

Silvio Gesell
THE NATURAL ECONOMIC ORDER
PART ONE

Chapter 1

AIM AND METHOD

As pointed out in the Introduction, the economic aim of every kind of socialism is to abolish unearned income. It is the so-called surplus value, sometimes termed rent and interest. To attain this end, the nationalization or socialization of production with all its consequences is usually deemed indispensable.

The claim of the dispossessed is supported by Karl Marx's scientific investigation into the nature of capital, striving to prove that surplus value is inseparably linked to private enterprise and the private ownership of the means of production.

I propose to demonstrate that Marxian doctrine stands on untenable premises. On being rectified, they will lead to a completely different, opposite conclusion. It will teach us that capital must not be looked upon as a thing, but as a condition of the market determined solely by supply and demand. French Socialist Proudhon, Marx's opponent, offered proof of this to the workers of his day more than 50 years ago.

Guided by this amended theory of capital, we shall learn that after removing certain artificial obstacles due to the private ownership of land and to our irrational monetary system, today's economic order will be enabled to bring its fundamentally sound principles to fruition. Such removal will allow workers, by their own labor and in some 10 to 20 years, so to alter market conditions for capital as to cause surplus value to disappear and the means of production to lose their capitalistic character. Private ownership of the means of production will then offer no advantage beyond what a savings box offers its owner: it does not yield surplus value or interest, but one can gradually use up its contents.

Savings or other money then, invested in means of production (houses, ships, factories), will be returned to the owners in the shape of sums annually written off in proportion to their natural wear and tear or consumption. Simply by means of untrammelled hard work, enhanced by the powerful modern instruments of production, the greatly admired and dreaded tyrant capital will be reduced to the harmless role of a child's porcelain piggy bank. The savings-box not only yields no surplus value, but to get at the contents the owner must break it.

The first and second parts of this book are about land. They show how agriculture, the building and mining industries can function without communism. The later parts of the book are about the new theory of capital. They will show how, without nationalizing any of the means of production, we can wholly eliminate surplus value from the economy and secure the right to the whole fruits of labor.

Chapter 2

THE RIGHT TO THE ENTIRE FRUITS OF LABOR

“Worker” in this book means anyone living on the fruits of labor. Hence farmers, wage earners, employees, artists, priests, soldiers, officials and kings are workers. The antithesis of a worker in our economy is solely the one in receipt of unearned income, i.e. income accruing without working.

Let us begin by distinguishing between the product, the yield and the fruits of labor. The product of labor is whatever labor produces. The yield of labor is the money that the sale of the product of labor or the wage contract, brings. The fruits of labor are whatever the worker can buy and consume with his wages.¹

The terms: “royalty, fee, salary” are used instead of “yield of labor” when the product of labor is not tangible, i.e. street sweeping, writing, governing. If the product of labor is tangible and also property of the worker, say a chair, the yield of labor is not a wage or salary, but the price of the object sold. All these terms mean the same thing: money paid for work done.

Manufacturers' and merchants' profits, after deducing interest on capital or rent usually contained in them, are likewise yield of labor. The manager of a mining company draws his salary exclusively for work done by him. If the manager is also a shareholder, his income will be increased by the amount of dividend received. He is then at once worker and capitalist. As a rule the income of farmers, merchants and employers is made up of the yield of their labor plus a certain amount of rent or interest. A farmer working on rented land with borrowed capital lives exclusively on the fruits of his labor. What is left to him of the product of his labor after paying rent and interest is the result of his activity, and is subject to the general law of wages.

Between the product of labor (or service rendered) and its fruits are the daily bargains struck in buying and selling. These bargains greatly affect the fruits of labor. It very commonly happens that two people offering the same product of labor for sale obtain unequal fruits. The reason is that though equal as workers, they are unequal as dealers. Some persons excel at disposing of their product for a good price, and at making judicious choices for their purchases. For maximizing one's income, the commercial disposal of goods and the knowledge necessary for successful bargaining contribute as much to the success of labor as technical efficiency does. The exchange of the product must be considered as the conclusion of the production process. From this point of view every worker is also a dealer.

If the objects making up the product of labor and those making up the fruits of labor had a common standard by which they could be compared and measured, commerce, i.e. the conversion of the product into the fruits of labor, might well be done without. With accurate measuring, counting or weighing, the fruits of labor would always be equal to the product of labor minus interest and rent. The proof that no cheating had been resorted to could be had by examining the objects making up the fruits of labor, much as ascertaining by the scales of the Bureau of Weights and Measures whether the druggist's scales weigh correctly or not. But commodities have no such common standard. The exchange is always affected by bargaining, never by measuring. Nor does the use of money exempt us from the need of bargaining to effect the exchange. The term "measure of value," sometimes applied to money in

¹ [The corresponding German terms are Arbeiterzeugnis, Arbeitserlös and Arbeitsertrag.]

antiquated² writings on economics, is misleading. No quality, whether of a canary bird, or of a pill or an apple, can be measured by a monetary instrument.

Hence a direct comparison between the product and the fruits of labor will not furnish any valid or legal proof that the laborer has received the entire fruits of his labor or not. The personal right of a worker to the entire fruits of labor must be relegated to the realm of imagination.

It is a different matter with the common or collective right to the entire fruits of labor. By this is meant that the fruits of labor, taken collectively, should be divided exclusively among the workers. No fruits of labor must be surrendered to the capitalist as interest or rent. This is the only condition set by the right to the whole of the common or collective fruits of labor.

The rights to the collective whole fruits of labor imply that we should not trouble about how much of it goes to the individual worker. For whatever one worker may fail to secure will be added to the remuneration of another worker.

The apportioning of the workers' shares follows, as up to now, the laws of competition. The easier and simpler the work, the keener the competition, and the less the personal fruits of labor will be. Workers who perform the highest qualified work are most securely protected from the competition of the masses, and are therefore able to obtain the highest price for the product of their labor. At times some natural physical aptitude (singing, for example) replaces intelligence for the purpose of getting rid of competition from the masses. Lucky he whose qualities liberate him from dreaded competition.

The effected right to the entire fruits of labor will necessarily benefit all individual workers, but in unequal measure. They may be doubled or trebled, but not leveled. Leveling the fruits of labor is a communist utopia.

Our aim, on the contrary, is that the workers as a whole have the right to the entire fruits of their labor. These will be apportioned individually by competition. It is true that collateral effects like technology breakthroughs cause great and undue differences in the individual fruits of labor, particularly in commerce. It would be desirable for such differences to be reduced to within decent limits, but that is only a side effect. The right to the entire fruits of labor, in our sense, entails no such leveling.

Industrious, capable and efficient workers will, therefore, always secure larger fruits for their labor, proportionate to their higher efficiency. To this will be added higher wages following the disappearance of parasitic unearned income.

Summary

1. Product, yield and fruits of labor are not immediately comparable. There is no common standard for measuring these quantities. The conversion of one to the other takes place not by measuring but by bargaining.
2. It is impossible to decide whether the fruits of an individual worker's labor are, or are not, the whole of what they should be.
3. The entire fruits of labor can be understood only in a common or collective sense.
4. The right to the entire collective fruits of labor entails the abolition of all unearned income, namely interest and rent.
5. When interest and rent are eliminated from economic life, proof is complete that the right to the entire fruits of labor is now a reality, and that collectively such fruits are now equal to the product of labor.

² [The Penguin Dictionary of Economics equates "measure of value" with "unit of account."]

6. The suppression of unearned income raises the individual fruits of labor - doubling or trebling them. No levelling is to be expected, at most a partial one. Differences in the individual product of labor will be accurately translated into the individual fruits of labor.
7. The general laws of competition, which determine the relative amounts of the individual fruits of labor, will remain. The most efficient worker will receive the highest fruits, to use as he pleases.
Today the fruits of labor are curtailed by rent and interest, which are not, of course, determined arbitrarily, but by market conditions. Everyone takes as much as those conditions allow.

Let us see now how the market conditions, beginning with ground rent.

Chapter 3

HOW GROUND RENT³ EATS INTO THE FRUITS OF LABOR

A landowner can choose between cultivating his land and allowing it to lie fallow. Owning the land is independent of cultivating it. Land does not suffer from lying fallow; on the contrary, it improves. As a matter of fact there are methods of cultivation, like triple rotation, which restore soil fertility by letting it lie fallow.

A landowner, therefore, lacks enticement towards allowing others to use his property (farm, building site, oil or coal field, water-power, forest and so forth) free of charge. If the landowner is offered no compensation, no rent, for the use of his land, he simply lets it lie fallow. He is the absolute master of his property.

Anyone in need of land applying to a landowner, therefore, will obviously have to pay him rent. Even if the surface of the earth and its fertility could be increased at will, it would never occur to a landowner to let others use his land free of charge. If worst came to the worst, he might turn his property into a hunting ground or a park. Interest is inseparable from tenancy, because competition in the supply of land for letting can never be great enough to make the use of land free of charge.

How much rent, then, will the landowner be able to demand? Suppose that the whole surface of the earth were needed for the sustenance of mankind and no extra free land were available, far or near. Suppose further that the whole surface of the earth were in private possession and under cultivation, and that the employment of more labor, the so-called intensive cultivation, did not increase the produce. In such conditions the dependence of the landless on their landlords would be as absolute as it was in the times of serfdom. The landlords would raise their claims to the utmost; they would claim for themselves 100% of the produce of labor, the entire harvest, granting the laborer, like a common slave, only what was enough for subsistence and procreation. In such conditions the so-called "iron law of wages" would hold good. The tillers of the soil would be at the mercy of the landowners. Rent would be equal to the yield of the land, minus the cost of feeding the tiller and his draught animals, and minus interest on capital.

Such conditions for the existence of an "iron wage" do not, however, exist. The earth is much larger and more fertile than necessary for the support of its present population.⁴ Even with modern methods of extensive cultivation,⁵ hardly one-third of its area is exploited. The remainder either lies fallow or remains unclaimed. If intensive cultivation⁶ were generally introduced instead of extensive cultivation, one-tenth of the surface of the earth would perhaps be enough to provide mankind with the average amount of foodstuffs consumed by today's workers. Nine-tenths of it would lie fallow (which, of course, does not mean that mankind would be satisfied with such an arrangement. Should everyone desire to eat his fill of something better than potatoes, to own a saddle-horse, a courtyard with peacocks and pigeons, a rose garden and a swimming-pool, the earth might, even with intensive cultivation, be too small).⁷

Intensive cultivation comprises the drainage of swamps, irrigation, soil mixing, deep plowing, rock blasting, marling, applying fertilizers; choosing the right crops, improving the stock of plants and animals; destroying pests in orchards and

³ [Ground rent is that part of rent going to the ownership of the bare site, apart from improvements.]

⁴ [This is still true at the beginning of the third millennium.]

⁵ Extensive cultivation economises labor.

⁶ Intensive cultivation economises land.

⁷ [Gesell lists 19th century desires, but the principle stands: the earth can satisfy everyone's needs, but not everyone's greed.]

vineyards, destroying locusts; saving the work of draught animals by means of railway, canal and motor transport; a more economical use of foodstuffs and fodder through exchange; limiting sheep-breeding by cultivating cotton; adopting a vegetarian diet etc. Intensive cultivation requires much labor; extensive cultivation, much land.

No one, then, is at present compelled, by complete lack of land, to appeal to the landowners. Since this compulsion does not exist (and solely for this reason) the dependence of the landless on the landowners is limited. The landowners, however, are in possession of the best land, and it would require a great deal of labor to bring into cultivation land left unclaimed in settled neighborhoods.

