It is inviting to regard J. S. Mill's formal arrangement of the Principles of Political Economy—the discussion of 'production,' 'distribution' and 'exchange' in separate books—as indicating a failure to define distribution in terms of the pricing of scarce factor services, or to appreciate the relation between factor pricing, the technical conditions of production and allocation. (Knight, 1956, 42; Schumpeter, 1954, 543) But Mill had reasons, which involve matters other than pure theory, for the decision to organize his work as he did—a concern to distinguish those economic relationships which do from those which do not vary between alternative societal organizations; an interest in comparative economic development; and a pedagogical concern for simplicity. It is certainly true that the formal treatment of production, distribution and exchange, in that order, left its mark on the substantive matter itself; serious confusions were created which a more satisfactory package from a theoretical perspective would probably have avoided. As an obvious example, placing the contrast between 'demand for commodities' and 'demand for labour'—the fourth fundamental proposition on capital—before either the analysis of distribution (particularly the wages-fund theory) or the analysis of exchange courted misunderstanding. Moreover, Mill's social preoccupations sometimes led him to bring the discussion of difficult technical problems to a close rather too hastily for the analytically conscientious reader. (Marshall, 1920, 824)

Yet for all that, his position can be unravelled and it is clear that the organization of the Principles did not derive from any intention to divorce production and distribution from exchange in a technical sense. The general perspective is, in fact, one of a tight interconnection between these aspects of the economic problem (following the lines laid out by Ricardo).

As a typical instance of misdirected criticism we may refer to G. P. Scopes's objections to Mill's fourth fundamental proposition on capital—"demand for commodities is not demand for labour": 'Can Mr. Mill really believe that the labour spent by the whole building trade of London . . . has not been paid for by the vast sums of money for which these houses have been sold?' (1873, 120) This indeed was precisely the substance of W. S. Jevons's complaint that, according to the fourth proposition—which he rightly observed originated with Ricardo—capitalists 'maintain and pay for labour whether or not there is a demand for the commodities produced' and 'production goes on independently of the use to which the pro-

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I shall show that there is nothing in the propositions which denies the validity of derived demand for inputs (imputation); on the contrary, Mill specifically stated his adherence to the imputation principle without, of course, providing a water-tight analysis thereof. In Section I, I present the evidence of Mill’s acceptance of the concept of derived demand, evidence that proves essential for an appreciation of the fourth proposition on capital. This proposition, I show in Section II, was not designed to explain the return to labour at the industry level, and in no way conflicts with the principle of imputation. With this behind us, we will be in a position to consider formally aspects of the wages-fund doctrine. In Section III the doctrine is taken up in terms of Mill’s conception of economic process. A picture emerges which is far removed from a simple agricultural economy wherein the wages fund may be interpreted as a (real) wage bill, made up of commodities sharply distinguished from ‘luxury’ goods, and ‘predetermined’ in magnitude at the commencement of the period of production. Mill (like Ricardo) did not take seriously the conceptual framework of an annual agricultural cycle governing the demand for labour, and allowed for rapid alterations in the flow of real wages.

This demonstration sets the stage for an attempt to clarify what must surely constitute one of the most difficult interpretive problems in the classical literature. Mill’s famous reiteration from the wages-fund theory in 1869. Section IV offers our interpretation of this most peculiar episode—Mill’s new insistence upon a labour demand ‘curve’ of zero elasticity. His case, we shall argue, turns upon

derived demand presuming zero elasticity of demand from final product in the short run—a position quite consistent with the industry level and extended too hastily to the economy as a whole.

1. The Principle of Derived Demand

I shall deal first with the pricing of inputs in particular industries although the classical economists paid far less attention to microeconomic problems of this order, than to the determination of the general wage rate. I shall demonstrate the presence in Mill’s work of an appreciation of derived demand in the sense that the ultimate source of factor remuneration in sales proceeds, and the motive for employment is the (expected) added revenue product. The argument is obviously not technically water-tight because a clear marginal principle is absent.

