

# Hay, carrots, bread and roses: subsistence and surplus wages in Sraffa's papers<sup>1</sup>

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## Introduction.<sup>2</sup>

In *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory*<sup>3</sup>, Sraffa excludes subsistence commodities from the category of basic commodities that, by definition, enter the production of all other commodities (Sraffa, 1960, pp. 7-10). By so doing he partly modifies the wage theory adopted by the surplus-approach theorists, from Petty to Marx, though he relies on them for the constructive part of his theory. The result of this decision is the removal of two fundamental processes from the direct focus of the analysis of surplus and relative prices: a) the production of wage commodities, traditionally symbolized by corn in the works of classical economists; and b) the subsistence process, i.e. the social reproduction of the labouring population seen by classical political economists as the 'race', that supplies the commodity labour.

In *Production of Commodities*, then, the idea of wages as an inventory of conventional necessities is replaced by that of a variable proportion of the net product. The exclusion of wage goods from the basic commodities also makes it possible for wages to be paid 'post factum', at the end of the process of production (loc. Cit. p. 13). In fact this is not bread eaten before going to work, including childhood, but an additional loaf of bread, or a rose, to be enjoyed as surplus.

A careful reading of Sraffa's archive papers yields some useful tools and observations that bring into focus the relations between subsistence and net product. From his first critical comments on Cannan's *Theories of Production and Distribution*, dated Feb. 1923 (D1/67.1.3), to the notes in a file marked by Garegnani as 'gathered by Sraffa in preparation for a work subsequent to *Production of Commodities*, dated 1945-67 (D3/12/42), Sraffa looks into the question of subsistence and its analytical implications.<sup>4</sup>

The archive papers shed light on the classical concept of wages as a real physical cost necessary to form and maintain workers' productive capabilities, to reproduce the labouring population, and to restore the self-sustaining conditions of the economic system as a whole. From this follows the

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<sup>3</sup> Henceforth *Production of Commodities*.

<sup>4</sup> For a guide to the papers and the catalogue see De Vivo (2000), Garegnani (1998) and Smith (2000).

analytical method of 'physical costs', which Sraffa contrasts with the method used by the marginalist economists who define the real cost of labour as disutility and sacrifice. The key words for understanding the nature of wages in the physical-costs method are: 'enable' and 'necessary'. As illustration of their meaning, Sraffa in a 'Notebook' dated Dec. 1927 -March 1928, entitled 'Looms' and marked IMPORTANT says:

Example, carrots are necessary if we want a donkey to work. But there are two sorts of carrots: those which we must have given to it before in order to enable it to work (otherwise it would be dead) and those you must show to it and promise to it in order to induce it to work.

There is a great difference between the two: the first is a definite number or weight of real carrots, determined by physiological condition, and since they have been actually consumed, it has been possible to weigh them and to know exactly to the ounce their quantity: no tricks can be played about them.

The others are different, they needn't even be real carrots- It may be a mashed paper carrot, rubbed against real carrots to take up the smell, which we simply show to the donkey, or it may be a stick [...].

Now economics deals with mashed paper carrots and whips, P.E. dealt with real costs.(D3/12/10.61.1-3).

Most readers of *Production of Commodities* and Sraffa's archive papers pay little attention to the question of subsistence wages.<sup>5</sup> In our view, however, this is central, both for the full understanding of the surplus approach and for the critique of neoclassical economics, considered by Sraffa the "black night" of political economy (D3/12/7, 160). Moreover, subsistence is a very dynamic notion as the material conditions and conventional norms of social living do involve a host of powerful forces- the instincts of survival and procreation, the passions of pride and self-love, fear of insecurity, changes in the social codes of consumption and use of time.

Sraffa, while excluding subsistence from basic commodities, is clearly aware that this is not marginal or a question of backwardness. In a letter of 13-3-62 (D3/12/ii.147), answering a letter in which Garegnani had asked for clarification about the dependence of wages from profit, and interpreted the choice in terms of historical progress, Sraffa denies that he is thinking of a sequence from subsistence to luxuries, and also indicates some readiness to reconsider the relation between rate of profit and rate of surplus wages:

[...] Here we get into a difficult matter, and while I would be glad to talk with you about the question of determination of wages, it is too complex for a letter. First of all, 'subsistence' has never meant pure 'physiological necessity' (whatever that means), but always includes social and historical or habitual necessity. This is clear, if only because when wages are reduced people will often give up something physiologically necessary before giving

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<sup>5</sup> In this respect Roncaglia (1974) and Pivetti (2000) are an exception.

up a 'superfluous' thing like alcohol, smoking etc. And then when a 'standard' level has prevailed for a certain time it becomes necessary - if you want the result.

[...] On the other hand, I am convinced that maintenance of the interest rate by the bank or stock exchange has had its part in determining the distribution of income between social classes: because it necessarily affects anyone who loans or borrows.

[...] I have no intention of proposing another mechanical theory which, in one form or another, would support the idea that distribution is determined by natural, technical, or even accidental circumstances which would render futile any action on either side aimed at modifying it. In conclusion I would say that in the review it will be best not to insist too much on the obiter dictum of the monetary rate of interest (D3/12/iii.149-150).

