2 Say and Ricardo on value and distribution*

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1. Say's *Treatise*: bringing Smith to the continent

When Jean-Baptiste Say published his *Traité d'économie politique* (henceforth *Treatise* or *T*) in 1803, economic thinking in England was largely shaped by Smith's *Wealth of Nations*, while in France and some other parts of Continental Europe physiocratic ideas were still predominant. Say, who admittedly had adopted (and adapted) the economics of Adam Smith for the main parts of his *Treatise*, can be credited with having established certain Smithian ideas on the Continent.[1]

However, while Say had indeed borrowed much of his economics from Smith, he had not followed the Scotsman in every respect and had not confined himself to merely popularizing the latter's ideas. First, there were other, mostly French authors, especially Condorcet, Condillac and Turgot (see, for example, *T*: xxxii–xxxvi), who exerted an important influence on Say's thinking. Secondly, beginning with the second edition of the *Treatise* Say put forward criticisms of Smith's *Wealth of Nations*. He stressed five 'principal imperfections' of Smith's doctrine: (1) 'To the labour of man alone he ascribes the power of producing value. This is an error' (*T*: xl); (2) 'By the exclusive restriction of the term *wealth* to values fixed and realized in material substances, Dr Smith has narrowed the boundary of this science' (*T*: xli–xlii, emphasis in the original);[2] (3) 'On the subject of commercial production [he] presents us with only obscure and indistinct notions' (*T*: xlii); (4) 'His work does not furnish a satisfactory or well connected account of the manner in which wealth is distributed in society' (*T*: xlii); and (5) 'By not characterizing the two different kinds of consumption, namely, unproductive and reproductive, he does not satisfactorily demonstrate, that the consumption of values saved and accumulated in order to form capital, is as perfect as the consumption of values which are dissipated' (*T*: xlii–xliii). Say had thus departed from Smith in several respects of his analysis, and in particular with regard to that part which was at the very centre of economic theory: the theory of value and distribution. Say's conceptualization, although undoubtedly inspired by Smith's, was markedly different from it. With its emphasis on 'utility' and on 'supply and

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demand', the theory of value expounded by Say stressed some elements of Smith's to the neglect of others, with the result that an entirely different theory emerged. As seen below, the same can also be said of Say's explanation of interest and profit.

When Ricardo took up the Smithian heritage in England, he could draw not only on the *WN* but also on the exposition and elaboration of Smithian economics contained in Say's *Treatise*. While Ricardo praised certain aspects of Say's analysis, from the beginning he was critical of other aspects and especially of Say's theory of value and distribution. Early on he pointed out difficulties, inconsistencies and contradictions in Say's analysis, which, in Ricardo's judgement, the latter was incapable of resolving in the successive editions of the *Treatise*.

This paper deals with the differences of opinion between Ricardo and Say in the theory of value and distribution – the main field in dispute between them. Attention is focused on those aspects which, in our interpretation, concern fundamental issues in controversy between the two authors, while other aspects which are considered to be only peripheral to the main theme are set aside. In particular, Say's concept of the 'entrepreneur' will be referred to only in passing (see, therefore, Steiner 1996: 30–35 and 1998b), and we shall not deal with the similar, but by no means identical, views of Say and Ricardo with regard to the 'law of markets'.[3] Since during the time of their acquaintance until Ricardo's untimely death in 1823 Say variously expressed his wish to learn from his British counterpart and to absorb his doctrine,[4] our question will essentially be whether he made progress in this regard. With the possible exception of the law of markets there is indeed no presumption that Say exerted any influence on Ricardo, whilst we have Say's word that things were different the other way round. The question then is to what did this influence amount. Accordingly Ricardo's analysis will serve as a measuring rod of Say's analytical achievements in the theory of value and distribution.[5] Whenever possible we shall let the two authors speak for themselves and keep our comments and interpretation to a minimum.

The structure of the paper is the following. In Section 2 we provide a brief account of Say's first encounters with Ricardo and of the latter's criticism of his work in 1814 and 1815. Significant differences in terms of scope, method and content of the analyses of the two economists are pointed out in Section 3, while Section 4 identifies the main areas of disagreement between Ricardo and Say. In Section 5 we document Ricardo's reactions to Say's attempts to come to grips with his criticisms in the successive editions of his *Treatise*. Section 6 turns to Say's concepts of 'value' and 'riches' which Ricardo considered mistaken. Section 7 deals with the different views of the two authors in the theory of value, the problem of the measure of value and Ricardo's criticism of Say's distinction between 'gross' and 'net revenue'. Section 8 addresses their opposing views in the theory of income distribution, focusing attention on the explanation of rents and profits. Section 9 contains some concluding remarks.

2. The first encounters between Say and Ricardo

Ricardo and Say first met in December 1814,[6] when Say visited Ricardo at Gatcombe Park and the two together went to see Bentham and James Mill at

Ford Abbey. Their meeting had been arranged by Mill, who had informed Ricardo on 24 November 1814:

> Mons. Say, the author of the excellent book with which you are well acquainted, entitled *Economie Politique*, is in this island. It would be a thousand pities that you and he should not see one another.
>
> (Ricardo, *Works*, vol. VI: 156–7)

Say had been commissioned by the French Government to study economic conditions in England and bring back such information as might find useful application in France.[7] Ricardo reported on their meeting in a letter to Malthus of 18 December 1814:

> Monsr. Say . . . does not appear to me to be ready in conversation on the subject on which he has very ably written – and indeed in his book there are many points which I think are very far from being satisfactorily established – yet he is an unaffected agreeable man, and I found him an instructive companion.
>
> (Ricardo, *Works*, vol. VI: 161)[8]

In the same letter Ricardo also expressed his agreement with what was later to become one of Say's best-known propositions:

> Mr. Say, in the new edition of his book [*Traité*, second edition, 1814],... supports, I think, very a[bly] the doctrine that demand is regulated by production. Dema[nd] is always an exchange of one commodity for another. . . . Accumulation necessarily increases production and as necessarily increases consumption.
>
> (Ricardo, *Works*, vol. VI: 163–4)

But on the occasion of this meeting Ricardo (and Mill) must also have raised objections to some of Say's 'definitions', because Ricardo was to write to James Mill on 30 August 1815: 'Have you seen Mr Say's Catéchisme D'Economie Politique? . . . I like it very much though he has not altered the definitions to which you and I objected last year' (Ricardo, *Works*, vol. VI: 264–5; see also ibid.: 269). What Ricardo had criticized in the first two editions of Say's *Treatise* becomes clear from a letter to Say of 18 August 1815, in which he observed with regard to Say's *Catéchisme*:

> You have I perceive a little modified the definition of the word *value* as far as it is dependent on utility, but with great diffidence, I observe, that I do not think you have mastered the difficulties which attach to the explanation of that *difficult word*. Utility is certainly the foundation of value, but *the degree of utility can never be the measure by which to estimate value*. A commodity difficult of production will always be more valuable than one which is easily produced although all men should agree that the latter is more useful than the former. A commodity must be useful to have value but the difficulty of its

> production is the true measure of its value. For this reason Iron though more useful is of less value than gold.
>
> (Ricardo, *Works*, vol. VI: 247–8)

In the same letter Ricardo also criticized Say's confounding of value and riches:

> Riches are valuable only as they can procure us enjoyments. That man is most rich, and has most valuables, who can procure in exchange for his commodities, not those things which he himself or the world generally consider as most desireable, because they may possibly be procured at little cost, but those things which are of difficult production, which is always the foundation of great value. It appears to me therefore incorrect to say as you do page 95 that that man is superlatively rich, *although he has few valuables*, who can procure easily or for nothing those things which he wishes to consume.
>
> (Ricardo, *Works*, vol. VI: 248)

Finally, Ricardo commented on a passage in which Say had suggested that an increase of capital could be ascertained by valuing all commodities in the capitalists' inventory at their current prices. As against this Ricardo argued that, 'An increase of capital is to be ascertained only by its power of employing more industry and of adding to the produce of the land and labour of the country' (Ricardo, *Works*, vol. VI: 248–9).

Ricardo's early objections thus concerned three main issues: the theory of value, the distinction between value and riches, and the problem of the measure of value.

3. On differences in scope, method and content

As the early exchange between Say and Ricardo and its reflection in the correspondence of Ricardo with James Mill, Malthus and McCulloch also indicate, their differences of opinion concerned the scope, method and content of economic analysis. As regards scope, Say opted for a Political Economy that was practically useful and this aim, he thought, necessitated the employment of the inductive method (see also Steiner 1996: 25–8; 1998b: 202–6). 'The excellence of this method', we read in the *Treatise*, 'consists in only admitting facts carefully observed, and the consequences rigorously deduced from them' (*T*: xvii). And: 'Political economy, in the same manner as the exact sciences, is composed of a few fundamental principles, and of a great number of corollaries or conclusions, drawn from these principles. It is essential, therefore, that these principles should be strictly deduced from observation' (*T*: xxvi). Say was of the opinion that mathematics had no role to play in the study of economic phenomena and that mathematical calculation was 'the most dangerous of all abstractions' (*T*: xxviii n). Given his concern with practical matters, the time frame of his analysis was often short term.

Ricardo was also interested in establishing principles that could provide guidance to the statesman. However, contrary to Say and notwithstanding his expertise as a highly successful stock jobber, in the theory of value and distribution Ricardo

advocated the deductive method of reasoning. In the introduction to the *Treatise* Say criticized him for this:

> It is, perhaps, a well founded objection to Mr. Ricardo, that he sometimes reasons upon abstract principles to which he gives too great a generalization. When once fixed in an hypothesis which cannot be assailed, from its being founded upon observations not called in question, he pushes his reasonings to their remotest consequences, without comparing their results with those of actual experience.
>
> (*T*: xlvii)

In accordance with his deductive bent in the theory of value and distribution, Ricardo did not share Say's view as regards mathematics. This becomes indirectly clear when Ricardo writes about Malthus: 'Another of his great mistakes is I think this; Political Economy he says is not a strict science like the mathematics' (Ricardo, *Works*, vol. VIII: 331). At the same time there is evidence indicating that Ricardo distinguished between different spheres of economic analysis and the ability of the theorist to establish economic laws in them. In his letter to Malthus of 9 October 1820 he specified:

> 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.*
>
> (Ricardo, *Works*, vol. VIII: 278)[9]

As regards the determination of value and distribution in a given time and place, Ricardo implied, a law can be formulated. In such a formulation mathematics was of considerable use, as is discernible especially in the chapter 'On value': see, in particular, Ricardo's discussion of the inverse relation between the real wage rate and the rate of profits, his so-called 'fundamental theorem of distribution' (see Blaug [1962]1997:96); and his treatment of fixed capital which shows that he employed the annuity formula in the numerical examples given (see Ricardo, *Works*, vol. I: 54–62). Much of Ricardo's analysis is concerned with analysing the properties of long-period positions of an economic system in conditions of free competition, characterised by a uniform rate of profits and uniform rates of remuneration for each kind of primary factor of production.