We encounter a brief suggestion of the relationship in question in Mill’s reference to the ‘principles’ to the ‘present system of industrial life, in which employments are minutely subdivided, and all concerned in production depend for their remuneration on the price of a particular commodity.’ (CWIII, 455) The principle was further elaborated in a chapter dealing with indirect inputs of labour in lengthy processes of production: ‘All these persons ultimately derive the remuneration of their labour from the bread, or its price; the plough-maker as much as the rest; for since ploughs are of no use except for tilling the soil, no one would make or use ploughs for any other reason than because the increased returns, thereby obtained from the ground, afforded a source from which an adequate equivalent could be assigned for the labour of the plough-maker. If the produce is to be used or consumed in the form of bread, it is from the bread that this equivalent must come.’ (CWIII, 31) It is presumably the expectation of future yield that provides the motive for the use of the input.

In the case of materials which are disposed as such by being once used; ‘the whole of the labour required for their production, as well as the abstinence of the person who supplied the means of carrying it on, must be remunerated by the price of a single use.’ By contrast, ‘implements . . . being susceptible of repeated employments, the whole of the products which they are instrumental in bringing into existence are a fund which can be drawn upon to remunerate the labour of their construction, and the abstinence of those by whose accumulations that labour was supported. It is enough if each product contributes a fraction . . . towards the remuneration of that labour and abstinence, or towards indemnifying the immediate producer for advancing that remuneration to the person who produced the tools.’ (Ibid., 37, cf 32)

The general principle also covers workers involved in transportation of a product ‘from the place of its production to the place of its destined use . . . its final consumption’; they too ‘derive their remuneration from the ultimate product.’ (CWIII, 32–33) The wholesale and retail functions of the ‘Distributing Class whose agency is supplementary to that of the Producing Class’ are similarly treated: ‘the produce so distributed, or its price, is the source from which the distributors are remunerated for their exertions, and for the abstinence which enabled them to advance the funds needful for the business of distribution.’ (Ibid., 40) It is indeed in consequence of the ‘increased utility’ afforded by these functions that the product ‘could be sold at an increased price proportional to the labour expended in conferring it.’ (Ibid., 48)

Although in the above citations the ‘distributive’ functions are formally separated from the strictly ‘productive’ it is quite clear that the process of production in any meaningful economic sense was envisaged as coming to an end upon sale to the final consumer. It is essential to note that this applies also to wage goods. For Mill distinguished labourers’ accommodation from industrial structures which have what he termed a ‘protective’ function in production—manufactories, warehouses, docks, granaries, barn, farm buildings devoted to cattle, or to the operations of agricultural labour—on the grounds that the housing of workers is ‘destined for their personal accommodation: these, like their food, supply actual wants, and must be counted in the remuneration of their labour.’ (Ibid., 38) Similarly, coal may be employed ‘not only in the process of industry, but in directly warming human beings. When so used, it is not a material of production; but is itself the ultimate product.’ (Ibid., 35) The point at stake is an important one since the formal inclusion of wage goods within capital, to be discussed in the next section, may leave the impression that such commodities were envisaged as intermediate products reflecting a sort of production of commodities by means of commodities. That the finished products of many branches of industry are the materials of others’ (Ibid., 36) was an irrelevant consideration in the case of workers’ consumables which were treated on a par with all other final goods.

There is also to be found in the Principles (CWIII, 474) a passage of potential significance for Mill’s intentions by his ‘recantation’ in 1869 of the wages-fund doctrine. It contains an observation drawn from Thomas De Quincey focussing upon the implications of the fact that input use is characterized by the properties of derived demand and joint demand. The perspective is one of microeconomics involving particular industries.2

II. ‘Demand for Commodities is not Demand for Labour’

We turn next to the theory of distribution from a macro-economic perspective. To set

2Ricardo had never spelled out as clearly as did Mill adherence to the general notion of imputation in the context of the return to particular inputs but the evidence suggests that he did not reject J. B. Say’s version of the doctrine. The greatest care must be taken in approaching the classical theorems on capital to keep this in mind. (See Hutton, 1978, 670–1).
The stage we must have in mind is Mill's discussion of capital.