The present study consists of four sections, apart from the introduction. In the first, Sraffa's papers are analysed with regard to the question of the real cost of labour: a) in the neoclassical and b) in the surplus theories. In the second, we give some hints on the process by which Sraffa formed the decision to exclude subsistence from the basic commodities. In the third, we focus on the ambivalence of wages as costs and net income, in the fourth we draw some conclusions about the relation between subsistence and surplus wages.

## **1. The real cost of labour in the archive papers**

At the end of the twenties Sraffa began working on *Production of Commodities* (Garegnani, 1998). At that stage Sraffa probably chose his point of attack to produce the greatest effect both for criticism of the neoclassical theory of capital and for the reproposal of the surplus theories.<sup>6</sup> This point is the question of the measurement of the physical surplus product determined by technical productive relationships and of the rate of profit in the presence of a variable distribution. This line of attack enables him, on the one hand, to take up the argument of the measure of surplus where Ricardo and Marx had left it, and, on the other hand, to show the logical inconsistency of the measurement of the quantity of capital, adopted by neoclassical economics. In his book Sraffa omits from the determination of surplus and relative prices the exogenous component of subsistence wages but clearly brings out the institutional distribution of the surplus.

A key element in understanding the notion of subsistence and surplus wages, is Sraffa's work on the history of economic thought, which he considered indispensable for comprehension of the analytical questions. According to Sraffa conflicting interests inevitably affect the concepts, the

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<sup>6</sup> This sense of strategic choice might be expressed by a sentence from Whitehead's *An Introduction to Mathematics* marked by Sraffa in the margin of the copy he possessed (PS, 3500):

Operations of thought are like cavalry charges in a battle — they are strictly limited in number, they require fresh horses, and must only be made at decisive moments (Whitehead, 1911, p. 61).

tools, and the relative importance of the problems. Thus there is a risk of distortion with the passage of time, when theories are used without remembering their original meaning and context. Nevertheless, theories deposit concepts and analytical tools as a patrimony to use and criticize, regardless of the motivations from which they were originated (D2/4.3.2). In determining the order and weight of their arguments, theorists interact with the common sense and prejudices of the public about practical problems and their possible solutions. Especially in the case of the theory of value and distribution, the rhetorical aspects of the arguments are essential for understanding and modifying current conceptions. To this regard, Sraffa words offer an insightful warning:

[...] Thus every economist tends to frame his theories in such a way that certain elements acquire in them importance which is entirely out of proportion of the part they play in real life, but reflects the necessity of<sup>in</sup> which the economist has been of opposing ~~opposite~~<sup>obsolete</sup> theories or popular prejudices. And when the theory has crystallized and we have forgotten the way in which it has grown, we are often inclined to over-estimate the importance of certain elements simply because for long forgotten historical reasons they play a very large part in accepted economic theory.

A further disturbing element is that in the background of every theory of value there is a theory of distribution. The real problem to be solved by a theory of value, that is: «Why is a commodity exchanged with another in a given ratio?» is constantly transformed into the entirely different one: «How is the price received for the product distributed between the factors of production?». [...] There is a continuous attempt at visualizing in the microcosm of any one particular commodity a process which takes place only in all commodities as a whole, considered simultaneously, that is in society as a whole.

And often theories of distribution in their turn are meant not so much as a means to analyzing the actual process through which the product is distributed between different classes, as for showing either that the present system is wrong and should be changed, or that it is right and it should be preserved. Thus ~~it becomes~~ an analysis of what is ~~it~~<sup>the theory</sup> becomes a form of propaganda for what ought to be. (D2/4.3.3-4)

To understand the theories of wages and distribution one must begin with the fact that in their analyses all economists, classical and neoclassical, are talking about the functioning of a capitalist system in which workers are recognized as means of production. In this sense the costs of social reproduction of labour can be analysed like the costs of reproduction of horses, machines and slaves. In a document called “Real physical costs”, Sraffa remarks:

Capitalism is very ill adapted for the analysis of those parts of economic theory which are common to any economic system. It is intermediate between slavery and socialism. The best suitable is a community in which all labour is performed by slaves. Such a

community exhibits clearly the distinction between real cost of labour and wages. Horse & slave equal, they receive food necessary for efficiency and all profits go to te employer ((D3/12/42, 40).

As a matter of fact, all the difficulties in the theory of wages are due to the ambivalence arising from the fact that waged labour is both free and ‘commanded’. This ambivalence is reflected in all the questions linked with wages in both the theoretical traditions, classical and neoclassical. The element of freedom in waged labour takes above all the form of self-management of reproduction; it is this self-management that makes waged workers different from slaves. In the case of slaves, person/commodities, the owner directly controls their reproduction, as with horses. The capitalist, on the other hand, does not administer the reproduction of workers and does not directly dictate the relationship between men and women, the number of children, cohabitations, separations, diet, housing etc.<sup>7</sup> In this separation of the subjects and conditions of reproduction, Smith identifies the source of a significant reduction in the costs of reproduction of waged labour relatively to slavery (Smith, 1976, pp. 183-4).

In general, we can say that the concepts of subsistence and surplus wages are present in both theories, but they are explained and positioned differently. The neoclassical economists see subsistence as an analytically marginal downward rigidity of wages, introduced for equity, while the classical economists see it as the normal price, necessary of efficiency. Conversely, surplus wages are seen as the general case by the neoclassicals and a particular case by the classicals. Moreover, the neoclassical framework focuses on the allocation of given scarce resources while the surplus approach aims to reflect in relative prices the structural conditions of a system of production of resources that includes the process of the social reproduction of labour. Lastly, for the neoclassicals the price of labour is just like other prices and the labour market is analogous and simultaneously interactive with the markets of all other commodities, whereas for the classicals the price of labour is a share of income determined separately and preceding the determination of relative prices.