Intensive cultivation, then, involves considerable trouble. Not everyone is capable of migrating to and settling in the unclaimed lands of the wilderness. And to migrate not only costs money, but the produce of far away lands can be brought to market only at great expense in transport costs and import duties.

The farmer knows all this, as does the landowner. So before the farmer makes up his mind to emigrate; or before he sets about draining the neighboring swamp; or before he turns to market gardening, he will ask the landowner what rent he demands for his land. Before answering, the landowner will think the matter over and calculate the difference between the fruits of labor on his field and the fruits of labor⁸ on wasteland, garden land, or unclaimed land in Africa, America, Asia, or Australia. The landowner is determined to obtain this difference for himself, and this is what he will demand as rent for his field. As a general rule, however, there is not much calculation. In such matters both parties are guided by experience.

Some hardy young fellow migrates, and if he reports favorably, others follow. In this way the supply of labor at home is reduced, with a consequent general rise of wages. If migration continues, wages will rise to a point at which the would-be migrant begins to doubt whether he had not better stay home. This indicates that the fruits of labor at home and in the new country have become equal. Sometimes a migrant makes an estimate beforehand. Let us examine it.

We assume that the amount of working capital required is the same as in Germany, so it is left out of the estimate.

Traveling expenses for self and family	1 000 ⁹
Accident and life insurance during the voyage	200
Acclimatization insurance, i.e. the premium charged by an insurance company for the special risks entailed in changing climate	200
Prospecting and fencing	600
Cost of migrating and settling	2 000

To these expenses, which the farmer in Germany does not incur, add interest charged on the working capital:

5% on 2 000	100
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We assume that, with a given amount of work, the settler produces the same in his new location as he did at home. We shall consider the competition between the

⁸ Let me again remind the reader of the difference between the product and the fruits of labor. The product of labor of the emigrant may be ten times larger, but the fruits of his labor the same.

⁹ [In the original the monetary unit is the Reichsmark of early 20th century. In translation I name the currency only when relevant.]

two locations. Let us remember that the farmer, like any other producer, is not interested in the product of his labor but only in the goods for consumption that he can obtain from it, i.e. in the fruits of his labor. The settler must send his produce to market and convert the money he gets for it into the goods he needs for consumption. And he must pay for the conveyance of these goods to his new home. The market where he can sell his produce is, as a rule, distant; if we suppose it to be Germany, a country forced to import large quantities of agricultural produce, the emigrant will have to pay:

Freight-charges for cart, railway, ship and freighter	200
Import-duty in Germany	400
Freight-charges for freighter, ship, railway and cart for the goods received in exchange	200
Import-duty in the new country	200

Total	1000

In the above estimate, the conversion of the product into the fruits of labor, usually effected by way of commerce, costs the emigrant 1 000, an expense avoided by the German farmer. If therefore the latter pays 1 000 as rent for a piece of land, the fruits of the labor of both are the same.

In Germany, to rent land is always more advantageous than to bring waste land under cultivation. Here transport costs and custom duties are replaced by interest on the capital employed for reclaiming the land (draining a swamp, mixing different soil layers, dressing with lime and manuring). For intensive cultivation the difference lies not in interest and freight, but in the cost of cultivation itself.

Ground rent, then, tends to reduce the fruits (not the product) of labor to the same general level everywhere. Landlords claim as rent whatever agricultural advantages well-cultivated German farmland possesses over the Lüneburg Heath¹⁰ or, given the distance, over unoccupied land in Canada. Rent may appear, if the land is sold, as its price, which is simply capitalized rent. All differences in land like fertility, climate, access to market, custom duties, freight costs and so forth, are leveled by rent. (I have not mentioned wages; the omission is intentional).

Metaphorically speaking, ground rent reduces the surface of the globe for farmer, manufacturer and non-landowning capitalist, to that of a billiard ball. Flürscheim put it thus: "Just as ocean waters obliterate the inequalities of the ocean bed, so does rent obliterate the inequalities of land." It is a remarkable fact that ground rent reduces the fruits of labor of all farmers to the amount that may be expected from unclaimed land at home or in the far-off wilderness. Ground rent makes nonsense of notions like "fertile," "barren," "loamy," "sandy," "swampy," "rich," "poor," "well or badly situated" land. Rent makes it a matter of indifference to a farmer whether he cultivates moorland in the Eifel,¹¹ a market-garden in Berlin, or a vineyard on the Rhine.

¹⁰ [A stretch of land some 80km wide lying between the rivers Elbe and Aller in NW Germany.]

¹¹ [Hilly region of no economic interest W of the Rhine.]

Chapter 4

TRANSPORT COSTS, RENT AND WAGES

The fruits of labor on free land, wasteland, marsh and moor determine how much the landowner must pay as wages and how much he can claim as rent. The farm-laborer will obviously claim a wage equal to the fruits of labor on free land, since he is free to take possession of and cultivate free land (we shall soon define this term more accurately). It is not necessary for every farm-laborer to threaten to emigrate when negotiating his wages. Married men with large families, for instance, would gain nothing by such a threat, since the landowner knows that they cannot carry it out. The threat becomes effective if migrating younger men cause a general shortage of labor. Even though not many laborers are able to migrate, the shortage of labor caused by a partial migration supports those staying at home in negotiating their wages as effectively as if they had already booked their passage.¹²

On the other hand the tenant farmer must be allowed to keep an amount equal to what he would get on free land after deduction of rent and interest from his working capital. Farm rent, then, is also determined by the fruits of labor on free land. The landowner, when calculating the rent of a farm, need not leave the tenant a margin greater than the fruits of labor on free land, and the tenant is not compelled to accept any less. If the fruits of labor on free land fluctuate, so will wages and farm rent.

The most important factor influencing the fruits of labor on free land is the distance between the unoccupied land and the market. Such market may be a manufacturing centre, where the commodities are processed, or a trading centre where they are simply exchanged.

The importance of distance from the market is best seen in the difference in the price of a field in the vicinity of a town and an equally fertile field further away from it. The difference in price is entirely due to their distance from the market.

In the Canadian wheat district, for example, where to this day one can have good land free, the wheat has to be carried on wagons, along unbeaten tracks, to the far distant railhead, thence to be conveyed to Duluth on Lake Superior and shipped on lake steamers. These carry the wheat to Montreal, where it is transferred to ocean steamers. From there the voyage continues to Rotterdam, where transshipment to Rhine vessels is necessary. These go as far as Mannheim, and to reach the markets of Strasbourg, Stuttgart or Zürich the wheat is loaded on railway trucks. And its price in these markets, after payment of import duties, must be the same as the price of wheat grown domestically. It is a long journey, costing a great deal of money; yet the balance of the market price that remains after deducting import duty, freight,

¹² How greatly wages influence migrating labor is illustrated by the following anecdote from a speech by President Wilson, May 20th, 1918: "When the American Secretary of Defence was in Italy, a minister in the Italian Government listed to him the various reasons why Italy felt a certain intimacy with the United States. He remarked: 'If you wish to make an interesting experiment, go into a troop-train and ask the soldiers, in English, who of them have been in America. The rest you will see for yourself.' Our Secretary of Defence did board a troop-train and asked. More than half of them rose to their feet." The Italian rentiers had driven these men to America, and the American rentiers had driven them home again. Since they fared as badly in America as they had fared at home, the poor devils kept restlessly wandering to and fro. Wilson added: "There are American hearts in the Italian army!" But we know better. When these migrating workers left their country they cursed their fate, and they cursed it again on leaving America to return home.)

insurance, brokerage, stamp duty, interest on money advanced, sacks, etc. is still only the sum obtained from the sale of the product of labor, and not what the settler in the wilderness of Saskatchewan requires. This sum has to be transformed into articles for use - salt, sugar, cloth, firearms, tools, books, coffee, furniture, etc. and it is only after all these objects have arrived at the settler's homestead, and the freight on them has been paid, that he can say: "These are the fruits of my labor minus interest on my capital." (Whether he has borrowed the money necessary for migrating or is working with his own capital, he must deduct interest on the capital from the product of his labor).

It is obvious, therefore, that the fruits of labor on such free land must depend to a great extent on transport costs. These costs have been steadily sinking, as is shown by the following table:¹³

Freight-rates for one ton of grain from Chicago to Liverpool:-

1873 -	67
1880 -	41
1884 -	24

The saving on freight is 43 per ton of wheat from Chicago to Liverpool alone. This is almost one sixth of the 1884 price, or one fourth of the 1911 price. But the distance from Chicago to Liverpool is only part of the distance from Saskatchewan to Mannheim; hence the 43 saved is only a fraction of the actual amount saved on transport.

The same saving on freight applies to the goods consumed by the settler. The grain was the product of his labor; the 240 per ton of wheat was the yield of his labor; and the fruits of his labor, in the form of merchandise shipped back to him, are what the settler produced the wheat for. Keep in mind that the German industrial workers who eat Canadian wheat, must always pay for it with their products, which they send directly or indirectly to Canada and for which, therefore, freight must likewise be paid. Thus there is a double saving on cheaper freight, and the fruits of labor on free land, which determine the general wage in Germany, are increased.

It would be an error to suppose that whatever is saved on freight translates into a corresponding increase in the settler's fruits of labor. In reality such fruits will increase only by about half the saving on freight. The reason is that the rising fruits of the settler's labor on free land raise the wages of the German farmers as well. The rising wages of domestic farm laborers and of settlers on free land entices industrial workers into agriculture.¹⁴ The existing relation between the production of agriculture and of industry is modified, as is also their exchange ratio. The settler has to pay higher prices for the industrial products that make up the fruits of his labor. The quantity of such products does not, therefore, increase directly proportional to the increased yield of labor of the settler on free land and inversely because of lower transport costs.

Competition causes the difference to go to the industrial workers. The same happens when a new technology, like steam-power, reduce the cost of production of any industrial good. Producer and consumer share the gain.

It may be worth giving figures on how a change in transport costs affects the fruits of labor of the settler on free land, and consequently rent and wages.

¹³ Taken from Mulhall's Dictionary of Statistics.

¹⁴ [Evidently this does not happen today. The mechanism though, *mutatis mutandis*, is the same.]

I. Fruits of labor of a settler on free land in Canada with a freight-rate of 67 per ton in the year 1873.

Product of labor: 10 tons of wheat shipped to Mannheim and there sold at 250 per ton	2 500
Minus 10 x 67 for freight	670
Yield of labor	1 830

This yield of labor is spent in Germany for the purchase of merchandise.

Transport costs are the same as for wheat	670
The fruits of labor of the settler therefore amount to	1 160

II. Same calculation for the year 1884 with a freight-rate of 24/ton.

Product of labor: 10 tons of wheat at 250 per ton	2 500
Minus 10 x 24 for freight	240
Yield of labor	2 260

This yield of labor, 430 greater than in the first calculation, is now converted into the fruits of labor in the form of industrial products. For the same reasons as above, the exchange between industrial and agricultural products has been modified in favor of industry. Let us suppose that this rise in the price of industrial commodities absorbs half the 430 of increased yield of labor

The yield is therefore	2 045
Let us now deduct the return freight, slightly up (240 to 245) since the amount of goods has increased by the amount economized on freight:	245
The fruits of the settler's labor now therefore amount to	1 800

As the decreasing freight charges raise the fruits of labor of the settler on free land from 1 160 to 1 800, the wages of the German farm laborer automatically increase by the same amount, and tenant farmers will claim a correspondingly larger fruits of labor. The ground rent necessarily decreases by the same ratio.