Say and Ricardo had somewhat different views of society and its stratification which are reflected in their respective theories. There are passages in Say's writings expressing an essentially harmonious view. However, as we shall see below, he was perfectly aware that the relationship between the different classes of society was conflict-ridden, a fact that found expression in recurrent social unrest. Apparently, he was convinced that Political Economy could help to alleviate, and

eventually dissolve, such conflicts of interest. In one place he boldly contended that Political Economy 'satisfactorily proves that the interest[s] of the rich and poor, and of different nations, are not opposed to each other, and that all rivalships are mere folly' (*T*: lix). But his warnings of the selfishness of entrepreneurs and his plea that the state ought to defend the workers against them were more down to earth and reminiscent of Smith's view. In Ricardo, as in Smith before him, social conflicts accounted for a good deal of the thrust of the analysis. The observation that the interests of the different classes of society were not congruent was a common premise of their theoretical edifices and a main explanatory factor of economic and social development. In Ricardo the emphasis was on the conflict of interest between the landed gentry, on the one hand, and the rest of society, on the other, as was reflected, for example, in the controversy about the Corn Laws. He was also concerned, though to a lesser extent, with the conflict between the rising class of industrial, merchant and money capitalists, on the one hand, and workers, on the other.

4. Areas of disagreement between Say and Ricardo

If we now turn to the areas in Political Economy with regard to which Say and Ricardo disagreed in their correspondence and publications, we see that these concerned almost exclusively the following:

(1) the distinction between 'value' and 'riches';
(2) the theory of value, the problem of the measure of value, and the distinction between net and gross revenue; and
(3) the theory of income distribution, especially the explanation of rent and of profits.

There were a few related themes, in particular the impact of machinery on employment and that of agricultural improvements on rents. A careful inspection shows that it was only with regard to the law of markets, later known as 'Say's law', that the two authors were largely in agreement, at least at first sight. Both insisted that acts of saving do not involve a reduction in effective demand for consumption goods, but rather a change from 'unproductive' to 'reproductive consumption'. Hence they concluded that there cannot be a 'general glut' of commodities as was maintained by authors such as Malthus and Simonde de Sismondi. A closer look would reveal, however, significant differences of opinion of the two economists (see Gehrke and Kurz 2001: section VIII). The view that there cannot be a lack of aggregate effective demand was a consequence of the fact that both authors, like the classical economists in general, tended to identify saving and investment. More precisely, they lacked a proper analysis of the interplay of saving and investment.

As regards areas (1)–(3), on which we focus attention, Ricardo's disagreement with Say is all too obvious and not even concealed by his polite and diplomatic ways to refer to this in their correspondence and in print. And, as we have seen,

the differences were there right at the beginning of their intellectual encounter and did not go away over time, notwithstanding Say's repeated affirmations that he had absorbed Ricardo's doctrine and had made use of it in the numerous changes between the different editions of the *Treatise*, his magnum opus. While Ricardo took notice of these changes, he felt with an ever increasing astonishment, which was to turn into disenchantment, that the substance of Say's respective arguments, which he thought erroneous or misleading, was basically left untouched. Therefore, his belief in Say's ability to understand his, Ricardo's, doctrine gradually vanished.

Scrutiny shows that the differences of opinion concerned what were then and are today considered to be core fields of Political Economy. Indeed, appearances to the contrary notwithstanding, Ricardo did not endorse the central 'principles' Say advocated, that is, doctrines which the latter had adopted with some adaptations from Smith and which Ricardo had already criticized in Smith. In particular, Ricardo thought that in the theory of value and distribution Say contradicted himself in important respects and that his overall analysis lacked coherence. As to the distinction between net and gross revenue, Ricardo saw Say committing essentially the same error as Smith, an error which derived from the defective theory of value the two authors advocated. According to that theory the price of a commodity equals the added up payments of factor services in its production. This component parts approach to the theory of value misled Smith and Say to contend that all prices would rise or fall as wages rose or fell. The two authors thus missed the constraint binding changes in the distributive variables, given the technical conditions of production, demonstrated by Ricardo. Say emphasized also the importance of utility for prices and argued that the latter were determined by demand and supply. According to Ricardo these propositions were either wrong or vacuous, because the concepts of 'demand' and 'supply' had little or no analytical content. As regards income distribution, Say mixed Smithian ideas such as the one concerning the conflict over wages between master and workmen with his own demand–and–supply approach yielding a compromise which Ricardo found unsound. He criticized Say especially for not having understood the principle of differential rent and, once rent is set aside by focusing attention on marginal (i.e. no-rent) land, that the rate of profits is determined once the real wage rate is known, and that these two distributive variables are inversely related to one another.

All other differences of opinion follow from those rooted in differences in their respective theories of value and distribution. For example, Say very much in the tradition of the physiocrats and Smith maintained that improvements in agriculture would increase rents, whereas Ricardo argued that this was not necessarily the case: it all depended on the particular *form* of improvements under consideration. According to Say the employment of improved machinery could never cause a problem of unemployment. Ricardo in the third edition of the *Principles* showed that there are cases in which the introduction of new machinery was injurious to the labouring classes.

5. Insubstantial modifications: Say's difficulties with Ricardo's theory of value and distribution

Ever since they had first met in 1814 Say felt the need to respond to the objections Ricardo had raised against his doctrines. In the successive revisions of his *Treatise* he explicitly sought to bring his own exposition into conformity with Ricardo's ideas. This process began in 1815, before Ricardo had published his *Principles*,[10] and it continued until Ricardo's death in 1823.

Ricardo reported on Say's reaction to the publication of his *Principles* in a letter to Trower of 23 August 1817:

> Say . . . spoke favourably of my book – was quite sure that *in a few years there would not be a shadow of difference between us*, but he complained that I had made demands too great on the continued exercise of thought on the part of my reader, and had not sufficiently relieved him or assisted him by a few occasional examples, and illustrations, in support of my theory.
>
> (Ricardo, *Works*, vol. VII: 178)

In December 1817 Say informed Ricardo: 'I am still busy correcting my *Traité d'Economie* and I am making much use of your *Principles of Political Economy*' (Ricardo, *Works*, vol. VII: 227).(1*) However, instead of a new edition of the *Treatise*, Ricardo was first to receive the French translation of his *Principles* by Constancio, with Say's 'explanatory and critical notes', in December 1818.[11] He commented on them in a letter to Mill of 22 December 1818: 'M Say does not appear to me to have clearly seen the doctrine which I wish to establish' (Ricardo, *Works*, vol. VII: 371). James Mill, in a letter of 24 December 1818, was rather more outspoken:

> I am full of contempt for these notes of Say. . . . *There is not one of your doctrines, that he has seized, or perceives the force of in any degree.* Think of his saying . . . that you have assuredly in the text committed a great error, because in talking of exchangeable value, you have not included profits of stock and rent, as constituent parts. This is to declare, as plainly as words can speak, that *the man knows not in the smallest degree what your book is about.*
>
> (Ricardo, *Works*, vol. VII: 375)[12]

Ricardo's assessment, though expressed less harshly, was substantially the same. In a letter to Mill of 28 December 1818 he said about Say's notes:

> Some of them are ingenious, but *he does not grapple with the real question in dispute, – he makes a shew of answering it, but he completely evades it.* In his note on gross and net revenue [see Say in Ricardo 1819, vol. I: 222–4] – he begs the question; – he first supposes that a part of the revenue received by the labourers is more than their wants require – that is to say is net revenue, and then he says that there is an advantage in increasing the gross revenue altho' you do not thereby increase the net revenue. In what I said on that subject I expressly guarded myself, by saying, that Adam Smith had not argued this question on a supposition that by increasing the number of labourers you were increasing the number of human beings susceptible of and enjoying happiness . . . and yet M Say answers my observations by saying that there would be a greater number of human beings enjoying happiness.
>
> (Ricardo, *Works*, vol. VII: 378–9)

Ricardo had contemplated the idea of including a translation of Say's notes in the second edition of his *Principles*, together with his comments on them. But, as he informed Mill, he then decided to drop it and added: 'I think of making no other answer to M Say's observations but that of remarking that *he has left my main position respecting the regulator of rent unanswered*' (Ricardo, *Works*, vol. VII: 379).

In the meantime Say prepared the fourth edition of his *Treatise*.[13] When in October 1819 he sent a copy to Ricardo, he wrote:

> You will see by the corrections I have made, in particular in the first chapters of the second book on the Distribution of Wealth, how useful your criticisms have been for me, since they have obliged me to work again on the most delicate parts of my doctrine. I will consider myself very fortunate if these corrections and several others succeeded in winning you over on the few points where I have had the misfortune not to agree with you.
>
> (Ricardo, *Works*, vol. VIII: 136)(2*)

Ricardo did not consider their differences to be only few and insubstantial. His reaction, in a letter of 11 January 1820, must have disappointed Say:

> Your chapter on value is, I think, greatly improved; but I cannot yet subscribe to all your doctrines on that most difficult part of the science of Political Economy. In that Chapter you appear to have misapprehended a position of mine. I do not say that it is the value of labour which regulates the value of commodities, for that is an opinion I do all in my power to overthrow; but I say that it is the comparative quantity of labour necessary to the production of commodities, which regulates their relative value.
>
> (Ricardo, *Works*, vol. VIII: 149)

Not surprisingly, Ricardo was at a loss to understand how Say could possibly attribute to him the old Smithian view, which Ricardo had long shown to be untenable, that value was regulated by the value of labour, that is, wages, rather than by the quantity of labour 'embodied' in a commodity. To McCulloch Ricardo wrote more frankly, on 23 November 1820:

> I have looked over carefully all the new matter in his fourth edition *without discovering any thing to induce me to alter the opinion which I have given of*

> *the confusion of his ideas respecting value*. Utility, riches, value, according to him are all the same thing. A commodity is more valuable because it is more useful. A man is rich in proportion as he is possessed of value – of utility, and it makes no difference whether commodities are of a low value or of a high value. *Erroneous as I think these views are he has not the merit of uniformly adhering to them*, for he often acknowledges that commodities will fall in value if their cost of production be diminished, altho' they preserve the same utility. The book I think is altogether an able one, but *I am quite convinced that M Say does not see quite through the subject*.
>
> (Ricardo, *Works*, vol. VIII: 298–9)

Say continued to modify his exposition, and when he presented Ricardo with his *Lettres à M. Malthus* in August 1820, he wrote:

> I strongly desire that the explanations I here give of my doctrine of value will satisfy you better than those found in my previous writings. This doctrine seems to me to be suitable for being adopted and further elaborated by you, and I await with impatience the first writings you are going to publish in order to know what you think of it; because I believe to have shown it to be *nothing else but yours only expressed in different words*.
>
> (Ricardo, *Works*, vol. VIII: 280–1)[3*]

Ricardo was not of this opinion. In a letter of 4 September 1820 he wrote to Malthus: 'I have seen Say's letters to you . . . I am not convinced by any thing Say says of me – *he does not understand me, and is frequently at variance with himself when value is the subject he treats of*' (Ricardo, *Works*, vol. VIII: 227–8).[14] Malthus for once agreed:

> There are more contradictions in it than those which relate to value, and there are some doctrines, besides those which directly concern me *that appear to me to obscure, rather than to throw light on the general subject*. I cannot agree with him in making no distinction between services and products, in his strange and useless application of the term utility, in his opinions respecting the immateriality of revenues, and in *his mode of reasoning by exclamations* which enable him to stop short when he comes to the stress of the argument.
>
> (Ricardo, *Works*, vol. VIII: 259–60)

Ricardo informed Malthus in a letter of 24 November 1820 that he had written some notes on Say's *Lettres* (which, however, are not extant),

> with which I am by no means pleased. *He is very unjust to me, and evidently does not understand my doctrine;* and for the opinions which we hold in common, he does not give such satisfactory reasons as might I think be advanced.[15] . . . *In Say's works, generally, there is a great mixture of profound thinking, and of egregious blundering*. What can induce him to persevere in representing utility and value as the same thing?
>
> (Ricardo, *Works*, vol. VIII: 301–2)

And to McCulloch, who had published a review of Prinsep's translation of Say's *Traité* in the *Scotsman*, Ricardo wrote in a letter of 25 April 1821: 'The criticism on Say in the Scotsman is I think very just – *he is certainly very far behind in his knowledge of the present state of the science*' (Ricardo, *Works*, vol. VIII: 374).