Though we cannot here go into Sraffa’s detailed survey of neoclassical and classical literature on wages, it is worth noting a few analytical points, indicated in his papers, in which the question of

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<sup>7</sup> This aspect of direct control over the reproduction of slaves and the relation between men and women is perceived by Smith in the *Lectures on Jurisprudence* of 1762-3 (Smith, 1978, pp. 175-182). In the passage from slavery to paid labour in the U.S., the ambivalence of waged labour was visible in terms gender relations:

[...]a central way that wage dependency was at once legitimated as freedom and condemned as slavery was in terms of housework [...] title to this quintessential female brand of dependent labor was a crucial measure for men who owned nothing else than their own labour (Stanley, 1999, p.188).

subsistence plays an important role in the two theoretical contexts: a) neoclassical economics, and b) the surplus theories

a). Neoclassical economics.

The cynicism of treating workers like horses is the point on which Marshall clearly demurs. In the first chapter of the sixth book of the Principles of economics, where he deals with the distribution of income, he explicitly states:

The keynote of this Book is in the fact that free human beings are not brought up to their work on the same principles as a machine, a horse, or a slave. (Marshall, 1920, p.504)<sup>8</sup>

Apart from humanitarian goodwill, however, the problem is to see how the question of social reproduction of the labouring population fits into the neoclassical theoretical scheme, especially with regard to Marshall's attempt to link the theory of demand, based on marginal utility, with the classical theory of costs of production. Marshall's synthesis becomes impossible precisely because of the profound difference in the meaning assigned to the real cost of labour in the two theoretical contexts (D3/12/7.105-106).

In the case of the labour supply the concept of marginal utility has to be considered “thin air”. In the neoclassical approach in general, according to Sraffa, measurements are statistically impossible and systematic relations between prices and quantities based on utility are illusions which only apparently find a real sense through money. Bentham, says Sraffa, had already indicated this solution to get out of certain difficulties linked with the measurability of pleasure, and the same is done by the modern economists who use money as an indicator of utility (D1/11/1.7).<sup>9</sup>The marginalist formulation of the utility functions forces us to assume that the two goods are distinctly identifiable, one with solely positive utility, the other with only negative utility. In Marshall's view of the labour supply, for example, work is only disutility and consumption only utility. ‘This is too simple’, says Sraffa in a document, dated in the catalogue as pre 1928, and titled “Scissors in ‘ultimate conditions’” since: “In every act of consumption there is a hidden element of disutility as in every toil there is an element of utility [...] there are no unmixed pleasures and there are no unmixed evils ”(D1/13.5.1). A document dated Paris, Feb. 1923, before his Cambridge period, contains reading notes on Cannan's *Theories of Production and Distribution*, in which Sraffa uses references to real daily life as a basis for calling for a return to common sense in the notion of

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<sup>8</sup> As Sraffa notes, Marshall, partly and in an indirect way, retrieves returns the costs of reproduction in the relation between wages and efficiency, but confines it within an argument dealing with incentives to produce (D3/12/42.44-45).

<sup>9</sup> We might say that utilities are phantoms that can be grasped conceptually only by transposing them onto the level of money income, and hence of prices - which in fact are precisely what the theory is supposed to explain. Thus, as in a fairy tale, in the neoclassical theory, relative prices act like a sheet thrown over the phantoms to make them visible. But this sheet is made of threads tightly and rigidly woven into utility functions. This fabric dissolves under the light of Sraffa's criticism, and we could begin to announce that ‘the emperor is naked’.

labour supply and utility function of income linked with it. In particular, when Cannan cites Jevons's view that the second unit of food has less utility than the first, Sraffa notes that if the second, or the third, etc., are insufficient to maintain life their utility is the same. Moreover, he adds, in another document, "it is absurd to reduce amounts of food to infinitesimal quantities, as below a certain limit of size commodities are useless" (D1/67.1.3). Hence there exist critical quantities which depend on the function of the commodity and the rhythm of life that regulates the timing of consumption; besides, the utility of successive units might even increase, and it can happen that "l'appetito vien mangiando" (ibid.)<sup>10</sup>. The utility of income also depends on context, and hence, above all, on the living conditions of those who receive the income.

In reality, the hypothesis of a continuous choice between income and work on the basis of utilitarian axioms, leading to the assumption of a systematically decreasing price-quantity relation, is contradicted if one explicitly takes account of the physical process of subsistence and conventional standard of living (D1/13.1-6). For example, with an increase in price the supply of labour may diminish because other family members leave the labour market due to social conventions regulating women's work (D1/11.6). Or else, with a fall in wages the labour supply may increase because the wage can no longer guarantee the habitual standard of living; or, on the contrary, with a wage increase the supply may fall because the habitual standard has been reached (D1/11.90.2).

