

# **SOCIALISM**

**Vol. I**

# PRACTICAL SOCIALISM

*By the Rt. Hon.*

CHRISTOPHER ADDISON

*Formerly Under-Secretary to the  
Board of Education and to the  
Ministry of Munitions; later, in  
succession, Minister of Munitions,  
Reconstruction and Health*

VOL. I



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## INTRODUCTION

THE majority of people are possessed of good will, and none of them can look upon the present state of things as satisfactory. They admit and deplore the bad trade, the unemployment, the perpetual unrest, the wretched home conditions and the poor opportunity in life that so many of our fellow-citizens have to endure ; they would go a long way, I think, if they could be convinced that the remedies proposed were practical and likely to be successful. The trouble is that, whilst dissatisfied at present, they are bewildered by the general clamour and are not sufficiently satisfied of the usefulness of such proposals as are put forward. They therefore prefer to bear those ills they have than fly to others that they know not of.

Since the use of machinery and organized mass industry began to break in upon the relatively placid life that prevailed throughout most of the eighteenth century, it has seemed to require the lapse of at least a generation before a British Government could make up its mind to attempt to regulate or control what was going on in industry in the interest of those whose lot in life was being worsened by the new conditions. Fox and Grey, as well as Tom Payne, were before their time, although Grey lived to initiate reform. A long "sinking-in" process was required with the British public before the new conditions were realized, and we were confronted by the phenomenon of Wilberforce and his friends nobly battling for the abolition of slavery overseas, whilst they had little perception of what was going on at home with those whom the new industrial developments were condemning to a life of unrelieved toil, squalor and misery. As Trevelyan puts it: we had to wait till

Shaftesbury began to agitate for the liberation of white slaves at home before the public conscience realized that things were nearly as bad in some of our industrial centres as they were in the West Indies.

In a similar way the immense change that is coming over industrial conditions in our own time by the vast amalgamations of capital, and by comprehensive trade organizations that are able to dictate terms to the producer and to the consumer alike, is leading rapidly and inevitably to a great extension of State intervention. The war accelerated the process of industrial consolidation, although, for a time, post-war reaction has retarded the recognition of its significance. Nevertheless the consciousness of the immense power of these great combines and of the need for protection against them is becoming more definite, and the practical question as to what is to be done is exercising many minds.

Many people are frightened by words, especially by anything styled "socialistic." It brings up visions of some bureaucratic tyranny, of conflicts, of spoliation and of peril to their homes. The last thing they think of is that it may be something which may promote development, although the experience of the practical working of things under national direction—or under a socialistic system, if you like—during the war convinced very many people, myself included, that such would be the case.

Of course, the success of any system of working is dependent upon how you work it and upon the quality, experience and good sense of those charged with its direction; but on the moderate assumption that no British Government would be so silly as to put things in charge of people who have not the requisite knowledge and capacity, it seems undeniable that our recent experiences prove that unregulated "private enterprise," as it is called, is being very harmful, and that, on the other hand, we could get a much better development of our mineral and land resources under

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national direction than under the present system; that such a change would be beneficial to the producer and to the consumer alike; that it would encourage, not discourage, invention and the applications of science to productive processes, and immensely promote the welfare of the mass of the people.

In the wider vision that characterized the close of the war period this view was shared by many men of acknowledged capacity and of diverse party allegiances. In some cases they went so far as to express their conclusions in definite form. Neither then, nor now, had they or the rest of us any liking for being ordered about by "Jacks in office," or "Whitehall mandarins," as current misrepresentation depicts those who would direct national enterprise; but they had got behind phrases and had seen the atrocious waste of the present system and had had a glimpse of the organized capacity of the British people. They saw that the way of national organization was the way of real "economy," as against the gigantic levies that are now imposed upon the mass of the people, not so much in taxes as in prices and in deprivations.

But the forces of reaction have triumphed so far, and many of us are voices "crying in the wilderness." Nevertheless, a useful purpose may be served by presenting in popular form some of the lessons that emerged from our experiments in practical socialism and that seem applicable to our present distresses. I do so with the more confidence because it was my privilege to hold Government office throughout the whole of the war period.<sup>1</sup>

In order to secure a sufficient compactness of form

<sup>1</sup> For convenience of reference in the following pages the offices held by the author during the war period were:

August 1914 to May 1915—Under-Secretary Board of Education.

May 1915 to December 1916—Under-Secretary Ministry of Munitions.

December 1916 to July 1917—Minister of Munitions.

July 1917 to close of war—Minister of Reconstruction.

this volume is limited to an analysis of our experiences in industrial and commercial matters, and an attempt will be made in a Second Part to examine them in relation to individual initiative and to their possible application to some outstanding present-day problems.

C. A.

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# PRACTICAL SOCIALISM

## CHAPTER I

### REASONS WHY

**D**URING the war period the State was compelled more and more to adopt methods of national control and direct trading. In some cases they became necessary for the securing of essential supplies at all, and very commonly because it was not possible otherwise to secure either fair distribution or reasonable prices.

The process began in the first instance in respect of those supplies of which the State itself was the chief consumer, but as experience grew, and as more inside knowledge became acquired, the exercise of State powers had to be extended to cover things of which the individual citizens themselves were the chief consumers, as distinguished from the bulk requirements of the State.

In that time of concentrated effort certain imperfections attaching to the present system of conducting trade and enterprise became clearly focussed, and were seen to be resulting in national danger as well as in social hardship. There is no reason to suppose that the same disadvantages do not continue to operate in times of peace ; indeed, there is clear evidence that they do, although, for the most part, their effects are now cloaked in their application to a multitude of separate individuals, rather than revealed in the mass. Their effects, for example, in the cases of food and coal—wherein the producer usually receives a too low, or a very insecure, price, and in which the consumer

usually pays too much—have been prominently before us lately in the reports of the Food Prices Commissions and in some of the reports and actions of the Food Council as well as in the Findings of the Royal Commission on the Coal Industry. In such cases it is tempting, but it is a capital blunder, to limit our thoughts to retail or end prices, for in most cases they are only the inevitable consequences of what has gone before, or of the system of which they are a part. Nobody suggests that all private enterprise is bad, or that all State control or management would necessarily be good; it depends upon what you mean by "private enterprise," and on how State management and control are exercised and to what extent.

The efforts of a man who invents a useful machine, or who, by industry or better efforts, makes two ears of corn to grow where only one grew before, are clearly forms of private enterprise that it would be insanity to discourage; but the experience of our war-time socialism convinced me, anyhow, that much of the help and encouragement that such people need can more readily and more certainly be provided under a national system than they can at present.

As against these forms of private enterprise a group of men may hold up the supplies, say, of lead or wheat, and produce an artificial scarcity and increase of price, although there may be plenty of both lead and wheat in existence; they may succeed in enriching themselves at the expense of people who use lead for the manufacture of needful things or who require wheat for food, and thereby they add to the impoverishment of the ultimate purchaser. It cannot be claimed that these forms of "private enterprise" are of any use—indeed they should not be styled enterprises at all; they should be spoken of and treated as exploitation and regarded as a crime against society. They are, however, an intrinsic part of the present system wherein each man is supposed to be free to

do the best he can for himself financially, and in which, so long as he keeps within the four corners of the law, it is no part of his business to have regard to the ultimate effect of what he does on other people. The great bulk of people, indeed, pursue this line of action quite decently and honestly—indeed very often they could not carry on in any other way because, even if they wished, they have no means of ascertaining what the ultimate or mass effect of their action will be. The result of this process long continued, however, in the absence of any State participation on behalf of society as a whole, is that we find ourselves possessed, for example, of miles and miles of pestilential slums which cost so much in degradation, and in a hundred public charges, and which will require more than a generation of public effort and expenditure to restore. Similarly, the continuance through a long period of the present system is the reason why we find ourselves possessed of 6,000,000 acres of land substantially unused but suitable for growing much of the timber which we import from abroad at prodigious cost and with great public advantage could grow at home. The slums have not grown up and the hillsides become waste places because their owners, as individuals, were either indolent or careless: they had to do the best they could for themselves within the narrow limits of their own lives, and there was no national policy or effort in the matter. Their aim, quite naturally, was to make the least loss, or the most profit, out of their own individual possessions; but for all that, in the long run, the bulk effect of their efforts has been disastrous for the community as a whole.

In a similar way the utter impossibility of making the fullest use of our mineral resources under the present intensely individualistic system has been revealed and commented upon in every authoritative inquiry that has been held, and these very deficiencies compelled us, during the war—when we were engaged

in a desperate struggle to obtain supplies—to improve and extend many schemes of national direction and control, and we did so with very beneficial results.

My personal knowledge and experience of what we had to do in those times do not extend to all the enterprises in which the State embarked, but it includes some of those in which the task was most difficult and most highly technical, for it is easier for the State to intervene in the processes of distribution than in those of manufacture.

Let me epitomize, first, some of the outstanding facts that compelled State intervention on a wide scale, and afterwards review some of the processes that were adopted and try to relate their results to some of the necessities of the present time.

*Private Enterprise unable to Supply.*—The first large-scale attempt of the State to supply itself with goods which the ordinary processes of industry were failing to provide was in the Ministry of Munitions. That Ministry was set up towards the end of May 1915, and until that time—apart from the supplies obtainable from Woolwich and one or two other State establishments—most of the orders had been placed with the great private firms that specialized in munitions manufactures—that is to say, with the most experienced makers and with those presumably from whom you could most confidently look for delivery.

It was no fault of the private firms that sufficient orders had not been placed for many things which a comprehensive programme soon showed to be required, but it is certain that if the deliveries of the private firms had been made in accordance with their promises no such crisis as arose would have been occasioned.

There was little to choose as between the arrears and the deliveries of the different classes of goods. They were all dreadful; and there is nothing to be

gained by multiplying illustrations.<sup>1</sup> The simplest and most talked-of illustration of arrears was that of ammunition, although when people spoke of "shell" deliveries they mostly referred to the shell cases and not to completed rounds of ammunition—the position in regard to which was even worse than it was with shells. The position, however, with regard to "shell" deliveries up to June 1st, 1915, was as follows :

Deliveries promised by June 1st, 1915 . . . . .	5,723,900
Deliveries made . . . . .	1,526,400
	<i>Arrears</i> 4,197,500

It is interesting to examine the record of the National Ordnance Factories up to that time, seeing that they belonged to the much disparaged class of State-managed institutions :—

**Deliveries promised by National Factories**

up to June 1st, 1915 . . . . .	292,100
Deliveries made . . . . .	308,000
Deliveries in excess of promises . . . . .	15,900

As compared with this, the record of the two greatest and most experienced munition-making firms in the country was as follows :

	<i>Promised</i>	<i>Delivered</i>	<i>Arrears</i>
No. 1	907,550	235,550	672,000
No. 2	1,020,925	308,090	712,835

The figures speak for themselves, and they are not quoted for the purpose of imputing blame but simply as a statement of fact and in order to give point to the inquiries as to why it was that private enterprise in this appalling fashion failed to meet national necessities. The scale of production up to this time

<sup>1</sup> If the reader is interested he will find particulars of the arrears of different types of supply in my book, *Politics from Within*, vol. i. (Herbert Jenkins, 1924).

was almost trivial as compared with what it afterwards became, and the much greater things that private manufacture was afterwards able to do when furnished with State assistance and direction must be borne in mind as intensifying the contrast with what went before.

When the munition firms gave undertakings to supply all those shells by June 1915 we must assume that they expected to be able to do so; but they must have trusted to luck and hoped that somehow—by sub-contracting or otherwise—they would get the things made, for the reports that soon came in convinced us that their own competent experts could never have advised them that with their then existing machinery and equipment they could have met their undertakings. This observation must not be taken as applying only to the two firms referred to in the Table, for amongst all the chief private firms with shell contracts due for delivery by June 1st, 1915, there were only three whose deliveries were even *half their promises*—and two of these were quite small and had delivered less than 40,000 between them.

The Ministry had not been in existence a month before examinations made by competent engineers showed that, as things were, the deliveries could not possibly have been made as promised. A substantial proportion of arrears was clearly attributable to this kind of consideration: "We must book the order. It would never do to let it go to So-and-so. We shall manage somehow."

All very natural, no doubt, but only justifiable on the assumption that it is more important to keep somebody else out of work and get the ultimate profit yourself than it is to deliver the goods. The only special feature of this characteristic and everyday assumption was that at that time it happened to be focussed on something that was vital to the safety of the State, and the State found itself in jeopardy in consequence.