If the 1873 price of 10 tons of wheat in Germany was	2 500
And the wages for producing it amounted to	1 160
Then 10 tons of land ¹⁵ brought the landowner, who worked on or let them, ground rent amounting to	1 340
But if in 1884 wages rose to 1 800, the rent fell to	700
(that is 1 340 minus 640 increase of wages).	

What the settler on free land pays in freight is therefore deducted from the fruits of his labor. The landowner in Germany will demand this amount, either by increasing the rent for his tenants, or by deducting it from the product of his farm-laborers if he works the land himself. In other words, what the free land settler pays as freight the landowner pockets as rent.

¹⁵ A ton of land is a Danish land-measure denoting the amount of land that produces one ton of grain. A ton of land therefore indicates an area of land varying according to soil quality.

Chapter 5

SOCIAL CONDITIONS, RENT AND WAGES¹⁶

Rail and shipping costs are not of course the only factors affecting the fruits of labor of the settler on free land, and concomitantly the wages of the German farm-hand. Man does not live by bread alone, so that the fruits of labor are not the sole consideration in deciding for or against migration. The national and social life of the country that the would-be migrant is to leave, and of the country where he intends to go, have often a strong and determining influence. Many a man is satisfied with smaller fruits of labor at home, finding compensation for the loss in the winning of a laurel wreath for rabbit-breeding or in the song of the chaffinches, which in his opinion is nowhere as beautiful as at home. Such attractive -or repelling- forces as the case may be, ebb and flow. At times they stimulate, and at times restrain, migration. Many German farmers, for instance, are migrating back from Russia,¹⁷ not in the hope of higher fruits of labor, but because conditions there are no longer quite to their taste. All such factors counteract to some extent the forces tending to level the purely material fruits of labor of the migrant and of the farm-hand left behind. Let us suppose, for instance, that we resolve to make life pleasanter for German workers by prohibiting alcohol. Prohibition would enrich the lives of the workers, not to say their wives; the billions spent on alcohol, directly or indirectly might instead be spent

- On motherhood, in the form of a monthly State subsidy to cover the expense of bringing up each child;
- on better schools;
- on public libraries
- on cinemas, theatres and amusement parks;
- on churches;
- on free treats at pastry shops, popular festivals, assembly-rooms etc.

The decision whether to migrate or not would not then be settled solely by an estimate of the material fruits of labor. Many a wife would induce her husband to stay, and many migrants would return. The effect on wages and ground rent is obvious. The landowners would go on raising their demand for ground rent (by lowering wages) until the restraining influence of prohibition on the would-be migrants reached equilibrium. The value of cakes given free to the women in the national pastry shops would be deducted from their husbands' wages, thereby increasing the ground rent.

Thus every advantage that Germany offered towards a better professional, intellectual and social life is confiscated by ground rent. Ground rent is poetry, science, art and religion capitalized. Ground rent converts the Cologne Cathedral, the brooks of the Eifel, the twitter of birds among the beech-leaves, into hard cash. Ground rent levies a toll on Thomas à Kempis,¹⁸ on the relics of Kevelaer,¹⁹ on

¹⁶ [The contents of this chapter are rather dated, but still very useful to understand the historical reasons for European colonial expansion from the 16th century onwards: the European landlords forced the European landless to migrate. Italians and the Irish, militarily weak peoples, made for newly-independent America. Spaniards and the British, militarily strong peoples, went to conquer land in South America and Africa.]

¹⁷ [They were the so-called Volga Germans, attracted there by Czar Peter the Great (1672-1725). Those who stayed were deported by Stalin to Kazakhstan during WW II.]

¹⁸ [1379-1471. Author of *The Imitation of Christ*.]

Goethe and Schiller, on the incorruptibility of our officials, on our dreams for a happier future, briefly on anything and everything; it forces a toll up to the point where the worker's asks himself, Shall I stay put and pay, or shall I migrate and give it all up? Nothing escapes its attention. The more pleased a man is with his country and fellow citizens, the higher is the price the landlord extorts for this pleasure. The tears of the departing migrant are pearls of great price for the landlord. That is why city landlords often organize societies and other institutions intended to render town life attractive, as well as to restrain departures and stimulate returns. They can thus raise the rents on their town properties. Homesickness is the taproot of ground rent.

But if the German farm-hand does not live by bread alone, neither does the settler on free land. The material fruits of labor are only part of what man needs to make life worth living. The migrant has to struggle to overcome the emotional forces binding him to his native land, and in his new home he also finds things that attract and others that repel. The attractions tend to make the fruits of labor appear sufficient to him (everyone is prepared to do agreeable work for less pay), whereas the repulsive features diminish them. If repulsive circumstances like a harsh climate, insecurity of life and property, vermin and so forth, are considerable, the fruits of labor must be correspondingly higher if he is to stay on and entice those at home to follow his example. Everything that influences the life and happiness of the settler on free land has a direct influence on the contentment of the German worker, who adjusts his wage demands. Such influence, positive or negative, begins with the account of the journey. If there was no seasickness, if life on board was tolerable and the food good, those left behind will be enticed to migrate. If the settler also tells of the liberty he is enjoying, of hunting and riding, of great hauls of salmon and herds of buffaloes, of his right to dispose freely of the bounty of nature, and above all of his being treated everywhere as a free citizen and not as a serf or a beggar, the laborer at home will of course hold his head, during wage negotiations, higher than if the news was of Red Indian attacks, rattlesnakes, vermin and hard work.

The landowner knows all this. If a letter full of complaints arrives, the most is made of it. It gets published, while the Press is given to understand that it must carefully exclude any attractive, encouraging reports. Any organization set up to advertise the attractions of the home country is also entrusted with reviling free land. Every piece of news like snakebites, scalping, locust swarms, shipwreck, that scares workers from migrating and makes them more amenable to staying put, translates into hard cash for the landowners.

¹⁹ [Shrine in N.Rhine-Westphalia.]

Chapter 6

ACCURATELY DEFINING FREE LAND

What first comes to mind when speaking of free land is the vast, uncultivated territories of North and South America. Such free land is easily and comparatively cheaply reached. The climate is suitable for Europeans, social conditions are attractive to most people; the security of life and property are not bad at all. On arrival, the immigrant is accommodated for a week or two in a hostel at State expense, and in some countries he is given a free rail ticket to the farthest limit of settled land. Here he is free to settle at once. He may pick out the site he likes best: pasture, arable land or forest. The homestead he has a right to claim is big enough to provide work for the largest family. As soon as he drives in the boundary stakes and notifies the land office, he may start work. Nobody interferes with him or even inquires who allowed him to till the soil and reap the fruits of his industry. He is lord of the land within his four stakes.

Land of this kind we call first class free land. Such free land is not of course to be found in settled areas, but only where people are few and far between. Within tracts already occupied there are, however, large uncultivated areas, which by some abuse of State power have become the private property of individuals living in far off places. I bet that a few thousand persons living in Europe own between them hundreds of millions of hectares of such land in America, Africa, Australia and Asia. Anyone wishing to occupy a piece of this land has to come to terms with the proprietors, buying or renting, but normally he can do that for a nominal sum. Such conditionally free land we call second class free land.

Freeland of the second class is still abundant in many parts of the world. It is not always land of the best quality. Much of it is densely overgrown with forests needing a great deal of labor to clear. Large areas suffer from lack of water and can be made fertile only by expensive irrigation schemes. Other land, often of the best quality, has to be drained; or, being situated in remote valleys, lacks means of communication, without which produce cannot be brought to market. Free land of this kind can be made use of only by migrants with access to either capital or credit. For the theory of rent and of wages, however, it does not matter whether such free land is brought under cultivation by a company of capitalists or by the migrants directly. The distinction only affects capital and interest. If the migrant settles on land that has been opened up with the help of capital, he has to pay the customary interest on the capital invested, adding his working expenses to it.

For the rest, whether individuals or companies with the financial means for large-scale land reclamation, half the world is still free land. The best land in California and along the Rockies used to be a desert not long ago; now it is a vast garden. The British have made Egypt habitable for millions by means of the Nile dams. The Zuider-Zee, Mesopotamia and other deserts will also be brought into cultivation by similar expenditure of capital. We can say then that second-class free land will be at mankind's disposal for a long time to come.

Chapter 7

THIRD CLASS FREE LAND

The most important free land, however, which is also of the greatest import for the theory of rent and wages, is third class free land. But defining it is not so simple as defining the other two. It calls for some reflection.

A few examples will make the matter clear.

Example 1.

Berlin building regulations do not allow more than four stories. If the limit was two stories, the city would have to cover twice its present area to lodge the same population. Hence the land saved by third and fourth storey is to this day unoccupied building land. If the American building code were in force in Berlin - that is, 40 stories instead of four, one-tenth of its present building area would be enough. The rest would be surplus, to be offered to any builder at little more than the price of a potato patch. Freeland for building purposes is, therefore, available even in the centre of a large German city, in unlimited quantities - by building from the fourth storey upwards to the clouds.

Example 2.

In the imaginary republic of “Agraria”²⁰ the use of chemical fertilizers is prohibited by law, allegedly because it is injurious to health, in reality to limit the output of grain and keep its price up. The landowners of Agraria believe that “little and dear” is better for them than “much and cheap.” Emigration is likewise prohibited. Because of both prohibitions, small crops and high prices, the people of Agraria have brought all wasteland, swamps and moor under cultivation, thus contriving to make crops meet the needs of the population. But despite this the people are unhappy and clamor for the immediate repealing of the prohibitions, since they expect the use of chemical fertilizers to treble the produce of the soil, as happened in Germany.

How would rent and wages be affected by such repeal? Would not the same thing happen in Agraria as happened in a city where new building regulations allowed the number of stories to treble? With the use of chemical fertilizers, the soil of the republic would exceed the needs of the present population by two thirds. Two out of every three hectares would be allowed to lie fallow, at the disposal of future generations. In a republic where every inch of soil and every swamp are cultivated, the introduction of chemical fertilizers would suddenly create vast areas of free land. This free land would, for the time being, be leased for hunting at a nominal amount.

These examples from the building industry and agriculture, show how new land, third class free land, may be created. It is indeed being created daily as the result of scientific discovery. The nomad requires 100 hectares to provide for his family, the farmer 10, the horticulturist one or less.

The whole agricultural area of Europe is as yet cultivated very superficially. The density of population, even in Germany, is still so low, that if horticulture were

²⁰ [Sic in the German text.]

generally adopted, half the area at present under cultivation would have to be let lie fallow, first because there would be a lack of buyers for such quantities of foodstuffs, and second because there would be a lack of workers necessary for such an intensive cultivation of the soil. We may therefore consider the whole of Germany to be third class free land.

For the purpose of comparing the yields of the soil under intensive cultivation, hunting, nomad wandering and extensive cultivation, all farmland may be considered free land, much as Americans may consider the space above the stories already in existence as free building land up to the clouds.

Let us apply these examples to the theory of rent and wages. Germany, in the limited sense above described, is still free land. The farm-hand may at any time take refuge on this free land if dissatisfied with his wages. Therefore the wages of farm-hands cannot fall permanently below the fruits of labor on such third class free land, any more than they can fall below the fruits of labor on first class free land. Here, then, is an unfailing support for the farm-laborer in his wage negotiations.