The question of subsistence as a necessary cost of production re-emerges as an unresolved muddle when it comes to defining net income; on this question there is no agreement even among neoclassical economists. In fact as a cost it should by definition not be included in the net income. Thus in the Report of the British Association on the Common measure of value in direct taxation, compiled in 1878 by a commission including Jevons, it is asserted that: "As the horse has to be clothed and stabled, so the productive labourer has to be clothed and housed". This assertion is cited and criticised by Edgeworth in the entry on 'Income' which he wrote for *The Palgrave Dictionary* (1906, p. 374), reported by Sraffa (D3/12/42.36).

The costs of reproduction of labour emerge as analytical problem also in the debate on the value of emigrants in the *Giornale degli economisti* between 1904 and 1905 (D1/60.1). Pareto also entered the debate with an article entitled 'Il costo di produzione dell'uomo e il valore economico degli emigranti'<sup>11</sup>, in which he advises to include in the national expenditure also the costs of raising labourers that migrate (Pareto, 1905, p. 326). In a previous article in the same journal, Coletti had mentioned also the economic value of caring of children:

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<sup>10</sup> 'Appetite comes with eating'.

<sup>11</sup> 'The cost of production of man and the economic value of emigrants'.

An important class of elements which the statistics fail to show is the care devoted by the mother and other family members to the upbringing of children [...]

The great influence of this element of cost, that is to say the different degrees of care and affection used in bringing up children, is indicated [...] by the obviously greater mortality of illegitimate, neglected children compared with legitimate children. (in Italian, Coletti, 1905, p. 264)

Pigou and Marshall also take up these questions, though, when defining national income, Marshall says it is impossible to make unpaid domestic work visible (Marshall, 1920, p. 524), and Pigou excludes from national income “food and clothes essential for the maintenance intact of the labour force” (Pigou, 1946, p. 4).<sup>12</sup>

#### b) The surplus theories.

In the classical surplus approach the reproduction of labour is seen as an objective physical process whereby men and women, embodied and embedded in social communities, at particular times and places, are made able to work (Picchio, 1992, pp. 8-29).

The clearest formulation of subsistence wages in a surplus approach is given by the physiocrats. This is referred to by later surplus theorists, who use various circular frameworks to represent the reproduction of the system. In this scheme the correct definition of costs is central for reaching a correct definition of the surplus. For the physiocrats, first of all, it is clear that rent is not one of the costs, as it is mostly based on an institutional system of property of a scarce non reproducible factor and does not contribute to the process of production. In their view, moreover, profit is not yet fully distinguished from earnings from work, and thus is explained as the conventional level of subsistence for farmers. Smith introduces the distinction between wages and profit, but his view of profit is ambiguous: it appears both as surplus in the real system and as an addition in the price system. For Ricardo profit is definitely a residuum, and hence by definition not a cost of production. His general trade-off between profit and wages is based on this clarity. Profit is, rather, the aim of production and the main analytical problem. The surplus is clearly visible as long as the product and the costs are measured in physical terms (corn). The confusion starts when labour begins to be measured in time or abstract energy. In fact, the measure of value that Sraffa seems to like the most is Petty's one who says that: “[...] the days food of an adult Man, at a Medium, and not the days labour, is the common measure of value” (Petty, 1691, p. 65).

Sraffa asserts, in a document written in the summer of 1929, that the measurement of labour is achieved through a series of ‘small errors’:

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<sup>12</sup> In this connection, it may be noted that the problem of the contribution of the unpaid labour of social reproduction once more rears its head owing to the fact that in many countries, industrialized and not, the national bureaux of statistics measure this contribution and show that its total is generally slightly greater than the total of paid work, of men and women. On this see Picchio (2003).



The fatal error of Smith, Ricardo, Marx has been to regard «labour» as quantity, to be measured in hours or in kilowatt of human energy, and thus commensurated to value. [...]

All troubles seem to have been caused by small initial errors, which have cumulated in deductions (e.g. food for worker=quantity of labour, is nearly true) [...]. (D3/12/11.36)

In the document entitled ‘Degeneration of cost and value’ he again takes up this question, viewing it as the origin of a much more radical shift, brought about first by the wage-fund theorists and then by the marginalists. It is useful to follow Sraffa in the path leading to the modern definition of the cost of labour:

Smith & Ricardo & Marx indeed began to corrupt the whole idea of cost –from food to labour. But their notion was still near enough to be in many cases equivalent.

The decomposition went on at a terrific speed from 1820 to 1870: Senior’s abstinence and Mill’s mess of the whole thing. Cairnes brought it to the final stage «sacrifice» [...]

Simultaneously a much bigger step was taken in the process of shifting the basis of value from physical to psychical processes: Jevons, Menger, Walras.

This was an enormous breach with the tradition of P.E.; in fact this has meant the destruction of classical P.E. and the substitution for it, under the old name, of the calculus of Pleasure & Pain (Hedonistic). (D3/12/4.2.3)

In the papers it emerges that Sraffa is fully aware that the question of value is not reducible to a problem of measure it is also a problem of method and of vision.<sup>13</sup> As regards to method, it is worth noting the comment written by the twenty-five year old Sraffa to Cannan's introduction:

From his first words C. sets himself the task of searching for causes: but why not for the relationships of the nature and the structure of institutions and phenomena? Can he possibly manage to explain everything as a chain of cause and effect? (trans. D1/67.1.1)

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<sup>13</sup> On certain methodological aspects, such as the breakdown of the analysis into subsystems, Sraffa seems to us to recall Whitehead. This impression might be partly confirmed by a quotation from Whitehead made by Dobb (1937, p. 7) and referred by Ginzburg (2000, p. 115). Indeed, it is worth citing the ampler context from which the quotation comes, for it contains some important remarks on methodology.

