Title	A POWER THEORY OF WAGES
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Citation	Kyoto University Economic Review (1929), 4(2): 14-51
Issue Date	1929-12
URL	http://hdl.handle.net/2433/125186
Right	
Type	Departmental Bulletin Paper
Textversion	publisher

Kyoto University
Economic Review

MEMOIRS OF
THE DEPARTMENT OF ECONOMICS
IN
THE IMPERIAL UNIVERSITY OF KYOTO

VOLUME IV 1929

PUBLISHED BY THE DEPARTMENT
OF ECONOMICS IN
THE IMPERIAL UNIVERSITY OF KYOTO

A POWER THEORY OF WAGES

CONTENTS

1. WAGES AS VIEWED FROM THE STANDPOINT OF THE POWER THEORY

The price of labour, as wages, becomes the income of the labourer who offers in exchange labour (or labour power in the view of scholars of a certain school). While forming a contrast to incomes accruing from sources other than labour, or property income (or capital income), on the one hand, it represents the cost (price) income (the income as cost), together with land rent, on the other. By the cost (price) income I mean the income, which, as the price of final productive goods, is devoid of the nature of surplus, it being fixed, in a certain sense, independently of the actual price of the product. In another sense, of course, land-rent partakes of the nature of surplus value, but that is neither here nor there.

Some explanation is necessary of my contention that wages mean the price of certain goods called labour. The word wage allows of a very narrow as well as of a very wide construction. The word in a wide sense is inclusive of the price of labour as indirect income. If that income be called direct income which one gets in compensation for participation in undertakings which supply products necessary for the material life of society, or for material goods, and which is accordingly paid directly out of the price of the products, and if the incomes which are paid indirectly, in contradistinction to direct incomes, be called indirect incomes, the remunerations which doctors, *rikisha* men, *geisha* and servants receive may be covered by the word wages in a wide sense. The labour which is entitled to indirect incomes is generally termed service, and it is usual that such service directly benefits its recipients, instead of being appreciated through the materials on which it works. (This is a very generalised definition, but I have no time to offer a detailed interpretation of this point in my present article). The so-called direct incomes contain various kinds of wages, but they may roughly be divided into those accruing from physical labour and those from mental labour. Among the profits which industrialists receive there are some whieh may be viewed in the same light as remunerations for labour, and these may well be regarded as compensation for the labour of supervision, a kind of mental labour. The word " wage " is generally applied to the price of physical labour exclusively, remunerations for other kinds of labour being designated as salaries. So far as economic theories are concerned, however, there is on warrant for treating them differently. In the present article, all indirect incomes will be left out of consideration, but the price of labour classed as direct incomes will be minutely studied, while taking the word wage in a narrow sense as the basis of the whole discussion (1)

(1) With a view to precluding all misunderstandings that may be created in the minds of the readers of the present article, I append the following classification table :—

- Wages in a wide sense
  - 1. Wages as direct incomes
    - (a) Wages for mental labour
      - (1) Wages other than those received by industrialists
      - (2) Wages for industrialists
    - (b) Wages for physical labour=Wages in the narrowest sense
  - 2. Wages as indirect incomes

Wages in the widest sense include both the wages classed as indirect incomes, and those classed as indirect incomes, and accordingly they are inclusive of all incomes accruing from labour and service. Wages in the narrowest sense cover the wages from physical labour only, which form part of direct incomes. In the present article, all wages classed as direct incomes will be dealt with. That is to say, the article will treat, besides the wages from physical labour, of those from mental labour, not even excepting the wages received by industrialists. I believe that the wages theory as applied to the wages classed as direct incomes holds true, in substance, in regard to those classed as indirect incomes also, but I will in the present article confine my attention to the wages falling into the first-mentioned category.

An enterprise consists, in a sense, in the will to take the profit or loss which is repeated regularly. The will to take the profit or loss always means trade. It is not, of course, correct to say that the will to buy or sell things is in itself an enterprise. It is necessary that these transactions should be repeated regularly and that there should be a combination of goods. By a combination of goods I mean that the goods purchased are sold with certain other goods added, instead of being sold as they were bought. It is true that some men of business and scholars attempt to interpret an enterprise chiefly in the sense of the operation of capital, but this point is outside the scope of the present article. If analysed with a sole eye to its essential parts, an enterprise means the will to trade regularly in the goods which are a combination of articles, that is to say, the goods purchased combined with some other articles. Such trade essentially requires capital, and consequently capital is a concomitant of an enterprise.

If an enterprise is interpreted in this way, it will be clear that an enterprise is not simply to carry on production by combining productive elements. It may cover a far more extensive scope of economic actions. Such being the case, it is not quite correct to regard the so-called direct incomes as incomes which are in keeping with the position occupied in an enterprise or with economic functions. As a matter of fact, primary incomes are incomes accruing from participation in the supply of material goods (or the integral property), and consequently it is necessary to divide enterprises into direct or principal enterprises, and indirect or collateral enteprises. Those enterprises that participate in the supply of material goods are principal, while the others are collateral. Thus defined, the incomes received according to economic functions in principal enterprises may be called direct incomes. The principal enterprises include, above all things, ordinary productive industries. The transport business and the warehousing industry, which are of a nature to influence material goods in one way or another, fall into the category of principal enterprises also. So can all trades which are designed to serve the purpose of tacilitating the supply of the goods produced be counted among the principal enterprises. The banking and trust businesses which mediate and promote the supply of funds to these enterprises also belong to this category. On the other hand, such enterprises as aim at the supply of goods called service (not rendered through the production of goods), the supply of land, residences or suchlike things necessary for material goods, and the supply of consumptive credit may be classed as collateral enterprises.

As already repeatedly stated, wages are incomes which those who give labour get as its price, but labour is not a product of other productive goods. It is the so-lalled final productive goods or the goods of highest order. The view that wages depend on the cost of producing labour is often advanced, but it cannot be maintained. Why it is infeasible requires an elaborate exposition. Suffice it to say here that the idea underlying this point of view thet labour is a product cannot be accepted. To discuss the matter from one angle, all items of distribution go to support the life of those who get them. As industrialists live on profits accruing from their enterprises, capitalists on the interest on capital, and landowners on land-rent, so do labourers subsist on their wages. Where there are labourers carrying on their existence, there is necessarily labour or capacity for labour. Inasmuch as all incomes are essentially employed for the maintenance of existence, there is no reason why wages alone should be regarded as the cost of producing labour. From another point of view, it is impossible to argue that industrialists or capitalists produce labour. It is true that the masters of slaves produce slavery, for they can manipulate their slaves as they do their cattle, by virtue of their supply of food and clothing and their absolute hold on the lives of their slaves. In this case, however, industaialists can have no right to the lives of these poor men after their term of service has expired, none the more because it may be supported with the wages which they have given them. Is it, then, proper to think that labour is produced by labourers themselves for the sake of their wages? Products are by their nature increased or reduced in amount at will in accordance with a rise or fall in prices, but in the case of labourers they cannot either increase or reduce their labour; they cannot exert their will over the amount of labour. All that we see is the amount of labour co-existent with their life. It is, of course, possible that there occurs an increase of population in a long space of time with the advance of wages, and the labour population increases or decreases in consequence of migration, but this increase or decrease in population does not occur in synthetic economics within a limited isolated sphere, and consequently there is no occasion for taking such a contingency into consideration in our idealistic study of the subject. Furthermore, the increase of population by no means indicates that it is brought about by labourers of their own free will for a period chosen by themselves. It is simply the natural outcome of their mode of existence. Thus, labour lacks the attributes which allow of the interpretation that it is a product produced by labourers of their own free will. Labour, like land (or the utility of land), is final productive goods which automatically exist.