When Ricardo presented Say with a copy of the third edition of his *Principles* on 8 May 1821, he pointed out,

> the particular difference which exists between us, respecting the meaning which should be attached to the word 'value'. You use it in the same sense as 'riches' and as 'utility' and it is this part of your valuable work which I am very anxious should have the benefit of your further consideration . . . Allow me also to remark that your work would be much more valuable if you entered more fully into the laws which regulate rent and profit.
>
> (Ricardo, *Works*, vol. VIII: 379–80)

Upon returning from his 'Tour on the Continent' in December 1822 Ricardo reported to Malthus:

> I saw Say several times, but our conversation did not turn much on subjects connected with Political Economy – he never led to those subjects, and I always fancied that he did not much like to talk about them . . . *Neither . . . [Garnier] nor M. Say have succeeded in at all understanding what my opinions are*.
>
> (Ricardo, *Works*, vol. IX: 248–9)

Ricardo gave a similar account in a letter to Trower, and added:

> Speaking to the Duke of Broglie of M Say he observed that he did not appear to him to have the least notion of the doctrines of the New School – *that his notes in the French translation of my book shewed clearly that he did not know what the subject in dispute was*.
>
> (Ricardo, *Works*, vol. IV: 244)

While it is true that Say revised his *Treatise* several times, the modifications he introduced with regard to the central issues that were in dispute between him and Ricardo were insubstantial. A detailed account of these modifications therefore seems dispensable.[16] In the following discussion of these controversial issues we will therefore make use of the English translation of the fourth edition of Say's *Traité* and occasionally draw on the correspondence between the two economists and their other writings.[17]

6. Value and riches

As we noted above, Say's definition of value and riches elicited objections from Ricardo early on. In August 1815 he wrote:

> It appears to me . . . incorrect to say as you do page 95 [of the *Catéchisme*] that that man is superlatively rich, *although he has few valuables*, who can procure easily or for nothing those things which he wishes to consume. He may only wish to consume bread and water and may be able to procure no more. He cannot be so rich as his neighbour who has abundance of valuables which he can exchange for all the luxuries of life, which it [is] his desire to consume. Riches are measured by the quantity of valuables which a man possesses, not by the moderation of his wants.
>
> (Ricardo, *Works*, vol. VI: 248)

Modern readers might be tempted to object that Ricardo's criticism of Say is mistaken, and that there is nothing wrong with saying that a man is 'rich' – *that is*, experiences high 'utility' – when his desires/wants/needs are very limited or modest. If low command over exchange value produces 'bliss' (for such a man), he can well be said to be 'rich' in the above sense although he possesses few valuables. But such an objection would miss Ricardo's point, which is Say's confounding of value and riches. Ricardo made this clear in the final passages of the chapter 'Value and riches' of his *Principles*, where he charged Say with having 'confounded two things which ought always to be kept separate, and which are called by Adam Smith, value in use and value in exchange'. He expounded:

> If by an improved machine I can, with the same quantity of labour, make two pair of stockings instead of one, I in no way impair the *utility* of one pair of stockings, though I diminish their value. If then I had precisely the same quantity of coats, shoes, stockings, and all other things, as before, I should have precisely the same quantity of useful objects, and should therefore be equally rich, if utility were the measure of riches; but I should have a less amount of value, for my stockings would be only half their former value. Utility then is not the measure of exchangeable value.
>
> (Ricardo, *Works*, vol. I: 280 n; emphasis in the original)

In his notes on Ricardo's *Principles* Say responded to Ricardo's criticisms in the chapter on 'Value and riches' in several lengthy notes. To Ricardo's argument that he had made utility the measure of value, and value the measure of utility, Say replied that he indeed considered value to be a measure of utility and that, if two commodities are of the same value, this proves that men derive the same degree of satisfaction from their consumption. He continued:

> I would be very wrong if one could infer from what I have said that when the price of a commodity falls its utility is diminished. The utility of a commodity which falls in price approaches the utility of the air, which costs us nothing, although it is extremely useful.
>
> (Say in Ricardo 1819, vol. II: 89)(4*)

It is unclear how Say could consider these statements to be compatible with each other.

Say's response to Ricardo's argument that the confounding of 'riches' and 'value' must lead to contradictions reads as follows:

> The costless action of the natural agents, when it replaces the costly action of men and of capitals, diminishes the value of the product. Since all value is relative, the value of the products cannot fall without increasing the value of the revenues (or of the productive funds from which these revenues are derived). The cheaper the products sell, the richer are the consumers. I have proved elsewhere that the fall of the products resulting from economising in the costs of production does not alter the revenues of the producers.
>
> (Say in Ricardo 1819, vol. II: 92)(5*)

It is not made clear how a fall in the value of commodities, due to the introduction of better methods of production, is compatible with a rise in the 'value of the revenues'. And when Ricardo pointed out that Say, having confounded riches and value, was inconsistent in maintaining that riches are augmented when the value of commodities is reduced because of better methods of production (see Ricardo, *Works*, vol. I: 288), Say replied: 'In the passage cited it is said that *the revenues of society remained the same*; whilst the riches are augmented by all that can be purchased additionally with the same revenue' (Say in Ricardo 1819, vol. II: 97).(6*) Say's 'response' thus consisted in reiterating the statement which had been shown to be inconsistent with his confounding of value and riches. He apparently had not understood Ricardo's argument.

To the sample of inconsistent statements from his *Catéchisme*, by which Ricardo had sought to show him his contradictions, Say responded with a long note in which he introduced the distinction between 'richesses naturelles' and 'richesses sociales'. In the former category he included all things from which utility is derived, including air, sunlight, or the affection of family members, while the latter, with which Political Economy is concerned, comprised only the products of human industry possessed of utility. He then repeated his statement that *'Exchangeable value* and *riches* are synonymes' (Say in Ricardo 1819, vol. II: 99),(7*) and continued:

> Now the main problem is to bring the principles of *Social riches* or Political Economy into a relationship with those of *Natural riches*. If the produce is augmented due to the better use that we make of our land, of our capitals, and of our industry, more utilities (or natural riches) are produced, and at the

> same time the production of social riches appears to be diminished, because the exchangeable value of the product falls. Social riches thus do not follow the same course as natural riches.
>
> (Say in Ricardo 1819, vol. II: 100)(8*)

According to Say's view, which appears to be rooted in physiocratic thought, the introduction of new methods of production, and in particular the introduction of machines, is associated with the substitution of 'services productifs', that is, services supplied by productive agents, which are costly, by 'services naturelles', that is, services supplied by nature, which are gratis. 'Richesses naturelles' and 'richesses sociales' may therefore move in different directions. Overlooking this divergence, Say maintained, had prompted Ricardo to advance his unjustified reproach of contradictions in his, Say's, writings. However, the importance of this divergence is far from clear, as Say continued his response with the following statement:

> It remains to identify those who benefit from this augmentation, those who are more rich, not only in terms of natural riches, but also in terms of social riches, in terms of exchangeable values, by this increase in produced utility.
>
> (Say in Ricardo 1819, vol. II: 101–2)(9*)

After having first stressed the divergence of 'richesses naturelles' and 'richesses sociales', Say now suddenly asserted that both are augmented simultaneously. According to Say, two cases of an augmentation of riches must be distinguished. The first case is this:

> If, from causes the discussion of which is extraneous to our present argument, the exchangeable value of each bushel of wheat remains constant, in spite of an augmentation in the quantity of wheat produced, the increase in the riches produced goes entirely to the profit of the producers; that is, the proprietors of the funds of capital, the funds of land, and the industrial funds, which generated fivehundred instead of fifty bushels. The revenue derived from these portions of the funds is tenfold.
>
> (Say in Ricardo 1819, vol. II: 102)(10*)

No explanation is given how the value of each unit of wheat may remain constant in spite of an augmentation of the quantity produced. Say then contrasted this case with a second one, in which the value of wheat is falling:

> If . . . the exchangeable value of each bushel of wheat has fallen because of the greater quantity produced of it, the profit obtained is still in the proportion of fivehundred to fifty; but this profit is made by the class of consumers, who are richer by what they pay less, that is, by as much as the producers would have had from selling more. Their revenue does not increase tenfold, because they do not spend it entirely on wheat-bread; but the portion of the revenue which is ordinarily spent on wheatbread is raised tenfold, and all the portions of the revenue which are raised tenfold, summed up, give a sum that is equal to the value of the product which has increased tenfold, if the price is supposed not to have fallen. In both cases the society thus enjoys an augmentation of values as well as an augmentation of utility.
>
> (Say in Ricardo 1819, vol. II: 102)(11*)

Again, the contradiction pointed out by Ricardo has not been resolved, but merely restated. No wonder, then, that Ricardo did not feel inclined to continue this 'debate'.

Given the unsatisfactory nature of Say's response in his notes, Ricardo saw no reason to withdraw his criticism in the second edition of the *Principles*, despite the changes that Say had made in the third edition of the *Treatise*. And when he rewrote the final part of chapter 20 for the third edition, Ricardo made it clear that no matters of substance were involved: 'M. Say, *notwithstanding the corrections he has made in the fourth and last edition of his work*, "Traité d'Economie Politique," appears to me to have been *singularly unfortunate* in his definition of riches and value' (Ricardo, *Works*, vol. I: 279). The rewriting of the final paragraphs of chapter 20 in the third edition was prompted by the changes made by Say in the fourth edition of his *Treatise*, which made it impossible for Ricardo to retain the extensive citations from the earlier editions. In revising this part, Ricardo now summarized Say's contradictions by confronting inconsistent statements from the fourth edition of the *Treatise* in a series of numbered paragraphs (Ricardo, *Works*, vol. I: 282–3).

