THE WAGES FUND THEORY: A HISTORICAL ANALYSIS AND RECONSIDERATION

Thesis for the Degree of Ph. D.
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William Leo Breit

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This is to certify that the

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presented by

WILLIAM LEO BREIT

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In the preparation of this work I have incurred many obligations. I wish to acknowledge, above all, my gratitude to Professor John Henderson who supervised the study and made many valuable suggestions on matters of fact and theory. He also undertook the laborious task of mercilessly correcting the many imperfections in style. At all stages I had the help and encouragement of the other members of my guidance committee: Professor Harry Brainard, Professor Anthony Koo, Professor Thomas Mayer, and Professor Richard Rudner. Their ideas, both in and out of the classroom, proved very helpful. I am particularly indebted to Professor Koo for his advice with respect to Chapter VII. I also owe a debt of gratitude to the Workshop in Monetary Theory and Policy at Michigan State University. The study could not have been completed at this time without the provision of a Workshop Fellowship relieving me of teaching duties. I am grateful to Professor Abba Lerner and Professor Thomas Mayer who directed the Workshop seminars where various portions of the thesis got an early hearing. The other participants in the Workshop--Professor Andrew Brimmer, and Messrs. Nae Hoon Chung, G. Stanley Groves, and Robert Haney Scott--made many helpful criticisms. It is a pleasure to record my thanks to the librarians of the Special Collections Room at the Columbia University Library where I

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did research for some of the chapters during the summer of 1960. Everyone there was most pleasant and helpful. Since I was often singularly stubborn in accepting suggestions none of these mentioned are responsible for any errors, omissions, or lapses in logic that the study may contain.

Finally, I owe a deep debt of gratitude to my Mother whose moral support made it possible for me to absorb the last minute confusions and emergencies of the final days.

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THE WAGES FUND THEORY: A HISTORICAL ANALYSIS AND RECONSIDERATION

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AN ABSTRACT OF A THESIS

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ABSTRACT

The interpretation usually given to the wages fund doctrine is that it was one of the most sterile and pernicious theories in economic literature. Although never without its detractors, the doctrine was one of the foundation stones of the classical economics, reaching its apogee in John Stuart Mill's Principles. The policy implication of the doctrine was that all institutional means of raising wages were self-contradictory since the rate at which capital, and therefore the wages fund, could be increased varied directly with profits. The greater proportion of wages to profits, the smaller the tendency to accumulation. The wages fund doctrine was accepted by both employers and trade union officials. However, the doctrine came under attack by Francis D. Longe in 1866, and William T. Thornton in 1869. In a review of Thornton's volume John Stuart Mill recanted and this event is generally credited with the demise of the wages fund theory. But the doctrine's adherents were not liquidated by Mill's surrender and within five years they regrouped their forces for a counterattack. The chief defenders of the wages fund theory in the latter half of the nineteenth century were J. E. Cairnes and F. W. Taussig; its major critics were Francis A.

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By 1890, however, the theory was finally abandoned in favor of marginal productivity analysis. Controversy ceased, not because of the cogency of the criticisms levied against the doctrine, but because of a shift in emphasis from the essentially macro problem of economic growth to the micro problem of efficiency. The wages fund doctrine was a theory of the limits to aggregate wages, and was not intended to say anything about the wages of individual workers.

The wages fund theory remained incognito as a part of capital theory, since in modern capital theory it is postulated that production is a process in which time is required before consumer goods result from the use of the roundabout method of production. In the interim period somebody has to make advances to the various inputs producing capital. These advances constitute a wages fund. This was precisely the role of the wages fund in classical economics. Therefore, the theory was a doctrine of production incorrectly interpreted as a theory of distribution. Moreover, Keynesian economics involves a return to the wages fund theory since Keynes showed that real wages are determined in the capital market through decisions affecting investment and not in the labor market.

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The present dissertation has two aims: first, to provide a survey and critique of the theoretical controversy that raged over the wages fund doctrine from its earliest statement up to the turn of the century; second, to construct a theoretical model of the classical economics so that the relationships between the various parts of the system can be examined with the wages fund doctrine as an integral part of the system. The model may help to clarify some of the issues that were never resolved in the spectacular debates of the nineteenth century.

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I do not think that, even in the purely analytical field, our knowledge is so far advanced as to justify us in writing off as superseded the propositions of all but our immediate contemporaries; and in the applied field, I do not think that we can hope to understand the problems and policies of our own day if we do not know the problems and policies out of which they grew. I suspect that damage has been done, not merely to historical and speculative culture, but also to our practical insight, by this indifference to our intellectual past--this provincialism in time--which has become so characteristic of our particular branch of social studies.

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[3]Ibid

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CHAPTER I

INTRODUCTION

"The wages fund theory is the crowning instance of an untrue abstraction . . . and it has probably done more injury to the reputation of economic theory than any other generalization ever received into economics textbooks and then expunged from them." These words, by James Bonar, fairly well express the view that has dominated economic thought on the wages fund doctrine for the past century.[1] Writing forty years after Bonar, Paul Samuelson claims he has been impressed by the "falseness and emptiness of the wage fund doctrine,"[2] stating that "it constitutes one of the most sterile chapters in that dreary gap between the classical age and the revolutionary neoclassical discoveries of the last third of the nineteenth century."[3] Frank H. Knight has referred to the wages fund doctrine as "an amazing tissue of inconsistency and irrelevance."[4]

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[1] James Bonar, Disturbing Elements in the Study and Teaching of Political Economy (Baltimore: The Johns Hopkins Press, 1911), p. 75.

[2] Paul Samuelson, "Economic Theory and Wages," The Impact of the Union (New York: Kelley and Millman, 1951) Ed. by David McCord Wright, p. 320.

[3] Ibid., p. 316.

[4] Frank H. Knight, On The History and Method of Economics (Chicago: University of Chicago Press, 1956), p. 75.

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Such repudiations of the wages fund doctrine are quite general, although not easily explained. It seems incredible that the great thinkers of classical economics should have devoted themselves with vigor to the espousal of such a "false and empty" theory. After having been one of the main building blocks of the classical edifice of Smith, Ricardo, Malthus, Senior, Mill and others, it was vigorously attacked in succeeding decades by Longe and Thornton, the latter's onslaught finally leading to a much-discussed "recantation" by John Stuart Mill in 1869. T. W. Hutchison claims that this event "was one of the more overt signs of the crumbling of the classical system,"[5] and it is sometimes supposed that from this time onward the theory dropped out of economic literature--it "sank without a trace,"[6] one commentator put it. Nevertheless any appearance that the theory succumbed that soon is purely illusory. At least two major attempts at reconstruction occurred in the last half of the nineteenth century. In a sense they were largely dying gasps. The arguments raised on behalf of the doctrine by Cairnes and Taussig remained almost unheeded by a tranquilized generation of economists. By the

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[5]T. W. Hutchison, A Review of Economic Doctrines, 1870-1929 (Oxford: Oxford University Press, 1953), p. 13.

[6]A. C. Pigou, "Mill and the Wages Fund," Economic Journal, Vol. LIX (June, 1949), p. 177.

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beginning of the twentieth century most of the classical superstructure had been replaced with the fabric of marginal productivity theory. The latter analysis relates to individual decision-making units, whereas the classical economists mainly studied aggregates of individual decision-making units--the economy as a whole. In short, macroeconomics was replaced by microeconomic analysis as the central focus of attention in the main stream of economic writings.

The origin of the wages fund theory rests on the classical theory of capital which in turn was based upon a conception of the production process as being discontinuous and time-consuming. If the production process is time-consuming then it follows that the real wages received for the work performed today must have been produced yesterday; what workers produce today reaches the form of finished goods at a later time. In any period shorter than the length of the overall productive process, the aggregate amount of wages goods is fixed; there is a fixed fund which cannot be increased during the specific period. The number of workers divided into the fund gives the average wage rate.

The foregoing is essentially the form of the doctrine as found in Smith, Malthus, Ricardo, Senior and the Mills, as well as lesser members of the classical school. Perhaps it is worth noting that the theory, when properly stated, was in "real" terms, since much confusion has occurred because of

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the failure to recognize and remember this simple fact. In classical economics, total capital stock consists of (1) wages-goods, or circulating capital, and (2) machinery, buildings, and inventories of non-wage goods, or fixed capital. The wages fund doctrine conceives of the fund as a physical stock of wage goods used to support labor during the present period of production, resulting from the product of the previous period. Money wages are merely the means by which this physical stock of wage goods can be obtained, with the latter being the real equivalents of the total money wage bill. When the output of the present period is completed the capital stock is replenished (part of the stock being the wages fund) and the advance is returned to the capitalist in a form that now includes profits.

The major policy implication of the wages fund doctrine was that labor unions, factory legislation and other institutional means of raising wages were futile and self-contradictory because they merely reduced aggregate profits and, therefore, investment. Given a specific population at any moment, only net additions to the capital stock could bring increased real income to the working classes. It can be argued, therefore, that the theory, because of its effect on the thinking of employers, union officials and the public, actually retarded the growth of organized labor, especially as regards the

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The rejection of the wages fund doctrine by John Stuart Mill, after a prolonged series of attacks by a number of British writers, is an event for which it is hard to account. The cogency of the criticisms of the doctrine cannot explain his retraction, since most of them contained little analytical content and there was certainly no empirical refutation. Most critics of the doctrine gloriously confused the monetary and real factors. The strange point is that in his eventual repudiation of the doctrine, Mill fell into the same fallacy after having clearly understood the distinction at an earlier date.

It is significant, of course, that the wages fund theory flourished in the period when economists were primarily concerned with the conditions prerequisite to capital formation and economic growth. However, by the close of the nineteenth century the English capitalist system had matured to the point where the emphasis could be shifted from that of capital accumulation to the need for economic efficiency. After 1890 the marginal productivity theory of wages became increasingly popular among economists. As a matter of fact there is no inconsistency between the wages fund theory and the marginal productivity doctrine since they provide different answers to different q

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different questions. The wages fund theory dealt with the fact that a rapid growth of capital can increase real wages, with the limits to aggregate wages at any point in time being determined by the real wage bill advanced by capitalists to laborers in the period of production. Therefore, it is a theory of production, which has incorrectly been rendered as a theory of distribution. The special insight of the wages fund theory is that the wage bargain affects distribution only indirectly through the effects on profits and investment. On the other hand, the marginal productivity doctrine explains the limits to what determines the demand for individual workers, but explains nothing about the limits to aggregate wages.

The point of the present thesis is the contribution it makes to the "classical revival." In recent decades some of the main theoretical concepts of classical economics have been exhumed and refurbished: the Malthusian population principle, Say's law, and the quantity theory of money. The industrial revolution and the birth pangs of capitalism were closely associated with the original rise of the classical economics of which the wages fund theory was so fundamentally a part. It is significant that the widening of interest in classical economics is taking place in a world that is once again undergoing rapid and profound change. Perhaps the new industrial societies appearing in other parts of the world in our time is

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The thesis has two aims. First, to provide a survey and critique of the theoretical controversy that raged over the wages fund theory from its earliest statement up to the turn of the century. One of the most neglected periods in the history of economic thought is the interim between the end of the classical period, usually represented by John Stuart Mill's <u>Principles</u>, and the "marginal revolution" of the 1870's and 1890's. Aside from scattered remarks as to the wages fund controversy, a systematic treatment does not exist. The second aim is the construction of a theoretical model of the classical economics so that the relationships between the various parts of the system can be examined, with the wages fund doctrine as an integral part of the system. The model may help to clarify some aspects of classical economics, in general, and the wages fund theory in particular.

In general the sequence of chapters and topics is chronological, covering the earliest statements of the theory by the classical economists and neglected early critics of the doctrine (Chapters II-III), through later criticisms and attempted reconstructions (Chapters V-VI). Chapter IV deals with some of the effects of the wages fund doctrine on the trade union movement in the nineteenth century. In Chapter VII is found the highly simplified model of the classical system. Chapter VIII contains an assessment of the wages fund theory today.

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CHAPTER II

THE WAGES FUND THEORY AND CLASSICAL ECONOMICS

Classical economics saw the development of the economy as a race between capital accumulation and population growth. Although the whole classical system can be conceptualized as a circular flow in which everything depends on everything else, it is possible to think of wages as the prime mover. For the rate of capital accumulation and population growth varied according as wages were high or low. Thus the wage rate was the crucial variable in the system. For this reason Mark Blaug's comment that "no aspect of classical economics was as little developed as wage theory"[1] is disturbing. It is true that much of the discussion of the wages fund theory was ambiguous. Nevertheless it must be conceded that by the time of John Stuart Mill the doctrine had been stated clearly and unequivocally. The present chapter will provide a sketch of the wages fund theory at the hands of the major classical economists.

The "wages fund" theory undoubtedly took its name from Adam Smith's statements occurring repeatedly in the

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[1]Mark Blaug, Ricardian Economics (New Haven: Yale University Press, 1958), p. 127.

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eighth chapter of the first book of the Wealth of Nations. In his discussion of wages Smith uses over and again the phrases "funds destined for the maintenance of labour" and "funds destined for the payment of wages." In Smith's words, "the demand for those who live by wages, it is evident, cannot increase but in proportion to the increase of the funds which are destined for the payment of wages."[2]

But the idea of a wages fund was not entirely original with Adam Smith. The Physiocrats, especially Quesnay and Turgot, used the concept of avances in their theory of capital, and this was suggestive of a "wages fund." However, the physiocratic theory of wages was not the wages fund theory, but a subsistence theory of wages. Quesnay hoped to demonstrate that nothing could be deducted from wages for the support of the state since wages were already at the level of the means of subsistence. Both Quesnay and Turgot argued that if wages were greater than the minimum means of subsistence for any area of the economy, or if they fell below that point, the migration of laborers would eliminate the variation.

The weakness of the physiocratic theory is that it never explained why wages are at the means of subsistence

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[2]Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations (New York: Modern Library Edition, Random House, Inc., 1937), p. 69. See also pp. 71, 73 ff.

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necessary. In the Physiocratic Doctrine this fact was presupposed; in the classical economics it was the problem itself. Acutally, the physiocrats could not answer the question because they did not have a theory of population. Nevertheless, Quesnay and his followers must be credited with having been precursors of the classical theory of wages in at least two respects: (1) The theory of capital outlay that used the notion of avances annuelles meaning the recurring expenses the farmer was presumed to make in order to produce; (2) the principle of a subsistence or "iron law of wages" (which is a limiting case of the wages fund theory).[3]

Adam Smith's Theory of the Wages Fund

The theory of the wages fund in Adam Smith follows logically from his treatment of capital and is really a corollary of the classical views on that subject.

Adam Smith saw the productive process as a time consuming one, that is, as one in which a time period elapses until the product of labor is ready for the market. Goods for the maintenance of the laborers must therefore be provided for the

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[3]For a history of the pre-classical theory of wages, see Michael T. Wermel, The Evolution of the Classical Wage Theory (New York: Columbia University Press, 1939). See also Joseph Schumpeter, History of Economic Analysis (New York: Oxford University Press, 1954), p. 663.

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time until the product is completed. As soon as the commodity is ready for the market the need for maintenance ceases. But supplies of food are rarely owned by workers, and they, therefore, must rely on the employer to provide those goods. The supplies of such goods came to be called the "wages fund," by later classical economists.

Actually, Smith refers to two sources of the demand for labor: "revenue" and "stock." "Revenue" meant that amount spent for "unproductive" workers, those who do not produce a good for sale in the market. Any employer who hires workers for the direct satisfaction of his own wants is, therefore, using his capital unproductively. What is spent on them is prodigality:

> By not confining his expense within his income, [the prodigal] encroaches upon his capital. Like him who perverts the revenues of some pious foundation to profane purposes, he pays the wages of idleness with those funds which the frugality of his forefathers had . . . consecrated to the maintenance of industry. By diminishing the funds destined for the employment of productive labour, he necessarily diminishes . . . the quantity of that labour which adds a value to the subject upon which it is bestowed, and, consequently, the value of the annual produce of the land and labour of the whole country, the real wealth and revenue of its inhabitants. If prodigality of some was not compensated by the frugality of others, the conduct of every prodigal, by feeding the idle with the bread of the industrious, tends not only to beggar himself, but to

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By far the most important part of the demand for labor is derived from "stock." The beginning of the real confusion over the wages fund can be traced to this part of Smith's treatise. At times "stock" is conceived of in terms of real goods, while at other times it refers to the money funds in the hands of capitalists. In Chapter I of Book I Smith uses the term "capital" and "stock" interchangeably as the source of wages.[5] He claimed that any diminution of the funds destined for the payment of labor, "as it lowers the wages of labour, at the same time raises the profits of stock."[6] The source of wages, then, is simply funds in the hands of employers; a surplus over and above the employer's consumption.

Smith then divides capital into two kinds: fixed and circulating. That part of the capital consisting of tools is "fixed"; that which is employed in the maintenance of the

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[4]Smith, op. cit., p. 322. The idea of the productiveness and efficiency of private as opposed to public expenditures can be traced to this and similar passages (cf. p. 315) in Smith. This firm credo, a part of what Professor Galbraith has called the "conventional wisdom" of our society had its origin in the Wealth of Nations and has resulted in the social imbalance between public and private expenditures which Galbraith believes characterizes American capitalism. See John Kenneth Galbraith, The Affluent Society (Boston: Houghton Mifflin, 1958).

[5]Smith, Ibid, p. 87.

[6]Ibid., p. 90.

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laborers is "circulating capital."[7] In Book II where Smith essentially enters the realm of economic dynamics by introducing time into the analysis, he clarifies his definition of capital which he previously used interchangeably with stock. Actually he now tells us that capital is only a part of stock. Stock consists of: (1) finished commodities reserved for immediate consumption, and (2) capital, both "fixed" and "circulating" which is used in production and is expected to yield a revenue. Capital, therefore, is that part of stock which is expected to bring forth a revenue.[8] The real income of society is in the quantity of goods and services which are circulated by "the great wheel of circulation" we call money. But money is altogether different from the commodities to which it does the circulating. Smith notes that in a money economy all income appears first in the form of money. But money does not compose the real wages fund; rather the fund consists of the goods that money wages of the laborers can buy.

Adam Smith must be credited with the first statement of the wages fund theory, not only in the sense that he was the first to use the term "funds" in his discussion of wages, giving the theory its particular characteristic. In addition,

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[7] Ibid., pp. 262-263.

[8] Loc. cit.

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Smith showed that in a society having division of labor the process of production is time-consuming. So workers must be supplied with goods until present labor results in finished products. Given the inequality of incomes, such supplies of goods are in the hands of capitalists, and therefore workers must bargain for wages. Employers have "revenue" and "capital" with which labor can be paid. The former funds hire only unproductive workers while the latter hires workers who produce goods for sale in the market. However, in Smith's presentation, there are two flows--one money, one real. This became a fertile source of confusion in the controversy over the wages fund doctrine which started about a half century later.

Ricardo's Treatment of the Wages Fund Theory

Like Adam Smith, Ricardo at times used the term "circulating capital" to mean that part of capital which constitutes the demand for labor. His distinction between fixed and circulating capital was in terms of technical durability, but in practice circulating capital in Ricardo's analysis consisted only of wages.[9] To Ricardo's mind, that

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[9] P. Sraffa, Ed., The Works and Correspondence of David Ricardo, Vol. IV (Cambridge: The University Press, 1951), pp. 305-306.

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wages were paid from capital was an unquestioned premise. Although the time consuming nature of the productive process was understood by him, he did not clearly connect the fact with the importance of the payment of wages from capital as had Adam Smith. For Ricardo, wages are determined by a bargain in which the demand for labor comes from the wages fund, and the amount of this fund divided by the number of laborers gives a fixed and definite wage rate. Ricardo defined capital as that part of the wealth of a country which is employed in production, and consists of food, clothing, tools, raw materials, machinery, etc., necessary to give effect to labor.[10] But Ricardo did not stress the idea. In fact, he was quite careless in his discussion of this topic. At times he used the term "circulating capital" to stand for that part of capital which constitutes the demand for labor; at other times he was not so careful and merely used the term "capital" instead. He admitted the difficulty in making a distinction between the terms "fixed" and "circulating" capital:

> It is difficult to define strictly, where the distinction between circulating and fixed capital begins; for there are almost infinite degrees in the

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[10] David Ricardo, Principles of Political Economy and Taxation (Cambridge: The University Press, 1951), ed. by Piero Sraffa, p. 30.

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> durability of capital. The food of a country is consumed and reproduced at least once in every year; the clothing of the labourer is probably not consumed and reproduced in less than two years; whilst his house and furniture are calculated to endure for a period of ten or twenty years.[11]

So Ricardo was unclear as to whether the demand for labor depended on total capital, or only on circulating capital. Indeed Ricardo's only consistency appears to be that the source of wages is some part of capital. However, in his discussion of "Taxes on Raw Produce"[12] Ricardo has a very rigid predetermined wages fund in mind. It consists of the harvest of past seasons. He argued that a tax on raw produce would raise the price of food to the consumer, and this would lead to a rise in wages. Laborers "would not be able to subsist on the same wages as before, and to keep up the race of labourers. Wages would inevitably rise; and in proportion as they rose, profits would fall."[13] Herein lies the importance of the wages fund theory in Ricardo's system, for its significance lies not in his discussion of the determination of wages, but in his treatment of the determination of profit. The importance of the wages fund in Ricardo's profit theory has been summed up by Professor Henderson:

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[11] *Ibid.*, p. 150.

[12] *Ibid.*, pp. 156-172.

[13] *Ibid.*, p. 159.

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"If the rate of profit is explained by only those goods which are wage goods, then the origin of profit is a function of the wage-profit relationship and not the ability of capital to increase production."[14] To Ricardo wage goods determine the rate of profit. For profits as a share of output are equal to the total physical product at the margin of land utilization minus the wages fund. Changes in wages are regarded from the standpoint of resources devoted to producing the wages fund. Given diminishing returns a greater quantity of labor comes to be embodied in each additional unit of agricultural output. This means that in Ricardo's system "the rate of profit depends only on the amounts of labour and those turnover periods which concern the production and distribution of the goods forming the real wage rate."[15] Aside from this use of the wages fund theory, it played only a small part in Ricardo's analysis.

To sum up, it may be said that Ricardo's use of the wages fund theory was characterized by a lack of clarity and consistency. His remarks on the subject were scattered, and

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[14] John P. Henderson, "A Reinterpretation of Ricardo's Theory of Value" (Unpublished Doctoral Dissertation, University of Maryland, 1956), p. 133 n.

[15] Ladislaus Bortkiewicz, "Value and Price in the Marxian System," International Economic Papers, No. 2. (London: Macmillan Co., 1952), p. 32.

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the chief role that the doctrine played was in his theory of profits, rather than in his theory of wages. Nevertheless he conceived of the demand for labor as being determined by capital, although he did not always distinguish between fixed capital, and the wages fund.

The distinction between circulating and fixed capital was completely lost at the hands of Ricardo's disciples. In James Mill's Elements "the rate of wages depends upon the proportion between Population and Employment, in other words, Capital."[16] Mill argued that since population had a tendency to increase more rapidly than capital, wages are low and workers are poor and miserable. Ricardo himself was somewhat disturbed by this uncritical use of the wages fund theory and after reading Mill's Elements wrote him that "it is not strictly correct" to say that "the demand for labour and the power of employing it will be in the proportion to the increase of capital . . . . The power of employing labour depends on the increase of a particular part of capital, not on the increase of the whole capital."[17] For Ricardo had shown in his chapter on machinery that the demand for labor may vary irrespective of changes in the amount of capital

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[16] James Mill, Elements of Political Economy (London: G. C. Bohn, 3rd edition, 1944), p. 41.

[17] P. Sraffa, op. cit., Vol. IX, p. 127.

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through the principle of factor substitution. As Blaug has pointed out, however, "Ricardo's disciples failed to develop the logical implications of the system which they had inherited."[18]

Mrs. Marcet's Conversations

In the popular literature of the time the wages fund came to play a major role in discussions of economic policy. In 1816 Mrs. Jane H. Marcet published her Conversations on Political Economy, a work that went through seven editions within the next twenty years. Mrs. Marcet was already known as the author of Conversations on Chemistry and Natural Philosophy. But her new book made her name a household word in England. The text consists of a series of conversations between a governess named Mrs. B. and a child named Caroline. The lesson on the wages fund theory must be quoted to be fully appreciated.

> Caroline What is it that determines the rate of wages?
>
> Mrs. B. It depends upon the proportion which capital bears to the laboring population of the country.
>
> Caroline Or, in other words, to the proporation which subsistence bears to the number of people to be maintained by it?

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[18] Blaug, op. cit., p. 123.

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Mrs. B. Yes, it is this alone which regulates the rate of wages, when they are left to pursue their natural course. It is this alone which creates or destroys the demand for labor . . . .

Caroline By demand for labor do you mean the demand of the poor for work, or of the capitalist for workmen?

Mrs. B. Certainly the latter. The demand for labor means the demand for laborers, by those who have the means of paying them for their work, whether it be in the form of wages, maintenance or any other kind of remuneration.[19]

Mrs. B. then went on to explain that attempts of workers to increase wages through combinations would prove futile. Only education could save the workers from misery.

Caroline Surely you would not teach political economy to the laboring classes, Mrs. B.?

Mrs. B. No; but I would endeavor to give to the rising generation such education as would render them not only moral and religious, but industrious, frugal and provident . . . . We may hope that the influence of prudential habits will help to raise the poor above the degrading resource of parochial assistance, and prepare the way for the abolition of the poor-rate, a tax which falls heavily on the middle classes of people, and which is said to give rise to still more poverty than it relieves . . . . I know therefore of no other remedy to this evil than the slow and gradual effect of education. By enlightening the minds of the lower classes, their moral habits are improved, and they rise above that state of degradation in which all feelings of dignity and independence are extinguished.[20]

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[19] Mrs. Jane B. Marcet, Conversations on Political Economy in Which the Elements of That Science Are Familiarly Explained (Boston: Bowles & Dearborn, 1928), p. 92.

[20] Ibid., p. 176.

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The purpose of Mrs. Marcet's book was to instill an understanding of the classical theory into the minds of well meaning, but misdirected, young people who might have humanitarian impulses to help the poor. As she stated in her preface, such young people are "fluctuating between the impulse of [their] heart[s] and the progress of [their] reason, and naturally are imbued with all the prejudices and popular feelings of uninformed benevolence."[21]

Malthus's Theory of The Wages Fund

Thomas Robert Malthus published his Principles of Political Economy in 1820. In this work he rejected the "iron law of wages" that followed from his theory of population growth. He saw no reason to assume that a subsistence wage was the logical outcome of economic and social forces. Nevertheless he made crucial use of the wages fund theory, of which the subsistence or "iron law" theory is only a limiting case. For to Malthus the average wage could be explained only through the use of supply and demand concepts. In his treatment of the demand for labor, Malthus presented a clear statement of the wages fund theory. The welfare of the laborer, he argued, depended upon "the funds for the maintenance of labor," and must be proportional to the rapidity with which the fund

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[21] Ibid., p. vi.