Apart from this consideration, however, the evi-

dence indicated, and subsequent action proved, that the arrears were due to many other causes. For example, if sufficient quantities of this or that material, or part, were not forthcoming in time, delay followed, and a whole set of processes dependent upon its supply would be held up, so that partly manufactured goods were piled up, waiting for the gap to be filled before later processes could be proceeded with. Again, some machines that were suitable were being employed on other non-essential but profitable work ; others were being used that were out of date. There was a shortage of this or that class of craftsman here or there, and a shortage of quite a few men would often hold up the completion of the manufacture of a great quantity of goods because the vital parts with which they were concerned were not forthcoming in sufficient numbers. There was, indeed, a multitude of reasons for the arrears, and many of them were quite good reasons ; and, apart from the general considerations first mentioned, the removal of the obstacle was commonly quite beyond the power of the contracting firm. The metal merchant, the machine-tool maker and the rest, had "other fish to fry" ; each one of them would attend to this matter as soon as he could—and he in his turn was doing his best ; he saw only his own difficulties and his own sources of profit and he had not, and could not have, any knowledge of the relative importance of this demand or that. If we could have visualized it all it was a turbulent scene of industrial struggle and clamour, and its result was a dramatic failure to supply the goods.

At this stage the State came in.

What for ?

Was it to cramp any man's initiative, or to delay the adoption of novel methods ?

Not at all.

Was it to deprive any man of a just return for his expenditure of labour and ingenuity ?

Certainly not.

Rather it was to make it possible for the individual to do more, to do it more quickly and at a smaller cost both of effort and money. Scores of blunders were made, of course. The State had to feel its way, to learn its job in this new undertaking as in any other. But the remarkable thing was that, the more it learned, the more the country became convinced that it got better value for itself by endowing the State with more and more power.

At first it had to take power to supplement deficiencies, to adjust differences, to "marry up"—as the experts called it—the processes that were going on in different places; to take a census of machinery, to examine the state of the work here, there and everywhere and to give directions for the allotment of the different parts of it. The grabbing of orders, irrespective of capacity to execute them, was one of the first things that had to be abandoned. If one firm had an accumulation of goods at one stage and another could carry them on, then the parts were moved, or the machines were moved, or the materials were moved, or deficiencies in essential craftsmen made good. The holder-up was made to disgorge; the manufacture of essential parts—of machines, of gauges and the rest—was brought into some measure of harmony, and, to make good deficiencies, the State set about doing things for itself.

Some enterprising firms were setting fine examples; others were far from making the best use of the materials, machinery and men that they had, and therefore it was necessary to spread information as to what the more competent were doing amongst those who were less competent, and trade jealousy was not considered. The advice and help of scientific men and experts were made use of for the development of new resources, for the improvement of a hundred processes, and in countless ways. We found, too, that high prices were resulting from the fact that very little use was being made of the scientific investigation of the in-



redients of cost, and the application of these processes led to the discovery of great sources of waste and of inefficiency of method. Apart from what they showed, also, as to inefficiency, they revealed that the State, as a bulk consumer, was being exploited, whilst the welfare of those engaged in industry was being prejudiced or neglected.

We had, therefore, in successive Acts of Parliament, to take power over the production of all manner of supplies—munitions, clothing, food and so on ; to control shipping and distribution and the allocations of supplies all along the line ; to investigate costs, to fix fair prices, to give directions as to the conditions to be observed, and, finally, to engage ourselves in trading and manufacture on a vast scale.

These processes, of course, overlapped one another, and were closely interwoven, but an examination of some of their chief features will be attempted in succeeding chapters.

## CHAPTER II

### COSTS AND PRICES

**T**HE power to investigate costs, both in its direct and in its indirect effects, was one of the most potent and valuable of the powers that the State assumed.

Directly, it made it possible to effect prodigious savings in what the State had to buy, and it commonly happened that the mere possession of the power was sufficient to enable us to obtain reductions of price without its being necessary to exercise the power at all. The knowledge that we were resolved to use our powers if need be was often enough.

Indirectly, the value of this power was very far-reaching. It enabled us to obtain an analysis of the ingredients of costs by trustworthy experts, to examine the results on uniform lines and so expose and be able to correct all manner of overlapping and waste to the advantage of both the producer and the State. Moreover, the unchallengeable records of the costs of materials, machinery, labour, establishment charges and the rest, made it possible properly to assess some of the alleged causes of increase of cost that were often put forward so glibly. The returns were often useful also in securing that proper provision was made for such things as machinery depreciation and renewals when the amount set aside had been insufficient, or where the future had been prejudiced by the payment of excessive dividends. Best of all, perhaps, of the indirect effects was the creation of arrangements in some industries whereby a pooling of the best experience could be obtained and the results made available to those who were shown to be less efficient than others.

Before furnishing illustrations of the working of the system, however, it may be well to remind ourselves of a recent case wherein, having abandoned this power, the State has been prejudiced by the lack of it. A few months ago we had the Report of the Royal Commission on Food Prices. The Commissioners had no power to investigate costs. They could only do their best with such statements as were voluntarily supplied or which they were allowed to investigate. There were, therefore, many cases in which it was impossible to account for the prices charged and for other incongruities.

Take this case.

Lord Vestey, one of the directors of the Union Cold Storage Company, told the Commission that—

“during the twelve months ended December 31st, 1924, the net trading profit of all meat handled by the Argentine Freezing Works operated by or on behalf of the Union Cold Storage Company amounted to 0·213 of a penny per pound.”<sup>1</sup>

The figures, indeed, suggested that for the last six months of the year the trade had been conducted at a loss, for Lord Vestey is reported to have said :

“For the last six months we have worked for the British public for nothing.”<sup>2</sup>

On the retail side the profits earned by 2356 retail shops belonging to this firm were stated to amount only to 0·47 of a *id.* per *lb.*—

“without allowing for interest and depreciation and the expenses of the head office.”<sup>3</sup>

The Royal Commission on such evidence as they had, however, concluded that during the first six months of the year (1924)—

<sup>1</sup> First Report of the Royal Commission on Food Control. Cmd. 2390, 1925, par. 316.

<sup>2</sup> *Forward*, Jan. 31st, 1925.

<sup>3</sup> Par. 208.

"The net profit on chilled beef alone had amounted to not less than 0·76d. per lb."<sup>1</sup>

The sequel, however, was supplied by the Company itself in advertisements of their new issue of shares on June 23rd, 1925. The prospectus then issued gave the profits as follows :—

12 months ending December 31st, 1920	£279,453
" " " 1921	448,807
" " " 1922	446,917
" " " 1923	586,579
" " " 1924	700,000

The profit for 1924 (the year during which they had worked for six months—"for nothing") was arrived at "after providing for depreciation," and the prospectus went on to say : "The Directors anticipate that future profits will amount to not less than £1,150,000 per annum."

The contrast in the figures speaks for itself. No wonder the Chairman of the Commission said that "This is a mysterious trade."

Nevertheless, it may be that the statements as supplied by Lord Vestey were correct enough in themselves so far as the fragments of the accounts as defined in his statement were concerned, and yet consistent with the prodigious profits claimed in the prospectus. It all depends upon the allowances made in other sections of the firm's accounts—for example, for overhead charges, transport, cold storage, dock dues, insurance, commissions and such like. A few of the skilled accountants, such as were available to us during war time, would no doubt have unravelled the mystery to great public advantage, but the Commission had no power to employ them.

In a recent announcement the costs to be incurred by the Admiralty in the new shipbuilding programme are stated as likely to amount to about

<sup>1</sup> Par. 317.

£55 millions, and the cruisers are expected to cost £2 millions apiece. As things stand the British public and the Imperial Parliament, with childlike faith, will have to accept what is supplied to them as to contract prices in the absence of any power to ascertain what a fair price should be.

During war time, however, being sceptical as to the prices prevailing in some existing contracts, we applied to Parliament for power to find out what a fair price should be, and to fix one, if need be, after proper investigation. It is almost incredible, but it is true, that when the State was proposing to spend hundreds of millions annually on armaments we had no power to find out for ourselves whether the price demanded was a fair one or not. It is illustrative of the terrific influence of private interest in shaping national policy that the power to investigate prices has again been abandoned, notwithstanding that its exercise during the war was found to save the taxpayers of the country hundreds of millions of pounds.

It seemed a very simple question to ask: "What do these things cost to make?" We had been told to provide for an enormous increase in the output of supplies, but nobody seemed to know what they cost to make, and such information as we could obtain from existing contractors all went to show that the prices then prevailing were extraordinarily moderate. We very soon found, however, that contracts were being arranged up and down the country by our co-operative Committees at prices lower than those hitherto prevailing, and with firms that had little previous experience of this type of manufacture. Not only so, but the costs which began to emerge from these co-operative undertakings, and from the first small beginnings of national factories, showed a striking reduction on existing contract prices—although in nearly all cases the arrangements in those early days of the Ministry were extraordinarily improvised, and the shops and factories were staffed to a great extent

by managers and workpeople who were new to the work.

There is no need to trace out the details of our unsavoury experiences, but, in October 1915, I appointed Sir Hardman Lever, in co-operation with Sir John Mann, to create a system of cost-accounting throughout our work, and to secure that a full use was made of the powers we then had and of the greater powers we had decided to seek (and subsequently obtained) in the Munitions of War Amendment Act. These two great accountants got together a fine staff and went to work with a will. The system, of course, underwent great development and assumed diverse forms. Most Government departments subsequently adopted similar methods, and the Ministry of Food and the Contracts Department of the War Office were as successful in the curtailment of prices and excessive profits as were Lever, Mann and their associates. There was, indeed, plenty of profiteering that nobody succeeded in reaching owing to the fact that the whole thing was improvised and had to be built up and applied as we could during a great period of rush ; but wherever it was applied it not only effected immense economies, but led to great improvements in manufacturing methods.

It is no part of the purpose of this survey to describe the great variety of controls that were adopted in consequence of the power to examine costs and fix prices,<sup>1</sup> and they were very much intermingled with the power to regulate supply and distribution as well as with the power to undertake directly trading and manufacture, but the Minute of Lever's first appointment may perhaps be quoted as giving an indication of how the thing started. It constituted, I believe, the first official beginning of this great State experiment :

<sup>1</sup> Those who desire detailed information on the method of exercise of some of these State controls should consult *Experiments in State Control*, by Mr E. M. H. Lloyd (The Clarendon Press, 1924).

October 29th, 1915.

**MR LEVER,**—The work of certain departments of the Ministry dealing more particularly with finance and accounts has grown so rapidly and in so many new directions that it has become necessary to concentrate and co-ordinate these departments. I have, therefore, decided, with Mr Lloyd George's approval, to appoint an Assistant Financial Secretary, who will be of the same status as the Directors-General, and to whom the Departments of Munitions Finance and Munitions Accounts will be directly responsible. Mr Lloyd George has approved of your being invited to fill this post.

With regard to contracts, it will be your duty to see and express your opinion upon all contracts of the following kinds, and you will be responsible for sanctioning their financial terms:—

- (1) Contracts which involve capital expenditure or loans.
- (2) Net cost contracts.
- (3) All important contracts or undertakings involving an expenditure of £40,000 and upwards.

You may, however, be required by minute of the Minister to extend your functions to contracts other than those specified.

All such contracts and undertakings must be referred to you, or such officers as you designate for the purpose, before any definite understanding is arrived at with the contractors.

The Department of Cost Accounting will also continue to be responsible to you.

As Assistant Financial Secretary, your powers and duties in matters of finance, accounts, and contracts, as above defined, will also extend to the Departments of Explosive Supply and Trench Warfare Supply.

CHRISTOPHER ADDISON.

It was naturally easier to detect excessive charges in the cases of materials than in the more complicated processes of manufacture, and records as to excessive prices in some materials were forthcoming immediately. Lead afforded an early illustration in the case of metals and was the occasion for the issue of one of the first orders for the control of price and distribution. We found that supplies were being held up, especially towards the end of each month, so as to obtain higher prices, and although the Metal Exchange loyally did its best to help us, no substantial improvement was

effected by voluntary means. The Chairman of the Metal Exchange (Sir Cecil Budd) joined our ranks and rendered splendid service, recognizing, with many others, the necessity for the exercise of our powers. The immediate result of the order controlling price and distribution was that people who had no supplies available immediately discovered parcels in their back-yards, and within a week substantial quantities were being offered at reduced rates. The reason of course was that, under the order, customers could not get delivery without our sanction, and the one thing the patriots who were holding the lead wished to avoid was for us to come in and examine and requisition their stock. In order, therefore, to escape this calamity they ceased their cornering.

Another early case of quite a different type of material led to one of the first agreements on a costing basis. A ring had been formed amongst suppliers of cotton waste, and prices had been forced up from £42 to £70 per ton. Lever reported in the case of one large mill that the profit "could not have been less than £20 per ton," and that this profit "must represent over 300 per cent. on the actual cost outlay of the mill for treating the cotton waste." The issue of the order was immediately accompanied by a break in price, and it fell to £55 per ton. Finally an arrangement was come to on a basis of the cost as ascertained by our accountants plus a profit of £4 per ton. The profit was subsequently reduced to one of £2 per ton.

The most striking instance in bulk of the value of the possession of the powers under review—apart from the actual exercise of the powers of investigation—is afforded by the enormous reduction in the prices of shell cases that was obtained in February of 1916. After many fruitless negotiations a meeting was held on January 31st, 1916, with the six largest contracting firms, and the results of what we had found as to costs in our co-operative contracts, national factories,



and otherwise, were put before them. I suggested that we might either—

- (1) Agree on a price ;
- (2) Ascertain the cost in each case and allow an agreed percentage over for profit ;

*or*

- (3) Work on a co-operative basis with ascertained costs as we were already doing with great advantage with some firms.