In May 1821 Ricardo wrote to Say, informing him that in his new edition he had 'pointed out the particular difference which exists between us, respecting the meaning which should be attached to the word "value". You use it in the same sense as "riches" and as "utility" and it is this part of your valuable work which I am very anxious should have the benefit of your further consideration' (Ricardo, *Works*, vol. VIII: 379). In one of the rewritten passages in chapter 20 Ricardo had asked rhetorically: 'When I give 2000 times more cloth for a pound of gold than I give for a pound of iron, does it prove that I attach 2000 times more utility to gold than I do to iron?' (Ricardo, *Works*, vol. I: 283). To this Say replied in a letter of 19 July 1821:

> No, but if we suppose for a moment that a pound of gold and a pound of iron render a service to man that is perfectly equal in spite of the inequality in their value, then I say that in a pound of iron there are:
>
> 1999 units of natural utility which are a part of riches for which nature does not make us pay, and which do not concern political economy;
>
> and 1 unit of utility created by industry, the capitals and the lands, a utility for which we must pay and which is the only one that contributes to exchangeable riches, the sole object of our investigation.

> 2000 units of utility altogether, contained in a pound of iron. Whereas in a pound of gold there are:
>
> 2000 units of utility, all of which are exchangeable [value] because all of them are the fruits of our industry, our capitals and our lands; utility which is a part not only of our natural riches but also of our *social riches, the only ones with which political economy can be concerned.*
>
> (Ricardo, *Works*, vol. IX: 33–4)[12*]

Ricardo's response was communicated to Say in a letter of 5 March 1822.[18] It is apposite to quote him in full:

> I am happy to observe that the difference between us is much less than I had hitherto considered it. You speak of two different utilities which commodities possess, one, which they derive from nature, without any of the labour of man, the other, which they derive exclusively from his labour. You say that for the first of these, which you call natural utility, nothing valuable can be obtained in exchange, and it is only for that portion of utility which is given to a commodity by labour or industry, for which anything valuable can be obtained . . . You explain on these principles the case I had put to you of a pound of iron and a pound of gold, which I had supposed had exactly the same utility, though the gold was 2000 times more valuable. If we give 2000 times more for the gold than for the iron, you say, it is because that particular utility of which only Political Economy treats, namely that given by labour, is 2000 times greater than that given to iron, and you add that the iron has 1999 portions of natural utility for which nothing is given; of which the gold has none.
>
> Although I cannot quite approve of the terms used to explain this truth, yet I do now, and always have substantially agreed in the reasoning which proves it, for I have always contended that commodities are valuable in proportion to the quantity of labour bestowed upon them, and when you say that they are valuable in proportion as they are useful, and they are useful in proportion to the quantity of labour or industry bestowed upon them, you are in fact expressing the same opinion in other words.
>
> In your last edition of the 'Catechisme' you say page 2 that the riches of a person are in proportion to the value of the commodities which he possesses, and not in proportion to their quantity: so far you repeat the same opinion, but when your pupil calls upon you to explain what is the measure of the value of things, your [sic] answer that it is the quantity of all other things that the proprietor is enabled to command by their means, if he consents to exchange them. Now in this I think there is a contradiction, for we are told that riches are in proportion to value, and value in proportion to the quantity of things, therefore riches are in proportion to the quantity of things; and yet you say that riches are in proportion to value, and not in proportion to the quantity of things.
>
> (Ricardo, *Works*, vol. IX: 169–70)

Ricardo's letter continues:

> Let us suppose that the same cause, namely, an economical process, which lowers the value of gold one half, lowers at the same time, in the same degree, and by the same means, hats, shoes, cloth and linen. In this state of things a pound of gold will command just as many hats, shoes, cloth, and linen as before any of the economical processes were discovered. I ask is the man equally rich as before who has a pound of gold? *You first answer no, because he has not a commodity of equal value, and you secondly answer yes, because he can command an equal quantity of various other commodities.*
>
> (Ricardo, *Works*, vol. IX: 170)

Touché! This demonstration was Ricardo's final attempt to explain to Say that his concepts of value and riches ended in complete muddle.[19]

7. Theory of value, measure of value, gross and net revenue

According to Say, the utility of a thing 'is the primary source of value' (*T*: 284). He opted for taking the needs and wants of people 'as existing *data*, and reason upon them accordingly' (*T*: 285). Interestingly, Say stressed that only those objects are possessed of a value (in contradistinction to free goods provided by nature, such as air or solar light) which represent utilities necessarily procured by human agency, 'because the very act of production implies an act of mutual exchange, in which the producer has given his personal agency for the product obtained by its exertion' (*T*: 286). Hence, as in Ricardo, the attention focused on produced and reproducible commodities. The producer is said to put up with the productive effort only on the assumption that he receives 'an equivalent' for it.

7.1 Value, its component parts, and utility

Value (or price), Say contended, was governed by 'demand' and 'supply'. He gave these concepts the following analytical meanings. As regards the former, the reference is to 'aggregate demand' for a commodity and it is argued that it depends negatively on the commodity's price. This is due to two effects: first, as the price of the commodity is increased those less well off will gradually have to withdraw from the market: 'the number of its consumers is reduced'; secondly, those who can still afford to buy the product will buy less of it: 'the consumption of each consumer is reduced also' (*T*: 288–9). It seems that Say thought exclusively in terms of the income effect of a change in the price of a commodity; there is at any rate no explicit mentioning of the (relative) price effect. Therefore the passages under consideration must not be interpreted as anticipating the principle of substitution in consumption as developed by marginalist theory.

By 'supply' Say meant the total or aggregate 'supply or amount in circulation', that is, 'the quantity attainable at a given time, and ready for the satisfaction of those who are in want of the specific article' (*T*: 288). He maintained that 'the supply

will be more abundant, when the current price is high, and more scanty when that price has declined' (*T*: 290). However, no compelling reason is given why this should be so. At any rate there is no element in Say's discussion resembling the principle of substitution in production as conceptualized by marginalist theory.

Say's reasoning culminated in the proposition that 'the relative intensity of supply and demand . . . is the ground-work of price on every act of exchange'. He stressed: 'Demand and supply are the opposite extremes of the beam, whence depend the scales of dearness and cheapness: the price is the point of equilibrium, where the momentum of the one ceases, and that of the other begins' (*T*: 290). There is a modern ring to this formulation, but there is not yet a sufficiently developed theory behind it. What can at most be said is that Say contributed to shunting the car of economics away from the classical on to a different track which was eventually to lead to marginalist theory.

The link between demand and supply, on the one hand, and cost of production, on the other, Say specified as follows: 'The price paid for every product, at the time of its original attainment or creation, is, the charge of the productive agency exerted, or the cost of its production' (*T*: 298, similarly p. 315). Hence the price of each commodity is composed of, and thus can be resolved into, rents, profits and wages, or rather, as Say preferred to call them, into the '*profit of land*', the '*profit of capital*', and the '*profit of labour*' (*T*: 316–17). With technical progress, cost of production will fall and if, in the short run, the market price remains the same, this will be reflected in a 'larger profit than ordinary in this particular channel'. This above-normal profitability 'is said to naturally attract a larger proportion of productive agency, the exertion of which, by increasing the supply, reduces again the current price to a level with the bare cost of production' (*T*: 298) – and, we may add, brings profitability back to a normal level. Say's argument concerns the 'gravitation' of market prices to their natural levels as contemplated by Smith and the classical English economists (see also Say in Ricardo 1819, vol. I: 79 n; Béraud 1992: 378).[20] The question is whether the new level of profitability equals the old one or is different from it. Say is not clear about this, as his following discussion shows.

The adding-up concept of value is a treacherous ground for the inattentive scholar because he may easily slip into the view that value rises or falls with a rise or fall of each single component. As is well known, Smith in places fell into the trap and so did Say. Thus, like the Scotsman Say was of the opinion that a low (high) wage rate meant low (high) prices. In one place we read:

> In proportion as the value he [the labourer] consumes is small, his ordinary wages may be low, and the product [!] of his labour cheap. If his condition be improved, and his wages raised, either his product becomes dearer to the consumer, or the share of his fellow producers is diminished.
>
> (*T*: 336, similarly p. 339)

As Ricardo was to clarify, a fall (or rise) in the remuneration of any productive factor of necessity involves a rise (or fall) in the remuneration of some other factor, given the technical conditions of production, whereas the variation in the price of a commodity in terms of some standard of value cannot be ascertained a priori, but depends on the technical conditions of production (direct and indirect) of the commodity relative to those of the standard. There is no reason to presume that a lower (higher) real wage generally involves lower (higher) prices of commodities. And it is not true that a higher real wage rate involves 'either' a higher price 'or' a smaller share of some other factor: it always involves the latter.

7.2 Measure of value

This leads directly to the problem of Ricardo's search for an 'invariable measure of value'. Say, like other commentators, had difficulty in understanding the *analytical* significance of this concept. This is not surprising, because without an intimate knowledge of the different steps reflecting Ricardo's consecutive attempts to simplify the problem of distribution and relative prices his concern with an invariable standard was bound to look like chasing a will-o'-the-wisp. According to Sraffa (1951: xxxi–xxxiii), Ricardo proceeded in four steps. The first consisted of eliminating the problem of the rent of land in terms of the theory of differential rent in the *Essay on Profits*, published in 1815 (see Ricardo, *Works*, vol. IV). The second step consisted of trying to get rid of the problem of value in determining the general rate of profits by assuming the 'corn model'. The third step consisted of adopting the labour theory of value. This allowed him to ascertain the values of commodities independently of income distribution and thus helped him to dispel the adding-up doctrine, suggested by Smith and adopted by Say, of price as a sum of wages and profits (and rents). It thereby put into sharp relief the constraint binding changes in the distributive variables. However, as Ricardo became increasingly aware, the labour theory of value could not generally be sustained as a theory of relative prices. This is because with unequal proportions of labour to means of production in different industries and unequal degrees of durability of fixed capital, relative prices would not only depend on the quantities of labour 'embodied' in the various commodities, but also on the level of the rate of profits, and would change with that level: with compound interest the weight of the profit component in prices depends on the rate of profits. Ricardo's search for a measure of value that is 'invariable' with respect to changes in distribution was the final step in his efforts to simplify the theory of distribution.[21]

Say can be expected to have known little about these consecutive attempts and especially about the fact that the concept of a measure that was meant to be invariable with respect to changes in income distribution was essentially a device designed by Ricardo in order to see through the complexities of the dependence of relative prices on the rate of profits. Say objected to the very idea of Ricardo's search for such a measure:

> An invariable measure of value is a pure *chimera*, because one cannot measure values other than in terms of values, that is, by a quantity essentially variable.

