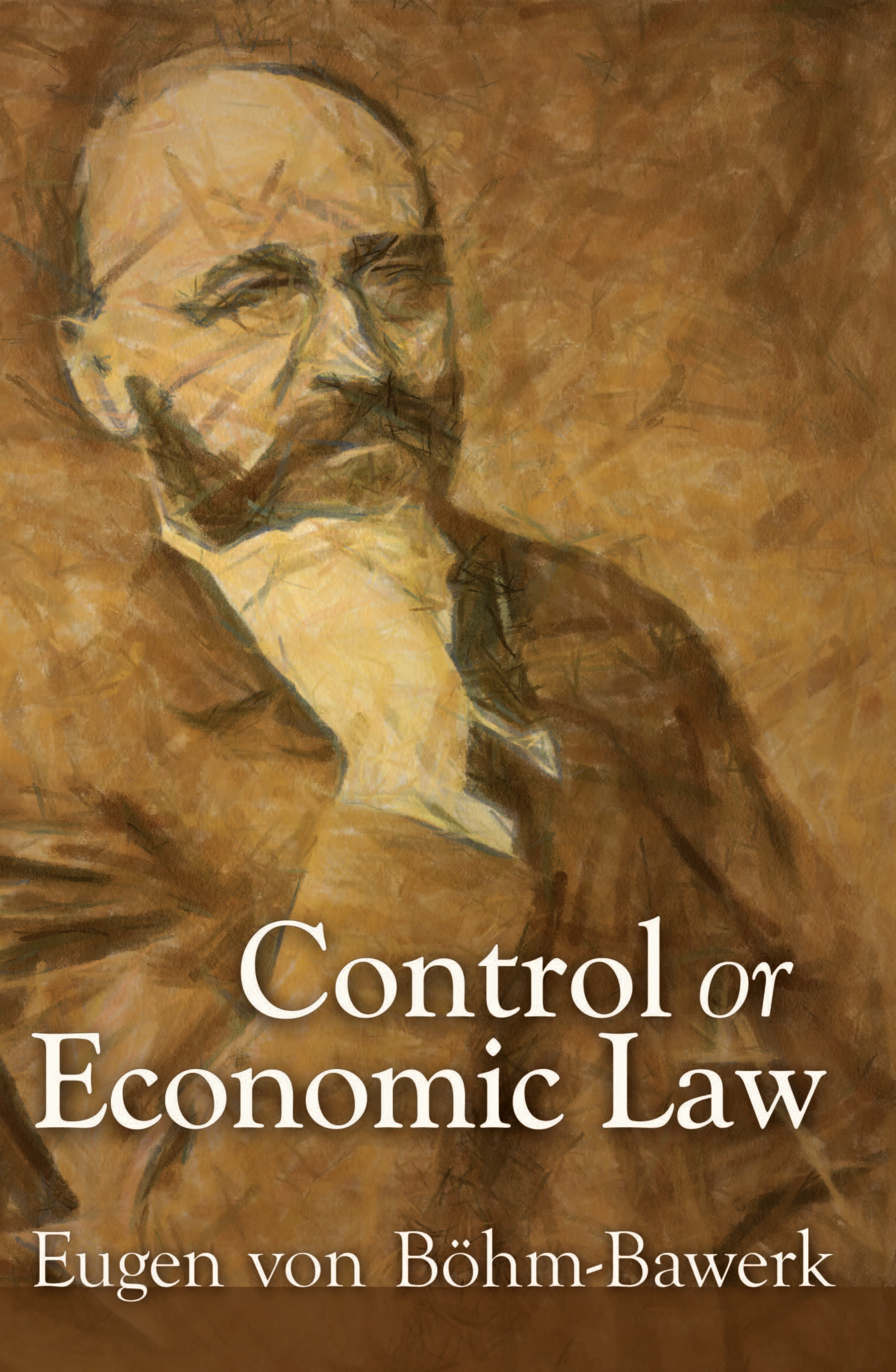

Control *or* Economic Law

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I. The Scientific Foundation of a Rational Economic Policy

Economic theory, from its very beginnings, has endeavored to discover and formulate the laws governing economic behavior. In the early period, which was under the influence of Rousseau and his doctrines of the laws of nature, it was customary to apply to these economic laws the name and character of *physical laws*. In a literal sense, this characterization was, of course, open to objection, but possibly the term "physical" or "natural" laws was intended merely to give expression to the fact that, just as natural phenomena are governed by immutable eternal laws, quite independent of human will and human laws, so in the sphere of economics there exist certain laws against which the will of man, and even the powerful will of the state, remain impotent; and that the flow of economic forces cannot, by artificial interference of societal control, be driven out of certain channels into which it is inevitably pressed by the force of economic laws.

Such a law, among others, was considered to be that of *supply and demand*, which again and again had been observed to triumph over the attempts of powerful governments to render bread cheap in lean years by means of "unnatural" price regulations, or to confer upon bad money the purchasing power of good money. And inasmuch as in the last analysis, the remuneration of the great factors of production—land, labor, and capital—in other words, the distribution of wealth among the various classes of society, represents merely one case, although the most important practical case of the general laws of price, the entire all-important problem of distribution of wealth became dependent upon the question of whether it was regulated and dominated by natural economic laws, or by the arbitrary influence of social control.

The early economists did not hesitate to decide this question with fearless consistency in favor of the exclusive predominance of "natural laws." The most famous, or rather notorious, illustration of this interpretation was the "wage-fund theory" of the classic and postclassic school of economists, according to which the amount of wages was determined by a natural relationship of almost mathematical accuracy thought to exist between the amount of capital available in a country for the payment of wages, the so-called "wage fund," and the number of workers. All workers jointly were considered incapable of ever receiving more than the existing "wage fund," and the average was thought to result with mathematical accuracy from the division of the wage fund by the number of workers. No artificial outside interference, including strikes, could change the operation of this law. For if, through a successful strike, the wages of one group of workers were to have been raised artificially, a correspondingly smaller portion of the wage fund would be available for the remaining workers, whose wages would then have to come down accordingly. A general or average increase of wages above the total of the "wage fund" was held to be out of the question.

Later generations have adopted a different view of this matter and of economic "laws" in general, and have developed different new formulas in accordance with their changed views. Following the example of Rodbertus and Adolf Wagner, a distinction was drawn between "purely economic categories" and "historic legal categories." The former were to include all that was permanent, generally valid, and recurrent in economic phenomena under any conceivable social order; the latter were to represent the historically varying types, brought about by changed legal systems, laws, or social institutions. Henceforth, a determining, or at any rate far-reaching influence upon the laws of distribution was ascribed to this latter or "social" category, a term used frequently ever since, especially by Stolzmann.[1]

This may have been right or wrong, but it was certainly not without some justification. But how far-reaching was the influence of control to be, and how and where was it to be delimited against the influences emanating from the other "categories"? These questions were not, and have never been, definitely settled to this day. A few years ago, at another occasion, I wrote, "Nowadays it would be idiotic to try to deny the influence of institutions and regulations of social origin on the distribution of goods."

It is obvious that distribution under a communistic order would have to be materially different from that in an individualistic society, based on the principle of private property. Nor could any sensible person deny that the

[1] "Die Soziale Kategorie in der Volkswirtschaftslehre," Berlin 1896; "Der Zweck in der Volkswirtschaft," Berlin 1909.

existence of labor organizations with their weapon of strikes has been of pronounced influence on the fixation of wages of labor. But, on the other hand, no intelligent person would claim social "price regulation" as being omnipotent and decisive in itself alone.

Often enough one has seen governmental price regulations to be incapable of providing cheap bread in lean years. Every day we may see strikes failing, when they are directed towards the attainment of wages "not justified in the economic situation," as it is commonly expressed. The question, therefore, is not whether the "natural" or "purely economic" categories on the one hand, and the "social" categories on the other, do exert any appreciable influence on the terms of distribution; that both do, no intelligent person will deny.

The sole question is this: *how much* influence do they exert? Or, as I have expressed myself several years ago, in reviewing an older work by Stolzmann entitled "Die Soziale Kategorie,"

> The great problem, not adequately settled so far, is to determine the exact extent and nature of the influence of both factors, to show how much one factor may accomplish apart from, or perhaps in opposition to, the other. This chapter of economic theory has not yet been written satisfactorily.

I should like to go almost so far as to say that, until quite recently, not even a serious attempt has been made to elaborate this problem by either one of the two great schools that compete with each other in the perfecting of our science: the theoretical school, represented primarily by the well-known "marginal-utility theory," and the historic or sociological school, which, in its struggle against both the old classicists and the modern marginal-value theorists, likes to place the influence of control (*Macht*) into the very heart of its theory of distribution.

The "marginal-value" school has not ignored the problem confronting us here, but so far, it has not elaborated it extensively; it has conducted its investigations up to the confines of the whole problem, so to speak, but so far, has stopped at these confines. So far, it has principally occupied itself with the developing of the laws of distribution under the assumption of free and perfect competition, perfect both in theory and in practice, thus precluding the predominance of one party, as would be implied in the term "influence of control."

Under this, and the other modifying assumption of the exclusive prevalence of purely economic motives, the marginal-value theory has come to the conclusion that, in the process of distribution, each separate factor of production receives approximately that amount in payment for its contribution to the total production that, according to the rules of imputation, is due to its cooperation in the process of production. The shortest formulation of this idea is contained in the familiar concept of the "marginal productivity" of each factor.

But in making this contribution, the marginal-value school had furnished only an incomplete skeleton of the theory of distribution as a whole, and it was well aware of this shortcoming. It never pretended to have fully covered the complex reality with that concept; on the contrary, it never failed to emphasize, again and again, that its past findings had to be supplemented by a second series of investigations, whose task it would be to inquire into the changes that would be produced in this fundamental concept by the advent of changed conditions, particularly those of "social" origin.[2]

The reason why the marginal-value school took up that part of its investigation first was only that it seemed to require priority in methodical treatment, that primarily one should know and understand how the process of distribution, or more generally, that of price formation took place in the absence of all outside social interference.[3]

First of all, a starting point, or point of comparison, had to be reached from which the changes might be measured that would be produced by the advent of special outside factors of a "social" origin. The marginal-value theory, thus, as a whole, first laid down a general theoretical frame for the problem in formulating its general value and price theories, and, within that frame, it elaborated in detail only the theory of free competition, while until now it had left a gap where the influence of social "control" should have been studied and described.

This imperfection has always been felt as such; with every new decade it is being sensed more because in our modern economic progress, the intervention of social means of control is continuously gaining in importance. Everywhere trusts, pools, and monopolies of all kinds interfere with the fixation of prices and with distribution. On the other hand, there are the labor organizations with their strikes and boycotts, not to mention the equally rapid growth of artificial interference emanating from the economic policies of governments.

[2] I may refer, for instance, to my statement in regard to two complementary parts of the price theory, published as early as 1886.

See my "Foundations of the Theory of Economic Value," in *Conrad's Jahrbücher*, N.F. 1886, Bd. XIII, pp. 486; and my *Positive Theory of Capital*, Chap. IV.

[3] Of course, there must always exist a certain minimum of outside interference, as shown in detail further on, because there always must exist a social order of some kind.

In the eyes of the classical economists, the theory of free competition could claim to be the systematic foundation of the entire problem, as well as the theory of the most important normal case. But at present, the number and importance of those phenomena that no longer find an adequate explanation in the theory of free competition probably already exceed the number of those cases that may still be explained by that one formula.