The price of final productive goods cannot be determined by the cost of production, because they are not produced and consequently do not involve any cost of production. Although there is a tendency for the prices of other goods, that is, those which are products in one sense or another, to be ultimately determined by the cost of production, the price of final productive goods—the price of labour under review, for instance—is not determined by the prices of other goods. It changes automatically. It partakes of the nature of an independent invariable amid a variety of prices that balance and influence one another. There are, of course, certain limits to its fluctuations, but within these limits it fluctuates independently of all others. There are causes for its fluctuations, but these causes are not economic. It is for this reason that its fluctuations can be described as automatic from the point of view of political ecomomy. Let me explain this point at some length.

The only possible answer to the question of how wages are fixed is that relations of power determine them. In order to simplify the problem, I will set aside the consideration of the heterogeneity of labour and the different scales of wages, and proceed on the assumption that labour is all of the same nature and the wages of a single kind. Regarding different scales of wages, I propose to deal with them in a later chapter. Theoretically speaking, the minimum wage may be of a size that is little better than zero, if only temporarily. The minimum wage of any durable nature must, however, be of a size which enables the labourer and his family to maintain the so-called biological existence. While on the other hand, it is theoretically conceivable that the maximum wage can be, if for a time, far in excess of the price of the goods produced by the labour of the labourer, though the maximum wage of a durable character must necessarily be the price of the goods produced (minus, of course, compensation for the consumed part of capital). As to the point between these two extremes at which wages are to be actually fixed, it depends upon the relative influence of those who require labour and those who supply it. In common parlance, the social influence ot labourers is decisive of the scale of wages.

According to the theory hitherto accepted, wages depend on the relation between demand and supply. So far as it goes, this dictum is, of course, indisputable, but how are demand and supply determined? The generally accepted theory maintains that as the supply is generally determined by the cost of production, the supply of labour is determined by the cost of production in the shape of the means of livelihood (which are looked upon as the cost of producing labour. The means of livelihood may be interpreted in many ways, and this phase of the question I will discuss later on). Such being the case, it is fair to say that the supply of labour depends solely on the means of livelihood. As to the demand, it is determined by the so-called productive power (productivity) of labour. The general term of the productivity of lahour is here employed, but what it signifies is defined variously by scholars. For instance, those scholars who advocate the marginal productivity theory define it as the price of the product secured by the marginal unit of labour. From the point of view of another theory, the productivity of labour means the part of the price of the product left, which can be paid for labour, after the consumed part of capital, land-rent and interest (and a reasonable margin of profit, besides) have been deducted from the total price. Though different in many respects, these definitions have this in common, that what is left after the capital income has been deducted is the productivity of labour, and that the demand for labour is determined by that.

But such a view cannot be accepted. In the first place, it is not the means of livelihood, as the costs of the production of labour are regarded, that determines the supply price of labour and the curve of supply, for, as already mentioned, the means of livelihood for labourers are not the costs of labour production. As a matter of fact, what labourers expect to gain by their resolution determines the supply price of labour. Needless to say, it cannot go beyond the maximum and minium limits. In actual practice, however, the requisite means of livelihood for them are what labourers have been customarily obtaining as wages or what their employers have been customarily paying them and estimating in their profit and loss accounts. Thus, partly by force of custom and partly by mutual expectation on the part of those who demand labour and those who supply it, the amount of wages is usually anticipated. So long as there occurs no fresh change in the social position of labourers or so long as no marked rise or fall takes place in the price of the particular product concerned, therefore, the amount of which labourers demand as wages will, as a general rule, be determined by the means of livelihood which they require. It will thus be seen that the approximation of the required means of livelihood and the supply price of labour to each other is due, not to the fact that the former constitute the cost of production, but to the fact that the extent to which labourers can exert their influence on their employers (their influence on the whole mechanism of society also) leads them to make up their minds to demand that much. This curve of labour supply is not unalterably fixed even under given circumstances. It is subject to change within certain limits, so long as labourers think that they are capable of altering the extent of their influence on their employers more or so long as they can change their estimate of their influence with them. In this way, strictly speaking, their is a certain curve surface, or many possible supply prices. Of these, labourers choose a certain supply curve and a certain supply price, which they make up their minds to claim. In the second place, similar conditions obtain in regard to the demand curve of labour. Divers theories are advanced as to how the demand price of labour is determined. It is not my purpose to examine each of these theories, but it is a fact that what industrialists estimate as the maximum demand price of labour is that part of the price which they generally attribute to labour, or that part of the price produced by labour. It represents the balance of the price of the product (since wages are paid in advance, this price means the estimated price) after the land-rent, interest and a reasonable amount of profit have been deducted. Industrialists are prepared to pay that much for labour, if occasion demands. As I have already mentioned, the highest point to which the demand price of labour can rise is, of course, the price of the product (minus the consumed part of capital). The demand price which industrialists name is not, however, the *de facto* maximum demand price. It is fixed at a point to which the demand of labourers can be reduced or to which industrialists think they can reduce it. It is fixed, so to speak, by an estimate of the relative power of capital and labour. In actual practice, it is assumed, on the one hand, that labour cannot be purchased unless a price large enough to enable labourers to maintain their present standard of living is paid, and attempts are made, on the other, not to pay more than that, the required means of livelihood determine the amount of the demand price, in most cases. But when the strong attitude of the suppliers of labour makes it necessary for industrialists to anticipate the need of paying more, the demand price of labour rises accordingly, the demand of labourers being duly reflected upon it. In fact, it can easily be raised to the *de facto* maximum price. In some extreme cases, it is even possible for the demand price to go on rising until it becomes equal to the total price of the product by encroaching on the profit and absorbing interest and even land-rent. Thus, it can be noticed that in the background of the demand curve of labour is the demand curve surface. A certain line on this surface forms the demand curve. In other words, the demand price is indifinite. It is the circumstances prevailing at the time that make it definitive and an unalterable entity, on which industrialists take their stand.

In this case, how does the attitude of both parties, viz. those who demand labour and those who supply it, bear on the value of exemption from indemnification (the value in saving)? Let me first consider the position of the suppliers of labour. They do not produce their labour at any definite cost of production, and so it is impossible that its cost of production determines its value of exemption from indemnification. Besides, their labour is of no use or value to themselves (unless it is sold to industrialists). Accordingly, when it is sold, there is no need whatever for obtaining it again by paying a price for it. Such being the case, its possession does not exempt them from any form of indemnification. In other words, its value of exemption from indemnification is nil. Thus, the suppliers of labour, which is final productive goods (or to use a different term, productive goods of the last degree), are capable of lowering their wages to a point which is little higher than zero, but as a matter of fact, they try to get as high wages as possible in accordance with their social power, and the existing relative power practically decides the amount of the wages which they demand. This demand acts upon those who are in need of labour, and the labour value of exemption from indemnification is determined. That is to say, value of exemption from indemnification which industrialists put on labour depends on the price which they conclude they must pay for labour in the existing relative power of capital and labour. It embodies neither the maximum limit, viz. the price of the goods produced by labour, nor the balance of the price after interest and land-rent have been deducted. The value of exemption from indemnification, which determines the attitude of industrialists, represents only the reflection of the demand made by labourers in view of the influence which they wield. Some people may argue that inasmuch as the price of the product minus interest, land-rent and a reasonable margin of profit is the price which industrialists are ready to pay labourers, that is to say, the price ordinarily attributed to labour, and as the wages which labourers demand cannot, as a general rule, exceed this limit, the labour demand for wages necessarily presupposes interest and profit. To this contention, it may be pointed out thaf although in the present economic system interest and profit, no doubt, power and regulate wages, yet judged from the natural order of things, interest and profit cannot be determined without presupposing a certain amount of wages, because they partake of the nature of surplus. On the contrary, wages are essentially fixed with the demand of labourers mainly in view. Industrialists have no alternative but to buy labour. If they must purchase labour, they must of necessity pay wages which are determined by the relations of power. The wages paid by them are necessarily included in the price of the product, in a static state at least, and it is not of a nature to be counted as surplus. Thus, wages determine the price, but they are not determined by the price. It is only when the price comes to contain a surplus due to various fortuitous circumstances that wages are conditioned by interest and profit as the secondary reactionary operation of this surplus. From the point of view of their essential nature, wages are a sort of thing to be fixed independently of all other factors. They are not determined by the income in the shape of a surplus. As the price of final productive goods, they constitute the starting point of the formation of the price of the product, not the last or the intermediate stage of the process.