> This does not mean that value itself is chimerical; it is no more so than the temperature of bodies, which cannot be fixed beforehand.
>
> (Say in Ricardo 1819, vol. I: 12–13; see also vol. II: 69–70)[13*)]

This criticism anticipated an objection levelled by Samuel Bailey at Ricardo's concept. As we know today, while Ricardo's idea of a measure that is invariable with regard to changes in the distribution of income can be given a precise expression in well-specified conditions, his overall search was indeed futile (for details, see Kurz and Salvadori 1993).[22]

7.3 Gross and net revenue

Smith was accused of having put forward statements in his discussion of the component parts of value which can be read as confounding gross and net produce. This kind of criticism can certainly be levelled at Say, who stressed vis-à-vis the doctrine of the Physiocrats:

> Whence it appears, that the term *net* product applies only to the individual revenue of each separate producer or [entrepreneur][23] in industry; but that the aggregate of individual revenue, the total revenue of the community, is equal to the *gross* produce of its land, capital, and industry. Which entirely subverts the system of the economists of the last century, who considered nothing but the net produce of the land as forming revenue, and therefore concluded that this net produce was all that the community had to consume, instead of admitting the obvious inference, that the whole of what has been created, may also be consumed by mankind.
>
> (*T*: 318; emphasis in the original)

While Say is justified in criticizing the concept of 'produit net' in the Physiocrats as too narrow, his alternative conceptualization suffers from a confusion with regard to the definition of the net produce. For if the gross produce is defined as the 'total revenue of the community' (or total 'value added'), consisting of wages, profits and rents, then these income components cannot in turn be taken to form the costs of production which must be deducted from the gross produce in order to obtain the net revenue. Ricardo pointed this out in the third edition of the *Principles*:

> Of net produce and gross produce, M. Say speaks as follows: 'The whole value produced is the gross produce; this value, after deducting from it the cost of production, is the net produce.' ... There can then be no net produce, because the cost of production, according to M. Say, consists of rent, wages, and profits ... Take a whole from a whole, and nothing remains.
>
> (Ricardo, *Works*, vol. I: 421 n)

8. Theory of income distribution

Say maintained that the problems of value and distribution were of the same nature and therefore had to be dealt with in the same way:

> The causes, which determine the value of things, and which operate in the way described in the preceding chapters, *apply without exception to all things possessed of value ... amongst others, therefore, to the productive service yielded by industry, capital, and land, in a state of productive activity* ... [The] relative value [of productive agency], like that of every other commodity, rises in direct ratio to the demand, and inverse ratio to the supply.
>
> (*T*: 314–15)

Therefore, wages, profits and rents are to be explained in terms of demand and supply, where the demand for means of production derives from the demand for products.

8.1 Wages

Much of what Say has to offer on wages he took from Smith, interspersed with a few ideas of his own. These concern the much acclaimed discussion of the specific role of the entrepreneur as opposed to the capitalist in the process of production and the running of a business (*T*: 329–32), and Say's conception of the wages of common labour as a form of profits. As opposed to Smith Say did not reserve the concept of profits to human capital as the result of expensive education and training. He argued: '*A full-grown man is an accumulated capital*; the sum spent in rearing him is indeed consumed, but consumed in a reproductive way, *calculated to yield the product man*' (*T*: 333 n). After this remarkable definition which draws a parallel between the production of commodities and that of men one would expect the investors in this kind of capital to obtain the ordinary rate of return, but this expectation is frustrated: the wages of common labour, Say emphasized, tend to gravitate around an historical and cultural subsistence level, which is taken to be sufficient to maintain also the family of the worker. Say, who again followed Smith closely, provided essentially two reasons in support of this tendency: first, the working of a kind of Malthusian population mechanism which involves a tendency towards an 'excess of population above the means of subsistence' (*T*: 339); secondly, the advantage masters are said to have over workers in the conflict over wages – in this context Say acknowledged the 'conflicting interests of master and workman' (*T*: 338). Hence, the real wage rate of common labour may be taken as given – just as in Smith or Ricardo.

We now come to Say's explanation of profits and of rent. Ricardo's argument, as is well known, typically proceeded in terms of the supposition that there is a quality of land in the economy which is cultivated, but not fully cultivated, and which therefore is not scarce and yields no rent (see Ricardo, *Works*, vol. I: ch. 2). On this quality of land – marginal land – the rate of profit is determined once

the real wage rate is known. This was one of Ricardo's analytical devices to see through the complexities of the problem of income distribution and relative prices. Say, as we have seen, in 1815 became acquainted with the *Essay on Profits* which contained already the essence of Ricardo's theory of distribution, and then with the *Principles*, and told Ricardo how much he was impressed with the argument and that he was keen to incorporate it in the *Treatise*. However, when we turn to this work we may begin to understand Ricardo's frustration with the achievements of his admirer. In fact, there is every reason to think that Say had not understood the principle of differential rent and Ricardo's theory of profits. We first turn to the theory of rent.

8.2 Rents

Appearance has it that the mutual difficulties of comprehension of our two authors started at the linguistic level (see Mahieu 1992: 36–7). However, the real causes were deeper and concerned conceptual and analytical issues. In this context it is interesting to note that Say advised Constancio to translate the title of chapter 2 of the *Principles*, 'Of Rent', as 'Du fermage ou Profit des terres' (Ricardo 1819, vol. I: 63), thus re-interpreting Ricardo's concept of rent in terms of his, Say's, own concept of 'profit of land'. This undermined one of the declared aims of Ricardo in this chapter, that is, to distinguish as clearly as possible between the rent of land, on the one hand, and the interest and profit of capital, on the other, and thus to overcome their widespread confounding in the literature (see Ricardo, *Works*, vol. I: 67).[24] Scrutiny shows that in the theory of the rent of land and that of mines, as well as in other fields in dispute between them, we encounter an analytically minded Ricardo, determined to lay down the foundations of the new subject of Political Economy, confronted by a Say incessantly pointing towards 'facts' which he deemed incompatible with the economic principles Ricardo sought to establish. Say's criticism concerned first and foremost Ricardo's doctrine that marginal land (the marginal mine), that is, land (the mine) last cultivated (worked), does not yield a rent to its proprietor. In addition he questioned the possibility of distinguishing with sufficient definiteness between land and capital and thus between rents and profits (see, for example, Say in Ricardo 1819, vol. I: 66–7). In the following we shall first deal with Say's critical notes on Ricardo's theory of rent in the French edition of Ricardo's *Principles* and then turn to the *Treatise*, in which Say presented his alternative conceptualization.

According to Say Ricardo was wrong in assuming that those portions of marginal land (marginal mines) that are cultivated (worked) do not yield a rent to their proprietors. His reasoning is not always very clear but with some effort and goodwill we might perhaps distinguish four objections put forward by him. *First*, he maintained that capital proper and labour required 'la coopération du sol' which in turn would not be granted without a payment – a 'profit foncier' – to the proprietor of the services of land. Hence, in this view rent is the payment to an indispensable factor of production: 'Can it not be said that the proprietors exercise a productive function, because without it there would be no production?' (Say in Ricardo 1819, vol. I: 92 n).[(14*),25] *Secondly*, he argued along the lines of Adam Smith that rent is a monopoly price. This is said to be true both with regard to land (see Say in Ricardo 1819, vol. I: 95 n.) and mines. About the owner of a mine he wrote:

> The proprietor . . . has a sort of monopoly which allows him to raise the value of his product above the costs of labour and the interest on the capital that is required to obtain it and bring it to the market. *This monopoly price is reduced by competition, but it cannot, I believe, fall to nothing.*
>
> (Say in Ricardo 1819, vol. I: 112n)[(15*)]

Unfortunately, Say refrained from telling the reader why competition should be unable to make the rent vanish. In the present context of a discussion of Ricardo's chapter on the rent of mines, that is, exhaustible resources, Say could also have put forward, but did not, an entirely different argument in support of his view that an income has to be paid to the owner of the marginal mine for working it: if he allowed the mine to be exploited without being paid a 'royalty' he would gradually give his asset away without any compensation.[26] Yet, a scrutiny of the relevant passages (see, in particular, Say in Ricardo 1819, vol. I: 112–13 n) shows that there is nothing in Say's reasoning that points in the direction of the concept of royalty.

There is another consideration put forward by Say which, if interpreted favourably, provides some support for his view that the rent of marginal land will generally be positive. This brings us to his *third* objection. To be clear about one possible source of the disagreement between him and Ricardo we need to recall that Ricardo's no-rent-on-marginal-land argument was based on the implicit assumption that landlords have no use for their land other than renting it out to corn producers. Apparently Ricardo saw no harm in setting aside alternative uses of land, given his aim of providing a clear-cut distinction between rent and profit. An important implication of this assumption is that, in modern parlance, the 'reservation price' of the use of land, that is, that price at which the landlord will choose to retain some positive amount of his land, is zero. This is precisely Ricardo's premise with regard to marginal land. Some of Say's objections, who in this regard again followed closely Smith (see also Béraud 1992: 378–9), could perhaps be interpreted as implying that the reservation price of the land service is generally not zero because there are alternative uses of land. He wrote:

> Land is an admirable chemical atelier in which a number of materials and elements combine and collaborate which then leave it in the form of wheat and fruits, from which we obtain our subsistence, of linen, from which we produce our clothes, and of the trees from which we construct our dwellings and ships. . . . It is in this way that the fund of land was able to furnish a tenfold, or a hundredfold quantity of useful products to men.
>
> (Say in Ricardo 1819, vol. I: 82–3 n)[(16*)]

Say's *fourth* objection was of a similar kind. He argued that whichever plot of land is cultivated is done so because of its characteristic features which distinguish it from all other plots of land available in the economy: 'The land will only be cultivated if the cultivator has been assured of his property; then it is more precious than all the other land of the same quality not yet appropriated' (Say in Ricardo 1819, vol. I: 72 n).[17*] However, Say was mistaken in believing that this was a fundamental objection to Ricardo's principle of differential rent. The only difference between Ricardo's original formulation and Say's is that whereas the former assumed that there was a finite number of different qualities of land, the latter may be interpreted as maintaining that the number was infinite.[27] Whether or not marginal land pays a rent and whether or not there is a continuum of different qualities of land, Ricardo's concept of persistent cost differentials in agricultural production and of differential rent based on them is entirely unaffected by Say's criticisms.

In the *Principles* Ricardo contented himself with drawing the reader's attention to the fact that Say obviously had overlooked *intensive* rent: with intensive diminishing returns marginal land may yield a rent to its proprietor: 'By his note to page 182 of the second volume of the French edition [see Ricardo 1819], he [Say] does not appear to be aware that it [the theory of intensive rent] has even been advanced' (Ricardo, *Works*, vol. I: 412 n). Having neglected 'that important doctrine', Say is said to be wrong in assuming 'that he has overturned all the conclusions' which result from his, Ricardo's, theory of rent (Ricardo, *Works*, vol. I: 412 n).[28]

Say's 'realism' and anti-deductivism apparently stood in the way of his coming to grips with the principle of differential rent. This can also be seen in the *Treatise* where Say developed his view against the background of the views of others, especially Destutt de Tracy and Ricardo.[29] He wrote:

> The tenor of their argument is this: the proprietor of land lying waste or fallow having also a capital to dispose of, may, at his pleasure, expend it, either in cultivation, or in some other way. *If he reckons that the cultivation of his land will yield him as large a return as any other investment, he will give it the preference* ... Well: and what do they infer from this? Why, that cultivation yields no return whatever, beyond the interest of the capital engaged in it; and if so, *what is there left for the profit on the productive powers of the soil? Evidently nothing whatever.*
>
> (*T*: 361–2)

The reader, wondering whether this was meant to be a faithful description of Ricardo's theory of rent, is told by Say: 'I have endeavoured to put the argument in the clearest and most intelligible light'. Then follows the adjunct: 'I have to observe upon it, that it proceeds upon a *partial and imperfect view of the matter*, and upon *a total neglect of the influence of demand in the fixation of value*' (*T*: 362). This criticism is taken to clear the ground for Say's own, that is, 'more complete view of the subject' (ibid.).