Nor has this gap left open by the marginal-value theory ever been filled by that other school of economists, those who place the influence of the "social" category in the foreground.[4] The reason for this is that they again overestimated the explanatory power of their favorite formulas. When, with an air of conviction, they proclaimed that under this or that condition, for instance, in the fixation of wages, it was "power" that ultimately decided matters, they thought to have given a content to their explanation, which, if applying at all, was to supplant or exclude explanations on purely economic grounds. Where power or "control" entered into the price, there was no economic law, they thought, and thus the mere mention of "control" was both the beginning and the end of the explanation to be given. It was accompanied more often by a fierce denunciation of the "economic laws" developed by other theoretical schools, than by a careful investigation of the question of where and how the two "categories" relate to each other. Moreover, the term "two categories" was merely a phrase of a rather vague and ill-defined meaning, and thus by no means very suitable to the conducting of clear and penetrating investigations.

At the present time it is probably Stolzmann who may be considered as the typical representative of that school of thought. Other authors of a similar type, like Stammler or Simmel, may have become more widely known and influential, but Stolzmann has the merit of having tried to follow up, one by one, and to elaborate systematically the suggestions made by older economists, since Rodbertus and Wagner, and then he has the additional asset of having shown himself more familiar with economic theory than many authors starting from different approaches. He is thus, I think, the one representative of his school best qualified to discuss these basic principles.

Now, Stolzmann declares as the fundamental idea in his theory of distribution that it is not, as taught by the marginal-utility theory, the purely economic conditions of imputation, i.e., not the contribution of each factor

[4] A few gratifying attempts to fill this gap have begun to appear in recent English and American literature, particularly in the form of a careful study of the theory of monopoly prices. But these attempts do not suffice to render superfluous the presentation offered in these pages.

of production to the total, that determine the distribution of the produce among landowner, capitalist, and laborer, but rather that it is social control. It is "power alone that determines the size of each factor's share."

What determines its distribution is not what each factor of production contributes to the total produce, but what the men standing behind the factors of production are able, by virtue of their control, to command for themselves as remuneration according to the social power exerted by each. These and similar statements are coupled with an incessant attack on the marginal-value theory based on this very same consideration, that in its theory of distribution it had failed to give any place to the decisive factor of "power," and instead had reversed into the old "naturalistic" interpretation, the theory of the eternal and unchanging laws of nature.

But obviously this was not a correct method of penetrating into the intricacies of the problem before us. To have "power" alone determine the manner of distribution was just as one-sided. It was all too obvious that power could not determine everything in distribution, and that the purely economic factors meant something too. Nor could this dilemma be solved by a compromise in assigning determining and decisive influence to control, and only a vague and restricted influence to natural forces. A true solution, it seems to me, is still to be sought, in spite of Stolzmann's 800 pages, and by other means than evasive dialectics.

Let us then first state what is really before us in this controversy much neglected in economic science: neither more nor less than the *scientific foundation of a rational economic policy*. For it is obvious that any artificial outside interference in the economic sphere will be without sense, unless the preliminary question of whether anything can be accomplished through the influence of "power" in opposition to the "natural economic laws" *can* be answered in the affirmative. The problem is to gain a clear and correct insight into the extent and nature of the influence of "control" against the natural course of economic phenomena. This is what we must *see*, or we shall *grope* in the dark! I do not think that this seeing can be facilitated or replaced by simply interchanging two terms for the different causal influences, or by ascribing a merely conditional influence to the former and a determining one to the other.

In the following I shall therefore try to raise a few questions and suggest their answers through which I think the way to understanding must lead. What I am offering here are nothing but humble suggestions, for I am well aware of the fact that a full systematic treatment would require much more than what is presented here. And moreover, in making the suggestions, I shall have to mention things most of which have not the least claim to novelty or originality. For the most part, I shall have to start with self-evident trivialities that are close at hand. I shall merely present them in a certain connection and lead them into certain conclusions, equally so manifest that they merely need to be formulated with full clarity and purpose.

II. Conformity or Contradiction?

As I do not wish to repeat obvious things, I do not stop to inquire whether "control" is an influential factor in the determination of prices, generally speaking, and more particularly in distribution. This I consider to be an accepted fact, settled long ago among all modern economists. My first question, therefore, is whether this influence of control asserts itself in conformity with, or in contradiction to, the economic laws of price, or whether it counteracts and invalidates the theoretical laws of price, or whether it harmonizes with these.

This question is analogous to one that had to be asked, once upon a time, in the field of production of economic goods:

> Is the admitted ability of man artificially to increase the production of goods a power that asserts itself apart from and in contradiction to the natural laws, or something that can take effect only within and in compliance with the natural laws of production?

As is known, everybody agrees, in regard to this question, that the "power of man over nature" can be exerted only in harmony with the laws of nature and in strict conformity to them. And I am convinced that once the question before us is explicitly and clearly stated, an analogous consensus of opinion will be easily arrived at: namely, in the problems of price and distribution, "power" (*Macht*) is evidently not asserted apart from or in contradiction to but within and in conformity with the economic laws of price. Let us first elucidate this with a few familiar illustrations in which the element of power is particularly patent.

There is first the case of *usury*: What is it that gives to the usurer that "control" over his victims which is at the bottom of the familiar "extortionate" usury prices? Nothing else than those very same factors which the allegedly "pure economic" theory of marginal utility furnishes us in its price formula: it is the urgent want of the borrower, which, but for the usurer, would go unsatisfied; it is the satisfaction of the most pressing wants that depend on the services obtained from the usurer.

As a result of this, moreover, the subjective value, determined by the corresponding utility, and therewith the upper limits of the possible prices, are being moved up. And since the borrower finds no aid from any competition among the suppliers of money who would have to underbid each other, there are equally absent all those more subtle price-restricting elements which, in the case of free competition, determine the valuation of the competitors to be contended with on the supply side.[5] The usurer, through his inflexibility, thus obtains the power to raise his price to almost the extreme upper limit, which corresponds to the high subjective valuation of the hard-pressed borrower.

Or there is the typical case of monopolies. Each owner of a complete monopoly has the "power" to fix the price of his product at any point he pleases. He again owes that "power" to the existence of certain classes of demand of the highest intensity on the part of people whose urgent wants and high purchasing power combine toward creating a correspondingly high intensity of demand, together with the factor just explained, that the absence of competitors does not establish any lower limits likely to interfere with their taking advantage of the most intense demand among the buyers.

But the fact that the monopolist's "power" is rooted in these very economic factors will also determine certain familiar and oft-explained limitations: the monopolist can, after all, never fix the price at a point higher than that close to the valuation of the highest, most intense class of demand, and, moreover, what is still more important, he must always reckon with the restriction of the quantity that can be sold at the higher price. He can, in other words, never escape the economic law according to which the price is fixed at the intersection of supply and demand, at that, point where equal quantities are offered and taken. Since he can arbitrarily determine amount and intensity of the supply which he may wish to offer, he may select that point of intersection at a low or at a high point on the scale of possible prices; but the higher that point is, the smaller will become the number of those remaining on the demand side, and the smaller will be the quantity to be disposed of at that point.

The monopolist thus never has unlimited control; he merely has the choice within the laws of price of different "economically possible" price levels. He

[5] See *Positive Theory*, 3d Ed. Chapter IV.

can select that price at which the combination of profit for each article, and the number of articles to be sold at that price, are likely to promise the greatest total profit, but he cannot exert his "power" in any other way than in conformity with the laws of price, for it is his behavior that establishes the "price law," namely the conditions of the amount offered at a given price level, but never can he counteract the laws of price.

The same as shown in these typical illustrations will probably always be true, whenever any kind of so-called "economic power" is applied, for it is this kind of power only that concerns our problem, not physical force or direct compulsion. Highway-robbery or extortion, force of arms or enslavement would, of course, belong to an entirely different category. But the exertion of economic control never introduces any new element into the determination of price that had not previously found a place in the purely theoretical laws of prices.

What conclusions are to be drawn from these facts in regard to our problem, I shall discuss later. For the present, let me refer to an important distinction that should be made in this connection between the influence of economic "control" and "non-economic motives."

For, while the effects of the latter may be contrary to, or conflicting with, the economic laws of price, the exertion of control must always be in conformity with them. Where non-economic motives, such as generosity, philanthropy, class or race-hatred, national sympathies and antipathies, vanity, pride, and so forth play their part in the fixing of prices and distribution, they may lead to prices at variance with, or contradictory to those to be expected according to the price-law formula. Whoever is moved by non-economic, outside considerations like friendship or humanitarian impulses to make a gift to the other party of the bargain, may as a buyer consent to a price that will exceed his subjective valuation and as a seller be content with a price far below his own valuation of the goods; or who, from patriotism or national prejudice, wishes to buy only from his compatriots, may consent to prices higher than those offered by their competitors in foreign countries.

This disturbing effect of noneconomic motives conflicting with the price laws is based on the familiar fact that the economic laws of price apply and claim validity only so long as the conditions on which they are based really prevail by themselves alone, without outside interference; analogous to the physical law of gravitation which holds true only under the assumption of the exclusive effect of gravitation, as exists for instance in a vacuum, while any interfering disturbances, such as friction or buoyancy as exercised by a balloon loaded with gas, would cause phenomena of motion contradictory to the law of gravitation. As distinct from that, the price-determining influences emanating from economic "control," or preponderance of "power," always remain within and in conformity with the formula laid down by economic theory: they never form an exception to, but always an application of the economic law of price.

From this there follow two things that are of significance to our problem: first that we neither should nor even can make any reservation as to the validity of the economic laws of price and distribution, when the influence of power comes into play. We need not, in regard to them or the non-economic motives, resign ourselves to the view that out economic laws are valid only so long as no such influence intervenes, as in the case of non-economic motives, that they hold good only in an imaginary world in which such influences are absent, but not in the world of realities in which social power plays a role more pronounced day by day. Nor should we take that resigned view, which would greatly diminish the usefulness of our theoretical laws and reduce their general validity, that our economic laws need not explain this or that case at all.

And then, this leads to the second conclusion: whoever wishes adequately to set forth the influences of social control in the explanation of price determination should not case aside those laws operating with so-called "purely economic" factors, but he should accept and develop them. He must not accuse them, as does Stolzmann in regard to the laws of price and distribution developed by the marginal-utility theory, of considering the effects of "natural factors" only, so that these theories would have to be discarded or rejected before one could adequately present the effects of social influences; no, indeed not; we should accept these laws and develop them through a careful analysis in those directions in which social forces actually become operative, when we try to formulate their effects on price fixation and distribution. Our task is not to discard but to develop these allegedly "purely economic" laws of distribution. The fact that economic control cannot affect the conditions of distribution in any other way than through the medium of the categories of "marginal utility" and "subjective value" is indeed not a remote conclusion, and has been explicitly stated here and there in the past, thus for instance, not so long ago by Schumpeter, who attacked a vague statement by Professor Lexis in his theory of distribution, referring to the influence of power, with these words:

> The reference to the relative strength of economic power in itself does not explain anything. For if one asks what constitutes economic power the answer can only be: the control over certain goods. And it is only from the

> economic function of these goods and the subsequent formation of value that a real explanation can be derived.[6]

Is this not just as if somebody were to argue that the speed of a steamship depends not upon the power of her engines in relation to the resistance to be overcome, or the weight to be propelled, etc., but on the number of rotations of the propellers, which, in turn, of course, depends exclusively upon the power of the engines?

Nor does that explanation do justice to what Stolzmann has stated at several other places in his writings to be the relation between the natural and the social "category"; namely, that natural factors operate as "conditions" or "premises," merely determining the possible limits, whereas within these limits and premises it is the social factors that really "determine" and "decide" matters.