The formal definition of capital is that of 'a stock previously accumulated, of the products of past labour,' the function of which in production is to afford the shelter, protection, tools and materials which the work requires, and to feed and otherwise maintain the labourers during the process. These are the services which present labour requires from past, and from the produce of past, labour.' (CWW, 55) In the same context Mill also defined capital as 'wealth appropriated to productive employment'; and yet more generally, as 'whatever of the produce of the country is devoted to production.' (Ibid., 87)

Mill himself gave four propositions respecting capital—all of which are part and parcel of Ricardian doctrine—asserts that 'industry is limited by capital':

"There can be no more industry than is supplied with materials to work up and food to eat. Self-evident at the thing is, it is often forgotten that the people of a country are maintained and have their wants supplied, not by the produce of present labour, but of past. They consume what has been produced, not what is about to be produced. Now, of what has been produced, a part only is allotted to the support of productive labour; and there will not and cannot be more of that labour than the portion so allotted (which is the capital of the country) can feed and provide with the materials and instruments of production." (Ibid., 63-4)

It is not always clear whether Mill intended his proposition to relate solely to a dependency of productive employment upon 'circulating capital' (wages goods and materials). So it might appear but for the closing sentence which specifically refers also to fixed capital. In the latter case the 'dependency' of productive employment on capital has a clear implication, and we assume—and this is probably a fair attribution in the present context—constancy of the real wage rate so that circulating capital can be treated on a part with technological capital in its relationship to labour. The weight of emphasis, however, is such as to suggest a very general statement more concerned with circulating than with fixed capital, for which there were good reasons as we shall presently see.

The proposition on capital which primarily concerns us here is Mill's fourth which does not, strictly speaking, constitute a distinct proposition at all but is rather a direct corollary of the first. (Hayek, 1941, 433; Tawney, 1896, 219-20; Marshall, 1920, 628) Thus what supports and employs productive labour, is the capital expended in setting it to work, and not the demand of purchasers for the produce of the labour when completed; the demand for commodities determines in what particular branch of production the existing labour and capital shall be employed.' (CWW, 78) Similarly, 'it is not the money paid by the purchaser, which remunerates the labour; it is the capital of the producer; the demand only determines in what manner that capital shall be employed, and what kind of labour it shall remunerate.' (Ibid., 88)

Clearly the notion that demand for commodities is not demand (for labour does not relate to the demand for particular kinds of labour or labour in particular industries. For Mill did not deny that a demand for a particular kind of commodity gives rise to a demand for labour to make that commodity; as we have seen: 'all concerned in production depend for their remuneration on the price of a particular commodity.' What Mill had in mind by the fourth proposition was aggregate wages: 'The general principal, now stated, is that demand for commodities determines merely the direction of labour, and the kind of wealth produced, but not the quantity or efficiency of labour, or the aggregate of wealth.' (Ibid., 87)

Mill himself had difficulty in expressing his precise intentions. But one particular formulation reveals the essence of the matter and confirms the preoccupation with aggregate employment and earnings. I have in mind the criticism of those economists who argued 'as if a person who buys commodities, the produce of labour, was an employer of labour, and created a demand for it as really, and in the same sense, as if he bought the labour itself directly, by the payment of wages...'. On the contrary, 'if by demand for labour be meant the demand by which wages are raised, or the number of labourers in employment increased, demand, demand for commodities does not constitute demand for labour. I conceive that a person who buys commodities and consumes them himself, does no good to the labouring classes; and that it is only by what he abstains from consuming, and expends in direct payment to labourers in exchange for labour, that he benefits the labouring classes, or adds anything to the amount of their employment.' (Ibid., 80, italics added) Both Ricardo and J. B. Say were said to have fully appreciated this position; this is important, for the latter also went some way towards an appreciation of the theory of imputation, indicating thereby that there is no necessary conflict between this approach to distribution and the approach implied by the fourth proposition on capital since each pertains to a distinct area of discourse. (of Hollanders, 1979, 373-75)

III. The Wages Fund Theory and Economic Organization

It is usual to attribute to the classical economist a conception of economic activity which runs in terms of discontinuous output, so that advances out of past produce are required for the maintenance of current activity. The wages-fund theory is said to fall into this category of models. Contrasting with such conceptualizations are those which emphasize the continuity of production—synchronized activity.

There is, of course, no question that the time-consuming character of economic activity caught the eye of the classical economists, Mill among them (CWW, 53, 58-9) Their models imply the need for accumulated advances to tide over producers. Yet the fact is that many of Mill's assertions are more consistent with synchronized activity. It is my impression that his formal accounts involving discontinuities were designed to bring to the fore as clearly as possible the time-consuming character of economic activity. But it must not be overlooked that synchronization economics does not gainay such this particular aspect (although it certainly tends to disguise its presence) since it remains true that the flow of current input is responsible for the flow of future production and decisions regarding the current use of input must be made on the basis of expectations regarding the future; similarly, it remains true that the current flow of output is the consequence of input use in the past. These facts, of course, only become conspicuous within the terms of the model when consideration is given to an expansion of capacity from period to period when the (real) proceeds of past activity prove inadequate to 'finance' the current flow of input. If what I have asserted is a legitimate representation of Mill's position—the evidence will presently be laid out—the greatest care is required in understanding what he had in mind by the wages-fund doctrine. To this matter we now turn.