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increases. An increase in the demand for labor is brought about by an increase in the fund; but until the time that the increased demand generates an increase in the supply of workers through its effect on population growth, those currently working will enjoy higher wages, since the larger wages fund is divided up among them. Malthus was careful not to confuse an increase in capital per se with an increase in the wages fund; he twitted Adam Smith for this error:

> Adam Smith, in his chapter on the wages of labour, considers every increase in the stock or revenue of the society as an increase in the funds for the maintenance of labour . . . . Upon a nearer examination, however, it will be found that the funds for the maintenance of labour do not necessarily increase with the increase in wealth, and very rarely increases in proportion to it.[22]

On the contrary, Malthus held that for the economy as a whole, an increase in the stock of revenue can be considered an increase in the wages fund only if it consists of surplus food capable of supporting a greater number of laborers, that is, if it is a "product of the soil." Malthus's sharp distinction between the "product of labour" and the "product of the soil" is a corollary of his belief that the products of the soil must constantly lag behind the products of labor. Malthus contended that any general increase in the wages of labor without a corresponding increase in the production of food

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[22] Thomas Robert Malthus, Principles of Political Economy, Considered with a View to Their Practical Application (New York: Augustus Kelley, 1949), p. 126. 2nd Edition. (Originally published in 1820, 2nd Edition, 1836).

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can only be a nominal increase: that is, it must inevitably be followed by a rise in the price of food, leaving real wages unaffected.

What Malthus's wage theory comes down to is the proposition that the average wage rate depends on the supply and demand for labor. The supply is determined by population growth, while the demand is determined by the wages fund. This fund is only a part of the total "stock of revenue" and is dependent upon the productivity of the soil. Any increase in the supply of labor will lead to a fall in wages, in the short run. When wages fall, there follows an increased application of labor to the same amount of capital, making available a larger quantity of food. Thus wages rise. The causal sequence is as follows: As the number of laborers increase, there is an increased demand for wage goods. The price of these goods rises and real wages fall. But a fall in real wages increases profits; capital accumulation grows, the demand for labor increases, and real wages rise again.[23] It should be noted that Malthus did not argue that wages inevitably tend toward some minimum level of subsistence. The level of wages depended upon the adjustment of population to changes in wages. That is why Malthus advocated moral

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[23] *Ibid.*, pp. 126-136.

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restraint on the part of workers.[24]

Malthus's chief contribution to the wages fund theory is his recognition that (a) the wages fund, and not capital as a whole, determines the demand for labor, and (b) that the wages fund theory did not necessarily imply a subsistence wage for workers.

McCulloch

Perhaps the baldest statement of the wages fund theory, as well as of the general principles of Ricardian economics, was that of John Ramsey McCulloch. Hollander called him "the veritable keeper of the economic conscience of England";[25] and Blaug credits him as being the "major factor in the rapid propagation of Ricardian economics";[26] and James Bonar claimed that he was the real author of the wages fund theory,[27] although, as we have seen, that distinction must be reserved for Adam Smith. The truth is that McCulloch was really no more, and no less, than a popularizer *par excellance* of Ricardo,

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[24] *Ibid.*, pp. 163, 174, 175, 176.

[25] Jacob Hollander, *David Ricardo. A Centenary Estimate* (Baltimore: Johns Hopkins Press, 1910), p. 123.

[26] Blaug, *op. cit.*, p. 40.

[27] James Bonar, *Malthus and His Work* (London: Allen & Unwin, 1924), p. 155.

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stating in over-simplified terms what had already been said by others. In 1826 in his Essay on Wages, he argued that since wages depend on capital the accumulation of capital must precede the division of labor. The essence of McCulloch's wages fund views and their policy implications are well stated in the following quotation:

> There are no means whatever by which wages can be raised other than by accelerating the increase of capital as compared with population, or by retarding the increase of population compared with capital. And every scheme for raising wages, which is not founded on this principle, or which has not an increase of the ratio of capital to population for its ultimate objective, must be nugatory and ineffectual.[28]

He did not deviate from Ricardo in his analysis of capital, and stressed in unequivocal terms the dependence of wages on the "fund for the maintenance of laborers." Thus he added nothing new to the doctrine.

Nassau Senior

With the publication of Nassau Senior's Political Economy in 1836 we have the first attempt to explain the actual determination of the wages fund. The amount of the fund depended on two factors: the productivity of labor in the production of wage goods, and on the amount of employment in

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[28] John Ramsey McCulloch, An Essay on the Circumstances Which Determine the Rate of Wages and the Conditions of the Labouring Classes (London: Longman, Brown, Green, and Longmans, 2nd Edition, 1851), p. 16.

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30 Ibid.

wage goods industries. In his words:

> On what, then, does the extent of that fund depend? In the first place, on the productiveness of labour in the direct or indirect production of the commodities used by the labourer; and, in the second place, on the number of persons directly or indirectly employed in the production of things for the use of labourers, compared with the whole number of labouring families. If we wished to ascertain the comparative wages of the labouring population in two parishes, containing each, we will say, twenty-four labouring families, these are the only two points to which we need direct our inquiries. If we found that in one parish eighteen families, and in the other only twelve, were employed in producing commodities for the whole twenty-four, we should infer that, supposing the labour of each to be equally productive, wages must be higher by one-fourth in the first than in the second. But if we found that in the second parish labour was more productive by one-half than in the first, we should infer an equality of wages in the two.[29]

To Senior, the productivity of labor was a function of the intellectual, physical, and moral qualities of the laborers; the natural resources of the economy; the degree to which labor is assisted by fixed capital; and the existence or the absence of government interference.[30] Once the fund is created, the distributive shares between capitalist and laborers are determined by two factors: (a) the rate of profit on the advance of capital for a given period, and (b) the time period elapsing between the advance of capital

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[29]Nassau William Senior, An Outline of the Science of Political Economy (New York: Augustus M. Kelley, Inc., 1938), p. 174. (Originally published in 1836).

[30]Ibid., pp. 175-181.

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and the receipt of profit.[31] Senior assumed that the period of production is of uniform length of one year, and starts at the first day of the year for everybody, when wages (in goods) are advanced. Thus the fund is irremediably determined at the beginning of the year, and all production proceeds parallel through the year. Senior's conclusion in brief is that if the capitalists decide to increase their circulating capital by devoting more laborers than usual to the production of wage goods for the following year, instead of to the production of income for themselves, in the next year they will have a greater amount of capital, wages will be higher, and the rate of profit lower. Senior pointed out that the rate of profit depends on:

> the amount of labour which at a previous period was devoted to the production of wages, compared with the amount of labour which these goods when produced can command.[32]

As to the average length of the period of production, Senior stated that it depends on the circumstances of the country and industry, and cannot be reduced to a general rule.

Senior's distinct contribution to the wages-fund analysis

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[31] Ibid., pp. 185-186. An excellent discussion of Senior's treatment of the wages fund theory can be found in Marian Bowley, Nassau Senior and Classical Economics (New York: Augustus M. Kelly, 1949), pp. 185-193.

[32] Senior, op. cit., p. 194.

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was his attempt to clarify the forces at work in determining the amount and distribution of the fund, and, as Bowley has noted, he related the productivity of labor to the theory of capital.[33]

John Stuart Mill

As Mill saw it, the subject of economics was really an investigation into "the nature of Wealth, and the laws of its production and distribution."[34] Mill retained the traditional threefold division of productive resources: labor, natural objects (the primary factors) and capital (the derived factor). The latter he defined as an "accumulated stock of the produce of labour,"[35] and assiduously warned the reader against confusing money with capital:

> Money cannot in itself perform any part of the office of capital, since it can afford no assistance to production . . . . What capital does for production is to afford the shelter, protection, tools, and materials which the work requires, and to feed and otherwise maintain the labourers during this process. These are the services which present labour requires from past, and the produce of past, labour. Whatever things are destined for use--destined to supply productive labour with these various prerequisites--are Capital.[36]

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[33] Bowley, op. cit., p. 193.

[34] John Stuart Mill, Principles of Political Economy (Fifth Edition; New York: D. Appleton & Co., 1858), Vol. I, p. 17.

[35] Ibid., Vol. I., p. 83.

[36] Ibid., Vol. I., p. 84.

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But no sooner did Mill define capital as a stock of goods than did he confuse matters by stating the principle in terms of the use to which the goods are put: an unfortunate contradiction that was an fertile source of misunderstanding of the classical theory of capital in general, and the wages fund doctrine in particular:

> The distinction, then, between Capital and Not-capital, does not lie in the kind of commodities, but in the mind of the capitalist--in his will to employ them for one purpose rather than another; and all property, however ill adapted in itself for the use of labourers, is a part of Capital, so soon as it, or the value to be received from it, is set apart for productive re-investment. The sum of all the values so destined by their respective possessors, composes the capital of the country.[37]

In Mill's discussion of the factors that limit production he claimed adherence to Say's Law, stating that what was saved was immediately consumed, although this fact was "not at all apparent to the vulgar."[38] There was always a market for the sale of the output for the "supply of commodities in general cannot exceed the power of purchase, nor the inclination to consume."[39] An increase in output, therefore, was only limited by the efficiency and quantity of the factors

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[37] Ibid., Vol. I., p. 86.

[38] Ibid., Vol. II., p. 104.

[39] Ibid., Vol. II., p. 107.

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of production. So Mill concerned himself with the forces that limited these factors.

Relying on his assumption of the validity of the Malthusian theory of population, Mill immediately rejected the notion that there can be a limitation of the quantity of labor: "The power of multiplication inherent in all organic life may be regarded as infinite."[40] The only force which prevents humans from overstocking the earth is the limitation of the food supply. As the quantity of nutriment increases the supply of labor increases.

So far as regards the limitations on the accumulation of capital, Mill says:

> Since all capital is the product of saving, that is, of abstinence from present consumption for the sake of a future good, the increase of capital must depend upon two things--the amount of the fund from which savings can be made and the strength of the disposition which prompt to it.[41]

According to Mill, the inducement to save and invest depended on many variables which, for purposes of this discussion we need not go into. Suffice it to say that Mill saw no reason why the process of capital accumulation should be limited, for, given Say's Law, markets will always expand to absorb the output.

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[40] Ibid., Vol. I, p. 206.

[41] Ibid., Vol. I, pp. 213-214.

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So the only element which was limited in quantity and not susceptible of indefinite increase was land. Like Ricardo, Mill found nature to be the limiting factor in the progress of economic growth. By increasing the quantity of labor on the land, the product would not be increased in an equal degree:

> . . . every increase of produce is obtained by a more than proporational increase in the application of labour to the land . . . . This general law . . . is the most important proposition in political economy.[42]

The principle of diminishing returns was antagonistic to progress. Technology increased output per unit of labor either through increasing the productivity of the land or diminishing the quantity of labor necessary to obtain a given quantity of produce. Like nearly all of his predecessors, Mill minimized the importance of technology feeling that the stronger force was the law of diminishing returns. So long as the rate of increase of population was more rapid than technological progress, the future of the human race was not an optimistic one.

Mill believed that the principle of diminishing returns would cause a fall in the rate of profit to the minimum, a decline in the rate of capital accumulation, and a movement

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[42] Ibid., Vol. I, p. 230.

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> It must always have been seen, more or less distinctly by political economists, that the increase of wealth is not boundless: that at the end of what they term the progressive state lies the stationary state, that all progress in wealth is but a postponement of this, and that each step in advance is an approach to it.[43]

The stationary state exists until technological changes jar the economy into movement again.

Mill did not believe that the stationary state was necessarily accompanied by a mere subsistence wage level. For wages could be increased by raising the laborers' standard of living. He felt that individual workers could also raise their wages by getting out of the laboring class, and by emigration into less populous regions.[44]

In his theory of the general level of wages, Mill uncritically accepted the wages fund theory. He stated that the level of wages was determined by the ratio of population to capital, or, in other words, by the relation between the supply and demand of labor. By population, Mill meant only members of the laboring class, or those who work for hire; and by capital, Mill meant only circulating capital expended in the direct purchase of labor power. Such capital was necessary because productive operations "require to be

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[43] Ibid., Vol. II, p. 334.

[44] Ibid., Vol. II, pp. 341-381.

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continued a certain time before their fruits are obtained." Mill's statement of the causes of wages was very brief and pointed, and since it is all that Mill ever said on the wages fund theory until his "recantation" it is worth quoting in full:

> Wages, then depend mainly upon the demand and supply of labour; or, as it is often expressed, on the proportion between population and capital. By population is here meant the number of the labouring class, or rather of those who work for hire; and by capital, only circulating capital, and not even the whole of that, but the part which is expended in the direct purchase of labour. To this, however, must be added all funds which, without forming a part of capital, are paid in exchange for labour, such as the wages of soldiers, domestic servants, and all other unproductive labourers. There is unfortunately no mode of expressing by one familiar term, the aggregate of what may be called the wages fund of a country; and as the wages of productive labour form nearly the whole of that fund, it is usual to overlook the smaller and less important part, and to say that wages depend on population and capital. It will be convenient to employ this expression, remembering, however, to consider it as elliptical, and not as a literal statement of the whole truth.
>
> With these limitations of the terms, wages not only depend on the relative amount of capital and population, but cannot, under the rule of competition, be affected by anything else. Wages (meaning, of course, the general rate) cannot rise but by an increase of the aggregate funds employed in hiring labourers, or a diminution in the number of competitors for hire; nor fall, except either by a diminution of the funds devoted to paying labour, or by an increase in the number of labourers to be paid.[45]

From this Mill concluded that labor unions could not raise

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[45] _Ibid._, Vol. I, pp. 420-421.

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wages, although he refused to condemn them. But the point to note is that at the hands of John Stuart Mill, the wages fund theory was stated clearly, avoiding the fuzzy formulations of the earlier classical writers. He considered the doctrine to be an ordinary case of the operation of the law of supply and demand, a belief which a later chapter will show has much justification. It was just this point that led to the major criticisms of the doctrine in the late 1860's.

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CHAPTER III

SOME NEGLECTED EARLY CRITICS OF THE WAGES FUND THEORY

The wages fund theory came under attack fifty years after it was first spelled out in the <u>Wealth of Nations</u>. Although the early heretics each assailed a fundamental part of classical economics, their incursions had no effect on the subsequent development of the classical system. The wages fund theory was a key part of Ricardian economics, and Ricardo's austere and unpalatable doctrines, had "conquered England as completely as the Holy Inquisition conquered Spain."[1] Ricardian economics was accepted by the public, by statesmen, and by the academic world. Controversy was suspended and all other points of view ceased to be discussed. In order to overthrow the wages fund theory Ricardian economics itself would have required abandonment. In economics it takes a theory to kill a theory, and since none of the first critics of the wages fund doctrine came forward with a new system of thought, the victory of classical economics was complete.

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[1] John Maynard Keynes, <u>The General Theory of Employment, Interest and Money</u> (New York: Harcourt, Brace, 1936), p. 32.

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West's Criticisms of the Wages Fund Theory

The earliest writer to question the validity of the wages fund doctrine was Sir Edward West, one of the most curiously neglected figures in the history of economic thought. This neglect is hard to explain since Cannan has called him, "the first, though not the name-father, and the greatest of the 'Ricardian school,'"[2] and credits him with the independent discovery of the law of diminishing returns.[3] Moreover, on March 9, 1815, Ricardo wrote to Malthus concerning West, "I have read his book with attention and I find that his views agree very much with my own."[4] Two years later Ricardo linked West's name with Malthus as having "presented to the world, nearly at the same moment, the true doctrine of rent."[5]

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[2] Edwin Cannan, A History of the Theories of Production and Distribution from 1776 to 1848 (London: Staples Press, 1898), p. 219.

[3] Ibid., p. 123.

[4] Letters of David Ricardo to Thomas Robert Malthus 1810-1823 (Oxford: Oxford University Press, 1887), edited by James Bonar, p. 63.

[5] David Ricardo, Principles of Political Economy and Taxation (Cambridge: The University Press, 1951), edited by P. Sraffa, p. 5.

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We may now credit this remarkable man with another "first," since in 1826 he managed to raise the initial challenge to the wages fund theory.[6]

West was aware of his originality in economic analysis. In the preface to his pamphlet he claimed credit for "the true doctrine of rent" and the law of diminishing returns, and said, "The author thinks is is not unfair to assert his claim to these and other important principles; his essay is before the public, and the public will decide how far the claim is well founded."[7]

West agrees with Smith, Ricardo, and Malthus that real wages of workers cannot increase without an increase of capital. But he makes one essential point against the doctrine, namely,

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[6]The facts about West's life are somewhat scanty. He was born in 1782 and graduated from Oxford with the B.A. in 1804 and the M.A. in 1807. In 1822 he was knighted and one year later was appointed to the office of Chief Justice of Bombay. His anticipation of Malthus's rent theory and the principle of diminishing returns was suggested to him by evidence presented before the corn committees of 1813-14. The attack on the wages-fund theory was published in a pamphlet in 1826, although it was actually completed a few years earlier. A final and most ambitious economic work was in preparation at the time of his death. <u>The Dictionary of National Biography From Earliest Times to 1900</u> (London: Oxford University Press), Vol. XX, p. 1240.

[7]Sir Edward West, <u>Price of Corn and Wages of Labour With Observations upon Dr. Smith's, Mr. Ricardo's and Mr. Malthus's Doctrines Upon Those Subjects</u> (London: John Hatchard and Son, 1826), p. vii. Like Adam Smith, West was an empiricist. His pamphlet is replete with statistical tables showing the price of wheat per quarter for each year from 1744 to 1821.

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that an increase of capital will not be used to hire workers unless there is an effective demand for the final product. Hence, the increase in capital is a necessary but not sufficient condition for increasing wages. But the obvious objection arises, "Will an increase in demand necessarily lead to an increase in capital accumulation, and a greater wages fund?" West's answer is in the affirmative. He argues that an increase in demand for final products will increase money wages first. Eventually, however, an increased money wage will result in an increase in real wages.

West's objection to the wages-fund theory, therefore, was that it neglected the important factor of aggregate consumer demand. It must be reiterated that West did not deny that real wages are paid out of capital. But he felt that the quantity of available wage goods did not determine the demand for labor any more than did the quantity of cloth determine the demand for coats:

> It is obvious that if wages were all paid in kind, and not in money, an increase of capital must precede any increase of the demand for labour and of wages. These wages would be the <u>real</u> wages of labour, and they could not be increased without any increase of capital, that is, of the necessaries, etc., of which the real wages are constituted. Wages certainly in this sense could not be increased without an increase of capital; nor could the number of coats be increased without an increase of the quantity of cloth. But we might just as well say, that the demand for coats depends upon the quantity of cloth, as that the demand for labour depends upon the quantity of capital.

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> Though the number of coats cannot be increased without an increase in the quantity of cloth, increase the demand for and the price of coats, and the cloth will soon be manufactured; so increase the demand for and the price of labour and the necessaries which the labourers require will soon be raised and manufactured.[8]

West felt that this important point was missed because of an error in economic reasoning: the failure to recognize that the demand for commodities is really the demand for labor. "This mode of reasoning is adopted in every work of note upon the subject of political economy."[9] The truth is, argued West, that if the demand for, say, hats increases, the demand for labor will likewise rise. For there will occur an increase in the money wages of workers resulting from the efforts of hat manufacturers to bid workers away from alternative employments. But the increase in money wages will cause a shift in demand to wage goods, resulting in an increase in the production of such goods, and eventually an increase in real wages. To West, therefore, the demand for labor depends not so much on previous capital accumulations, as on the present state of effective demand.

It appears that West was an early believer in the hypothesis that inflation causes real wages to rise. Professor Rees has shown that since 1889 there is a high positive

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[8] Ibid., pp. 80-81.

[9] Ibid., p. 79.

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correlation between real wages on the one hand and money wages and prices on the other in the United States.[10] However, as Kessel and Alchian have noted, these positive correlations cannot be interpreted as evidence for the proposition that an increase in money wages will cause an increase in real wages since during this period of time there also occurred a per capita increase in capital, improvements in technology, and improvements in the skills of the labor force--all of these enabling wages to rise in spite of inflation.[11] Of course, improvements in productivity and capital formation leading to increases in wages is quite compatible with the wages fund theory.

So far as the wages fund theory is concerned, West's attack did nothing to damage it. He accepted the idea that real wages are paid out of capital, and that capital must increase before real wages will rise. The importance of West's criticism is that it showed an awareness of the possibility of inflation as a stimulant to economic growth. Further, his recognition of the importance of consumer demand as a

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[10]Albert Rees, "Patterns of Wages, Prices, and Productivity," Wages, Prices, Profits, and Productivity (New York: The Fifteenth American Assembly, 1959), pp. 11-59.

[11]R. A. Kessel and Armen Alchian, "The Meaning and Validity of the Inflation-Induced Lag of Wages Behind Prices," The American Economic Review, Vol. L (March, 1960), p. 44.

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determinant of employment puts him in the same league as Malthus, and he should be added to Keynes's list of heretics who, along with Mandeville, Malthus, Gesell, Hobson, and Major Douglas, "preferred to see the truth obscurely and imperfectly rather than to maintain error, reached indeed with clearness and consistency, and by easy logic, but on hypotheses inappropriate to the facts."[12]

Godfrey Higgins: A Mercantilist's Criticism Of the Wages Fund Theory

A short time after West made his criticisms of the theory, a very obscure archeologist wrote an article objecting to the doctrine. The author was Godfrey Higgins, an active liberal who had been engaged in the study of archeology in pursuit of his interest in the history of religious beliefs. However, Higgins was also keenly interested in the practical questions of political economy. He took part in the earliest measures for the better treatment of the insane; he favored the repeal of the corn laws, and in 1832 advocated the abolition of the Irish Church.[13]

Higgins directed his broadsides against the wages

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[12] Keynes, _op_. _cit_., p. 371.

[13] _Dictionary of National Biography_, _op_. _cit_., Vol. IX, pp. 819-820.

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fund theory of McCulloch. He felt it was necessary to answer McCulloch since the latter's work had been made available in an inexpensive edition in order to educate the laboring classes as to the futility of any attempts to gain wage increases. Higgins felt that the analysis was erroneous and highly dangerous, and badly in need of refutation. "The existence of millions is at stake," he cautioned, and pointed out that:

> It ought never to be forgotten that the conclusions deduced by the economists, and on which they found their demand for changes are the results of the most abstruse and difficult reasoning known in any science whatever; a science in which the propositions in general are totally incapable of anything like the demonstrations of the exact sciences; though, like all philosophers of the day, its professors boast that it is capable of the strictest demonstration with how much truth, the reader must now be pretty well enabled to judge.[14]

The roots of Higgins' objection to the wages fund theory lay in the definition of the term "capital." He believed that the word had been used in two entirely different senses by McCulloch, and it was by confounding them and by sometimes reasoning from one, and sometimes from the other, that McCulloch "has been induced to draw conclusions perfectly untrue and erroneous." McCulloch had defined capital as the

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[14]Godfrey Higgins, Esq., "Observations on Mr. McCulloch's Doctrines Respecting the Corn Laws, and the Rate of Wages," The Pamphleteer, Vol. XXVI (October 12, 1826), p. 251,254.

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produce of industry which can be made directly available either to the support of laborers or to the facilitating of production. That portion of capital which supports human existence consists of food, clothes, and other articles required for the use and consumption of the laborers. This portion forms the fund out of which wages must be paid. According to McCulloch, the rate of wages depended on the magnitude of this fund divided by the number of laborers. Higgins did not object to this. But the crux of Higgins's argument was that McCulloch did not recognize that precious metals could increase national capital without increasing wages. Higgins seemed to interpret the wages fund theory in purely monetary terms as indicated by the following quotation:

> When stripped of its formal and technical language, to what does it amount? Simply to this; that if a larger sum of money be divided as wages amongst a given number of persons, they will have a larger sum each than if a smaller sum be divided amongst them; that if two pounds be divided amongst four men, they will have each a larger sum than if only one pound be so divided; that is, the rate of wages would be higher if two pounds be divided, than if only one were so divided.[15]

It is clear from McCulloch's argument that the latter was reasoning in real terms. Higgins, of course, is thinking of money wages, and not real wages. This being the case and

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[15]Ibid., p. 251.

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believing he had stated McCulloch's position fairly, he therefore charged that McCulloch had made a mistake of confusing capital appropriated to the payment of wages, with national capital, which to Higgins, should include bullion.

The extent of Higgins' misunderstanding is made evident in his commission of the mercantilist fallacy of confusing precious metals with wealth:

> It cannot be denied that there are always large quantities of capital in every country which can or may be made available to the support of human existence or the facilitating of production, which are not turned to such purpose, and therefore can have no influence on the rate of wages. All gold and silver in hoards are of this description. Mr. McCulloch's argument, in fact, goes to prove that the rate of wages will increase with the increase of national wealth. I greatly fear that is so far from being true, that, on the contrary, the rate of wages decreases as civilization and wealth increase. I much fear that the history of the world would establish this mortifying result . . . . Suppose our gold companies of Mexico should send us 1,000,000 ounces of gold, the rate of wages will not be affected. Suppose we hoarde them against a future war, or send them off to buy luxuries, plate, pictures . . . . Our capital is increased but the rate of wages is not affected. That is what happened to Spain.[16]

Higgins understands McCulloch to have included gold and precious metals as part of national capital. But McCulloch was careful to exclude bullion from his definition and, therefore, Higgins' objection that an increase in gold would not increase wages is quite beside the point. In short,

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[16] Ibid., pp. 251, 253.

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Higgins stricture is that an increase in national capital does not always lead to higher wages, since an influx of gold into England would not necessarily increase wages. But this objection is specious because gold is not included in the classical definitions of national capital. This might even be considered the special lesson of Adam Smith's treatise. That Higgins should have misunderstood this fundamental proposition is evidence that economics at least so far as Higgins was concerned, did indeed contain "the most abstruse and difficult reasoning known in any science whatever." It is not too surprising that such an argument caused no frantic rush among political economists to revise their theories. To Higgins this latter fact must have seemed most unfortunate since he believed the wages fund theory to be "destructive to the very existence of society in this country--destructive actually to the food of many millions of people."[17]

Thomas Hodgskin

The next writer to raise doubts about the wages fund theory was an early socialist, Thomas Hodgskin. However, Hodgskin did not attack the properly stated form of the doctrine, but the theory in money terms. He argued that the

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[17] *Ibid.*, p. 254.

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"real wages of the labourers do not consist in money, but what the money buys" and he denied that wages are paid by capital: "Labour, not capital, pays all wages."[18]

T. Perronet Thompson: An Early Institutionalist

A far more interesting analysis appeared in the Westminster Review in 1831. The article can be considered a precursor of institutional economics in the Veblenian sense of the term. T. Perronet Thompson, of Queens College, Cambridge,

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[18] Hodgskins views were stated in his volume, Popular Political Economy published in 1827. His discussion of the wages fund theory was very scanty and added nothing to the general debate. We shall, therefore, present it only the courtesy of a footnote. His whole discussion is limited to the following quotation: When a capitalist "who owns a brew-house and all the instruments and material requisite for making porter, pays the actual brewer with the coins he has received for his beer, and then buys bread, while the journeymen bakers buy porter with the money wages, which is afterward passed to the owner of the brew-house, is it not plain that the real wages of both these parties consist of the produce of the other; or that the bread made by the journeyman baker pays for the porter made by the journeyman brewer? But the same is the case with all other commodities." P. 247.