[...] a fundamental concept [...] is essential to scientific theory; I mean the concept of an ideally isolated system. This conception embodies a fundamental character of things, without which science, or indeed any knowledge on the part of finite intellects, would be impossible. The ‘isolated system’ is not a solipsist system, apart from which there would be nonentity. It is isolated as within the universe. [...] the conception of an isolated system is not the conception of substantial independence from the remainder of things, but of freedom from casual contingent dependence upon detailed items within the rest of the universe. Further, this freedom from casual dependence is required only in respect to certain abstract characteristics which attach to the isolated system, and not in respect to the system in its full concreteness. (Whitehead, 1927, pp. 58-59)

Regarding Sraffa in relation to Whitehead, we have found a reference, to *Science in the Modern World* (D3/12/10.25). Sraffa’s library contains two works by Whitehead, with frequent marginal annotations: *Introductory Mathematics* (1911) and *Science and the Modern World* (1927).

In the preparatory notes for his lectures of 1928-31 (D3/12/4), Sraffa takes up these aspects again, focussing on causes at different analytical levels, in the metaphysical sense or as determinants in the cognitive, mathematical sense (D3/12/4.6), and assessing the relative importance of these viewpoints.<sup>14</sup> The analytical foundation is treated as an intellectual gymnastic “which may give us some pleasure because it suits our habits, it clears up some relations, but tells us nothing about the nature of things” (D3/12/4.14). The really important aspect of the analysis is its historical and social significance, which is:

[...] the truly important, that which gives us a real insight into the mystery of human mind and understanding into the deep unknown relations of individuals between themselves and between the individual and society (the social, or rather the class mind).

It is terrific to contemplate the abysmal gulf of incomprehension that has opened itself between us and the classical economists. (D3/12/4.14).

The definition of metaphysics given by Sraffa in the same document is particularly significant:

[...] by metaphysics here I mean, I suppose, the emotions that are associated with our terminology and frames (schemi mentali)- that is, what is absolutely necessary to make the theory living (lebendig) capable of assimilation and at all intelligible. (D3/12/4.15.1)

Thus the metaphysical aspects are not dismissed, but rather the question of measure is freed from its confusion with equity. Values belong most of all to the philosophical vision and anthropology of the social system (D3/12/7.161), nevertheless, the measure of exchange values can be dealt with in a sub-system of relative prices that express a self-sustaining state of the production of commodities by means of commodities. .

## **2. A few notes on the route leading to wages in *Production of Commodities***

As we mentioned in the first section, Sraffa sacrifices the given subsistence wage as inventory of commodities, and instead expresses wages as a variable, and dependent from profit, proportion of the net product. In the archive this change of the notion of wages appears explicitly in a document dated 1-1- 43, entitled ‘Transition from 2<sup>nd</sup> and 3<sup>rd</sup> equations, i.e. Replacement of wages as constant inventory as wages as variable w’ (D3/12/33.90). This is worth quoting at length because it is

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<sup>14</sup> In another document Sraffa specifies the meanings of different concepts:

Cause in metaphysical sense

Measure in sense of meter of value [value later underlined with a wavy line]

Determinant in sense principium conoscendi

Determinant in mathematical sense, given a we know b in an equation  $a+b=0$

crucial for the question of physical costs, and important for the distinction between subsistence and net wages:

We have represented wages as a list of commodities, each in a specified quantity in units of weight, length, etc. Now we propose to regard wages as variable. We could this by regarding the quantities of the commodities entering into wages as variable. Then wages could vary in a large number of ways: the quantity of one commodity could increase in a given proportion, that of another in a different proportion while that of a third decreased, and a fourth commodity hitherto not consumed by the working class might be added to the list in a given quantity. We could give to these variables the value which they had in each situation, & an incidental result of the solution would be the total price of the commodities entering into the wages. In the present inquiry however we are only interested in this last quantity, the price of wages, [underline added] & not in the different wages in which they may be spent.<sup>15</sup>

For each set of values of these numerous variables there would be only one total price of wages: but many possible sets could correspond to the same total price. (D3/12/33.90.1a)

This passage may provide an indication for a possible “easy” adaptation (according to Sraffa) of the system of relative prices based on the standard commodity, to the ‘more appropriate, if unconventional, interpretation’ of wages as subsistence (Sraffa, 1960, p. 10). It is marked in the margin with a wavy line, which usually indicates a lack of total conviction. Whereas there are no signs of uncertainty in the second part of the passage, which says:

Now we propose to regard wages as variable. But instead of doing this by regard the quantity of each commodity entering into wages as an independent variable (which would lead us into an enquiry of the ways in which wages are spent) we shall consider a single variable, the price, in terms of the commodities chosen as standard of the collection of the commodities which enter into the workers consumption. The list of commodities can vary in many ways and to each list there corresponds one value of  $w$ : but to any one value of  $w$  there corresponds a large number of lists of commodities (always within the limits of those produced as we do not now consider changes in production). (D3/12/33.90.1.b)

The aggregate  $W$  also hides possible variations in quality of the commodities included in the lists, since it deals only with the proportion of surplus distributed to wages. This question is liquidated as of “no interest except to the shopkeepers” (ibid.). In a document dated 17-1-43, Sraffa acknowledges

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Indicative of value [added later in pencil] (D1/67.1.1).