The last thing those present wanted was that we should send our accountants into their works to produce a precise report upon the cost and character of their operations. We, ourselves, were prompted by no inquisitiveness, and were not in the least desirous of going to this length if we could obtain what we knew to be fair terms by simpler means. We put before them a scale of prices based, as we knew, upon correct ascertainment and containing a margin for a good profit. The price we offered, for example, included—

- A provision for steel at a stated cost per ton ;
- 33½ per cent. per annum for depreciation on plant ;
- 10 per cent. per annum for depreciation on buildings ;
- 6 per cent. on working capital ;

*and*

- 10 per cent. for repairs to plant, extensions and small tools.

There was a good deal of hard bargaining, but the sequel at an adjourned meeting speaks for itself. It was as follows—mentioning only as typical illustrations those forms of shell which involved some of the chief expenditure. The prices in the Table for 18-pounder and 4.5-inch shells were at first provisional, but were subsequently confirmed :

Type	Price of Current Contracts		Prices Proposed by Ministry		Prices Accepted by the Firms	
	s.	d.	s.	d.	s.	d.
18-pounder	20-23	0	12	6	12	6
4·5-in.	47-65	0	34	0	34	0
60-pounder	60-82	4	49	6	52	6
6-in.	80-90	0	68	6	70	6
8-in.	240	0	155	0	157	6
9·2-in.	262-305	0	210	0	227	6

The reductions effected in these and other shell prices resulted in the saving on the 1916-1917 programme, as compared with the previous prices, of no less than £400,000 per week on this part of ammunition alone.

The results of these negotiations with the dominant firms were of enormous importance, not only because of the savings effected, but because it established the power of the State to protect itself in this way and made it easy to apply the process to hundreds of smaller contracts. Lever's subsequent statement to the Public Accounts Committee aptly summarizes the result in the shells case :

"We have the power under the Munitions Acts to see the books if we want to, so they immediately brought the prices down."

One large firm—but not one of those whose arrears have already been referred to—had the hardihood at one time to put forward a claim that substantially meant that they were entitled to manufacture 18-pounder shell cases for the duration of the war at 20s. apiece. We naturally refused to accept this impudent challenge, and they fell into line with the rest. But it is interesting to notice that one of the principals of this firm in these later days is a prominent champion of the plea that the only way to reduce prices and so improve trade is for workpeople to work

longer hours at the same wages or to take reductions of wages for their existing hours.

The case of cordite may be quoted as an illustration of the type of result obtained after a full application of the powers of inquiry into the actual processes of manufacture. Up to the spring of 1916 certain main types of cordite had cost 2s. 3d. per lb., but the accountants reported, in the case of a propellant factory—to the provision of which the firm had contributed £464,000—that the price being obtained represented a dividend of 105·7 per cent. per annum on this capital. It was further pointed out that if the money being obtained were used to write off the whole cost of the factory to a scrap value of £16,000 the firm would still have received sufficient to pay dividends of 33·8 per cent. per annum! Here was a case pre-eminently for the exercise of costing powers. There is no need to tell the details of the story, but the end result was that the cordite was reduced to 1s. 7½d. per lb., and the saving on the year's supply of cordite on that basis, as compared with the former price, amounted to £3,900,000.

A figure like this—small as compared with the savings on shell ammunition—is a good illustration of the stupidity of the outcry that popular critics are always raising as to the cost of the staff employed by Government departments. The saving on cordite alone was probably sufficient to have paid the salaries of the Cost Accounting staff for the whole of their natural lives if they had lived to be threescore years and ten each one of them. The trouble is that in presenting figures to Parliament the savings effected appear only in reduced estimates on the contracting side, whilst salaries paid are separately recited and form a popular target for a ready, but often unthinking, shooter. Public men ought to have more pluck in defending good salaries. Work, for example, of the highly technical character here being described cannot be undertaken by any amateur. It requires the services

of men of high training and proved capacity and rectitude, and such men may have to be paid for at high prices, although both Lever, Mann and many more served us as volunteers in war time.

There is no doubt at all that in the course of a year a capable staff of cost accountants would save a Government department the whole of their salaries very many times over, and I have no doubt that if similar processes were applied to the new Admiralty shipbuilding programme we should save many times over the salaries of the cost accountants, and probably the cost of the whole of the staff of the Admiralty itself.

It is not necessary to expand the story of how these powers were applied, but a Table of a few typical illustrations of what was obtained as a result of their use on quite minor operations will give an indication of their value.

Of course nobody to whom the pruning-knife had been applied pretended to like it, and many of them doubtless contributed to the flow of talk on the favourite subject of the evils of State interference, but two main general conclusions emerged as unchallengeable and as fully established in the proceedings of the Public Accounts Committee, in the reports of the Controller and Auditor-General and in a multitude of other ways :—

- (1) That unholy as profits were in many directions during the war (and as they have been since) if it had not been for the exercise and deterrent effect of the power to investigate costs, and, if need be, to fix prices, the National Debt would have been hundreds of millions more than it is.

The truth and fairness of this statement is in no way affected by the full allowance that we ought to make for the patriotic help which many of the firms rendered by declining to exploit national necessities, and who often went out of their way to solicit the

SAVINGS ON TYPICAL CONTRACTS

<i>Operations</i>	<i>Original Price</i>			<i>Price Agreed as Result of Investigations</i>		
	<i>Per</i>	<i>£</i>	<i>s. d.</i>	<i>£</i>	<i>s. d.</i>	
Filling Fuses . . . . .	100	1	4 0	0	12 0	
Filling Gaines . . . . .	100	1	14 0	0	10 3	
Assembling Fuse to Gain. . . . .	100	0	18 0	0	15 11	
Making and Filling 1'7 Dets.. . . .	1000	2	9 0	1	1 3	
Gain. No. 2 . . . . .	100	1	5 7	0	19 9	
Primers No. 1, M. II. . . . .	100	0	11 3	0	8 7'75	
T. Tubes, Mk. N . . . . .	100	1	1 11'50	0	14 1'50	
18-lb. Block Charges . . . . .	100	1	7 1	0	17 0	
10 Mesh Amatol . . . . .	100 lbs.	1	0 0	0	8 6	
C.E. Pellets for Gain. . . . .	100	1	0 10	0	13 6	
4'5-in. Cordite Cartridges . . . . .	100	12	15 0	11	15 0	
Filling 4'5-in Lyddite Shells . . . . .	100	18	16 8	7	18 4	
Making and Filling 4'5-in. Cordite Cartridges . . . . .	100	26	7 7	15	0 0	
Assembling 4'5-in. Rounds . . . . .	100	4	12 5	2	5 0	
18-Pounder Cordite Rounds . . . . .	100	7	2 7	5	15 0	
Primers . . . . .	100	0	14 4	0	9 6	
T. Tubes . . . . .	100	1	2 4	0	17 6	

COSTS AND PRICES

help of our cost accountants and of other experts to help them to keep down their own costs and the prices we had to pay. People like them were to be found all over the country ; but, unfortunately, their contribution would have been swamped by the prices extorted by others, and often by very large firms.

- (2) The application of the powers in the hands of skilled and sensible men operated to improve industrial processes as well as the conditions of the people who were employed.

These aspects of the case will be referred to later on, but the value of the comparisons of different methods of working that the collection and criticism of results made possible, was widespread and unquestioned.

A single anticipatory glimpse may be taken in order to fix the point in mind before closing this chapter. Returns were made regularly of the costs per ton of the manufacture of sulphuric acid in each of the national and privately owned factories, and the results were made freely available to all. One factory, for instance, wasted three times as much sulphur in their ash as the more competent, and the proprietors had the good sense to be grateful for the information and to apply themselves successfully to an improvement in their methods. The value of these cost criticisms and inquiries went far beyond any mere reduction in price ; they were proved to be one of the most efficient of instruments for the improvement of manufacturing processes, and for the promotion of the well-being of those engaged in industry.

### CHAPTER III

#### THE CONTROL OF SUPPLY AND DISTRIBUTION

**W**HEN the State as a customer seeks to protect itself from exploitation by taking power to investigate costs and, if need be, fix fair prices, it is undoubtedly interfering with the ordinary course of competitive private industry, but it is not thereby undertaking executive work, although the dividing line is often rather a shadowy one.

The control of price, however, in regard to those commodities that the State requires—either for its own use or for the citizens generally—necessarily involves a command over the processes of their supply and distribution, otherwise—as indeed was the case sometimes—it may find itself in danger of not getting the supplies at all.

The agencies for the supply and distribution of goods from overseas specially lend themselves to a process of consolidation or trustification. This is probably due to the concentration for trade convenience of the different markets into a few centres, or even into a single centre, so that, apart entirely from any question of the more economical handling of the goods under national direction, control of supply and distribution became necessary to prevent holding-up for the purpose of obtaining higher prices.

The war inevitably gave an impetus to the development of industrial and trade organizations because industries had to be brought together and dealt with in a collective fashion. It therefore became a slogan of that period that "every employer should be in his employers' association and every workman in his

trade union." At that time also people aimed at the promotion of Joint Industrial Councils, not for the settlement of disputes only, but for the improvement of the conduct of the industry itself and for the benefit of those engaged in it.

In the post-war reaction the impetus to the formation of these councils has disappeared and the parties have drifted apart. Little remains, perhaps, but an increased consolidation of labour on the one side, and of the employers on the other. The trade unions have no power to effect improvements in industrial methods, even when they are essential to their own interests, for a block-headed reaction, as championed by the coal-owners, has shut them out from any voice in management. It is fair to say that the leaders of many industries repudiate the example set by the coal-owners, but it is undeniably true that, in the mass, increased compactness amongst the leaders of industry has not resulted in any increased co-operative devotion to the improvement of industrial methods.

But improvements in industrial methods are not ends in themselves, they are only means to an end, and unless the mass of the people and those engaged in industry are bettered thereby we reap no advantage. Increased organization may even become cruel and oppressive, and in many directions this appears to be the line of development. The strong Committee on Trusts which was appointed during the war period pointed out that industrial combinations tended more and more to develop into *price-fixing* combinations. However vehement may be the jealousies, or however absurd the trade secrets, between firms in the same industry, there is never disunion when there is a prospect of obtaining a higher price for what they sell.

The Committee on Trusts, in their Report to the Ministry of Reconstruction, 1918, said that, roughly speaking, the purposes for which manufacturers and merchants usually combine may be classed



under two heads. In the first class they mention the regulation of selling prices, the restriction of competition, the monopoly of raw materials, the pooling of margins, arrangements for boycotting or undercutting any members of the trade who break established arrangements, and so forth.

In the second class they grouped such purposes as increased power to obtain the regulation of the conditions of labour, traffic, insurance and other purposes, but the Committee came to this very disappointing conclusion<sup>1</sup>:

“ In the course of our investigation we have come across no combination whose primary object is to increase the efficiency of business ; but since our inquiry has not covered the whole ground, it is possible such may exist. In every case examined the primary object has been to regulate prices.”

Many of us who took an active part in the formation of Joint Industrial Councils during the closing part of the war period had been encouraged by the more generous spirit of those days to hope that such bodies would be used in the best sense to promote improvements in industrial methods—in the application of scientific processes, and in co-operative endeavours to promote the welfare of all engaged in the industry. A good start was made by a few councils, of which the Joint Industrial Council in the pottery trade was perhaps the best example, but the example of the Government in allowing the National Joint Industrial Council to lapse has led to most of them falling into disuse.

The regulation of prices by trade combinations is inseparable from a control of supply and distribution, and results in an ability to determine the price the consumer has to pay as well as the quantity of supplies he can obtain. The more a combination develops

<sup>1</sup> Memorandum of the Committee on Trusts, April 12th, 1918, p. 21.

into a price-fixing association the more the incentive to improve methods retreats from view, because the habit is to fix the price so that every producer, even the least competent, can work at a profit. Therefore when a man finds that, however sloppy his methods, thanks to the price-fixing, he can still get along quite comfortably, he has lost the greatest incentive of all to improvement. Perhaps the clearest and most convincing demonstration of the truth of this statement is contained in the Report of the Royal Commission on Food Prices, where they show that it is the habit of the Master Bakers' Association so to fix prices that every baker in the district can get a profit, however antiquated his methods, although, as was revealed, a competent firm could make a "handsome profit" when selling bread at a 1d. per quartern loaf below the fixed price.

It is only now and then in peace time that we obtain glimpses into such results of the operations of price-fixing combinations, but they afford some indication of what we found ourselves confronted with in the war period, when, in self-defence, we had to take increasing and direct powers to control distribution and supply, as well as price.