Now it hardly is a refutation of the wages fund theory to assert that goods exchange for goods. Hodgskin neglects the crucial problem involved--the time-consuming nature of the productive process; the fact that workers today consume goods produced yesterday. It is true that they were made by other workers, but that does not mean such goods do not constitute capital. And his demonstration that real wages consists in what money wages can buy actually strengthens the wages fund theory. However, it should be noted that Werner Stark considers Hodgskin's attack on the theory "perhaps his best contribution to economic science in the narrow and technical sense of the word." See Werner Stark, The Ideal Foundations of Economic Thought (London: Oxford University Press, 1944), p. 71.

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presented an argument purporting to subject the theories of political economy to test. According to Thompson economics is a branch of natural science and susceptible to the scientific method. The analysis of supply and demand involves the same kind of objective phenomena as does the subject matter of chemistry or physics.

> For no reason can be given why the connexion, for example, between the demand for a given substance and the supply should not be as legitimate an object of philosophical examination as the connexion between two bodies at the ends of a lever or between two substances which exercise a chemical action upon each other . . . . The object of this article is to bring the opinion of what has denominated itself "the new school of political economy" to the test of something like such examination as is undergone by every theory which makes up part of the system of education in an English university.[19]

To Thompson the wages fund theory cannot bear close scrutiny. In order to develop an adequate theory of wages one must explain the underlying forces that cause wages to be what they are in different countries. By real wages Thompson means the actual composition of wage goods. For example, real wages in Ireland might consist largely of potatoes while in England some amount of roast beef would be assumed. Any explanation of wages must explain these differences. To Thompson the variations are a result of "the force of opinion

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[19] T. Perronet Thompson, "The True Theory of Rent, in Opposition to Mr. Ricardo and Others," The Westminster Review (London, 1831), p. 5.

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and habit."[20] But this is inconsistent with the explanation given by the wages fund theory. A comparison of capital to population cannot give us any insights into the opinions and habits that cause wages to be what they are:

> . . . Englishmen have the physical capability of living on potatoes as much as other men, but fortunately they have not the habit; and though it might be wrong to say they would starve first in their own proper persons, they will utterly refuse to multiply upon such a diet, the effect of which on population is ultimately the same. And the causes of these differences of habit are to be found in everything that has affected the past or affects the present condition of society--in ancient institutions, in modern improvements, in past and present laws, in battles lost and won, in reformations of religion, in the progress of science, in the manners of the higher classes, in the information of the lower, in everything which man can neither suddenly alter nor create, and which connects his present mode of existence with that of his ancestors and his posterity.[21]

Thompson argues that fluctuations regularly take place in the ratio of capital to population, but "the element which . . . keeps the average rate of wages to one point and not to another, or which determines the point to which wages shall tend as mean, is not physical but mental."[22] Thompson goes on to point out that most nations are considerably above the point of mere subsistence in their wage rates. So opinion

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[20] Ibid., p. 16.

[21] Ibid., p. 16.

[22] Ibid., p. 17.

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and habit determine wages as well as the rate of profit, "which are only the wages of another description of labourers." The ultimate determinant of wages and profits is the institutional structure of society. Such prices merely register the underlying social framework.

> Public opinion and custom require, for example, that a shopkeeper shall have a good coat, shall drink at all times malt liquor and sometimes wine, and give them to his neighbors--that his wife and daughters . . . shall wear clean linen, and moreover not wash it themselves--and that when they travel, it shall be by the stage-coach and not by the wagon.[23]

In sum, Thompson's objection to the wages-fund theory was that it did not search deeply enough into the submerged forces that ultimately determine wages. But such a criticism cannot hold up against a theory that takes the institutions of society as given data and then proceeds to explain the determination of wages. The significance of Thompson's attack was that it raised the question of the proper role of economics: Should it be a study of the evolution and make-up of institutions, or should economists accept them as given

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[23] Loc. cit. Compare Thompson's statement with that of a contemporary institutionalist, C. E. Ayres, "It is the structure of society that allocates the community's resources, just as it is the state of the community's arts and crafts that defines those resources determining their over-all relative abundance. Price patterns reveal those underlying conditions and structures and give effect to them." C. E. Ayres, The Industrial Economy (New York: Houghton-Mifflin, 1952), p. 370.

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and go on from there to discuss resources utilization? The issue was decided in favor of the former treatment by most economic heretics, in particular the American institutionalists. But the latter method became the approach of the classical economic tradition.

Richard Jones

Brief mention must be made at this point of a discussion of the wages fund theory at the hands of Reverend Richard Jones in 1833.[24] In a series of lectures on wages which he delivered in April of 1833, Jones refers to the inaccuracy of language involved in the discussions of the wages fund theory, the point being that there is a tendency to confuse "the word _capital_ when used . . . to denote the _whole_ of this fund, with _capital_ in its narrower and more appropriate sense of

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[24] Jones was a graduate of Caius College, Cambridge, from which he took his B.A. and M.A. in 1816 and 1819 respectively. In 1833 he was appointed professor of political economy at King's College, London, a position which he resigned in 1835 in order to succeed Malthus in the chair of political economy and history at the East India College at Haileybury. Ironically, he became one of Malthuses severest critics. According to his biographer, Jones was midway between Adam Smith and Ricardo, more "historical" than the former, less historical than the latter. "It cannot be said that his works establish any new principle; they introduced modifications into others previously formulated. His greatest claim to economic fame rests on his recognition of the necessity of the inductive method." _Dictionary of National Biography_, _op. cit._, Vol. IX, p. 1045.

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'That portion of the stock of a country which is employed with a view to profit.'"[25] The amount of capital devoted to the maintenance of labor may vary, independently of any changes in the whole amount of capital. Capital (that is, the stock of accumulated wealth employed for profit making purposes) can increase without increasing the demand for labor. So the wages fund can vary or stay fixed with any stock of capital. In other words, Jones was warning that capital not only consists of wage goods, but also of machinery (that is, fixed capital). The latter cannot be used in the direct satisfaction of human wants. Hence, to assume that capital accumulation _per se_ will increase the wages fund is wrong. Jones was essentially pointing out the possibility of technological unemployment.

Jones also objected to the Malthusian principle of population on the grounds that an increase of wages would not necessarily cause an increase in population. Instead, it may stimulate new wants and consumption "leaving the rate of increase stationary, or, in some instances retarding it; a decrease in the rate of wages may diminish the consumption of articles subservient to artificial and secondary wants

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[25] Rev. Richard Jones, _A Syllabus of a Course of Lectures on the Wages of Labor_, delivered at King's College, London, April, 1833 (London: John Murray, 1833), p. 51.

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Thomas Hopkins

The next writer to discuss the wages fund theory directed his attack not against the theory itself, but against the policy implications derived from it by the theorists. The critic was Thomas Hopkins, an historian who wrote a statistical history of Great Britain. In the course of that study, Hopkins argued the thesis that increases in population are necessary to economic progress, and he vigorously attacked the view of Malthusians who argued that early marriages should be discouraged. Hopkins claimed that his statistical studies indicated that wages had risen over time even though population had also increased. The policy recommendation of Malthusians and wage fund adherents was measures to decrease population. Hopkins saw much contrivance in such a view:

> It appears to have obtained countenance and support partly from the avidity with which the wealthy classes . . . embraced a theory which removed the odium of causing distress from themselves and threw it on the improvidence of the people . . .[27]

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[26] Ibid., p. 56.

[27] Thomas Hopkins, Great Britain for the Last Forty Years; Being an Historical and Analytical Account of the Finance, Economy, and General Condition, During that Period (London: Simpkin and Marshall, 1834), p. 55.

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The problem involved in the wages fund theory, he felt, was one of <u>ceteris paribus</u>. The theory states, for example, that if capital is increased, population remaining constant, wages will rise. But, says Hopkins, this "is not the real point at issue:--the question is, if you reduce the labouring population will capital also be reduced?"[28] Hopkins answered this question in the affirmative. He thought that most economists were unaware that labor creates capital, and "this strange oversight has led to the absurdities that have been advanced respecting the excessive population of Great Britain; and the means of improving the conditions of the people by reducing their numbers."[29] Hopkins obviously was a strong believer in the labor theory of value, claiming that landlords and entrepreneurs "create nothing that operates as capital." Workers alone create the wages fund, and reducing the number of workers must reduce the fund. Increasing the number of workers will have the opposite effect. He concluded that political economy is out of sympathy with the "great body of the people" and hence this insight goes unrecognized.[30]

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[28] <u>Ibid</u>., p. 57.

[29] <u>Loc</u>. <u>cit</u>.

[30] <u>Op</u>. <u>cit</u>., p. 58.

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The last theorist whom we must mention before we come to the serious controversy of the 1860's is Mountifort Longfield.[31] Longfield felt that there was no subject more important than wage theory because workers are the most numerous of the income receivers, and "the opinions held respecting them may exercise an immense influence over the peace and happiness of the country, independent of the effect they may have upon legislation."[32] Longfield did not attack the wages fund theory directly; indeed, he completely ignored it. But his importance lies in the fact that he was a striking precursor of marginal analysis. He neglected the proposition that wages depend on the ratio between capital and labor. Instead he argued that they depend upon the relation between the supply and demand of labor: "The supply consists of the present existing race of laborers" while the demand is

> the utility or value of the work which they are capable of performing. Menial servants, and those

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[31] Longfield was educated at Trinity College, Dublin, and received the M.A. in 1829 and the LL.D. in 1831. He has the distinction of being the first professor of political economy at Trinity College, a post he held from 1832 until 1834 when he became Regius Professor of Feudal and English Law at Dublin. He died in 1884. Dictionary of National Biography, Vol. XII, pp. 119-120.

[32] Mountifort Longfield, Lectures on Political Economy Delivered in Trinity and Michaelmas Terms (Dublin: Richard Milliken and Son, 1834), p. 201.

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> labourers usually termed unproductive, must be maintained by funds derived from other sources; but the wages of the great mass of labourers must be paid out of the produce, or the price of the produce of their labour. . . . This gives us the measure of each labourers wage in the articles which he contributes to produce, and by proportion we ascertain the quantity of any other article which he can procure in exchange for them.[33]

Of the universal applicability of the theory Longfield had no doubts since it "is founded upon mere abstract reasoning, and cannot be false in any time or country."[34]

In summary, we may note that the earliest criticisms of the wages fund theory were largely at the hands of obscure writers, some of whom were not professional economists. Their attacks were not very powerful, either because the critics did not distinguish between monetary and real factors, such as Higgins; or they insisted that the theory should do more than it really set out to do (Thompson). Hodgskin and Jones had mainly semantical objections, while West and Longfield were really ahead of their time. West recognized the importance of consumer demand as a factor in the demand for labor; Longfield came close to stating a marginal productivity theory. Both were ignored by the leading economists of the day. This is probably because none of the writers developed an extensive treatment of their views. Most of the tracts were devoted to

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[33] *Ibid*., p. 210.

[34] *Ibid*., p. 212.

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other matters, with the wages fund coming in for cursory treatment. We must wait until the 1860's before serious controversy took place. Meanwhile, the wages fund theory held sway, retarding effective factory legislation and the labor union movement. The influence on trade union development will be the subject of the next chapter.

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CHAPTER IV

THE WAGES FUND THEORY AND THE TRADE UNION MOVEMENT

It might seem curious, at first that the nineteenth century, a period in which so many great advances were made in the sentiment of humanity, witnessed the development of no more than haphazard attempts at improving the lot of the working classes. There were, of course, well-meaning people, and the need for a new approach to mass misery occasioned by the industrial revolution was proved by the widespread interest in the reform of the Poor Laws. In addition, there were many supporters of social reform among the most influential men of the day: Disraeli, Owen, Dickens, Shaftesbury, Carlyle, to name only a few. If this was the case, why was it that no large scale efforts were made to deal sympathetically with the problem through labor legislation and trade unionism?

The only possible answer lies in the ideas that molded men's outlook at that period. One historian has noted that in 1832, there was "a certain callousness, an indifference to suffering and in some respects an invincible blindness."[1]

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[1]Ernest L. Woodward, The Age of Reform, 1815-1870 (Oxford: Clarendon Press, 1938), p. 18.

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Even Shaftesbury was hostile to far-reaching labor legislation, and Bright was equally opposed to factory reform.[2] The evidence indicates that the wages fund doctrine played a crucial role in forming this climate of opinion.[3] By the middle of the nineteenth century particularly effective use was being made of the doctrine in restraining and modifying the immediate demands of the labor movement. For the wages fund theory contradicted the fundamental assumptions on which the trade union movement was based. On this fact all practical men of the day were agreed.

Strikes in the London building trades in 1861-62 and other labor disturbances culminating in considerable violence in Sheffield in 1867, resulted in the selection in that year of "Royal Commissioners appointed to Inquire into the organisation and rules of Trade Unions and other associations" by the Queen's warrant. The reports of this Commission constitute a cross-section of the opinions on trade unions as expressed by representatives of the British public at that time.

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[2] A. F. Young and E. T. Ashton, British Social Work in the Nineteenth Century (London: Routledge and Kegan Paul, 1956), p. 9.

[3] The use made of the wages fund theory in attacking factory legislation in England has been documented by Mark Blaug. See "The Classical Economists and the Factory Acts: A Re-examination," Quarterly Journal of Economics (May, 1958), pp. 211-226.

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For a period of more than a year the Royal Commission heard testimony from employers, public officials, and union members and leaders. On the first day of public hearings, Sir Edmund Walker Head, a member of the commission and former governor-general of Canada questioned the first witness, Robert Applegarth, leader of the London Carpenters. The following testimony took place:

> Q. Do your interests depend somewhat on the amount of capital employed in the trade?
>
> A. Yes.
>
> Q. And does not the amount of capital employed in the trade depend upon the employer and what profit he makes by it?
>
> A. Yes.
>
> Q. Therefore, your interests may be affected indirectly through the employer, although the direct benefit apparently is gained by the workmen?
>
> A. Yes; but I would ask what we should do in the event of all the rest of the trades getting an advance of wages, and the price of things going up, if we were to stand still?[4]

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[4] Reports of the Royal Commissioners Appointed to Inquire into the Organisation and Rules of Trade Unions and other Associations; together with Minutes of Evidence and an Appendix Containing a Digest of the Evidence, Correspondence with Her Majesty's Missions abroad regarding Industrial Questions and Trade Unions, and Other Papers. Presented to Both Houses of Parliament of Her Majesty, London, 1867-69. Citation from First Report, 1867, p. 10.

These are the official parliamentary documents as published by Her Majesty's Stationery office in twelve volumes. The first ten reports contain a verbatim account of the

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Clearly this testimony indicates an understanding of the logical corollary of the short-run rigid wages-fund theory: that if one group of workers increases its share some other group of workers somewhere would have to take less, since only a certain amount is available for wage-earners.

Typical of the statements made to the Commission was that of Mr. Herman Merivale. According to the Report, Mr. Merivale had been a barrister and under-secretary for India from 1834 to 1842. He testified as follows:

> That wages depend in reality on the demand and supply of labour; that they cannot rise except either by an increase of the aggregate funds employed in hiring labour, or a diminution in the number of competitors for hire; and that those truths, applicable as they are to the entire amount of wages earned in a country, are as substantially, though not as directly, applicable to the amount of wages earned in each separate employment--are propositions which . . . are as thoroughly understood and admitted by the intelligent class among the workmen themselves as they are by impartial inquirers.[5]

The doctrine of the wages fund was accepted as an unquestionable fact by both friend and foe of labor. Professor

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testimony before the Commission. The last report is divided into two volumes, the first containing the final majority and minority reports, and "observations" of several individual commissioners; the last volume is an appendix including a digest of the entire evidence from the first ten reports, tabulated replies from questionnaires submitted by the Commissioners to trade unions, letters from members of the British diplomatic service relative to labor conditions in foreign countries, and miscellaneous correspondence from employers, trade associations, and business groups.

[5] Eleventh and Final Report, 1867, Vol. I, p. cxxi.

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Hutt was quite right when he claimed that in the nineteenth century "articulate trade union leaders readily accepted the wage fund formula."[6] One influential trade union leader of the London Consolidated Society of Bookbinders, T. J. Dunning, in a monograph published in 1860, referred to the wages fund theory and stated that no one was likely to refute it, not even trade union leaders. The theory's propositions, he said, "are in the enunciation like that of two and two making four--we will endeavor to show why the propositions fail in convincing the workmen that they are doing wrong in entering into combinations. Not that the propositions are doubted but because implicit belief in them is perfectly consistent with the propriety of Trade Combinations."[7]

Critics of trade unionism attempted to show that unions, by increasing wages at the expense of profits, would

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[6] William H. Hutt, The Theory of Collective Bargaining (London: P. S. King and Son, Ltd., 1930), p. 7.

[7] T. J. Dunning, Trade Unions and Strikes, Their Philosophy and Intentions (London: Published privately by the author, 1860), p. 5. Prefacing this essay is an advertisement stating that the view taken in the book represents not only that of the writer and his union, but the working classes generally. Dunning further argued that the only worthwhile object of trade unions, given the wages fund theory, would be to provide a fund for the support of the members when unemployed. Moreover, like other union leaders, he opposed strikes except on "extraordinary" and "most unusual" occasions. The Edinburgh Review was scathingly denounced for endeavoring to "incite public opinion against unions." What is more, "the true state of employer and employed is that of amenity, and they are the truest friends, each of the other, for each derives his revenue from the other." (p. 52).

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check capital accumulation. Since the rate at which capital and therefore the wages fund, could be increased varied directly with profits, the greater the proportion of wages to profits, the smaller the tendency to accumulation. One of the most widely read critics of labor combinations demonstrated the futility of labor organizations in increasing aggregate wages by pointing out the causal factors involved in the process of distribution:

> There is only a certain produce to be divided between capitalist and laborer. If more be given to the laborers than nature awards, a smaller amount will remain for the capitalist; the spirit of accumulation will be checked; less will be devoted to productive purposes; the wage fund will dwindle, and the wages of the laborers will inevitably fall. For a time, indeed, a natural influence may be damned back; but only to act, ultimately, with accumulated force. In the long run, God's Laws will overwhelm all human obstructions.[8]

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[8] James Stirling, Trade Unionism, With Remarks on the Report of the Commissioners on Trade Unions (Glasgow: James Maclehose and Sons, 1869), pp. 26-27.

In this extremely interesting book, the free market was closely identified with divine ordinance: "The humble labourer finds his best protection, and his richest reward, in that very struggle among the powerful, which shallow thinkers denounce as oppressive to the poor; while, at the same time, the competition among labourers for employment secures the capitalist against the tyranny of the many. Free competition ensures justice to all. When nature is left free to work, a divinely regulated mechanism of antagonist interest secures to each man that which is fairly due to him: to the master, faithful service at a fair price; to the labourer, the hire whereof he is worth." pp. 6-7.

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It was claimed, therefore, that the wages fund doctrine was one of "God's Laws" and therefore the only way in which a union could help workers was by permanently restricting the numbers entering the trade and thereby forcing employers to grant higher wages. The aim and purpose of unions was believed to bring about a monopoly position in providing labor services. For if capital fell behind population, wages fell. But the fall would bring about increased accumulation of capital and a reduction in population. If population increased less than capital, wages rose, causing a check to accumulation and a stimulus to an increase in population. As Cairnes later admonished, "against these barriers Trade Unions must dash themselves in vain. They are not to be broken through or eluded by any combinations however universal; for they are the barriers set by Nature herself."[9] With so complete an acceptance of the doctrine on both sides of the trade union it is no wonder that all the methods of unions were condemned from 1825 to 1875. As the Webbs have put the case:

Compare Stirling's statement of 1869 with the recent comment of F. A. Hayek, "It is probably . . . impossible in our time for a student to be a true friend of labor and to have the reputation of being one." See F. A. Hayek, "Unions, Inflation, and Profits," The Public Stake in Union Power (Charlottesville: University of Virginia Press, 1959), ed. Philip D. Bradley, pp. 46-63.

[9] J E. Cairnes, Some Leading Principles of Political Economy Newly Expounded (New York: Harper & Brothers, 1874), p. 338.

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> To the ordinary middle-class man it seemed logically indisputable that the way of the Trade Unionists was blocked in all directions. They could not gain any immediate bettering of the conditions of the wage-earning class, because the amount of the wage fund at any given time was pre-determined. They could not permanently secure better terms even for a particular section, because this would cause capital immediately to begin to desert that particular trade or town. They could not make any real progress in the near future, because they would thereby check the accumulation of capital. And finally, even if they could persuade a benevolent body of capitalists to augment wages by voluntarily sharing profits, the "principle of population" lay in wait to render nuggatory any such new form of "out-of-door relief."[10]

It is not surprising, then, that union leaders and entrepreneurs opposed strikes as a means of bettering wages. It is significant that the first major attacks on the wages fund theory were accompanied by the development of trade unions as bargaining agencies. Prior to that period, unions were little more than mutual-aid societies, hamstrung as they were by the power of the wages fund. The wages fund theory as a barrier to union development was recognized as late as 1897, at which time the Webbs commented that "it still lingers in the public mind, and lies at the root of the current middle-class objections to Trade Unionism."[11] Recognition of the difficulty of increasing all around wages led Hoxie,

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[10] Sidney and Beatrice Webb, Industrial Democracy, Vol. II (London: Longmans, Green and Company, 1897), pp. 615-616.

[11] Ibid., p. 604.

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taking realistic stock of the situation, to admit that, "unions are not primarily concerned with wages as a whole, but with the wages and standards of living of a particular group."[12]

The justification of unions only as a mutual-aid society or producers' cooperative was stressed by W. Stanley Jevons. In 1869, Jevons was invited by the Trade Unionists' Political Association to deliver a paper on "Trades Societies: Their Objects and Policy." In this paper Jevons warned the workers against trying to subvert the inevitable logic of the wages fund. The only legitimate purpose of such an association, he warned, was to act as a "Friendly Society," or attempt to get more wholesome conditions of work in the factories. But when it came to raising wages, Jevons said:

> The more I learn and think about the subject the more I am convinced that the attempt to regulate wages in injurious to the workmen concerned in the majority of cases, and that in all cases it is thoroughly injurious to the welfare of the community.[13]

Jevons went on to suggest that the workers save their money and "invest it in a cooperative society, and let it grow,

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[12] Robert F. Hoxie, Trade Unionism in the United States (New York: D. Appleton & Co., 1923), p. 283.

[13] W. Stanley Jevons, "Trade Societies: Their Objects and Policy" (1869). Reprinted in Methods of Social Reform (London: Macmillan & Co., 1883), p. 117.

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It is significant that the major working class movements up to the 1880's had as their object getting laborers out of the laboring class. Shortly after the rise of modern trade unionism the first successful attacks on the wages fund theory were made. The first real bargaining organizations came about in Great Britain in 1851 with the formation of the machinists as such a bargaining agency. In the United States unions as bargaining agencies came somewhat later.

As a result of the wages fund theory, the liberals and reformers of the mid-nineteenth century had great faith in producers cooperatives as a means of solving the labor problem. In the United States, for example, the National Labor Union, and the Knights of Labor advocated the formation of producers' and consumers' cooperatives as part of their official program. The Knights of Labor was by far the largest organization of labor this country ever had. They looked toward land reform, producers cooperatives and education to create a society of small property owners. Such a system was to supplant the wage system.[15] The Knights of Labor officially

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[14] Ibid., p. 110.

[15] Harry A. Millis and Royal E. Montgomery, Organized Labor (McGraw-Hill Book Company, 1945), pp. 50-55, 59-75.

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had little interest in the possibility of improving the economic conditions of the worker _qua_ worker. They frowned upon strikes and on efforts of the government to raise income. Their program was to help workers in establishing cooperatives. The membership would be the market for the product of the producing units. The idea was to destroy capitalism by making everyone a capitalist.[16]

On the basis of the evidence, therefore, we must agree wholeheartedly with a recent writer on the subject of collective bargaining who commented that "the question of the effectiveness of the endeavors of the union may result in different answers

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[16]As a solution to the problems of labor, a producers' cooperative is wholly ineffective for it either succeeds as a business firm, or it fails. If it fails, it goes out of business. If it proves profitable and succeeds then it ceases to be a cooperative because the existing original group that formed it would lose if they brought in new members. The temptation is to close the doors of the concern and seek expansion through borrowing funds or internal investment. Thus it becomes another private business enterprize and _hires_ additional workers. An economically successful producers' cooperative cannot get the workers out of the laboring class because it is to the interest of the membership to keep its doors closed to new members. Hence it ceases to be a cooperative.

Consumers' cooperatives are a different story. It is to the interests of the members to enlarge the membership in order to get the cost advantages of large-scale marketing. But as a solution to the problem of labor the consumers' cooperative is not successful because it is not a working class organization. Like any other business enterprise it is interested in long hours, low wages, and low costs. Its appeal is to low income people, and therefore, its membership is made up to a large extent of working people. Such organizations aid workers only in their role as consumers, and not as workers.

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depending on the wage theory with which it is attacked."[17]

In the United States, the progress of trade unions also felt the heavy hand of the wages fund theory. In his autobiography, Samuel Gompers stated, "The first economic theory that came under my eyes was not calculated to make me think highly of economists. My mind intuitively rejected the iron law of wages, the immutable law of supply and demand, and similar so-called 'natural laws.'"[18]

Nevertheless, Mr. Gompers was not without an economic theory to justify trade unions. Indeed, he found it necessary to replace the wages fund doctrine and the iron law of wages with the "Golden law of wages" of Ira Stewart.

Ira Stewart was the writer who provided the American Federation of Labor with its wage-theory during its first years. In 1865 Stewart wrote:

> The simple increase of wages is the first step on that long road which ends at last in a more equitable distribution of the fruits of toil. For Wages will continue to increase until the Capitalist and Laborer are one. But we must confine ourselves to the simple fact that a reduction of hours is an increase of Wages.[19]

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[17] J. Pen, The Wage Rate Under Collective Bargaining, (Cambridge: Harvard University Press, 1959), p. 4.

[18] Samuel Gompers, Seventy Years of Life and Labor, Vol. II (New York: E. P. Dutton & Co., 1925), p. 1.

[19] Ira Stewart, "The Eight-Hour Movement: A Reduction of Hours is an Increase of Wages," 1865, Boston Labor Reform Association, Boston, Mass. Cited in Henry Raymond Mussey, "Eight-Hour Theory in the American Federation of Labor," Economic Essays Contributed in Honor of John Bates Clark (New York: The Macmillan

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This latter proposition became the corner-stone of the American Federation's thinking. The theory is really nothing more than Ricardo's standard of living hypothesis:

> It is not to be understood that the natural price of labour estimated even in foods and necessaries is absolutely fixed and constant. It varies at different times in the same country, and very materially differs in different countries. It essentially depends on the habits and customs of the people.[20]

But John Stuart Mill is even clearer on the subject. Mill had argued that a substantial increase in wages over a long time could cause habits to change. Wages were in the long run determined by the standard-of-living. Such a notion in effect removed all pessimism from the dismal science. No wonder that it was grabbed eagerly by trade union leaders to replace the wages fund theory. Stewart's theory was based on the assumption that any rise in wages tends to become permanent. To Mill the workers' standard of living could be raised by education through which they are made aware that improvement in their economic condition could only come about through limiting their numbers. Combining this with a reduction in the labor supply through colonization, the Laborer's lot could be substantially ameliorated.[21] Ira Stewart's

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[20]David Ricardo, Principles of Political Economy and Taxation (London: G. Bell and Sons, Ltd., 1927), p. 74.