Now it is quite true that, at first, the effect of economic factors is essentially that of delimiting the margins of the price; the subjective valuations of buyers and sellers merely determine the upper and lower price limit. But even this "setting" of "limits" may stiffen into actual "fixing" of prices, whenever and wherever the limits from above and below become so numerous and so closely placed that they reduce the interval to a small zone or even to one distinct point, as is generally the case with intense and at the same time perfect competition among many individuals. Nor does "control," on the other hand, ever "determine" anything. It can at best exercise a "constraining" influence, where economic delimitations establish the margin.

He who deals with a needy purchaser, in the absence of competition, has the "power" to fix the price at any point of the probably wide range located between the value of the urgently needed goods to the anxious buyer as the upper limit, and the value of the same article to the not-anxious seller as the lower limit. But at what exact point of this extensive range the price will ultimately be fixed is not determined by the relative "power" alone, for with equal "power" the philanthropist will make an entirely different price to the poor man than with the usurer. Or there may be different degrees of skill in bargaining, or in sizing up the position of the other side, of perseverance, of patience, of disregard for public opinion, of defiance or fear, even in case of equal objective "power," which will move the price to a very different point of the scale.

[6] Review in Vol. 21 of *Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*, 1912, p. 284; similarly also Oswald versus Liefmann in *Zeitschrift für Sozialwissenschaften*, N.F.

But when the "relative power" of the two parties seems to fix the price at a quite definite point of the scale, it certainly has again been nothing else than the coincidence of a majority of "restrictive influences" that narrow down the limits from both sides to such an extent that the price level itself appears to be "determined" thereby. Nor is any other outcome to be expected, for since, as shown before, "economic power" can become effective only through the intermediary determinants of the theoretical price formula, and since these determinants can again fix the price only through a consecutive *delimitation*, it is obvious that "power" can equally determine prices in no other way than through the fixation of limits; it does not possess any independent "price-fixing capacity," as distinct from this "restricting" or "limiting" ability.

From this it will become clear why, in the discussion of these questions, the old terms of "purely economic" or "legal-historic" categories, as Rodbertus called them, or of "natural" and "social" categories, as applied by Stolzmann, are not sufficient. These terms may have served a purpose in their time. At least they have, roughly speaking, indicated certain distinctions which should also be kept in mind, and they have been particularly helpful, towards the elimination of the old, one-sided view that there are only "natural laws" operative in our economic life. But in the theoretical explanation of the phenomena of price and distribution they do not play that role which their authors ascribe to them.

They fail to draw a straight and clear line of demarcation between social phenomena, because these are always permeated by both factors. A certain amount of the "historical-legal" or "social" element is sure to be present in all economic phenomena. There is no room left for an opposite, "purely natural" category. There literally exists no price nor any form of "distribution" (except perhaps highway-robbery and the like) without containing at least some legalistic-historical aspect. For, in every civilized community, there must always exist some social order that will apply when two members of that society get into contact with each other, and thus determine the nature of that contact. It is, therefore, either saying too little or too much, when anyone claims the phenomena of distribution for the "social," as distinct from the "natural," category; or it is but an empty truism, which, in its very concept, applies to every singly economic or social phenomenon, for obviously a Robinson Crusoe could not even so much as "barter" with himself.

One member of a society can only trade with another if both can acquire ownership of the goods to be exchanged under the existing social order. Any statement attempting to express more than that truism is too far-reaching. Thus Rodbertus shoots way beyond the mark, when with that peculiar emphasis he defines interest on capital as being the typical fruit of the existing social order, and denies its "purely economic" justification. And Stolzmann equally shoots beyond the mark, when he holds that the "social category" alone "determines" distribution, and when he falsely accuses our theory of distribution of teaching purely natural laws of distribution, because it also does justice to the economic foundations of social power. A closer analysis of social power, however, must inevitably lead straight across the line of demarcation between the "social" and "natural" categories; power is present on both sides of the line.

Social "control" is not an abstraction or a distilled product in which the influence of the purely social category is reflected as such. Nor are the explanations given by the marginal-value theory—which Stolzmann calls extremely "naturalistic"—an unmixed distillation of only the natural and purely economic influences. Instead they always take into consideration certain characteristics of the existing, or an assumed, economic order. With proper elaboration they will be found capable of expressing the entire influence of social power, but even so, it remains true that prices are determined more or less accurately by the subjective valuations based on the marginal utility. And it remains equally true that the value of productive goods depends on nothing else but the value of the products to be obtained from them. In the last analysis, therefore, the value of the factors of production depends on the share of the product attributable to each factor in the productive process.

"Social control" and "social category" are thus not synonymous. The latter term, like its antithesis "natural" or "purely economic" category, has been so confused and misconstrued that I would prefer to dispense with its use altogether in the interest of a clear presentation. Where I did use these terms in this or in previous writings, I did so, not because they form part of my own vocabulary, but rather because I could not well avoid altogether the use of a generally accepted term. In order to make myself understood, I had above all to use the language of those whose opinion I was discussing. Nor have I failed at earlier occasions to make reservations in this respect.

And now I shall try to submit a few thoughts concerning the direction in which the old economic theory will have to be developed so as to embrace systematically in its teachings the influence of "control" (*Macht*, or "outside power").

III. The Example of the Strike

What I have to say may, I think, best be developed by looking at a typical instance that illustrates price determination through social control in a particularly noticeable manner: the case of the settlement of wage disputes by means of a *strike*.

According to the accepted formula of modern wage theory, based on the marginal-utility theory, the amount of wages in case of free and perfect competition would be determined by the "marginal productivity of labor," i.e., by the value of the product that the last, most easily dispensable laborer of a particular type produces for his employer. His wages cannot go higher, for if they did, his employer would no longer gain any advantage from employing this "last" laborer; he would lose, and consequently would prefer to reduce the number of his workers by one; nor could the wages be substantially lower, in the case of effective competition on both sides, because the employment of the last worker would still produce a substantial surplus gain. As long as this is true, there would be an incentive to the further expansion of the enterprise, and to the employment of still more workers. Under an effective competition among employers this incentive would obviously be acted upon, and could not fail to eliminate the existing margin between the value of the marginal product and the wages in two ways: by the rise of wages, caused by the demand for *more* workers; and by a slight diminution of the value of the additional produce, due to the increased supply of goods. If these two factors are allowed to operate without outside interference, they would not only delimit wages, but actually fix them at a definite point, owing to the nearness of these limits, let us say for instance at $5.50 for a day's labor.

But let us now assume competition to be not quite free on both sides, but that it be restricted, or eliminated, on the side of the employers; either because there exists only one enterprise of that particular branch of industry over a large territory, thus giving it natural monopoly over the workers seeking employment, or because there is a coalition of entrepreneurs within that industry, who mutually agree not to pay their workers a wage higher than, let us say, $4.50. In either case, this coming into play of "control," a superior power of the employers, will certainly suffice to lead the wages to be fixed at a point below $5.50, say at $4.50, other conditions remaining equal.

How would this correspond with the standard explanation offered by the marginal-value theory? The answer is not difficult. In fact, the solution has been repeatedly stated in the fairly well developed theory of monopoly prices. I shall merely try to restate the familiar arguments in a clear and systematic manner.

We have before us a case of "buyers' monopoly." The widest margin within which the monopoly price can be fixed is limited, from above, by the value of the labor to be purchased by the entrepreneur exercising that monopoly, and from below, by the value of unsold labor to the laborer himself. The upper limit is determined by the value of the produce of the *last* worker, for the reason that the entrepreneur will not assume any loss from the last worker he employs and that the same amount of labor cannot be paid for in unequal amounts. This upper limit of the possible wage would, in our illustration, be $5.50.

More is to be said in regard to the lower limit. The very lowest limit is determined by the utility that would be left to the worker if he were not to sell his labor at all. It is thus, primarily, the use-value to the worker of his own labor, provided he can make some use of his labor for himself alone.

In thinly populated new countries, with an abundance of unoccupied land, where everybody may become a farmer at will, this labor-value might represent quite a considerable amount. In the densely populated "old" countries, however, this limit is extremely low, because most of the workers lack capital, and can hardly ever profitably utilize their own labor as independent producers.

A worker who has accumulated some savings may find some compensation for not selling his labor in the escape from discomfort and hard work, or in the enjoyment of rest and leisure. Those who have any such means of subsistence will figure out just what minimum of wages would compensate them for the effort of working. To those who have nothing to fall back on, the marginal utility of a money income to be gained by working is so extremely high that even a very low wage will be preferred over the enjoyment of leisure.

In order to illustrate this with actual sums of money, let us assume this lowest limit, the use-value of labor and the enjoyment of leisure, to be very low, say $1.50. This amount may be even far below the minimum of subsistence, which, for well-known reasons, determines the lower limit of the possible *permanent* wages without, of course, determining temporary wages or those of each individual case.

But there may also arise other intermediate wage levels. In the foregoing illustration we have excluded all competition among the employers in that one particular branch of industry. If such competition were existing, it would inevitably force up the wages to the upper limit of $5.50; but even in its absence, there would still remain a certain amount of outside competition, namely with employers in all the other branches of industry. This means that the worker in our particular industry still has the alternative of escaping the very low wage offered to him in his own line, by switching over into other branches of production, although a number of circumstances may greatly reduce the gains to be expected from this expedient. To change from one occupation, for which one has been trained and adapted, into another, is likely to result in less productivity, and the maximum wage level attainable in the new occupation will be likely to remain far *below* $5.50.

The curtailment in wages will vary for each worker entering into a new branch of production according to his adaptability, or his ability to perform a different kind of skilled labor. The most painful cuts in wages will be suffered by that probably largest portion of the workers, who are not adequately trained to perform any other kind of skilled labor, and who will have to switch over from "skilled" into "unskilled" trades, and accept a poorer position in some type of common labor. Still another slight lowering of the wage level may result from the fact that the influx of new workers into that occupation may force down slightly the marginal productivity of the last worker, and thus lower the wage level for all.

Under the influence of all these circumstances we would now have to assume that the various workers set for themselves a series of individual minimum limits, below which no one would allow his wages to be reduced by the monopolistic pressure of the entrepreneurs. To illustrate these various gradations of minimum wages, let us assume the minimum of existence to be $3.00, which, as has been said, would represent not the temporary, but the permanently possible lowest wage level. The wages obtained by the most common type of labor would thus be very near to $3, say $3.10. A smaller and smaller number of workers could find employment in other occupations, as the wage rate increased in the following ascending sequence: $3.50, $3.80, $4, $4.20, $4.50, $4.80, $5. Note, however, that the upper limit of this wage scale would still remain below the marginal product of the original occupation, thus below $5.50.

What effects and limitations will result from this state of affairs in regard to the monopolistic fixation of wages within the original widest zone of $1.50 to $5.50?

Let us assume, to begin with, that the monopolistic entrepreneurs use their power in an unrestricted, purely selfish policy, unaffected by any considerations of altruism, or consideration of public opinion, uninfluenced by any apprehension that the workers might fight back through means of a labor union or strike, and convinced that they are absolutely assured of an atomized, effective competition among the individual workers. Under such premises, the rate of wages would be fixed according to the general formula applying to a purely selfish monopoly, already mentioned before in another connection: they would be fixed at that point which promises the largest returns, after a careful consideration of all circumstances, and with due regard to the inevitable fact that with changing prices, the amount of goods to be disposed of profitably will change, only that in the case of a buyers' monopoly the results are exactly opposite to that of a sellers' monopoly. Or stated concretely: the *lower* is the wage rate fixed by the monopolist, the smaller will be the number of workers available, and from a correspondingly smaller number of workers will the entrepreneurs be able to collect that increased return which might accrue from pushing the wage scale down below the value of the product of the marginal laborer, i.e., below $5.50; in fact, this value might even increase through a reduction in the output, which would cause a rise in the price of the finished goods.