Some of the reasons that compelled us to control storage and distribution with increasing rigour are happily not applicable to peace-time conditions. They depended upon scarcity; and the element of scarcity led to the establishment of an elaborate system of priority certificates, whereby the amount available was allocated to different processes as they appeared to be relatively important. In the case of food, which is important to all, it led to a vast system of individual rationing. Nobody would pretend that priority certificates or rationing are desirable in themselves, or would be applicable or tolerated in a time of plenty. On the contrary, sound policy would encourage the production and distribution of

an abundance of supplies, and endeavour to secure that the producer at the one end has such a stable and sufficient reward that he is encouraged to produce ; and that the consumer at the other end is able to buy without needless increases of cost between himself and the producer.

It is the intermediate agencies that project themselves into peace-time conditions with increasing hardship. Transportation, storage and distribution are essential services, but the consolidation of the agencies which control them is the outstanding feature of recent years, and in the absence of State powers the community is helpless in the face of them. The war period taught us, if we are willing to be taught, how to deal with some of the stages between the producer and the consumer that result in unnecessary increases of price and corresponding hardship.

*Overseas Transportation.*—Take, first, the process of overseas transportation. The reasons that led to the creation of the Ministry of Shipping were similar to those that led to the creation of the Ministry of Munitions, although they developed later. Private enterprise in the management of many shipping companies failed us, just as the great munition firms did, although it is fair to say that up to December 1916 the shippers had not received a clear presentation of our requirements.

In December 1916 some of us, as Members of the Cabinet, were set to work to find out exactly what the position was. We found that we were alarmingly short of many supplies. A great reduction in unessential imports was imperative, and the submarine menace was growing. It soon became evident that the shortage in sea transport was greatly aggravated by the fact that a substantial part of British shipping was not ministering to our needs at all. Although there was a vast number of ships of one kind or another on the British Register, there were only about 3500 ocean-going ships of more than 1600 gross tons

register, and it was on these vessels that we mainly depended. At that time we obtained information as to the whereabouts of 3374 of them. There were 1880 engaged on various national services—for the Army, Navy, Dominions, or for the carriage on national account of wheat, sugar, timber and ore. We instituted inquiries as to the whereabouts and employment of the 1494 ships out of the 3374 that were not thus accounted for. There were 482 passenger liners, of which 309 were on berth in different places, and 50 of them did not trade to the United Kingdom; of the 173 vessels, not then on berth, 107 were in distant waters not trading to the United Kingdom, 87 of which were in the Indian, Chinese and Java seas. The other vessels of the 1494 consisted of 1012 cargo vessels, tramps and liners, of which 494 traded regularly to the United Kingdom, 103 never came at all, and the remainder traded anywhere, and might or might not come to home ports. The Directors of most of these absent ships were certainly in our midst: they were cognizant of our plight and there had been no lack of requests for ships. The Board of Trade indeed had been clamouring for ships for months past, so much so that in the previous November Mr Runciman—the then President of the Board of Trade—had informed the Cabinet that:

“We start this winter with a shortage, which we see no means of filling by building, buying or *chartering*,<sup>1</sup> of a deficiency estimated at 400 steamers of 4000 gross tons.”

This confession of inability to extend chartering was very surprising, but it did not stop us from giving the Ministry of Shipping more powers and instructing them to charter, for it was quite evident that there was a good deal still to be got out of the 1494 free vessels, notwithstanding this confession of impotence. The reasons of course why many of these free vessels

<sup>1</sup> My italics.

were trading in distant waters and making no contribution to national support was very simple: it was that the owners were trading for profit, although their methods were leading the nation straight to famine. Sir Charles Fielding—who was the Ministry of Munitions representative on the Committee of Experts—examining our imports, reported that there were sufficient British ships to meet the needs if they were all pressed into the service, and the sequel, notwithstanding its dreadful happenings through submarines, proved that he was right. Fielding also pointed out that if we continued during 1917 to pay private freight charges on the scale of the 1916 rates we should pay £34 million more for the same amount of imports than we should if they were carried in requisitioned ships at national rates.

On January 26th, 1917, Sir Leo Chiozza Money, then Under-Secretary at the Ministry of Shipping, reported the result of some calculations that he had made and which had been confirmed by Sir Josiah Stamp, then at the Inland Revenue. These calculations showed that during the first twenty-six months of the war, apart entirely from the profits on passenger liners, the profits of tramps and cargo liners had been as follows:

	<i>Net Profit first 26 months of war</i>	
	<i>A.—Insurance at pre-war values</i>	<i>B.—Insurance at full values</i>
Ocean tramps, 1666 .	£135,000,000	£116,000,000
Cargo liners, 1108 .	103,000,000	89,000,000

The conclusion of Money and Stamp was that, including passenger vessels, and after allowing for insurance even on inflated values, the profits of British shipowners up to that time had been well

over £300 millions. They had therefore been helping themselves quite freely, although the end product was that we were looking starvation in the face.

We were saved by the requisitioning under the Ministry of Shipping and by the skilful management of the ships under national direction. More was got into the ships, the voyages were shortened, the times of loading and unloading were shortened, and we obtained the ships at immensely less cost, although they were still very profitable to their owners. Under the Government Blue Book rates the payments provided a profit of 12 per cent., after allowing for insurance on inflated values, and the extent of this latter qualification will be realized when we know that if pre-war values were allowed for in insurance the rate of profit would have been 30 per cent.

It may be urged that those were exceptional times, that national requirements were more consolidated than they are at ordinary times, and that the vast economies effected under national direction would not be feasible in peace time. It is true that in those times many ordinary demands could not be met, but the whole of the ordinary peace-time demands, put together in terms of tonnage, are trivial when compared with the essential tonnage of food, timber and ore, which collectively take up three-quarters of all our tonnage. Even if we were to content ourselves, therefore, with the economical management of the importation of food, timber and ore, the saving would be immense.

By way of illustrating what we suffer from under present circumstances let me quote the case of the powerful North Atlantic Steamship Combine. On December 31st, 1924, the Canadian Government was presented with the results of an official investigation into the operations of this great combine by Mr W. T. R. Preston of their Department of Trade and Commerce, at Ottawa. According to the Report of Mr Preston a very large number of important British lines participate in the combine, but for reasons of

their own the combine has decided that the Britisher shall be made to pay. Mr Preston says (p. 28 of his Report):

"It is clearly established that although the distance is shorter between Montreal and Liverpool (2760 miles) than between Hamburg and New York (3577 miles), the freight rate of Canadian exports is two and three times greater than the combine rates between Hamburg and United States ports."

Not only are the freight rates higher on Canadian exports, but British exports are similarly penalized, as a few typical examples will show.

The rates per ton, as fixed for the combine for April 1924, were as follows:

From Antwerp to Spain	. 10s.
United Kingdom to Spain	. 30s., plus 10 per cent.
Antwerp to Australia	. 50s.
Swansea to Australia	. 75s.
Hamburg to Bombay	. 25s.
United Kingdom to Bombay	40s.
Antwerp to Canada	. 25s.
United Kingdom to Canada.	45s.

For an official document the following statement of Mr Preston is remarkably frank, but certainly justifiable:

"The suggestion that British steamship lines controlled by Peers, Baronets and Knights of the British Empire, carry freight from foreign ports to any part of the world at a lower figure than they are willing to carry identical freights from British ports, would be absurd, unless official evidence that cannot be contradicted is available to prove the absolute proof of the suggestion" (p. 24).

Why do we as a nation put up with this kind of thing?

The first reason, perhaps, is because the people do not know about it, and I am afraid that is partly

accounted for by the fact that private interests dominate the policy pursued by much of the public Press. We are a much-exploited and over-patient people!

It is still difficult to imagine how great lines—like the Cunard, Royal Mail Steam Packet Company, White Star, Furness Withy and others—can be participants in a combine that adopts a policy of this kind, but there can be no reasonable doubt that the determining reason for their doing so is that the Britisher can be made to pay, and he is therefore made to do so.

*The Control of Storage and Distribution.*—Before and after goods are transported by sea they are stored on land; and, during the war—as well as since—we have had a good deal of new light as to how the present system is developing. We do not hear in these days of the conflict between the merchant or trader and the shipping companies that we used to do. The reason is that they work together. The spirit of combination is comprehending both supply and distribution.

In the case, for example, of one of the bulkiest of our imports—grain—the recent Report of the Food Prices Commission showed that the whole of our grain shipments are in the hands of seven or eight firms, and so powerful are these bodies in imposing prices on the producer that, in Canada, their operations have led to the formation of wheat producers' "Pools," which consist of alliances of the producers as a defence against the exploitation of speculators and the great importing combines. Recent information indicates that producers in the United States and other countries are preparing to imitate the Canadian example.

As against all the elaborate exploitation which successive Government Commissions show the great combines are able to impose upon the producer and the consumer, we found, in war time, that the Royal Commission on Wheat Supplies<sup>1</sup> was able to purchase in bulk and to import on State account

<sup>1</sup> See their Report, Cmd. 1544, 1921.



27,000,000 tons of wheat and flour, with administrative charges of only 1s. 2d. per £100.—What an exhilarating experience it would be to find the grain-importing combines giving a stabilized price to the producer and importing the national supplies of wheat at a charge of one-seventeenth of one per cent. !

Parenthetically, also, the experience of the Wheat Commission effectually disposes of the legend that the overhead charges of State operations compare unfavourably with those of privately conducted businesses.

In the case of Meat importation and distribution our experience is, if possible, more detailed and more profitable than in the case of corn, for the knowledge gained during the war has been very materially added to. The Argentine, which is the greatest supplier of beef—and which sent us no less than 71 per cent. of all the beef imported in 1924—affords perhaps the most striking case. We have already glanced at the profits of the Union Cold Storage Company, which is the great British concern that operates in the Argentine in friendly co-operation with the five great American meat companies. Between them these concerns control 88 per cent. of all the meat exported from that country. The extent of their control before the war was not so great as it is now, but in the early days of the war period the power of these organizations was so extensive that the Government, in self-defence, took over some meat works at Las Palmas that had been closed for two years. These works operated so successfully that their continuance was recommended by two separate Government Commissions—namely, by the Inter-Departmental Committee on Meat Supplies,<sup>1</sup> under the chairmanship of the Right Hon. W. C. Bridgeman, now First Lord of the Admiralty, and by the Interim Report on Meat from the Sub-Committee appointed by the Standing Committee on Trusts,<sup>2</sup> under the chairmanship of Mr H. W. Macrosty, of

<sup>1</sup> Cmd. 456, 1919.

<sup>2</sup> Cmd. 1057, 1920.

the Board of Trade. During the war the importation of meat from this source was used for the supplies of the troops, and it is true to say that the British Army was supplied with better and cheaper meat than any other army in the field. Post-war reaction decreed the cessation of this enterprise, but happily we have been furnished with a detailed and critical account of its transactions by the Accountant and Auditor-General in his Trading Accounts and Balance Sheets for 1920-1921. He reports<sup>1</sup> that :

“The profits at March 31st, 1921, on the frozen meat factory at Las Palmas, amounted to £617,695.”

With the proof before them that the British Government can undertake meat purchase and distribution on its own account, if need be, the great Argentine combines drew nearer together. Lord Vestey told the Food Prices Commission<sup>2</sup> that “There has not been a real set-to” between the Union Cold Storage Company and the American companies since 1913.

On the contrary, a Conference has been established ; a close understanding has been arrived at, and the Royal Commission gave a vivid and interesting picture of the different processes of control of the meat imports which follow therefrom. We find that they extend from the Conference in Buenos Ayres through the shipping companies, through cold storage companies and through the London and provincial markets to the retail shops controlled by these great concerns. Briefly, the process is that a Freight Committee, consisting of representatives of the steamship and meat companies, sits in London and fixes the total amount of freight required from time to time<sup>3</sup> :

“One of the principal objects of the Committee is to prevent the total quantity of chilled beef reaching this country at any time being in excess of what

<sup>1</sup> No. 126, 1922, pp. 9 and 143.

<sup>2</sup> Par. 291.

<sup>3</sup> *Ibid.*

the market can absorb on terms which will yield a satisfactory margin of profit to the refrigerating companies."

The Bridgeman Committee and the Royal Commission showed how the process is continued after the Freight Committee had fixed the amount to be imported. It appears that two-thirds of the firms operating in Smithfield market belong to jobbers, agents and importers, dealing almost entirely with imported meat, and that much more than half of the meat that comes into Smithfield is controlled by this organization. We are told<sup>1</sup> that:

"Smithfield is in fact the basic market, and wires are sent out daily to the country depots telling them the trend of Smithfield prices":

and the provincial markets are unable to quote a price for the day until they have heard from Smithfield.

Without further elaboration of the story at this place, it is fair to say that, so far as the British consumer of imported meat is concerned, the great trusts determine:

- (1) How much the producer (except New Zealand) is to be paid;
- (2) How much of it the Britisher is to get;
- (3) When he is to get it; and,
- (4) How much he is to pay for it.

No wonder, therefore, that the Commission<sup>2</sup> concluded that:

"The system of regulating supplies of an important article of food by a combination of private traders is open to serious criticism on grounds of public policy. It is not a system which either producers or consumers can be expected to view without grave suspicion, and in the long run we believe that both producers and

<sup>1</sup> Par. 255.