Thus, I prefer to take the following view of the mechanism of the determination of wages. The supply curve of labour is determined by the demand of labourers, which is, as a general rule, based on their standards of living. The personal circumstances of labourers may differ. Some labourers may make bigger demands than others, because they form a higher estimate of their social power than others do, while some others may be inclined to work at low wages brcause of their distressing financial circumstances. Or in some other cases, labourers may be content with low wages on account of the small family which they have to support. In such circumstances, a certain supply curve is formed within a certain limit with an elasticity to move upwards and downwards. The demand price of labour depends, on the whole, on the labour demand reflecting the social position of labourers also, but it varies according to the individual circumstances of those who require labour. For instance, those who have a comparatively large margin of profit left after various items of cost have been deducted from the price of the product may be willing to pay a high price for labour, while on the countrary, those who are involved in heavy costs will have no alternative but to give a low price for labour. In this way, the quantity of labour in demand can be indicated in the form of a certain demand curve. Needless to say, this demand curve is not inflexible. Even assuming the price of the product to be unalterable, the demand curve is capable of moving upwards and downwards within a certain limit according to the attitude of labourers. At any rate, it takes a certain shape under certain circumstances. It is hardly necessary to point out that if both the demand and supply curves are given, the wage, which is the price of labour, can, of course, be fixed.

One conclusion to be drawn from the proposition that the relation of power is the final judge of wages is that wages can be raised through the operation of trade-unions. Those who deny such capability on the part of trade-unions may contend that so long as all other conditions remain unaltered, the state of demand for labour must also remain the same. It therefore follows that if wages can be raised by the power of associated trade-unions, it will be in regard to only a part of labour, the other part of labour being forced to be left a drug in the labour market. Even conceding that wages for all kinds of labour may temporarily be forced up, they argue, there will soon occur a decline in the demand for labour in consequence of either the suspension or the reduction of enterprises on the part of some industrialists who find their business unprofitable, with the result that there will either be an oversupply of labour or a fall in wages. This view is, however, erroneous in that it is based on the false premises that the state of demand for labour and accordingly the demand curve of labour are invariably fixed. The demand curve is not absolutely fixed; there is a narrow and long curve surface within the scope of which it can be fixed. Consequently, the demand curve moves within this scope according to the state of supply prevailing. If the activity of trade-unions changes the relative power so that higher wages are demanded by labour, the demand curve of labour, which has up to that time been determined with special regard to interest payments and profit, undergoes a corresponding change, the curve going up because of the drains to be made on the surplus. This is analogous to a change that occurs in the demand curve for finished goods in consequence of the growth of human desires. Thus, it is possible for wages to rise all round without causing a drug in the labour market. The rise may sometimes reduce the surplus of some enterprises so markedly that the industrialists concerned may be forced to reduce the scope of their various forms of business and so there must, of course, be limits to the demand for higher wages. Where these limits lie is, however, a debatable question. In the maximum case, it is possible for wages to rise to a point equivalent to the total of the price of the product (minus the wear and tear of capital), provided there is no change in the demand for the finished goods, but industrialists will naturally be inclined to suspend business, unless they can expect a certain amount of surplus. The minimum surplus expected by them depends on the social conditions ruling at the time, and no sweeping definition is justified. It is evidently subject to constant changes.

Let me now consider the case of maximum limit only. The price of the product of labour makes the highest limit of wages. Nominally, however, the rise of wages may be without limit. Let us suppose, for argument's sake, that labourers demand wages which, in the terms of currency, are above the ruling price of the goods produced by labour. In such cases, it is not absolutely impossible for industrialists to accept the demand of labourers, for if they can make up for what they pay in wages by increasing the price of the product, they will suffer no loss. The increased wages form the surplus purchasing power, which enables labourers to buy higher-priced goods, and if this process is repeated, wages in the terms of currency can rise indefinitely. But in practice, wages do not in any circumstances durably exceed the price of the product.

2. THE PYRAMIDAL FORMATION OF WAGES

Labour for which wages are paid is by no means of a single kind, though I put it in that way hypothetically before; it is of far more numerous kinds than is generally believed. It is generally divided into unskilled labour, skilled labour, intellectual labour and labour of women and children, but this does not cover the whole rage of variety. Each kind has its own labour market and in each labour market wages are fixed independently of one another to a certain extent. This being so, it may appear at first sight that the law of one price for one thing does not rule in the labour market, but seeing that labour itself is of various kinds, it is in the natural order of things that it should have many markets and the resulting many prices.

One point of view has it that high-class labour can be reduced to common labour. It regards one unit of the former as equal to, say, three units of the latter, but this way of thinking is not tenable except when the amount of work done by each kind of labour is compared on the basis of the quantity of the goods that can be produced by each labour, and such cases are comparatively few. As a general rule, labour of different kinds is used for different purposes. It may be possible to regard A labour as being equivalent to twice as much as B labour, in the light of the wages fixed, but this simply means a comparison of the price of labour, or the reduction of the price to units, not the reduction of labour to units. The same thing may be said of the point of view which believes in a reduction of this kind based on a comparison of the price or value of the goods produced by labour. Various kinds of labour are required and supplied because of their distinction from one another. The diversity of labour exists not only in regard to the classes of labour, but about the kinds of work done by workers belonging to the same class also. The classes of labour may roughly be divided into four, as already mentioned, while the kinds of work referred to practically means difference in trades and skill. It is hardly necessary to say that there is a good deal of mutual adaptability between the kinds of labour belonging to the same class. Take unskilled labour, for instance. Unskilled workers can often be transferred from business. A to business B, but there are limits to this adaptability, and beyond these limits, they have demands and supplies of their own, with their separate markets. That different classes of labour have separate markets is, of course, a well-known fact, but for the moment I wish to confine my attention to the study of the fact that different wages rule in different classes of labour.

As the classes of labour differ, so do wages differ, and between these different classes of labour there is no mutual adaptability, with the result that it is very difficult for those in one particular class to accommodate themselves to the conditions in another class. Inasmuch as each class has demand and supply of its own, the wages paid for those in different classes are at variance. This phase of graduated wages is called the pyramid of wages. It is called the pyramid for the following reasons. Setting apart the labour of women and children, unskilled labour has the largest supply with the lowest wages. The higher the wages, the smaller is the supply of labour (the number of labourers, in fact) and consequently there are very few, even among those in the highest class who get the highest scale of wages for their highest ability. If the size of the wages be indicated by a height from the base and the amount of labour available for different scales of height by the width at each height, a shape something like a pyramid will be formed. It may not, of course, be exactly the same as a pyramid in shape, and an accurate idea of the shape cannot be formed unless we examine the wages statistics in all communities, but, on the whole, it seems undeniable that there is a tendency such as has been described.