Of course, there may again enter certain counteracting tendencies, such as increasing costs, with the restricted expansion of the enterprise, the growth of overhead expenses, etc. With an increase in wages (which, however, we always assume to remain below the marginal product of $5.50) the gain per laborer would decrease; but, to offset this, the number of workers from which that gain can be made will increase, or even be brought back to normal. From these considerations, it would be most unlikely that the monopolists could fix the wage rate at $1.80 or $2.00 or at any point below the minimum of existence of $3, both because this rate would not be likely to remain in force, and because it would be lower than the wage paid outside for common labor, and therefore would at once cause the majority of the workers to withdraw into those unskilled occupations which, in our illustration, receive $3.10. This danger will diminish gradually with each increase in the wage rate, and disappear almost entirely at some point, say at $4.50, at which only a few exceptional workers might find it possible to obtain higher wages in other skilled occupations, if such be open to them at all. Under the assumed circumstances, the danger of men withdrawing would have almost disappeared, and a successful attempt might be made by the monopolistic employers to fix the rate of wages at this point, without running the risk of any considerable restriction of output caused through a shortage of workers.

Two other considerations might influence an intelligent monopolist to exercise his power "with restraint." First, a wage rate remaining far below that of other skilled occupations may, if only in the long run, lead to a shortage of workers, for while the laborers accustomed to their occupation might hesitate to change their job owing to the difficulties of transition, the new supply would fall off. Secondly, too high a rate of profit per worker would exert too powerful a strain on the employers' union, and is likely to lead to a dissolution of the coalition by those members wishing to expand their business, or to the formation of new enterprises outside of the coalition, thus creating new competition, likely to cut down prices and to raise wages. Generally speaking, the fear of outside competition forms perhaps the greatest safeguard against too unscrupulous a use of monopolies preying on the general public.

I hardly need to re-emphasize the fact that if, under such conditions, through the "control" of the monopolists the wage level were to be reduced from $5.50 to $4.50, this would, from first to last, happen by virtue of and in conformity with the elements of the price-law, as formulated by the marginal-value theory. It is in consideration of these elements that both contending parties would fix the price at that level, by "delimiting" it from above and from below. By such action, no "fixed" price would be determined, but merely a wider price-range, as distinct from the case of perfect competition on both sides. The monopolists might just as well decide upon $4.20 or $4.80 than upon $4.50. This situation is explained by the fact that several factors entering into the calculation, such as the number of workers likely to drop out at a certain wage level, or the probability of outside competition, are not definitely known, but only to be conjectured. The monopolists would naturally try to select the most favorable point of the wage scale; but, owing to the uncertainty of so many elements entering into the fixation of this optimum point, there results a certain more or less elastic zone for its approximate location, just as in ordinary market competition for prices, when negotiations are carried on with covered cards, traders less experienced or less shrewd commit errors in sizing up inside marked situations, so that actual prices are caused to fluctuate over a wide range around the "ideal" market price.

Let us now turn to the other case, equally interesting and complicated, the influence of "control" exerted by labor unions, through the use of their instrument of power, the strike. Let us retain all previous assumptions with the same figures as above: $5.50 for the value of the product of the "last" worker, $1.50 as the personal valuation to the workingman of his unsold labor, $3 as the minimum of existence, etc., and introduce into our assumed case only one novel element, namely that the workers of the industry under discussion do not compete against each other, but that they be unionized, and thus be in a position to enforce their joint demand for higher wages by means of a strike.

Now I do not for a moment deny that this coming into play of "power" on the part of the workers may profoundly influence the price of labor. It might even raise it not only above the level of $4.50, reached in the case of reduced competition among the monopolists, but even beyond the level of $5.50, which would have been attainable under perfect competition. This last fact is particularly noteworthy and striking, for hitherto we had regarded the value of the marginal product of labor, *precisely that $5.50*, as the upper limit of the economically possible wage, and at first sight it might look as if "power" could actually accomplish something in contradiction to the price formula of the marginal-value theory, something that did *not* conform to this law, but disproved it.

Here now enters into our explanation the distinction between marginal utility and total utility, i.e., the fact that the value of a total aggregate of goods is higher than the marginal utility of each unit, multiplied by the number of units contained in the total. The fundamental question in the evaluation of a commodity or an aggregate of goods is always how much utility may be derived from the command over the good to be valued. Under the assumption of competition among all the workers, the thing to be evaluated by the employer is always the labor-unit of each worker. If the employer had in his employ, for instance, 100 workers, his negotiations with each one of the 100 workers over his wages would merely hinge upon the question of how much additional profits the employers would make by employing that one additional worker, or how much he would lose by not employing this one last worker. In that case we were fully justified in arriving at the marginal utility of each unit of labor, that is, the increase in output which the labor of the last one of the 100 workers adds to the total output of the enterprise, or $5.50.

But now this is different: in the case of a joint strike of all the 100 workers, the point in question for the employer is no longer whether he is going to run his enterprise with 100 or 99 workers, which to him would mean a difference in the output of $5.50, but whether he is to keep his enterprise going with 100 workers, or not at all. On this depends not 100 times $5.50, but obviously much more than that, if for no other reason than that labor is what is called a "complementary" good, a good which cannot be utilized by itself alone, without the necessary other "complementary" goods, such as raw materials, equipment, machinery, etc. If only one man out of a hundred withdraws from the enterprise, the utilization of the complementary factors will, as a rule, be little disturbed. One single operation—the one which can be dispensed with most easily—will be omitted, or replaced, as far as possible, through a slight change in the division of labor, so that with the deduction of *one* man, not more is lost than the marginal product of one day's labor, namely $5.50.

The withdrawal of ten men would cause a more serious disturbance. But a changed disposition in the use of the remaining ninety workers would probably make it possible to find some way for at least the most important functions to continue unhampered, and the loss again to be shifted to that place where it is least felt. A continued depletion of the complementary good, "labor," would make itself felt more and more severely. While the withdrawal of the first worker would have caused a decrease in the daily production of only $5.50, that of the second might amount to a diminution of the output by $5.55, that of the third by $5.60, and that of the tenth by as much as $6. If, as would be the case in a strike, all the 100 men walked out, there would be caused a loss, not only of the specific labor product of those 100 men, but additional productive goods would cease to be utilized. The machinery would have to stand still, the raw materials would lie idle and depreciate, etc. The loss in the value of the product would increase out of all proportion, far beyond a hundred times the last laborer's marginal product.

The loss, of course, would be subject to great modifications, according to the actual conditions existing in each case. If the idle machinery and capital do not suffer any other damage by being idle, the additional loss would merely consist in a postponement of the completion of the respective products from the capital goods, temporarily not utilized on account of the lack of the complementary factor of labor. Their produce will be obtained in an undiminished amount only at a later period, after the resumption of production. This loss must at least equal the interest on the dead capital for the period of idleness. It may amount to more, if the delay should involve added losses, such as the inability to take advantage of favorable business opportunities, whereby indirect depreciations may be incurred.

But the damage would be still further increased if the specific character of the idle capital goods should not only cause a temporary delay, but a definite curtailment in the profits, as for example in the case of perishable raw materials, such as beets in an idle sugar refinery, or agricultural products that cannot be harvested owing to the worker's strike, unused animal power, such as horses, or the water power of an electric power plant. The enforced shutdown may also threaten the fixed capital investments, as in mines, where ventilation and water pumps must not stop, lest the entire plant be destroyed.

How does all this affect the fixation of wages in the case of a strike?

Let us realize, first of all, that although the wage disputes are formally concerned with the *per capita* wages for *each individual worker*, to the manufacturer it is always a question of obtaining, or not obtaining, the *total* labor of these 100 workers. He will either get all of the workers, or none, according to whether the negotiations lead to an agreement, or to a break. The decision as to how much wages he can pay at most will thus hinge on the value that the hundred workers represent to him jointly. The per capita wage is a secondary item, and is determined by dividing the total value by the number of workers. To him, this quota represents only an arithmetical concept, not a value; to him it does not represent the value of a unit of labor.

But how high is the *total value*? This is explained by the theory of imputation. The value of that aggregate of labor is derived from the value of that amount of products which may be ascribed to the availability of that particular total of labor, and this again is identical with the amount of the product of labor.

Here comes into play a remarkable phase of the theory of imputation, which I recently had to defend in detail against differing opinions.[7] For if the withdrawal of that amount of labor, whose value we are trying to ascertain, not only prevented the use of that labor itself, but also stopped the use of other, complementary goods, the utility of these goods would have to be added to that of labor, regardless of the fact that under certain circumstances the use of labor might have to be imputed to its corresponding complementary good, without which the products could not be obtained.

I shall merely recapitulate here without detailed discussion the various steps of the argument leading to this conclusion. Fundamentally, the total value of a whole group of complementary goods is dependent upon the amount of the (marginal) utility which they possess jointly, and thus, in case of complementary productive goods, upon the value of their common product.[8]

The distribution of this total value among the various units of the complementary group may take different directions, according to the different causation. If none of the units admits of any other use than joint use, and

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[7] *Positive Theory of Capital*, Book III, Chapter IX on the Theory of Value of Complementary Goods (Theory of Imputation).

[8] *Positive Theory*, Book III, Chapter IX.

if, at the same time, no one member contributing toward the joint use is replaceable, then every single member has the full total value of the entire group, while the other members are valueless. Each complementary unit is equally capable of holding either one of the two valuations, and it is solely the outside circumstances that determine which one of them shall be worth "everything," by being absolutely essential in the ultimate completion of the group, or which one is worth "nothing" through its isolation.

In our case of an impending strike of all the hundred workers, the employer is threatened with the total loss of the joint gain arising from the use of the two complementary groups, labor and capital, to the extent stated above, and this is why in that case he would have to attribute to labor that *total* joint utility, including that part which under other conditions might have to be attributed to the complementary capital goods. His subjective valuation of labor must be based upon all these things.[9]

Consequently, the upper limit for the highest rate of wages will advance. For all the hundred workers jointly it will rise beyond the hundred-fold amount of the single value of each day's labor, that is, beyond 100 times $5.50, at least by the amount of the interest of the capital left idle and perhaps even above this, by the amount of the actual loss from perishing or deteriorating complementary capital goods. Thus, for instance, in case there be merely a postponement or loss of interest, it would rise above $550, up to, say, $700 for each day; in case of a direct loss in the utilization of the complementary goods, it would rise in proportion to the extent to which an actual loss takes place, perhaps to $1000, perhaps even to $2000 per day. And the maximum of the economically possible wage level for each individual worker would thereby rise from $5.50 to $7 or even to $10 or $20. This means that with any wage level remaining below this maximum, the entrepreneur would, at least for the time being, fare better than if he were to cease employing all the hundred men.

This "faring better" need, however, not imply actual profits to the entrepreneur, but merely a smaller loss than he would incur in the other alternative—the "lesser evil," which is, of course, to be preferred to the greater one. This rise of the last possible per capita wage to $7 or to $20, on the other hand, does *not* represent the subjective valuation of one day's labor to the entrepreneur. This has already been stated in the foregoing and it can hardly be sufficiently

[9] Naturally, I cannot, in passing, review the entire difficult and complicated theory of distribution with all its details, and have to ask the readers who are interested in the complete discussion of the foregoing conclusions to read the fuller explanation given in my *Positive Theory of Capital*.

emphasized. The employer would never pay that wage, if it were a question of employing *one* laborer only. It represents the hundredth part of the total value of 100 laborers, which is a very different unit from the individual value of each unit of labor.

In the wage negotiations between an employer and a labor union the range would thus be limited by the value to the laborer of his unsold labor (i.e., the amount of $1.50 as his lowest limit), and by the per capita quota of the total value of all 100 laborers at the rate of $10 as upper limit, to take one of the three figures as an illustration.