<sup>2</sup> Par. 293.

consumers will demand a controlling influence in the administration and policy of trading organizations exercising these vast powers.<sup>1</sup>

The pity is that the majority of the Royal Commission on Food, with the history of the Las Palmas experiment and the records of the Ministry of Food before them, could not screw up their courage further than to recommend that when the Food Council—entirely unequipped with any powers beyond publicity—was satisfied, as a result of its investigations, that<sup>1</sup>:

“a person, firm or association is behaving in a manner contrary to the public interests, it should be the Council’s duty to instruct that person, firm or association to desist from such behaviour.”

There is no difference in principle in what has recently been disclosed in the case of meat than from what we found during war time in regard to the holding of other kinds of stock—whether it was lead, cotton waste, aluminium, or anything else—and the reasons that led us to control metals were identical in principle with those that were exercised on wool, hides, hemp, flax and a host of other commodities. I can find no instance in which an order controlling the disposition of stocks was not immediately followed by a fall in price, because the control of stocks had, as its corollary, the power over distribution, together with power to determine the price to be paid for the services rendered at different stages and, consequently, the elimination of unnecessary costs.

Under present circumstances the difference between the wholesale and retail prices of meat is from 6d. to 1s. per lb., but the Royal Commission on Food Prices<sup>2</sup> told us that the Ministry of Pensions could purchase hind-quarters of beef at 5½d. per lb., and it was able to issue the prime joints of beef at 7½d.<sup>3</sup> to their hospitals, sell off the inferior joints at the ordinary market price, and still make a profit.

<sup>1</sup> Par. 344.

<sup>2</sup> Par. 244.

<sup>3</sup> Par. 224.

The policy of the Ministry of Food which controlled prices all along the line from the dockside to the consumer was to allow the actual retailer of meat an average profit of about 2d. per lb., and unless they had been able to eliminate whole groups of intermediate charges, the price of meat, entirely apart from its scarcity, would probably have been at least twice what it was, judging from our present experiences. We obtain an indication of the extent to which, under State direction, it was possible to eliminate unnecessary charges, when we find by the National Trading Accounts and Balance Sheets, 1920-1921,<sup>1</sup> that the whole of the administrative costs of the Ministry of Food (including all the costs of food committees, rationing and the rest, which were superimposed on the ordinary transactions at that time owing to scarcity) were less than a half of one per cent. It is to be remembered, too, that although there was a limitation of charges all along the line every party who rendered an essential service was generously paid for it. Nevertheless, the National Trading Account tells us that the net result of the transactions of the Ministry of Food, exceeding in the aggregate £1200 millions, was a profit of £6,391,365.

As a demonstration of the ability of the State to control supplies and distribution, and to check profiteering, the story of the departments which controlled the supplies and prices of wool, hides, flax, jute, hemp, chemicals and many other materials, surpasses even the achievements of the Ministry of Food. Without their operations it was certain that humble people would have obtained no supplies at all, or only at utterly extortionate prices, and those interested in the tale of it should consult Mr Lloyd's dramatic story.<sup>2</sup> The result of State transactions in these commodities was that, in addition to rebates

<sup>1</sup> P. 126, July 1922.

<sup>2</sup> *Experiments in State Control*, by Mr E. M. H. Lloyd (The Clarendon Press).

to India and other countries of more than £8 millions, and repayments to the Dominions of more than £5 millions, the profits surrendered to the Exchequer amounted to £27,525,502.

As a final illustration of some of the savings that were effected during the war period I may add a quotation from the Trading Accounts and Balance Sheets, 1920-1921. The Controller and Auditor-General says<sup>1</sup>:

“The Ministry [of Food] operated its own insurance fund, credited it with premiums at commercial rates, debiting all losses. This policy has resulted in a profit to the Department which would otherwise have accrued to the underwriters of £10,500,000.”

The lesson to be learnt from these experiences will be referred to later, but for those who are willing to get behind phrases, and look impartially at the facts, they reveal an unassailable case for national intervention in the arrest of the gross and increasing waste which takes place in the price of many articles of common necessity between the producer and the consumer and that are thereby characterized by discouragement to the producer and hardship to the consumer.

<sup>1</sup> P. 139.

## CHAPTER IV

### NATIONAL FACTORIES

**A** GOOD many people who are sympathetic to the case that is here being presented may be prepared to admit that the investigation of the costs of production, when the State itself is a purchaser of the goods, may assist in the establishment of a fair price and prevent exploitation, provided that the investigations are conducted by sensible and experienced men without too vexatious an interference with the conduct of business. They may even admit that the organization under national auspices of the storage and distribution of bulk commodities—such as food or coal—when there is an altogether unjustifiable increase of price between the producer and the consumer, may be managed with advantage and even yield a lower price to the consumer and a more stable and perhaps higher price to the producer if the thing is managed without too much "red tape" and on "businesslike" lines. But to suggest that the State can, with advantage, take a hand in the complicated processes of manufacture is to go much further and, indeed, to desecrate the Ark of the Covenant of private enterprise.

The fashionable thing is to assume that State and municipal undertakings are characterized by wasteful methods, although we are confronted by the existence of municipal gas, transport and other undertakings by the score, that are efficiently and cheaply run. It is an assumption that is accepted gladly and without further inquiry by those who similarly assume that the one sovereign remedy for bad trade is that working men should work longer hours for less

money. Whatever may be their genesis it is certain that neither of these notions can have resulted from a candid examination of what really did happen when the State undertook manufacture on a large scale.

Further, let us not assume, but rather wait for proof, that the socialistic method necessarily involves the existence of functionaries in Whitehall, who will issue orders on details of management to the men in charge, say, of a factory or a farm. It is true that a Government, through its departments, must be supreme on questions of policy, but the commonly accepted fairy - tales of superhuman "Whitehall mandarins" are as remote from the reality as anything could well be.

We may take it as an axiom that any system will break down unless those responsible for management are left to manage. The problem is to secure competent management. The overlapping Boards of Directors of some of our vast industrial concerns are just as remote from the details of management and direction as any State official could be ; and, judging from the recent inquiries into the 1500 separately managed concerns of the Coal Industry, or even from the recent Report into the management of Messrs Vickers Limited, and of Messrs Armstrong, Whitworth Limited, it does not appear that the present system is by any means successful in securing competent management. Indeed, if any State Department had been shown to be so atrociously incompetent as the conduct of these concerns has been found to be, there would have been an anti-socialistic outcry from one end of the country to the other, and it would have had a good case.

Whatever may be our prejudices, it is undeniable that, measured by the two great tests of Output and Price, the State factories of the war period were a signal success—far greater than many of us had dared to hope for. There were, of course, multitudes of



instances of waste, and any hostile critic could, no doubt, discover some of them. The wonder to many of us was that, in the bustle and pressure of the time, there were not many more ; but, when the whole lot of them are included in the expenditure involved in our national factories, and distributed over the whole output obtained, the result was that we obtained far greater supplies at much less cost than we found it possible to obtain from private manufacture. Moreover, by the experience gained in these factories we were able to secure great reductions in private contract prices and a general grading-up of industrial methods.

Some factories, of course, were better than others : the costs were lower, although both paid the same rates for labour and were supplied with material at the same cost ; better organization and arrangement as well as personal factors contributed to make up the difference. But since we were possessed of a system whereby we could contrast and investigate these differences we were able to apply ourselves to their removal. There was not then, and there never will be, any escape from the fact that some men are more competent than others, but the result of the frank ascertainment of the facts in the different factories resulted in the standard of the most competent being taken as that which was to be attained to. In this respect the State system differs, and must differ, to the public advantage, from what prevails at present. There are, under present circumstances, numberless competing private companies, each with its own separate board of directors, each with jealously guarded trade and industrial secrets, and the rest : the less competent struggle on as best they can ; they are sometimes absorbed by their greater rivals and occasionally they abandon the struggle unless protected by a price-ring, but always they are foremost in championing any demand for the reduction of wages. On the other hand the great combines drift more and more into becoming price-

fixing combinations, and are disposed to follow the rule of the Light Castings Association, which frankly says that its object is "that of raising and keeping up the price to the buyer of goods and articles made and (or) supplied by its members." In actual practice a rule of this kind results in a price being fixed that will afford a possibility of profit to the least competent manufacturer, and there is no machinery whereby the best practice and experience may be utilized, or even made available, for the general improvement of industrial methods.

When we were investigating the causes of the awful arrears in delivery that confronted us in the early days of the Ministry of Munitions, few things were more astonishing than the differences in time that the same processes took in different works. Here, for example, is a typical Table of the number of seconds or minutes that an identical operation took in three different shops :

A is a very well-managed private concern.

B and C are two of the greatest munition-making firms, and at that time they were very badly in arrears with their deliveries.

<i>Process</i>	<i>Firm</i>		
	A	B	C
1 . . .	4	7	15
2 . . .	3	5	10
3 . . .	3	2½	6
4 . . .	1½	3	(not performed)

When differences of this kind were projected, as we found they were, over the general work of the different shops, it was no wonder that the costs with B and C were higher than they were with A. The real difference was not so much between machinery, material or workmen, as between good and bad management.

The institution of our National Factories came

about not only because we wanted to obtain more supplies, but because the facts, as they came to be ascertained, forced this method upon us—even on the minds of men whose preconceived ideas were all the other way. It appeared to be the only way in which we could be sure of bulk production and of economical production. When the results of the co-operative system of production, which had been established a few months, were beginning to be clearly ascertained in December 1915, together with those from the few early national factories, a Memorandum was prepared by the financial experts, summarizing the results. It showed that the savings being effected by national direction were so prodigious, and that the rate of output was being made so much more dependable, that the course of future policy thereafter was not open to question. The Memorandum opens with this paragraph :

“In undertaking the examination of contracts, the paramount point has been to ascertain whether value is being received for Government Funds expended. In order to form a fair and proper judgment in this matter, it is necessary to acquire information as to the cost of the manufacture of articles purchased, and considerable time and effort has been devoted to accumulating this knowledge.”

It was reported, for example, that by a process of collaboration, the

“prices of conversion of metals to the materials for making cartridges or fuses have resulted in the reduction in prices of from 20 to 30 per cent.” ;

that by the supply of parts at ascertained cost, with the remuneration based “on the twofold basis of a bonus for quick production and a percentage of savings obtained by economy in management,” we had already obtained a saving of nearly 40 per cent. over a very wide range of orders.

Even at that early period it was shown, for example,

that the 18-pounder shells, for which, with three small exceptions, prevailing contracts were from 18s. to 23s. per shell: "It has now been made clear that an 18-pounder H.E. shell should, after the initial stages of a new and unknown industry have been overcome, be manufactured by Government-owned factories at 11s. or under."

These are some examples of the results as first reported; but they were soon eclipsed by the more brilliant results derived from some of the State explosive factories.

The important and valuable thing to note, however, is that there was nothing stereotyped or "cut-and-dried" about the system that developed; it was simply evolved as experience indicated. There was, for instance, a considerable group of national shell factories that were administered by Boards of Management, on which experienced men in the various localities served voluntarily, and therein, of course, we had an advantage over what would characterize any form of State establishment in ordinary times, although in these cases the actual management was in charge of salaried persons in the usual way. Other factories were managed by existing firms under a co-operative scheme and they were remunerated as agents on a basis which provided a bonus on economical production. Later on, many private firms came into the co-operative scheme and secured the advantages of bulk purchase and supply of materials or parts. Such factories working on co-operative lines, or by firms acting as agents, formed a considerable proportion of the Filling factories, but, as time went on, the largest and most important of the factories came more and more to be those which were nationally owned and directed, and in the case of filling, the great factory at Chilwell, near Nottingham, managed for us by Lord Chetwynd, filled more heavy shell than all the other co-operative and agent factories put together.

By March 1916 there were between forty and fifty national shell and projectile factories in operation, and, as Lever foresaw, in a Memorandum to me of the 23rd of that month :

" This great group of factories offers unique opportunities for centralizing buying, standardizing production, collating and exchanging information, and for introducing improvements so that each may profit by the experience of all."

As to how this system was applicable to small things as well as large may be illustrated by a small Table of comparable costs of a few small articles wanted in vast numbers by the Ministry and by private firms :

<i>Article</i>	<i>Armament Firms</i>		<i>The Ministry</i>
	<i>s.</i>	<i>d.</i>	<i>d.</i>
Tin cups . . . . .	0	2½	¾
Discs machined . . . . .	0	10	4½
Tubes . . . . .	1	6	4½
Grub screws . . . . .	0	2	1½

These and multitudes of similar results, however, were obtained only by a firm-handed application of the lessons learnt from our own factories. The sort of discrepancies that required attention may be illustrated from the Report of Mr H. E. Judd, in April 1916, when he showed that the copper used at our Uskside factory for each 6-inch H.E. shell cost 5s. 10d., whilst at Leeds the comparable price was 3s. 9d. Derby paid 6d. for stamping 4.5-inch base plates, whilst at Rotherham they cost 1s. Machining the same plates cost Leeds 1s. 10d., whilst Bradford turned them out for 1s. 3d. ; and so on, through a long series of differences.