The question is: how much can the laborer demand as wages? How much can the landowner demand as rent?

Chapter 8

THIRD CLASS FREE LAND, RENT AND WAGES

Let us suppose that extensive farming needs 12 men to cultivate 100 hectares of land for a harvest of 600 tons, i.e. 50t per man and 6t per hectare.

Let us further suppose that with intensive farming the same area needs 50 men for a harvest of 2 000t, i.e. 40t instead of 50t per man and 20t instead of 6t per hectare.

Note that the product of intensive cultivation increases as regards the area, but decreases as regards the worker.

With extensive cultivation, twelve men produce 600 tons, 50t each.

With intensive cultivation, twelve men produce 480 tons, 40t each.

The difference of 120t is to be attributed to the 100 hectares being a large area, requiring less labor with extensive cultivation. When it is not possible to cultivate extensively, the alternative is intensive cultivation, which however yields less produce. The disadvantage is such, that if they were offered land allowing them extensive cultivation, they would agree to pay for the advantage. The owner of this area, then, is in a position to levy an additional rent corresponding to the difference between the larger product of labor in extensive, and the smaller one in intensive, cultivation. In our example, the rent of 100ha of land will be the price of 120t of harvest.

Extensive cultivation saves labor; intensive cultivation saves land. Rent is born out of this tension, and the degree of tension, assessed by experience, determines the distribution of farm produce between rent and wages.

There is no need to explain why extensive cultivation yields more for a given amount of labor and less for a given amount of land. It is a question of technique. It is enough to know that such is the case in agriculture, founded on experience and in the nature of things. If it were otherwise, if extensive cultivation yielded 40 tons while intensive cultivation yielded 50 tons per man, the whole of agriculture would tend towards intensive cultivation. All the land that could not be stocked with labor would be let lie fallow, simply because any worker still available would reap larger harvests by a still more intensive tillage of the land already under cultivation than by cultivating fallow land.

The theory of population asserting that population matches the food supply is not inconsistent with the above proposition. Population grows with the increase in food supply; it follows in the wake of intensive cultivation, it does not precede it.

Let us make an example to show how the product of labor gets distributed between ground rent and wages.

- A. 12 workers cultivate 100 hectares extensively. They produce 480 tons, i.e. 40t per head.
 - B. 60 workers also cultivate 100, but intensively. They produce 900 tons, i.e. 15t per head.
1. The fruits of labor of the 60 have decreased by $40 - 15 = 25t$.
 2. This reduction is to be subtracted, because the laborers of A. earn more per head.

3. If one of the 60 wanted to change place with one of the 12, he would have to pay him a difference of 25t. If all the 12 changed place, they would have to be given $25t \times 12 = 300t$.
4. These 300t, subtracted from the larger area, are ground rent. They make up a part of true ground rent.
5. If 48 out of the 60 of B were to leave, the remaining 12 would produce as much as the 12 of A., i.e. 300t more, or 25t more per head. A single worker would get 40t instead of 15t.
6. The 12 staying behind could entice the 48 into leaving by offering them a compensation of 300t: $48 = 6.25t$ each.
7. If the 12 staying behind wanted to replace the 48 who have left with another 48, each one of these would have to pay 6.25t to join the enterprise. Were they happy to work as employees, each would have to give up 6.25t of his wage to join in. $15t - 6.25t = 8.75t$.
8. The entire rent of the 100ha is thus $60 \times 6.25t = 375t$. Wages and rent get distributed as follows:

$60 \times 6.25t = 375t$ as rent from intensive cultivation;
 $60 \times 8.75t = 525t$ as wages after deducing the rent;
 $60 \times 15t = 900t$ as product from intensive cultivation;
 $12 \times 8.75 = 105t$, salary as above; which added to
 375 of rent as above, gives
 $12 \times 40t = 480t$ as product from extensive cultivation.

Rent and wages get distributed as follows:

1. Fixing the difference per head between extensive and intensive cultivation ($40t - 15t = 25t$) and multiplying the difference by the number of workers: $12 \times 25t = 300t$, which can be considered as part of the rent;
2. Subtracting the intensive workers ($60 - 12 = 48$) and dividing the part of the rent by that number: $300t : 48 = 6.25t$;
3. The last figure, multiplied by the number of intensive workers, gives the rent of the ground they cultivate: $60 \times 6.25 = 375$.
4. Subtracting the rent of 6.25t from the product of a single worker (15t) one gets his salary: $15t - 6.25t = 8.75t$.

Extensive cultivation makes use of all the labor on offer to cultivate the whole of the available area, regardless of method: hunting, cattle grazing, three-field rotation, rice paddy, or mixed farming.

Intensive cultivation is a form of agriculture that practiced on a large scale must result in a general shortage of labor.

“Intensive” and “extensive” are therefore relative terms. The herdsman is an intensive worker compared to the huntsman. Hence pastoral tribes must generally pay rent for the use of their land, and are able to do so.

Extensive cultivation yields the largest fruits of labor (wages and rent), whereas intensive cultivation yields the larger crop. The landowner would like to combine the two, and of course endeavors to practice intensive cultivation. He cannot, however, do so without withdrawing labor from among the extensive cultivators, thus causing land to lie fallow (become third class free land). It stands to reason that the owners of this land are unwilling to let it lie fallow. They therefore try to attract labor to it by raising wages; and in so doing they are prepared to go close to the limit of

profitability (absorption of rent into wages), since a landowner will prefer receiving a dollar an acre as rent rather than receiving nothing at all.

Third class free land has thus the function of a level playing field for wages and rent. Such free land makes the arbitrary fixing of wages impossible. Neither can the landowner fix wages as low as he pleases, nor can the laborer demand as much as he chooses. Economic laws determine the amount falling to each.

Chapter 9

TECHNICAL IMPROVEMENTS, RENT AND WAGES

Technological improvements increase the product of labor. If there was no difference between intensive and extensive cultivation, wages and rent would increase in direct proportion to such improvements.

Let us figure it out:

- A. 12 workers cultivate 100ha producing 480t, i.e. 40t each;
- B. 60 workers cultivate 100ha producing 900t, i.e. 15t each. 100 ha fetch a rent of 375t and an individual salary of 8.75t.

Certain technological improvements increase the product of labor by 25%. In A. the product increases from 480t to 600t, or from 40t to 50t per head, and in B., from 900t to 1 125t, or from 15t to 18.75t per head.

Distribution takes place as follows:

Rent: $50t - 18.75t = 31.25t$, which multiplied by 12 workers equals 375t. $375t : 48$ workers = 7.81t. $7.81t \times 60$ intensive workers gives a rent of 468.60t.

Salary: $18.75t - 7.81 = 10.94t$.

A. $12 \times 10.94t = 131.34t$ total salaries	B. $60 \times 10.94t = 656.40$ total salaries
Rent = 468.60	Rent = 468.60
Product = 600t	Product = 1 125t

Rent and salaries appear to have both increased by 25%: the first from 375t to 468.6t, and the second from 9.75t to 10.94t.

The percentage of distribution has remained the same. Landlord and worker enjoy the same advantage.

Technological improvements, however, rarely benefit extensive and intensive cultivation equally. The intensive farmer, for instance, could not make use of a tractor-driven multi-share plough, or of a seed distributor. Such machines make sense only for large areas. A lion does not catch mice.

On third class free land a tractor is quite useless, but extremely useful on first and second-class free land. In the vast plains of America a single tractor²¹ will plough the fields of 50 or more farmers, well and cheaply. The product of labor of these free land-settlers increases of course enormously. But the fruits of labor depend on the product of that labor. It is the fruits of labor of the free land-settler that determine the wages of labor on rented land everywhere.

Were all the circumstances surrounding the conversion of the product of labor into the fruits of labor to stay unchanged, wages in general would necessarily rise in the same proportion as the increase in the products of labor due to the 10-share tractor. But such circumstances do not stay unchanged. Again we see how necessary it

²¹ The tractor-driven plow is sometimes owned by a co-operative, but at times by a contractor, or local mechanic who also keeps it in repair.

was to distinguish from the outset between product and fruits of labor. It is the fruits of labor, not its product, that determine wages in general.

When the fruits of labor of the free land-settler increase, so do the fruits of labor of the industrial worker. If it were not so, industrial workers would return to cultivate free land of the first, second or third class. The rise of wages in industry is caused by a modification of the exchange ratio between the products of the free land-settler and of industry. Instead of 10 sacks of wheat the settler has to give 12 for a gramophone, a rifle, a medicine-chest. In this way the settler, when transforming the product into the fruits of labor, has to surrender part of his surplus product to the industrial worker. That is how the tractor forces up wages all round.

The tractor, though, increases the wages of the farm-hand proportionately more than it increases the surplus of the product that it creates. The motor plough may produce a surplus of 100 million tons, which if distributed among all the workers, would not increase their salaries as much as it increases the fruits of labor of the free land-settler. The reason is as follows:

If there is a rise in the fruits of labor of the free land settler of the first or second class, the wages of the tenants in Europe also rise, even though there is no increase in the product of their labor, as the tractor is very little used there. The bulk of wages here increases at the expense of rent on land; it is minimally due to the surplus produce of the free land-settler. Let us see how this can happen.

Assuming that the product of labor of the free land farmer of the first and second-class increases by 20% through the introduction of more efficient agricultural machinery (allowing for interest and maintenance); the fruits of labor of the free land farmer increase by only 10%, since, as already shown, the other 10% goes to the industrial worker, who demands more for the product of his labor, and can get it. The exchange between industrial and agricultural products shifts 10% in favor of industry. Thus of the 20% increase of the product, only half, or 10%, is transferred to the wage reservoir.

Our landowners must in this case draw on their rents to meet the increased demands of the laborers, since the product of their land has not increased.

The rent of 100ha comes to 375t; each of the 12 workers will see his wage increase by 10% from 8.75t to 9.62t. The total for the 12 is 115.44t, instead of $8.75 \times 12 = 105t$ as before. Rent loses 10.44t, going down from 375 to 364.55t.

But the landowner's loses more than the decrease of his rent expressed in tons of agricultural produce. Such tons are of as little use to him as they are to the free land settler. In exchanging his tons of rent-product for industrial products he loses again, because of the shift in the ratio of exchange. He loses another 10% from 364.55t, which decrease to 328.10t. The total percentage loss is 12.5%.

The smaller the rent in proportion to labor costs, the harder the landowner is hit by the rise of wages. But since landowners cannot, obviously, engage laborers at a loss, and since landowners practicing extensive agriculture can demand a higher rent than their colleagues practicing intensive agriculture, there is a shift from intensive to extensive cultivation. Less labor is required and many laborers are thrown out of employment. The unemployed depress wages below their true level (equal to the fruits of labor of free land-farmers of the first and second class, which have risen 10%). Emigration then increases, until equilibrium is re-established between wages at home and the fruits of labor overseas.

There is still to be figured out the distribution of the product between rent and salaries following technical improvements that favor extensive, but not intensive, cultivation.

The product of the 12 A. workers increases from 480t to 600t. That of the 60 B. workers stays at 900t. A single A. worker produces 50t, a single B. stays at 15t. The difference between the two has increased from 25t to 35t.

According to our calculation, the rent increases from 375t to 525t, and the salary decreases from 8.75 to 6.25.

$35t \times 12 = 420t$; $420t : 48 = 8.75t$; $8.75t \times 60 = 525t$, which is the rent.

$15t - 8.75t = 6.25t$, which is the salary.