In our imagined case, direct competition being absent on both sides, entrepreneur and workers would meet each other within their limits on similar grounds, just as the two parties of buyers and sellers meet in the case of isolated exchange.[10]

In theory, it would not be unthinkable nor impossible for the rates to be fixed at any single point within the wide range between $1.50 and $10. We have, of course, come to know some circumstances that make it appear rather unlikely, though not altogether economically impossible, that the wages be fixed within the lowest section of the zone lying between the absolutely lowest limit and the minimum of existence of unskilled labor; and for reasons of similar nature, it is not very likely that the wage rate would be raised up to a point near the upper limit of $10. That it could not be kept at such a point for any length of time I shall try to demonstrate in a future investigation which I consider of special theoretical import. But not even temporarily will it readily be pushed so high. For any wage level substantially exceeding the output of the "last worker" would meet with a strong and increasing opposition on the part of the employers as involving a loss to them. Before granting such a wage rate, they would probably prefer to risk the decision of the supreme trial, consisting in fighting matters out in a lockout or strike; although an intermediate wage, approximating the actual service of the last worker, might conceivably be granted by the employers, anxious to avoid the risk of the certain losses involved in a strike, and the added uncertainty of its outcome. Nor would workers find it to their advantage to push the wages up to level actually causing losses to the entrepreneur, for this again might threaten them with a restriction, or suspension, of work, and force them out of their jobs. Thus there enters the question about the permanency of wages, which will be investigated later.

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[10] *Positive Theory*, Book IV, Chapter II.

On the other hand, the workers' difficulties will become all the greater by the strike, the more excessive wage demands they make. The threat from strike breakers or "scabs" from other branches of industry will increase with the more favorable terms which the entrepreneur can still grant below the refused rate of wages. If the striking workers should insist on a wage rate of \$9, a wage of \$7 may perhaps already contain a very tempting premium to scabs and substitutes, who in other occupations requiring similar qualifications may obtain only a wage of \$5.50, corresponding to the output of the last worker. And once substitutes are employed, the cause of the strike is usually lost, whereas, in the other alternative, the outcome is by no means certain.

In a strike, that party wins, as a rule, which, popularly speaking, can "hold its breath" for the longest time. To the worker, the strike means unemployment. For the time being the worker may meet this loss by means of savings accumulated for this purpose, by subventions from strike funds, by consuming his property, by selling or pawning dispensable goods, or by incurring debts as far as his credit will permit. With the longer duration of the strike, these savings will become smaller and smaller until they are used up. During the period of gradual diminution of savings, the marginal utility of the rapidly decreasing means of subsistence goes up, more and more of essential wants go unsatisfied, and more and more of the vital necessities are neglected, with the increasing shortage of funds.

Finally the point is reached at which the very maintenance of life depends on a renewal of income through work, if only at a modest wage: at this point even the most obstinate resistance of the strikers is broken—provided, of course, that the resistance of the opposite party, the employer, is not crushed beforehand.

In the ranks of the employers there are the same phenomena. With the increasing duration of the strike, the desire for a settlement becomes more and more intense. The idle plant produces no income. Some of the costs of production and at least the personal living expenses of the manufacturer continue, and have to be met. If the entrepreneur has a large fortune, these expenses may be covered from that. If not, then the pressure of the strike will be felt much more rapidly and intensely. In any case, there are here two very distinct phases of the effects of the strikes that should be distinguished. The successive and increasing lack in the means of subsistence may first threaten the business of the entrepreneur, and then, if there are no funds left for the most urgent living expenses, his personal existence.

This latter, more intense effect of strikes, will normally arise only in the most exceptional cases. Nor is it likely, for these and similar reasons stated before, that in a strike wages will be fixed at the most extreme—neither at the very lowest nor at the very highest—marginal regions of the wide range "economically possible," at least for the time being. In our illustration this zone was assumed to extend from $1.50 to $10, and a wage rate below $3 would be just as unlikely as one above $8, although, as I want specially to emphasize, such extreme wage rates are not unthinkable, nor altogether economically out of question for a *short period* of time.

Most of what has been said so far is based on obvious and almost trivial facts and observations which have become sufficiently familiar through common experiences with strikes. I have merely restated these matters, so to speak, in the terms of the marginal-utility theory, in order to make plain the essential point of the theoretical principle under discussion, namely, that the "influence of power" in the case of strikes, so familiar to all engaged in industry, is not altogether distinct from, or opposed to, the forces and laws of the marginal utility theory, but wholly *in conformity* and *in harmony* with these, and that every deeper analysis of the question, through what intermediate agencies and to what marginal points "power" may control the course of events at all, must lead into the more specific exposition of marginal utility, in the theory of imputation, where the ultimate explanation is to be sought and found.[11]

There is another far more interesting question: When will the terms of distribution, obtained through means of power, be of lasting effect?

This question is all the more interesting, in that it is by far the most important one. Even the most ephemeral fixation of prices or wages may have considerable importance to that group of individuals or for that short span of time that happens to be affected by it. On the other hand, these temporary fixations mean little or nothing for the permanent economic welfare of the various social classes; just as the classical economists have held long-trend prices to be far more important and challenging than momentary fluctuations; thus Ricardo hardly touched upon the latter, and found it worthwhile only to elaborate the theory of long-trend prices. Similarly, in the theory of distribution, paramount importance is attached to the permanent trends according to which the shares of the various factors of production tend to be

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[11] I need not call the attention of those familiar with the theory to the fact that all of what I have said here is absolutely in conformity with the so-called "theory of marginal utility," even in parts where I had to deal with the concept of total utility. For this is merely a term introduced into the modern theory of value, chiefly by the Austrian School, as one of its particularly characteristic traits. This same theory, of course, covers and explains those cases in which valuation is based on total utility as well as those far more frequent cases in which valuation takes place literally from a "marginal utility." (See my *Positive Theory of Capital*, Book III).

distributed as distinct from all ephemeral and temporary fluctuations. Even the most ephemeral phenomena must also be understood and explained, if for no other reason than that the laws controlling them are, in the last resort, not different from those determining their permanent effects; but it goes without saying, that that phase of our theory which covers those cases outlasting the others in time and space will be far more important to us than the explanation of rapidly passing exceptions.

But there is a second reason why it seems to me that the consideration of the influences of "power" deserves greater attention from the viewpoint of their permanency, for, as far as my knowledge of economic literature goes, this most important phase of the subject has never been investigated.

While the problem of the influence of power on prices as such has hitherto been only scantily treated, and never in a systematic manner, in economic theory, fundamental investigations into the permanent effects of such influences of power seem to be totally lacking, so that here we enter, in a certain sense, upon literary virgin land.

IV. The Various Alternatives

Let me again start from our concrete illustration, and discuss, one by one, the various alternatives. What is typical and generally true in each individual case will thus easily become clear, and, moreover, specially stressed and summarized at the end.

Temporarily, as we have seen in our assumed conflict between the power of entrepreneurs and workers, any wage rate between $1.50 and $10 was economically possible, although it was not likely to be fixed, not even for a short period, near the extreme upper of lower limit possible, but rather somewhere near the middle of the total range of wages. In order to make our discussion theoretically exhaustive, we shall have to consider both extremes, as well as each one of the possible rate levels within the total range of wages.

1. **I need not waste any words about the fact that a wage rate *below the minimum of existence***—thus in our example below $3—cannot possibly be permanent. This follows from the familiar reasons stated often and in detail elsewhere, pointing to the diminution of the labor supply as the inevitable consequence of a wage level no longer sufficient for the support of the workers' families, and to the subsequent increase of wages, necessitated by the law of supply and demand—allowing, of course, for familiar exceptions in favor, or rather in disfavor, of those exceptional types of occupations which are being followed merely as a sideline by people who draw their real means of subsistence from other sources.
2. **Nor can wages be fixed permanently *below the rate of the most common type of labor***, in our illustration, below $3.10. This hardly needs any further explanation, for the reason that all the causes applying to point 3 which follows, will evidently apply here too, even to a greater degree. The exceptions, familiar since Adam Smith, for occupations connected with special attractiveness or privileges

and in which, therefore, many people are satisfied with a smaller remuneration than that available in other less attractive or less honorable occupations, will, of course, also apply here, without, however, affecting the general theory of distribution.

3. **Wages higher than those of common labor, but *below the "marginal product of the last laborer"*** (in our illustration, wages between \$3.10 and \$5.50), will hardly be able to remain in force, if imposed through temporary preponderance of power, certainly not when the use of that power was limited to one particular group, such as to the workers of a single factory, or to a single branch of production, while in other occupations, requiring the same or a similar amount of skill, wages prevail commensurate with the natural amount of the marginal product (in our case, of \$5.50). For although the personal discomfort connected with a change of occupation may prevent a large-scale exodus of an entire generation of skilled workers from a less remunerative branch of production into other, better-paid occupations, the gradual effect upon the selection of occupation among the younger generation of workers will be all the greater. They will naturally seek the better-paid occupations, and shun those with exceptionally poor wages. Normal deficiencies in the original stock of workers will no longer be met, and the gradual depletion of employees will ultimately force the employers to offer their workers a wage rate equal to that obtainable in other industries of a similar type.

A more complex analysis would have to be made in the case of a universal reduction of wages through artificial forces affecting all lines of production. Such a contingency is, however, far less likely ever to occur, for the reason that a universal coalition of entrepreneurs of all branches of industry which alone could exert such control would be extremely hard to organize, and still harder to hold together. But let us assume such a case, at least for a certain period of time, for our theoretical analysis. Obviously, the worker would then no longer find it possible to escape into another, more remunerative branch of production, and thus there would cease to exist that most influential factor, which, in the case of a partial reduction of wages, would sooner or later ensure the restoration of the original wage rate.

Instead, there would now appear some new, although slow-working, factors within the ranks of the entrepreneurs. A wage level fixed below the marginal productivity of labor results in a special gain that goes to the employer, first, in the form of an increased profit, which, however, in case of a prolonged continuance of this condition, will have to be surrendered in part to the capitalist in the form of higher interest, for the reason that pending on and owing to this condition other equally profitable types of investment will be open to capital. The very fact of an increased entrepreneur's profit will in itself alone work as an incentive to the expansion of existing enterprises (this incentive might perhaps be temporarily curbed by binding the old entrepreneurs to coalition agreements) and also to the formation of new enterprises founded by outsiders, not belonging to the coalition, who, of course, can attract the needed number of workers only by offering somewhat higher wages. The increased interest rate, moreover, will shift the margin of profits among the various more or less capitalistic methods of production toward those with more machinery, labor-saving devices, and so forth.

An increased interest on capital and a cheaper supply of labor will transform the smaller profits into losses among those producers near the margin of profitability, especially in these enterprises where a low rate of interest prevails coupled with higher wages, so that where previously a slight advantage had been found to exist in a more capitalistic method of production, it now becomes more profitable to reverse the methods of production through increase in the use of manpower, and a less intense use of capital equipment.[12] Naturally, this incentive will not lead to quick results. Capital invested in such a manner in instruments of production will not suddenly be abandoned, but rather tend to be used up first, or at least not be replaced, because human labor, having become cheaper, will be preferred in its place. This again will lead to an increased demand for labor which can only be met by granting somewhat higher wages. These, of course, must not completely neutralize the advantages of the less capitalistic method of production. This motive may be operative both within and without the employers' coalition, and to a very different degree among the various types of producers. It will be hardly at all operative among those who had employed very little fixed capital and much physical labor; very little among those with whom capital predominates to such great technical advantage that even considerable changes in the

[12] That, and how low interest and high wages tend to make for the lengthening, and high interest and low wages for a shortening, of the average period of production, I have shown in my *Positive Theory of Capital*, Book VI, Chapter X.

level of wages or interest will not bring about any transition towards a less capitalistic method; but far more among a third group of producers, whose technical equipment is such as to divide their methods of production just equally between machinery and labor. These great individual differences will not remain without profound influence on the probable course of events.