Even in those early days, however, the comparable costs between State production and private contract for typical shells were as follows :

<i>Shell</i>	<i>Average Contract Price</i> s.	<i>National Factory Prices</i>	
		s.	d.
18-pounder . . . . .	20-23	Keighley . . . . .	9 1
		Dundee . . . . .	9 1
		Uskside . . . . .	13 0
		Huddersfield . . . . .	13 11
		Liverpool . . . . .	12 11
4.5-in. . . . .	47-65	Leeds . . . . .	39 10
		Bradford . . . . .	36 10
		Derby . . . . .	31 2
		Rotherham (1st month) . . . . .	45 6½
6-in. . . . .	80-99	Grimsby . . . . .	68 10

When results like these were obtained after a few months of early and relatively inexperienced working, it is no wonder that we were prepared to undertake a vast extension of the system.

A critic might urge that the comparison just made is between the results obtained by these national methods and the prices exacted by the great armament firms which had a virtual monopoly until the summer of 1915, and that a goodly number of well-managed private factories, under the co-operative scheme, produced goods as cheaply as we did. That is true, and the fact that thereafter, and with growing numbers, they participated in our co-operative methods was in itself a tribute to the efficiency of the methods. But the very fact that one has to present a critic with suggestions of this kind only displays the more the disadvantages attaching to private monopolies. Those disadvantages were typically revealed in the inquiry recently held into the affairs of Messrs Vickers Limited (December 1925). In order to bring Messrs Vickers on to a proper basis the Committee has been obliged to write down the shares to about a third of their nominal value and to use up the whole of the reserves. In this way the unfortunate share-

holders are paying the long-deferred costs of bad and extravagant management, of prodigious overhead charges, of excessive capitalization and the rest—all characteristic of private monopoly emancipated from independent inquiry and control. The only thing to be wondered at is that the application of the unpleasant remedy has been deferred so long. What applied to Messrs Vickers has already applied in various ways to the Dunlop Company, to Messrs Armstrong, Whitworth, to Messrs Cross & Blackwell, and many more; and the recently published results of the great group of cotton and spinning companies that underwent inflation in the post-war period, as compared with those concerns that conducted their businesses on competent and frugal lines, ought surely to convince the most reluctant citizen that some alternative method of the management of great industries is, at all events, worth consideration, seeing that these results have meant the absorption of the life savings to tens of thousands of decent people who were led to invest their all in these undertakings and now find themselves condemned to a dependent or impoverished old age.

Let us, however, extend the comparison to better managed industries. When we turn to the explosive factories we have to compare results with the chemical trades in which many of the chief firms were undoubtedly well managed and had been ready to adopt improved and scientific processes. Notwithstanding this heavy pull against us, equally striking results were obtained. Most British sulphuric-acid makers had devoted themselves to the manufacture of dilute acid, and the bulk production of the strong acid (oleum) that was required had not been developed on a great scale in this country, although it had in America. It was for this reason that the late Lord Moulton, as head of the Department of Explosive Supply, determined to set up a great national factory for the production of oleum at a relatively early

period, and although it would not be fair against British producers to stress the comparison too far, it is fair to press it against some of the great American firms that were well managed. By May 1916 we were presented with this amazing result :

- (1) The capital cost of our factory had been £750,000.
- (2) The average contract price for oleum per ton in U.S.A. was £12.  
Ditto at home, £30.
- (3) The cost per ton at our works was from 50s. to 60s. (say 55s.).
- (4) The output at our works per week was 2050 tons.
- (5) The difference in our factory price and the lowest U.S.A. price was £9. 5s. per ton.
- (6) The saving on 2050 tons per week for fifty-two weeks at £9. 5s. per ton is £975,050.

By May 1916, therefore, our savings had already repaid the total cost of the factory, as compared with the lowest contract prices, and the process continued afterwards, only in greater volume.

Some of the State explosive factories, like some of the projectile factories, were managed by experienced firms acting as our agents, and others were participants in co-operative schemes, but the State-owned T.N.T. factories provided results entirely comparable with the prices prevailing on extensive private contracts, both at home and in the United States. The latest detailed figures that I possess bring the results down to April 1917, but I know that the factories thereafter gave an increased output and underwent substantial improvements. At that time there were forty explosive factories of one kind or another, and six of them were devoted to the manufacture of T.N.T. and were State-owned, and the results were as follows :



<i>Name of Factory</i>	<i>Date of Com- mencement of Production</i>	<i>Cost, including Amortisation</i>	<i>Average pre- vailing Con- tract Prices</i>
Oldbury . . . . .	June 1915	12'12d. lb.	} U.S.A. and Canada 28d. U.K. 20d.
Hackney, Wick . .	Oct. 1915	16'54d. ,,	
Craigleith (just beginning) . . . .	Jan. 1917	25'76d. ,,	
Litherland . . . .	Mar. 1916	18'73d. ,,	
Penrhyndendraeth	Jan. 1916	15'48d. ,,	
West Gorton . . .	Oct. 1915	14'79d. ,,	

We were then producing T.N.T. in thousands of tons per week, and the savings per pound aggregated, even each week, a vast sum, since a saving of a 1d. per pound represented a weekly gain of more than £9000 for each thousand tons.

The capital cost of the six factories had been £1,473,000, but by April 1917 they had already produced T.N.T. which, as against contract prices, had given us a surplus of £2,404,318. They had therefore completely wiped out their total cost of provision, and had left a balance over of 83 per cent.

Extending our summary to all the national factories provided up to April 1917, and comparing the prices—not with the inflated prices of 1915, but with the reduced prices obtained as the result of the application of the costing methods—we could already record a gain of nearly £10 millions.

A summary is presented in the subjoined Table,<sup>1</sup> although some of the factories included in the Table were only then being built, especially in the case of propellant factories. But it appears that all the capital costs had been repaid by the end of 1918, whilst many of the individual factories had repaid theirs long before that date.

It amounts to this: by the institution of national factories we had obtained products at so much lower

<sup>1</sup> See next page.

**NATIONAL FACTORIES  
GUN AMMUNITION COMPONENTS**

<i>Nature of Factory</i>	<i>No. of Factories</i>	<i>Estimated Capital Cost</i>	<i>Value of Production at Contract Prices</i>	<i>Surplus on Contract Prices over Production Costs</i>	<i>Depreciation included in Cost of Production</i>	<i>Total of 5 and 6 available to meet Capital</i>	<i>Approximate Time required in full Production beyond March 31st, 1917, to meet all Capital</i>
1	2	3	4	5	6	7	8
		£	£	£	£	£	Months
Explosives .	29 (a)	6,881,870	13,177,001	2,102,393	824,503	2,926,896	12
Propellants .	11	18,802,300	7,882,127	1,375,035	1,218,060	2,593,095	36
Projectile .	16	6,832,040	17,573,045	2,913,718	775,030	3,688,748	9
Shell (b) .	32	1,139,986	3,968,821	314,736	270,000	584,736	6
<b>Total .</b>	<b>88</b>	<b>33,656,196 (c)</b>	<b>42,600,994 (d)</b>	<b>6,705,882</b>	<b>3,087,593</b>	<b>9,793,475</b>	<b>...</b>

- (a) Excluding two small factories destroyed by explosion and one in a congested area closed down.  
 (b) To September 16th only. Other figures to March 17th.

prices than those obtainable even on the most favourable terms from private enterprise that we were able to repay the whole costs of the factories—land, buildings, machinery, everything—in from two to three years. If we had compared the prices with those prevailing before the great reductions obtained by the institution of costing the period would have been much shorter still. No business firm would ever dream of recouping themselves for the cost of a well-equipped factory except under a considerable term of years, because, apart entirely from machinery renewals, the land, buildings, lighting, drainage, railway sidings, and other facilities, are enduring assets. It must also be borne in mind that the building and equipment of those factories, owing to the higher prices prevailing, had been much more costly than any comparable establishments which had been provided before the war.

It is therefore not open to doubt that if we chose to do so we are able, not only to organize supply and distribution, but to organize and conduct under State initiative the much more complex processes of manufacture with results both as to the volume of output and the cost of production that bear comparison, not only with the general average, but with the most efficiently conducted private concerns. The overhead charges in particular were incomparably less than those which must attach to the multiplicity of overlapping of boards of directors at present responsible for management, but I believe the successful result was due more than anything else to the fact that the system lent itself to a disinterested comparative treatment of independently ascertained results, so that the best methods of purchase, distribution of work, lay-out and arrangement of factories, machinery installation and working methods were revealed, and the system made it possible and profitable to apply them where required.

An examination of some collateral advantages will be dealt with in later chapters, but reference should

be made to one great advantage that we possessed, and which a critic might urge would not ordinarily be obtainable: it was that we had at our disposal some of the best brains that industry and commerce could provide, on a voluntary basis. I do not for a moment wish to overlook this consideration, and the importance of it cannot easily be overstated. In ordinary times, no doubt, such men would command high prices, but they could be obtained, I feel sure, at a far less cost than is represented by the earnings of many of them in private life, for there is a dignity and attractiveness about the Public Service that appeals even to the most conservative-minded of men. Even if such men could not be obtained, except at high prices, they would be worth it, and I, for one, would be quite willing to pay the price, for, when all is done and said, their aggregate salaries would be a mere fraction of the payments now made to the swarms of figurehead directors and their staffs that beset the business and industrial world.

Great State enterprises need the best and most skilful direction that we can secure, and we should be fools, and courting only failure, if we embarked upon them without being prepared to enlist the most experienced help obtainable. I have no doubt at all, and the evidence recurred scores of times, that a highly paid staff of experts would often save us their total annual cost several times over in a single month.

Granted, then, that we are sensible enough to enlist the best experience in direction, is it not quite absurd to suppose that we could not manage successfully the winning and distribution of coal and the development on scientific and comprehensive lines of the manufacture and distribution of its by-products? It is even more grotesque to contend that we could not manage, under national auspices, the purchase and distribution of sides of beef, and of grain for bread, without the awful waste and increase of cost between the producer and the consumer that characterizes the present system.

## CHAPTER V

### WAGES

SOME apologists for bad trade begin and end their thinking at wages and hours of labour. With them the sovereign remedy is that the workmen should work longer hours for the same money, or the same hours for less money. The representatives of the coal-owners have lately been the leading exponents of this doctrine, although the waste, mismanagement and lack of scientific method in the conduct of their industry has been unsparingly condemned by one authoritative inquiry after another.

The Prime Minister himself, in a rash moment, lent his authority to this prescription, on July 30, 1925, when he told a deputation of the miners<sup>1</sup> that: "All the workers of this country have got to take reductions in wages to help put industry on its feet."

As an illustration of this doctrine we are asked by the mine-owners to believe that the successful conduct of the coal industry in the Forest of Dean requires the miners' labourers' wages to be reduced to 4s. 9½d. per shift, so that even on a full week of six shifts (which is the exception) the total earnings of such a man for the maintenance of himself, his wife and family, as well as providing for insurance and other deductions, would be less than 29s. a week. It is very extraordinary that the Prime Minister should have lent his authority to this kind of thing at the end of a period during which there has been a reduction in wages altogether unprecedented in our industrial history, both in extent and in rapidity. We have been officially informed by the Ministry of

<sup>1</sup> *Daily Herald*, July 31st, 1925.

Labour in their *Gazette* that, apart entirely from the reductions that have taken place in the wages of agricultural labourers, Government employees, domestic servants, shop assistants, clerks and others, the following wage fluctuations have taken place since 1921 :

		<i>Decrease per week</i>	<i>Increase per week</i>
1921	. . .	£6,024,500	...
1922	. . .	4,209,500	...
1923	. . .	317,000	...
1924	. . .	...	£554,000
1925	. . .	79,000	...

The reductions, therefore, in the weekly earnings of those whose wages are scheduled is rather more than £10 millions per week, and it is certainly an underestimate to add an additional million for those whose reductions have not been scheduled. Taking these figures together, therefore, the income of the wage-earning classes during the year 1925, as compared with five years previously, has been reduced by at least £550 millions per annum ! Notwithstanding these reductions trade had not substantially improved. If wage reductions were the sovereign remedy, surely this prodigious contribution would have produced some beneficial effect ere this.

There does not, in fact, appear to be any reliable evidence in support of the Prime Minister's contention, and the effect of the enormous reduction which has taken place in diminishing the purchasing power of the people in the home market obviously entails less employment for those who would have produced the boots, clothes, furniture and numberless other articles that they would have purchased during 1925 if working people had had the income they possessed in 1920. At all events we may hope that there is an increasing number of people who, having before them the staggering futility of these wage reductions, will

want to have a little better proof before they are prepared to press for a further application of the Prime Minister's dismal prescription.