It will be convenient to have before us that strong version of the doctrine wherein a specific annual wage bill is 'synchronized'—no more and no less—to be paid out to labour, upon which assumption the celebrated labour-demand curve of unitary elasticity is based. The most explicit statement is by Mill himself at the time of his retraction of belief in the doctrine in 1869. In his review of Thornton on labour Mill laid out what he conceived to be the received doctrine:

"The theory rests on what may be called the doctrine of the wages fund. There is supposed to be,
at any given instant, a sum of wealth, which is unceasingly devoted to the payment of wages of labour. This sum is not regarded as wasteful, for it is augmented by saving, and increases with the progress of wealth; but it is reasoned upon as at any given moment a predetermined amount. More than that amount it is assumed that the wages-receiving class cannot possibly divide among them; that amount, and no less, they cannot but obtain. So that, the sum to be divided being fixed, the wages of each depend solely on the divisor, the number of participants. In this doctrine it is by implication affirmed, that the demand for labour not only increases with the cheapness, but in- creases in exact proportion to it, if the same aggregate sum being paid for labour whatever its price may be." (CVW, 643-4).

For Mill, this is a characteristically ambiguous statement, since it is not specified whether the "circulating capital" is in real or money terms. (Tausig, 1896, 2300) But it appears that the latter was intended, for while Mill found the rationale for this conceptualization of the labour market in the notion of a form of discontinuous production, reference is also made to "the capitalist's pecuniary means": "In the common theory, the order of ideas is this. The capitalist's pecuniary means consist of two parts—his capital, and his profits or income. His capital is what he starts with at the beginning of any year; or he when he commences some round of business operations: his income he does not receive until after the end of the year, or until the round of operations is completed. His capital, except such part as is fixed in buildings and machinery, or laid out in materials, is what he has got to pay wages with. He cannot pay them out of his income, for that he has not yet received. When he does receive it, he may lay by a portion to add to his capital, and as such it will become part of next year's wage-fund, but has nothing to do with this year's." (CWIV, 444; IV, 301)

Let us now gather evidence from Mill's Principles to evaluate the accuracy of this retroactive view. The picture which emerges bears little resemblance to that portrayed in 1869.

Statements relating to wage-rate determination in the Principles are relatively few and

surprisingly ambiguous. The most important analysis at the outset of Chapter IV, and deals with the general return to labour (including service or unproductive labour):

"Wages, then, depend mainly upon the demand and supply of labour, or it is often expressed, on the proportion between population and capital. By population is here meant the number only 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 ex- change for labour, such as the wages of soldiers, domestic servants, and all other unproductive la- bourers. There is, of course, no necessity of ex- pressing by one familiar term, the aggregate of such unproductive labourers 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 the expression, remem- bring, however, to consider it as elliptical, and not as a literal statement of the entire truth.

With those limitations of the terms, wages not only depend upon the relative amount of capital and population, but cannot under the rule of com- petition be affected by anything else. Wages (meaning, of course, the general rate) cannot rise, but by an increase of the aggregate of unproductive labourers employed in hiring labourers, or a diminution in the number of the competitors for hire; nor fall, ex- cept either by a diminution of the funds devoted to paying labour, or by an increase in the number of labourers to be paid." (CWIV, 378).

This is the most important formal state- ment of the principle of wage-rate determini- nation in the entire work. Its crude inad- equacies are such that it is hardly unfair to say that, from a theoretical viewpoint, we are scarcely carried beyond the assertion that 'wages are what wages are.' For it begs the questions, most important of which is the precise determination of the breakdown of aggregate capital between its components by reference to some kind of production function. Yet Mill evidently believed, and perhaps justifiably so, that the formulation