3. THE EXPLANATION OF GRADES IN WAGES

What is it that makes this pyramidal formation of wages possible, then? The first step towards the enunciation of this truth lies in making clear why there are grades in wages. Some scholars attempt to explain the grades in wages by reducing the so-called high-class labour to units of common labour, but when these two kinds of labour are performed by altogether different persons, there can be no means of reducing one unit of the former into corresponding units of the latter, so far as the work itself is concerned. If the reduction is based on the difference in wages, it would be simply begging the question to try to explain wages by such reduction methods. It might appear possible to explain the grades in wages on the basis of the amount of non-economic compensation, arguing, for instance, that higher wages are paid for work which is filthy or attended by social dishonour, but, generally speaking, this merely explains only a small part of the difference in wages among labourers belonging to the same class. In different classes of labour, the larger the non-economic compensation, the higher the wages. Some people follow the lines of the costs of production theory and base their explanation on the amount of the educational and training expenses to which labourers have been put, but the difference in educational expenses is out of proportion to the difference in wages in many, if not most, cases. Moreover, skill is often acquired while at work and the workers who acquire it are put to no expense whatever. Such being the case, the above explanation cannot be accepted. Lastly, there is an attempt to explain grades in wages on the ground of the productivity of labour, or the price of the product secured by a specified kind of labour. This assertion certainly does not commend itself. The argument that the pronuctivity of labour depends on the amount of the wages and that the latter is controlled by the former cannot be accepted at least in principle. Setting apart the above consideration, it is an obvious fact that the difference in wages is not in accord or keeping with the difference in the productivity of labour. It is very often the case that the difference in wages for a superior skilled worker and for an unskilled labourer is very insignificant as compared with the difference in their productivity (taking the productivity to mean the amount by which the price of the product is either increased or reduced as one labourer is added or withdrawn). I do not, of course, deny all connection between the degree of the productivity of labour and grades in wages. Nor do I deny the influence of the former on the latter, but I do not think that the latter can be effectually explained by the former.

In my opinion, the grades in wages are essentially due to the divergence in the power of labourers. Supposing that different wages are given for the different classes of labour, A, B, C, and D, as, for instance, 100 for A, 80 for B and 60 for C, this shows that the social power of A is sufficiently strong to make it demand 100 and that of B and C 80 and 60 respectively. Thanks to their social power, they demand this much for their labour. As for industrialists, they try to combine labour and other productive factors in a manner as advantageous to themselves as possible. They study how much labour of different classes is needed for producing goods of the value and quantity which they desire. The total of this demand on the part of all industrialists forms the demand function for a certain particular class of labour. If the demand for labour falls short of the supply of labour, it leads to two results. Either labourers, or suppliers of labour, must modify their demand and reduce the price of labour, or those who demand labour must make concessions, as in the case of those industrialists who count on a certain margin of profit, there is usually room for concession on their part. In any case, by the continued operation of power, demand and supply are brought into accord and the wages are fixed,

How do industrialists arrange matters, in such circumstances, so as to ensure profit? The marginal productivity theory contends that they study how to increase or decrease the marginal unit of some particular productive factor, labour in this instance, by fixing the required quantities of other productive factors, and then assume the proportionate increase or decrease in the price of the product. By this means, it maintains, they will determine the demand price of labour and the required amount of labour. This theory, however, forms a mistaken estimate of the mentality of industrialists in assuming that they will first fix the required quantities of all other productive factors. Industrialists try to discover the most profitable combination (combination of productive factors) within the scope of their enterprise, and the facts which they take into consideration in this regard are the estimated price of the product and the estimated prices of productive goods (which determine the so-called value of exemption from indemnification), which are nothing but the suppositional supply prices (the prices which the supplies of productive goods demand). The required amount of labour and the demand price of labour are fixed in consideration of these supply prices. What would happen, if the combination of productive goods should prove unworkable in the form previously determined, owing to disharmony between demand and supply? In such a case, industrialists must either alter the demand prices of productive goods by reducing the margin of profits or induce the other party to alter the supply prices. In this way, a new combination which accords with the altered circumstances can be determined. The extent to which concessions will be made and the point at which harmony will be established depend solely on the state of relative power. The only decider of the amount of the demand price of labour is the demand put forward by labourers by dint of their power. The prevailing conditions of demand and supply in the market may prevent the demand price of labour being fixed as labourers desire, but the demands of labourers furnish the basis on which it will finally be settled, though some modifications of their original demand may be unavoidable. Industrialists base their calculation of profit on a comparison between the total amonnt of cost and the price of the product and they try to make the composition of the former as favourable as possible so that the latter may be increased to the largest possible figure. It is the estimated prices of productive goods that are the pre-requisites for the consideration of this composition, and these prices reflect the supply prices.

Let us suppose that wages are fixed by such a process. The suppliers of labour of various kinds (that is, labourers) are not equal in their social power, and they demand a standard of wages according to their respective power. Unskilled labourers, who are the largest in number, demand the lowest wages because their power is weak, while skilled labourers usually demand higher wages than the former because they enjoy greater social power on account of their skill, or special art. In fact, it often happens that the goods produced by skilled labourers fetch specially high prices, and the fact that there is sometimes an inadequate supply of such skilled labour makes the wages paid for it all the higher. With regard to intellectual labour, it requires a certain amount of culture, and this culture leads to its high social power, which enables it to demand correspondingly high wages. The social power which culture bestows on intellectual labour, however, sometimes declines. For instance, it suffers when the spread of high education diminishes the public regard for intellect. In such cases, wages for such labour go down. This is not, be it observed, simply the result of an increased supply of labour; it is more fundamentally due to a change in its social power, for the only possible explanation of the difference of wages paid for labour of various classes is the divergence of the social power held by each kind of labour. To cite a few notable examples to prove this contention, wages paid for women and juvenile labour are generally low. Notwithstanding the fact that in some kinds of work, women show as high efficiency as men, the former are content with two-thirds or even one-half of the wages of the latter, a fact which is mainly ascribable to the inferior social power of women. This disparity in wages becomes less in a society where the social position of women is higher. The same state of things is observable in regard to juvenile labour. Again, look at the peculiar conditions of labour in Japan. The wages which Korean labourers receive in Japan Proper are some per cent. lower than those paid to Japanese labourers, and this cannot be explained except on the ground of the disparity of social power between Korean and Japanese labour. It is by no means due to the inferior quality of Korean labour as compared with Japanese labour.

Thus, wages can be plotted as a pyramid consisting of different classes of labour. Even in the same class of labour, wages are not equal. They differ according to the quality and amount of work supplied. In the first place, some labourers may produce the same kind of goods, say, "n" per cent. more than other labourers engaged in the same line of work, because of their closer application and better skill, while some others may produce goods of better quality than ordinary labourers can produce so that the proceeds from the sale of the goods can be increased by "n" per cent. Such labourers can be paid higher wages than those others to the extent warranted by the "n" percentage, by which the proceeds are increased, no matter whether their superiority is born or acquired, or whether it is the result of close application or of natural talent. The percentage of increase in their pay may not always be the "n" per cent., but it will be determined at a point approaching it. Here, on the whole, the so-called law of difference rules. Secondly, it may be supposed that in the case of labour belonging to the same class, the transfer of labourers from one kind of work to another can be easily effected, but such is not necessarily the case. Among unskilled labourers, such transference is comparatively easy, but it may, to a certain extent, be impeded by various circumstances such as customs, geographical distance, difference of physical power and the trade-unions. Among skilled and intellectual labour it is often extremely difficult, as skill and education cannot be acquired in a short space of time. Indeed, change of work is often absolutely impossible in one generation. Such being the case, even in respect of labour of the same class, there must needs be many different labour markets for different kinds of work, with more or less differing scales of wages.