Many influential sections of the Press displayed a significant silence over the Prime Minister's statement, and their silence perhaps betokened misgiving. A few weeks afterwards the President of the Federation of British Industries returned from America and presented to the Federation a Report on the state of trade and industry in that country. He pointed out that in America they are enjoying abounding prosperity, although they pay higher wages than any country in the world. Indeed, he went out of his way to repudiate the notion that low wages were good for trade, and particularly emphasized the importance of high wages in assisting the home market. The main point of his criticism was the same as that which was adopted<sup>1</sup> by Mr McKenna in his address to the shareholders of the Midland Bank, in attributing the continued depression in the overseas market mainly to the forced deflation that had been pursued with a view to the re-establishment of the gold standard, by which it had become more difficult for overseas customers to purchase our goods. The President of the Federation of British Industries also emphasized the importance of concentrating our attention on improved methods of management, rather than attempting still further to discourage and depress the man whose work is primarily essential for the production of any output at all.

There are also two other features specially characteristic of the post-war period which ought to be noted before we attempt to apply our experience of the working of national or socialistic methods to the question of wages. During 1919-1920, after the Treasury Issues Committee had ceased to operate, there was an unprecedented watering of capital by the issue of bonus shares—as well as by the flotations

<sup>1</sup> January 26th, 1926.

of old companies under new names—on the ground that they were to undergo what was politely known as "reconstruction." In its issue of January 4th, 1926, *The Manchester Guardian*, under the heading of "Spinners' Profits in 1925," gave a classified list of spinning mills and distinguished the non-inflated concerns from those which had been recapitalized or reconstituted. The original companies, with their capital unenlarged, paid dividends averaging 13.25 per cent.; whilst the refloated companies had paid only 2.25 per cent., and only 70 out of the 212 of them had paid any dividend at all. One can well believe that the directors of every one of these 212 reconstituted companies, in a frantic endeavour to make substantially the same plant—now written up to three or four times its proper value—pay a dividend at the same rate as it might have done on the original capital, would swell the clamour to reduce wages so as to provide a contribution to the missing dividends. What applies to these spinning companies applies to hundreds of other companies similarly dealt with.

The other feature that has characterized business since the war has been the extraordinary growth of middlemen agencies, advertisement costs, agents, commissions, and other overhead charges, so that production has come to form a smaller and smaller proportion of the price the ultimate producer is called upon to pay. Whenever it has happened that these circumstances have been superadded to indifferent management, it is inevitable that we should have a succession of failures.

The liquidator in the recent case of the Belgrave Mills Company, which failed for £3,500,000, attributed it to "carelessness and inefficiency."<sup>1</sup> Three days later<sup>2</sup> we were told that as a result of it: "Hundreds of people in Oldham district and others in various parts of the country will be forced to spend a black

<sup>1</sup> *Daily Mail* report, December 10th, 1925.

<sup>2</sup> *Weekly Dispatch*, December 13th, 1925.



Christmas this year. Hundreds of people, including many widows, have been ruined."

In the case of Messrs Vickers the Committee of Inquiry<sup>1</sup> reported that: "The management had not the special experience required to direct and control so large and varied a body of industrial undertakings"; and in commenting upon it *The Financial Times* of December 10th, 1925, said:

"A tremendous retrenchment can be made in the overhead and administration costs of these big undertakings, and far too little attention has yet been paid to the economies that can be effected by the elimination of waste in management and production. The latest report of the United States Secretary of Commerce shows that practically all the saving in industry that has taken place in America has been effected in this form, and has kept pace with a higher standard of living and consequently of wages."

During the war period, from 1915 to 1918, we had the priceless advantage of getting behind partisan generalizations on both sides and of being able to base conclusions on ascertained facts. The more we knew of them the less regard we came to pay to the sort of slipshod generalization of which the Prime Minister has been guilty. Competent management always stood out, and we came to know, almost before reports came in, who would provide the bad records and who the good.

That period was characterized, it will be remembered, by substantial and repeated increases of wage rates, but even they were more than compensated by the improvements in method that were effected. During 1916 alone there were no less than 1500 wage awards by the Committee of Production, and they affected many classes of workers. Most of the awards

<sup>1</sup> Mr Dudley Docker, Sir William Plender and Mr McKenna.

gave increases of pay. Notwithstanding these increases, however, in a Report on April 26th, 1917, the Assistant Financial Secretary (Sir John Mann), estimating that the Gun Ammunition Programme for 1917-1918 would cost £413 millions, pointed out that £456 millions would have been paid for the same quantity the previous year, even at the reduced prices secured in the spring of 1916.

The saving was accounted for in this way :

Further reduction in contract prices . . . . .	£10,500,000
Use of cheaper explosives . . . . .	20,500,000
Economy in the use of the more costly metals . . . . .	12,000,000
	<hr/>
	<u>£43,000,000</u>

This gratifying reduction in price had been obtained notwithstanding that the increases of wages provided for in the different awards were roughly estimated to amount in the aggregate to £28 millions—and this additional sum had been fully allowed for in the reduced price of £413 millions.

It may be interesting at this point to quote some analyses of the costs that led to the reductions in price referred to in a previous chapter in order to show what was the share of the labour charges. A set of operations has been selected in which presumably they would have formed a high proportion.

The course of proceedings in each of three typical cases was the same: first the firm quoted a price (stage A); this price was challenged by us and was followed by a reduced quotation with a table of costs (stage B); this statement of costs so far exceeded our own experts' estimate that they themselves made an examination, and, as the result of their examination, a final price (stage C) was agreed upon by the firm—and the final price still allowed a generous profit, as was admitted.

CASE No. 1

FILLING No. 2 GAIN. CONTRACT, 12,000 PER WEEK

	<i>Per 100</i>
Stage A.—Firm's first quotation . . . . .	£3 0 5
„ B.—Firm's reduced quotation after supply of table of costs . . . . .	1 13 8½
„ C.—Price agreed after our accountants had reported . . . . .	1 5 7

THE COMPARABLE ANALYSES OF COSTS WERE AS FOLLOWS

	<i>By the Firm</i>	<i>By our Accountants</i>
	£ s. d.	£ s. d.
Labour . . . . .	0 11 11½	0 10 4½
Materials . . . . .	0 8 4	0 7 8½
Oncosts . . . . .	0 9 0	0 4 1½
Proof . . . . .	...	0 0 2½
	<hr/>	<hr/>
	£1 9 3½	£1 2 5
	<hr/>	<hr/>

CASE No. 2

FILLING PRIMERS. CONTRACT, 30,000 PER WEEK

	<i>Per 100</i>
Stage A.—Firm's first quotation . . . . .	£1 5 5
„ B.—Firm's reduced quotation after supply of table of costs . . . . .	0 19 11
„ C.—Price agreed after our accountants had reported (including an allowance of 1s. 4½d. for inspection and adjustments)	0 11 3

THE COMPARABLE ANALYSES OF COSTS WERE AS FOLLOWS

	<i>By the Firm</i>	<i>By our Accountants</i>
	£ s. d.	£ s. d.
Labour . . . . .	0 5 2½	0 3 11½
Materials . . . . .	0 8 0½	0 1 11½
Oncosts . . . . .	0 3 10½	0 1 7
Proof . . . . .	...	0 0 4½
	<hr/>	<hr/>
	£0 17 1½	£0 7 10½
	<hr/>	<hr/>

## CASE No. 3

## FILLING FRICTION TUBES. CONTRACT, 50,000 PER WEEK

	<i>Per 100</i>
Stage A.—Firm's first quotation . . . . .	£1 19 5
„ B.—Firm's reduced quotation after supply of table of costs . . . . .	1 11 5
„ C.—Price agreed after our accountants had reported . . . . .	1 1 11½

## THE COMPARABLE ANALYSES OF COSTS WERE AS FOLLOWS

	<i>By the Firm</i>			<i>By our Accountants</i>		
	£	s.	d.	£	s.	d.
Labour . . . . .	0	14	2½	0	9	8
Materials . . . . .	0	2	0	0	1	5½
Oncosts . . . . .	0	10	8½	0	3	10½
Proof . . . . .	.	.	.	0	0	9
	<hr/>			<hr/>		
	£1	6	11	£0	15	8½
	<hr/>			<hr/>		

Our figures of the labour costs were accepted as accurate, and we may conclude the summary by a display of the labour costs in proportion to the price originally asked and subsequently taken :

	No. 1	No. 2	No. 3
Price asked . . . . .	£3 0 5	£1 5 5	£1 19 5
Price taken . . . . .	1 5 7	0 11 3	1 1 11½
Labour cost . . . . .	0 10 4½	0 3 11½	0 9 8

The total labour costs therefore in each case were far less than the reduction which was accepted. In every case the oncosts that were asked for were far greater than was found to be justifiable, and were not far short even of the total labour costs as returned by the firms themselves.

Examples such as these might be multiplied almost indefinitely, but it will be sufficient to display on a separate Table an analysis of the ingredients of costs in a number of machining operations in which presumably labour also would form an important part.

### ANALYSIS OF COST

<i>Shell</i>	<i>Material</i>		<i>Labour</i>		<i>Shop Charges</i>		<i>General Charges</i>		<i>Total</i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
<i>18-Pounder H.E. Mark III.—</i>										
<i>Cost of machining . . .</i>	5	6'67	1	7'15	1	7'41	0	9'36	9	6'59
<i>18-Pounder Shrapnel—</i>										
<i>Cost of machining . . .</i>	10	7½	2	5½	2	7½	1	0	16	8½
<i>60-Pounder H.E.—</i>										
<i>Cost of machining . . .</i>	23	10½	6	0	6	4½	3	6½	39	9½
<i>4'5-in. H.E.—</i>										
<i>Cost of machining . . .</i>	15	11½	4	1½	4	2½	2	1½	26	5½
<i>6-in. H.E.—</i>										
<i>Cost of machining . . .</i>	37	2½	7	2½	8	10½	4	11½	58	2½
<i>9'2-in. Howitzer—</i>										
<i>Cost of machining . . .</i>	126	11½	17	2½	23	5½	16	11½	184	7½
<i>12-in. Howitzer—</i>										
<i>Cost of machining . . .</i>	278	2½	21	10½	43	3½	28	9	372	1½

The cases quoted in the Table are thoroughly typical of manufacturing operations, and should at least provide material for reflection to those who are possessed of the notion that if we can only reduce wages all will be well. It is to be remembered also that the figures in the Table do not contain the grotesque exaggeration of overhead charges and excessive prices for materials which figured so often before the more critical analyses of the cases had taken place.

The records show clearly that on the only occasion in our industrial history when it was possible to get a dispassionate display of facts by competent experts, wages costs, even on the high level of wages prevailing during the war period, formed a surprisingly small proportion of total costs, even when, as in the cases quoted in the Table, all the extras in the way of inflated establishment charges, commissions, and numberless other items had been rigidly excluded. When these latter items are allowed for, as they are in the average industrial undertaking, the share of wages in total costs is correspondingly diminished.

### WOMEN'S WAGES

As a result of the ascertainment of the share of labour in contributing to total costs we were able for the first time to deal with underpaid labour by direct orders, and in no department were the powers found to be more required, or more helpful, than in regard to the wages paid to women workers. It is a shameful story, and since we seem slowly to be reverting to the old standards, it is fitting that this chapter should conclude with specific reference to that subject.

The powers which the State acquired and exercised for two years after the autumn of 1915 did more to

improve the condition of women wage-earners than had been achieved by all the agitation, by all the sweated trades legislation and the other piecemeal efforts of the previous fifty years.

The wages of women workers before the war, when, as was nearly always the case, they were employed by the day or week, averaged about 12s. per week. The number of hours worked was usually sixty or more. How a grown woman was expected to feed and clothe herself and live a decent life on these wages passes understanding. But such was the conception of the directors of privately managed industry.

The first attempt to deal with this state of things was taken in October 1915, although at that time we had no *power* to prescribe wages and working conditions. All that could be done then was to make a beginning in the form of recommendations. The recommendations were issued to all the establishments that were "controlled" as to their work and processes, and it was recommended that women who were employed by the hour on men's work should have at least a minimum of £1 per week; that if they were doing skilled men's work they should receive the skilled man's pay; and if employed on a system of payment by results they should receive the same piece-rate as the men. In the same way, a beginning was made on the wages of women and girls who were employed on what was recognized as women's work.

There was no trouble with well-managed businesses, for many of them were already paying more than the minimum wage on a shorter-hour week; but the resistance and difficulty we experienced elsewhere, on even this first and very tentative approach to better conditions, made it evident that nothing but compulsory power would really avail. The consequence was that, in the Munitions of War Amendment Act, power was sought and obtained to prescribe working conditions.

The most vocal section of the opposition was that

which employed women on private work. Where women were employed on war work in the same factory that private work was being undertaken, an immediate result of the payment of somewhat better wages to those engaged on Government work was that those employed on private work applied to have the same rates, or, alternatively, they sought every opportunity of changing over from private work to war work.

Even a minimum wage of £1 per week, according to some energetic defenders of the existing system, was going to "ruin industry." If anyone cares to consult the columns of *Hansard* at that time he will find that I was freely heckled—for instance, amongst others, by a well-to-do Liberal manufacturer in the North of England, who employed a large number of women, and he was typical of many more. His assaults at question time were, however, as nothing compared to his expostulations in the Lobby and elsewhere. He simply "could not carry on on these terms." He "might as well shut up shop, and so might everybody else in private industry," and so on *ad nauseam*. In those days, however, one was glad to see that he got very short shrift from his fellow-Members of Parliament of all political classes. The one thing he did not do was to advertise the fact, which we discovered for ourselves, that if a woman in his factory had taken home 14s. at the end of the week she did well. Our accountant's reports also showed that in some respects his methods were so sloppy that his costs would have been high even if he had paid no wages at all. Happily, in those days the nation was in no mood to listen to men of this class.

