ON THE MARXIAN THEORY OF WAGES

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There is some question as to whether Marx held to a "subsistence theory" of wages, and, if so, what he meant by it exactly. The difficulty arises for those who try to find some equivalent to Marx's predictions in modern-day behaviour of wage rates and living standards in advanced capitalist countries.

Mandel's (1971) reading is that while Marx and Engels may have subscribed to a subsistence-theory—in the sense of wages tending to some physical minimum—earlier on in their career, they no longer maintained one by the time of Marx's *Grundrisse*. In its mature form, according to Mandel, Marx's theory of wages was concerned only with the relative impoverishment of the working class, in relation to the wealth that it was able to create. Hence, he states: "Marx never expounded any 'law' of the absolute impoverishment of the workers, though he regarded their relative impoverishment as inevitable" (p. 151). Howard and King (1975) rightly point out, however, that Marx, insofar as he held to the labour theory of value, consistently applied that theory to all commodities, including labour-power. Hence, he defined the exchange-value of the commodity labour-power as tending to equal the necessary labour-time required to produce and reproduce the worker, i.e., the socially necessary time needed to produce the means of subsistence.

Hence, so long as one maintains the labour theory of value, the definition of the wage, in equilibrium, as being equivalent to some subsistence level seems inescapable.

Mandel contends, further, that Marx foresaw absolute impoverishment not for the entire working class but only for the so-called "lazarus layers" of the proletariat, by which is presumably meant the reserve army of the unemployed. The point may be raised whether, allowing for competition among the workers, it would be possible for some sectors to receive a wage above subsistence while the reserve army is willing to settle for exactly a subsistence level. It seems again that, unless one proposes a theory of noncompeting groups among the working classes, there must only be a unique wage which is competitively determined. The picture of employed workers receiving above-

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subsistence wages, albeit relatively impoverished, and unemployed ones receiving less than subsistence wages, on this first reading, seems flawed. Thus, the difficult choice seems to be either that Marx held to the theory of subsistence, hence his theory was consistent, though devoid of predictive power, *or* that he correctly allowed for rising real wages, but failed to make this consistent with his theory. Thus, he was either an inconsistent realist, or an unrealistic theoretician.

Nevertheless, what might be possible is to resolve the problem in a more dynamic setting by taking into account a well-defined but changing subsistence wage. The task is to show how the reserve army of the unemployed exerts a pressure for the wage to be equal to the defined subsistence level while indicating how the growth of the reserve army itself depends on the "rhythm" of capital accumulation. The relative pace of accumulation, compared to the rate of growth of the labour force, exerts pressure on wages, temporarily raising these above subsistence level. This seems to represent fairly Marx's statement in *Grundrisse* (p. 287) that during periods of prosperity, the worker can "take part in higher forms of enjoyment, even spiritual forms, can agitate for his own interests, buy newspapers, listen to lectures, educate his children, develop his tastes." Mandel (p. 145) reads this as meaning that "the value of labour power thus includes two elements: a more or less stable physiological element, and a variable element, regarded as necessary for the reproduction of labour power in accordance with the increasing needs acquired by the worker."

Of course it is well known that Marx never meant by subsistence merely the purely physiological requirements for survival but also included an "historical or social element." In *Value Price and Profit* (p. 57) he maintained that besides the physical element, "the value of labour (power) is in every country determined by a traditional standard of life. It is not mere physical life, but it is the satisfaction of certain wants springing from the social conditions in which people are placed and reared up." What has given rise to misunderstanding, however, is that this "standard" has always been considered from a static viewpoint, i.e., as given at any point in time. What has not been considered is the possibility that this supra-physiological element is itself variable through time and changing according to the levels of consumption previously achieved. The hypothesis here is that the greater bundle of use-values which workers consume during periods of high conjuncture (or some portion of such a bundle) becomes customary and incorporated into the notion of a subsistence bundle of goods, whose value is still definable as the necessary labour time to produce it. In the literature on the consumption function, a similar phenomenon is known as the "ratchet effect."