Industrial coalitions comprising the producers of one and the same line of industry, or of similar industries will as a rule be based on a harmony of interest, sufficient to favor a continuation of the coalition that benefits all members equally. But if the coalition should include certain groups whose interest makes them disagree in regard to the desirability of a continuance of the coalition, then in all human experience, harmony cannot be maintained, particularly not when the inevitable appearance of outsiders pierces a hole through the victorious phalanx of entrepreneurs. All employers, of course, stand to gain to some extent by keeping the wages down, but these gains will differ widely in the various industries, according to the physical distribution of capital and labor. In those branches of production in which this gain is comparatively small, it may be neutralized by the enforced inability to expand or to introduce more profitable methods of production. Now, if an industrialist sees that the benefits he has sacrificed in favor of the coalition are unscrupulously reaped by outsiders and feels their competition more and more keenly, then the psychological moment has come for his withdrawal from the ranks of the coalition; for those industrialists whose particular situation would enable them to profit most from an expansion and a change in their methods, in violation of the rules of the coalition, will prefer to reap these advantages for themselves, before their last chance has been destroyed by outsiders. And that is the beginning of the end of the coalition: the reappearance of a steadily widening stream of competitors with the final effect that the wage level will again be raised from that dictated by superior control to the level of free competition, i.e., to the level of the marginal product!

This kind of deductive reasoning may perhaps be found to be convincing only in part. But it should be remembered that in problems of this nature there are no other than deductive methods at our disposal. We shall never be so fortunate as to assemble reliable direct observations, or to make experimental tests. The assumed employers' coalition embracing all industries has never actually existed, and if it should ever come into being, it would soon disappear again, like all social groupings, and it could not even be considered as an empirical proof of my deductions. The question might still be, whether its dissolution was caused by the factors cited in my deduction, or by some other, new factors. The reasons given in my argument can, by their very nature, operate gradually only. And conditions would hardly remain unchanged for so long a period as might be necessary to produce these effects.

One would never be able to determine beyond a question through purely empirical methods, whether the ultimate result was due to the gradual undermining influence brought about by these alone *within* the original state of affairs, or whether, and to what extent, it might be ascribed to the advent of new factors. But precisely because we are dependent in these questions upon deduction as the sole source of our knowledge, and because they cannot be verified through direct observation, as is possible in other cases, we have no choice other than to elaborate such deductions; and these, of course, must be made on the basis and according to the methods of economic theory, which alone after all, as we have seen, will explain the influences of outside power. At the same time, we must observe that supreme caution and precaution which the use of the deductive method always requires, particularly where the lines of deductive reasoning are long and complex, and where it is not possible to check them up, step by step, through empirical observations.[13]

It is from these considerations that I wish to submit here and in the following pages a few suggestions which, I realize, constitute only a rough, unfinished sketch of such deductive thoughts as may lead to a more detailed investigation later on, and in a general way at least, may indicate the direction in which, in my opinion, the attainable amount of knowledge and understanding may be found.

Let us then continue our inquiry into the wage rates located above the level of the marginal product (within the range of possible wages), and beginning from above, start with the highest conceivable rates.

4. **It is obvious without any further discussion that such extremely high wages cannot endure**, because they would cause such great capital losses to the entrepreneur that their perpetuation would lead

[13] See preface to my *Positive Theory of Capital*.

to bankruptcy, although temporarily they might represent the minor evil as against a prolonged shutdown. (See above.)

5. **Nor can the wage level following next**, as is equally obvious, remain in force permanently because, though not threatening the entrepreneur with immediate financial ruin, it would still cause him actual losses, although of a smaller extent. If continued over a long period of time, even small losses must also lead ultimately to financial ruin, so that case 5 would flow over into case 4; and without doubt, in such cases the entrepreneurs would prefer to liquidate their unprofitable business, or at least give up the unprofitable branches.
6. **The greatest theoretical interest attaches to the next-following level of wages**: can that wage rate endure which, though not causing any actual loss of capital to the entrepreneur, absorbs or reduces the interest on his capital investment?

Let us first answer a preliminary question. Would it be possible for the entrepreneur's profits proper to disappear or to be permanently reduced, while in other branches of business, such as in the loan market or unproductive investments like real estate (apartment houses), the rate of interest remained unchanged?

The answer is emphatically, No! Entrepreneurs working with borrowed capital would suffer an actual loss from the difference between the higher rates of interest that they would have to pay to their creditors, and the lower rate which that capital would bring them in their business, and thus the matter would lead back into the situation presented under point 5 above.

Nor would those entrepreneurs who work wholly or in part with their own capital be able to stay in business under such a state of affairs. Once capital is invested in an enterprise, it may have to content itself with a lower rate of interest, when and because its withdrawal would not be feasible nor possible without a great depreciation of the capital stock itself. There would be little inducement to replace used-up capital funds, if the investment should promise a smaller return to its owners than the same capital could produce in other kinds of investments, such as in real estate or in the loan market. And the familiar and often-discussed causes which, generally speaking, tend to equalize the interest rate in the various markets of capital (not artificially isolated) would surely also tend to prevent a one-sided diminution or elimination of the entrepreneur's original capital gains.

Their reduction would thus either have to extend all over the other fields of capital employment, or they could not occur at all.

The question under investigation thus assumes the following form: "Can that wage rate remain in force permanently which, though not affecting the entrepreneurs' capital stock, takes away capital interest from business, or at least reduces the 'natural' rate of interest prevailing under free competition?" In other words, can a wage increase obtained by the use of power permanently absorb interest on capital, or reduce it below its natural level?

The rather difficult answer to this question will be somewhat facilitated if we investigate separately the two stages involved, namely, the *total* and the *partial* absorption of interest on capital.

I consider it impossible that interest could disappear completely from a nation's economic life, with the exception of the almost unthinkable case, hardly applying here, of capital accumulation far exceeding all demand. The disappearance of the "incentive to thrift," contained in interest, would eliminate that most important portion of capital, which is formed through savings made only for the sake of interest. It might happen, of course, that that other type of savings, intended as a "rainy-day penny," might then be somewhat increased, if people were to provide for their future by accumulating capital alone, without the support of interest. But it is generally believed that on the whole there would result a substantial diminution of capital stock, and the subsequent shortage of capital supply would probably exert a strong pressure in the opposite direction, i.e., in the direction of a renewed increase, rather than in that of a permanent disappearance of interest.

But even though the supply of capital were to be reduced, the thing that would be of decisive importance is the demand side of capital. Let us assume for a moment that interest had actually disappeared from economic life, i.e., that present and future goods could be exchanged for each other on the same level without discount, and that loans could be obtained without interest. The inevitable consequence of this would be an increase exceeding all bounds in the demand for present goods. The empirical law of the larger productivity of time-consuming, more highly capitalistic, roundabout methods of production, could not fail to make itself felt, in the sense that industrialists would compete with each other in lengthening the periods of production, and would adapt their enterprises to the technically most economical, but at the same time, most extended and time-consuming methods of production.

The automatic check that counteracts such tremendous lengthening of the productive process at present would have ceased to exist; that check is the interest payment that automatically places a progressive tax on lengthened methods of production. But once the lengthened method of production were freed from the burden of interest, and did not cost more than the shorter one, and at the same time, produced more than the latter, a general incentive to an enormous prolongation of the productive process would be called forth. It would, however, find its physical limitation in the diminished subsistence fund of the workers during the increased period of waiting, imposed by the lengthened period of production. From the existing, and possibly reduced, subsistence fund, it would be impossible to support the same number of workers for an indefinitely prolonged period of waiting.

Instead, the trend of wages will necessarily be held down from two sides within the margins of the possible price range.[14] First, the duration of the periods of production, although somewhat longer, will be restricted to the shortest possible time through a process of selection which will be made under free competition in favor of the most profitable among the various possible extensions of the productive process; and as this selection can only be effected in regard to the most effective part of demand by granting higher prices, which means, in this case, by granting a correspondingly higher premium on the demanded subsistence fund, then, at least in regard to this phase of the inevitable development, interest will be restored to business—as I have described more fully in my *Positive Theory of Capital*.[15]

But at the same time something else will happen. The just-described process of selection leads to a restoration of interest and the periods of production will no longer be indefinitely lengthened, although they will still continue to be somewhat longer. The

[14] I do not wish to take into account that the assumed increase in wages would also increase the standard of living at which the workers would have to be maintained; this, however, may be offset by the lower rate of interest with which the "propertied classes" would have to content themselves after the elimination of interest on capital.

[15] Book VII, Chapter III.

entrepreneurs, who profit by paying the highest premium on present goods, will under normal circumstances be forced to resort to longer periods of production than they employed originally. For while before the advent of wage increases, the permanency of which we are investigating, they had to pay only as much for interest and wages jointly as they now have to pay for the increased wages alone, now, moreover, they have to pay for the restored interest. This condition can only be met through larger profits than before, and these increased profits can be made only through a corresponding lengthening of the period of production, unless we should invoke the advent of new inventions with a subsequent increase in the output, like a *deus ex machina*, instead of concluding our argument by sticking to the original assumptions. But then it would be impossible for the same number of workers as before to be provided for throughout this extended period of production out of the existing reduced, rather than increased, subsistence fund. There must therefore be a limitation in another direction, a restriction in the number of employed workers, in approximately the same proportion in which the subsistence fund has been extended. This physical necessity will be met economically through the motive of self-interest, with high wages and a low interest rate under a more capitalistic method of production; that is, the employment of fewer workers in lengthened periods of production is more profitable.[16]

As long, therefore, as the enforced wages prevail at that high level, there will come about a provisional state of equilibrium of approximately this description: The general adoption of the lengthened period of production will tend to increase the workers' per capita output. The "marginal product of labor" will thus be increased, as also by a reduction in the number of workers, and it will now correspond with the enforced higher wage level that had risen beyond the "marginal product" of the previous stage. Interest on capital that has been restored is now lower than previously. The entrepreneurs manage to survive because, with the increased "marginal productivity of labor," even the last worker in their employment will still

[16] On this subject, see my detailed discussion in *Positive Theory of Capital*, particularly the comparison on the table of p. 451, to which I merely wish to add that the assumption of a totally perfect competition has in this case been eliminated by our present assumption, at least on the side of the workers who have eliminated underbidding by strictly cooperating with each other.

produce to them the higher wage to be paid, and also because the surplus productivity of the entire lengthened process of production will leave them a sufficient amount above the wage increase to compensate them for the interest on capital. But this new equilibrium is possible only at the expense of employing a smaller number of workers. And it is for this reason that, in all probability this temporary equilibrium will again be disturbed.