$12 \times 6.25 = 75t$ total salaries	$60 \times 6.25t = 375t$ total salaries
525t = Rent	525t = Rent
600t = Product	900t = Product

Thus technical improvements affect the distribution of the products of the soil very unequally. Much depends on where the benefit falls, whether on free land of the first and second classes, or on free land of the third class, or on extensive cultivation.

The workers of yesteryear were not always wrong when clamoring for the destruction of machinery to safeguard their interests. Rent not only absorbed the whole of the surplus production from technical improvements, but also part of the wages in force before the introduction of the machinery.²²

²² [The reference is to the Luddite movement begun in Britain in 1811. The government dealt with it by widespread hangings and transportation of rioter workers to Australia.]

Chapter 10

SCIENTIFIC DISCOVERIES, RENT AND WAGES

Scientific discoveries have been a more powerful factor than machinery towards the trebling of the yield of German land in the past decades. The main means have been the use of potash salts, basic slag, and nitrogen-collecting plants as manure; the artificial production of nitrogenous fertilizers, (cyanamide), the prevention and cure of contagious diseases in plants and animals.²³

Such discoveries have not, however, benefited all soils equally. By far the greatest gain has been experienced by peaty, marshy and sandy soils previously considered barren. Here the development meant more than trebling the produce; it meant creating new soil, for sand and moor had previously not been cultivated at all. In Germany a small fraction of these wastelands used to be cultivated as burnt moor and yielded a scanty crop every 15 years to those willing to undertake such hard work.²⁴

These lands now yield rich harvests every year. Land naturally fertile cannot, of course, treble its already rich yield. Such land provides the manure necessary for its own perennial rejuvenation in mixed farming, where crop and animal husbandry go hand in hand. That is why artificial fertilizers are much less important in such cases than when applied to lands naturally barren. The influence of artificial fertilizers on the produce of first and second-class free land is still slighter. These virgin lands as a rule require no manure at all. Moreover, the cost of transporting artificial fertilizers to such land is prohibitive.

Thus the effect of scientific discoveries on wages and rent varies according to the nature of the land to which they are applied. As for machinery, it is impossible to state generally whether they raise or depress rent or wages. To decide for a particular case, a lot of information and research are necessary. If nothing is left out of reckoning, results may be trustworthy. We shall therefore abstain from calculating as in Chapter 9.

²³ By electrifying the soil the physicist Lodge obtained an increase in produce of 30-40%.

²⁴ As little as 30 years ago, more than half the province of Hanover was covered with heather. Every 15 years the heather was cut, piled and burnt, the ashes being spread on the land, which was then ploughed to yield a scanty crop of rye or buckwheat. The smoke from these fires could often be seen 50 miles away.

Chapter 11

LEGISLATION, RENT AND WAGES

The influence of legislation on the distribution of the product of labor between rentiers and workers is manifold and far-reaching. It has often been said that politics consist, in the main, of attacks on wages and rent, and in the corresponding defense and counterattack. As a rule, action is here dictated by instinct. The interplay of forces is not fully understood, or, if understood, it is politic to conceal the truth.

Advocates of the measures proposed with so much passion are not greatly concerned about scientific proof of the efficacy of what they propose. Politics and science are uneasy bedfellows; very often indeed the aim of politics is to prevent, or at least retard, the recognition of some scientific discovery. What odd things have been said, for example, about wheat-duties! “They protect and encourage agriculture”, say those who pocket the immediate advantages; “they are bread-usury and theft”, say those at the receiving end of the shrinking loaf of bread. “The duties are paid by the foreigner”, say some, to which others retort “the duties are all borne by the consumer.” The wrangle proceeds, as has for fifty years, over a purely human transaction, open for all to see; and still the disputants are none the wiser. It is therefore well worth investigating the influence of legislation on rent and wages.

When a merchant orders a shipment of tobacco knowing that at the border he will have to pay a duty of 100 per bale, he must be assured of recouping this expenditure, plus interest on the capital invested, plus his own profit, from the sale price of the tobacco. The import-duty is, for the merchant, an integral part of the merchandise, and is entered by him in his inventory on the credit side, just like any other item such as chests, sacks and bales: -

100 Tons Java tobacco	200 000
Freight and import-duty	50 000
	—————
Total	250 000
10% expected profit	25 000
	—————
Capital invested	275 000

That is how the merchant accounts for import-duties. Can our landlord similarly account for the land tax? It is often asserted that he can. Landowners themselves will tell you that they intend to charge every tax, plus interest and profit, on the scanty wages of the farm-hands, so as to recoup any amount of land tax in the long run. If such is the case, as landowners argue, would it not preferable to shift the tax base from land to heads (poll tax), or to income? Laborers would then at least save the interest and profit that we landlords add to the land tax.

Before tackling this problem in depth, it is indispensable to answer the question that Ernst Frankfurth raised in his illuminating little book on unearned income²⁵, namely: “What becomes of the land-tax revenue?” For surely it cannot be

²⁵ [*Das arbeitslose Einkommen* in the original.]

immaterial whether the State uses the revenue to build a new road through the landlord's estate, thus reducing school fees for the children of his tenants, or, instead, to subsidize foreign grain. Without knowing this we are not in a position to determine who in the end pays the land-tax. So says Ernst Frankfurth.

Some landowners do not wait for the State to tax them and with the proceeds to build roads needed for the exploitation of their estates. They build the roads themselves. Such costs are a capital investment, like clearing, draining, and so forth. The landowners expect the advantages from such roads to balance the interest on capital. If, nevertheless, and as a rule, the State builds the roads, taxing the landlords for the expenditure, this is simply because the roads usually cross the lands of many owners with conflicting interests. The necessary powers of expropriation are the exclusive domain of the State. But even with the State building the roads, the land-tax revenue is still capital investment, the interest on which the landlord expects to recover to the last cent. This is the real nature of almost every tax. If the State levies a tax to protect its borders from the inroads of barbarians, the landlord saves the amount of this tax from the insurance that would otherwise be necessary against the invasion of Cossacks and Yankees.²⁶

So if the State uses the revenue from the land-tax for the benefit of the landlords, these taxes must be looked upon as capital investments. They are the remuneration of the State for services rendered by the landlord. The landowner may consider these taxes in the same way as the wages of his laborers. If he leases the land to tenants he will add the tax to the farm rent, recovering it if the State works cheaply and well, and even making a profit if the State displays the shrewdness of a clever, parsimonious contractor.

But what if the State taxes the landowners so as to relieve the tenant or the laborers, say, from paying school fees? Is it still possible for the landlord to consider the land-tax as a profitable investment? Let us suppose that the landlord can neither charge the tenant with the amount of school fees saved by the latter nor reduce the wages of the laborers by the same amount. Tenant and laborers would see the fruits of their labor increase by the amount of school fees remitted. But why should the landlord raise the fruits of the labor of tenants and laborers? The reason is not that he himself is taxed. The real reason is that the fruits of the labor of tenant and laborer depend on the fruits of such labor on first, second and third class free land. If the land tax revenue is used to benefit the third class free land-farmer, say in the shape of a reduction of school fees, then, indeed, the equilibrium between the fruits of labor of wage-earners and tenants and those of free land-farmers is not disturbed, and it is impossible for the landowner to transfer the burden of the land-tax to his tenants and laborers. Otherwise he says to the tenant: "To the advantages my farm offers you, I add free education for your children. For this rich loamy soil, a healthy climate, a fine view of the lake, a situation close to the market, and free schools, you have to pay me so much per hectare". And to his farm laborer the landowner says: "If you do not consent to a reduction of wages you may go. Calculate whether with the wages I offer you, together with free schooling for your children, and other social amenities, you are not as well off as if you decided to cultivate first, second or third class free land. Think it over before you go".

It is clear that the whole burden of the land-tax is transferable for as long as its yield does not benefit free land farmers, more particularly those of the third class. If, on the other hand, the revenue of the land-tax is made to benefit, in some form or other, intensive cultivation, the increase of the fruits of labor of third class free land farmers is passed on to the farm laborers engaged in extensive cultivation. The land-

²⁶ [Read: Russian and American wheat.]

tax, in this case, far from being transferable, hits ground rents doubly, first by its full amount and second in the form of a demand for higher wages by the farm-laborers that cannot be evaded.

Let us follow the calculation:

The land tax has halved landlord A.'s ground rent of 375t. Its amount is spent entirely in favor of third class free land, or intensive cultivators. The product of third class free land farmers has increased from 900t to 1 200t.

Back to the calculation of the distribution between rent and salaries, we get:

Before:

Extensive culture: area 100ha, number of workers 12, production 480t, or 40t each.

Intensive culture: area 100ha, number of workers 60, production 900t, or 15t each.

Rent was 375t and the individual salary 8.75t.

Now:

Extensive culture: area 100ha, number of workers 12, production 480t, or 40t each.

Intensive culture: area 100ha, number of workers 60, production 1 200t, or 20t each.

The difference between workers A and B. is 20t.

Let us figure out the rent:

$20t \times 12 = 240t$; $240t : 48 = 5t$, which multiplied by 60 give a rent of 300t (before they were 375t); salary is $20t - 5t = 15t$ (before it was 8.75).

A. $12 \times 15t = 180t$ total salaries	B. $60 \times 15t = 900t$ total salaries
300t = Rent	300t = Rent
480t = Product	1 200 = Product

The correct allocation of public expenditure decreases the rent from 375t to 300t. Half of 375t = 187.5t must be further subtracted from 375t, leaving in the end only 112.75t. $375t - 112.75t = 262.50t$, which is 70% of the original 375t.

This shows how right Frankfurth was to give priority to inquiring about the yield of the tax, and how futile it is to attempt to answer the question whether the burden of the land-tax can be shifted or not, without first establishing its allocation. It also leads us to suspect why measures proposed by social reformers have often failed, or had the opposite effect to the one desired. And it also shows us how greatly the powers of the State influence the distribution of the product of labor.

Let us add something about practical measures of social policy. Suppose that, in lieu of the land tax, the State subsidised grain imports instead of taxing them. The State would thus take part of the landlords' grain and give it, directly or indirectly, to the cultivators of first and second class, but not third class free land.

It would happen as follows: the going German salary of 8.75t corresponds to the fruits of labor of the cultivators of first and second class free land. This happens because the product of the labor of the free land farmer dwindles through freight and custom duties from 30t to 15t. Freight and custom duties on the conversion of these 15t into objects of everyday use (consumer items for the free land farmer) reduce the fruits of labor further, so that by their arrival at the homestead of the free land farmer all is left is 8.75t.

Suppose now that in Germany the import duty on grain was replaced with an import subsidy, on the principle that as import duties used to be sauce for the rentiers, import subsidies are now sauce for the workers. Consequently, not only the free land farmer has to pay no duty, but also receives an extra 10t out of the rent of the German

landlord, who on import hands over an extra 3t as subsidy. Now he brings for sale 18t instead of 15t, and the fruits of his labor increase to $8.75 \times 18/15 = 10.50t$.

As the fruits of labor of the free land farmer increase, so will the salaries of the German worker. The result is the same as in the previous case; the landlord must pay tax, the yield of which goes to salaries, so that the tax can no longer be passed on, but weighs exclusively on the size of his ground rent. Such fall in rent would straighten the previous distortion irreversibly.

The increase in the salaries of workers on first, second and third class free land entices industrial workers back to agriculture, thus bringing to market more agricultural and fewer industrial products. The exchange shifts in favor of the workers, and the rentier pockets a much lower rent out of his drastically reduced product.