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Suppose we now attempt to put these conjectures into more formal language. Define r, the rate of accumulation, as being inversely related to the real wage, w, because of the wage-rate of profits relationship, and the duality between growth and the rate of profits in the standard neo-Ricardian model (e.g., Sraffa, 1960), i.e.

$$(1) \qquad r = r(w) \qquad\qquad r'(w) < 0$$

In the rest of this paper, the following specification of (1) will be used:

$$(1') \qquad r = \alpha + \beta w \qquad\qquad \alpha > 0 \qquad \beta < 0$$

Let R be the magnitude of the reserve army of the unemployed, and $\dot{R}$ its change through time. Let n be the exogenously given rate of growth of the labour force. Then it is postulated that:

$$(2) \qquad \dot{R} = k(n - r(w)) \qquad\qquad 0 < k < 1$$

Thus, the pool of the unemployed is growing, stagnant or shrinking, depending on whether the rate of growth of the labour force is greater than, equal to, or less than the rate of accumulation. On the other hand, it is supposed that the change in the actual real wage through time depends inversely on the change in the pool of the unemployed, i.e.

$$(3) \qquad \dot{w} = -v\dot{R} \qquad\qquad 0 < v < 1$$

Finally the difference between the subsistence wage w^* and the actual wage w is taken to be a function of the change in the size of the reserve army of the unemployed through time:

$$(4) \qquad w^* - w = \theta\dot{R} \qquad\qquad 0 < \theta < 1$$

Substituting (1') into (2) and the resulting expression for $\dot{R}$ into (3) yields the following equation:

$$(5) \qquad \dot{w} - vk\beta w = vk(\alpha - n)$$

which is a linear first-order differential equation in w and has the following solution:

$$(6) \qquad w(t) = \{ (w(0) - (n-\alpha)/\beta \} \, \exp(vk\beta t) + (n-\alpha)/\beta$$

As $t \to \infty$, $w(t) \to (n-\alpha)/\beta$, as long as $\beta < 0$, which is true by assumption,

although this may not be a necessary condition.

What about the time path of the subsistence wage w^*? Substituting (1′) into (2) and the result into (4) gives us the following relationship between w^* and w:

(7) $$w^* = \theta k(n-\alpha) + (1-\theta k\beta)w$$

Obviously then there is a relationship between the time-paths of w and w^*, if the momentary relationship between them is given by (7). More explicitly, we have:

(8) $$w^*(t) = \theta k(n-\alpha) + (1-\theta k\beta) \left[\{ w(0) - (n-\alpha)/\beta \} \exp(vk\beta t) + (n-\alpha)/\beta \right]$$

As $t \to \infty$, $w^*(t)$ approaches the following magnitude:

(9) $$\theta k(n-\alpha) + (1-\theta k\beta)(n-\alpha)/\beta$$
$$= \theta k(n-\alpha) + (n-\alpha)/\beta - \theta k\beta(n-\alpha)/\beta$$
$$= \theta k(n-\alpha) + (n-\alpha)/\beta - \theta k(n-\alpha)$$
$$= (n-\alpha)/\beta$$

Therefore we have $\lim_{t\to\infty} w^*(t) = \lim_{t\to\infty} w(t)$. That is to say, eventually, the subsistence wage "catches up" with the actual wage.

Hence, suppose the economy is growing at the rate $n = \bar{r}$. Then according to (2), R would be stagnant; the real wage would be equal to subsistence, i.e., $\bar{w} = w^*$, and $\bar{r} = r(\bar{w})$. This would be the equilibrium growth rate, or the Harrodian "natural" growth rate. Unlike the "knife edge," however, this growth rate is stable, since, according to (6), starting from any initial position where w is different from its equilibrium value, this should return to its equilibrium value as sufficient time elapses. Such an equilibrium is depicted in Figure 1. Of course $\bar{r}$ is compatible with a positive but unchanging reserve army of unemployed.

On the other hand, all we have said thus far presupposes that the economy sticks to a particular technique, i.e., a single curve on the wage-profit diagram. This notion of an equilibrium growth rate is certainly not representative of Marx's vision, which presupposes that entrepreneurs introduce new techniques which result in higher than prevailing profit rates, at given wages. This may be represented by a technique curve which is to the right of, and above, the current one, at least in the relevant section.

Suppose, then, that the real wage is $\bar{w}$. The introduction of a new technique allows the capitalist to obtain a rate of profit higher than the prevailing one. However, as more and more capitalists adopt the innovation, the higher rate of profit becomes general, the rate of accumulation increases above $\bar{r}$, and hence exceeds n. This gives rise to the shrinking of the reserve army and the bidding up of real wages, according to equations (2) – (3). In this transition, real wages are higher than subsistence.