Before we turn to the latter we shall briefly comment on the above argument. First, Say focused attention exclusively on *marginal* land. He did not mention once the case of intramarginal, that is, rent-bearing land. He also did not mention Ricardo's distinction between extensive and intensive diminishing returns and extensive and intensive rent. Hence, he did not in the least discuss Ricardo's theory of *differential* rent, let alone put Ricardo's argument 'in the clearest and most intelligible light'. Secondly, we know from Ricardo that if land of the best quality is available in superabundance there can be no rent. However, if the best quality of land is in limited supply, then the total quantity of corn to be brought to the market matters as regards the price of corn and whether a rent will be paid on land of the first (second, third, etc.) quality of land. Therefore, Say's accusation of 'a total neglect of the influence of demand' does not apply to Ricardo's doctrine. Third, despite the obvious shortcomings and indeed quite incomprehensible misinterpretations in his account, Say has glimpsed an important truth with regard to the nature of Ricardo's theory of value and distribution. In a footnote he wrote, specifying a characteristic feature of Ricardo's explanation of all property income, that is, rent, profits and interest: 'According to these writers, *even the interest of capital is not given as the recompense of its concurrence in the business of production*' (*T*: 361n). This is indeed a distinguishing feature of Ricardo's surplus-based approach to the explanation of all shares of income other than wages. Say's claim that 'I have already exposed the fallacy of this opinion' (ibid.) cannot be sustained: simply to contend that profits are the payment for the service of a factor called 'capital' is just that – a contention.[30]

His 'more complete view of the subject' Say introduced in the following terms: 'The productive power of the soil has no value, unless where its products are objects of demand' (*T*: 362). Taking this for granted, he went on to argue that then cultivation will begin, yielding 'the usual rate of interest upon the requisite advances.' He stressed:

> Up to this point, there is no difference between us [i.e. him and Ricardo etc.]. But if any circumstance operate to aggravate the demand beyond this point [?] the value of agricultural product will exceed, and sometimes very greatly exceed, the ordinary rate of interest upon capital; and this excess it is, which constitutes the profit of land, and enables the actual cultivator, when not himself the proprietor, to pay a rent to the proprietor, after having first retained the full interest upon his own advances, and the full recompense of his own industry.
>
> (*T*: 362)

If by 'this point' he meant the amount of product that can be produced using the cost-minimizing method of production to cultivate the entire amount of land of the best quality, then the question is: what is the difference between Say's position and Ricardo's? Ricardo did not deny that if a larger social demand for corn needs to be met, then the price of corn will have to rise. But he did not leave it at that. He indicated by how much the price will have to rise, due to a rise in cost of production,

given the technical alternatives and the quantities of the different qualities of land available to cost-minimizing producers. And he showed that the cost differentials between different methods of producing corn used simultaneously hold the key to explaining the level(s) of rent(s) on intramarginal land(s). He also argued that the rate of profits is bound to fall with a rise in the price of corn and the consequent emergence (or rise) of rent(s), given the real wage rate. All this appears to have escaped Say's attention.

In the sequel Say reiterated his view and stressed: 'herein consists the difference between the *profit* and the *rent*: profit is high or low, according to the quantum of the product; rent, according to the quantum of the purchase-money or price' (*T*: 362). By this formulation he may perhaps have meant to appease Ricardo who had insisted, against the adding-up doctrine, that the price of corn is not high because a rent is paid, but a rent is paid because the price of corn is high (Ricardo, *Works*, vol. I: 74). This was a corollary of the principle of differential rent. However, the lack of clarity of Say's above formulation and the rest of his argument in the chapter provide sufficient evidence to maintain that he had not understood that principle. We read, for example, that 'rent is generally fixed at *the highest rate of that profit*' (*T*: 365). This surprising claim is rationalized in terms of the concept of rent as a monopoly price: 'Landed proprietors . . . are enabled to enforce a kind of *monopoly* against the farmers' (ibid.). And: 'Whenever that is the case, the bargain between the land-holder and the tenant must always be greatly in favour of the former' (*T*: 366). This essentially carries over Smith's argument regarding the relative strengths of master and workmen in the conflict over wages to the conflict between landowner and tenant over rent. However, Say was wrong in assuming that some concentration of landed property is incompatible with free competition. And free competition is, of course, perfectly compatible with the existence of rent, as Ricardo's theory of differential rent showed.

8.3 Interest and profits

Say criticized the old scholastic view of usury and the prohibition of taking *interest* as based on a lack of understanding of 'the functions and utility of capital' (*T*: 366) and thus of the function and utility of saving. The interest on a loan of (money) capital is said to be composed of two parts which are not easy to distinguish practically: pure interest and a 'premium of insurance', or risk premium, as an indemnification of the risk the lender incurs (*T*: 344). The former part is said to consist of 'rent paid for the utility and use of capital' (*T*: 348) and to depend on: (1) the size of 'aggregate capital' of a nation, which in turn depends 'on the quantum of previous savings'; and (2) whether there are many or few 'lucrative employments of capital' (*T*: 349). Say enunciated 'the general and eternal law, that the more abundant is the disposable capital, in proportion to the multiplicity of employments, the lower will the interest of borrowed capital fall' (ibid.).

As regards the *profits* of productive capital, Say emphasized the 'extreme difficulty' of distinguishing between 'the profit derivable from the employment of capital', on the one hand, and the 'profit of industry' of the entrepreneur, on

the other. Smith and the other classical English economists are accused of having neglected the latter distinction: 'they comprise under the general head of the profit of capital, or stock, as they term it, many items, which evidently belong to the head of the profit of industry' (*T*: 354). We are then told that the rates of profit yielded in different industries depend on 'the relative demand and supply for each mode of employment of capital respectively' (*T*: 356). But what is capital? Say took issue with the view advocated by Smith and others that labour was the first price, the original purchase-money, for all things. He objected that this omits the fact that there is also paid 'the agency and co-operation of the capital employed'. Yet: 'Is not capital itself, they will say, composed of accumulated products – of accumulated labour?' Surprisingly he answered: 'Granted', followed by: 'but [sic!] the value of capital, like that of land, is distinguishable from the value of its productive agency; the value of a field is quite different from that of its annual rent' (*T*: 356). Who has ever disputed this? Of what use are his considerations for an understanding of the factors regulating the ordinary rate of profit? Say appears to have thought that there is a perfect analogy, also reflected in his peculiar terminology, between the 'profit of capital', the 'profit of land' and the 'profit of labour'. He concluded by reiterating his contention that 'the profit of capital, like that of land and the other natural sources, is the *equivalent given for a productive service*, which though distinct from that of human industry, is nevertheless its efficient ally in the production of wealth' (*T*: 357). What is perhaps meant by this 'productive service' is alluded to elsewhere in the *Treatise*, where Say put forward the germs of an explanation of profits in terms of the sacrifices incurred by the saver, his 'forbearance' or, as Nassau W. Senior was to call it, his 'abstinence'. Capital is said to be

> the mere result of *human frugality and forbearance* to exercise the faculty of consuming, which, if fully exerted, would have destroyed products as fast as they were created, and these never could have been the existing property of any one; wherefore, *no one else, but he who has practised this self-denial, can claim the result of it with any show of justice. Frugality is next of kin to the actual creation of products, which confers the most unquestionable of all titles to the property in them.*
>
> (*T*: 293)

Say did not get much beyond the observation that whoever has accumulated capital is entitled to receive profits. And even if his explanation of interest as a compensation of acts of 'self-denial' of the saver were formulated in a more compelling way, it would, of course, be subject to the usual objections put forward against the abstinence theory. In particular, it is not clear in which relation the interest payments obtained by individual saver-investors stand to their individual and thus subjective sentiments of 'forbearance' and 'self-denial', and whether the accumulation of capital does not also generate feelings of pleasure and happiness. Be that as it may, Say's view of interest is in strict contrast to Ricardo's who focused attention on the productive use made of capital and the surplus left over after all

necessary costs of production, including the wages of labour, have been deducted from gross outputs.

9. Concluding remarks

As we have seen, at the beginning of their encounter Say acknowledged Ricardo's authority in political economy which is reflected in a submissive tone towards the author of the *Principles*. However, already at the time of his notes to the French edition of that book Say, who orginally had expressed his concern with adapting his doctrine in order to gain Ricardo's approval of it, changed his attitude. After Ricardo's death he openly attacked Ricardo and diminished his achievements. Towards the end of a critical review of McCulloch's 'Discourse on the rise, progress, peculiar objects and importance of Political Economy' in the *Revue Encyclopédique* of 1825 Say wrote about Ricardo: 'I think that his only title to fame is his doctrine of money'. He added: 'Mr McCulloch will perhaps reproach me for not having communicated earlier my views on Ricardo's doctrines.'(18*) To excuse himself he mentioned that he did not want to

> cause the slightest affliction to a highly recommendable man, who honoured me with his friendship . . . This is the reason why in the notes which the publishers had asked me to append to the French translation of his book I have touched only cursorily the points on which we disagree. But it will perhaps be seen some day from our correspondence that, *while I avoided to refute him publically, I nonetheless privately fought some battles with him in the interest of truth*.
>
> (Say 1825: 718–19)(19*)

Say's more critical stance towards Ricardo is reflected in the fifth edition of his *Traité* (1826), and at one point he also intended to publish his correspondence with Ricardo but then gave up the plan.[31] In his letter to Tooke of 14 May 1825 he explained his change of opinion:

> I have asked Francis Place [the translator] not to consult you with regard to the translation he had carried out of an economic essay and some correspondence between David Ricardo and me . . . I became convinced that the moment was ill-suited for such a publication. I gave up the idea of publishing this piece in England.
>
> (Say 1848: 526)(20*)

In his *Cours complet d'économie politique pratique* (1828–9) Say was more outspoken and launched a frontal assault on Ricardo. He admitted that the conversations and correspondence he had with Ricardo, 'have obliged me to work out anew these first principles, and have given me the means to present them with a clarity that would probably never have been reached' (Say 1852, vol. I: 113).(21*) However, these improvements did not mean that his position got closer

to Ricardo, on the contrary. His major differences with Ricardo concerned the theory of rent (see Say 1852, vol. I: 216–20) and the theory of value. As regards Ricardo's determination of prices in terms of cost of production Say insisted 'that all the productive services are equally suited to all the products' (Say 1852, vol. I: 362).(22*) To the concept of a tendency towards a uniform rate of profits in conditions of free competition he objected: 'This is what I call *metaphysical political economy*. It has no utility whatsoever, because it cannot provide any guidance in practice'(23*) – because there will never be two pieces of land or two firms absolutely equal one to the other. In a footnote he added: 'David Ricardo, in the third edition of his book, appears to be disenchanted that I did not adopt what he considers to be an important doctrine. It is precisely because I do not consider it important that I have not said anything about it. *I only consider important what is useful and applicable*' (Say 1852, vol. II: 68).(24*) And finally, turning to the Ricardian school as a whole, he exclaimed: 'The error of this school is to take each principle too absolutely; and, after having presented it in the form of a theorem, to deduce rigorously consequences which very often do not conform to the facts' (Say 1852, vol. II: 400).(25*)

In one place the author of the *Treatise* wrote about his analysis of the sources of production and of revenue that it leads us 'into the labyrinth of the science of political economy' (*T*: 294). If one had to describe Ricardo's analysis in terms of Say's metaphor, one might say that it was designed to show the reader a way out of that labyrinth.