Of course these shifts in the exchange favor agricultural and industrial products as much as the fruits of labor of the first, second and third class free land farmers, and the salaries of the agricultural workers, until even there the balance is completely found in the fruits of labor.

Chapter 12

PROTECTIVE TARIFFS, RENT AND WAGES

Without going further, one could argue that a protective import duty should have an effect completely opposite to that of an import subsidy. If a subsidy hits rents doubly, a protective duty, being the opposite of a subsidy, should raise rents doubly: first directly, by raising the price of farm produce, and second indirectly, by depressing the wages of first and second class free land farmers.

Let us see if it is true.

Let us begin by understanding that a protective tariff differs fundamentally from tariffs meant to maximize State revenue. The reason is that the interests of the landowners in protective duties far exceed those of the State. For every 100 million that the State raises as import duty on wheat, the landowners raise 1 000 million²⁷ from the consumers of bread in the form of higher prices. That is what the duty protects: the rent, besides giving better security to mortgages. When import duties are purely fiscal, as for tobacco, they hit not only imports but also domestic production. In Germany, anyone with more than one tobacco plant in his garden must inform the revenue authorities; in Spain the culture of tobacco is prohibited, for it is State monopoly. But if the import duty on wheat is of secondary importance as public revenue, Frankfurth's query about the use made of the tax is also of secondary importance. We shall therefore leave wheat duties themselves out of account, concentrating instead on the rents placed under their protection.

There is nothing arbitrary in the distribution of the product between landowner and farm worker. Everything proceeds according to iron laws. Any attempt at interfering with this distribution must be made according to these laws, under pain of failure. But even if the attempted interference eventually failed, there is a time lag before the disturbed equilibrium is restored. Meanwhile the play of forces resembles the swing of a pendulum set in motion by an impulse: distribution oscillates for some time between rent and wages until the former state of affairs is restored.

So if protective duties for the purpose of raising rents at the expense of wages conflict with the economic laws governing the distribution of the product between the two, they must either fail entirely or succeed only temporarily, that is, until the equilibrium of forces disturbed by legislative interference has been restored.

It is not our purpose to investigate the matter beyond obtaining a general picture of the economic processes resulting from import duties. If we wished to arrive at conclusions applicable in all possible circumstances to individual cases, such as the question as to how much a 20% import duty on wheat would raise the price of a certain estate, our investigation would go far beyond the scope of this book.

Our first concern is the influence of import duties on the fruits of labor of first and second-class free land farmers, and on the wages of farm-hands in lands protected by such tariffs. Of the fruits of labor of third class free land farmers, whose product is also "protected" by the tariff, we shall speak later.

First and second-class free land farmers rightly consider import duties as a burden, like any other charge that makes converting the product into the fruits of their labor more expensive. Whether this higher expense results from higher freight charges, from higher prices of sacks, from piracy, fraud, or import duties, makes no difference to them. What the consumer pays for the product of the free land farmer's labor (wheat) the free land farmer considers as the yield of his labor, which gets

²⁷ The exact amount for any country can be calculated from the ratio of imports to home production.

decreased by import duties as much as by freight. The fruits of his labor are correspondingly smaller. If the loss caused by freight up to now was 30% of the price of his product, the tariff may increase this loss to 50 - 60%.

Freight charges from Argentine seaports to Hamburg are about 15 a ton. Add to this the rail transport from the farm to the harbor, which is more than double that; in all about 50. The duty in Germany is 55 a ton. Total charges are therefore 105 out of a sale price of about 240.

The immediate effect of such duties is, therefore, to reduce the fruits of labor of first and second-class free land farmers, as well as of farm-hands in lands protected by the same tariff. At first such reduction may appear as an increase in foodstuff prices with wages staying stationary. The duty, then, allows the landowner to demand higher prices for his agricultural produce without having to pass this surplus as higher wages to his laborers, or without having to pay higher prices for the industrial products he consumes. A rise in industrial wages, which would shift the burden of import duties away from industrial workers, is equally impossible, since these wages depend also, as already seen, on the fruits of labor of first and second class free land farmers. Industrial workers are therefore no more able to shift the burden of the import duties away from themselves than farm-laborers and first and second-class free land farmers are. So until such reactions as to be described later begin to be felt, the whole amount of the import-duty is a free gift to the landowner. By import-duty we mean not only the sums accruing to the public treasury, but also the sums levied on the consumer as higher prices paid for essentials in the home market. Every loaf of bread, therefore, every egg, every ham and every potato pays a tribute going straight into the landlord's pockets. If the land is let, the duty is immediately transferred to the rent; if sold, the duty is capitalized, i.e. multiplied by 20-25 and added to the price of the property.

But, politicians say, the duty is paid abroad. And that is perfectly true. The relatively trifling sums collected as State revenue at the border are indeed paid by the free land farmer settled abroad out of the fruits of his labor. But this is wholly irrelevant. The wages of the German worker depend on the very fruits of labor out of which German import duty is paid. Were the German worker aware of this, the politician's soothing words would be cold comfort indeed for him, who must pay out of his own pocket the higher price of food that the German landowners increase by the full amount of the tariff.

The belief (hope or bold assertion) that import duty partly falls on the interest on capital is, as we shall presently show, erroneous. Interest, especially of capital seeking investment, cannot be taxed. It is free and independent of tariffs.

Nevertheless, import duties are not without repercussions. In time, certain counter-effects slowly but surely begin to be felt. Assume that a free land farmer in Manitoba, Manchuria, or Argentina writes to a friend in Berlin: "I lose in freight and import duties more than half of what you pay in Berlin for my wheat. You lose in freight and import-duties half or more of what I pay here for your goods (tools, books, medicines and so forth). If we were neighbors, we would save these costs, and both of us would double the fruits of our labor. I cannot convey my fields to where you are, but you can transfer your workshop or factory here. Come, then; I will supply you with whatever food you may require at half the price you are paying now, and you will supply me with your products at half the price I am paying now."

The calculation is correct, but there are obstacles. As a rule industry prospers only in the neighborhood of many other industries, since almost all branches of industry are somewhat interdependent. The migration of industries must therefore proceed gradually. It begins with the naturally independent trades like brickyards, sawmills, flourmills, printing presses, furniture and glass factories, etc. At first, of

course, it affects those commodities upon which freight-charges and import-duties are especially high. Nevertheless, the migration of individual industries depends on the addition of import-duties to freight-charges. These may be so high as to call for a decision to migrate. The higher the duty on wheat, the more often will it pay to pack up tools and relocate the workshop in the vicinity of the free land farmer. With every new industry established in the neighborhood of the free land farmer, the fruits of his labor increase, concomitantly increasing, as we know, the wages in the far away "protected" country!

The advantages the landowner gets out of the tariff are therefore sooner or later absorbed in higher wages. The landowners who realize it act promptly: they sell their land, for instance, before the counter-effects make themselves felt. They leave it to their successors to go to Parliament clamoring for relief when the inevitable reaction plunges agriculture into difficulty. *Die Not der Landwirtschaft*, "The plight of agriculture" was the political slogan of the Prussian protectionists. "Agriculture," of course, was a euphemism for rent. It would not be difficult to find an English or American parallel.²⁸

The reactions set off by a protective tariff are not confined to the behavior of first and second-class free land farmers. We must also observe how our third class free land farmer fares with the tariff. The effect on him is the exact reverse of the effect on first and second-class free-landers. They pay import duties out of their pockets; he is under the protection of the tariff for the products he brings to market after satisfying his own personal needs.

So he shares in the blessings of the protective tariff, that is, in the looting of consumers. Instead of 6, he now gets 8 for a rabbit; he sells his honey for 1.35 instead of 1.10: in short, he obtains higher prices for everything he sells, without having to pay higher prices for what he has to buy. In other words the fruits of labor of the third class free land farmer increase, while the wage earners complain of a decrease in the fruits of their labor. Thus the fruits of labor of the third class free land farmer increase in two ways: absolutely, on account of the rise in prices, and relatively in comparison with the decrease in wages. But it is the fruits of labor of the third class free land farmer that determine the general rate of wages. Evidently the imbalance cannot go on for long. Word goes around that a rabbit can be had for 8, honey for 1.35, potatoes for 5, and goat's milk for 0.20. Wage earners begin to agitate with demands for higher wages. Pointing to the increased fruits of labor of the third class free land farmer they, too, claim higher wages, threatening to move to the heath, marsh, or waste as the case may be, if their demands are not met.

Hence wages increase from third class free land to first and second class free land, continuing until it completely cancel out the effect of the wheat duties.

It must be further remembered that the special price increases of all farm produce caused by the import-duties, and the consequent increase in rents, calls for new efforts towards intensive cultivation, and that if the duty raised the fruits of labor of intensive farmers, wages, and through them rent, must also be affected.

Better to understand the effect of custom duties also from this point of view, let us work it out.

Suppose that before the introduction of the duties the rent to be paid on 100ha was 2 000, and the price of its produce 500 per ton. Under extensive cultivation the

²⁸ The reduction of rent as a consequence of the rise of wages is inevitable, although it cannot always be expressed in figures. For it may happen that the development here described may be synchronous with one of those oft-occurring currency inflations caused by either gold discoveries or over-issues of paper money. A currency inflation such as the 1890 - 1914 one restores to the landowner what he loses in rent. But this applies only to mortgaged landed property, and the landowner has also to reckon with the reverse possibility, namely a gradual fall of prices, as happened in 1873-1890.

area would produce 30t, and under intensive cultivation twice as much: 60t. At 500 per ton, the price of the product would be 15 000 in the first, and 30 000 in the second case.

With the tariff, the price would increase from 500 to 700. The total would increase to 21 000 instead of 15 000. The difference of 6 000 would go entirely to rent (extensive workers would have a negligible effect) so that this would now be 8 000 instead of 2 000. With intensive cultivation things would be different. Their 60t at 700 per ton (instead of 500) would fetch 42 000, which minus a rent of 8 000 would leave them 34 000 instead of 30 000.

The effect of the tariff is to raise the yield of intensive farmers, and since the tariff does not affect the prices of industrial goods, intensive farmers also increase the fruits of their labor.

But as the fruits of the labor of intensive farmers increase, so do wages, for the fruits of the labor of intensive farmers, as already seen, determine the general level of wages.

The general conclusion is that a tariff meant to protect rents is bound sooner or later to meet the fruits of labor of the free land farmers head on; the protection it affords can never be other than temporary.

For those who have to pay "temporary" tariff charges it may be a consolation, and for those who enjoy the advantages of the equally "temporary" tariff it may be disquieting to become aware of their temporariness. But it is a very serious matter if the farmer, on buying land or dividing an inheritance, blindly mistakes the transitory rise of rent for a permanent one. For what does he know of theories of rent and wages? He is guided simply by experience. He sees the harvest; he knows the prices of farm produce and the wages of farm laborers. His calculation is finished and the bargain struck. The customary sum is paid in ready money, and the rest is covered by a mortgage. But this mortgage is not a temporary affair: it is sure to outlast the transient effect of the tariff upon wages, and it does not decrease when the laborers, regardless of the stationary selling price of farm produce, approach the farmer with demands for higher wages. The farmer then begins to complain, once more, about the plight of "agriculture."