As regards the labour in demand in fields other than industrial, some scholars take the view that wages for this are, exactly like the price of finished goods, fixed according to the marginal utility, for, it is contended, it is exactly the same as finished goods in that it directly satisfies the desires of consumers. As for myself, however, I believe that the wages for such labour also depend on the social power of those who supply it. There are, of course, some hindrances to mutual adaptability between labour in industrial fields—between industrial labour and non-industrial labour especially—but they are nevertheless reciprocally transferable. It is, therefore, unlikely that wages for the latter should be fixed as simply as the price of finished goods is fixed. Needless to say, labour in fields other than industrial is required not for its contribution to production but for its direct utility, and yet unless the same wages are paid for it as are paid for labour in demand for industrial purposes, it will find its way into industrial fields. Nor is there, for the same reason, any necessity that higher wages than those paid for industrial labour should be paid for it. Thus, they are fixed in consideration of the social power of labour—indirectly in the sense that they follow the scale of wages for industrial labour. Again, the price paid for non-industrial labour (apart from the above-mentioned connection with the wages for industrial labour) is fixed by the demand made by labourers by dint of their power. In practically all cases, the demand for labour of this kind (so-called service) is not continuous, nor is it sufficiently divisible. Its use value is, as a rule, far greater than wages. In such circumstances, the only possible way is to decide the wages on the basis of the supply price of labour or the demand of the labourers, with due regard to the relative power of employers and employees. Viewed from this standpoint, the quantity of non-industrial labour is by no means anticipated, and consequently its marginal utility is absolutely indefinite. It is nothing more nor less than the demand of labourers that determines the general scale of wages. The state of the demand for non-industrial labour and that for industrial labour combine to operate in the direction of changing the above-mentioned labour demand.

In short, from my point of view, the pyramidal formation of wages reflects the pyramidal formation of the sacial power of labour. The power possessed by each labourer makes him demand a wage commensurate with it. This demand forms the supply price of labour. The demand price of labour is based on the price of the product, viz. the proceeds. When these two prices do not agree, one or the other will have to be altered. This alteration also depends on relative influence. Within the limits of the productive capacity of society, there is a possibility of the supply price demanded by labourers, no matter how high it may be, being accepted, for the price of the product is at least above the wage bill (so long as the increased wages are spent on products as surplus purchasing power). It therefore follows that the demand price is merely the index of the power which industrialists can hope to exert in reducing the demand of the labourers for wages. Even when the prices of products are the same, a variety of the demand prices of labour are possible. It is not the nature of the goods only that decides the size of the so-called power by possession (the power which one exercises in giving goods in one's possession), but the social power of their possessors is also responsible for it. (1)

(1) I am indebted to Oppenheimer for the expression of the pyramid of wages. My purpose is not so much to insist on the pyramidal formation of wages as to show that wages do not represent the price for labour of a single kind, but that there is a variety of wages for different classes of labour. Oppenheimer also recognises the so-called dual pyramid in regard to wages. There is, above the standard wages, one pyramid of higher wages corresponding to the degree of superiority in conditions or qualifications of labour, and, below them, the other pyramid of low wages corresponding to inferior qualifications, of which the deformed, invalid and weak-minded form the base. Not much importance is, however, attached to the latter pyramid; the former pyramid always forming the chief subject of study. Oppenheimer says that farm labourers in East Germany constitute the lowest part of the pyramid in question. Owing to class pressure, their wages are the lowest, and consequently there is a constant flow of these labourers into urban districts. Labourers in urban districts get higher wages than farm labourers according to their conditions and qualifications, and the disparity between their wages depends on the so-called "natural distance."[1] Oppenheimer recognises a pyramidal formation in all kinds of income, and the pyramid of wages may be regarded as one notable example. I have no

[1] Oppenheimer, Theorie der reinen u. politischen Ökonomie, 1910. 397, 410; ditto, David Ricardos Grundrententheorie, 1909. S. 237 ff.

time to dilate on Pareto's law, but it may fairly be said that it recognises, to a certain extent, a pyramidal formation in regard to incomes other than wages also.[1] Ammon's theory of class formation is a very emphatic form of the theory of the dual pyramid which Oppenheimer made light of, in practice, even while enunciating it.

According to the opinion of Lexis it seems that the theory of the pyramidal formation of wages is unsustainable. He insists that either in big industries or handicraft industries the number of labourers who get medium wages is largest, as is shown by statistics. Nevertheless I think that if the number of farm labourers, handicraftsmen, and domestic workers, who generally get lower wages than the labourers referred to, is taken into account, it will he seen that those who get the lowest wages are largest in number.[2] Zwiedineck categorically traverses Oppenneimer's view. He argues that the grades in wages are by no means due to the disparity in fundamental conditions, that is, relative scarcity of labour. Labour markets, he contends, are many, not one, and each market has its own standards of wages required by its respective peculiar circumstances. To contends that the grades of wages are determined simply on account of the superiority of qualifications is to disregard the operation of these complex circumstances.[3] I have no intention of discussing this point in detail.

4. THE EXAMINATION OF DIVERGENT THEORIES

Many theories have been advanced to explain the process by which wages are determined. As the present article does not aim at the historical study of theories, I will consider a few important theories out of many by way of proving the accuracy of my view.

The cost of production theory deserves first attention. It is quite natural that those who take the line that the prices of all goods,—or, to be more exact, the natural prices which are, it were, the centre of gravity to which the market prices of goods tend to settle down in the midst of fluctuation—are determined by their respective cost of production should conclude that wages, which are the prices of labour, a kind of goods, are fixed by the cost of labour production.

1) See my book entitled "The Study of Present-day Society" (in Japanese).

2) Lexis, Allgemeine Volkswirtschaftslehre, S. 151.

3) Zwiedineck-Südenhorst, Die Lohnpreisbildung, G. D. S. IV, 1. S. 332.

The cost of production theory is not, however, of a simple nature; it contains a number of ramifying ideas. Here, I will confine myself to a study of typical views. The cost of producing labour means, according to the cost of production theory, the cost in which labourers are involved in supporting themselves and their families of a size which causes neither an increase nor a decrease in the population. If wages rise above this level due to some circumstances, an increase of population and consequently an increase in the supply of labour occurs, with the result that they will be lowered to this level again. If, on the other hand, wages fall below this level, a decrease in population and the resulting diminution in the supply of labour will force them up to this level. Of course, it is not denied that due to various circumstances, the standard of living, which may be regarded as the cost of production, is subject to change. In any case, this theory contends, the relation of demand and supply operates to bring the prices of labour to the level of the cost of producing labour. This theory cannot be supported, first, because wages, and therefore the cost of living of labourers, cannot be viewed in the light of the cost of producing labour. As I have already explained in detail why they cannot be so regarded, I shall not repeat it here. Only I want to add that whereas the prices of all goods are, if the cost of production theory is accepted, determined by the cost of production, in the case of labourers, wages, which are the prices of labour, are evidently decisive of the cost of production. The standard of living, which is taken as the cost of production, is fixed according to the wages received. If so, the application of the cost of production theory to the price of labour will reverse the relation of cause and effect between prices and the cost of production. Secondly, recourse must be had to the process of a rise or fall in the population in order to explain why wages settle down to the standard of living (though some advocates of the cost of production theory do not refer to the question of population). Conceding that a rise in wages leads to an increased supply of labour, it will take a generation for this increased supply to be realised as a sequel to the increased population. Consequently, it is inconceivable that the market price of labour will be lowered to the designated level by the increased supply of labour. Moreover, if the standard of living depends on habits and customs, it is quite possible that the advanced means of livelihood will come to form the new cost of production of labour. The same thing may be said as to decline of wages. This being so, the contention that wages find the level of the cost of production, which harmonises with the existing standard of living, cannot be endorsed. Thirdly, the uncertain nature of the cost of production must be pointed out. It is clear that it is of social nature and does not merely refer to physiological needs, and consequently it can take various forms according to circumstances. Notwithstanding the contention that the cost of production determines wages, therefore, it is very difficult to judge its exact amount. Even apart from this consideration, if, as is contended, the standard of living which constitutes the cost of production depends on social conditions—customs in particular—it means that the arbiter of wages is sought in non-economic factors, viz. customs, and it is nothing but relations of social influences that are responsible for the formation of customs. Thus, it seems that the cost of production theory has in view exactly the same facts as the theory of social influence is based upon.