<sup>15</sup> It is interesting to note the unusual term “price of wages” employed by Sraffa (underlined by us). The term is sometimes used by Ricardo to indicate the difference between wages as workers’ subsistence, given by a list of goods and by an absolute level, and wages as real cost of production for the capitalist given by a proportion between product and costs. For a detailed analysis of the Ricardian notion of the “price of wages” see Gerke, 2003.

the necessity of changing the first equations if wages are considered a dependent variable and writes:

In first equations, wages are lots of commodities. If now we want to regard them as variable, it is clear that there are ~~sorts~~ sources of variation: the quantity of labour may change + the wage per man may change, in our present notation these two are not distinguished. So we must explicitly make appear the two quantities, as  $w$  and  $L$ . (D3/12/33.90.2)

To this regard we could note that the quality of forces affecting  $w$  and  $L$  are quite different, although partly related;  $w$ , as standard of living, belongs to the sphere of social reproduction that includes habits, tastes, social conventions, institutions such as the family and the state, while  $L$  (employment) depends from production, technologies and the rate of accumulation. This distinction between the sources of changes in the aggregate  $W$ , as dependent proportion, could be of great interest for the analysis of the surplus wages. Both subsistence and net wages, in fact, although with different degrees of cogency, reflect powerful animal spirits of the labouring population acting on the ground of living conditions.

The previous passages show Sraffa's awareness of the difficulties involved in returning to physical subsistence wages, necessarily specified in lists of physical commodities. These analytical difficulties might have been the reason why he excluded the physical component of conventional necessities from basic commodities. This exclusion, moreover, makes it more plausible to use the proportion of surplus wages as a dependent variable, as Sraffa explicitly recognizes in an important document entitled 'Scaffolding', dated September 1956 (D3/12/68). In this case too it is worth recalling the textual formulation that gives an account of the decision:

On the other hand, with the wage measured in abstract commodity, it becomes awkward and unrealistic to continue to regard it as independent variable which originates from a wage which consists of necessities of subsistence; it will therefore be convenient to replace in that position with the rate of profit. (D3/12/68)

However, the choice to define the surplus wage as a dependent variable could also be explained by a certain reluctance to specify the actual conditions of material and social reproduction of the labouring population, and the preference for a field in which modern economists, including Sraffa, felt more at ease. This was the field of monetary theory, which had been much more studied in the history of economic thought, but which the classical surplus-value economists undoubtedly felt was less important for understanding the conditions of reproducibility and the structural dynamics of the system. On monetary theory Sraffa had stated, in a document going back to the end of the twenties:

Among the different parts of economics, the monetary part is one of the least inexact: the theory of money is the one which perhaps neglects the fewest essential facts. This is partly due to the relative simplicity of the material, partly to the fact that because of its practical importance it has been longer studied and more extensively elaborated. Consequently monetary theory (together with that of finance) is perhaps the only economic theory that practitioners must take account of (trans., D2/1.2).

Lastly, Sraffa is aware of the heroic simplifications required in order to reach clear definitions, and of the reductionism necessarily involved in a process of abstraction. But he thinks the classical concepts are sufficiently clear and rooted in experience to constitute a usable and fruitful analytical tool for studying certain basic aspects of the capitalist economic system. In a document, already mentioned, which includes some notes collected by Garegnani under the rubric of 'material prepared for a possible future work', Sraffa writes:

The difficulty of distinguishing in the total money cost of a thing what is real cost and what is surplus may be very great in practice, but it is not greater ~~to conceive~~ than other similar distinctions that are accepted in every economic theory in respect to rent, interest, etc.

The difficulty is, what is «necessary» food, shelter etc., to be given to the worker in order just to enable (not to induce him, as this involves the possibility of alternative employment, in the widest sense, including leisure, on his part) to produce a thing is certainly not greater than that of distinguishing, in the total payments made to landlords, what is real rent and what is interest and depreciation of capital sunk into the land, or in the total sum paid for the hire of a horse what is food, shelter & depreciation of the horse and what is interest on capital. (D3/12/42.35)

However, the classical assumption that subsistence is a necessary input brings us back to the questions that need to be conceptualised and better specified with regard to the costs of social reproduction of the labouring population. For example: how to define the standard of living? What has to be considered capital? Whose subsistence has to be considered capital? What process of social reproduction of the population? What relation between the individual (male and female) and society? What role of the family and state? The theory of subsistence wages, then, is only a point of departure that poses fundamental questions for the understanding of the dynamic structure of the economic system.

### **3. The ambivalence of wages**

Many of the problems inherent in the analysis of wages derive from the fact that two meanings converge in its definition: cost and income. According to the classical economists the analysis of the conditions of self-replacement of the system must perforce start out from the production of the

subsistence goods required to enable workers to work and reproduce as a race. However, if, in a capitalist system, the workers are means, and the commodities conventionally needed for their subsistence are to be considered as capital, the workers should belong within the national wealth as product, like horses. But horses and other commodities do not receive income. If they did, they would belong to the nation understood as a community of citizens enjoying rights as suggested by Cannan in a note to Smith's *Wealth* (Smith, 1976b, p. 57), taken up by Sraffa (D3/11/37.6). Wages as income refers, then, to a constitutional plane of citizenship that places labour in the bracket of commodities and labourers in that of rights.