[21]John Stuart Mill, Principles of Political Economy (New York: D. Appleton & Company, 1895), Vol. II, pp. 341-381.

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theory shows a similar optimism:

> My theory is, first, that more leisure will create motives and temptations for the common people to ask for more Wages.
>
> Second, that where all ask for more Wages, there will be no motive for refusing, since Employers will all fare alike.
>
> Third, that where all demand more Wages, the demand cannot be resisted.
>
> Fourth, that resistance would amount to the folly of a "strike" by Employers themselves against the strongest power in the world, viz., the habits, customs, and opinions of the masses.
>
> Fifth, that the change in the habits and opinions of the people through more leisure will be too gradual to disturb or jar the commerce and enterprise of Capital.
>
> Sixth, that the increase of Wages will fall upon the wastes of society, in its Crimes, Idleness, Fashions, and Monopolies, as well as the more legitimate and honorable profits of Capital, in the production and distribution of wealth, and
>
> Seventh, in the mechanical fact, that the cost of making an article depends almost entirely on the number manufactured is a practical increase of wages, by tempting the workers through their new leisure to unite in buying luxuries now confined to the Wealthy, and which are costly because bought only by the wealthy.[22]

The influence of the economists' theory of wages in the nineteenth century was not confined to Great Britain and

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[22] Ira Stewart, *op. cit.*, p. 233. [The italics are Stewart's].

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the United States. Ferdinand Lasalle carried its social and political meaning to the continent of Eruope, and in so doing, stated most clearly the supply side of the theory of wages, to which he gave the imperishable epithet, "The Iron Law of Wages." Lasalle was induced to do this by an invitation issued by the Central Committee for the Organization of a General Workers' Congress in Leipzig. At this congress he expounded his view on the subject of the efficacy of a labor movement for improving the conditions of the working class and on the importance for this purpose of workers' associations. In his Open Answer to the central committee, in 1863, Lasalle offered two problems for consideration: (1) the problem of improving the conditions of individual workers whose situation, due to causes such as sickness, old age, accidents of various kinds, is reduced to a subsistence level lower even than that of the working class as a whole; and (2) the problem "of improving and raising above the present level the general situation of the working class as a whole."[23]

Lasalle argued that only the second problem can be of fundamental importance to the general labor movement. But the only practical project designed for the accomplishment

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[23]Ferdinand Lasalle, Open Answer to the Central Committee (New York: Columbia University Press, 1939), p. 161.

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of the purpose up to that time had been the workers' consumers' cooperatives. Lasalle contended that these were unable to improve the condition of the workers, since the laboring class suffers from injustice, not as consumers, but as producers. To Lasalle, the only way workers could improve their lot would be to get out of the working class. He proposed that the government assist in the creation of free workers' production associations and suggested that the government offer protection to these associations. He argued that if the working class can become its "own entrepreneur" then the remuneration of labor would be the product of labor. But trade unions were not the answer, certainly, since they violated all the agreed-upon laws of economics. To quote Lasalle:

> Under present relationships of the rule of supply and demand for labor, wages are determined by the following Iron Law: the average wage is always reduced to the absolutely necessary subsistence, demanded by the customs of the people for the maintenance of life and the propagation of the race. This is the point around which the actual daily wage fluctuates, like a pendulum, never rising for a long time above its average norm, because then as a result of an improvement in the condition of the workers, marriages would become more frequent, propagation would increase and the laboring population would multiply, thereby, increasing the supply of work hands which would bring wages to the former level, or lower. But wages cannot for long remain below that which is absolutely necessary for subsistence, for then laborers are forced to migrate, refrain from marriage, and from raising children, and, finally, the number of laborers diminishes through misery which weakens the supply of work hands, and therefore restores wages to its former level . . .

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> The limitation of the average wage by limits set by the customs of the people as to what is absolutely necessary for subsistence and the perpetuation of the race--such, I repeat, is the iron and cruel law, regulating wages under present conditions.[24]

For Lasalle this law of wages was the most important feature of his economic views, the law from which "everything else naturally follows." Furthermore, he considered it to be universally recognized. His statement as to the futility of improving conditions of workers by any methods that contradicted the wage theory of the classical economists is so strong and unequivocal that it bears quoting in full:

> No one can argue against this law. I can cite for it as many authorities as there are in economic science, great and famous names--and from the liberal school of thought too, because this law was discovered and proven precisely by the liberal school of economic though.
>
> . . . I can tell you and the entire working class the surest remedy for safeguarding yourself once and for all against all deceit and attempts to lead you astray--as soon as anyone will speak to you about improving the lot of the laboring classes, ask him first of all this question: does he, or does he not recognize this law? If he does not recognize it, then you may as well know that he either wants to deceive you, or that he is a most pitiful ignoramous of economic science . . . All agree in recognizing this law. In this respect, there is no disagreement among men of science.
>
> And, if the person talking about the condition of the workers will recognize this law, then, ask him how he proposes to do away with it. And, if he will find no answer, turn your back calmly on him. He is a demagogue

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[24] Ibid., p. 162.

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> who wants to deceive you, and to deafen you or himself with loud phrases.[25]

In summary it may be said that the wages fund theory exercised great influence on the economic events of the nineteenth century. On this, the evidence is decisive. In particular, it restricted the passage of effective factory legislation, and hampered the development of trade unions as bargaining agencies. This latter fact led to the first major criticisms of the theory resulting eventually in Mill's famous "recantation" in 1869. For trade unions could not develop until the wages fund theory was laid to rest. The growth of unions is inextricably bound up with the dispute over the doctrine during the second half of the century, and it is to that controversy that we now turn.

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[25] *Ibid*., p. 164.

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CHAPTER V

LATER ATTACKS ON THE WAGES FUND THEORY AND MILL'S RECANTATION

The first important attack on the wages fund doctrine was made by Francis D. Longe in 1866. However, the precise role played by Longe's monograph remained undetermined in the history of economic thought. Longe himself was not an economist but a lawyer. At Oxford he studied philosophy and a few years after his graduation, in 1854, became assistant commissioner of the Children's Employment Commission. His duties brought him in contact with employers of large numbers of workers, giving him the opportunity to become acquainted with the opinion of businessmen on the wages problem. During this time he also became familiar with John Stuart Mill's theories of the relation between capital and labor. In the process, Longe became convinced that the wages fund theory was a delusion and he eventually presented his argument to that effect in his treatise published in 1866.[1] His only previously published writing, "An Inquiry into the

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[1]Francis D. Longe, A Refutation of the Wage Fund Theory of Modern Political Economy as Enunciated by Mr. Mill and Mr. Fawcett (London: Longman Green and Co., 1866). Reprinted by the Johns Hopkins Press, 1903, as A Reprint of Economic Tracts, edited by Jacob H. Hollander.

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Law of Strikes," had been published in 1860; it was an historical essay on the treatment of combinations of workers in common law.

Longe's Attack on the Wages Fund Theory

Longe began by noting the practical objection that the wages fund theory stood in the way of all efforts to better the conditions of workers, either through trade union action, or on the part of government. In his words:

> The most important practical objection to the wage fund principle is that it excludes altogether the influence of liberal principles from the field of social action, where it is for the interest of society that they should be ever most influential. It is a principle which forbids public opinion coming to the rescue of a depressed class, by awarding its just censure against those who themselves perfectly well know that they or their class are partly, if not entirely, responsible for the conditions of the labourers whom they are employing, and whom they could without any ultimate loss to themselves raise to a condition of greater comfort, and one more tending to the general well-being of the community to which they belong.[2]

However, Longe also made a theoretical attack on the theory by questioning its basic assumptions. According to Longe, there were three assumptions:[3] (1) There is a definite fund separate and distinct from society's general wealth, being a part of capital available for, and necessarily

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[2]*Ibid.*, p. 16.

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

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expended in the remuneration of labor; (2) that laborers constitute a group among whom this fund can be, and is, in fact, distributed through competition; (3) and that the wages fund doctrine is merely an application of supply and demand analysis to the particular commodity, labor power.

Longe denied the validity of the first assumption. He argued that if there were such a wages fund in the economy as a whole, it must be composed of many particular funds resting in the hands of individual capitalists.[4] But Longe denied that each and every employer was in possession of a fund of definite amount that could not be increased and all of which had to be spent in the hiring of labor:

> Suppose, then that such a fund would represent the utmost amount which at any given time the whole body or supply of labourers could get from their labour, such fund would represent the money-measure of the demand for labour in a country at such time. But, even so, the wage fund principle would be a false principle. For such money-measure of the demand for labour would only represent the amount of wages which at any given time the labourers in a country _could_ get; it would not represent a certain amount of wealth, which would or must be distributed by the competition of sellers and buyers of labour, any more than the money-measure of the demand for oysters or beef at any given time represents a certain sum of money which the sellers of oysters or beef must get from their customers, at whatever price some of them sell their oysters or beef. The total amount of money which the labourers could possibly get would be limited by the amount of the

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[4] _Ibid_., p. 37.

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> wages fund; but whether they got all that wealth, or only half of it, would depend solely upon whether they let their labour go at its proper or half its proper price.[5]

The employer, argued Longe, has considerable discretion as to the uses to which he might put his wealth. He might use more or less of it for his personal consumption, or employ more or less for productive operations. Although employers could give the full amount of the wages fund to the workers, there was no reason to expect them to give more than the smallest quantity necessary to employ the laborers they required. The amount of the aggregate wages fund at any given period would have no bearing on the amount of wages received by the whole body of workers, except insofar as it would represent the aggregate sum that laborers could compel their employers to give them. So far as the individual capitalist was concerned, there was no definite amount of wealth that needed to be extended in the hiring of labor.

According to Longe, the factor that determined how much of his wealth the capitalist used in employing labor (that is, the amount he employs "productively") depended on demand. Output must be salable at profitable prices:

> The existence, or prospective existence, of a purchaser is a condition precedent to the employment of wealth as capital; and the quantity of money or wealth

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[5]*Loc. cit.*

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> for which they will be exchangeable,--in other words, the demand and its money-measure, governs the quantity of wealth used from time-to-time in production,--whatever may be the quantity of wealth applicable to . . . such a purpose, the quantity of labour seeking employment, and the quantity of suitable raw material, available to the producer . . . . The estimate of the demand in the producer's mind . . . governs the quantity of wealth or capital (using the terms as synonymous) which is from time to time employed in productive operations.[6]

For Longe, then, the demand for output determines how much of his wealth the entrepreneur will use productively and how much any individual capitalist would use to employ labor. The total amount expended would not depend on a pre-existing wages fund, but on the extent of aggregate demand for commodities.

The position that the demand for commodities is really a demand for labor is in contradiction to Mill's teaching. In his Principles Mill was unequivocal on this point:

> The demand for commodities is not a demand for labour. The demand for commodities determines in what particular branch of production the labour and capital shall be employed; it determines the direction of labour, but not the more or less of the labour itself, or of the maintenance or payment of labour. The demand for commodities is a consideration of importance rather in the theory of exchange than in production. Looking at things in the aggregate, and permanently, the remuneration of the producer is derived from the productive power of his own capital.[7]

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[6] Ibid., p. 44.

[7] John Stuart Mill, Principles of Political Economy, 5th edition, Vol. 1 (New York: D Appleton and Company, 1865), p. 114.

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It should be pointed out that Mill did not deny that the production of commodities involved the employment of labor; Mill's argument was simply that expenditures on labor services resulted in a larger total demand for labor than did direct expenditure on commodities. Nor did Mill deny that labor was required for the production of commodities. By reasserting the concept of derived demand, therefore, Longe did not demonstrate a fallacy in Mill's position, and was, in fact, wide of the mark. In modern terminology, what Mill was saying is that labor is a substitute in consumption for commodities. What is more, since laborers directly employed in providing services probably spend their income on commodities anyway, the demand for labor derived from the production of commodities does not give rise to a direct demand for labor in addition to derived demand.

Mill's proposition can be reformulated into the interesting theorem that the demand for labor is greater if the demand of consumers is directed toward more labor intensive satisfaction. Given the technical conditions of production, the relative shares in the national income between labor and capital depends on the preferences of the community as between relatively labor-intensive and relatively capital-intensive types of goods. Factor owners have an interest in demand being directed to those industries that use their factors was simply that

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The demand for commodities, therefore, (that is, relatively capital using types of goods) is not the demand for labor (that is, relatively labor intensive types of goods).[9]

Actually, there is a more serious objection to Longe's "refutation" of Mill at this point. For his argument seems completely irrelevant to the central question of the wages fund since it did not come to grips with the problem of whether wages were advanced out of capital. Longe treated the wages fund as though it were a fund of money used in the employment of labor. If this is a correct interpretation of Longe, it means that he took Mill in his simplest meaning. If Mill's wages fund theory referred to money in the hands of employers available for paying money wages, the logical corollary of course (and the one that Longe naturally drew) was that there was no predetermined fund. Since Mill took great pains to

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[8]See Wolfgang Stolper and Paul Samuelson, "Protection and Real Wages," Review of Economic Studies, Vol. IX (Nov., 1941), pp. 58-73. Reprinted in American Economic Association, Readings in the Theory of International Trade (Philadelphia: The Blakiston Co., 1949), pp. 333-358.

[9]Another way of saying this is that the employment multiplier is greater if the expenditure is for relatively labor-using items. Furthermore, if it is the case that the marginal propensity to consume from labor income is greater than from capital income, the conclusion is even stronger. See Harry G. Johnson, "Demand for Commodities is not Demand for Labour," Economic Journal, Vol. LIX (Dec., 1949), pp. 531-536.

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talk in real terms, Longe's objection cannot be taken seriously.[10]

Longe rejected the second assumption of the wages fund theory (laborers constitute a body among whom the whole is distributed by competition) by pointing out that laborers as a class consist of a number of different groups of workers having different skills and abilities. Workers do not compete across such group lines. If an employer is able to hire labor of a given kind and of a certain skill at a lower wage than he would otherwise pay, there is no way for this saving to get into the hands of other employers for distribution to the rest of the work force. Thus, there is no definite wages fund:

> How could the shoemakers compete with the tailors, or the blacksmiths with the glass-blowers? Or how should the capital which a master-shoemaker saved by reducing the wages of his journeymen get into the hands of the master-tailor? Or why should the money, which a reduction in the price of clothes enables the private consumer to spend in other things, go to pay or refund the wages of any other class of labourers belonging to his own

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[10]The same can be said of Henry D. Macleod. In 1858 Macleod published a book in which the wages fund theory comes in for discussion as a periperal notion to the main subject of the work: deposit creation and banking. Macleod agrees with Longe that the demand for commodities determines the amount that will be paid in wages, but he stressed the effect of bank credit expansion in enlarging the "wages fund." In Macleod's treatment the source of wages as simply money funds is stated in its baldest form. See Henry D. Macleod, The Elements of Political Economy (London: Longmans, Brown, Green, Longmans and Roberts, 1858).

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> country? It would clearly be just as likely to be spent in the purchase of foreign wine or in a trip to Switzerland.[11]

This objection is a specious one, of course, since the wages fund theory did not purport to be a theory of the wages of different laborers, but to explain the average wage rate. Longe's objection to the second assumption of the theory is not a very powerful one.

Longe's rejection of the third assumption (the wages fund is only a particular application of supply and demand theory to the determination of wages) is more interesting. He questions whether the general law of supply and demand has anything to do with the wages fund. Mill, of course, had conceived of the determination of wages as simply an application of the supply and demand apparatus to the labor market. Mill argued that the quantity demanded varied with prices and price must be such that the quantity demanded just equals the quantity supplied.[12]

But to Longe, the wages fund theory postulated a relation between supply and demand quite different from Mill's interpretation of that relationship. He argued that in the wages fund theory, demand in relation to labor means the

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[11]Longe, _op_. _cit_., p. 53.

[12]Mill, _op_. _cit_., Vol. I, p. 549.

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quantity of capital offered, not the quantity of labor demanded. The ratio is the simple one of comparing a given quantity of offered capital with a given quantity of labor in the market; it is not the Millian ratio of ascertaining at what price the quantity of labor demanded will be equal to the quantity of labor supplied. Longe pointed out that in the wages fund theory supply and demand were fixed. Supply was the number of laborers; demand was the quantity of circulating capital. When the two were brought together the average or general rate of wages was determined. Hence there is no play for a varying demand and no possibility of more than one point of equilibrium. Longe's argument is that demand is being used in two different senses: in the conventional sense of a varying quantity demanded at different prices, as opposed to the wages fund sense of a fixed and given amount. Longe took Mill severely to task for this confusion: "Mr. Mill leaves it to his readers to reconcile, if possible, the two uses of the term 'demand' and to extricate him from a difficulty, the solution of which would have discovered the error of his theory of wages, and the unreality of the entire system on which that theory was based."[13]

But this objection cannot hold up, although it is the

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[13] Longe, op. cit., pp. 34-35.

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one to which more space has been given in the wages fund debates than any other. We shall have to wait until Chapter VII to demonstrate that the wages-fund doctrine, when taken with the other postulates of the classical economics, is indeed analyzable in terms of demand and supply in which schedules can be derived and a determinate equilibrium established with chances for variation in that equilibrium. Neither Longe nor Thornton saw this possibility. But when the classical system is seen as a sort of aggregative general equilibrium model in which everything depends on everything else, the confusion is cleared up.

Thornton's Attack on the Wages Fund Theory

It might be said of Francis Longe's Refutation what David Hume said of his Treatise of Human Nature: it "fell dead-born from the press without reaching such distinction as even to excite a murmur among the zealots." But in 1869, only three years after Longe's attack, there appeared William Thomas Thornton's volume, On Labour: Its Wrongful Claim and Rightful Dues, Its Actual Present and Possible Future. The book had a curious effect on John Stuart Mill, and is generally credited with the destruction of the wages fund theory. Thornton, unlike Longe, was a professional economist. He was a close friend of Mill and well-known by his earlier publications; he was able

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was able to command a wide and attentive audience. Nevertheless, it appears that Longe's criticism was far more substantial than that of Thornton's.

Thornton admitted that his motive in attempting to destroy the wages fund theory was a practical one. He wanted to make way for reform in the conditions of the poor of England.[14] Unlike Longe, Thornton accepted all of the assumptions on which the wages fund theory was based, except for one: he accepted the notion that wages were paid out of capital, and did not question the underlying assumption of the time-consuming nature of the capitalist productive process. The only point he denied was that the wages fund was at any given time a definite and determined amount. He argued that there was no definite wages fund clearly identifiable in the general wealth of the economy, all of which was destined to be paid out in wages. He made the same point as Longe: Any given capitalist at his discretion may spend more on himself, and invest less, or *vice versa*. If one prospective employer can do this, they all can; if the fund is so indefinite it cannot form the denominator for which laborers are the numerator. The wages fund can be greater or less within wide limits and

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[14]William Thomas Thornton, *On Labour: Its Wrongful Claim and Rightful Dues, Its Actual Present and Possible Future* (London: Macmillan and Company, 1869), p. ii.

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hence, being indeterminate, cannot yield the average rate of wages. The whole of Thornton's inquiry rests on the assumption that money funds of employers constitute the real and important capital applied to the payment of wages.

Thornton first marshalled his forces to destroy the entire theory of supply and demand. He was well aware of his temerity in attacking a principle so firmly founded in economic theory. But he rashly went ahead "in opposition to preeminent authority and universal credance."[15] His own reluctant feelings were well expressed:

> I find myself in collision with Mr. Mill, and feeling in consequence a little as Saul of Tarsus might have felt, if, while sitting at the feet of Gamaliel, he had suddenly found himself compelled by a sense of duty to contradict his master.[16]

Thornton believed that he could justify his audacity only if he could make good his case and prove his assertions. This could be done, he believed, by showing examples where supply and demand did not determine price; in which, though demand exceeded supply, price did not rise, or an equilibrium where the quantity offered and quantity demanded were not equal. In order to make a cogent argument he thought he had only to show a single exception, for:

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[15] Ibid., p. 45.

[16] Ibid., p. 52.

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> a scientific law admits of no exceptions whatever; one single exception suffices to deprive it of all legal character. If one single instance could be found or conceived in which water failed to seek its own level, that water seeks its own level would cease to be a law.[17]

Thornton, therefore, adduces case after case in which he believes the determination of price by supply and demand does not hold. In his opinion he covered the field of possible cases. The first instance in which he thinks he found a contradiction of the principle of supply and demand was the Dutch auction:

> When a herring or mackeral boat has discharged on the beach, at Hastings or Dover, last night's take of fish, the boatmen, in order to dispose of their cargo, commonly resort to a process called a Dutch auction. The fish are divided into lots, each of which is set up at higher price than the salesman expects to get for it, and he then gradually lowers his terms, until he comes to a price which some bystander is willing to pay rather than not have the lot, and to which he accordingly agrees. Suppose on one occasion the lot to have been a hundredweight, and the price agreed to twenty shillings. If, on the same occasion, instead of the Dutch form of auction the ordinary English mode had been adopted, the result might have been different. The operation would then have commenced by some bystander making a bid, which others might have successively exceeded, until a price was arrived at beyond which no one but the actual bidder could afford or was disposed to go. That sum would not necessarily be twenty shillings; very possibly it might be only eighteen shillings. The person who was prepared to pay the former price might very possibly be the only person present to pay even so much as the latter price; and, if so, he might get by English auction for eighteen shillings the fish for which at Dutch auction he would have paid twenty shillings. In the same market, with the

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[17] _Ibid_., p. 50.

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> same quantity of fish for sale and with customers in number and every other respect the same, the same lot of fish would fetch two very different prices.[18]

Thornton considered this example the exception that destroyed the rule. However, clearly the law of supply and demand is made of sterner stuff. Far from showing that supply and demand do not determine price, he had shown only that the law could be consistent with two different prices in two different markets. In his example, supply and demand are equal at twenty shillings in the Dutch market and equal at eighteen shillings in an English market. But supply and demand are equal at equilibrium whether the market be Dutch or English. And in order to show that the prices would be different even in different markets, Thornton has had to make some rather unlikely assumptions. He had to assume that the customer who was prepared to pay twenty shillings for the fish was the only person who was willing to pay even so much as eighteen shillings. If we could combine the two different markets into one diagram, we would have a case where the demand curve for fish is infinitely inelastic between twenty and eighteen shillings. But the point is that even if there is a section on the curve in which price may vary without a corresponding change in the quantity demanded, the condition of equality between supply and demand at the equilibrium price still holds.

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[18] Ibid., pp. 47-48.

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Thus Thornton has in no way disposed of the principle.

Thornton made another argument to obliterate the principle of supply and demand, an example no less fatuous than the first:

> Suppose two persons at different times, or in different places, to have each a horse to sell, valued by the owner at £ 50; and that in the one case there are two, and in the other three persons, of whom every one is ready to pay £ 50 for the horse, though no one of them can afford to pay more. In both cases supply is the same, viz. one horse at £ 50; but demand is different being in one case two, and in the other three, horses at £50. Yet the price at which the horses will be sold will be the same in both cases, viz. £ 50.[19]

It should be noted that in his first example Thornton thought he had demolished the law of supply and demand because several prices fulfilled the condition of equality between supply and demand. In this case he believes the law is undermined because no price fulfills the condition. At £ 50 there is a demand for as much as three times the quantity supplied. But at any amount over £ 50 there is no quantity demanded at all. What Thornton has constructed is a demand schedule consisting of a single point. In his example he does not make it possible for supply and demand to equalize at equilibrium. Clearly if the particular case chosen does not permit supply to equal demand, it will be greater or less.

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[19] Ibid., p. 49.

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He has not allowed price to fulfill the condition by enforcing a kind of price control in which no one bids the price up even though demand exceeds supply.

But Thornton (understandably) was not satisfied with the two previous demonstrations and chose one more example to clinch his case:

> When a tradesman has placed upon his goods the highest price which anyone will pay for them, the price, of course, cannot rise higher, yet the supply may be below the demand. A glover in a country town, on the eve of an assize ball, having only a dozen pairs of white gloves in store, might possibly be able to get ten shillings a pair for them. He would be able to get this if twelve persons were willing to pay that price rather than go ungloved. But he could not get more than this, even though, while he was still higgling with his first batch of customers, a second batch, equally numerous and neither more nor less eager, should enter his shop, and offer to pay the same but not a higher price. The demand for gloves, which at first had been just equal to supply, would now be exactly doubled, yet the price would not rise above ten shillings a pair. Such abundance of proof is surely decisive against the supposition that price must rise when demand exceeds supply.[20]

This example is similar to the illustration of the horse which is demanded at £50 and not a farthing more by anyone who is willing to buy him. Thornton here assumes that the twenty-four customers for the gloves place the extreme limit of what they are willing to pay. He allows no bidding among the customers and all are willing to pay the exact same amount,

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[20] Ibid., p. 52.

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no more, no less. Since Thornton has chosen such a peculiar case and made all of the necessary assumptions to keep price from rising, it is not too surprising that the increased demand--which is only a point, and not a schedule,--does not cause an increase in price.

Apparently not convinced by his own arguments, Thornton adds _obiter_ _dicta_ that even if the law of supply and demand were literally true it would be of small significance:

> Even if it were true that the price ultimately resulting from competition is always one at which supply and demand are equalized, still only a small proportion of the goods offered for sale would actually be sold at any such price, since a dealer will dispose of as much of his stock as he can at a higher price, before he will lower the price in order to get rid of the remainder.[21]

What Thornton seems to be saying is what no economist had ever denied: equilibrium takes time to work itself out since it is a process that works through the higgling of the market. Thornton's disappointing conclusion is that "it is competition, and not supply and demand, that regulates price."[22] When competition does not exist, and when monopoly power is exercised by a single seller or combination of sellers, the selling price is not determined by competition. Does this mean price is not determined by supply and demand? What Thornton

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[21] _Ibid._, p. 53.

[22] _Ibid._, p. 61.

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should have said is that although equilibrium for the monopolist may be represented by the same graphic device of intersecting lines which is employed for the case of competition, there is no equating of supply and demand at the monopoly price.[23]

In destroying the foundation of supply and demand theory, Thornton believed that the theory of wage determination also had been undermined, since the wages fund theory was simply the application of supply and demand analysis to the labor market. Yet, Thornton complained, the price of labor is scarcely ever mentioned without provoking a reference to the "inexorable," the "immutable," or the "eternal laws of supply and demand. Thornton says, however, that no such laws can or do exist, a fact he believed he had proved. Therefore, "the progress of enquiry need no longer be barred by this legal bugbear."[24]

The rest of Thornton's argument is simply that employers

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[23]This point was made by Professor Chamberlin: "The instance of monopoly has been chosen as a simple and familiar case in order to free the notion of equilibrium from its associations with the intersection of the demand and supply curves. It will be the purpose of this book to show that most prices involve elements . . . mingled in various ways with competition, and the result is very generally equilibrium prices which do not equilibrate supply and demand." See Edward H. Chamberlin, The Theory of Monopolistic Competition, Seventh edition (Cambridge: Harvard University Press, 1956), p. 15.

[24]Thornton, op. cit., p. 65.