suffered for his purposes, basing it upon a very general and certain theory of Capital. It is difficult to avoid the im- pression that the theoretical details relating to the demand for labour simply did not concern him deeply in this context; it was application, based upon a minimal theoretical structure, that was the major preoccupation, the inten- tion being to demonstrate that the condition of the labouring class 'can be bettered in no other way than by altering that proportion [between capital and population] to their ad- vantage; and every scheme for their benefit, which does not proceed on this as its foun- dation, is, for all permanent purposes, a de- lusion.' (Ibid., 343; cf 354) It is pertinent that the larger discussion of Chapter IV, Wages itself, apart from two subsequent chapters on Popu- lar Remedies for Low Wages, focuses upon the implications of the Malhouserian population doctrine—labour-supply—rather than the na- ture of the demand for labour. Thus a change in the cost of wage-goods works its effects upon wages first by impinging upon wage-supply. There can be little question that Mill's primary concern was with issues of this or- der.

A second formal statement of the doctrine, again in the context of the equilibrating func- tion of wage movements, is equally vague:

"Goods can only be lowered in price by competi- tion, to the point which calls forth buyers suf- ficient to take them off; and wages can only be lowered by competition until room is made to ad- mit all the labourers in a share in the distribution of the wage-fund. If they fell below this point, a portion of the capital would remain unemployed for want of labourers; a counter-reaction would commence on the side of capitalists, and wages would rise." (Ibid., 356).

This passage might be read as assuming a rigidly pre-determined wages bill; but it is also not inconsistent with a totally different ver- sion of the wages-fund theory wherein the wages bill is not a pre-determined sum but the equilibrium outcome of a market-clearing

process (about which more below). Once again, there is too little theoretical detail to be sure of Mill's intention regarding strict analysis. The formulation served the purpose of an elementary exposition of the notion of an equilibrium wage rate designed to counter popular remedies for low wages (such as minimum-wage legislation) in which context precisely the extract appears.

Yet for all that there comes to light, upon closer examination of the qualifications al- lowed by Mill to the main statement, some profoundly interesting theoretical insights. I have in mind his qualifications in the present context to the 'law of markets.' Mill recog- nized the possibility of slack periods in par- ticular trades when available capital is kept idle—a circumstance which could still be formally absorbed into the doctrine, for 'Cap- ital which the owner does not employ in pur- chasing labour, but keeps idle in his hands, is the same thing to the labourers, for the time being, as if it does not exist.' (Ibid., 338) More significant, the allowance is extended to the aggregate labour market:

"When there is what is called a stagnation... then work people are dissuaded, and those who are retained must submit to a reduction of wages: though in these cases there is neither more nor less capital than before... if we suppose, what is somewhat not absolutely impossible, that one of these fatigues of disaffection should affec- t all occupations at the same time, wages al- together might undergo a rise to its full tide. This, however, are but temporary fluctuations: the cap- ital now lying idle will next year be in active em- ployment, that which is this year useless to keep up with the demand will in its turn be locked up in crowded warehouses; and wages in those sev- eral departments will ebb and flow accordingly, but nothing can permanently after general wages, except an increase or a diminution of capital itself (always meaning by the term, the funds of all sorts, devoted to the payment of labour compared with the quantity of labour offered itself to hire)." (Ibid., 356-8). Further allowances for excess capacity will be found in the formal discussion of capital
in the first Book. Thus 'a fund may be seek-
ing for productive employment, and find none, adapted to the inclinations of its possessor: it then is capital still, but unemployed capital. Or the stock may consist of unsold goods, not susceptible of direct application to productive uses, and not, at the moment, marketable: these, until sold, are in the condition of un-
employed capital.' (Ibid., 57, cf 65).

Idle capital in these contexts apparently refers not only to unsold stocks of goods but also to money funds available for investment in wage payments or other disbursements. What is involved is a well-considered and fundamental qualification to the proposition of the text—capital is limited by capital—is in fact aligned to the in the previous section) from which it is apparent that Mill intended to sup-
plement the basic doctrine regarding aggre-
gate employment by some function relating to the state of aggregate demand for final goods—or what is equivalent, some function of not excess demand for money.

The significance of the qualification ex-
tends beyond its linkage of monetary and em-
ployment theory, important though this is. Most relevant is that the qualification points away from any notion of an aggregate sum of wealth, in real or money terms or both, unconditionally 'destined' for the payment of wages. In the light of all this it appears that the wages-fund doctrine was, as Mill himself put it in one of our foregoing citations, a the-
ory relating to 'permanent' wages—assum-
ing full equilibrium as far as concerns aggre-
gate demand for commodities—and par-
ticularly relevant for an appreciation of the general problems of population or the inabil-
ity to generate increased employment by pro-
tective measures.