For now, the labor union will be split in two, one group employed at a high wage, and another group not employed at all. The greater an increase in wages has been enforced and the more the new methods of production are protracted, the bigger will be the number of unemployed. Two developments are possible. Both groups of workers may stay together within the union, which implies that the unemployed members would have to be supported by contributions from their employed fellow workers. If these contributions are large, they will absorb the surplus accruing to the workers from the wage increase, for it should not be overlooked that the total output that can be produced by a reduced number of workers with the same capital, must, even with improved methods of production, remain below that obtainable from a full employment of capital and labor. Thus, nobody would be benefited from the new artificially created order of things; as against the previous "natural" order; many would indeed be at a disadvantage, which fact would again be distinctly unfavorable to the prolonged maintenance of a situation created through a strong combined pressure of power. But if the standard of living of the unemployed workers were to be substantially reduced, these latter again would not allow such a condition to persist; there would be discontent, discord, and ultimately dissolution of the union. The malcontents would sooner or later become outsiders, and compete by offering their services to the entrepreneurs; the revived competition, with its underselling, would put an end to the monopolistic dictation of wages back to the level economically justified under the full employment of all workers, i.e., to the "marginal product" of the last worker employed in an again reduced period of production.[17]

[17] I fully realize that a lengthening and shortening of the process of production cannot be carried out at a moment's notice, without trouble, in that it always affects the entire structure of fixed capital. But, on the other hand, it is hardly probable that the pendulum would swing to the full extreme of a complete disappearance of interest and back toward the original starting point. It would be far more likely for those economic forces that

If, ultimately the employed workers should fail to provide for their unemployed fellow workers, then the same process would take place, even more rapidly. The mass of the unemployed would enter into competition and even more violently underbid wages.

One might perhaps think of an alternative in another direction; namely, that the unionized workers might enforce not only higher wages, but also the full employment of all workers at that higher wage rate. But even though the workers might have the power temporarily to enforce these conditions, they could not be permanent. For this would necessarily lead over into one of the two alternatives considered above, under numbers 4 and 5. By being forced to pay the workers not only a wage that in itself is higher than the entire amount of the original interest on capital, and in addition to this a restored interest on capital (although somewhat smaller in the aggregate), the entrepreneur will find that his costs have increased, and he will suffer losses and sooner or later abandon the enterprise, or go into bankruptcy.

Moreover, it is almost unthinkable that any employer could ever be compelled to employ all workers available at a given time. At best, the labor union may, through violence, prevent dismissals from the former stock of workers. But any attempt to enforce the employment of additional workers, in proportion to the natural deficiencies in their ranks, or even that of an increasing number of workers, corresponding to the natural growth of population, would be well-nigh impossible.

From all these considerations, which could and probably ought to be elaborated in far more detail, I believe that a complete absorption of interest and capital through artificial, enforced wage increases is out of the question in the economic life of a nation. But would, perhaps, even the partial elimination of natural interest on capital be permanently possible?

I do not see any reason for assuming a course of events differing from the one assumed above. A smaller increase in wages at the expense of interest on capital will cause exactly the same reactions and

swing the pendulum back from the extreme towards the starting point to intervene long before that point had been reached, and to keep the swing of the pendulum within much narrower limits, thus restricting the technical changes in production necessary in adaptation to the respective prices of the factors of production. But as I did not wish to make any omission in the method of presentation, I was anxious to consider also the extreme cases, with their countereffects, just as if they actually occurred in practical life.

effects, only in a correspondingly smaller degree. A mere reduction in the interest rate will at first not destroy the premium for saving contained in interest, but merely diminish it; the effect of this on the amount of future savings cannot be predicted with certainty.[18]

Possibly the amount of savings would decrease, and possibly not. But this would not alter the general trend of events, as shown in the preceding chapter of this inquiry, where I have purposely mentioned incidentally only, the probable reduction in the supply of capital, without ascribing to it any decisive influence. The determining factor is to be found in the demand for capital, and in this phase of the problem it is inevitable that each increase in wages beyond the actual marginal product, followed by a reduction in the interest-rate, will tend to cause a lengthening of the methods of production and thus a diminution in the number of workers. If the entrepreneur is not to suffer any actual loss, which he could not take for any length of time, the wage increase must be covered by an increased marginal productivity of labor, which can best be brought about through an extension of time for the various stages of production. This again, under otherwise equal circumstances, can be accomplished only by a simultaneous reduction in the number of workers, unless improvements through inventions, etc., should happen to be introduced, or other developments of an accidental nature should take place, contingencies which can be left out of account.

Enforced unemployment of a portion of the workers would also tend to lead toward the dissolution of the labor union, only in a less intense degree, in accordance with the smaller extent of wage increases attained by the labor union, under this assumption. The weakening of the forces counteracting the continuance of such a temporary condition does not mean a different result, but merely the postponement of effect. It cannot mean that an adjustment exceeding the natural limits, if only by very little, could last, nor can it mean that the suspension of a smaller number of workers would not cause them to compete for employment. But it *does* mean that such a condition will continue to exist for a longer period against the pressure of minor influences, so that, for instance, trifling losses caused by this temporary situation could be borne for a considerably longer

[18] Compare this problem with the interesting discussion in Cassel's "Nature and Necessity of Interest," pp. 144 ff.

time by the employers, before they would go into bankruptcy or go out of business; or else a small number of the unemployed might be supported from union funds for a longer period, or, through moral pressure, be prevented from underbidding the union members.

And this again may imply something else. As I have already shown above, protracted periods of time are likely to bring in their wake changes in other directions. If a process of economic change is spread over a certain length of time, its general progress will, in most cases, be affected by other incidental or independent outside causes, which almost spontaneously will affect the general situation. Over a period of several years, methods of production, or the business cycle, never remain unchanged. The latter may move up or down, the former will most likely progress, and if the interval is very long, there may even occur considerable changes in the general economic structure, such as the number of population, and their relation to the capital stock.

Besides this, another alternative is possible. Those very impulses, whose normal effects I am trying to observe and investigate, may themselves contain certain additional, almost accidental effects on other external factors. For example, they need not necessarily, but may, affect the technique of production. These chances should thus not be left altogether out of consideration, but should not be inserted as a factor in the series of deductions, as they cannot be foretold with absolute certainty. In our case, for instance, the entrepreneurs may find themselves pressed by the enforced wage increase, and this may form a powerful and effective incentive for the adoption of technical improvements in the methods of production, just as free competition is generally credited with forming a powerful incentive to industrial progress. Or it may happen that the permanent improvement in the standard of living attained by the workers by way of an enforced wage increase may retard the growth of population, as is commonly the case among wealthier classes, etc. Now, should some accidental or incidental development occur that would directly or indirectly increase the marginal productivity of labor, then it may also happen that the initial wage increase, exceeding that marginal productivity, might subsequently counterbalance the unexpected increase in the marginal productivity, and thus remain in force permanently. This would be all the more frequent, the less excessive the original enforced wage increase had been, i.e., the less it had gone beyond the marginal productivity of labor existing at that time. But of course, in the case of small wage increases, it is impossible to expect this with any degree of certainty, because such accidental events as these may fail to take place, or even have opposite effects. Business cycles may show a downward trend, population may increase more rapidly than capital supply, etc., in which case wages would be reduced all the more rapidly.

Those cases, however, in which a subsequent change of economic environment may render permanent an originally excessive wage increase obtained through force, might tend to confuse the theoretical analysis. They appear to give empirical proof of the fact that, through the dictate of power, wages can be raised above the limits laid down by marginal productivity, not only for the time being, but with a lasting effect. On close observation, however, they do not furnish this proof. The original wage increase was the effect of a dictate of power. Its permanent duration, however, is not the result of power, but of outside influences of a third order, which have increased the marginal productivity of labor, and with that increased the possible permanent higher wage level, quite independently from the dictate of power, or at least without necessary connection with it. I shall have to return to this point further on, in summarizing the results of this investigation.

Before that, however, for the sake of completeness, I shall have to consider a seventh possibility, so small, however, in practical importance, as to be out of all proportion to its theoretical complexity.

7. **In the scale of the possible wage rates**, there enters, between that wage that already absorbs a part of the interest and that wage level which coincides with the marginal product of labor, another rate of wages which, though exceeding the marginal productivity of labor, does not cut into the reward of capital with this excess amount, but remains within the total produce of labor. For when an increasing number of workers cooperate with a given stock, each additional worker entering the field will contribute only a decreasing addition to the joint product.[19] The last worker employed at a given time adds the "marginal product"; each one previously hired adds a little more to the total product. That is why the entrepreneur gains nothing from the last worker employed—provided his wages just equal the

[19] According to a not entirely uncontested variation of the law of "diminishing returns."

marginal product, and successively more and more from each previous worker, leaving out of consideration the share to be attributed to the contribution of capital. Now, if the wages increase above the marginal product, the entrepreneur will suffer a loss from the employment of the last worker, or workers. This loss may, however, be offset to some extent by the gain from the workers employed previously. So long as this is the case, so long as the total amount of wages does not consume more than is covered by the joint output of all workers together, the share of capital need not be reduced.[20] The share of wages exceeding the marginal product will then be paid at the expense of the real, pure profits which previously had gone to the entrepreneur.

For the purposes of this investigation we must now ask whether such a wage increase, affecting or absorbing, as it would, only the entrepreneur's profits, if achieved temporarily through a dictate of power, could possibly remain in force permanently. This question is, it seems, even harder to answer through methods of deductive reasoning than was the case in previous parts of this inquiry, and it is altogether unsuited for an empirical test. There would be no lack of forces counteracting the continuance of the new wage level, but they would be weak, and only gradual.

The entrepreneurs suffering losses from the last worker employed will endeavor to reorganize their enterprise at an early opportunity, so as to reduce the number of workers by eliminating those causing losses. There may be some opposition made to such a reorganization on the part of the workers who will not tolerate any dismissals; this may postpone the elimination of the excessive number, until natural vacancies occur that are no longer filled. Moreover, the best possible organization of the enterprise with a reduced number of workers will require a change in technical equipment. If extra losses through the sudden elimination of capital equipment are to be avoided, this can also be effected only gradually, by using up the old equipment.

[20] I wish to state that, in reasoning thus, I purposely omit all such losses as may be caused by the partial elimination of workers through interference with the existing organization. I assume, as it were, an enterprise that can be reorganized without difficulty, as indicated above, when I said that the capital employed was to be constant in its amount, although not in its physical composition.

> During these protracted periods, however, which thus would counteract the effectiveness of the other influences, weak in themselves, all sorts of changes in the general situation may arise that will affect the upward and downward trend of wages far more violently, or counteract them altogether; the small waves emanating from these influences will melt away unnoticed and imperceptible under the much higher wave of new economic factors. To test this in practice would be practically impossible; all the more since changes in wages affecting merely profits, without affecting the other factors of production, must of necessity be of very limited nature. A general wage increase enforced over the entire nation would affect both great and small, strong and weak enterprises, and a wage increase that is to be fully met out of the net profits of entrepreneurs, even in the weakest types of enterprises with the lowest profits, can hardly extend very far. For as soon as it became appreciable, it would cut into the capital gain of at least some of the entrepreneurs, or into capital itself, whereby the matter would lead over into one of the cases discussed above. A conclusive theoretical investigation, therefore, should not pass by this seventh case without at least an attempt at a more detailed investigation, which would meet even greater difficulties then those indicated here. However, the greatest practical and theoretical interest does not attach to this, but to the previous case, number six, which is concerned with the question as to whether any artificial influence of power *may* or *may not* be able permanently to increase the share of labor at the expense of that capital.

As the reader has seen, I was not able to answer this question affirmatively. I know quite well that this part of my belief will probably meet with very strong opposition, and that I will be accused of relapsing into the old, outgrown theory of "pure natural laws" in economics. I also know that many will find a strong empirical contradiction of my views in the undeniable fact that during the last decades countless strikes have led to an improvement in the workers' economic status never abrogated afterwards, and that almost universally and everywhere the standard of living of organized labor, which is able to apply the lever of power, is higher than that of unorganized workers.

But I believe I am able to meet both these objections. It would certainly never occur to me to attempt a revival of the old concept of "pure natural laws" in our economic science and therewith to oppose the belief in the effectiveness of the influence of control. On the contrary, I *do* believe in the effectiveness, in fact in a considerable and far-reaching effectiveness, of power, but I do *not* believe in its omnipotence; and since a careful analysis has shown me that these economic influences of power are in themselves based on motives of economic self-interest, I cannot close my eyes to the fact that any situation brought about by means of "power" may in itself again bring into play motives of self-interest, tending to oppose its continuance.