Chapter 13

THE ENTIRE WAGE-SCALE, UP TO THE HIGHEST SALARIES, RESTS ON THE FRUITS OF LABOR OF THE CULTIVATORS OF FREE LAND

If a landowner can squeeze 1 000 of rent out of his land, he will not be satisfied with less than this amount if instead of letting it he chooses to hire laborers and farm the land himself. Should the land, after deducting the cost of wages, not yield at least 1 000, he would dismiss the laborers and let it for 1 000.

In no circumstances, therefore, will a day-laborer gather higher fruits of labor than the tenant or settler on unclaimed land; for otherwise tenant or settler would rather work as day-laborers.

On the other hand the day-laborer will not agree to work for a wage less than what he might earn as tenant or settler, for otherwise he would either rent a piece of land or emigrate. It is true that he often lacks the money necessary to run a farm or to emigrate; but if he has it, or is forced to borrow it, he must charge interest (4-5%) on it in his calculation, and deduct this interest from the product of his labor. For what belongs to him as worker is the same as what is left to the settler on free land after paying interest on capital.

Let the gross return of the settler on free land (1st, 2nd or 3rd class) be 1 000 and the interest on his working capital 200. The net fruits of his labor will be 800. The general rate of wages must oscillate about this point. The wages of a day-laborer cannot rise higher, for otherwise settlers would turn day-laborers; and they cannot sink lower, for otherwise the opposite would happen.

The wages of industrial workers are also obviously dominated by this mechanism. If the fruits of labor in industry were larger than those on unclaimed land, agricultural laborers would turn to industry. Consequently agricultural produce would become scarce and rise in price, whereas industrial products, being super-abundant, would fall in price. The rise in agricultural prices and the fall in industrial prices would force the wage scale to readjust to an equitable level. Such readjustment would certainly be rapid, considering the great number of migrating laborers who are indifferent to growing sugar beet or shoveling coal.

It is thus an incontestable fact that if the fruits of labor on free land determine those of the agricultural laborer, they also determine the fruits of labor generally speaking.

Wages cannot rise above the fruits of labor on free land, since free land is the only support the farm-laborer has in his wage-negotiations, as is also the only support of the tenant in his rent-negotiations with the landowner. Should they be deprived of this support (say by suppressing freedom of movement) they would be at the complete mercy of the landowner. But for as long as free land acts as such support, no other cause can depress wages below these levels.

The fruits of labor on free land act, therefore, at once as maximum and minimum wage.

The existing great differences in the individual fruits of labor are by no means inconsistent with this general rule. Once the distribution of the product of labor between landowners and workers has been determined, the share that falls to the workers gets distributed automatically on a perfectly natural basis. The varying remunerations are not arbitrary, but adjusted entirely by the laws of competition, following supply and demand. The more difficult or disagreeable the work, the higher

is the wage. For how is a man to be induced to choose the more difficult or disagreeable of two tasks? Only by the prospect of higher fruits for his labor (which may, of course, consist of perks other than money). Thus if the workers need a teacher, a pastor or a forester, their only course is to dig deeper into their pockets and grant salaries for these offices that may greatly exceed their own fruits of labor. Only thus can they induce people to undergo the expense of educating a son for these professions. If the supply of teachers and pastors is still insufficient, salaries must again be raised. If the workers have overshot the mark so that the supply exceeds demand, salaries will be reduced. It is the same with all trades requiring special training. The opposite happens when the workers need a shepherd, a goose-herding girl or a scarecrow boy. If they were to offer for such leisurely pursuits the full fruits of their own labor gained by hard work, every townsman, teacher, pastor and farmer would apply. So a minimum wage is offered for herding geese, and this minimum is raised until someone is willing to accept the job. The workers also need a merchant to buy their products and sell them whatever goods they want. This merchant is also a worker, who must be granted a wage in the shape of commercial profit, sufficient to induce him into accepting such a bothersome profession.

Thus the basis for the adjustment of all wages is always the fruits of labor on free land. The whole structure of fine gradations in the fruits labor up to the highest-paid occupations is built upon this basis. Every change in the basis is therefore transmitted to the whole superstructure, just as an earthquake is felt up to the weathercock on the steeple.

Our proof that the so-called law of "iron wages" is unsound is not yet, indeed, complete, for the "iron wage", though not caused by private ownership of land, might still be caused by capital. That capital does not possess this power is obvious, however, from the frequent fluctuations of wages (a really "iron" wage could not fluctuate). Why, we shall demonstrate later (see Part V, The Free-Money Theory of Capital and Interest). If capital had the power to reduce the fruits of labor on free land to a minimum corresponding to the "iron wage", the yield of capital, as expressed in the rate of interest, would necessarily fluctuate as much as the fruits of labor on free land. But this is not the case, for, as we shall show later, pure interest, which is here the point, is remarkably stable, so remarkably stable indeed, that we are fully justified in speaking of an "iron return" on capital. If wages were as stable as interest is, whence would rent gather the surplus value that it regularly gathers from the differences between the fruits of labor and its product?

Chapter 14

INTEREST ON CAPITAL, RENT AND WAGES

When the settler on free land makes up his accounts, he must enter a charge for interest on his working capital, whether his own or borrowed from a capitalist. Interest must be kept separate from the fruits of labor, for interest has nothing in common with labor; it obeys entirely different laws.

The working landowner must likewise separate the interest on capital from the fruits of his labor.

Were settlers on free land to pay the same rate of interest for the necessary capital as farmers on rented land, one might imagine that the rate of interest had no effect on rent. But that is an error. Labor plus the right means of production can create any amount of new land, often in close proximity to cities. The lower the rate of interest, the easier it is to reclaim tracts of wasteland. The employer demands from the reclaimed land only an amount of interest equal to the rent of a field bought for the same capital outlay. With first and second class free land, freight sometimes swallows up the larger part of the product of labor, but with reclaimed free land it is interest on capital that absorbs the expected rent. Whatever the nature of the proposed reclamation, whether it is draining the Zuider Zee, recently decided upon,²⁹ or cultivating moors, or clearing virgin forests, or irrigating deserts, or blasting and removing rocks, the first question is always the amount of interest on the capital required, which is then compared with the rent demanded for land of the same quality. A high rate of interest shows the comparison to be disadvantageous; the moor is left uncultivated. With a low rate of interest, on the other hand, the undertaking would look promising. Were the rate of interest fall from 4 to 1%, for example, many land improvements that cannot be undertaken today would become feasible.

With a 1% rate of interest it would pay to irrigate the Egyptian desert with the waters of the Nile, to dam the Baltic sea and pump it dry, to build a giant greenhouse over the Lüneburg Heath for the culture of cocoa and pepper. With a rate of interest as low as 1% a farmer could plant orchards where today he is prevented from doing so by the amount of interest he would have to pay during the 5 to 10 years waiting for the harvest. In other words, at 1 % it would be feasible and profitable to bring all deserts, swamps and moors into cultivation. (The above proposal is not, of course, to be taken literally.)

A fall in the rate of interest would not only enlarge the area under cultivation, but it would also enable people to extract double or treble the amount of produce from the present area by the extended use of machinery, to build roads, to replace hedges with permanent fences, to set up irrigation systems, to deep-plough the soil, to plant orchards, to protect the fields from frost and a thousand similar possibilities. All such activities would necessarily reduce the cultivated area, and make free land, the great menace to rent, more accessible.

A reduction in the rate of interest would, further, allow transport facilities for wheat from abroad, (seaports, canals, ocean steamers, railways, silos) to be run more cheaply, thus lowering the freight charges on the produce of free land. Every dollar saved here would mean a dollar less to rent. For the interest on money invested in means of transport constitutes a very considerable part of freight charges. For the European railways in 1888, with an average rate of interest of 3.8%, the ratio between working costs (upkeep of the permanent way, salaries and wages, coal, etc.) and

²⁹ [The work was finished by 1930, the year of Gesell's death.]

interest was 135:115. Interest, therefore, very nearly equaled running costs, so that a reduction of the rate of interest from 4% to 3% would have allowed a reduction of the freight charges by nearly one eighth.

Running costs = 4,	interest on capital = 4,	freight charges = 8
" = 4,	" = 3,	" = 7
" = 4,	" = 2,	" = 6
" = 4,	" = 1,	" = 5
" = 4,	" = 0,	" = 4

That is to say, 0% interest would reduce railway freight charges by half. With ocean freight the ratio of charges to interest is not the same, although here, too, interest plays an important part. Ships, working capital like harbors, canals (Panama, Suez), coaling stations, coalmining equipment etc. all demand the regular rate of interest. This interest is a component of freight, a charge on the fruits of labor of first and second class free land settlers, which are of such decisive importance for wages and rent.

Thus the reduction or elimination of interest would reduce freight charges by half, thus bringing free land, economically speaking, 50% nearer. The competition of foreign wheat would become correspondingly keener.

But what would happen to rent if the arable area close at hand were thus expanded beyond the need for it? What would happen to rent if free land, which determines wages, could not only be increased at pleasure, but also brought closer, so that the difference between the product and fruits of labor of the free land farmer became less and less? Why migrate to far off Canada, to Manitoba, and from there ship wheat burdened with freight charges to Holland, if we could grow the same wheat on the soil of our own Zuider Zee? If the rate of interest fell to 3, 2, 1 or 0%, every country would be able to provide bread for its population. The limit to intensive cultivation is set by interest. The lower the rate of interest, the more intensive the cultivation of the soil can be.

We can here observe the close alliance existing between interest and rent. So long as there are wastelands, marshes and deserts to reclaim, so long as land can be technically improved, a high rate of interest, the ideal of the capitalist, is at the same time the bulwark of the landowner. If the rate of interest fell to zero, rent would not, indeed, disappear, but it would be dealt a staggering blow.³⁰

³⁰ The result of a fall in interest on the rent of building sites is complex. Interest on the building capital is a far larger component of house-rent than is the ground rent. In the country, and in small towns, ground rent is often less than 5 % of the rent of a building, whereas interest on the building capital is as much as 90% of the total rent. A fall of interest to 1 % or 0 % would therefore mean a great reduction in house rent, this of course depending on the amount of accommodation available to families. The masses that today, because of high house rents resulting from interest, must be content with very inadequate housing, would demand, and be able to pay for, roomier dwellings. Roomier dwellings mean larger building sites, and therefore increased ground rents. But a fall in the rate of interest would also reduce transport costs, so that the consequent shifting of the population to the suburbs would tend to counteract the rise of ground rents in the city.

Chapter 15

SUMMARY OF RESULTS ATTAINED SO FAR

1. The wage of an average worker is equal to the fruits of labor of the average cultivator of free land, and is entirely determined by such fruits. Every change in the fruits of labor of the cultivator of free land is transmitted to wages, regardless of whether such changes are caused by technical improvements, by scientific discovery, or by legislation.
2. The so-called "iron law" of wages is therefore a meaningless expression. For the individual, the wage oscillates about the amount mentioned under 1. It may rise above this amount for especially efficient work, but it may also fall short of it, even short of the minimum standard of survival in some cases.
3. The whole wage scale, even for so-called skilled work up to the highest level, uses as point of reference the fruits of labor of the cultivator of free land.
4. Rent on land is what remains of the produce of the land after deducting wages and interest on capital.
5. Interest on capital is the close ally of rent.
6. It cannot be asserted unqualifiedly that technical progress always benefits rent. The contrary is often true. Progress and poverty do not necessarily go hand in hand. Progress and growing general prosperity go hand in hand as often.
7. Neither can it be definitely stated whether the burden of a tax on land can, or cannot, be shifted. The question can be answered only when the allocation of the revenue from the land-tax is known. The land-tax may hit rent twice (through the tax itself as well as through a wage increase) or it may benefit rent by more than its amount.
8. If the yield of the tax on rent is employed for the benefit of the cultivators of free land, for instance as a premium on imported grain or as a subsidy for the cultivation of waste land, the State, if it wishes, can confiscate rent completely. The burden of a tax on rent, when the yield of the tax is so employed, cannot be shifted.

