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RICARDO AND THE 93% LABOR THEORY OF VALUE

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> Mr. Malthus shows that in fact the exchangeable value of commodities is not *exactly* proportioned to the labour which has been employed on them, which I not only admit now, but have never denied.
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> Ricardo, *Works*, II, 66.

Did Ricardo have a labor theory of value—did he believe that the relative values of commodities are governed *exclusively* by the relative quantities of labor necessary to produce them?

A considerable number of historians of economics have given a flat affirmative answer to this question—a surprisingly large number considering the fact that there is not the slightest basis for such an answer.[1] In the course of their expositions one encounters quite remarkable statements such as that Ricardo assumed that labor and capital were in a fixed proportion in all industries,[2] or that "Ricardo . . . constantly takes no notice of capital."[3] Presumably these writers did not have access to Ricardo's *Principles*.

More careful historians of doctrine have recognized the several and important departures from a pure labor theory that Ricardo emphatically made. There is, in fact, an almost continuous spectrum of interpretations. At one uninteresting extreme some writers argue that Ricardo simply forgot or did not understand the import of the qualifications he made. A very important group has advanced the view that Ricardo *wished* to hold a labor theory of value—Cannan heads his treatment: "Ricardo's Attempt to Revive the Pure Labour Theory."[4] They hold that under adverse criticism and honest self-examination, Ricardo was gradually forced to introduce in successive editions of the *Principles* a series of qualifications of increasing importance, so that in the end it

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[1] Some examples are E. Whitaker, *A History of Economic Ideas*, New York 1940, pp. 422-25; P. C. Newman, *The Development of Economic Thought*, New York 1952, p. 85; Emile James, *Histoire sommaire de la pensée économique*, Paris 1955, pp. 88-89; and C. Gide and C. Rist, *A History of Economic Doctrines*, 2nd ed., New York, n.d., p. 164.

[2] G. Myrdal, *The Political Element in the Development of Economic Theory*, Cambridge 1954, p. 62; similarly W. Stark, *The History of Economics*, New York 1944, p. 36.

[3] J. K. Ingram, *A History of Political Economy*, New York 1897, p. 125.

[4] *A Review of Economic Theory*, London 1929, p. 172.

really was not a labor theory.[5] But Ricardo was not willing to abandon the theory completely: "his heart clung to the pure labour theory,"[6] or he made a "brave show" of "identifying, as far as might be, value and the amount of labour necessary for production."[7]

In the most sophisticated versions of this view, the formal exposition of Ricardo's theory is, as I believe, correct and complete in substance, but there persists a strong implication that Ricardo attributes more than quantitative importance to labor in determining values.[8] Thus, after carefully stating Ricardo's "modifications" of a labor theory, St. Clair says that Ricardo "sweeps them all into the waste-paper basket"; for "he never got rid entirely of the idea with which he started, namely, that labour is the only price exacted by Nature for her gifts."[9]

The only economists to argue at some length that Ricardo had a cost-of-production theory of value, so far as I know, have been Marshall, Diehl, and Viner—but who could wish for more comforting allies?[10]

The widespread misinterpretation of a leading doctrine of an economist of the first rank is not a product only of later viewpoints and knowledge, for it occurred already in Ricardo's lifetime. The present essay seeks to set forth precisely what Ricardo's theory of value was, and to examine the interpretation placed upon it by his leading contemporaries.

I. *Ricardo's Theory of Value*

Ricardo's formulation of his theory of value was much influenced by his desire to correct what he believed to be the major errors of Adam Smith's theory. For Smith the long-run value of a commodity equaled

[5] This "evolution" in Ricardo's thought was apparently invented by Hollander, "The Development of Ricardo's Theory of Value," *Quart. Jour. Econ.*, 1903-4, XVIII, 455-91. Sraffa has recently shown that it rests upon a misconception; *Works and Correspondence of David Ricardo,* ed. Piero Sraffa, Cambridge, Eng. 1951, I, xxxvii ff. (Subsequent references to the latter will be given simply by volume and page numbers.)

[6] Cannan, *op. cit.,* p. 177.

[7] Alexander Gray, *The Development of Economic Doctrine,* New York 1931, p. 177.