If an entrepreneur is induced, through the motive of self-interest, to select the "minor evil," and permits a wage increase exacted from him, then an analogous motive of self-interest will urge him to reorganize the various factors of production by means of which he produces his goods. If the factor of production called "labor" has become more expensive than before, in comparison with the other factors of production, through an extorted wage increase, then it is almost unthinkable that the same relative apportionment of the various factors of production would remain the most rational in an economic sense.

If the entrepreneur finds his hands tied by the price of labor, but not in regard to the physical equipment of his factory, and he desires to adopt the presently cheapest combination of factors of production, he will prefer a combination different from the one used before, one that will enable him to make savings in the now more costly factor of labor, just as, for example, an increase in the cost of land may cause the transition from extensive to intensive methods of cultivation. If, ultimately, this saving in the now more expensive factor of labor continues to lead to the reduction in the demand for labor described before, which will ultimately render the enforced wage rate untenable, then it is no longer nature that has won a victory over power, but it is merely a new motive of self-interest, produced by changed conditions, that has prevailed over another motive of self-interest operative at another, no longer existing condition; or, stated more correctly, the same motive of self-interest that has led to the selection of the relatively most favorable combination of means of production will, under changed conditions, have made itself felt in a different direction.

This is not a belief in "natural economic laws," but merely the rebuttal of the shortsighted idea that if, after a profound change in the costs of the various factors of production, the trend of economic self-interest continued to work in the same direction as before, that therefore, one had to submit to the dictates of power as if they were imposed by providence, and to cease to defend one's self-interest. I emphatically repeat that I *do* recognize the effectiveness of the influence of outside power in distribution, both in theory and, to a considerable extent, in practice. And I might also mention the fact that it makes no difference whether these artificial influences of outside control emanate from monopoly, such as employers' coalitions of labor unions, or from a direct intervention by government authority. The reason why I have not specially mentioned or discussed this latter case is merely that it seems to me to differ in motive rather than in method of application from the far more frequent case of control exerted by contending parties. I believe, for instance, that the legal fixation of a minimum wage will have to be interpreted in its effects in the same way as the dictate of wages by a well-organized labor union.

But in order not to leave any room for misunderstandings, I shall once more summarize the results of my investigation: Temporarily at least, the influence of outside control may produce intense and far-reaching, in fact very profound, effects. Under certain conditions these effects may become permanent, particularly when they are merely applied to neutralize an opposite influence of control that previously had deflected the dividing line away from its natural position. Thus, for instance, a strike may achieve an increase of wages up to the point of the marginal product, whenever the entrepreneurs had previously held the wages down *below* the product by force of *their* monopoly power. Furthermore, when a subsequent economic development suddenly transforms the original, artificial dividing line into a natural one, then the advent of power simply means a temporary anticipation of a development that would equally have taken place without such intervention, only later. Finally, control may temporarily be equally successful when it leads to certain lasting effects, and to efforts among the defeated party to improve its economic status, so that this improved condition may again become the "natural" condition. This contingency, however, will always occur only as an exception to the general rule, and can never be expected with certainty to take place, but it does represent the most favorable and outstanding combination for effective dictates of power: For in this case, and probably in this case alone, can we claim with a certain amount of justification that not only the advent, but also the continuance of a rate of distribution elevated beyond the natural rate has, even though only indirectly, been caused through the influence of power.

But apart from these special cases stated before, there is, in my opinion, not a single instance when the influence of control could be lasting as against the gently and slowly, but incessantly and therefore successfully, working counterinfluences of a "purely economic" order, called forth through that artificial interference and the new situation created thereby.

And, I hope to have made clear, there is one more thing that not even the most imposing dictate of power will accomplish: *It can never effect anything in contradiction to the economic laws of value, price, and distribution; it must always be in conformity with these; it cannot invalidate them; it can merely confirm and* *fulfill them*. And this, I think, is the most important, and the most certain, conclusion of the foregoing industry.

But how about the second objection I anticipate, namely the alleged empirical counterproof that the practical experiences with strikes and wage struggles seem to have supplied during the past generations?

Well, if these are interpreted correctly, they do not supply such a counterproof. For whenever a strike has led to an enduring success, there always appears to have prevailed one or the other additional circumstance by which, in my opinion, the permanency of this result can be explained. In most of these successful cases, the labor organizations have very generally found a condition favorable to their efforts, because competition among the entrepreneurs to the detriment of the workers had been absent. Under such conditions, when employer organizations enjoy a great advantage over the unorganized workers through their monopoly or quasimonopoly, the influence of power is applied, in the sense of our theoretical assumption, merely to neutralize and eliminate for all time an opposed influence of power. This is probably at least a plausible explanation for the actually improved condition of organized labor over unorganized labor.

A second reason for this may be found in the fact that, wherever an increase of wages in the economic world is about to take place, organized labor may accelerate its advent by using their power, and thus always keep a step ahead of unorganized labor. And, finally, one should not overlook the fact that sometimes it only appears as if conditions among organized labor had been improved. For as the skillful or more highly qualified types of workers are more often and more generally in the advantageous position of organizing than are the common or unskilled workers, the contrast between organized and unorganized labor may often coincide with that between skilled and unskilled labor. The former, by virtue of general economic laws, have in themselves a claim to higher wages than the common workers. The higher wage level of labor unions as compared to unorganized labor must not, or at least must not unreservedly and exclusively, be ascribed to the influence of power exerted by their unions.

Moreover, our generation has passed, and is passing, through a period when, omitting ephemeral fluctuations, the general trend of economic progress was and is continuously highly favorable to a wage increase. Therefore, it has never been really possible to test by way of experiment or actual observation whether an enforced increase in wages, achieved by means of a strike, might not perhaps have been gradually demolished again by those gently and slowly working counterforces, the undermining effects of which I have referred to above. In every case there always is a great amount of counteracting and modifying outside influences which, in the majority of cases, in their net results were favorable to the elevation of the productivity of labor and the increase of its marginal product, which alone ultimately determines the wage rate.

And thus the great part of the considerable and lasting wage increases of the past generation may easily be explained by the combined factors referred to in my analysis: At first, these wage increases were caused by the labor unions and strikes. But the reason why they could be maintained without being rescinded was that the stupendous progress of our times continuously produced such great technical improvements, improved methods of utilizing human labor, and coincided with a substantial increase of population, and an even larger increase of capital. But we have no way of showing how things would have turned out, or what they would be at present, if those successful strikes had led into a period of depression, or of moderate, slow progress, instead of coinciding with a period of the most stupendous progress, so impetuous that many a blind enthusiast has seriously begun to question the iron foundations of Malthus's "law of population."

And finally there is here too a sense in which merely the impression of a lasting wage increase is being created, where in reality no increase has taken place at all. Many a wage increase obtained through strikes has been neutralized, not through any formal wage reduction, but through the increase in the cost of living. To what extent a subsequent rise in prices of certain important means of subsistence, together with a general indirect increase in the cost of living through depreciation of money, has deprived wage increases of their reality and transformed them into quite immaterial nominal money increases at best, is a much contested question. Personally I do not by any means agree with the contention often made by socialists that the wage increases obtained during the past prewar decade have altogether disappeared in this manner. I rather believe that a considerable part of them have been genuine and permanent in character; but this is true only in part, and as regards the other part, that process of absorption through quiet and imperceptible counterforces, to which I have referred already, has actually taken place; it is the same story in a different form.

It may be that my analysis, which I personally do not consider exhaustive by any means, may have to be amplified, elaborated, and corrected in many points. To me, the essential thing is that in the problems discussed here we need, in any event, a new method of approach, free from the preconceived notion that this entire question has been decided long ago. The struggle between the natural and the social categories has been fought over twice already in economic science, and in both instances decided by an error of judgment: the first time by the classicists in a one-sided manner in favor of the natural laws; the second time in the modern theories of social distribution, with a similar partiality in favor of social control. What is needed is to institute the whole procedure again, and to finish it, without prejudice, on the basis of the trivial truth, not sufficiently acknowledged so far, that the influence of social control does and must harmonize with the formulas and laws of pure economic theory.

In order finally to avoid new misunderstandings, let me add a last word that should not remain unsaid at this place. John Bates Clark, whom I had to oppose polemically on several occasions on important questions, and whom I look upon as one of the most original and deepest authorities of our science, has, on a certain occasion, set up a very important and distinctive line of demarcation, with the felicitous and characteristic terms of "functional" and "personal" distribution.[21]

"Functional" distribution determines the rate according to which the individual factors of production are to be recompensed for their share in production, irrespective of the person who has made that contribution, and without regard to the question of whether any single person has contributed much or little. Functional distribution thus explains the division of the total national dividend into the great categories of wages, rent, capital, and profits.

"Personal" distribution, however, explains the size of the share that each individual obtains for himself from the national dividend without regard to the function from which he obtains it, and particularly regardless of whether he receive his share for one single, or for several, functions contributed simultaneously.

Functional distribution explains high and low wages, high and low rates of interest, etc.; personal distribution explains large and small incomes, indicating how one and the same income of $100,000 may just as well result from wages of a well-paid bank president, or from rent, or from high or low interest, or from a mixture of several functional types of income, or how a modest income of $1000 may just as well be that of a worker without capital or that of a small capitalist or landowner.

Functional distribution explains relatively few and simple facts of a general nature; personal distribution gives us highly colored, mosaic-like pictures, resulting from the application of those simple and general laws of distribution to a vast variety of data, and explains the function, amounts, and qualities that have been contributed by each individual to the total production. The primary object

[21] *Distribution of Wealth*, p. 5.

of all scientific theory of distribution, and thus also the object around which have centered the old disputes referred to above, is *functional* distribution.[22]

These statements I have made regarding the limitations of outside control of distribution apply only to functional distribution. As to the influence of control on personal distribution, the limits are infinitely more elastic, both as to intensity and as to the lasting effectiveness of that influence. Since outside control may also permanently change the other factors to which the laws of functional distribution apply, it may happen that certain effects in the sphere of personal distribution may be brought about without temporal limitation. When the government of a country turns proletarians into landlords through distribution of land, they and their descendants may, for all time, find their income increased by rent from land, quite regardless of how the line of division between rent from land and wages of labor may be drawn in functional distribution. And if a socialist state should introduce common ownership of all means of production and transform all capital and all land into social property, in the produce of which each member of society share in one way or the other, then for all future, or at least as long as such socialistic order may continue, all personal shares would, in the same or similar way, be composed of the produce of each one's own labor, and an equal contribution from the produce of the social property, in a manner widely and permanently differing from our present system of personal distribution.

[22] "The science of distribution does not directly determine what each person shall get. Personal sharing results from another kind of sharing; only the resolving of the total income of society into wages, interest, and profits, as distinct kinds of income, falls directly and entirely within the field of economics." Clark, *Distribution of Wealth*, p. 5.

"The question is not whether the 'purely economic' categories or the 'social' categories exert any appreciable influence on the terms of distribution; the sole question is this: how much influence do they exert?"

"The monopolist thus never has unlimited control; he merely has the choice within the laws of price of different 'economically possible' price levels."

"One member of a society can only trade with another if both can acquire ownership of the goods to be exchanged under the existing social order. Any statement attempting to express more than that truism is too far-reaching."

"Generally speaking, the fear of outside competition forms perhaps the greatest safeguard against too unscrupulous a use of monopolies preying on the general public."

—Eugen von Böhm-Bawerk
Control or Economic Law

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