There is much else pointing to this conclu-
sion. What we have to say next is pertinent to the question of a strict upper boundary to the real wage bill (and a fortiori the money wage bill).

The function of capital, as we have seen, is 'to afford the shelter, protection, tools and materials which the work requires, and to feed and otherwise maintain the labourers during the process.' But Mill was very careful to specify that the function of capital whose function it is to fulfill the tasks of 'maintain-
ing labour' need not actually take the form of stocks of wage goods.

"What then is his capital? Precisely that part of his possessions, whatever it be, which it is to constitu-tion his fund for carrying on fresh production. It is of no consequence that in part, or even the whole of it, is in a form in which it cannot directly supply the wants of labourers." (CW II, 56, Ital-
ics noted)

The reason for this position lies in the sup-
pose flexibility of the system which per-
mits, by exchange or by production, the easy and rapid generation of commodities suitable for workers' consumption.

Thus, a decision by a capitalist to increase investment implies a fall off in his demand for luxuries ('plate and jewels')—l'art du fin-
nance from the sale of his produce (for ex-
ample, iron goods)—and a corresponding in-
crease in expenditure upon productive labour; this entails appropriate increases in money wages and accordingly in the demand by la-
bour for food. (Ibid., p57) What of expanded production of food to meet the new demand? Increased food supplies might, we are told, be obtained immediately by importation, pre-
sumably in exchange for the luxuries hitherto consumed by capitalists, or at least for goods produced by means of the resources made available by the reduction in luxury con-
sumption. If increased importation is not pos-
sible, then 'labourers will remain for a season on their short allowance: but the conse-
quences of this change in the demand for commodities, occasioned by the change in the expenditure of capitalists from unproductive to productive, is that next year more food will be produced, and less plate and jewellery. So that . . . without having had anything to do with the food of the labourers directly, the

conversion by individuals of a portion of their property, no matter of what sort—in this case stocks of iron goods—from an unproductive destination to a productive, has had the effect of causing more food to be appropriated to the consumption of productive labourers.' True enough, in the absence of increased food im-
ports it may take a 'season' for food supplies to be expanded, but there is little question that Mill intended to minimize the significance of any such delay. The case of achieving ex-
pansions of the food supply explains the con-
clusion that what distinguishes capital goods from others

"does not lie in the kind of commodities, but in the mode of the capitalists—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 reinvestment. The sum of all the val-
es so destined by their respective possessors, composes the capital of the country. Whether all these values are in a shape directly applicable to productive uses, makes no difference. Their shape, whatever it may be, is a temporary accident: but once destined for production, they do not fail to find a way of transforming themselves into things capable of being applied to it." (Ibid., 57, Italics added, cf., 67–68, 82–83; CW IV, 266–7)

The less significant is the distinction be-
tween wage-goods and luxury-goods, of course, the greater the flexibility of the pro-
ductive system and the ease of expanding the forerunner at the expense of the latter. In point of fact the notion of a sharp distinction be-
tween the two categories breaks down at an early stage in Mill's exposition, as is clear from the discussion of the 'unproductive' consumption of productive labourers. (CW II, 58) Workmen normally earn a 'surplus' over subsistence requirements which can best be seen in terms of the case of increased in-
vestment with given labour supply. Assum-
ing the workers to be 'already sufficiently sup-
plied with necessaries' they now will 'be-
come consumers of luxuries: and the capital

previously employed in the production of luxuries, is still able to employ itself in the same manner: the difference being, that the luxuries are shared among the community generally, instead of being confined to a few.' (Ibid., 68).