[8] In addition to O. St. Clair, one may cite A. C. Whitaker, *History and Criticism of the Labor Theory of Value,* New York 1904, Ch. 5, p. 130-31, J. Schumpeter, *History of Economic Analysis,* New York 1954, pp. 590-95, and H. Biaujeaud, *Essai sur la théorie Ricardienne de la valeur,* Paris 1934.

[9] *A Key to Ricardo,* New York 1957, pp. 40, 348.

[10] Marshall's discussion is in the *Principles of Economics,* 8th ed. London 1920, Appendix I. It elicited from the leading historian of the English classical economics the remark that "Marshall endeavours to show, in defiance of all evidence, that Ricardo never desired to put forward the pure labour theory of value" (Cannan, *op. cit.,* p. 177n). Viner criticized Cannan's position in his distinguished review of Cannan's book, *Economica,* 1930, X, 78-80. Karl Diehl's extensive, but only moderately detailed, account is in *Sozialwissenschaftliche Erläuterungen zu David Ricardo's Grundgesetzen,* Leipzig 1905, Pt I, pp. 1-50.

At least two other historians of doctrine asserted what I take to be the correct view its cost of production: the "natural" price of a commodity was the sum of the necessary payments for labor, capital, and land. A rise in the price of one of these factors, and in particular a rise in wages, would lead to a rise in the prices of the commodities in which the factor entered.[11] If the changes in values were to be more than nominal price-level changes,[12] however, this was clearly a superficial analysis: why should the relative values of commodities be affected in any systematic way by the absolute level of input prices? The organization, although not the content, of Ricardo's chapter on value can be interpreted as one which presses the criticism of Smith's theory to the utmost limits.

The analysis is limited to useful goods, produced in free competition, and the element of rent is temporarily put aside (and later shown not to enter into marginal cost). Ricardo begins with the simplest case: the commodities are produced by one type of labor alone, working perhaps on free land (I, 12 ff.) In this simplest case the relative values of commodities will clearly equal the relative quantities of labor necessary to produce them, and will be wholly unaffected by the absolute level of wages (no matter in what unit they are measured).

Consider next, with Ricardo, the case in which only labor is required to produce the commodities, but different types of labor are used in differing proportions (I, 20 ff.). The market will establish wage differentials corresponding to the differences in skill and training of the occupations, and "the scale, when once formed, is liable to little variation." Hence a rise of wages will affect the money costs of all commodities in equal proportion, and leave relative values unaffected. Ricardo did not consider the possibility that the relative amounts of skilled and unskilled labor employed to produce a commodity might change and hence its relative value would change; he could have asserted, however, that the relative value of the commodity will change only if the "common labor" equivalent of the original labor input changed.[13]

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but did not argue it: J. M. Ferguson, *Landmarks of Economic Thought*, 2nd ed., New York 1950, p. 106; and W. A. Scott, *The Development of Economics*, New York 1933, pp. 108-13.

[11] *Wealth of Nations*, Modern Library ed., Bk. I, Ch. 7. Ricardo quoted as a striking example of this argument the passage: "By regulating the money price of all the other parts of the rude produce of land, [the price of corn] regulates that of the materials of almost all manufactures. By regulating the money price of labour, it regulates that of manufacturing art and industry. And by regulating both, it regulates that of the complete manufacture. The money price of labour, and of every thing that is the produce either of land or labour, must necessarily either rise or fall in proportion to the money price of corn" (*ibid.*, p. 477).

[12] And Ricardo was not inclined to make this exception since he had a commodity theory of money.

[13] But a closer analysis would have indicated that the wages of superior labor contain interest on the investment in acquiring skill, and therefore the relative levels of wages and interest rates enter into relative values.

It is evident that we can still retain the proposition that relative values of commodities are independent of the absolute level of wages (and profits) if, when each worker is equipped with fixed capital, we assume that the ratio of fixed capital to labor is the same in every industry, provided the capitals have equal durability. And this is Ricardo's next case (I, 26 ff.). At this point it is not made clear whether the fixed capital earns a net return: Ricardo views the fixed capital as previously expended labor, and says, correctly but unnecessarily, that "exchangeable value of the commodities produced would be in proportion to the labour bestowed on their production; not on their immediate production only, but on all those implements or machines required to give effect to the particular labour to which they were applied."[14] At a later point it is made utterly clear that the contribution of the fixed capital consists of not only amortization quotas but also interest on the investment.[15]

And this is as far as Ricardo could go in attacking Smith's theory. The next step, and analytically the final step, is to allow the ratio of fixed capital to labor to vary between commodities, and when this is done: (I, 30):

> This difference in the degree of durability of fixed capital, and this variety in the proportions in which the two sorts of capital [fixed and circulating] may be combined, introduce another cause, besides the greater or less quantity of labour necessary to produce commodities, for the variations in their relative values—this cause is the rise or fall in the value of labour.