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combine while workers compete, thereby permitting the employer to keep a part of the wages fund for himself. His argument is that the wages fund is indeterminate depending on degrees of monopoly in the market for labor. As he put it:

> Determinateness or indeterminateness is the one point of difference between those who affirm and those who deny the wages fund . . . . If there really were a national fund the whole of which must necessarily be applied to the payment of wages, that fund could be no other than an aggregate of similar funds possessed by the several individuals who compose the employing class of the nation. Does, then, any individual posses such a fund?[25]

As we have already noted, Thornton's answer was that the wages fund is indefinite. The employer may spend more or less for different purposes. This objection contains the same fallacy as Longe's, although it is really even less sophisticated. Thornton takes the wages-fund theory as running to the effect that the money-funds of the employers constitute the real capital used for paying wages. Believing that he had successfully slain the dragon of the wages fund, Thornton went on to a discussion of trade unions as a countervailing power to the monopoly of entrepreneurs.

Thornton's book had an extraordinary effect on John Stuart Mill; extraordinary in the sense that Mill gave it great weight in a review and admitted that "it destroys a

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[25] _Ibid._, p. 85.

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prevailing and somewhat mischievous error."[26] This ponderous review is generally considered to be a complete rejection of the wages fund theory on Mill's part, although Longe's criticism is far more substantial than Thornton's. Certainly it is a curious incident in the history of economic thought that on such flimsy criticism Mill should have given up one of the main pillars on which the classical economic structure rested. One reason for this curiosity might be that as Mill grew older he became more liberal and was exceedingly anxious to get rid of a theory that made it impossible to improve the conditions of the working class. The weak point in this reasoning is that Mill earlier had a better opportunity to reject the theory when Longe sent him a copy of his essay in 1866, an opportunity that Mill neglected to use.

But before taking up Mill's recantation, we must ask a prior question: What is the relation of Thornton's volume to Longe's essay? Neither in Thornton's formal treatise, nor in Mill's review is Longe's name or work so much as mentioned, even though their arguments regarding the indeterminateness

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[26] John Stuart Mill, "Thornton on Labour and its Claims," Fortnightly Review, No. XXIX and XXX (May and June, 1869), pp. 505-518 and pp. 680-700. Reprinted in John Stuart Mill, Dissertations and Discussions, 2nd Edition (London: Longsman, Green, Reader, and Dyer, 1873), pp. 25-85. The above quotation is on page 48.

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of the wages fund and the criticisms of supply and demand were similar.

An interesting sidelight on this mystery has been furnished by Longe. Upon the appearance of Mill's article, Longe had the unsold copies of his pamphlet re-covered with a new title page bearing the date of 1869 and with a prefatory note referring to Mill's retraction. Some years later Longe wrote to Professor Jacob Hollander, of Johns Hopkins University, furnishing some evidence on his relation to Mill and Thornton:

> What I remember of the question is this: I never heard of Mr. Thornton until I saw Mill's review of his book <u>On Labour and its Claims</u> in the <u>Fortnightly</u> for May, 1869. I had sent a copy of my pamphlet to Mill and Fawcett (among many others) in 1866, and it was certainly known to political economists in 1867 and 1868. I never received any acknowledgement of its receipt from either Mill or Fawcett. I had been told that Thornton was an intimate friend of Mill, and that they were in the same office in London--the India House--and that both were writers on economic subjects. I never doubted that Thornton as well as Mill was aware of my pamphlet, and was pleased to find these known writers adopting my views. Being fully occupied with the duties of my new office, I returned to my district in the country and thought no more of the matter. I never heard that Mr. Mill or Mr. Thornton denied that they had seen my pamphlet before their publication in 1869. But I remember being told that Mr. Thornton had said that he had formed the same opinion that I had as to the fallacy of Mill's theory, before my pamphlet was published--which is very probable. After the appearance of Mill's article in the <u>Fortnightly Review</u>, the importance of my "Refutation" was recognized, and the Secretary of the Political Economy Society paid me the compliment of inviting me to meet the members at a club dinner, as a recognition of my authorship of the pamphlet. A little light conversation took place about it, after dinner, but no allusion was made to the

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connection between my "Refutation" and Mill's and Thornton's change of views.[27]

There is no question that Longe's ideas preceded Thornton's. A few months after Longe's essay was published a paper by Thornton appeared in the Fortnightly Review for October, 1866, on "A New Theory of Supply and Demand," in which the dependence of price upon competition rather than supply and demand was emphasized. Thornton indicated that the possibility of raising the price of labor artificially and irrespectively of supply and demand was engaging his further attention. In the Fortnightly Review for May, 1867, Thornton published an article titled, "What Determines the Price of Labour or Rate of Wages?" The question was discussed at length and the conclusion reached that combination among laborers might become effective in raising wages. His first reference to the "fallacy" of the wages fund was made in this article. This was followed in the same journal for October, November and December, 1867, with Thornton's "Stray Chapters From a Forthcoming Work on Labour," dealing with the origins of trade unions. No reference to Longe is made in any of these articles, notwithstanding the fact that Longe published a series of articles in the Fortnightly Review for August and

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[27] Letter of Francis D. Longe to Jacob Hollander. Cited in Jacob Hollander, "Introduction," A Reprint of Economic Tracts (Baltimore: Johns Hopkins Press, 1903), pp. 4-5.

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September of the same year. The articles were called, "The Law of Trade Combinations in France" and dealt with the contemporary situation regarding combination laws in England using France as a cross-reference. In the course of the article Longe discussed the Sheffield strike and the parliamentary inquiry into labor unions. However, Longe made no mention of the wages fund theory in these articles.

Mill's Recantation

Notwithstanding the superficiality of Thornton's effort and its precariously close resemblance to Longe's earlier work, Mill appeared to surrender to it. In a sixty page review of Thornton's volume in the Fortnightly, Mill admitted his errors. His friendship for Thornton is indicated immediately, for he starts out by complimenting him for his "competency" in his two previous works, "Over-Population and its Remedy," and "A Plea for Peasant Proprietors."[28]

It is clear that Mill is unwilling to give up all, however. In mentioning Thornton's discussion of the influence of demand and supply on price he says it is "a real contribution to the science, though, in my estimation, an addition, and, not as the author thinks, a correction to the received doctrine."[29]

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[28] Mill, op. cit., p. 25.

[29] Ibid., p. 26.

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He then proceeds to gently correct Thornton. In retaliation to Thornton's massive attack on supply and demand, Mill restated the theory in the clearest possible terms. Mill shows that demand, to be capable of comparison with supply, must be taken to mean that under perfect competition the ratio which exists between demand and supply is one of equality in equilibrium. If at the market price the demand exceeds the supply, the competition of buyers will drive the price up to the point at which there will only be purchasers for as much as is offered for sale; on the other hand, if the supply exceeds demand, either a part will be withdrawn or the price will be reduced. The law simply states that supply and demand adjust themselves so as to bring about an equality. In Mill's words,

> The law . . . of values, as affected by demand and supply is that they adjust themselves so as to bring about an equation between demand and supply, by the increase of one or the diminution of the other; the movement of price being only arrested when the quantity asked for at the current price, and the quantity offered at the current price, are equal. The point of exact equilibrium may be as momentary, but nevertheless as real, as the level of the sea.[30]

In reference to Thornton's examples Mill justifiably replies with the following sarcasm:

> I confess I cannot perceive that these considerations are subversive of the law of demand and supply, nor that there is any ground for supposing political economists to be unaware that when supply exceeds demand, the two

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[30] Ibid., p. 30.

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> may be equalised by subtracting from the supply as well as adding to the demand.[31]

Interestingly enough, nowhere does Mill completely jettison the wages fund. Indeed at one point he admits adherence to it "with qualifications and limitations necessary to make it admissable."[32] What Mill rejects is the naive form of the doctrine which a careful reading of his Principles will show he never accepted in the first place. Nevertheless, he admits his past involvement with the unsophisticated form of the theory. "I must plead guilty," he says, "along with the world in general" of having accepted the doctrine. At this point Mill conceives of the wages fund theory as postulating a demand curve for labor with an elasticity of unity:

> In this doctrine it is by implication affirmed that the demand for labour must not only increase with the cheapness, but increase in exact proportion to it, the same aggregate sum being paid for labour whatever the price may be.[33]

Mill avers that such a view of the theory is incorrect. There is not a fixed amount of money destined for the payment of labor. The argument should by now be familiar: If the entrepreneur can get his labor cheaper he can afford to spend more on himself.

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[31] Ibid., p. 38.

[32] Ibid., p. 43.

[33] Loc. cit.

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The conclusion that follows is that trade unions can raise wages by forcing capitalists to spend more on labor and less on themselves:

> The doctrine hitherto taught by all or most economists (including myself) which denied it to be possible that trade combinations can raise wages, or which limited these operations in that respect to a somewhat earlier attainment of a rise which the competition of the market would have produced without them--this doctrine is deprived of its scientific foundation and must be thrown aside. The right and wrong of the proceedings of Trades' Unions becomes a common question of prudence and social duty, not one which is premptorily decided by unbending necessities of political economy.[34]

Mill is now free to discuss the issue closest to his heart--trade unions. To Mill, the question of the justification of trade unions cannot be decided by natural law, and must fall under the jurisdiction of the moral law. The question is an ethical one: Are there any rights of labor or capital that are violated if one party pushed its demands to the extreme limit of economic possibility? Mill handles this question in terms of utilitarian philosophy. His answer is that the terms of the contract are the only rules of justice between employer and employee. No one is under any obligation of justice to employ labor at all; nor is anyone bound to pay any given wage. If wages are so high as to leave no profit to capital then the workers would simply "be killing the goose to get at the

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[34] Ibid., p. 47.

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eggs."[35] Nor should employers be considered wrong in trying to keep wages down, or unions in trying to get wages up. Mill even argues for a closed shop and rejects the contention that compulsory union membership is an infringement on liberty.[36]

Mill's recantation is curious for a number of reasons. For one thing, by accepting Thornton's strictures, Mill has taken the wages fund theory as meaning a money fund, and this is how he was brought to admit its indeterminateness. In his Principles he specifically stated that such a view is fallacious, remarking that the "error is produced by not looking directly at the realities of the phenomena and attending only to the outward mechanism of paying and spending."[37]

Longe and Thornton had both committed the error which Mill had warned against in the Principles. Now Mill himself appears to have fallen into the hopeless confusion between

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[35] Ibid., p. 66.

[36] Mill would doubtless have been an opponent of "right-to-work" laws, as the following passage indicates: "As soon as it is acknowledged that there are lawful, and even useful, purposes to be fulfilled by Trades' Unions, it must be admitted that the members of unions may reasonably feel a genuine disapprobation of those who profit by the higher wages or other advantages that the unions procure for non-unionists as well as for their own members, but refuse to take their share of the payment, and submit to the restrictions, by which those advantages are obtained." Ibid., p. 71.

[37] Mill, op. cit., p. 124.

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There are a number of possible explanations for Mill's unnecessary retraction. He was a personal friend of Thornton, and perhaps he was anxious to do Thornton a good turn. A favorable review from the great John Stuart Mill in which the master admitted his errors and claimed to have been set straight by a younger and far less eminent man would doubtless catapult that relatively obscure author into prominence. But that could not be the sole explanation.

The major reason is probably that Mill himself never quite understood the wages fund theory to begin with. There are many murky passages in the Principles in which Mill seems to conceive of the theory in money terms even though at other places he assiduously warns the reader against such a confusion. There is some indication that he had simply accepted the Ricardian system of economics without thinking it through. When taken with the fact that Mill had become increasingly desirous of reform in his later years and sought an excuse to repudiate the wages fund doctrine, we have a plausible explanation for his recantation.

It is worth noting that Mill's repudiation of the theory is much over-rated. Two years after his review of Thornton's book, he published his seventh edition of the Principles. It is not without significance that nowhere in this rev

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this revision does he alter his previous views on the doctrine. Indeed the whole controversy is dismissed in a footnote in the preface, remarking that any revisions in the wages fund theory were "not yet ripe for incorporation in a general treatise on Political Economy."[38] His refusal to insert his reversal into his magnum opus suggests that Mill was uncertain that his revision was at all justified or that all possible qualifications had been made. As one economic historian has recently pointed out, "the Principles is from many points of view a conservative work, including as it did nothing which Mill believed in any way dubious."[39]

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[38] John Stuart Mill, Principles of Political Economy (London: Longman, Green and Company, Seventh Edition, 1871), p. xxxi.

This aspect of Mill's recantation apparently escaped the notice of two recent writers on the subject. Their statement that the wages fund theory "was repudiated by J. S. Mill in a revised edition of his Principles" is simply incorrect. See A. F. Young and E. T. Ashton, British Social Work in the Nineteenth Century (London: Routledge and Kegan Paul, 1956), p. 19.

[39] Lawrence C. Hunter, "Mill and Cairnes on the Rate of Interest," Oxford Economic Papers, Vol. II (February, 1959), p. 85.

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CHAPTER VI

RESTATEMENTS AND REBUTTALS

In 1874 an economist regarded as the last in the direct line of the English classical school published a rehabilitation of the wages fund theory. Since as we have seen, the criticisms of the doctrine had been rather superficial, he did not have too difficult a task. The writer, a professor of political economy in University College, London, was John Eliot Cairnes. His reconstruction was published one year after the death of John Stuart Mill.

Cairnes's Restatement: The Residual Theory of Wages

Cairnes was singularly unimpressed by the arguments of Longe and Thornton, nor did Mill's retreat in the face of the latter's attack change his opinion that the wages fund theory, when properly stated, was valid. Referring to Mill's conversion, Cairnes said:

> Such an event, it must be frankly conceded, affords an extremely strong presumption in favor of the soundness of Mr. Thornton's view. Mr. Mill had himself been, if not the originator of the wages fund doctrine, certainly its most able and effective expositor; and the doctrine, supported by his argument, and implicated in his general theory, he has been led by Mr. Thornton's reasoning to discard. I say, it can not be denied that such a circumstance constitutes a weighty presumption in favor of Mr. Thornton's view; but I must also contend that

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> it amounts to no more than a presumption. In the freedom of science, I claim for myself the right of examining the doctrine on its merits. I must own myself unconvinced by Mr. Thornton's reasonings, strengthened and enforced though these have been by the powerful comments of Mr. Mill. Not indeed that I am prepared to defend all that has been written on what, for convenience, I may call the orthodox side of the question, but I believe the view maintained by those who have written on that side, and pre-eminently the view maintained by Mr. Mill himself--taking it as set forth in his original work, not as explained in his retraction--to be substantially sound, though needing, as it seems to me, at once fuller development and more accurate determination than it has yet received.[1]

Cairnes approached the problem as had Longe, Thornton, and Mill: from the point of view of the capitalist with respect to the scale of his operations. The question to which he addressed himself was the determinateness of the wages fund. To Cairnes, the wages fund was a determinate, and not a chance, amount. He pointed out that all of the critics had based their reasoning on the belief that a capitalist does not have to expend a given amount in wages. All Cairnes had to do to counter such an argument was point out that it assumed human

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[1] J E. Cairnes, Some Leading Principles of Political Economy Newly Expounded (New York: Harper & Brothers, 1874), p. 158. The refusal of other economists to be intimidated by Mill's recantation is evidenced by a note appended to the second edition of Stirling's attack on labor unions. There he said he could still "build on a doctrine which, on Mr. Mill's own showing, has up till May, 1869, been sanctioned by all or most economists, including himself." James Stirling, Trade Unionism (Glasgow: James Maclehose and Sons, second edition, 1869), p. 56.

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behavior is random. To Cairnes the real issue was what an individual capitalist in fact did in the real world. Cairnes reached a high degree of sophistication by recognizing that economic law does not tell us what people must do, but what man, in a given cultural context, does with a high degree of probability. In Cairnes's words:

> A "law" in Political Economy does not mean either legal coercion or physical compulsion, or yet moral obligation; nor does the "determination" expressed in economic law mean the necessary realization of certain results independently of the human will. What an economic law asserts is, not that men must do so and so whether they like it or not, but in given circumstances they will like to do so and so; that their self-interest or other feelings will lead them to this result. The predetermination in question is of the sort which leads a hungry man to eat his dinner, or an honest man to pay his debts and depends for its fulfillment . . . upon the influence of certain inducements on the will, our knowledge of what enables us to say how in given circumstances a man will act. It is in this sense that I understand the "predetermination" of a certain portion of the wealth of a country to the payment of wages. I believe that, in the existing state of the national wealth, the character of Englishmen being what it is, a certain prospect of profit will "determine" a certain proportion of this wealth to productive investment; it is in this sense that I understand the "predetermination" implied in the Wages fund doctrine; and against the doctrine so understood I cannot find that there is any thing very formidable in Mr. Thornton's criticisms. They are simply beside the mark--at all events, beside my mark.[2]

Cairnes's point is an ingenious one. He does not see the wages fund theory as asserting that capitalists put aside a specific

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[2] Cairnes, Ibid., pp. 184-85.

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proportion of their wealth with the intention that, regardless of circumstances, it shall be used for paying wages. He views the theory merely as stating that so long as capitalists remain capitalists they will strive to invest certain amounts of their wealth in profitable channels, and, therefore, a certain proportion must go for the payment of wages. Assuming the national industries of the economy to be of a certain kind, the proportion of aggregate capital invested in wages is not a matter within the discretion of the individual capitalist. The capitalist maximizes profits, and in order to do so, he must acquire the factors of production, which are three in number: (1) fixed capital, (2) raw materials, and (3) labor. How he distributes his wealth between these three depends on the nature of the industry in which he invests. This determines what the modern day economists would call the technical coefficients of production. Such coefficients are determined by the nature of the national industries:

> The aggregate investment being determined by certain mental and physical conditions, and the national industries being such as they are, there is but one distribution of capital invested which is consistent with the greatest advantage to the investors. That distribution involves a certain proportion spent in the payment of wages, and it is to this result that capitalists, if true to their own interest, *must* conform their conduct.[3]

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[3] *Ibid*., p. 187.

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Given available resources and the state of technology, Cairnes views the economy as a Leontief type system in which inputs are employed in rigidly fixed proportions, with the use of these inputs expanding pari passu with output. What Cairnes was arguing was that a manufacturing process that is labor-intensive cannot at that time offer an option of a capital intensive alternative. If, in the short run, there are rigidly fixed proportions for capital and labor inputs, as the Cairnes model assumes, the demand for labor is predetermined.

So far so good. At this point, however, Cairnes takes another tack and developed a line of reasoning that was far from satisfactory. To answer the question of what determines the proportion in which the factors of production are combined in the economy, Cairnes utilized what Professor Hayek later called the "Ricardo effect." On the one hand Cairnes assumed that fixed proportions of inputs were determined by the nature of the national industries, while on the other hand, he spoke of changes in the prices of the factors which would alter the factor proportions.

Cairnes argued that the wages fund was determined not only by the nature of the national industries and the total capital of the country, but also by the supply of labor. An increase in the supply of labor would cause a fall in the rate of wages. So much is clear. But now Cairnes added a more dubious

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dubious proposition: namely, the fall in the rate of wages meant a fall in the wages fund. For reasons he does not explain, Cairnes assumed a relatively inelastic demand for labor, since only under such an assumption would the total wage bill fall, given a decline in the wage rate. This is precisely what he imagined, as the following quotation indicates:

> An unexpected consequence results from this play of economic forces, namely, that an increase or diminution in the supply of labor, where it is of a kind to be employed in conjunction with fixed capital and raw materials, acts upon the rate of wages with a force <u>more than proportional</u> to the increase or diminution in the supply; for it tells at the same time upon both the factors on which the result depends, modifying them in opposite directions--the fund undergoing diminution as the number of those who are to share it is increased; or, on the other hand, expanding as the sharers become fewer.[4]

Unfortunately Cairnes used a simple arithmetical example involving a hypothetical entrepreneur dividing his money funds between the three kinds of capital: fixed capital, raw materials, and wages.[5] The example shows that when the supply of labor is plentiful, the wage rate falls, and a smaller amount of cash goes to labor. As already observed, this would be true only if the demand for labor were inelastic, so that increases in supply would decrease the total expenditure

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[4]<u>Ibid</u>., p. 174.

[5]In Cairnes, Ricardo's "circulating capital," that is, "capital destined to the maintenance of labor" has dropped out of use. See Chapter II, <u>supra</u>.

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for the input. Cairnes extends his example to the economy as a whole. The fallacy of composition aside, the most important objection to Cairnes's argument is that, like his predecessors, he was thinking only in money terms. Cairnes was on much firmer ground when he discussed the indeterminacy of the wages fund in terms of cultural factors.

From the foregoing analysis Cairnes drew an unhappy conculsion: in the progress of society the wages fund constitutes a diminishing percentage of total capital. This was true, he believed, because technical progress caused fixed capital to constitute a larger and larger proportion of total capital, and the wages fund a diminishing proportion of the whole. The conclusion is somewhat Marxian, the distribution between property and labor becomes increasingly unequal and the condition of workers becomes increasingly miserable:

> We may notice what amounts to an economic derivative law in the inductive development of progressive communities. The modifications which occur in the distribution of capital among its several departments as nations advance are by no means fortuitous, but follow on the whole a well-defined course, and move toward a determined goal. In effect, what we find is, a constant growth of the national capital, accompanied with a nearly equally constant decline in the proportion of this capital which goes to support labor. This is the inevitable consequence of the progress of the industrial arts, the effect of which is to cause a steady substitution of the agencies of inanimate nature for the labor of man. It is indispensable . . . to keep constantly in view the tendency of the wages fund, with the progress of wealth and art, to lag behind the advances of the other factors of the national capital. The fact is one of very great

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> significance, and highly deserving the consideration of those who speculate on social subjects . . . . For it involves a tendency toward increased inequality in the distribution of wealth.[6]

After reconstructing the wages fund theory, Cairnes went on to discuss whether trade unions could raise aggregate wages. He found the biggest obstacle to trade unionism not in a rigid predetermined wages fund, but in the tendency for profits to be within a "hands-breadth" of the minimum. He believed that any artificial increase in wages decreased the rate of profit, thereby causing a cessation of capital accumulations, so that ultimately wages must again fall. So if the wage rate were increased by labor unions, the rate of profit would fall and accumulation cease. The decline in investment leads to capital consumption, a diminution in society's fixed stock, and a reduced demand for labor and unemployment. He confessed that he was "unable to see how, in the presence of these considerations, founded as they are on uncontrovertible facts, the larger pretension of Trades Unionism can be sustained."[7]

The significance of Cairnes's analysis is not that he reconstructed the wages fund theory on a particularly sound

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[6] *Ibid.*, pp. 176-77.

[7] *Ibid.*, p. 218.

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base, but that his argument represented a shift in emphasis from the older Ricardian theory. Cairnes implied that wages, not profits, are a residual income. In Ricardo's schema, rent is a differential return; at the margin the value of output is divided between capitalist and laborer; the worker receives the going wage, and the capitalist the rest. Profits in Ricardo's system are a residual return. But to Cairnes, however, it is apparently the reverse: what the capitalist gets is determined by the minimum rate of profit necessary to induce him to produce, and wages become the residual return. The rate of profit is determined by the extent of the field for investment and the laborer gets what is left. According to Cairnes, capital accumulation adjusts more rapidly to the profit rate than population adjusts to the wage rate, since he claims it takes a generation to substantiate a trend in population, whereas capital accumulation can adjust quickly to a higher rate of profit. Such a view of things substitutes an optimistic outlook for Ricardo's pessimism, since if wages are a residual, the worker, rather than the capitalist, stands to gain from economic progress. Nevertheless Cairnes is more of a Cassandra than a Pollyanna when it comes to the future of the working class. Two ineluctable forces work to militate against the benefits derived from technological progress: (1) the Malthusian principle of population, and (2) the fact that fi

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that fixed capital constitutes an increasing proportion of total capital. The net result is that workers divide an increasing wages fund but find it is a decreasing proportion of total capital. The policy conclusion which follows is that laborers should limit their numbers, cease to be wholly dependent on wages, and become a member of the capitalist class through producer cooperatives.

Although usually considered a classical economist, the truth is that at least in one respect Cairnes was quite heterodox. He made wages a residual share, instead of profits, and developed a theory in which the standard of living was a result, rather than a cause, of wages. If workers limit their numbers, they too can gain the fruits of progress. From the point of view of the laboring class, this theory was far more optimistic than that of Ricardo.

The Criticisms of Cliffe-Leslie

The publication of Cairnes's volume was the occasion for another eminent economist to become involved in the wages fund dispute. In 1874, an economist whom Mill had once referred to as "one of the best living writers on applied political economy"[8] reviewed Cairnes's book in the Fortnightly

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[8] John Stuart Mill, "Professor Leslie on the Land Question," Fortnightly Review (June, 1870), p. 86.

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Actually, Cliffe-Leslie's argument added nothing new, and can be summed up briefly: according to Cliffe-Leslie the concept of the wages fund and the average rate of wages were mere fictions that have done harm to political economy since such aggregates hide the real causes which govern the determination of wages. His main objection was that "in every country, instead of an average or common rate of wages, there is a great number of different rates, and the real problem is, What are the causes which produce these different rates?"[10]

As we have seen, this objection had already been made by Longe. Both Longe and Cliffe-Leslie seemed unable to conceive of an average rate of wages, unless that average is realized in each individual instance of which the average is composed. The criticism is hardly convincing for two reasons: (1) the wages-fund theory never purported to explain individual

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[9]The writer, Thomas Edward Cliffe-Leslie had a background similar to Mill's. Born in 1827, he was taught Latin, Greek and Hebrew at an unusually early age by his father. He graduated Trinity College, Dublin, where one of his classmates was J. E. Cairnes. In 1853, Cliffe-Leslie was appointed Professor of Jurisprudence and Political Economy in Queens College, Belfast, a post he held until 1869 when he was appointed Examiner in Political Economy in the University of London.

[10]Thomas Edward Cliffe-Leslie, "John Stuart Mill' The Academy (June 5, 1875). Reprinted in Cliffe-Leslie, Essays in Political Economy (Dublin: Hodes, Friggis, and Company, 1888), Second edition, p. 51.

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wages, and (2) the notion of an average rate of wages was as useful as the concept of the general level of prices (which is only an average of all individual prices). It is curious, therefore, that Cliffe-Leslie found it all right to talk about a change in the value of money (which, of course, is another name for a change in the price level). An average wage rate is no more, and no less, an absurdity than the notion of a general price level.

For this reason Cliffe-Leslie subscribes completely to Mill's recantation:

> History affords scarcely another example of a philosopher so ready to review his positions, to abandon them if untenable, and to take lessons from his own disciples, as the discussion, for instance, of Mr. Thornton's book "On Labour" shows Mr. Mill to have been.[11]

Francis A. Walker's Attack on the Wages Fund Theory: The Differential Theory Of Profit

By this time it is evident that both the critics and defenders of the wages fund theory approached the problem in terms of the actions of individual entrepreneurs in hiring labor, and the variables that influence their decisions as to how much employment to offer. Furthermore, the analysis

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[11] Cliffe-Leslie, *Ibid*., p. 50.

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conceived of the wages fund almost entirely in money terms. In 1876, two years after Cairnes's reconstruction of the doctrine, an American economist, Francis A. Walker, attempted once again to demolish it.[12] The interesting point is, however, that Cairnes, the theory's defender, and Walker, its detractor, developed almost identical theories of profits and wages. Indeed, if one reads Cairnes and then Walker, and is unaware which author he is considering it is quite possible not to be cognizant of tow different writers. Yet Walker thought his argument disproved the theory, while Cairnes set out to prove it.