From all this there emerges a rather clear picture of Mill's vision of economic process in an advanced capitalist-exchange system. It is far removed from a primitive agricultural economy for which a rigidly interpreted wages-
fund theory might be appropriate, namely one wherein workers consume a distinct class of commodities, produced in annual jets, and opportunities for carry over from period to period are limited. (For an alternative view see Ekelund, 1976) Workers are paid in money, not in kind, and enter the market to purchase commodities at retail like any other consumers; there is no distinction in this re-
gard between consumption by labourers, cap-
italists or landlords. The 'wages fund' is thus expressed in money but has a real counterpart in the flow of wage goods currently made available at retail outlets. (Our reading is consistent with that of Taussig, 1896, p233)

The recantation of the wages-fund doctrine (1869) begins, we have seen, with a criticism of what Mill claimed to be received doc-
trine—his own original position, namely the technological inability, deriving from the dis-
continuity of the production process, to alter the magnitude of the wages bill (apparently even the 'pecuniary wages bill') during the course of the 'year.' This criticism, I have argued, appears unjustified if directed against the position actually developed in the Prin-
ciples, where there is little to suggest any such rigidly of the wages bill—in either money or real terms. Yet there is a sense in which the wages bill can be said to be 'predeter-
minded'—the sense implied by any determi-
nation solution to a problem of competitive pricing: The demand and supply curves must be stable for such solution to be meaningful, their stability reflecting investment plans by
capitalists and plans regarding work and leisure by labourers. It would seem that Mill erred in 1869 by confusing the two senses in his description of his original position.

IV. The Wages-Fund Theory: the Recantation Interpreted

Mill's precise position in 1869 concerning the wages-fund doctrine constitutes one of the most difficult problems in the history of economics. It is to this matter that we now turn.

After rejecting the case of unitary demand elasticity, Mill focused upon that of completely inelastic and apparently coincidental schedules of supply and demand where neither the employer nor buyers are under the action of any motives, derived from supply and demand, to give way to one another 2 in this case, which the law of equality between demand and supply does not provide for, because several prices all agree in satisfying that law. the question between one of those prices and another will be determined by causes which operate strongly against the labourer, and in favour of the employer, nothing but a close combination among the employed can give them even a chance of successfully contending against the employers. (CWV, 642-3)

Let us then trace out the argument made for zero elasticity of labour demand. The precise order of the argument must be carefully followed.

The case begins, as noted, with the account of the wages-fund doctrine in terms of a unitary elastic demand curve for labour as a whole the theory was applied to aggregate wages. (supra, p. 12) At the next stage, however, Mill referred to the motives of an individual employer of labour in making what seems to be his main argument against the notion of unitary elasticity. "Does the employer require more labour, or do treat employers of labour make their appearance, merely because it can be bought cheaper? As surely, no. Consumers desire more of an article, or fresh consumers are called forth, when the price has fallen: but the employer does not buy labour for the pleasure of consuming it; he buys it that he may profit from its productive powers, and he buys as much labour as no more as suffices to produce the quantity of his goods which he thinks he can sell to advantage. A fall of wages does not necessarily make him expect a larger sale for his commodity, nor, therefore, does it necessarily increase his demand for labour." (Ibid., 644, italics added).

Mill's case thus relates to the derived demand for labour. Since a fall in wage costs does not necessarily lead to expectations of greater final sales for the product it does not necessarily lead to an increase in demand for the factor.

Now, whereas Thornton believed that commodity markets are typically characterized by totally inelastic demand—at least over significant ranges—Mill did not. Moreover, he had just written a few pages earlier that it is the next thing to impossible that more of the commodity should not be asked for at every reduction of price (Ibid., 637), and the response of quantity demanded to price played an important role in Mill's general economics. But in the Principles Mill had alluded to the properties of derived and joint demand with regard to input use. These characteristics were the source of rigidities of production and consumption which tended to delay the fall of price to new cost levels (CW III, 474) It is not unlikely then that when Mill stated in 1869 that a fall of wages does not necessarily make the employer expect a larger sale for his commodity, nor, therefore, does it necessarily increase his demand for labour he had in mind so short a period that an expansion of sales may not be taken seriously by employers who, in such an event, refrain from immediately increasing their demand for labour. This position does not, however, rule out expanded demand for an input when a longer period is allowed. Indeed, in Part II of the review Mill recognized such a reaction.