As related to the cost of production theory, there is the so-called iron law of wages, which, though not necessarily a corollary of this theory, is a conclusion that may be deduced from it. It is contended that the increased labour population necessarily gives rise to competition for lower wages until wages are reduced to a point where it is barely possible for the lowest mode of living to maintained. This point of view regards the standard of living, the alterations and elevation of which the cost of production theory does not necessarily repudiate, as definitely fixed at the lowest level. For the cost of production to take this form it is only necessary to assume that the position of labourers *vis-a-vis* industrialists is very weak. That this iron law of wages is far from the truth in spite of its advocacy even at present by influential scholars, is obvious from the fact that wages have substantially risen all round since the closing days of the former century. Some advocates of the cost of production theory clearly admit that the standard of living which constitutes the cost of producing labour depends on custom and is consequently changeable. There is another theory related to the cost of production theory, and it is the so-called wages fund theory. This theory sees the existence in a specific community of a fixed fund out of which wages are paid in a certain specified period, and asserts that general wages are equal to the quotient of the division of this fund by the number of labourers, and that there can be no increase in general wages without a reduction in the number of labourers. This fund may sometimes be taken as referring to the amount of money paid as wages in the specified period, and at other times it seems to refer to the substance of wages or the total sum of money spent by labourers. The former means the fund for prices, while the latter signifies the total amount of substantial wages. In a sense, the wages fund theory is inconsistent with the cost of production theory. The latter asserts that wages are amenable to the labour standard of living, and that consequently the total amount of wages varies according to changes in the labour standard of living. The former, however, maintains that the wages fund is fixed in a certain specified period. A close study may reveal some possibility of reconciliation between these theories, but on the whole they appear to be incompatible with each other. Viewed from another angle, however, both may be regarded as running parallel and consonant with each other, in the sense that the wages fund merely marks the miximum limit of the changeable natural prices of labour or in that both strike a pessimistic note by signifying that because of the wages fund the demand for labour does not increase interminably and wages are restricted to the level of the needs of livelihood. This is especially so, when the unchangeability of the wages fund is not stressed and the theory is merely regarded as a link in the chain of reasoning adopted in explaining mechanism of demand for labour. No matter how the points enumerated may be interpreted, the wages fund theory has, on the whole, lost its dominant influence. Only a general survey of the theory reveals points of incongruity. In the first place, if the wages fund is fixed, the amount of money that is to be employed for the purchase of labour must necessarily be fixed, but such is by no means the case. Secondly, it is possible to make drafts, if occasion demands, on the proceeds of the sale of products during the same period for the payment of wages. Thirdly, industrialists always choose the most profitable methods of combining productive factors, and such methods vary according to the prices of productive goods. It is, therefore, inconceivable that the amount of money to be paid for labour should be rigidly fixed in advance. (1)

(1) Ricardo is a typical advocate of the cost of production theory. It will be clear from my article that the cost of production has a phase which may lead one to interpret it as the cost of existence. The nucleus of the argument in support of Ricardo's cost of production theory is the movement of the population,[1] and Lassalle owes his famous iron law of wages to Ricardo's cost of production theory.[2] There are nevertheless different opinions as to whether Ricardo's wages theory ought to be interpreted in such a pessimistic sense. It admits that the natural price of labour is not, in fact, fixed, that "it essentially depends on the habits and customs of the people" (Ricardo, Principles, Gonner's edition, p. 74.) and that consequently it varies with ages and peoples. It also admits that natural wages themselves are capable of moving upwards and downwards according to the state of population and the development of productivity. Taken altogether, however, it is impossible to deny that Ricardo's wages theory is pessimistic.[3] Through the operation of the law of diminishing harvests, there

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[1] K. Diehl, Erläuterungen zu Ricardos Grundgesetzen, Bd. 11. S 5-6.

[2] Offenes Antwortschreiben an das Zentral-Comité zur Berufung eines deutschen Arbeiter-Congresses 1. 111. 1863. Reden u. Schriften Bd. 11 1892.

[3] "The Study of Orthodox Political Economy" by Seiichi Tsuda. p. 226. et. seqq. Schrey, Kritische Dogmengeschichte des ehernen Lohngesetzes, S. 34 ff.

occurs a rise in the price of cereals and a fall in the rate of profit with the increase of population, and this decline leads to a gradual diminution in the accumulation of capital, which brings about the relative decrease of the demand for labour (which means that the increase of demand, not being in keeping with the increase of population, falls short of the supply of labour). The result is that "so long as wages are regulated by the relation of demand and supply, they have a tendency to decline."[1] It is not without reason that Cassel put this cost of production theory in a category of pessimistic theories. Ricardo deals minutely with kinematic problems such as the relation between the prices of cereals and wages and the relation between the increase of population and the general progress of society and wages, but I refrain from all reference to these problems in the present article. With regard to my criticism of the cost of production theory on the third mentioned ground, I refer the readers to Zwiedineck's criticism.[2] Again, in my opinion, the attempt to refute the argument based on the movement of population on the ground of the possibility of migration is misdirected, so long as the mode of handling the problem is idealistic.

Since there occurred a substantial rise in wages towards the end of the 19th century, the theory of the iron law of wages has gradually lost ground, though Oppenheimer still asserts that this law operates among the farm labourers in Eastern Germany, and believes that the pyramidal formation of wages has these farm labourers as the base. Thus, this law is regarded as determining the basis of the entire formation of wages. The so-called principle of centring in land takes the line that industry draws workers from agricultural districts and that higher wages paid in urban districts than in agricultural districts are the main inducement to farm labourers.[3] In my explanation of the pyramidal formation of wages, I did not touch on the essential question of what constitutes the base of the pyramid. Nor is it apposite to deal with here the question whether the pyramidal formation really depends on the scarcity of labour.

The wages fund theory, as described in the present article, refers chiefly to that of John Stuart Mill (though Mill renounced this theory when it was refuted by Thornton). Mill regards the so-called wages fund as a part of the capital appropriated for the purchase of labour (or a floating part of capital, to be more exact) ahd the amount of money, but not as actual materials of livelihood. Nor is this all. The fund for the employment of labourers other than industrial (servants and soldiers) is also included in it. (J. S. Mill, Principles, Book II Chap. XI 1.) From the point of view of the historical survey of theories, the wages fund theory ought to be traced

[1] Principles, p. 79.

[2] Zwiedineck-Südenhorst, Die Lohnpreisbildung, Grundriss der Sozialökonomik IV, 1. 1925, S. 324.

[3] Oppenheimer, Theorie der reinen u. politischen Ökonomie, 1910. S. 412 ff., Zwiedineck-Südenhorst, a. a. O. S. 328.

as far back as Mill. Ricardo's theory has a phase which gives it the appearance of a wages fund theory, but I shall not discuss this point here. Nor shall I take up in the present article the fact that in Mill's theory are mixed in uncrystallised forms the cost of production theory and the productivity theory which subsequently developed. My criticism of the wages fund theory in the present article is mainly based on the contention that the sums to be paid for labour depend on the demand for products, and therefore their prices. In order to realise the maximum estimated profit, producers have to give variety to their products and to arrange for the most profitable combination of productive goods with due regard to their prices in the manufacture of the goods which they choose to produce. In consequence, the amount of money to be paid as wages for a certain specified period is by no means unalterably fixed in advance. Moreover, it is an old complaint that wages are paid, not out of the capital, but out of the proceeds of the sale of products. This complaint seems to require a close study, but I have no time to discuss it here. (Here I propose to give a few examples of noteworthy criticisms of the wages fund theory)[1)]

The effects of productivity on wages have long been noted, but it is comparatively recent that the so-called productivity theory witnessed much development. Roughly speaking, the productivity theory can be divided into two kinds. One is what may be termed the general productivity theory, and the other is the marginal productivity theory. The latter takes the line that the productivity of the marginal unit, so to speak, is decisive of the amount of wages, while the former maintains that the amount of wages depends on the productivity of labour in general, no distinction being made between the productivity of the marginal unit and that of other units. Of course, the two theories will be in perfect accord, if the view be taken that the productivity of labour, no matter of what units, depend on that of the marginal unit, but let me here interpret the first-mentioned theory as defining that wages are dependent on the productivity of labour generally, in a sence other than the one mentioned above. As it is to the latter that special importance is

1) Cassel. Theoretische Sozialökonomie, 3te Aufl. 1923. S. 284; Schumpeter, Epochen der Dogmen-und Methodengeschichte, Grundriss der Sozialökonomik 1, 1. 2. Aufl. 1924. S. 94 ff.; Oppenheimer, a. a. O. S. 607 ff.; Salz, Beiträge zur Geschichte und Kritik der Lohnfondstheorie, 1905; Cannan, Theories of Canan Production and Distribution, p. 271 et seqq.

attached in scientific circles to-day, I will begin with an examination of the marginal productivity theory.