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[12] Francis A. Walker was the son of one of the leading American economists of the middle nineteenth century, Amasa Walker. He was born in 1840, attended Amherst, and during the Civil War rose to the rank of brevet-brigadier general. He was an able statistician and at the age of twenty-nine was placed in charge of the Bureau of Statistics. In 1872 Walker was appointed professor of political economy and history at Yale College, a post he held until he became president of the Massachusetts Institute of Technology, in 1881. Walker died in 1897. See James Phinney Munroe, _A Life of Francis Amasa Walker_ (New York: Henry Holt and Company, 1923). It is perhaps worth nothing that in his widely used text, _The Science of Wealth_, Amasa Walker had used the wages fund theory as an argument against labor unions, doubting their usefulness to raise wages. Nevertheless, he took the position that the law should not supress unions, since the laborer was not obligated to act as an isolated individual any more than was the capitalist. The role of labor associations was legitimate if they acted as "friendly societies" that helped members obtain employment, provided sick benefits, and engaged in education and temperance reform. See Amasa Walker, _The Science of Wealth_ (Boston: Little, Brown & Co., 1874), Seventh Edition, p. 269.

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Walker developed a profit theory similar to Ricardian rent theory. The profits of any entrepreneur result from one or the other, or both, of two circumstances: (1) his unusual abilities, (2) his exceptional opportunities. Just as the differential of returns on land arises as a result of differences in fertility or location, so do entrepreneurs differ with respect to organizational talents and opportunities, and so receive a profit. Just as marginal land yields no rent, the marginal entrepreneur, possessed of least ability and opportunity makes no profits, merely covering his costs of production. Such a notion might be called a differential theory of profits.

Walker was convinced that most profits are the result of superior ability on the part of certain entrepreneurs; as he put it:

> For the perfect temper of business something doubtless of hardness is needed, just as it is the alloy of baser metal which fits the gold for circulating in the hands of men. A little too much sensibility or a little too much imagination is often a sufficient cause of failure in the stern competitions of business. The successful entrepreneur need not even understand the theory of trade, or be a financier in the larger sense of that word. A kind of subtle instinct often directs the movements of the ablest merchants, bankers and manufacturers. They know that the market is about to experience a convulsion, because they know it; just as the cattle knew that a storm is brewing. They not only could not give reasons intelligible to others for the course they take; they do not even analyze their intellectual processes for their own satisfaction.[13]

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[13] Francis A. Walker, The Wages Question (New York: Henry Holt and Company, 1876), pp. 251-52.

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Technical skill and commercial knowledge are the special talents of the entrepreneur. Varying degrees of proficiency in these abilities differentiate capitalists and it is this differential advantage which is the source of profits. Since the price the consumer pays for the product must cover the costs of the marginal entrepreneur, the latter receives no profit while the supra-marginal producer received greater profits. Hence profit is a pure surplus created by the exceptional ability of entrepreneurs.[14]

Walker's criticism of the wages fund theory related not to the source out of which real wages are paid, but to the variables that determine the rate of wages. He agreed, for the most part, that wages are advanced out of capital, the reason being that production is a time-consuming process that makes it impossible for workers to wait for wages until the product is sold; in the interim, workers must be paid out of capital. The significant question remains; however, what determines the amount of wages that capitalists pay? Walker claimed, in this respect, that capitalists must recoup from the sale of their output what has been paid out in wages. Hence, the value of the output determines how much the

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[14]Walker's theory of profits was characterized by an eminent economic historian as one of the "wildest creations of nineteenth century economic thought." See Edwin Cannan, A Review of Economic Theory (London: King, 1929), p. 358.

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entrepreneur can pay for wages, under competition, and how much he does in fact pay. An entrepreneur will hire workers so long as prospects for profit exist and capital will not be used to hire labor if anticipated profits disappear:

> The employer purchases labor with a view to the product of the labor; and the kind and amount of that product determine what wages he can afford to pay. He must, in the long run, pay less than that product, less by a sum which is to constitute his own profits. If that product is to be greater, he can afford to pay more; if it is to be smaller, he must, for his own interest, pay less. It is, then, for the sake of future production that the laborers are employed, not at all because the employer has possession of a fund which he must disburse; and it is the value of the product . . . which determines the amount of wages that can be paid, not at all the amount of wealth which the employer has in possession or can command. Thus it is production, not capital, which furnishes the motive and the measure of wages.[15]

Walker says, therefore, that in the distribution of the product of society, first rent is deducted, and this is a pure surplus, with the rest of the product available for wages and profits. As noted earlier profits are a differential and wages the residual. In Walker's analysis, there is no tendency for profits to be equalized through the forces of competition. What competition does is to bring it about that the least able entrepreneur makes no more than a return to such supervisory services as he performs. The superior entrepreneur in point

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[15] _Ibid_., p. 130.

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The essential point of Walker's argument, therefore, is that the demand of consumers for output determines the wage. Wages are advanced out of capital, as all wage fund theorists contended, but in a "philosophical" sense they are paid from current product, since how much is advanced depends on the market for the output. Therefore, wages are conceived as coming out of current product, and not out of capital.[17]

There is no denying that Walker's book was extremely influential. Taussig said that "the general theory of distribution set forth by Walker gained an acceptance and influence probably greater than that of any writings in the English tongue since the days of the younger Mill."[18]

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[16] Walker is one of the first economists to distinguish between profits and interest on purely functional grounds: he refers to the investing capitalist who receives interest as a return for abstinance, and to the acting entrepreneur who receives profits. It might be suggested that his reason for doing so results from the fact that by his day the modern corporation had become prominent on the business scene. In the corporation the distinction between management and ownership is separated out, with consequences that Berle and Means were to draw many years later. See A. A. Berle and G. C. Means, The Modern Corporation and Private Property (New York: The Macmillan Company, 1933).

[17] It should be noted that Walker's argument, in its denial of Mill's principle that the demand for goods does not determine the demand for labor, is similar to that of West and Longe. See Chapters III and V.

[18] F. W. Taussig, Wages and Capital (New York: D Appleton and Company, 1896), p. 299.

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Nevertheless, one cannot but feel that Walker's supposed coup de grâce had less to it than meets the eye. There is really nothing in his analysis that is inconsistent with the wages fund doctrine. He admits that laborers are paid out of the product of past labor. When attention is directed to real wages it is clear that present labor does not produce present real income. Walker thought he had demolished the wages fund theory because he had focused attention on the motives of individual entrepreneurs in hiring labor: "it is production, not capital, which furnishes the motive for employment and the measure of wages."

The adherent of the wages fund doctrine would remind Walker that until a new stock of wages-goods are produced--a time consuming process--laborers can receive no more than there is to be had. The motives of individual entrepreneurs in hiring workers cannot change this conclusion in the aggregate. Higher profit prospects might cause more investment, leading to a greater stock of capital (including wage goods) in the future, but this only strengthens the wages fund theory, since it tells us that capital accumulation is a necessary pre-condition for the wages fund to increase. Cairnes, who thought he had reconstructed the doctrine, made essentially the same point: at any moment of time the wages fund is a fixed amount, while in the longer run it is determined by the demand for output that

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output that affects capital accumulation. Given Say's Law, or flexible prices, the demand for output is necessarily assumed.

Most writers who followed Walker adopted his general analysis and conclusions.[19] This is particularly true of Henry Sidgwick whose analysis of the doctrine is so similar to Walker's that it will be unnecessary to rehearse it here.[20] From the time of Walker it has been more or less taken for granted that there was nothing left to the wages fund theory, and that the payment of wages from current product was an established fact. The whole problem with which the theory attempted to deal--the determination of an average wage rate--was abandoned. The marginal productivity analysis which arose in its place was an explanation of relative wages, an excursion into micro- rather than macro-economics.

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[19] An exception must be made in favor of Silas Marcus Macvane, a professor of economics at Harvard. He vigorously attacked Walker's argument against the wages fund theory by pointing out that wages are not paid from the proceeds of present labor. The finished commodities streaming in at that moment to become wages of the labor then being expended were not the products of present labor. They were the final results of labor spread over years past. Silas Marcus Macvane, "Analysis of the Cost of Production," The Quarterly Journal of Economics (July, 1887), pp. 483-486.

[20] Henry Sidgwick, Principles of Political Economy (London: Macmillan Company, 1887), second edition.

Henry George's Attack on the
Wages Fund Doctrine

The last major attack on the wages fund theory was three years after the publication of Walker's The Wages Question. The critic was Henry George, a man who ranks with Veblen as one of the greatest economic heretics America has produced.

George had a practical reason for wanting to dispose of the wages fund theory. His panacea for all economic ills, the single tax equal to the economic levy of the land, was to be effective for all economic disorders: poverty, depression, and low wages. George believed that his program would raise wages and, therefore, he had to deny the wages fund. Indeed, George regarded the wages fund doctrine as so important that he devoted over one-quarter of his Progress and Poverty to its discussion.

George claimed that the wages fund theory, because it made employment a function of capital accumulation, attributed too much authority to the capitalist. According to George, wages were paid after labor had been rendered and value added to materials, whether the products are sold or not. To George, the current labor applied to food production, not financial reserves of capitalists sustains the working man during this time consuming process of production. Ultimately,

consumer demand keeps the economy in motion:

> The demand for consumption determines the direction in which labor will be expended in production.[21]

George considered Walker's book "a most vital attack," but refused it the last word on the subject because of the pervading Malthusianism contained within it. George's main point was that wages were a residual after rent had been deducted from total product. Consequently, if rent is eliminated, wages will rise:

> As Produce = Rent + Wages + Interest, therefore, Produce - Rent = Wages + Interest. Wages and interest do not depend upon the produce of labor and capital, but upon what is left after rent is taken out . . . and hence, no matter what be the increase in productive power, if the increase in rent keeps pace with it, neither wages nor interest can increase.[22]

In this example George pitted workers and investors against landowners, unlike the Marxist analysis which set workers against capitalists.[23] George's main point is that laborers

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[21]Henry George, Progress and Poverty (New York: Robert Schalkenbach Foundation, 1955), p. 58.

[22]Ibid., p. 171.

[23]This distinction between Marx and George was made by Charles Albro Barker, Henry George (Oxford University Press, 1955), p. 271. Perhaps it is worth noting that the conflict between capitalists and landlords in the United States came a good fifty years later than it did in England. That is why Marx did not include land rent in his system, while Henry George considered it crucial.

are not paid until their work is completed, and that at best capitalists give them an installment drawn from capital. But this objection to the wages fund theory is wholly specious, since if a laborer can afford to wait upon the completion of his work before obtaining remuneration, he must have capital of his own. Such capital would then be part of the wages fund. Therefore, George's objection cannot stand against a theory which has the assumption that workers only consume and do not save. Such a definition of labor was clearly stated by one of the major writers of George's day, Simon Newcomb:

> The typical labourer is one who has not accumulated any considerable amount of wealth for himself, and must, therefore, depend for his support upon the capital of others who pay him for his services.[24]

It might be argued with some cogency that if the worker is willing to wait until the completion of the product for his wages, he is a partner with the capitalist as regards profits and losses, and what he receives is no longer wages. He has in effect become a capitalist. Hence, the entire problem of the wages of labor is assumed away.

Taussig's Restatement

The last attempt at a reconstruction of the wages fund

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[24] Simon Newcomb, Principles of Political Economy (New York: Harper & Brothers, 1885), p. 436.

theory was made by Professor Taussig of Harvard University.[25]

In 1896 Taussig's Wages and Capital appeared in which he attempted a complete rehabilitation of the wages fund theory. He argued there that a wages fund did indeed exist in the sense that the real source of wages was the recurring supply of consumer goods, and in the short run this supply could not be increased. In his exposition Taussig tried to show that the doctrine was a sound theory of production incorrectly theorized into a theory of distribution. In Taussig's words:

> The wages-fund doctrine, or what there is of truth in it, has to do rather with production than with distribution. It serves to describe the process by which the real income of the community emerges from a prolonged process of production.[26]

In actuality, the wages fund theory was a part of the theory of the accumulation of capital, and was essentially correct in looking at the advance of funds from capitalists to laborers as the first step in the process by which wages are determined. Wages could permanently increase only through larger receipts passing into the capitalists hands, or through

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[25] Taussig was an adherent of the classical tradition in economics. He was educated at Harvard where he received his doctorate in 1883 and a law degree in 1886. Afterwards he accepted a professorship in political economy at Harvard and devoted his major energies to economics. He died in 1940 at the age of eighty-one. See Joseph Dorfman, The Economic Mind in American Civilization, 1865-1918 (New York: Viking Press, 1949), pp. 264-265.

[26] F. W. Taussig, op. cit., p. 322.

greater sums being turned over to capitalists by investors. However, wages are determined ultimately by what consumers are able and willing to pay for the commodities produced, and wages can rise only if ultimate demand is favorable. If consumer demand is deficient it will slow up the accumulation of capital upon which increases in the wages fund depend. Taussig really conceived of the economy as a gigantic machine that absorbs productive inputs and emits consumer's goods as outputs. The wages fund consists of all commodities consumed by workers: food, clothing, housing, fuel, entertainment, etc. This is real income. On the other hand, plant, raw materials, and the like, are not real income. Since the productive process is discontinuous (that is, production extends over a long period of time) a stock of commodities must exist in almost completed form ready for immediate use by current labor. Hence, consumer goods, like capital goods, are indispensable parts of the productive process and can be considered capital. Capital cannot immediately satisfy human wants. Therefore, goods on the shelves of retail establishments are still capital. The source of real wages exists in the form of capital at the time when the work is done. Income does not emerge from this capital until the wage-goods are purchased. Wages are the income of workers; capital is the supply of goods in all stages before ultimate consumption.

The commodities from which the labor of the present gets its reward exists not as a stock of already enjoyable things, but as an assortment of things nearly finished. Taussig took pains to emphasize that this relation of wages to capital would be the same under any economic organization, for in all societies production would be spread over a considerable period of time; and the reward for present work would have to come from goods still in the making.

This view of the theory differs considerably from that of the other wages fund debaters. In most of the controversies the payment of wages from capital was loosely associated with the bargaining of employers with workers. Funds in the hands of the employer were treated as capital from which wages were paid. At times the fund was money; at other times it consisted of quantities of wage goods. As has been shown, this double use of the term led to confusion. Taussig's restatement really clarified what was at issue. He answered the perplexing question of whether the wages fund is part of capital stock. He emphasized the relation between wages and consumer demand, which determined whether capitalists would produce more consumer goods, that is, increase the wages fund. He pointed out that the supply of goods soon to be available were predetermined by the forces of the past: productivity and consumer demand. Furthermore, he generalized

the wages fund theory to include all incomes, for what is true of wages is also true of interest, rent and profits. All are derived from capital in the same sense as are wages. Interest and rent received today are spent on commodities which do not reach the last stage of enjoyment until purchased. So all forms of present income (a flow) were a part of capital (a stock) a moment before. This means that present satisfaction of consumer goods must come from commodities produced by past labor:

> Past product, existing for any reason in the form of unfinished goods, is the source whence all laborers, hired or not hired, and all capitalists, and all members of the community, get the income of the present and of the immediate future.[27]

Taussig's policy conclusion was that labor unions are undesirable since real wages are largely fixed in quantity and quality. Such organizations could only affect money wages, but real wages are determined by other factors.

Taussig's view as to the significance of the wages fund theory was eloquently stated:

> The wages fund theory . . . shows the steps by which wages get into the laborer's hands and so points to the nearest and most obvious causes which affect them. It shows what is the process by which goods are produced in the great and complicated organism of modern society, and what are the channels by which the enjoyable commodities

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[27] *Ibid.*, p. 49.

> reach the hands of its various members. To understand that process, to follow those channels, is indispensable to truth and the accuracy of knowledge . . . .[28]

Professor Schumpeter paid tribute to Taussig's restatement some years later, and credited him with the first clear statement of the concept of the period of production. He claimed that the theory at Taussig's hands "opens an avenue which leads much nearer to the facts of production and distribution than we could ever hope to get by means of the marginal productivity idea alone."[29]

With Taussig's contribution, the controversy over the wages fund theory ended, and expositions of marginal analysis took its place. The emphasis in economic theory shifted for the most part to micro-economic problems. A later chapter will discuss the wages fund theory on the contemporary scene. But at this point it seems desirable to set up a highly simplified version of the classical system described in the preceding pages. The purpose of the ensuing chapter will be to construct a basic skeleton of the classical model that will enable us to show the process of the mutual interactions of the major variables.

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[28] Ibid., p. 123.

[29] Joseph A. Schumpeter, "Professor Taussig on Wages and Capital" Explorations in Economics: Notes and Essays Contributed in Honor of F. W. Taussig (New York: McGraw-Hill Book Company, 1936), p. 221.

CHAPTER VII

THE WAGES FUND THEORY: A DIAGRAMMATIC RECONSTRUCTION

The obvious danger of adumbrating the history of theoretical controversy is that of getting so engrossed in the subtleties of the arguments that the essence of the theory itself is forgotten. What must be kept clearly in mind is the significance of the wages fund theory in relation to the classical theory as a whole. A simplified model will help bring out the basic elements of that system and the place of the wages fund within it. The purpose of this chapter is to assemble and sharpen up the classical apparatus in order to understand the logic behind the classical theory of the wages fund.

The Model

A functional representation of the theoretical system of the classical economics would be as follows:

[1] $R = R(W)$

[2] $I = I(R)$

[3] $Ld = Ld(I)$

[4] $P = P(W)$

[5] $Ls = Ls(P)$

where

R = rate of profit

W = wage rate

I = investment (net additions to capital stock)

Ld = demand for labor

P = population

Ls = supply of labor

Equation [1] is the Ricardian residual theory of profits, which says that there is an inverse relation between wages and profits. To Ricardo an increase in wages meant a decline in profits since profit was conceived of as a residual. According to Ricardo, wages represent the product of so much labor: when high, they are equivalent to the output of much labor, when low, the equivalent of little labor. With a given output and capital stock, an increase in the wage rate reduces the rate of profit.

Equation [2] expresses the theory of capital accumulation, wherein profits determine the amount of net investment. Virtually all classicists took it for granted that capitalists make investments because they expect to earn profits; what they expect in the future is a function of present profits. By investment is meant net investment; that is, net additions to the stock of capital. Thus I = I(R) where R is the return

on fixed factors of production, or profit. By definition, net investment is represented by the increase in capital stock. Part of the net addition to capital stock hires workers, and is called "circulating capital." The other part, called "technological" or "fixed capital" consists of machines, buildings, and inventories of non-wage goods. Both wage capital (circulating) and technological capital (fixed) increase together.

Equation [3] is the wages fund theory. It says that wages are a part of capital stock used in support of labor during the current period of production; part of this period's output will be used to hire workers in the next productive period. Workers producing goods today are replenishing those goods consumed in the current period. The new wage-goods will then be used to tide workers over the next period of production. Hence, they determine the quantity of labor demanded in the next period.

Equation [4] represents the Malthusian theory of population, and says that population is a function of real wages. As real wages rise, population increases. A discussion of the shape of this function will be reserved for later.

Equation [5] is the supply of labor function, and says the labor force is the function of population.

The model is represented graphically in Figure 1. All

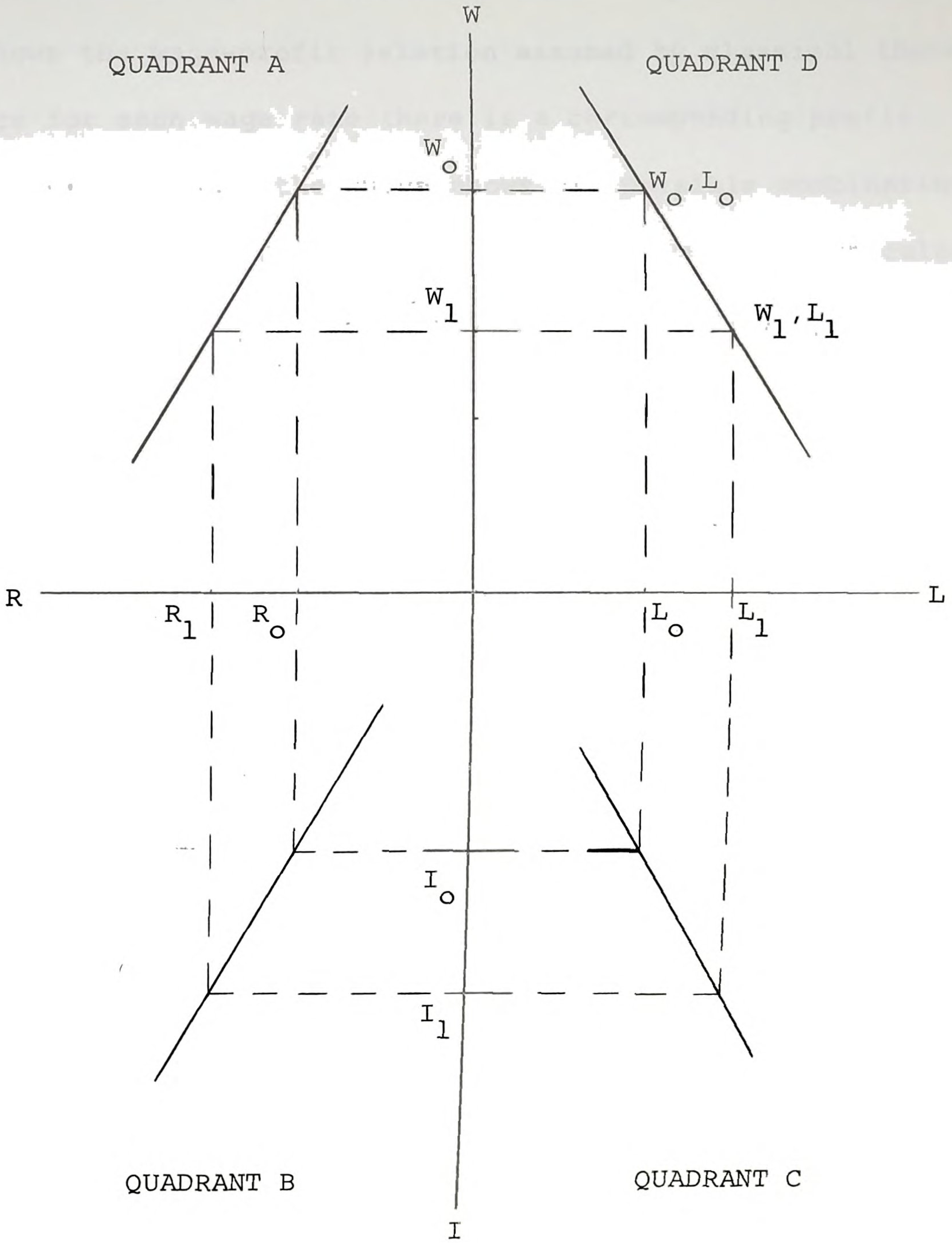
W
QUADRANT A
QUADRANT D
W_o
W_o, L_o
W_1
W_1, L_1
R
R_1
R_o
L_o
L_1
L
I_o
I_1
QUADRANT B
QUADRANT C
I

Figure 1.

directions in Figure 1 should be taken as positive. Quadrant A shows the wage-profit relation assumed by classical theory. Since for each wage rate there is a corresponding profit rate, or residual, the curve shows all possible combinations of wage rates and profit rates consistent with a particular state of the arts and a given output. An increase in the productivity of labor, for example, will shift the curve away from the origin, showing that for any given wage rate, the new profit rate would be higher than the original. From this curve is found the rate of profit consistent with any given rate of wages. The rate of profit in Quadrant A is projected to Quadrant B, which shows the amount of investment stimulated by present profit. As has been pointed out, investment means net additions to capital stock. This variable is a function of present profit, and it is necessary to specify as to shape of the curve only that it is a straight line showing that greater profits will stimulate greater investment. The slope of the line showing net investment is positive.

Since investment adds to capital stock, its increase means a rise in the stock of all kinds of capital, circulating as well as fixed. But the demand for labor is a function of the growth in circulating capital and can be read off the horizontal axis common to both Quadrants C and D. The angle formed by the curve emanating from the origin in Quadrant C,

and the vertical axis common to Quadrants C and B, shows the proportion of wage to non-wage capital. If we assume that the proportion of circulating capital is relatively large, the angle will be larger: an increase in capital would support a larger quantity of labor.

The Aggregate Demand Curve for Labor

The aggregate demand curve for labor may now be derived. The process is shown in Figure 1. The purpose of the four quadrants is to show how the aggregate demand function for labor may be distilled from the postulates of the classical model. The point is to relate the demand for labor to the wage rate.

Starting with Quadrant A, assume the wage rate is W_o. The corresponding rate of profit is R_o. It can be seen from Quadrant B that a profit rate of R_o results in an amount of investment equal to I_o. Part of this net addition to capital stock will be in the form of wage goods, and, as seen from Quadrant C, will hire the quantity of workers, L_o. The coordinates of L_o and W_o yield a point on the demand curve for labor, in Quadrant D, showing that the demand for labor is a function of the wage rate.

Another point on the demand curve can be generated by repeating the process starting with arbitrary wage rate, W_1. Following the same procedure as before, another point on our

demand curve is derived. Connecting the points, there is a demand curve for labor consistent with our given wage-profit function, profit-investment function, wages-fund-labor demand function. The demand curve for labor slopes downward and to the right, consistent with the usual conception of a demand curve. It is worth noting explicitly that this analysis shows the demand for labor without attempting to explain how the proportion of capital stock that constitutes the wages fund came about, except as it may be explained by reference to some previously existing situation. The model does not determine the proportion of fixed to circulating capital. It does show the effects of any change in this proportion. Such an analysis has precedent in economic analysis. The treatment of demand under oligopoly conditions, through the use of a kinky demand curve is a case in point. No attempt is made within the oligopoly analysis itself to explain how the current price and output situation came about. The demand curve in oligopoly theory can only be thought of with reference to a given starting point. But the starting point is not explained.

The Aggregate Supply Curve for Labor

The population supply is a functional relationship of population size and the average wage rate. In Quadrant I,

of Figure 2, the curve for population slopes upward and to the right, meaning that a higher wage is associated with larger families. At the higher wage the family can enjoy more food, medical care, etc., than at a lower one. It is, therefore, reasonable to assume that malnutrition and the incidence of disease would decline.[1] Furthermore, higher real wages may well be expected to lead to a decline in the average age of marriage. This is in line with Malthus's explanation:

> There is no reason whatever to suppose that anything besides the difficulty of procuring in adequate plenty the necessaries of life, should either indispose this greater number of persons to marry early, or disable them from rearing in health the largest families. But this difficulty would of necessity occur, and its effect would be either to discourage early marriages, which would check the rate of increase by preventing the same proportion of births; or to render the children unhealthy from bad and insufficient nourishment, which would check the rate of increase by occasioning a greater proportion of deaths; or, what is most likely to happen, the rate of increase would be checked, partly by the diminution of births, and partly by the increase of mortality.[2]

It is sometimes assumed that the Malthusian population supply function should be represented by a horizontal line at a subsistence wage rate. However, it is difficult to find

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[1] Cf., Harvey Leibenstein, A Theory of Economic-Demographic Development (Princeton: Princeton University Press, 1954), p. 23.