The logic of the argument, strictly speaking, is of the partial-equilibrium variety. It implies therefore a concern with a variation in the wages paid to a particular category of labour in a single industry, other wage rates and product prices held constant. Yet the wages-fund doctrine under attack involves the aggregate demand for labour, and suggests a concern with a variation in general wages. Mill was on dangerous ground when he (implicitly) shifted from the former to the latter context. In short he based his case for a zero elasticity of aggregate labour demand upon an argument not strictly applicable to that area of discourse. That he was, however, troubled by this issue is probable; for he himself raised the possibility that while the demand for labour by an employer in a particular industry may be totally inelastic upon wage reductions—a rendition suggesting a partial wage change—yet the capital released may be invested elsewhere in the system so that the whole of the wages-fund will be paying wages as before. (CWV, 644)

No direct answer to the foregoing problem was given; but precisely at this juncture Mill denied the existence of a "pware-determined" aggregate wages bill: "Exists there any fixed amount which, and neither more nor less than which, is destined to be expended in wages?" The wages bill "cannot exceed the aggregate means of the employing classes" (after allowance for their personal maintenance), but "short of this limit, it is not, in my sense of the word, a fixed amount." The capitalist is under no obligation to spend a specific sum upon labour; each employer (and therefore presumably all employers) can be obliged to spend more than expected on wages or may enjoy a windfall gain even during the brief period before old plans can be revised and new plans put into operation.

"In short, there is abolutely available for the payment of wages, before an absolute limit is reached, not only the employer's capital, but the whole of what can possibly be remunerated from his personal expenditure; and the law of wages, on the side of demand, amounts only to the obvious proposition, that the employers cannot pay away in wages what they have not got." (Ibid., 645)

We are now in a position to draw the threads of the argument together. On close inspection it will be seen that there are two distinct aspects to Mill's case. First, the argument that in the very short run firms may not respond to a fall (or, presumably, a rise) in the wage rate, because of low expectations of increased (decreased) final sales. This, in fact, was the only rationale offered for zero demand elasticity for an input; and while the argument implies a partial wage change, it was clearly Mill's intention to make a case for zero elasticity of the aggregate demand for labour, in the short period, upon variation in general wages—a rather too casual extension.

In the event of zero elasticity a variation in the wage rate entails a variation in the total industry wage bill. The second part of Mill's case, which also applies to the short-run period, urges that such alterations in the wage bill are indeed conceivable, since the notion of a technical inability to vary its size is groundless.

References


The development of segmentation theory has reached its highest level with the publication of this work. After more than a decade of piecemeal theoretical and historical work, the leading proponents of neo-Marxist economic theory have offered an historical and theoretical summation of segmentation theory in the U.S. that indicates the emergence of a mature paradigm. It will therefore offend traditional economists and radical nonbelievers equally. Such are the consequences of staking out a position. But like all "staked out" positions, this one needs to be surveyed.

Segmentation theory emerged as a Marxist adaptation of dual labor market theory in the early 1970s. The influence of this radical critique is reflected in the fact that what was dual labor market theory is now routinely referred to in the literature as segmentation theory. Its broader acceptance is indicated by the popularity of the latest policy recommendations some segmentationists have made. (Bowles, Gordon and Weil, 1983).

But it is this work that remains the theoretical and historical basis for later economic diagnoses and prescriptions. In this work the authors have aggregated consistent hypotheses on the development of U.S. society and economy and assembled awesome quantitative support for them. The segmentationists challenge the basic precepts of traditional analysis with a strong case. At the same time, they challenge basic precepts of more radical traditions and offer their own interpretations of Marxist political economy. The book is thus of importance to a wide spectrum of social theorists.

The Theoretical Projections

Kondratieff Cycles

The authors hypothesize four Kondratieff cycles in U.S. history and analyze three in detail. They demonstrate that it is not innovation per se, as Schumpeter hypothesized, but the work and production environment that first fosters and then renews capital accumulation. They call this environment the Social Structure of Accumulation. Once a Social Structure of Accumulation (SSA) reaches the limits of its potential to allow capital accumulation, a crisis occurs, precipitating the more or less rapid adoption of a new SSA. The possibility and original exploration of the new SSA arises during the period of decline of the previous SSA. Thus, each Kondratieff consists of a period of consolidation of an SSA (the upswing) and a period of decay (the downswing). The downswing also serves as the period of exploration for the next (upcoming) SSA.

The three Social Structures of Accumulation that correspond to the Kondratieff cycles dating from 1840 are Initial Proletarianization, Homogenization and Segmentation. They are examined in detail after the reader is given necessary introductory overviews of U.S. history and Social Structures of Accumulation. The history developed by the authors seems less than satisfying on two counts. First, it seems to ignore the major events that shaped the country. As an example, they state that the Civil War caused hardly an economic ripple. Similarly, the events at the turn of this century are ignored. For Marxists, this seems particularly inappropriate. Lenin dated the