The variations among commodities in the productive role of capital are classified as variations in (1) the ratio of fixed capital to labor (I, 34), (2) the durability of fixed capital (I, 31, 40), and (3) the rate of turnover of circulating capital (I, 37). A rise of wage rates relative to profit rates will lead to a relative rise in the values of commodities made with little fixed capital, or capital of short life, or with raw materials that turn over rapidly.[16]

This is of course a cost-of-production theory, and differs from Smith's theory only in the exclusion of rents from costs: "By cost of production I invariably mean wages and profits."[17]

[14] I, 24. Since the indirect ("hoarded") labor is in fixed proportion to the direct labor, exchangeable values are of course proportional to either part or the total.

[15] I, 39, where the case of a virtually perpetual asset is discussed.

[16] Ricardo's measure of value, a hypothetical product made by labor working with the average amount of capital, the capital being of average durability, and having an average "period of production," leads to the proposition that profits fall (measured in this unit) when wages rise, and the actual direction of movement of the values can be predicted; see my "The Ricardian Theory of Production and Distribution," *Jour. Pol Econ.*, June 1952, LX, 202-4.

[17] *Notes on Malthus*, Ricardo's *Works*, II, 42.

Ricardo believed that the changes brought about in the relative values of commodities by fluctuations in wages and profits were very small relative to those brought about by fluctuations in the quantity of labor (direct and indirect):

> The reader, however, should remark, that this cause of the variation of commodities is comparatively slight in its effects. With such a rise of wages as should occasion a fall of one per cent. in profits, goods produced under the circumstances I have supposed, vary in relative value only one per cent.; they fall with so great a fall of profits from 6,050 l. to 5,995 l. The greatest effects which could be produced on the relative prices of these goods from a rise of wages, could not exceed 6 or 7 per cent.; for profits could not, probably, under any circumstances, admit of a greater general and permanent depression than to that amount.[18]

And so, although it would be "wrong wholly to omit the consideration of the effect produced by a rise or fall of labour [wages], it would be equally incorrect to attach much importance to it" and therefore in the remainder of the book he will "consider all the great variations which take place in the relative value of commodities to be produced by the greater or less quantity of labour which may be required from time to time to produce them" (I, 36-37).

I can find no basis for the belief that Ricardo had an *analytical* labor theory of value, for quantities of labor are *not* the only determinants of relative values. Such a theory would have to reduce all obstacles to production to expenditures of labor or assert the irrelevance or nonexistence of nonlabor obstacles, and Ricardo does not embrace either view. On the other hand, there is no doubt that he held what may be called an *empirical* labor theory of value, that is, a theory that the relative quantities of labor required in production are the dominant determinants of relative values. Such an empirical proposition cannot be interpreted as an analytical theory, any more than the now popular view that the price level is governed by the wage level and the productivity of labor can possibly be defended as an analytical proposition.

This is not to say that Ricardo's analytical theory was correct, for it contained several important deficiencies. It excluded rent from costs, and even if the supply of land were fixed the rent a piece of land could yield in one use would be a cost to other uses. (Ricardo's practice of assuming that land was used to grow only corn obscured this point.) His theory was wrong in reducing all capital to previously expended labor plus interest; except in some irrelevant day of Genesis all capital has been made by the cooperation of earlier capital and labor and land. This view may have fostered his empirical judgment that labor

[18] I, 36. This passage underlies the title of this paper.

quantities were decisive, but one could have adopted (wisely or not) the empirical proposition even if he had a correct concept of capital. And of course if all commodities are not produced subject to constant costs, an explanation of relative values that ignores demand is simply inadequate.