With real wages rising, however, according to (1), the rate of accumulation and of profits must be falling. The new equilibrium on the new-technique curve would not be reached until once more $r = n$. Once this is achieved, the reserve army would stop shrinking, and real wages would stabilise at the new, higher, subsistence level.

All this may be illustrated in Figure 2. The economy is initially in dynamic equilibrium with technique B, growing at $n = \bar{r}$, with real wages $\bar{w}$. Then technique C is introduced, which at the old wage rate $\bar{w}$ yields a higher rate of profit r'. But now $r > n$, which bids up w, according to (5) until it reaches w', where once more $n = r(w')$, and $r' = r(w')$.

The tendency of the rate of profit to fall back to its original level after the use of the new technique has become general perhaps explains the technological dynamism of (competitive) capitalism which was the object of Marx's admiration. For unless the knowledge of the new technique can be monopolised, its generalisation can only mean that the struggle for higher profit rates must again be renewed by pushing the frontier outward.

This formulation also suggests that there is a natural barrier to accumulation which is the rate of growth of the labour-force, i.e., the rate n. But Marx was careful not to identify such a rate with the growth rate of the population. Rather he was referring to the growth in the strata of the population which come within the orbit of capitalism, which become dependent upon this mode of production. Hence, this would include those peoples of the underdeveloped countries who have come under the domination of international capital. It would also include those in the developed capitalist countries who have become dispossessed, precisely as a result of the process of accumulation. (In this sense we have neglected the relationship between r and n, or between shifts in the technique curve and changes in n. This has been done for the sake of simplicity.)

Finally, we also note that, as mentioned above, monopolisation of certain branches of production, of certain production techniques, may stave off the tendency of the rate of accumulation to drop off to its average level, i.e., n. Hence, this model leaves room for the elaboration of some features of monopoly capital.
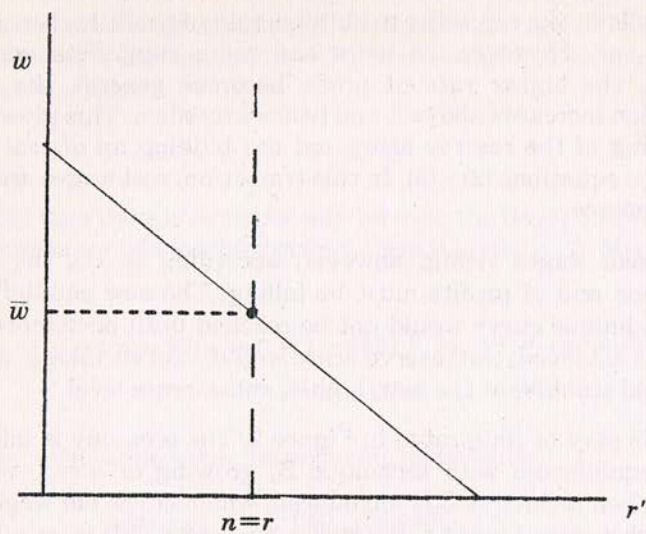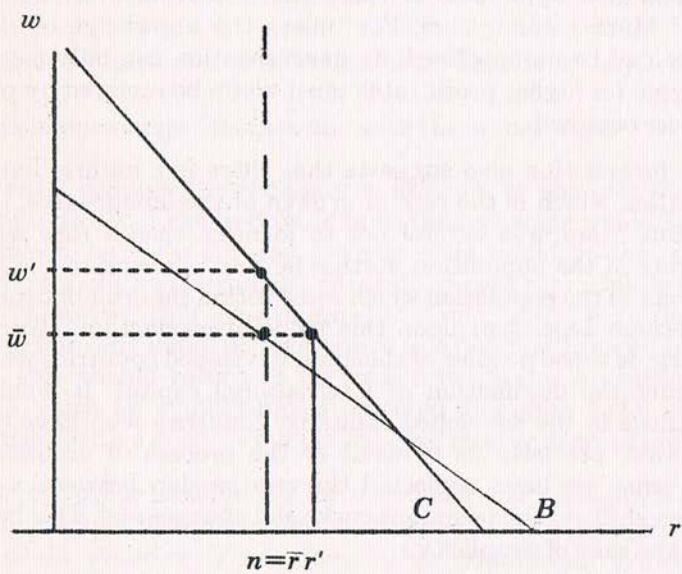
Figure 1

Figure 2

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