[2] Thomas Robert Malthus, "Population," Encyclopedia Britannica, Supplement to the Fifth Edition (1824), pp. 314-315.

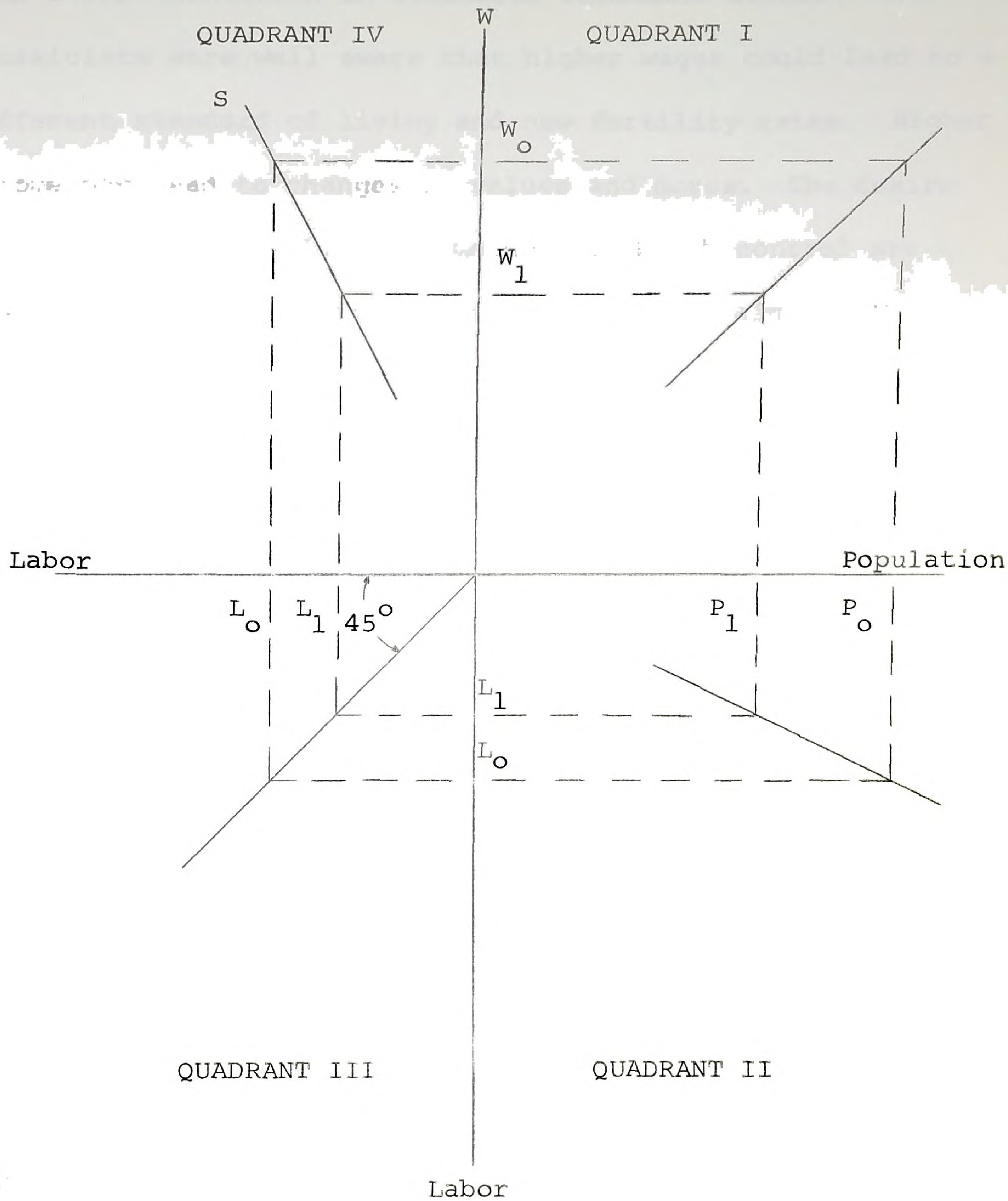

QUADRANT IV
W
QUADRANT I
S
W o
W 1
Labor
Population
L o
L 1
45°
P 1
P o
L 1
L o
QUADRANT III
QUADRANT II
Labor

Figure 2.

such a representation in classical economics itself. The classicists were well aware that higher wages could lead to a different standard of living and new fertility rates. Higher income may lead to changes in values and mores. The desire for children may decline and methods of birth control are employed so that the higher wage rate is maintained. The classical economists recognized that higher wages could lead to a higher standard of living. Hence, the population supply function need not be perfectly elastic. Of course, if drawn perfectly elastic then the dismal science would be dismal indeed, and any policy recommendations which merely acted upon the rate of profit would be futile. This would mean that the belief of the wages fund theorist that higher profits stimulate capital accumulation and greater wages could be only a very short run expectation. But, since the classical economists had strong views on economic policy regarding the accumulation of capital as a means of salvation to the laboring classes, it is clear that they implicitly assumed an elasticity in the population curve of less than infinity.

In Quadrant II of Figure 2, the labor supply function is drawn on the assumption that the supply of labor increases as population increases. Quadrant III simply contains a 45° line so as to transfer any amount of labor on the vertical axis between Quadrants II and III, to the horizontal axis between Quadrants III and IV.

We are now in a position to relate the supply of labor to a given wage rate. With a wage rate of W_o, the amount of population forthcoming is P_o. It can be seen from Quadrant II that a population of P_o results in a labor force of L_o. The 45^o line enables us to shift the quantity of labor L_o to the horizontal axis of Quadrant IV. The coordinates of L_o and W_o yields a point on the labor supply curve. Following the familiar procedure, the process can be repeated, starting with an arbitrary wage rate of W_1, and this derives another point on the supply curve. Connecting the points, a supply curve for labor has been derived.

Superimposing Quadrant IV of Figure 2 on Quadrant D of Figure 1, gives us an equilibrium wage rate (Figure 3). The equilibrium wage rate is W_e, with the amount of employment equal to L_e.

The Workings of the Model

A better understanding of the model and of the diagrams will come from analyzing the effects on the equilibrium values of the several variables of various changes in parameters. For example, consider the effects of an increase in the productivity of labor, a change in the proportion of fixed to circulating capital, or the effects of a change in population.

An increase in the productivity of labor involves an

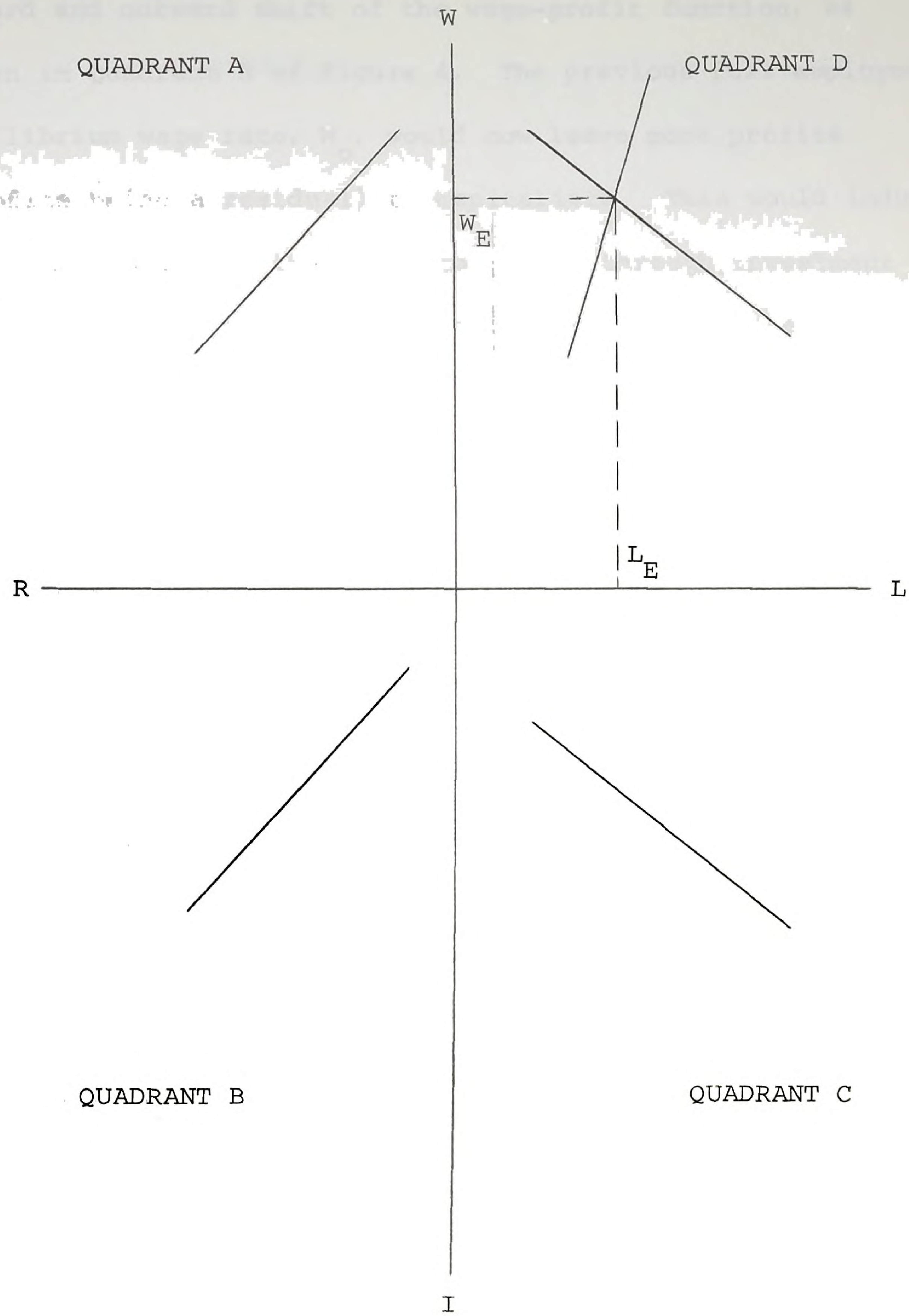
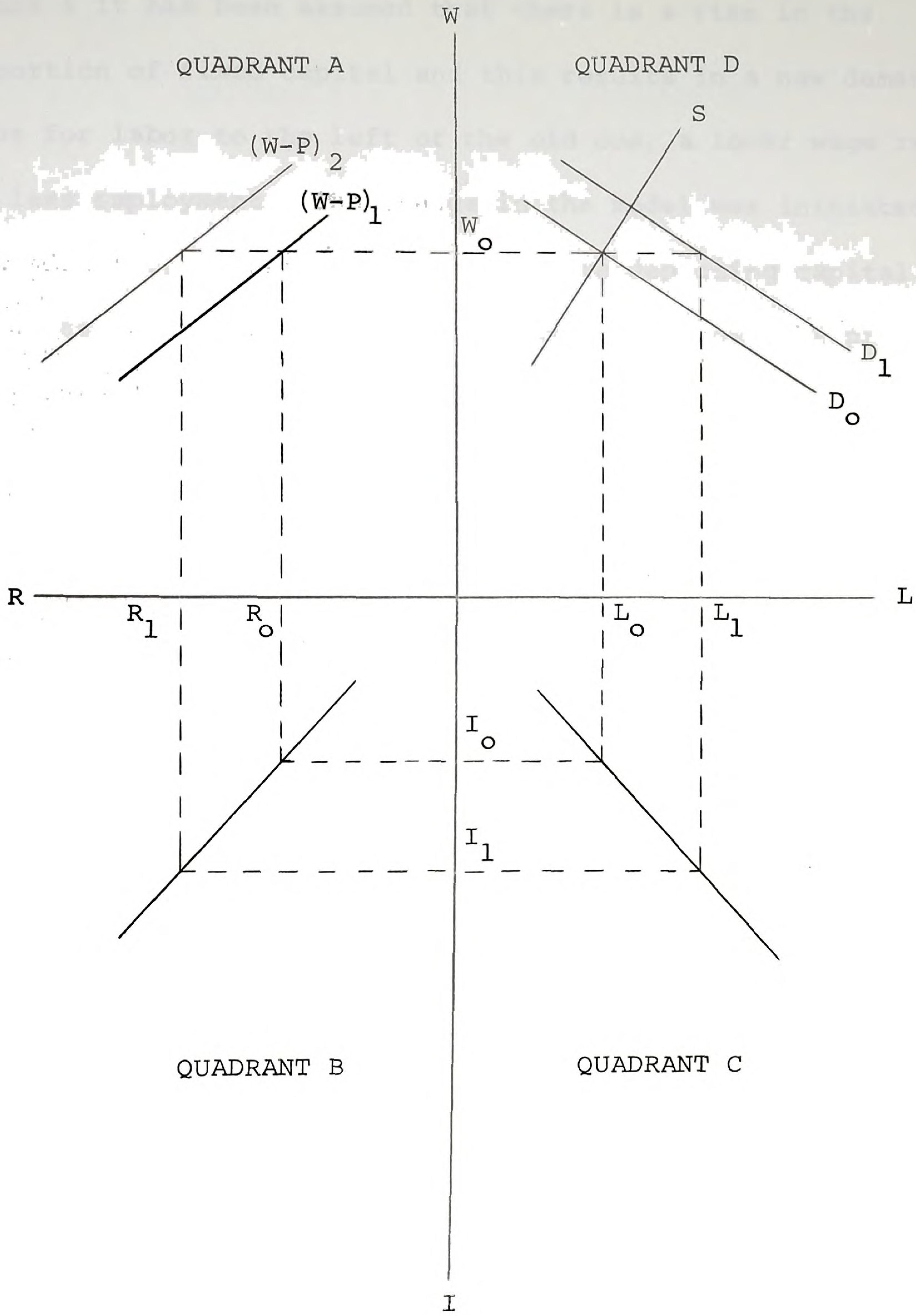


Figure 3.

upward and outward shift of the wage-profit function, as shown in Quadrant A of Figure 4. The previous full employment equilibrium wage rate, W_o, would now leave more profits (profits being a residual) to capitalists. This would induce employers to add to their capital stock through investment in technological and wage capital. With a greater stock of wage goods, a new point would be generated in Quadrant D, Figure 4. Using the new wage-profit function in Quadrant A for all possible wage rates, there is a new demand curve for labor, which is to the right of the old one. In Quadrant D this has led to an increase in the rate of wages and the volume of employment, a conclusion consistent with the classical hypothesis that technological improvements accrue to the benefit of labor, assuming always, of course, that workers limit their numbers. From the model, therefore, it can be concluded that an increase in productivity raises profits, increases capital accumulation, the wage rate, and employment.

The next possibility to consider is a change in the proportion of fixed to circulating capital. As we have seen in Chapter VI, Cairnes believed that in the progress of society fixed capital tended to constitute an increasing proportion of total capital, with the result that the distribution of income between property and labor became more unequal and the conditions of workers increasingly miserable. In


W
QUADRANT A
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(W-P)2
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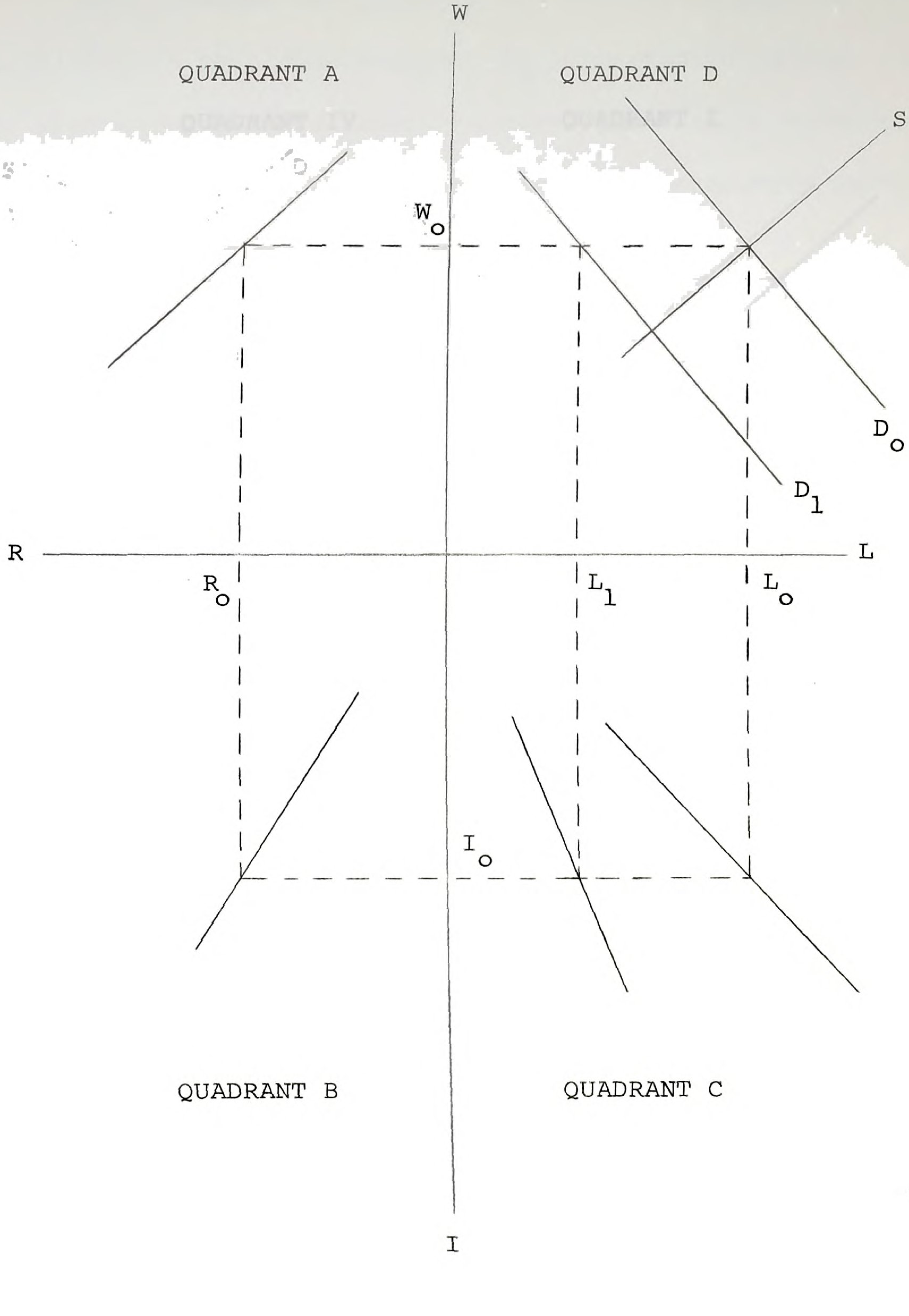
L1
Io
I1
QUADRANT B
QUADRANT C
I

Figure 4.

Figure 5 it has been assumed that there is a rise in the proportion of fixed capital and this results in a new demand curve for labor to the left of the old one, a lower wage rate and less employment. The change in the model was initiated in Quadrant C, Figure 5, where the curve depicting capital stock was shifted to the left, demonstrating that the proportion of circulating to fixed capital has decreased.

The effects of one of the most popular remedies of the liberal reformers of the nineteenth century will now be analyzed. As noted earlier, John Stuart Mill had vigorously defended the position that the only way to raise wages permanently was through education and emigration.

The sequence of events resulting from emigration or limiting of numbers can be seen in Figure 6. A reduction in population at an equilibrium wage of W_o is shown in Quadrant I of the diagram. The decrease in population is represented by a shift of the curve to the left, since at the previous wage rate there is now less population. In Quadrant II this results in a reduction of the labor force from L_o to L_1. In Quadrant IV the limitation of numbers has shifted the supply of labor curve closer to the vertical axis resulting in an increased wage rate, W_1, and a decreased volume of employment, L_1. This was Mill's conclusion which has been demonstrated diagrammatically.


W
QUADRANT A
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S
W_o
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QUADRANT C
I

Figure 5.

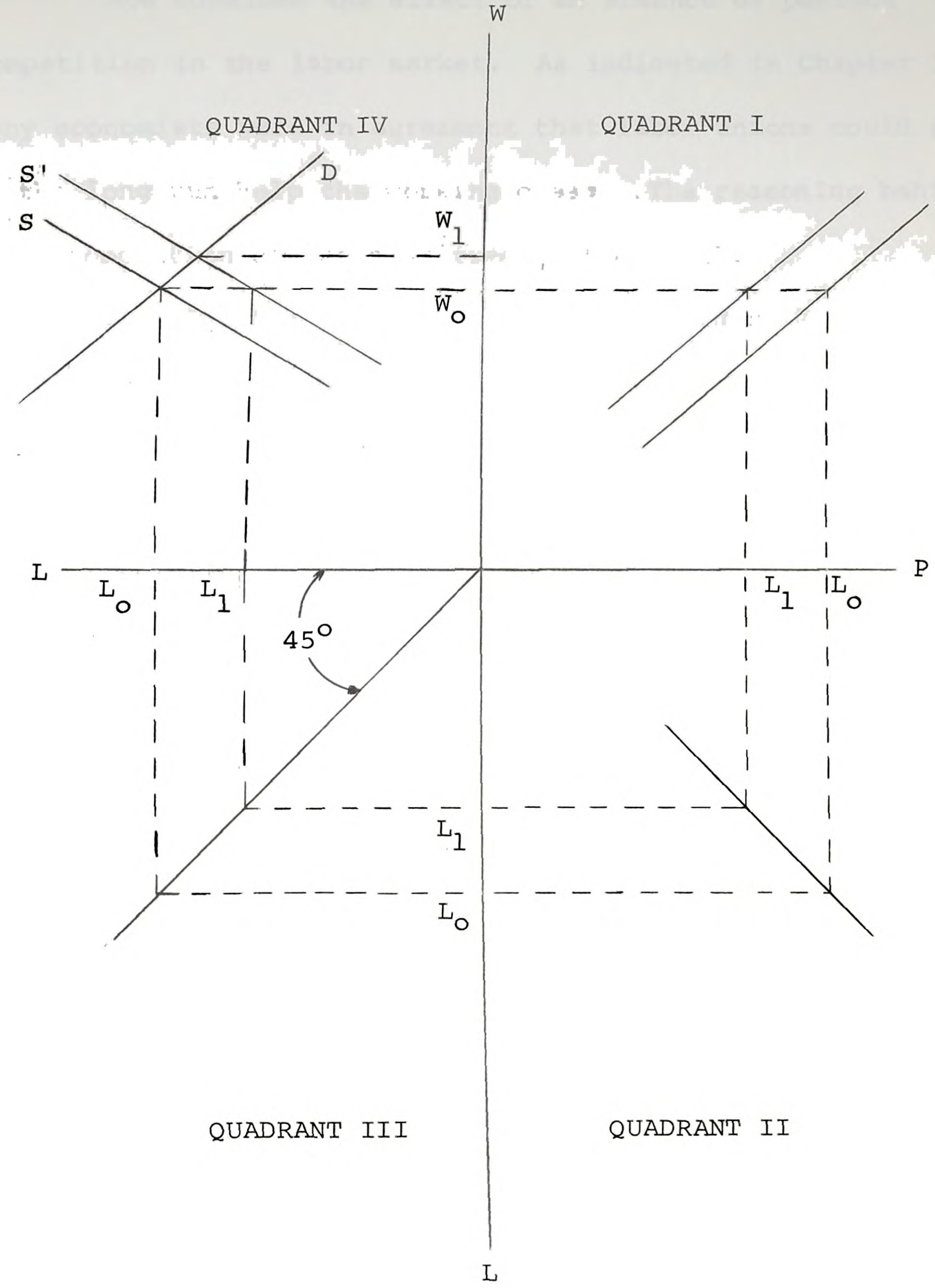
W
QUADRANT IV
QUADRANT I
S'
D
S
W_1
W_o
L
L_o
L_1
45°
L_1
L_o
P
L_1
L_o
QUADRANT III
QUADRANT II
L

Figure 6.

Now consider the effect of an absence of perfect competition in the labor market. As indicated in Chapter IV, many economists were in agreement that labor unions could not in the long run help the working class. The reasoning behind this proposition can be clarified by the model.

Consider the situation as shown in Figure 7. In Quadrant D, there is an equilbrium real wage rate of W_o consistent with full employment at L_o. But suppose that the wage rate is artificially fixed by a trade union at W_1, above the current equilibrium rate. What will be the new level of R, I, and L? In the first place, it can be seen that the rate of profit would fall, investment would be reduced, and hence less capital produced. The quantity of labor demanded would then fall to L_1, while the quantity of labor supplied would increase. Unemployment would result. Moreover, this conclusion would be magnified if the artificial increase in wages resulted in a "Ricardo effect," that is, a substitution of capital for labor. Such an effect would be represented in our diagram as a reduction of the capital stock angle in Quadrant C. As already demonstrated, the effect of this substitution would be to shift the aggregate demand curve for labor to the left. We may sum up by saying that labor unions would reduce the quantity of labor demanded at the higher artificial wage, and perhaps shift the labor demand

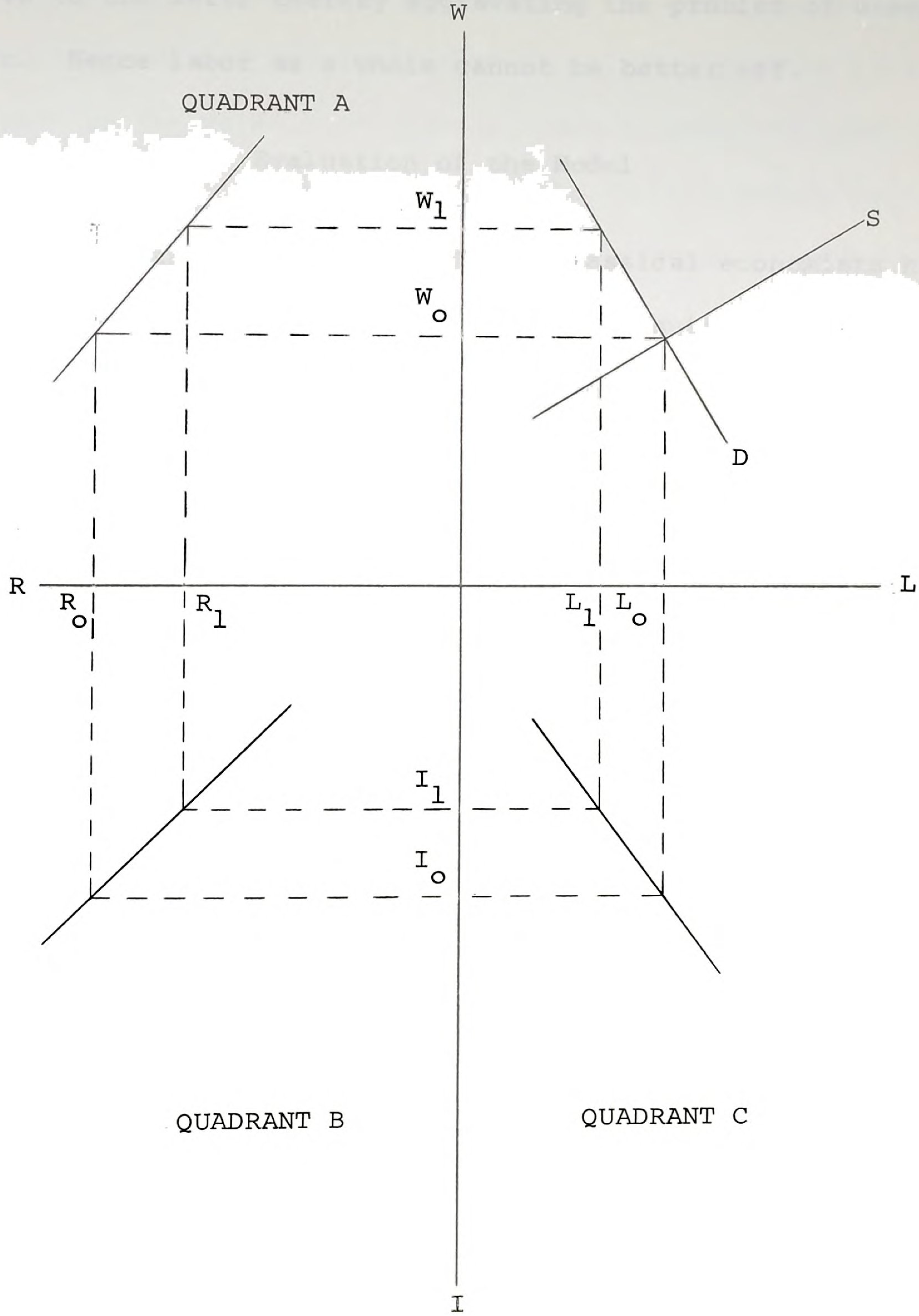

Figure 7.

curve to the left, thereby aggravating the problem of unemployment. Hence labor as a whole cannot be better off.