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Notes

1 Say had visited Edinburgh and Glasgow in 1814. In the note on his life in his *Oeuvres diverses* we read: 'In Glasgow he was asked to sit down in the chair from which

Adam Smith taught, and it was not without emotion that he told this episode of his journey one day to his audience in the *Conservatoire des Arts et Métiers*' (Say 1848: XI).(26*)

2 Unless otherwise stated, all emphases in quotations were added by us.

3 The latter problem is dealt with in Gehrke and Kurz (2001, section VIII); see also Baumol (1977), Béraud (1992: 474–88) and Steiner (1996: 29 n. 37).

4 However, as Steiner (1996: 22) aptly observed, Say's notes to the French translation of Ricardo's *Principles* published in 1819 marked a rupture in the relationship between the two scholars and showed a Say attacking his declared peer. We shall come back to Say's notes below.

5 For contributions to an assessment of the two authors from a different perspective, see, for example, Béraud (1992), Mahieu (1992: 33–8) and Steiner (1996: 22–35). According to Béraud (ibid.: 507) there have not been many critical studies of Say's contributions to economics.

6 They met again in 1817 and in 1822, on the occasion of Ricardo's visits to Paris.

7 A version of Say's report was published as *De l'Angleterre et des anglais* (1815). In a letter to Say of 24 December 1814 Ricardo wrote: 'The plan for the currency of France which you have sent me to look over differs in no very essential point from that which I recommended to our Bank of England' (Ricardo, *Works*, vol. VI: 165).

8 J.-B. Say wrote of himself: 'I have never been satisfied with my conversation. My second thought is in general better than the first one, and it is unfortunately always the latter which comes about in conversation' – Quoted in *Notice sur J.-B. Say*, prefixed to *Oeuvres diverses* (1848: XV). (27*)

9 Malthus replied on 26 October 1820: 'With regard to your new definition of the objects of Political Economy, I own it appears to me very confined.... In the same manner when you reject the consideration of demand and supply in the price of commodities and refer only to the means of supply, you appear to me to look only at half of your subject' (Ricardo, *Works*, vol. VIII: 286). Ricardo's response of 24 November could also have been addressed to Say: 'I do not dispute... the influence of demand on the price of corn and on the price of all other things [the reference is obviously to market prices], but supply follows close at its heels, and soon takes the power of regulating prices [the reference is obviously to natural price] in his own hands, and in regulating it he is determined by cost of production. I acknowledge the intervals on which you so exclusively dwell, but still they are only intervals' (ibid.: 302).

10 On 10 September 1815 Say wrote to Ricardo: 'I received these days that interesting little pamphlet [Ricardo's *Essay on Profits*], and I have read it with so much profit that I have made use of it and have cited it in the third edition of my *Traité d'Economie Politique* which I am currently preparing' (Ricardo, *Works*, vol. VI: 270).(28*) In November 1815 James Mill informed Ricardo: 'I have a long letter from our Parisien friend... He says he is rectifying his chapters on money to a conformity with your ideas, for the third edition of his book' (ibid.: 321). In July 1817 Say presented Ricardo with a copy of the third edition of his *Treatise*, 'where you will find several corrections, some of which suggested themselves to me from my conversations with you. The following editions will offer some more which I owe to your works. *My theory of value is already much better than the one you have criticized*' (Ricardo, *Works*, vol. VII: 166).(29*)

11 Although the French translation is dated 1819, a copy had reached Ricardo by the middle of December 1818 and Say's notes were discussed in letters between him and Mill of that month (see Ricardo, *Works*, vol. X: 374). In a letter to Ricardo Say explained that he had originally written these notes 'only for my own use. A publisher who had commissioned a translation of the work got knowledge of these notes and pestered me until he had obtained them from me' (Ricardo, *Works*, vol. VIII: 136).(30*)

12 James Mill refers to the following statement in one of Say's notes on Ricardo's chapter 'On value': 'Mr. Ricardo there appears not to have included profits or the interest of capital as a constituent part of the prices of commodities. Consequently, Mr. Ricardo, after Smith, includes in the natural price of commodities neither the interest of capital nor the profits of the land funds which have contributed to their production' (Say in Ricardo 1819, vol. I: 28–9).(31*)

13 In a letter to Pryme, dated Paris, 27 August 1819, Say wrote about the fourth edition: 'It will be more comprehensive, and I hope it will be found more complete and better connected than all the previous ones. The criticisms of Mr. Ricardo have been very useful to me. They have obliged me to elaborate on the doctrine of values as the measure of riches, and to solve, apart from many others, this interesting problem: *How is the low price of products at the origin of the riches of nations?* I have done what I could to make political economy such that there is not any difficulty that cannot be resolved with the help of this fourth edition' (Pryme, 1870: 125–6; emphasis in the original).(32*)

14 He reiterated his assessment in a letter of 9 October 1820 (see Ricardo, *Works*, vol. VIII: 276–7).

15 In one of his notes on John Cazenove's 'A Reply to Mr. Say's Letter to Mr. Malthus' Ricardo observed: 'I am as much dissatisfied as the author with M. Say's defence of the principle which both he and I maintain to be true' (Ricardo, *Works*, vol. X: 410).

16 A summary account of the changes in the successive editions of the *Treatise* is given in Steiner (1998a).

17 As we know from a letter of Say to Prinsep written in May 1821. Say was not very happy with the translation and disliked some of Prinsep's comments on his own doctrines. The translation is indeed not very good, nor are Prinsep's comments, but this does not affect the following rendition of Say's argument.

18 Say had suggested that his letter of 19 July 1821 might be read to the members of the *Political Economy Club*, together with Ricardo's response. Ricardo did so at the next meeting that he attended, on 4 February 1822. At the meeting Say was proposed to be elected as an honorary member and 'The thanks of the Club were voted to both gentlemen for these communications' (Ricardo, *Works*, vol. IX: 172–3 n.).

19 For a different interpretation of the debate, giving some credit to Say, see Steiner (2000: 15–17).

20 The view that in competitive conditions there exists a tendency toward a uniform rate of return on capital (and, more generally, a tendency toward uniform rates of remuneration for each single quality of original factors of production) led the classical economists to distinguish between 'market' or actual values, on the one hand, and 'natural' or normal values, on the other. About the former, these authors maintained, nothing could be said which is of sufficient generality. Therefore, only natural values were considered the legitimate object of scientific inquiry. While Say appears to have accepted the competitive tendency toward uniform rates of remuneration and thus the existence of centres of gravitation of market values, in his later publications he strangely rejected the concept of natural value. In his notes on the French edition of Ricardo's *Principles* he contended: 'The distinction between the natural price and the actual price made by Mr Ricardo, following Adam Smith, appears to me totally chimerical. *In Political Economy there are only actual prices.*' He concluded about Ricardo's argument in chapter 4 of the *Principles:* 'All the rest is hypothetical and of little use in practice' (Say in Ricardo 1819, vol. I: 126–7).(33*) To be clear, only in the actual economy are all prices actual prices, whereas in Political Economy all prices are abstract prices. As a scientific subject, Political Economy cannot do without some concept of normalcy and thus some level of abstraction.

21 Originally, Ricardo was in search of a commodity which at all times would be produced with the same amount of labour. In the third edition of the *Principles* he required that

in addition to this property the perfect measure of value would have to exhibit average proportions of labour to means of production.

22 This fact notwithstanding, Ricardo's concern with defining the average conditions of production under which the different commodities of a given economic system are produced played a useful role in his attempt to render clear how relative prices depended on the level of the rate of profits.

23 The translator, C. R. Prinsep, translated 'entrepreneur' as 'adventurer'.

24 In addition, the fact that the two authors argued against the background of different institutional settings in France and the United Kingdom, respectively, could only contribute to aggravating their problems of communication. See, for example, Ricardo's remark that 'M. Say appears to me to have mistaken the nature and effects of the English land-tax' (Ricardo, *Works*, vol. I: 186).

25 In another passage he draws a parallel between 'la faculté productive du sol' and 'la faculté productive du travail' (Say in Ricardo 1819, vol. I: 95 n.).

26 For a discussion of the relationship between the classical theory of rent and Hotelling's rule in dealing with exhaustible resources, see Kurz and Salvadori (2001).

27 For example, in accordance with von Thünen in *Der isolirte Staat* we might consider a plot of (otherwise homogeneous) land in a particular location as a particular quality of land.

28 On Ricardo on intensive rent, see also Béraud (1992: 386).

29 Interestingly, the translator, C. R. Prinsep, in one of his idiosyncratic footnotes wrote with regard to chapter 2 of the *Principles*: 'This chapter of Ricardo is perhaps the least satisfactory and intelligible of his whole work' (*T*: 361n). While this opinion echoed Say's, it was not confirmed by important contemporary and later authors. On the contrary, the theory of (intensive) rent was taken to be the stuff from which a new theory was elaborated – marginal productivity theory – by generalizing the principle of diminishing returns to all 'factors of production' alike. (For the difficulties the attempted generalization encountered, see, for example, Kurz and Salvadori 1995: ch. 14.)

30 In the above it is assumed that the rate of profit is larger than the minimum rate which according to Ricardo is just enough to compensate the 'risk and trouble' incurred by the capitalist.

31 Steiner (2000: 22) notes that Say rewrote parts of his correspondence for this purpose.

Quotations in the original French

(1*) Je m'occupe toujours à corriger mon *Traité d'Economie* et je fais un grand usage de vos *Principles of Political Economy*.

(2*) Vous verrez par les corrections que j'ai faites, notamment dans les premiers chapitres du Livre 2^e^ sur la Distribution des richesses, combien vos critiques m'ont été utiles, puisqu'elles m'ont obligé à remettre sur le métier les parties les plus délicates de ma doctrine. Je m'estimerais bien heureux si ces corrections et quelques autres parviennent à vous ramener sur les points peu nombreux où j'ai eu le malheur de ne pas me rencontrer avec nous.

(3*) Je désire vivement que les explications que je donne ici de ma doctrine des valeurs, vous satisfasse mieux que celles qui se trouve dans mes précéden[t]s écrits. Cette doctrine me semble maintenant digne d'être adoptée et étendue par vous; et j'attendrai avec impatience les premiers écrits que vous publierez pour savoir ce que vous en pensez; car je crois avoir montré *qu'elle n'est autre que la vôtre en d'autres termes*.

(4*) Mais j'aurais eu très-grand tort si l'on pouvait inférer de ce que j'ai dit, que lorsque le prix d'une chose baisse, son utilité diminue. L'utilité d'une chose qui baisse de prix, se rapproche alors de l'utilité de l'air, qui ne nous coûte rien, quoique fort utile.

