Economy, 1798-1833*. Cambridge: Cambridge University Press.
- Waterman, A. M. C. 1994. "Whately, Senior, and the Methodology of Classical Economists." In H.G. Brennan and A.M.C. Waterman, *Economics and Religion: Are They Distinct?* Boston, Dordrecht, and London: Kluwer Academic Publisher, pp. 41–60.
- Whately, R. 1832. *Introductory Lectures on Political Economy*. Second edition. London: B. Fellowes.
- J.C., Wood, ed. 1985. *David Ricardo Critical Assessments*. First series. Four volumes. London: Routledge.
- J.C., Wood, ed. 1994. *David Ricardo Critical Assessments*. Second series. Three volumes. London: Routledge.