Evaluation of the Model

The analytical tools of the classical economists have certain defects which make them not fully suitable for application in the economy of the twentieth century. For one thing the classical model as presented herein shows the wage rate, and the levels of output and employment determined by "real" factors alone. In keeping with classical theory money wages and prices were determined solely by monetary factors. It was assumed that changes in the monetary side had no effect on the "real" magnitudes. Clearly, however, monetary policy can be used to affect the wages fund, though the classical economists were skeptical that monetary happenings could have any "real" effects. However, if it can be shown that an increased supply of money affects the rate of interest and investment (or a whole range of expenditures through the real balance effect), then monetary policy is capable of affecting the size of the wages fund and employment.

However, we have demonstrated that there is a consistent version of the classical theory of employment, based on the residual theory of profits, the theory of capital accumulation, and the wages fund theory. Of its logical completeness there can be no doubt.

Another point that can be made for our diagrammatic formulation of the theory is that it solves a problem never settled in the wages fund debates; namely, what relation, if any, exists between the wages fund theory, and supply and demand theory? We now see that, contrary to Longe and Thornton, the analysis can be couched in terms of supply and demand schedules, although through a rather indirect route.

Furthermore, the insistence on the part of some interpreters (including Mill of the "recantation") that the wages fund theory involves a unitary elastic demand curve is seen to be misleading. Also, one of the special insights of the wages fund theory, the dependence of future wages on present profits, is made clear by use of the model presented here.

Another point that can be made for our diagrammatic formulation of the theory is that it solves a problem never settled in the wages fund [illegible] any, exists between [illegible] demand theory? [illegible] the analysis [illegible] schedules, [illegible]

CHAPTER VIII

CONCLUSION: THE MODERN SCENE

The subject matter of economics is returning to what it was in the beginning--a study of the causes of the wealth of nations. The century following the second Mill witnessed the discovery and enthronement of neo-classical economic theory. With that development the emphasis shifted from the causes of the wealth of nations to the role of the market mechanism in distributing the products which buyers have requested. The individual unit without reference to the economy of which he was a part was the phenomenon whose habits were of central interest. The "economy as a whole" dropped out of focus, and the "isolated datum" of economic man opened into view.

As we know, the classical economic theory was developed in the early stages of English capitalism and on an economic scene in which landed interests opposed the new and emerging manufacturing class. Hence, the problem of capital accumulation and functional distribution had popular interest and practical import. By the twentieth century, however, the economic scene had changed in certain fundamental respects. The latter part of the nineteenth century was one of great progress in which capitalism had firmly established itself. The economy of the Western world was one in which the forces of progress were

powerful and in which investment outlets were numerous. The only unemployment was due to fluctuations in the business cycle.[1] Thus, the turn of the century saw a shift from concern over the problem of growth to concern over the problem of economic performance. As Leontief has recently pointed out, economists worry first about growth and then about efficiency.[2]

Even as early as 1870, Jevons was able to state the economic problem as follows:

> Given: a certain population, with various needs and powers of production, in possession of certain lands and other sources of material: required, the mode of employing their labour which will maximize the utility of the produce.[3]

However, in working out his theory Jevons did not depart too far from the older classical theory. His ideas on capital were basically those incorporated in the wages fund theory.[4] But with the shift in emphasis it is not surprising that the wages

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[1] Alvin Hansen, "Economic Progress and Declining Population Growth," The American Economic Review, Vol. XXIX (March, 1939), Reprinted in American Economic Association, Readings in Business Cycle Theory (Philadelphia: The Blakiston Company, 1944), pp. 336-84. See especially pp. 367-70.

[2] Wassily Leontief, "The Decline and Rise of Soviet Economic Science," Foreign Affairs, Vol. I (January, 1960), pp. 261-272.

[3] William S. Jevons, The Theory of Political Economy (London: Macmillan, 1871), p. 267.

[4] George Stigler, Production and Distribution Theories (New York: Macmillan, 1941), p. 29.

powerful and in which investment outlets were numerous. The only unemployment was due to fluctuations in the business cycle.[1] Thus, the turn of the [illegible] the problem of growth [illegible] performance. [illegible] very first about [illegible] economic [illegible] fund theory no longer played a central role in economic analysis. When the problem was one of economic development the wages fund theory had a strategic role to play. In order to achieve rapid development, an economy's resources must be channeled into capital investment. In order to do so, wages must be kept down so as to control consumption, and the wages fund theory provided a matrix for the classical theory of economic growth. But when the problem shifted from economic progress to efficiency, the wages fund dropped out of wage theory. Not that economists were anti-wages fund. It would be more correct to say that they were passively non-wages fund. This point is not usually made. It is generally asserted that the theory was forsaken, the abandonment taking place after Mill's recantation.[5] But as we have seen the controversy lasted until the twentieth century, and the theory was a central issue in the writings of such leading economists as Cairnes, Walker, and Taussig.

It should be clear that the wages fund theory was a theory of the average wage rate, and was not intended to say anything about the wages of individual workers. If the main emphasis of the time was on atomistic economic problems, then of course the wages fund theory had no part to play, _at least_

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[5]cf. A. C. Pigou, "Mill and the Wages Fund," _Economic Journal_, June, 1959, pp. 171-80. Especially p. 177.

not as a theory of individual wages. The point to remember is that the marginal productivity theory did not replace the wages fund doctrine, since they are not substitute products. Indeed it was just this fact that made Alfred Marshall reluctant to accept the marginal productivity analysis as a theory of wages. In his Principles, after illustrating the use of the marginal productivity theory to explain one of the causes that govern wages, Marshall added,

> This doctrine has sometimes been put forward as a theory of wages. But there is no valid grounds for any such pretension. The doctrine that the earnings of a worker tend to be equal to the net product ofhis work, has by itself no real meaning; since in order to estimate net product, we have to take for granted all the expenses of production of the commodity on which he works, other than his wages.[6]

Professor D. H. Robertson, one of the most influential adherents of the marginal productivity theory, has called Marshall's qualification of the importance of marginal productivity "a godsend to critics"[7] and admitted that the marginal productivity theory did not replace the wages fund theory since marginal analysis attempts to solve a micro rather than a macro problem. Robertson says,

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[6] Alfred Marshall, Principles of Economics (New York: Macmillan, 8th edition, 1920), p. 518.

[7] Dennis H. Robertson, "Wage Grumbles," Economic Fragments (London: P. S. King & Son, Ltd., 1931). Reprinted in American Economic Association, Readings in the Theory of Income Distribution (Philadelphia: The Blakiston Company, 1951), pp. 221-244. Citation from page 227.

> Now so long as we are fixing our eyes on a single business or a single industry the assumption that all other factors of production have clearly defined supply prices is perhaps sufficiently nearly valid to give no great trouble to anyone; but what we are in search of is the principle governing the level of wages as a whole . . . .[8]

Robertson then goes on to argue that "grumbles" over the productivity doctrine result from attempts to read into the theory more than it is supposed to contain. All it was intended to show was an explanation for specific wages.

T. W. Hutchison has interpreted Marshall's reluctance in accepting the marginal productivity theory as a realization that the theory could not explain the level of wages as a whole:

> Nowhere than in his theory of wages does Marshall make a more strenuous effort to link up with the classical theory and treatment, though, in fact, the classical, mainly "macro-economic" distribution theory is concerned with quite different questions of distribution than is . . . a precisely and correctly formulated marginal productivity analysis. The two types of treatment and analysis, though not necessarily incompatible, cannot be said, when combined, to produce a very significant synthesis; they remain separate . . . answers to separate questions.[9]

With the development of marginal productivity doctrine there was one important point in the new orthodoxy which left a flank exposed. It is doubtful that marginal productivity

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[8] _Ibid._, p. 227.

[9] T. W. Hutchison, _A Review of Economic Doctrines_ (Oxford: Clarendon Press, 1953), p. 84.

analysis can be considered significant in the determination of aggregate wages. Demand functions for labor are non-additive since they are derived on the assumption that other elements in the system remain stable. Economists whose expertise in marginal analysis is unquestioned are none the less reluctant to apply their tool kit to macroeconomic analysis.[10]

Notwithstanding the fact that the doctrine of the wages fund was no longer a part of wage theory, it remained a part of capital theory, and it did so in its most pristine form, since the capital theory of the twentieth century is nothing more than a generalized version of the wages fund. In Böhm-Bawerk, for example, the period of production is the parameter manipulated by the capitalist in order to maximize his rate of return. It is the period of time elapsing between the input of labor, on the one hand, and the sale of the final product on the other. Land is disregarded, and labor and capital are considered to be the only factors of production. But the crucial point is that the lapse of time between input

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[10] For example, Kenneth Boulding claims that he "can hardly help regarding the development of marginalism as a retrograde step as far as the theory of over-all distribution--i.e., of the macroeconomics of distribution--is concerned." Kenneth E. Boulding, "Wages as a Share in the National Income," The Impact of the Union (New York: Kelley and Millman, 1959), p. 132.

and output is made possible by capital which must be advanced in the form of wages to laborers because workers cannot wait until the product is sold.[11] Böhm-Bawerk's concept of capital

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[11]Böhm-Bawerk's theory of capital has been analyzed in detail by Stigler, <u>op. cit.</u>, pp. 179-227. That the wages fund doctrine is a part of Böhm-Bawerk's capital theory was recognized by Wicksell. See Knut Wicksell, <u>Lectures on Political Economy</u> (Vol. I; London: Routledge and Kegan Paul, 1934), pp. 193-95.

It is interesting to note that Thorstein Veblen's first article in economics concerned the relation between Böhm-Bawerk's theory of capital and the wages-fund theory. Veblen's analysis is so perceptive that it bears repeating. Böhm-Bawerk made a distinction between what he called; "Social Capital" and "Private Capital"; the latter included social capital plus the means of subsistence of labor. To Böhm-Bawerk real wages are not drawn from the community's capital, although from the employer's standpoint they are drawn from his private capital. But Böhm-Bawerk includes in social capital consumption goods still in the hands of dealers and producers. Veblen noted that this point of classification might afford captious critics grounds for arguing that wages thus represent only a general claim on goods still a part of the general capital, and can only be satisfied by drawing on social capital. He felt that the controversy over the wages fund doctrine might be ended by drawing a distinction between the laborer's share of consumption goods (earnings) on the one hand, and wages on the other. From the standpoint of consumption goods, the laborer is not a laborer, but simply a member of society. The sustenance of workers while employed is drawn entirely from the product of past industry, and therefore wages are paid out of capital, since wages are a category of private capital. As a consumer he is not a "laborer" and his share of consumer goods is not "wages" but "earnings." Wages is a category having a different significance for economic theory from that of earnings. From the point of view of production wages are paid out of capital. From the point of view of distribution they are drawn from the product of industry since <u>to the laborer</u> they are the product of his present labor. "All this may seem to be a web of excessively fine-spun technicalities, but in apology it is to be said that it is also directed exclusively to a

is thus very similar to Taussig's: capital is the stock of commodities building up during the period of production.

In modern capital theory it is postulated that the entrepreneur needs the services of labor, equipment, and other factors of production. His capital fund is his command over the products of other firms. The owners of factors want command over products in exchange for their services; the entrepreneur needs command over the products of other firms to tide him over the initial period during which he has no products of his own to sell. Hence, the firm's capital consists of other firm's products. When the capital of all the firms in the economy is added together, we obtain society's real capital: the sum total of all products in the productive system.[12]

The reason that the wages fund played a key part in

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point of pure theory. And the whole controversy about the source of wages has also been in the region of pure theory, having never directly involved questions of physical fact or expediency." See Thorstein Veblen: "Böhm-Bawerk's Definition of Capital and the Source of Wages," The Quarterly Journal of Economics, Vol. VI (January, 1892). Reprinted in Thorstein Veblen, Essays in Our Changing Order (New York: The Viking Press, 1954), pp. 132-36.

[12]Compare with Scitovsky's definition: "We can say that society's capital consists of the total quantity of products stored up in the productive system in the form of inventories of consumers' goods, plant and equipment of all kinds, goods in the process of manufacture, inventories of parts and raw materials, and so forth." Tibor Scitovsky, Welfare and Competition (Chicago: Richard D. Irwin, Inc., 1951), p. 217

classical theory was because of the tremendous role given to capital accumulation in the spectacle of economic progress. Although technical change was recognized as a cause of economic growth, the classicals minimized the role of technology and concentrated on capital accumulation instead. However, one of the significant facts about capital formation is that it takes time before consumer goods result from the use of more "capitalistic" methods. In the interim period somebody has to make advances to the various factors producing this capital. These advances are the wages fund. So long as time is required for production, capital in the form of wage goods is necessary. In this respect it is significant that Mrs. Robinson's recent work on capital theory involved her in a return to the problem of classical economics and, in consequence, a return to the wages fund. If the focus of attention in economics is on economic growth and capital formation, a return to the wages fund theory can be expected. As Mrs. Robinson says, "The revival of interest in classical economics brings a revival of the classical theory." She pointed out that:

> Most kinds of human production consist of processes which take time to complete. The flow of consumption goods becoming available today is the result of work which was done in the past and with the aid of tools and equipment that may have been constructed very far in the past . . . . Thus in all human economies there must be property in capital goods--equipment and work-in-

> progress--as well as in territory . . . . In a capitalist economy property is owned by a small number of individuals who hire the labour of a large number at agreed wage rates and organize their work. The excess of the product over the wages bill then appears as income from property.[13]

Mrs. Robinson's analysis is therefore a return to classical economics and to the wages fund theory. Her analysis is strikingly similar to Cairnes. For, as we have seen, in Cairnes' analysis wages were residual income, and this is also the case in Robinson's volume. The relationship between Robinson's argument and that of the wages fund theory has been noted by Professor Lerner:

> In throwing out the marginal productivity mechanism she is forced . . . to a kind of residual theory which says that the real wage is determined by how much is left over to be divided among the workers as they take their turn in the queue after the requirements for accumulation and any consumption by capitalists, and we are back at the strict wages fund which comes back to life in several different contexts but always in response to minor variations of the same spell.[14]

To put this another way: the whole point of capital theory is that there is a lapse of time between input and output. This is made possible by capital, which must "advance" the wages of labor because wage earners cannot wait until the

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[13] Joan Robinson, _The Accumulation of Capital_ (London: Macmillan, 1956), p. 4.

[14] Abba P. Lerner, "Review of Joan Robinson, _Accumulation of Capital_," _American Economic Review_, Vol. XLVII (September, 1957), p. 699. See also, in this connection, Nicholas Kaldor, "Alternative Theories of Distribution," _Review of Economic Studies_, Vol. 23 (Second series, 1955-1956), pp. 83-100.

products of their labor have been sold. Viewed from the input side, capital is a wages fund. From the output side, capital is the stock of unfinished products accumulating during the period of production. When the theory is formulated in this fashion there is no inconsistency between capital theory and the wages fund doctrine. Both describe the roundabout process of production: one from the input side, one from the output side.

The role of the wages fund doctrine as part of capital theory is increasingly recognized by wage theorists. Mr. Rothschild, for example, admits adherence to the wages fund theory and, in summing up his findings, presents a very complete description of the wages fund doctrine, showing that the total wage bill cannot be increased in the short run. In his words:

> To improve wages the national income, out of which they are paid, must be increased. This can be achieved by industrialization, i.e., the accumulation of capital. But it will take some time until the newly-formed capital will bear fruit in the form of consumption goods, and in the interim period total real wages will be fixed within fairly rigid limits. The originally existing capital, capable of turning out consumption goods, will constitute something like a wage fund.[15]

It is clear, therefore, that the marginal productivity

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[15] K. W. Rothschild, The Theory of Wages (Oxford: Basil Blackwell, 1956), p. 10.

products of their labor have been sold. Viewed from the input side, capital is a wages fund. From the output side, capital is the stock of unfinished products accumulating during the period of production. When the theory is formulated in this fashion there is no [illegible] the wages fund d[illegible] of production: [illegible] theory has in no way superseded the wages fund theory. The marginal analysis tells us a good deal about what determines the demand for individual workers of a certain skill; it tells us very little about total wages. Instead of replacing the classical analysis of distribution, it has simply created a vacuum in its place.

There is a special sense in which the Keynesian analysis has filled the vacuum, for Keynes's analysis in effect rehabilitated the wages fund theory. In showing that labor can determine its money wage, but has no control over its real wage, Keynes's analysis made clear a point which follows directly from the wages fund theory: real wages are not determined in the labor market, but are a function of a quite different set of decisions. Keynes denied that labor has any control over real wages. Of course, it is possible for an individual worker to reduce his real wages by accepting a lower money wage, for so long as other prices do not fall, a lower money wage means a lower real wage. But if all money wages were reduced a certain percentage, it does not follow that real wages would fall. According to Keynes it is impossible for labor to determine real wages since a variation in money wage rates affects prices and real wages. Keynes's thesis is that a variation in money wage rates affects the demand for output, accompanied by falling prices which leave

real wages unchanged.[16] This is apparently what Professor Boulding meant when he referred to the "modified 'wages fund' of the General Theory."[17] Thus real wages are determined in the capital market through decisions affecting investment, and not in the labor market. Keynesian theory involves an indirect type of wages fund theory since he argued that, given the propensity to consume, employment was a function of investment (defined as net additions to capital). The demand for labor depends on capital, and this is precisely the wages fund argument of the classical economists. In the Keynesian system, as in the classical economics, the wage bargain in the

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[16] It appears that Keynes was of two minds in this matter. By Chapter 19 of the General Theory he admitted that variations in money wages might affect real wages through what has come to be called the "Keynes Effect." Because a fall in wages will be accompanied by a fall in prices, the stock of money in "real" terms increases. Assuming the nominal amount of money is constant, this lowers the rate of interest, increases investment thereby increasing employment and income. Notwithstanding this fact, Keynes rejected the manipulation of money wage rates as a policy for increasing employment. For one thing, in capitalistic economies there is no method available to bring about a universal reduction of the money wage rate. Employers must have sufficient bargaining power to push them downward, which they may not have. What is more, even if employers could cut wages, they would possibly get reduced in one industry before another, causing great labor unrest and dissatisfaction. What is still more, falling prices would have adverse effects on debtors. Keynes, therefore, felt that manipulation of the quantity of money would be a much sounder policy to follow in the event of unemployment. John Maynard Keynes, The General Theory of Employment, Interest and Money (New York: Harcourt, Brace and Co., 1936), pp. 257-271.

[17] Kenneth Boulding, op. cit., p. 132.

labor market only affects distribution indirectly, that is, as it affects the determinants of investment and future income.

The conclusion that distribution is largely independent of what happens in the labor market seems to be supported by the statistical evidence. The redistributive potential of trade unionism is an issue almost as old as the wages fund doctrine itself. If unions have the power to alter over-all income distribution it should show up in an increase in the labor share of the national income. But in order to prove the redistributive power of unions, it must also be shown that the diversion of property income to wages can be attributable directly to collective bargaining, and not to other forces, such as capital accumulation, low interest rates or rent controls.

The various studies on labor's share are of unequal reliability and not always comparable with one another. Despite differences of methods and definition, however, most studies show that the secular shift in the employee's share has been relatively small. Professor Levinson has argued that there has been a slight upward shift but attributes the rise in labor's share to governmental policy, with collective bargaining in a secondary role.[18] This conclusion has been

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[18] Harold M. Levinson, "Collective Bargaining and Income Distribution," American Economic Review, Papers and Proceedings, XLIV (May, 1954), pp. 315-16.

supported by Phelps Brown and Hart in their study of the wage share of the United Kingdom between 1870 and 1950. They concluded that the wage share has been relatively stable throughout the period.[19] Similar conclusions have been reached by Phillips[20] and Hildebrand.[21] The labor unions themselves seldom claim more than that they can raise real wages through the effect on purchasing power; few unionists argue that they can effect a permanent long-run shift of income from profits to labor for the economy as a whole.[22] Of course, we can never know what might have occurred in the absence of unionism, but the evidence does imply that unions _have not_ improved the relative position of wage earners over time.

Although it is tempting to conclude that the impotence of unions to raise wages is a telling tribute to the accuracy of the wages fund theory, it must be noted that the validity

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[19] E. H. Phelps Brown and P. E. Hart, "The Share of Wages in National Income," _Economic Journal_, Vol. 52, (June, 1952), pp. 253-57.

[20] Joseph D. Phillips, "Labor's Share and 'Wage Parity,'" _The Review of Economics and Statistics_, XLII (May, 1960), pp. 164-74.

[21] George H. Hildebrand, "The Economic Effects of Unionism," _A Decade of Industrial Relations Reserach 1946-1956_ (New York: Harper & Brothers, 1958), pp. 98-145.

[22] Allen M. Cartter, _Theory of Wages and Employment_ (Homewood: Richard D. Irwin, 1959), p. 167.

of the doctrine does not depend on empirical evidence regarding the share of labor. Indeed, both Ricardo and Cairnes expected the share of labor to fall over time. The truth is that any fact about the progress of labor's share would be consistent with the wages fund doctrine, depending on certain arbitrary assumptions about changes in other variables. Thus, Ricardo expected the share of labor and capital to decline at the expense of landlords. This followed from Ricardo's acceptance of the Malthusian theory of population and diminishing returns to land. If he found that labor's share had increased, the wages fund theorist would look for offsetting factors in technological development, or the willingness of workers to limit their numbers. The point is that the wages fund theory is not necessarily tied up with any definite trend in labor's share.

Labor Unions, the Wages Fund and Economic Development

What is of interest is that unions are still seen as an obstacle to economic development. The same arguments raised against them by the classical economists are once again used to demonstrate that they act as an obstacle to economic growth because they hinder capital formation. Professor de Schweinitz, for example, has argued that the labor movement in underdeveloped countries must be restricted in the interests

of economic development. In drawing upon evidence from Western experience in the nineteenth and twentieth centuries, he showed that if unions are successful in redistributing income from profits to wages, savings decline, consumption rises, and investment is retarded. The rapid industrial growth of England, Germany and the United States in the nineteenth century occurred when trade union action was either prohibited, or restricted. In the Soviet Union trade unions have never been permitted to develop because low wage rates are necessary to provide high rates of saving.[23] As one writer has put the case:

> Unions fundamentally favor consumption; economic development requires keeping aggregate consumption down in order to free resources for investment. Effective unions, whatever else they may do, thus tend to delay, reduce, or prevent the growth of investment.[24]

Recognizing the incompatibility of trade unions and economic growth for newly industrializing societies, Professor Mehta suggests that unions should be given assignments that would interfere as little as possible with the requirements of rapid development.[25]

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[23] Karl de Schweinitz, Jr.,"Industrialization, Labor Controls, and Democracy," Economic Development and Cultural Change, Vol. VII (July, 1959), pp. 385-404.

[24] Adolph Sturmthal, "Unions and Economic Development," Economic Development and Cultural Change, Vol. VIII (January, 1960), p. 199.

[25] Asoka Mehta, "The Mediating Role of Trade Unions in Underdeveloped Countries," Economic Development and Cultural Change, Vol. VI (October, 1957), pp. 16-23.

That the wages fund is still a crucial consideration for underdeveloped economies has been noted by Vakil and Brahmanand. They claim that in countries such as India the concept of capital as a stock of wage goods available to support labor in investment activities is realistic:

> We have maintained that unemployment in underdeveloped countries is due solely to the prevalence of the wage-goods gap. It is the inability of the economy to provide in the short-period the required surplus of wage-goods necessary in order that disguised unemployment can be employed in investment, that inhibits expansion in employment and investment. Countries like India have an abundance of population, but such an abundance does not necessarily connote a proportionate availability in employable units. If the economy can make good the wage-goods gap through a quick expansion in the output of wage goods, it is possible to raise the employment potential and thus initiate an upward cumulative process.[26]

The same argument is made by Professor Higgins. He notes that in some underdeveloped countries the labor cost of food determines the real wage rate and the spread between prices and real wages determines profit. When agricultural yields are good, wages are low and profit high. Investment thereby tends to increase. Once the new supplies of manufactured goods reach the market their prices fall. "If this drop in manufactures coincides with a bad harvest, so that wages and raw material costs are rising at the same time, investment may

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[26]C. N. Vakil and P. R. Brahmanand, Planning for an Expanding Economy (Bombay: Vora and Co., 1956), p. 23. See also, p. 211, 231-232, 397.

be cut off to a trickle."[27] Thus the experience of under-developed economies seems to support the proposition that the wages fund theory is not without validity.

As we have shown in this chapter, the wages fund theory was not replaced by the development of marginal productivity analysis since the two theories are attempts to explain two quite different phenomena. In fact the attempt to use marginal analysis to explain wages has created a vacuum in wage theory since it can only explain specific wages and tells us nothing about the total wage bill, or average wage rate, essentially macro-economic issues. The Keynesian theory in a sense filled the void by returning to the problem of aggregates. It involves a wages fund theory in the sense that real wages are assumed to remain constant in the face of a change in money wages, and the latter proposition has many of the same consequences as the classical wages fund doctrine. Furthermore in the Keynesian system, the important consideration so far as income determination is concerned is net investment (or net additions to capital) and this is a

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[27] Benjamin Higgins, Economic Development (New York: Norton & Co., 1959), p. 47. See also P. T. Bauer, "Regulated Wages in Under-Developed Countries," The Public Stake in Union Power (University of Virginia Press, Charlottesville, 1959), Ed. by Phillip D. Bradley, pp. 324-329.

fundamental part, indeed the essence, of the wages fund theory. The wages fund theory remained a part of capital theory because capital theory postulates a span of time between input and output and this is made possible through the advance of wages. Moreover, experience in underdeveloped countries indicates that the wages fund doctrine is indispensable as a tool of analysis.

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