II. *The Interpretation by Contemporaries*

Ricardo's *Principles* received very diverse reviews, ranging from the adulation of McCulloch to the reaction of one anonymous reviewer that the volume "contains no valuable information in point of fact, and very little good reasoning in point of doctrine."[19] This same diversity extended to the interpretation of his theory of value.

J. B. Say could find only a simple labor theory of value. In the notes he added to the French translation of the *Principles,* he observed:

> M. Ricardo does not appear to have included [in the contribution of machinery to the value of a commodity] the profits or the interest on the capital as constituent parts of the prices of commodities.
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> M. Ricardo . . . teaches throughout this book that the quantity of labor necessary to produce a product is the sole element of its price, . . .[20]

Malthus, the other leading economist of the period, did not attribute a labor theory to Ricardo, but chided him for his language:

> If to this cause of variation [differences in rate of durability of capitals] we add the exception noticed by Mr. Ricardo, arising from the greater or less proportion of fixed capital employed in different commodities, the effects of which would shew themselves in a very early period of savage life; it must be allowed that the rule which declares "that commodities never vary in value unless a greater or less quantity of labour be bestowed on their production," cannot possibly, as stated by Mr. Ricardo, be "of universal application in the early stages of society."[21]

It should be noticed that apropos of this discussion, Ricardo says, "In all the observations of Mr. Malthus on this subject I most fully concur" (II, 58). The only difference between Mathus and Ricardo in their concepts of costs of production was that the former included and the latter excluded the rent of land. The real dispute between them

[19] *The British Critic,* N. S. VIII (1817), 354. The reviewer continued: "He holds, for example, and this is the leading principle of his system, that the price of all commodities brought to market, consists solely of the wages paid to workmen, and of the ordinary profits on the stock. . . ."

[20] *Des principes de l'économie politique et de l'impôt,* transl. by F. S. Constancio, Paris 1819, I, 28; II, 297.

[21] *Principles of Political Economy,* 1st ed., London 1820, p. 90; reprinted in *Notes on Malthus,* Ricardo's *Works,* II, 59.

centered on the proper measure of value, rather than on the determination of relative values.

When James Mill wrote his primer on the Ricardian economics, *Elements of Political Economy* (1821), he restated Ricardo's theory in substance. After stating a labor-quantity theory, he went on to explain at length that because of differences in capital-labor ratios in various industries the fluctuations in wages and profits affect exchange values. He concluded:

> It is evident, however, that though this difference in the ratios according to which the wages of two kinds of labour were exchanged, and the different proportions in which they were applied in the production of commodities, would, upon a rise or fall in wages, alter the relative value of commodities, it would do so, without in the least affecting the truth of the previous proposition, that quantity of labour determined exchangeable value.[22]

The brazen illogic with which this passage closes was questioned by Ricardo: (IX, 127):

> In page 76 there is a passage ending with these words "without in the least affecting the truth of the previous proposition," etc. etc. If a watch and a common Jack altered in relative value without any more or less labour being required for the production of either of them, could we say that the proposition "that quantity of labour determines exchangeable value" was universally true? What I call exceptions and modifications of the general rule you appear to me to say come under the general rule itself.

Mill forfeited all hope of entering the economist's heaven when, in the second edition, he retained the passage unchanged and then went on to compound the sin by turning the labor theory into a tautology: "If the wine which is put in the cellar is increased in value one-tenth by being kept a year, one-tenth more of labour may be correctly considered as having been expended upon it."[23]

Ricardo's other fervent disciple, McCulloch, treated him with greater kindness. He repeated Ricardo's analysis, and then, before embarking on his own argument that the increased value of wine or timber arising merely from the passage of time was due to labor, warned the reader:

> But Mr. Ricardo was inclined to modify his grand principle, . . . so far as to allow that the additional exchangeable value that is sometimes given to commodities by keeping them after they have been purchased or produced, until they become fit to be used, was not to be considered as the

[22] *Elements*, p. 76.