In the papers, Sraffa more than once calls attention to the ambivalence of wages as income and cost (D1/5.83), returning it to the historical context in which is located the distribution of income among classes and the view of value. The conceptualization of wages depends on the nature of capitalist labour and the inherent profound ambivalence between freedom and constraint to work (D3/12/42.40).

The difficulties of distinguishing between a process of reproduction of productive energies and that of income distribution are aggravated by the fact that subsistence necessities are defined by social conventions regarding bodies, sexual relations, generations, places, cultures, times, etc. Moreover, the conceptualization of what is conventionally necessary depends on the perspective of the subjects observing the economic system. For instance, in a capitalist system, there is also a "conventional necessity" acknowledged for the profit. In this connection Sraffa notes:

[...] the distinction between wages & interest is wrong therefore: they are both necessary.

How then did we reach the previous conclusion? Is it wrong?

Our point of view was wrong. We were looking at it from the point of view of "what can be changed". Wages we found are dependent upon physiological laws that cannot be changed, and habits that can hardly be deliberately changed, if at all. Interest depends upon civil law which can be changed.

But by whom and how? (D3/12/7.42).

As a matter of fact, the two components of wages, subsistence and net income, express two different economic problems. On the one hand, the analysis of production demands that the conditions of reproducibility of the system be made explicit; on the other hand, the distribution of income reflects the historical fact that the waged workers are not horses or slaves. In a document called "Definition of net wages", dated 1928-31 in the archive, Sraffa writes:

The real problems of distribution arise in the second part that constitutes a "surplus". This part is distributed among the factors in proportions that are largely determined by causes other than the mode of production.

We have thus, implicitly, determined the two conditions essential for constructing a theory of wages. A) the property of the capital must be invested in persons other than those of the workers: otherwise, each worker-capitalist-landowner would be master of his own product: and thus distribution would once again be predetermined by production, there would be problems of exchange, not of genuine distribution. B) the worker must be free, i.e. must himself be the owner of his working strength. Slaves receive only from the national product the portion sufficient to keep them working, at most reproducing: they receive nothing from the surplus.

Moreover, what they receive is not part of the net national income, and the same is true of the fuel employed to drive the machines (D1/60.11).

The two components of wages thus are a reflection of a dialectical class relation—as Sraffa recognized in a document of 1928 entitled ‘Notes, essential on industries using hypothetical examples, with a note on language’. The dialectical relation is made plain, indeed, in the definition of what is necessary, definable only by indicating the class perspective. Precisely, in a document entitled ‘Surplus product’ Sraffa says:

The study of the ‘surplus product’ is the true object of economics: the great difficulty of the matter is that this object either vanishes or remains unexplained. It is a typical problem to be handled dialectically.

This notion is connected with that of “necessity”, & “necessity” has only a definite meaning from a given point of view, which must be explicitly stated, & then adhered to consistently.

[...] Therefore, according to what an economist selects as a “subject” of his economy (usually identifies himself with it) the surplus will be different.

The standpoint of capitalist society itself is that of the ruling class & therefore the surplus is composed of rent, interest and profit (D3/12/7.161.1).

In a dialectical perspective, it must be remarked that both subsistence and surplus wages belong to the anthropology and politics of the wellbeing of the labouring population. The ‘wages fund’, however, depends on two dimensions: wages and employment ( $W=wL$ ). Thus the aggregate is determined by the effective living conditions ( $w$ ), multiplied by the quantity of labour employed ( $L$ ). These two dimensions - living conditions and the actual productive use of the labour force - show different forces at play, a multiplicity of social subjects and different timing. These differences pass usually unnoticed.

#### **4. The relationship between net and subsistence wages.**

The concept of wages is defined by four fundamental processes: 1) production as labour is a necessary input, 2) exchange as a price established on the labour market, 3) distribution as wages are a share of national income and, last but by no means least, 4) social reproduction of the labouring population. To state that wages can not be lower than the level of necessary consumption

means anchoring them to a complex historical and anthropological process that marks the classical theory of the value of labour and the method of physical costs.

By introducing subsistence wages, within the Ricardian and Marxian core of values and prices of production, the whole system is given space for a multidimensional methodology based on the nature of the individual and society and their mutual relationship. This multidimensional approach was rooted in the foundations of classical economic thought. To this regard, it is interesting that in Sraffa's papers we find references to anthropological studies such as those of Malinowsky (D3/12/7.12). When the subsistence of the labouring population is brought together with the conditions of production and exchange of other commodities, it becomes possible to deal with living conditions on the level of the structural self-replacing state of the economy. But it also enables us to identify a deep fracture running through the whole capitalist system, caused by the tension between wages as normal costs of social reproduction and profit. The roots of this tension lie precisely in the difficulty of containing the labouring population's material and cultural conditions of life within the limits of 'human capital' - i.e. the necessary costs of maintaining it in a state of mere productive efficiency, like hay for horses and oil for machines, of food for slaves.