Let me examine a typical marginal productivity theory. The argument set forth by this theory is this: Suppose that there exist in a certain specified society land and capital as they are at present. To this are added quantities of labour by degrees. Supposing that 10,000 is the unit quantity of this labour, the first unit of 10,000 will be allotted to all industries in the society in such a way as to produce the most profitable results, and under the law of diminishing returns, the quantity of products to be produced by this labour unit is the largest. Labour units are allotted one by one until the last unit of 10,000 is allotted to all industries. The contribution which the last unit makes towards increasing the total quantity of products will, however, be the smallest. Now, as, under the principle of substitution, the loss of labour of larger productive capacity supplied in the initial stages can invariably be compensated for by that of the smallest productivity that is supplied last of all, that is, the marginal labour unit, the amount of wages depends on the productivity of this marginal unit. Industrialists do not pay for the marginal unit more than its productivity warrants, that is to say, they do not pay over and above the amount equivalent to the price of the product that is more plentifully produced. On the other hand, they will have to pay up to that limit due to competition. For other units also they do not pay more than that, because these units are capable of supplanting one another, as already noted. The theory has, however, this difficulty at least that it is impossible to ascertain the productivity of labour additionally supplied. An increase or decrease in the units of labour supplied must necessarily cause an increase or decrease in the supply of other productive goods, and consequently the resulting increase or decrease in the profit is the outcome of the combined operation of these two factors, not the result of the operation of labour units only. How difficult it is to attribute this composite result to the productive goods concerned in fair proportion can easily be seen from the explanation which I shall give later on. For the moment I will proceed with my discussion, apart from this consideration. The so-called marginal productivity of labour is, from the point of view of society as a whole, the increased part of the productivity of society which is ascribable to the last unit of labour, while, from that of each industry, it is the increased part of productivity which is due to the employment of the last labourer. To say that the productivity of the last-supplied labour unit is smaller than that of earlier-supplied labour units is a hasty conclusion which lacks logical necessity. The law of diminishing returns cannot be adduced as a proof of the correctness of such an assertion for the following reasons. If one alters the mode of utilising land and capital (as, for instance, the kinds and quantities of capital goods) as the supply of labour is increased, one may often see that with the increase of labour there occurs a gradual decline in the rate of productivity, but if the mode of utilisation remains unaltered, it will be impossible to say that the last unit of labour contributes less than any other unit to increase production. It would rather seem that the former usually contributes more greatly than the latter. It is also even possible to think that the first unit of labour is devoid of productivity. Such being the case, it is obviously possible for wages to exceed the total price of the product, if wages depend upon the productivity of the marginal unit of labaur. It is, of course, conceivable that industrialists will endeavour to increase the last unit of labour to the level of wages, but it must be remembered that their first aim is essentially the largest amount of profit. They seek the most profitable form of demand for production, of which a fixed amount of capital is capable, with the result that it is often possible that the capacity of the marginal labour to produce price is in excess of wages. Nor can it be denied that there is a possibility that labour cannot be increased beyond that. Thus, as I have explained elsewhere, this theory confounds the static increase of the unit of labour (accompanied with no change in the form of capital, that is, the contents of capital goods) with its dynamic increase (accompanied with changes in in the form of capital). This theory also maintains that the same mechanism determines the interest on capital and that the total price of the product is completely convered by the interest on capital and wages, but for the reasons already stated, such arguments do not hold water. As regards other doubtful points attending this theory, I do not think it necessary to deal with them in detail here.

There is another productivity theory. This theory has it that wages depend on that part of the price of the product which is attributable to labour, that is, the general productivity of labour, regardless of the question whether or no wages are dependent on the productivity of the marginal labour. According to this theory, wages depend on the productivity of labour, as a whole. Setting aside the question of whether that part of the price will be paid as wages or not, it is true that it marks the maximum limit of the demand for labour. (If the marginal principle is to be accepted, the value of every unit of labour is equal to the average of their productivity, for all are capable of substitution for one another, and the amount of the value depends on the contribution made by marginal labourers. Only this marginal contribution is not determined by the loss of the unit which is regarded as marginal labour). Then, how can the general productivity be determined? The price of the product must be allotted to all component productive factors, and this allotment must be made by the method of seeking the root of an equation by comparing various equations of production. This theory contends that only by means which meet these two conditions can the general productivity be determined. The productivity of all productive factors put together constitutes the total price of the product. This point of view does not commend itself, however. In the first place, I think it is absolutely impossible to take a fair attribution of the price of the product to all component productive factors. The reason for my thinking so will be dealt with in detail later on. Secondly, even if this can be done by the method of comparison, it does not necessarily prove the contention that productive factors. or the productivity of labour, for instance, determines wages—the price of labour. From my point of view, it simply shows that the cost or the price of productive factors determines the price of the product, and that the there is equilibrium between the sum total of the former and that of the latter. I cannot understand the theory, which, while disavowing this conclusion, takes the line that the price of productive goods depends on the amount of the price of the productive goods, which is worked out as the result of the allotment of the price of the productive goods.

I will, next, explain why it is impossible to attribute the price fairly to the component productive factors by a comparative method of calculation (the equation methods). In the first place, in seeking the productivity of productive goods by finding, by comparison, the roof of the equations of production showing various combinations of productive elements (equations in which the price and quantity of productive goods and those of the products are shown to be equal), the equality between both sides, viz., productive goods and the product, will not be disturbed, if both are equally doubled or trebled; but so long as we accept the law of economy through organisations as a matter of course, this lack of disturbance is quite absurd. Consequently, the method of calculation by comparison has an insuperable difficulty at the outset. Secondly, all equations contain, besides the productive factors such as labour, land and capital, industries, or the position of industrialists, as factors, the value to be attributed to which is yet to be found, and these factors differ according to enterprises. Thus, it is absolutely impossible to seek the roots of the equations of production. In a static state, it may be argued that there are industrialists and wages only and that there is no industrial profit in a narrow sense, which means that there is no value attributable to the position of industrialists. This view may at first sighta ppear to remove the above-mentioned difficulty, but the static state is an ideal state which cannot be perfectly realised in actual economy. What really takes place invariably falls short of this idealistic state. In such circumstances, how can a comparison of the value of various given goods lead to the discovery of the value to be attributed to the productive goods? It is certainly impossible to draw from a comparison of a number of equations the value attributable to productive goods, for there does not exist a definite relationship between the value of various productive goods and that of the product. Thirdly, what the calculation of imputation seeks is the possibility of profit which weighs most with industrialists. In other words, an answer is sought to the question: what value must be ascribed to certain definite productive good, and how the demand prices for these goods must be fixed accordingly. What industrialists are really concerned with is a comparison of the prices and quantities of various productive goods, of which they make use, and those of the product; they do not trouble their heads about matters concerning other industries. The calculation of the imputation of value by the so-called method of comparison, however, takes into consideration the relation between productive goods and products in many other kinds of enterprise as well. This clearly runs counter to the mentality of industrialists. Their business policy is by no means ruled by such a comparative method of calculation. Fourthly, it is impossible to accept the argument that may be advanced that by such methods of calculation the marginal contribution or the marginal productivity can be ascertained. What must be accepted as the so-called marginal productivity is the productivity which is either lost or gained through the lost or acquisition of the last unit of labour, and nothing else. (2)