[23] *Elements of Political Economy*, 2d ed., London 1824, pp. 97-98.

effect of labour, but as an equivalent for the profits the capital laid out on the commodities would have yielded had it been actually employed.[24]

The final disciple we shall notice is De Quincy. His exposition of the Ricardian theory took the form of a series of dialogues between himself and Philebus, an anti-Ricardian, and Phaedrus, a neutral. The debates went better, for De Quincy, than any in which I have ever been participant or spectator: De Quincy carried every point, no really embarrassing questions were posed to him; and his adversary capitulated handsomely after every sally.[25]

The dialogues were concerned with a defense of the proposition that a rise in general wage rates will not affect the relative values of commodities. Early in the discussion De Quincy asserts:

> *The ground of the value of all things lies in the quantity* (but mark well that word "quantity") *of labour which produces them.* Here is that great principle which is the corner-stone of all tenable Political Economy; which granted or denied, all Political Economy stands or falls. Grant me this one principle, with a few square feet of the sea-shore to draw my diagrams upon, and I will undertake to deduce every other truth in the science.[26]

And again,

> It is Mr. Ricardo's doctrine that no variation in either profits or wages can ever affect price; if wages rise or fall, the only consequence is that profits must fall or rise by the same sum; so again, if profits rise or fall, wages must fall or rise accordingly.[27]

The complications raised by different ratios of labor to capital in various industries are not considered.

There is reason for believing that De Quincy did not mean to attribute a simple labor-quantity theory to Ricardo, despite the explicit clarity with which this is asserted. The dialogues were never completed, and the complications may well have been postponed to these unwritten parts. In the later *Logic of Political Economy* (1844), De Quincy summarized the complications which Ricardo raised with respect to differing capital-labor ratios, and did not challenge their basic significance.[28] Yet the reader of the *Dialogues* would have received only the

[24] *Principles of Political Economy*, 1st ed., London 1825, p. 313. The qualifications arising out of differing capital-labor ratios are summarized on page 309.

[25] "Dialogues of the Three Templars on Political Economy," which appeared as three articles in the *London Magazine* in 1824; I use the reprint in *The Collected Works of Thomas De Quincy*, ed. by David Masson, London 1897, Vol. IX.

[26] *Ibid.*, p. 55; his italics.

[27] *Ibid.*, p. 60.

[28] Sec. VII; *Collected Works*, p. 196: "In this case, it can no longer be said that the prices of the resulting articles, according to the general rule of Ricardo, vary as the quantities of the producing labour: a disturbance of that law occurs."

account of the first approximation, in which capital (and various types of labor) are ignored.

Samuel Bailey's penetrating analysis of the value concepts of Ricardo and his contemporaries revealed with admirable clarity the carelessness, ambiguity, and dubious metaphysics that saturated this literature.[29] Yet this clarity was achieved partly by avoiding a real problem with which these economists were grappling: how can one measure the value of commodity A not merely in comparison with commodity B (the case Bailey studies) but in comparison with all other commodities? This latter problem, of which the isolation of monetary fluctuations is one instance, was surely the rationale of most of the discussion of a measure of value.

So far as Ricardo's theory of value is concerned, Bailey makes no charge that it is a labor-quantity theory.

> Mr. Ricardo, indeed, explicitly allows the influence of other causes, such as time, differences in the proportion of fixed and circulating capital, and inequalities in the durability of capital, by which he admits the value of commodities is liable to be affected. Notwithstanding these modifications, however, his followers continue to lay down the position of quantity of labour being the sole cause of value in the most precise and positive terms; not that they deny the exceptions, but they appear to lose sight of their existence, and frequently fall into language incompatible with their admission; . . .[30]

It may be added that in substance Bailey accepts Ricardo's theory of value, including the exclusion of rent from costs of production.

We may recapitulate this brief survey. McCulloch, Bailey and Malthus correctly understood Ricardo's theory to be a cost-of-production theory excluding rent, and De Quincy should probably be added to this group. The theory was understood as a simple labor-quantity theory by Say and Mill, and also by Torrens.[31] It is worth repeating that Ricardo accepted Malthus' analysis and rejected Mill's. The theory was more widely understood in its correct sense in Ricardo's time than in later times.

III. *Conclusion*

How did the misunderstanding of Ricardo's theory arise? Although Ricardo's exposition has been often and justly denounced, the main argument stands out clearly enough: it does not require great generos-

[29] *A Critical Dissertation on the Nature, Measures, and Causes of Value,* London 1825.

[30] *Ibid.,* pp. 230-31.