The component of capital as conventional necessities, clearly indicated by Ricardo in terms of 'food and clothing' (Ricardo, 1951, p. 95), has been largely ignored by economists, who have concentrated instead on fixed capital and its technological modifications. This component is not marginal, either in quantitative terms or in its analytical importance, and still less is it historically backward. It is just usually omitted from the analysis of the economic system. Sraffa offers much useful material for clarifying the concepts and distinguishing the levels of the analysis of wages both in its given subsistence and variable net component. Both components, if seen by labourers, have to do with effective living conditions and thus with lists of commodities while, if seen by profit holders, at the end are costs perceived as a proportion of national income.

Classical economists considered the labouring population as a subject, without political representation but with a considerable power of rebellion, focussed directly on living conditions - as for example in the case of the food riots which involved the whole labouring population.<sup>16</sup> In this connection it is worth remembering that in Ricardo, profit is the residuum after subtracting from product all that goes to the labouring population under various headings, including the Poor Law (Ricardo, 1951, p. 108). In this wider context, the definition of what is conventionally necessary and what is surplus social wage obviously becomes much more complicated, nevertheless the classical concept of 'subsistence', maintains all its importance for the definition of the social system as a whole. Moreover, its central location in the analytical frame allows for possible new insights into

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<sup>16</sup> On the 'moral economy' of those struggles see Thompson, 1971.



the structural dynamics of the economic system that take full account of the process of “enabling” individuals to work and, most of all, of the wider process of enabling them to compose their lives in a sustainable and meaningful way. The process of social reproduction of the labouring population has never been given adequate attention. Nevertheless, Sraffa's numerous and fruitful observations, contained in his papers, make it possible to recover an abandoned concept and a line of inquiry, that of normal wages as costs of social reproduction that could offer a starting point to disclose deep structural tensions and powerful dynamic forces.

### **Bibliography**

Coletti, F., 1905, ‘Il costo di produzione dell’uomo e il valore economico degli emigranti’, in Il giornale degli economisti, vol. XXX, febbraio.

De Vivo, G., 2000, «Produzione di merci a mezzo di merci: note sul percorso intellettuale di Sraffa», in M. Pivetti, a cura di, Piero Sraffa: contributi per una biografia intellettuale, Roma, Carocci.

Dobb, D., 1937, Political Economy and Capitalism. Some Essays in Economic Tradition, London, Routledge and Kegan Paul.

Edgeworth, F.Y., 1906, «Income», in I. Palgrave, ed., Dictionary of Political Economy, London, Macmillan.

Gehrke, C., 2003, “Prices of Wages”: a curious phrase”, paper presented at the ESHET Conference, Paris, Feb., 2003.

Ginzburg, A., 2000, «Sraffa e l’analisi sociale: alcune note metodologiche», in M. Pivetti, a cura di, Piero Sraffa: contributi per una biografia intellettuale, Roma, Carocci.

Malinowsky, B., 1929, The Sexual Life of Savages, London, Routledge.

Marshall, A., 1920, Principles of Economics, London, Macmillan.

Pareto, V., 1905a, ‘Il costo di produzione dell’uomo e il valore economico degli emigranti’, in Il giornale degli economisti, vol. XXX, aprile.

Petty, W., 1672, Political Anatomy of Ireland, London.

Picchio, A., 1992, Social Reproduction, the political economy of the labour market, Cambridge, Cambridge University Press.

Picchio, A., 2003, ed., Unpaid Work and the Economy, London, Routledge.

Pigou, A.C., 1946, Income: an introduction to economics, London, Macmillan.

Pivetti, M., 2000, 'Il concetto di salario come «costo e sovrappiù»', in M. Pivetti, a cura di, Piero Sraffa: contributi per una biografia intellettuale, Roma, Carocci.

Ricardo, D., 1951, On the Principles of Political Economy and Taxation, P. Sraffa, ed. with the collaboration of M. Dobb, "The Works and Correspondence of David Ricardo", vol. I, Cambridge, Cambridge University Press.

Roncaglia, 1974, 'Labour-Power, Subsistence Wage and the Rate of Wages', Australian Economic Papers, vol. 13.

Smith, A., 1976a, An Enquiry into the Nature and Causes of the Wealth of Nations, R. H., Campbell, A. S. Skinner, W. B. Todd, eds., Oxford, Oxford University Press.

Smith, A., 1976b, An Enquiry into the Nature and Causes of the Wealth of Nations, E. Cannan, ed., with a new Preface by George J. Stigler, Chicago, University of Chicago Press.

Smith, A., 1978, Lectures on Jurisprudence, R. L. Meek, D. D. Raphael, and P. G. Stein, eds., Oxford, Oxford University Press.

Smith, J., 2000, «Le carte di Sraffa presso la biblioteca del Trinity», in M. Pivetti, a cura di, Piero Sraffa: contributi per una biografia intellettuale, Roma, Carocci.

Sraffa, P., 1960, Production of Commodities by Means of Commodities: a Prelude to a critique of Economic Theory, Cambridge, Cambridge University Press.

Stanley, A.D., 1999, «'We did not separate Man and Wife, but All had to Work': Freedom and Dependence in the Aftermath of Slave Emancipation», in S. L. Engerman, ed., Stanford, Stanford University Press.

Thompson, E.P., '1971, The moral Economy of the English Crowd', in Past and Present, vol. 50.

Whitehead, A.N., 1911, An introduction to Mathematics, Home University Library, London, Williams and Norgate.

Whitehead, A.N., 1927, Science and the Modern World, Cambridge, Cambridge University Press.