(2) In the present article, I have dealt with two kinds of the productivity theory on wages, What I described as typical of the marginal

productivity theory is Clark's theory of wages. As I have already had occasion to analyse and criticise it often, I have here refrained from entering into details, so I refer readers to the books which I have written.[1] In my opinion, this theory does not prove the agreement of the prices of products with the prices of productive goods. It rather proves the possibility of the sum of the latter being larger than the sum of former.

what I described as the general productivity theory is, on the whole, Wieser's view. In this connection, I must mention two things. First, there is possibly a more apposite general productivity theory. Zwiedineck-Südenhorst makes mention of Rodbertus, Carey, Schäffle, besides Ricardo and Thünen. But as I thought it advisable to examine the view of a most recent distinguished scholar, I chose Wieser for the subject of my study. Wieser terms his own wages theory the marginal productivity theory, but in my view, it is not a marginal productivity theory, in the true sense of the term. The so-called marginal contribution of labour, on which it is thought wages depend, is, as a matter of fact, nothing but the general productivity of labour, as is fully illustrated by his theory of imputation. The marginal contribution in his sense does not embody the productivity which is lost though the less of the last unit of labour. This is shown by the fact that he rejected Böhm's method of imputation which consists in ascertaining the amount lost by the loss of the last unit, in saying that the method is not free from the danger of including in the productivity of the last unit, the productivity of capital and land, which collaborate with labour. This fact shows that it has in view something beyond what is generally accepted as the marginal productivity. How can the marginal contribution of labour be found then? The only way is by means of the comparative method (the equation method) (in the sense I have used the term). What is sought by this method is not other than the productivity attributable to all units of labour, not only to the last unit of it by this method of calculation. Let there be the following formulae: $X+Y=100$; $2X+3Z=290$; $4Y+5Z=590$ $\therefore X=40$, $Y=60$, $Z=70$. That X is 40 cannot be made clear by a change in value resulting from the loss or acquisition of the last unit. It cannot be regarded as the marginal productivity.

My first doubt is cast on this method of calculation itself. In order to solve the above-mentioned equation, it is necessary to obtain the formula $2X+2Y=200$ from $X+Y=100$, but since the law of economy through organisations rules, this is absolutely impossible. Unless there is uniformity of technic and the consequent uniformity of the technical coefficient, the formula $X+Y=100$ does not show that x in $2X+2Y=x$ is 200. It may be 500 or any other number, and nothing short of the actual fact can show. This difficulty ceases to exist, if the uniformity of the technical coefficient can be assumed, but such assumption does not accord with the actuality.

[1] "The Study of Economics." (in Japanese), Chapter I. The Study of Clark's Theories, p. 213 *et seqq.*

Next, in Wieser's own view, the incomes of industrialists, or profits, are the part which ought to be attributed to the position of industrialists, and they differ as enterprises differ. They can be found by the method of special imputation, by which what is left after the prices of general productive goods, known as general imputation, have been deducted can be attributed to special goods. (Theorie, S. 25 1.) If so, the equation which is given by actual production must be $X+Y+x=100$, instead of $X+Y=100$. All other equations of production contain new unknown numbers x_2, x_3, etc. as in $2X+3Z+x_2=290$; $4X+5Z+x_3=590$. On the basis of these equations, it is fundamentally impossible to find either general imputation, viz. the root of X and Y, or special imputation, viz. the value of x_1, and x_2.

Conceding that the calculation of imputation is possible, as Wieser asserts, each unit of X will be worth 40. From the point of view of Wieser, this may depend on the marginal contribution of X, but from the general point of view, which believes that the marginal productivity of X is lost through the loss of the unit, it is not the true marginal productivity. Accordingly, 40 belonging to X is the general productivity common to all units of X. In this sense, I have called it the general productivity theory. The first difficulty which this theory carries as an explanation of wages consists, as already stated, in the impracticability of the calculation. The second difficulty (which is counted among the reasons of the impracticability of calculation elsewhere in the present article) is the unlikeliness of the value attributed by this method being actually taken into serious consideration by industrialists. Even if such imputation is perfectly possible, the value worked out will be of no practical use, if it is not taken seriously by them. It will of worthless as a theory for explaining actual distribution, In order to find the value of X from the given equation, industrialists must examine the relation between the cost of production and the amount of production not only in respect of their own industries but about many other industries. This is, in fact, not only an impossible matter but a thing which practically all industrialists are not doing. Such being the case, the aim of the imputation theory, which, according to Wieser, consists in examining how much profit an industrialist can hope to derive from one labourer and one machine, will not be achieved.[1] From my point of view, the equation given by Wieser indicates the equilibrium between the prices of productive goods and the price of the product, and also the state of the operation of the law of the cost of production. As the value of X is 40, the equations already given are possible. It is not because those equations are supported given by facts that the value of X is estimated at 40.

The marginal productivity theory may be regarded as typical of wages theories in modern times, and I will consider a few of the criticisms made of this theory. Cassel, who believes in the general theory of the formation of price that prices are interdependent upon one another,

1) Der natürliche Wert, S. 70–71.

takes the view that the marginal productivity is not in itself the predominant cause of the objective question of the formation of prices, but that it is, as a matter of fact, one of the unknown numbers. It ought to be put on the same footing as all other unknown numbers. Proceeding, he says that where labour is employed for many different sections of production, it becomes impossible to define the marginal product correctly. As the marginal productivity must be the same in all sections of production, it can merely be interpreted as a share in the prices of all kinds of products. This price is amenable to the condition that such labour must acquire the same price in all sections of production. This being so, it is impossible to define the marginal productivity or this labour as anything other than this price, for it is this price that indicates the contribution of this labour to the prices of products. Thus, the proposition that wages depend on the marginal productivity of labour loses its independent meaning.[1] This view is shared by Amonn with practically no modification. Amonn says that the value of labour, or wages, is, after all, the same thing as the marginal productivity, for the marginal productivity means nothing more or less than what is paid as wages.[2] I do not deny that the prices of all goods are interdependent upon one another. I only wish to find how the amount of wages is determined on the assumption that other conditions are equal. As I have already explained, this is possible. From this point of view, I cannot endorse the view that the marginal productivity is equal to wages. Wages are the price which is paid for labour, while the marginal productivity of labour depends on marginal labour in the prices of products. It is a part of marginal labour. Although the two things have a tendency to become equal, they are not exactly the same. Amonn further says that as the price, the marginal productivity is not of an independent amount; it is formed in the course of the formation of value, and it also depends on wages. Thus, the wages theory is argument in a circle. But. so long as the marginal utility theory is accepted, the value does not depend on wages, and so it will not be correct to say that it is arguing in a circle. It is also contended that the marginal productivity itself is not objectively given, but if we take the supply of labour to be definitely fixed and the purchasing power and the demand co-efficient are given, the marginal productivity of labour can be deduced from them; it ought not to be regarded as an unknown number. I have, therefore, no intention of taking exception to the construction of this argument. I only wish to refer to my belief that there is a certain disparity between this marginal productivity and wages, in view of the mutual relationship of facts, and that even if they agree with each other, it is due to the operation of the law of the cost of production. In my view, there is a very strong possibility of the marginal productivity of labour not

1) Cassel, a. a. O. S. 288.

2) Amonn, Volkswohlstandslehre I. S. 251.

being equal to wages, and even when they are equal, this equality is the result of wages determining the price of marginal product, not the result of the marginal productivity determining wages.

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