(5*) L'action gratuite des agents naturels, quand elle remplace l'action onéreuse des hommes et des capitaux, fait baisser la valeur des produits. Comme toute valeur est relative, la valeur des produits ne peut pas baisser sans que la valeur des revenus (ou des fonds productifs qui donnent ces revenus) n'augmente. Les consommateurs sont d'autant plus riches que les produits sont à meilleur marché. J'ai prouvé ailleurs que la baisse des produits provenant d'une économie dans les frais de production, n'altérait en rien les revenus des producteurs.

(6*) Il est dit dans le passage cité que *les revenus de la société sont restés les mêmes;* car pour les richesses, elles sont augmentées de tout ce qu'on peut acheter de plus avec le même revenu.

(7*) *Valeur échangeable* et *richesse* sont . . . synonymes.

(8*) Maintenant la grande difficulté est de faire concorder les lois de la *Richesse sociale* ou de l'Économie politique, avec celles de la Richesse naturelle. Lorsqu'un produit se multiplie par le meilleur emploi que nous faisons de nos terres, de nos capitaux, et de notre industrie, il y a plus d'utilité (soit de *richesse naturelle*) produite, et en même temps la production de la richesse sociale semble être moindre, puisque la valeur échangeable du produit diminue. La richesse sociale ne suit donc pas la même marche que la richesse naturelle.

(9*) Il reste à connaître quels sont ceux qui profitent de cette augmentation, ceux qui sont plus riches, non seulement en richesses naturelles, mais en richesses sociales, en valeurs échangeables, de tout cet accroissement d'utilité produite.

(10*) Si par des causes dont la discussion est étrangère à l'object de notre spéculation présente, la valeur échangeable de chaque boisseau de blé se soutient, malgré l'augmentation survenue dans la quantité de blé produite, alors l'augmentation de richesse produite est entièrement au profit des producteurs; c'est-à-dire, des propriétaires du fonds capital, du fonds territorial, et du fonds industriel, dont il est sorti cinq cents boisseaux au lieu de cinquante. Le revenu provenant de ces portions de fonds a décuplé.

(11*) Si . . . la valeur échangeable de chaque boisseau de blé a baissé en raison de la plus grande quantité qui en a été produite, le profit obtenu est bien toujours dans la proportion des cinq cents à cinquante; mais ce profit est fait par la classe des consommateurs, lesquels sont aussi riches de ce qu'ils payent de moins, que les producteurs l'auraient été de ce qu'ils auraient vendu de plus. Leur revenu n'a pas décuplé, parce qu'ils ne l'emploient pas tout entier en froment; mais la portion de revenu qu'ils avaient coutume d'employer en froment, a décuplé; et toutes ces portions de revenu ainsi décuplées, se monteraient, si elles étaient réunies, à une somme égale à la valeur décuplée du produit, en supposant qu'il n'eût pas baissé de prix. Dans les deux cas, la société a donc joui d'une augmentation de valeurs comme d'une augmentation d'utilité.

(12*) Non; mais en supposant pour un moment qu'une livre d'or et une livre de fer rendent à l'homme un service parfaitement égal malgré l'inégalité de leur valeur, je dis qu'il y dans une livre de fer:

1999 degrés d'utilité naturelle faisant partie des richesses que la nature ne nous fait pas payer, et qui ne concernent pas l'Economie politique;
et 1 degré d'utilité crée par l'industrie, les capitaux et les terres, utilité que nous payons et qui est la seule qui fasse partie des richesses échangeables, unique objet de nos recherches.
2000 degrés d'utilité en tout, residan[t]s dans une livre de fer. Tandis que dans une livre d'or il y a:
2000 degrés d'utilité tout entière échangeable parce qu'elle est tout entière le fruit de notre industrie, de nos capitaux et de nos terres; utilité qui fait partie, non de nos richesses naturelles, mais de nos *richesses sociales, les seules dont l'Economie politique puisse s'occuper.*

(13*) Une mesure invariable des valeurs, est une pure *chimère*, parce qu'on ne peut mesurer les valeurs que par des valeurs, c'est-à-dire par une quantité essentiellement variable. Il n'en résulte pas que la valeur soit chimérique; elle ne l'est pas plus que la chaleur des corps, qui ne peut pas se fixer davantage.

(14*) Ne peut-on pas dire que [les] propriétaires exercent une fonction productive, puisque sans elle la production n'aurait pas lieu?

(15*) Le propriétaire ... exerce une espèce de monopole qui lui permet de soutenir la valeur de son produit au-delà des frais de main-d' œuvre, et des intérêts de capitaux nécessaires pour le terminer et le mener sur le marché. *Ce prix-monopole baissé par la concurrence, mais ne saurait, je crois, tomber à rien.*

(16*) La terre est un atelier chimique admirable où se combinent et s'élaborent une foule de matériaux et d'éléments qui en sortent sous la forme de froment, de fruits, propres à notre subsistance, de lin dont nous tissons nos vêtements, d'arbres dont nous construisons nos demeures et nos navires. ... C'est ainsi qu'un fonds de terre a pu fournir une quantité décuple, centuple, de produits utiles à l'homme.

(17*) Le terrain ne sera cultivé qu'autant qu'on en aura assuré la proprieté au cultivateur; dès lors il a quelque chose de plus précieux que tout autre terrain de même qualité [sic], non encore approprié.

(18*) Je pense que son seul titre de gloire est à sa doctrine des monnaies ... M. McCulloch me reprochera peut-être de n'avoir pas fait connaître plus tôt ma façon de penser à l'égard des doctrines de Ricardo.

(19*) ... causer la moindre affliction à un homme aussi recommendable, qui m'honorait de son amitié ... Aussi n'ai-je touché que très-légèrement dans les notes que les libraires m'ont sollicité d'ajouter à la traduction française de son livre, les points sur lequels nous différions; mais, on verra peut-être quelque jour, par notre correspondance, que, *si j'ai évité de le combattre sous les yeux du public, je soutenais néanmoins à huis clos contre lui, quelques combats dans l'intérêt de la vérité.*

(20*) J'avais prié Francis Place, non de vous consulter sur la traduction qu'il avait entreprise d'un Essay économique et d'une petite correspondance entre David Ricardo et moi ... Je me suis convaincu que le moment était fort peu propre à une semblable publication. J'ai renoncé à faire paraître ce morceau en Angleterre.

(21*) ... en m'obligeant à travailler de nouveau ces premiers principes, m'ont fourni les moyens de les présenter avec plus de clarté peut-être qu'on ne l'a jamais fait.

(22*) Il faudrait que tous les services productifs fussent également propres à tous les produits.

(23*) Voilà ce que j'appelle de *l'économie politique métaphysique*. Elle n'a aucune utilité, parce qu'elle ne peut fournir aucune direction dans la pratique.

(24*) David Ricardo dans la 3e édition de son livre, a l'air d'être fâché que je ne me suis pas arrêté sur ce qu'il appelle une importante doctrine. C'est précisément parce que je ne la crois pas importante que je n'en ai rien dit. *Rien ne me parait important que ce qui est utile et applicable.*

(25*) Le tort de cette école est de considérer chaque principe trop absolument; et, après l'avoir énoncé sous la forme d'un théorème, d'en tirer des conséquences rigoureuses, qui, très souvent, ne cadrent pas avec les faits.

(26*) A Glasgow on lui avait demandé de s'asseoir dans la chaire où professait Adam Smith, et ce n'est pas sans èmotion qu'il racontait un jour à ses auditeurs du Conservatoire des Arts et Métiers, cet épisode de son voyage.

(27*) Je n'ai presque jamais été content de ma conversation. Ma seconde pensée est en général meilleure que la première, et malheureusement c'est toujours celle-ci qui se produit dans la conversation.

(28*) J'ai bien reçu dans le tem[p]s cet intéressant opuscule [Ricardo's *Essay on Profits*], et je l'ai lu avec tant de fruit que je l'ai mis à contribution et l'ai cité dans la troisième èdition que je prépare de mon *Traité d'Economie politique*.

(29*) ... où vous trouverez plusieurs corrections dont quelques-unes m'ont été suggérées par mes conversations avec vous. Les éditions suivantes en offriront bien d'autres encore que je devrai à vos ouvrages. *Ma théorie des valeurs vaut déja mieux que celle que vous avez critiquée.*

(30*) ... uniquement pour mon usage ... Un libraire qui f[ai]sait traduire l'ouvrage, a eu connaissance de ces notes et m'a persécuté jusqu'à ce qu'il les ait obtenues de moi.

(31*) M. Ricardo parait n'avoir pas compris là-dedans les pro. ts ou l'intérêt des capitaux comme partie constituante du prix des choses. ... Par suite M. Ricardo ne comprend point, dans ce qu'il nomme, d'après Smith, le prix naturel des choses, ni l'intérêt du capital, ni les pro. ts du fonds de terre qui ont concouru à leur production.

(32*) Elle sera plus ample et j'espère qu'on la trouvera plus complète et mieux liée que toutes les précédentes. Les critiques de M. Ricardo m'ont été fort utiles. Elles m'ont obligé à approfondir la doctrine des valeurs comme mesure des richesses, et à résoudre, parmi beaucoup d'autres cette importante question: Comment le bas prix des produits fait-il la Richesses des Nations? J'ai fait mon possible, pour que l'Economie politique ne présentât aucune dif. culté qui ne pût être résolue à l'aide de cette 4e Edition.

(33*) La distinction entre le prix naturel et le prix courant que M. Ricardo admet après Smith, paraît être tout-à-fait chimérique. Il n'y a que des prix couran[t]s en Économie politique. ... Tout le reste est hypothétique et de peu d'usage dans la pratique.

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3 Ricardo on agricultural improvements*

A note

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1. Introduction

Ricardo's discussion of different forms of technical progress and their implications for the distribution of the product between workers, capitalists and landlords in Chapter 2 of the *Principles* (Ricardo, [1817] 1951) attracted the attention of major economists, including John Stuart Mill, Marx, Marshall and Wicksell. However, the numerical examples he put forward to illustrate what we may, for short, call 'land saving' and 'capital (*alias* labour) saving' technical progress generally met with fierce criticism. According to Edwin Cannan, Ricardo 'is absolutely and almost obviously wrong' with regard to the second kind of improvements and his reasoning is said to end 'in complete and hopeless failure' ([1893] 1967, pp. 259–60). Essentially the same criticism was reiterated some fifty years later by Harry G. Johnson who called Ricardo's second numerical example 'erroneous' (Johnson, 1948, p. 792).[1]

In this note we shall argue that Ricardo was not wrong in any substantive sense. He could only be criticized for having changed the definition of rent, which implied a change as regards the timing of its payment from *post* to *ante factum*, when proceeding from one numerical example to the next; alas, without explicitly noting, nor perhaps even noticing, the implication. We shall begin, in Section II, with a summary account of Ricardo's argument. Section III then provides an interpretation of Ricardo's two numerical examples in which each of them emerges as fully correct.

2. Two kinds of agricultural improvements

In Chapter 2 of the *Principles* Ricardo elaborated the concept of differential rent and then pointed out 'the effects of the natural progress of wealth and population on rent, in a country in which the land is of variously productive powers' (1951, p. 78), on the assumption that there is no technical progress. It is only in a second

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