Chapter 16

RENT OF RAW MATERIALS AND BUILDING SITES IN RELATION TO THE GENERAL LAW OF WAGES

Whether wheat comes from Canada, Argentina, Siberia, or from a farm next door; whether it be the import duty-burdened wheat of a toiling German migrant or the duty-protected wheat of a wealthy Pomeranian squire, it does not concern the miller. If the quality is the same, so also is the price.

This is true of all commodities. Nobody inquires about the cost of production or the origin of goods offered for sale. It makes no difference whether one man has become rich and another ruined by them; if the quality is the same, so is the price. This is clearly seen in the case of coins. Nobody inquires where, when, or how the gold of the individual coin was obtained. Whether it was got by bloodstained plunder, or by the relentless toil of a digger, the coins circulate side by side indifferently. Whatever the different costs of production of the individual competing commodities, the price remains the same. This is known to all who use raw materials, as also to the owner of the land whence the raw materials can be obtained. If, for example, a city needs paving stones for a new street, the proprietor of the nearest quarry will at once estimate the distance from the street to the nearest free (ownerless) quarry of equally good stones. He will then calculate the cost of carrying the stones from there to where they are needed, and will quote his price. This is the price that the city will have to pay, because only from this price upwards competition comes into play, and competition determines price. (The wages in both quarries are assumed to be the same, and therefore left out of reckoning).

If, however, there is no direct competition, because there is no free quarry within striking distance, and the proprietor in consequence demands an excessive price for his paving stones, competition will be by substitutes, like wood-pavement, macadam, gravel, asphalt, or a railway instead of a street. Or else the paving of the street may be abandoned. In the latter case the advantage expected by the city from the construction of the street would be the only competing factor that the proprietor of the quarry need take into account.

The same holds good for all raw materials without exception. If someone requires lime for a cement factory, clay for a brickyard, bark for a tannery, coal, iron ore, wood, water, building stones, sand, oil, mineral water, wind for his windmill, sun for his sanatorium, shade for his summer-house, warmth for his grapes, frost for his skating rink, the landowner who happens to be in possession of these gifts of nature will exact payment for them, just as does the quarry-owner for his paving stones, and always on exactly the same principle. Circumstances may differ in each separate case; the threat of substitutes may limit the landowner's greed to a greater or less extent; but the same law always holds good: the landowner exploits the advantages offered by the products, situation or nature of his property. He will leave for the purchaser's labor only what the purchaser would have obtained had he been forced to procure his raw material from waste land, from the desert, or from free land.

From these considerations we shall deduce a proposition of great importance for the general law of wages:

The product of the poorest, remotest and therefore often ownerless sources of raw materials, loaded with freight charges and with the wages paid to work the more favored sources of similar materials, forms the basis of the price of these materials. Whatever the owners of the favored sources save in the cost of production is rent.

The consumer always has to pay, for all the products of the earth and for all raw materials, the price he would pay to produce or extract the same stuff from waste land, or conveyed at great expense from ownerless land.

If the product of a man's work on the poorest soil were equal to the minimum for human survival, private ownership of land would make the "iron law of wages" a reality; but as we have seen, such is not the case. For this reason, but only for this reason, can wages rise above the survival minimum.

The ground-rent of cities, which in our industrial age very nearly equals the total rent on agricultural land, is determined on exactly the same principle, though the circumstances are somewhat different.

The land upon which Berlin is built was estimated in 1901 at 2 911 million marks. With interest at 4% this corresponds to a rent of 116 millions. This sum alone, distributed over the province of Brandenburg, is equal to a rent of 30 marks a hectare. Adding the ground rent of the other towns of the province, urban rent may have amounted to about 40 marks a hectare, a sum which, considering the poverty of the soil and the large areas of marsh, swamp and forest, possibly exceeded the rent on agricultural land. The position of the province of Brandenburg, a region with poor soil yet containing the capital of the German Empire is, indeed, exceptional; nevertheless these figures show the great importance of urban ground-rent today.

These figures are likely to surprise many readers; but, as someone has justly remarked, it is becoming doubtful whether, measured by the rental, our great landed estates ought not to be looked for in Berlin rather than, as hitherto, in Silesia.

How is this curious phenomenon to be accounted for? What determines the rent of building land, and what is its relation to the general law of wages?

In the first place we must explain why men congregate in cities despite the high ground rent; why don't they spread all over the country? Calculated by the above figures, the average yearly ground rent for every Berliner is 58 marks, or 290 marks for a family of five. This expense is entirely avoided in the country, for the ground rent of the average country cottage is so trifling that it could be paid with the contents of its pit latrine. And the hygienic advantages of life in the country contrast strikingly with the miserable housing conditions in towns. There must, therefore, be other weighty reasons to make people prefer the town.

If we assume that the "advantages" of town are cancelled out by disadvantages like bad air, dust, noise and numerous other offences to our senses, all is left to balance the expense of urban life is its economic advantage. The interdependence and co-operation of the city industries must afford advantages over isolated industry in the country, which in the case of Berlin counterbalance the 116 million of ground rent. Were it not so, the growth of cities would be quite unaccountable for.

No seasonal industry can be established in the country today that kept occupied many workers today and few or none tomorrow; for the worker must work the year around. In the city the varying demand for labor in the different industries is more or less leveled, so that workmen dismissed by one firm can get a job in another. Thus there is greater security against unemployment in a town than in the country.

In the country the manufacturer lacks the opportunity for exchanging ideas, the stimulus provided by intercourse with other businessmen. Workmen trained in a variety of skills in different production methods are an asset to the city manufacturer compared with the workmen of a country manufacturer. Thrown entirely on his own resources, and compelled to employ workmen deprived of intercourse with workmen from other industries and other countries, the country manufacturer is likely to lag behind in adopting improvements. He also often lacks the facilities afforded by the city for the sale of his products. Purchasers, both from home and abroad, flock to the city, where they find everything they need in one place. The city manufacturer is

approached by foreign customers' drawing attention to the consumers' wishes, and giving him valuable information about market conditions, prices, and so forth. The country manufacturer is deprived of all this. Instead of being visited by his customers he must sacrifice time and money in traveling to visit them. He must collect his information about prices of raw materials, market conditions abroad and the solvency of his customers in roundabout ways that are often anything but reliable.

Furthermore he is forced to lay in much larger stocks of raw material than his competitor in town who is able to procure everything if and when needed; and if through some oversight the country manufacturer runs short of some article, even if only a screw, the whole factory is brought to a standstill until the missing part has been sent "from town." Or if a machine breaks down, a mechanic may have to be summoned "from town," and until he arrives the factory is again idle.

In short, the disadvantages in respect of the factory itself, the workmen, the purchase of raw materials and the sale of finished goods, are so many that the country manufacturer forced to compete with a rival in town cannot possibly pay the same wages as the latter. Thus all that he and his workmen save in ground rent is deducted from the fruits of their labor.

Hence the only industries that can develop in the country are those requiring so much space that all disadvantages are offset by saving on ground rent; or those that cannot be operated in towns, like saw-mills, brickyards, rolling mills etc., or are forbidden by the police for hygienic reasons (lime-kilns, powder-mills, tanneries, etc.); or those with a simple technical organization, which allow the manager to establish his headquarters in town. In every other case the town is preferred.

Now we know where the money to pay the 116 millions marks of ground rent in the city of Berlin comes from, as we also know what sets a limit to the growth of cities. The advantages of combined work have been calculated in money and pocketed as ground rent by the landlords.

As the city grows, so do its economic advantages, and so do ground rents. If ground rents grow out of proportion to the advantages of the city, it stops growing.

If you wish to enjoy the advantages afforded by the city for your trade, you must pay the landlords for these advantages; otherwise you are free to establish your factory, shop, or dancing hall in the woods and fields. Calculate what is more advantageous, and act accordingly. Nobody prevents you from settling outside the city gates. If you can induce your customers to tramp out to you through rain and snow, dust and mud, and to pay the same price there as they would in the city centre, so much the better for you. If you think it unlikely, then pay ground rent and establish yourself in town. You have indeed a third possibility: you may try selling your goods cheaper outside the city. Some customers will be attracted by the cheaper prices. But where is the advantage? What you save on rent, you lose in the lower selling price.

Ground rents are thus determined by exactly the same law that governs the rents of agricultural land and raw materials. All the advantages of the city (including division of labor) go to the ground landlord. Just as German wheat fetches the price it would have fetched if it had been grown in Siberia and taxed at the border, so the goods produced in a city must be exchanged at the prices they would have fetched if loaded with all the disadvantages of goods produced far from industrial centers.

Agricultural rent captures all the advantages of situation and nature, leaving wasteland and wilderness to the would-be farmer; city ground rent claims all the social advantages: mutual aid, organization and education, reducing the fruits of labor of industrial and commercial workers to those of isolated producers in the country.³¹

³¹ [Globalization may make geographical borders disappear, but the argument stands: work incomes inexorably go down to the Chinese level, to which brute force keeps them.]

Chapter 17

FIRST GENERAL OUTLINE OF THE LAW OF WAGES

The product of labor that remains after deducting rent and interest on capital, form the wage reservoir to be shared among all workers: day-laborers, clergymen, merchants, physicians, servants, kings, craftsmen, artists. When everyone is free to choose a trade, the division takes place according to the personal capacity of each, by supply and demand. If the choice of occupation were completely free (it is not, but it could be), everyone would actually obtain the "largest" share in the distribution. Everyone in fact tries to obtain the largest share. The size of the share is determined by supply and demand: ultimately by the choice of occupation.

The individual choice of occupation influences the relative amount of wages. The absolute amount of the wage, on the contrary, is quite independent of the individual. It is determined by the amount of the wage reservoir. The larger the contributions of the individual workers to the reservoir, the larger the individual share will be. The number of workers is irrelevant; if there are more workers, the absolute size of the wage-fund grows, but so does the number of those entitled to a share.

We now know the amount contributed by the different categories of workers to the wage reservoir:

1. The contribution of agricultural workers equals the sum of the product that an equal number of agricultural workers could grow on free land, minus freight, interest and import duties, everything conceived in terms of produce.
2. The contribution of producers of raw materials equals the sum of the product that they could bring to market from the poorest, remotest, and therefore ownerless sources, minus interest.
3. The contribution of industrial workers, merchants, physicians, artists, equals the sum of the product that they could produce without the advantages of mutuality and organization, isolated from populated centers, minus interest.

By pooling all these products and distributing them according to present-day wage scale, everyone gets exactly what he can actually procure in the shops and markets with his present wage.

The difference between this amount and the total product of the aggregate work performed goes to make up rent and interest on capital.

Can workers (always in the broadest sense of the term) do anything to enlarge the wage reservoir, to obtain a real all-round increase in wages, which an increased cost of living cannot neutralize?

The answer is simple: keep a close watch on the reservoir. They must protect it from parasites. The workers must defend their wage reservoir as bees and hibernating marmots defend theirs. The whole product of labor, with no parasitic deduction for rent and interest, must go into the wage reservoir and be distributed to the last crumb among its originators.

It can be done. But not without two necessary reforms, here named "Free-Land" and "Free-Money."