[31] "Mr. Ricardo has pushed this principle still further, and contended, that in all periods of society, whether before or after the accumulation of capital and appropriations of land, the labour expended upon production is the sole regulator of value." *An Essay on the Production of Wealth,* London 1821, p. vi.

ity or deep subtlety to comprehend the main structure of his value theory—indeed he has suffered from overly subtle reading. The confusion over his theory has arisen from more fundamental sources.

In Ricardo's period several factors probably played a minor role in the confusion. Ricardo's two leading disciples, Mill and McCulloch, asserted a labor-quantity theory with all emphasis, although actually neither held such a theory to the extent of denying that fluctuations in wage and profit rates affected commodity values. Their expositions naturally colored the interpretation of Ricardo, even though McCulloch expressly indicated his disagreement with Ricardo. Another source was the vast confusion of the causes of value with the proper measure of value, and in Ricardo's first edition a pure labor measure of value was used.

The main source of the confusion, however, was probably the failure of economists to distinguish clearly between analytical and empirical propositions. Among economists who were not methodologically self-conscious, who did not systematically consider the necessary and sufficient conditions for an equilibrium, the distinction would seldom be remarked. Ricardo's emphasis upon the quantitative importance of labor tended to be read as an analytical proposition that labour quantities were the sole regulators of value.[32]

The failure to distinguish between analytical and empirical propositions has been a source of much misunderstanding in economics. An analytical statement concerns functional relationships; an empirical statement takes account of the quantitative significance of the relationships. When Marshall viewed the demand for a commodity as a function of its price, the prices of closely related goods, and of income, he was criticized by members of the Walrasian school for failing to recognize that all prizes in principle influence the demand for any commodity. This is a characteristic instance of the distinction in question: No Marshallian ever denied the existence of the formal relationships that were omitted; no Walrasian ever presented an empirical example of important error resulting from their neglect.

One further source of misunderstanding of Ricardo increased through time. His exposition was much influenced by his desire to refute what he deemed to be popular and pernicious fallacies, such as that a rise in wage rates increases all commodities' values, and that high money-wage rates lead to low profit rates. When these views dropped from sight the thrust of the chapter on value became more obscure, so the view

[32] The "philosophical" and "empirical" theories of value distinguished by Wieser and elaborated by A. C. Whitaker, *op. cit.*, bear only verbal similarity to the present distinction. In fact their "empirical" is my "analytical" theory, and their "philosophical" is either my "empirical" or a metaphysical theory of value.

could ultimately emerge that Ricardo was desperately trying to stave off for 20 pages the admission that labor requirements are not the only determinants of value.

Schumpeter asked why if Marshall's (and the present) interpretation of Ricardo is correct, there should have been any controversy—would it then not amount simply to the current cost-of-production theory?[33] One is inclined to reply that there was no controversy, and that the controversy was about something else. There was in fact no active controversy over the so-called labor theory in Ricardo's lifetime. The main points of controversy were different. First, Ricardo eliminated rent from the costs of production, which was not in keeping with popular views. Second, he appeared to deny (but did not do so) that supply and demand governed value; in fact he considered this a wholly superficial view that merely postponed analysis of the real determinants of relative values, namely the factors governing supply.[34] Finally, the endless dispute between Malthus and the Ricardians concerned the measure of value, not its causes.

The basic reason Ricardo's theory is often misinterpreted is that it was often misinterpreted in the past. If a theory once acquires an established meaning, each generation of economists bequeaths this meaning to the next, and it is almost impossible for a famous theory to get a fresh hearing.[35] Perhaps one hearing is all that a theory is entitled to, but one may plead that Ricardo deserves at least a rehearing—his theory is relatively more widely misunderstood today than it was in his lifetime. One can build a strong case that the modern economist need not be acquainted with Ricardo's work, but there is no case for his being acquainted with an imposter.

[33] *History of Economic Analysis,* New York 1954, p. 594.

[34] "It is admitted by everybody that demand and supply govern market price, but what is it [that] determines supply at a particular price? cost of production." *Notes on Malthus, Works,* II, 45.

[35] Very occasionally a theory, unlike a dog, has its second day, as when Keynes persuaded many economists of the error of the century-long tradition that Malthus' criticisms of the full employment assumption of Ricardo were invalid. The example is the more remarkable because the tradition was correct and Keynes was wrong.