It is not necessary to trace in detail the incidents which were subsequent to the modest beginning in prescribing women's wages. The business was characterized by the usual series of almost interminable interviews, committees, draft orders, awards, and so



forth ; it was the first time in our industrial history that a State Department had entered upon the regulation of women's wages, and only those whose lot it has been to deal with wages questions can form any real appreciation of the complexity of wage-rates, grades, methods of payment and the rest that we found ourselves endeavouring to unravel. It was discreditable that the attempt had never been made before, but it is more discreditable that, notwithstanding the shocking records revealed in those times, the State powers have since been abandoned. It was abundantly proved that well-conducted private industry did not require the payment of sweated wages, and that the labour costs were almost an infinitesimal ingredient of what the purchaser had to pay on the average sale price of goods produced by this underpaid labour. Many a time women's deputations came to us, and with tears in their eyes exhorted us to hold on to the modest circular (then known as L. 2) which provided a minimum of a £1 per week, for they told us that they regarded it as a charter for the working woman.

By May 1917 the usual rate for women workers had become 25s. for a 48-hour week, with extra pay for overtime. Women employed on piece-work—as well as a great many of those employed by the hour—earned much more than this.

It was not very much to be proud of as it was, but only those who went through it know what resolution and patience were required to bring things up even to this standard ; and the significance of the case is that, even in those days of an awakened national consciousness, it was impossible to secure decent payment for women workers, even on war work, without the possession and exercise of national power. The possession of similar powers is the more necessary nowadays when reaction is paramount, and when we see the augmentation of super-tax incomes going hand in hand with great wage reductions.

The wages of women workers were, and are now, fixed not so much on the value of the work done as on the supposition that the payment is not a wage at all, but a contribution to maintenance for the woman living at home or with her husband, and without primary regard to the necessities of those who have no such aids to fall back upon but who are solely dependent upon their earnings.

A long period had intervened between the publication of *The Song of the Shirt* and the outbreak of war in 1914, and there must have been tens of thousands of meetings and protests by well-meaning people against sweated wages, and yet how little had been accomplished! We can deal with such evils only by direct State action based on civilized principles.

## CHAPTER VI

### CONDITIONS OF EMPLOYMENT

**T**HE case for having power to ascertain labour costs and to prescribe rates of wages thoroughly justified itself; but an equally strong case was soon established for power to examine into the conditions of employment, and, if need be, to give directions for their improvement.

We have not yet slipped back into pre-war conditions as regards hours of labour, notwithstanding the retrograde proposals of the present Government for miners, and it is to be hoped that through a ratification of the Washington Agreement we never shall. Apart from that, the issue seems to depend not so much upon the influence of enlightened judgment as upon the power of resistance of organized labour. If we do revert to long hours of labour we shall certainly be sinning against the light, for since October 1915 there has been a greater gain in practical knowledge on the influence of hours of labour and conditions of employment on output and on health conditions than had been acquired during the whole of the nineteenth century.

The leaders of the industrial revolution of the early nineteenth century and the hot gossellers of the Manchester School thought only in terms of profit, and their cruelty to working people was perhaps due as much to lack of knowledge as to deliberate neglect. They forgot that the workers slaving away for 80 hours a week, week after week, were human beings like unto themselves, but unfortunately not so well circumstanced in opportunities for recuperation. If they thought about the subject at all they probably

took it for granted that they did in fact get a better output if every hour of the day and night that they could squeeze work out of people was made to "sweat its 60 minutes to the death." But it did not really pay even on the short view of daily profit and loss, entirely apart from the wickedness of the whole thing, with its toll of squalor and wretchedness. The people concerned would in fact have been all the better and more efficient, even as producers of goods, if they had had a reasonable share of the things that make life worth living—of leisure, home, decency and God's fresh air.

There were still a few who seemed to look at things in this old way when the Health of Mmunition Workers Committee was first appointed in the autumn of 1915. Some said, and a good many suggested, that the institution of that Committee was a piece of sloppy sentiment calculated to produce interference from fussy busybodies who knew nothing about the conduct of business. Nevertheless the sequel proved how needful such a departure was.

In many of the organized trades, of course, there were established agreements as to hours, and the Home Office had certain powers with regard to special classes of workers, but hours of work of from 70 to 80 per week were still quite common, and hours of 65 or thereabouts were general. Clearly the first thing to do was to ascertain the facts, to investigate the influence of conditions, and take care to base any suggestions for alteration upon the knowledge that was gained in that way.

The course of events was similar to that which characterized the acquisition of powers for the investigation of costs and the prescription of wages. Here also, as in the other cases, there was no need to exercise the powers in multitudes of instances, for intelligent employers and managers, through their Workers' Committees and other machinery, were ready enough on their own initiative to encourage

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proper inquiry and to apply the knowledge that was placed at their disposal. Indeed many of the most helpful and practical suggestions came from these sources. When Sir William Mather, for example, as head of the great firm of Mather & Platt, introduced the eight-hour day on his own initiative, he placed himself in line with other prophets whose practical wisdom is only proved and properly appreciated by a later generation.

The knowledge that was gained on the group of subjects collectively described as "working conditions" was due to the enterprise and practical outlook of the Health of Munition Workers Committee. I appointed this Committee<sup>1</sup> in the late summer of 1915, as it was evident that a central research and advisory agency was essential. The general aim of the Committee was thus expressed by Sir George Newman, its active chairman, in one of his earlier memoranda. He said :

"The aim of the Committee has been practical advice in order to increase the energy and consequent output of the munition worker. They have, however, also had in view the production of a new gospel of health for the industrial worker generally. They have endeavoured to look forward as well as deal with the immediate present."

A scheme of research into industrial fatigue was initiated, and the continuance of that valuable work

<sup>1</sup> The original members of this Committee were as follows :

Sir George Newman, M.D., K.C.B., *Chairman*.

Sir Thomas Barlow, Bart., M.D., F.R.S., etc.

Gerald Bellhouse, Esq.

Prof. A. E. Boycott, M.D., F.R.S.

The Rt. Hon. J. R. Clynes, M.P.

Prof. E. L. Collis, M.B.

Sir W. M. Fletcher, M.D., F.R.S.

Prof. Leonard E. Hill, M.B., F.R.S.

Samuel Osborn, Esq., J.P.

Miss R. E. Squire.

Mr H. J. Tennant, C.H.

E. H. Pelham, Esq., C.B., *Secretary*.

is now secured in the establishment of the Industrial Fatigue Research Board under the joint direction of the Medical Research Council and the Department of Scientific and Industrial Research. Both America and Germany were ahead of us in the promotion of organized research into questions of industrial fatigue; but in this case, as in so many others, when the Britisher gets an opportunity, he has a knack of quickly obtaining a leading position.<sup>1</sup>

*Hours of Labour.*—The first comprehensive Report on Industrial Efficiency and Fatigue was published in February 1917,<sup>2</sup> and embodied most of Dr Vernon's findings on output in relation to the hours of work which had been available for our guidance during 1916.

The following Tables of the results may be quoted as examples. In all cases they were obtained by the hearty co-operation of the management of the different works :

#### WOMEN ON LIGHT REPETITION WORK

	<i>Hours</i>		<i>Relative Hourly Output</i>	<i>Relative Total Output</i>
	<i>Nominal</i>	<i>Actual</i>		
First period	74·8	66·2	100	100
Last ..	54·8	45·6	158	109

#### MEN ON HEAVY WORK

First period	66·7	58·2	100	100
Last ..	56·6	51·2	139	122

#### BOYS ON LIGHT REPETITION WORK

First period	78·5	72·5	100	100
Last ..	60·5	54·5	129	97

<sup>1</sup> A list of the Reports of the Health of Munition Workers Committee and of others on questions of industrial fatigue will be found at the end of this chapter.

<sup>2</sup> Cd. 8511, price 1s. 3d. *Health of Munition Workers Committee Interim Report on Industrial Efficiency and Fatigue.*

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The conclusion in regard to these types of work was :

“ That a reduction in weekly hours of actual work varying from 7 to 20 in no case resulted in more than an insignificant diminution of total output, while on the average it produced a distinct increase.”

There were necessarily many collateral inquiries for the purpose of providing checks upon the general conclusion. It was found, for instance, that output dropped substantially during the last two or three hours of a 12-hour shift, and that there was more “lost time” when work was carried on for some time before breakfast than if the worker had had breakfast before he began. It was clearly established also that, when work had to be continuous, the employment—particularly of women on three 8-hour shifts, rather than of two 12-hour shifts—was not only much better for the health of the workers themselves, but gave a better output and was more economical in terms of labour costs.

It is interesting to notice that even in those early stages it was reported that (*loc. cit.*, p. 6) :

“ Progress towards greater industrial efficiency in regard to scientific application appears at present to be hampered in four directions :

- (a) Lack of observation of facts available for record and study.
- (b) Lack of scientific appreciation in the directorate.
- (c) Insufficient endeavour to make available existing knowledge ; and
- (d) Lack of inter-communication between different firms.”

With regard to these difficulties (except for the lack of scientific appreciation in many directorates) there is clearly no reasonable ground for hope of their

removal or substantial abatement except by the aid of some form of collective national machinery.

In those days the recognition of ultimate results was overshadowed by the overwhelming importance of obtaining output. As the first records began to come in we were compelled, from considerations of output alone, to recommend provisionally that the weekly hours of work for men should not exceed 67, and for boys and women, 60. By the end of 1916, however, the results of the practical tests that had then been made on an extensive scale proved that a 48-hour week, or thereabouts, was the most profitable period for work, and that the prescription of it should be accompanied with a strict limitation of overtime. The observations showed that those leaders of organized labour who for years past had agitated for a reduction of the hours of labour—not so much on output grounds as in order to obtain an opportunity for the workers to lead a decent civilized existence—were right, not only on humane, but on industrial, grounds.

The applicability of the general conclusion naturally varied according to the character of the occupation; being influenced, for example, by the amount of mental and physical strain involved, the extent to which the pace of the work was governed by a machine, the organization of the factory itself, its temperature, ventilation and other conditions, as well as by the arrangements of the hours, the provisions for taking meals, and kindred circumstances.

The investigation, for example, of different circumstances of work led to a great variety of helpful and sensible suggestions. The effect of the monotony attributable to the increased use of automatic machinery was substantial both with regard to output and its effect upon the health and mental condition of the workers. Thus repeated trials showed that batches of fresh workers gave a greater output than those who had been employed on the selfsame repeti-



tion work for several months, although there was no suggestion that any of the workers were not doing their best. At one long-established factory<sup>1</sup> a new shop was built and staffed so as to produce 5000 stock articles per week. This new shop was practically identical in equipment and mechanical conditions with an older shop in which the people had been employed more or less continuously for a long period. But it was found, after six months, that the new hands, in spite of their inexperience, were producing 13,000 articles per week instead of the 5000 expected, and it was added that :

“As patriotic interest in their output appears to be shared here by all the men alike, the lower output by the more experienced hands appears to be assignable only to the effects of long-standing customary restrictions upon the habits or rhythm of work from which the newer hands are free.”

The management of one of the largest factories were the first, I think, to make the experiment of giving the girls a quarter-of-an-hour break in the fresh air in the middle of the long morning spell, and it was found that :

“In spite of this deduction from their working hours of the time so spent, the output per day was increased.”

Considerations of this kind led us at an early period, with the almost unanimous support of all experienced managers of factories, to issue an order enjoining the discontinuance of Sunday labour. No diminution of output resulted, but so far as could be ascertained an increase, although there was not at that time any special means of singling out its effects, as the time was characterized by the extensive installation of improved machinery.

<sup>1</sup> Memorandum No. 7, p. 8.

The conclusion of the investigations with regard to lost time and so-called slackness was as follows,<sup>1</sup> that :

“ The proportion of lost time due to sickness and other avoidable causes is as a rule greatly underestimated in factory records, and the proportion due to slackness consequently over-estimated.”

In the future developments of industry we must look forward to a greater perfection of machinery, and to an increase rather than to a diminution of the monotonous repetition work that will fall to the lot of the average worker, together with a shrinkage of the demand upon his or her individual skill or initiative. It will therefore probably be the case that continued study by the Industrial Fatigue Research Board will point to the necessity, on the grounds of health and physical efficiency, of a further reduction in hours and an increased provision of breaks. Apart, however, from the gratifying exceptions provided here and there by enlightened employers, we shall certainly require in the future, even more than in the past, the authority of the State to secure not only the prosecution of inquiries, but their intelligent application.

#### WORKING CONDITIONS

*The Provision of Meals.*—It was characteristic of the novelty of the great experiment in inquiry that was being conducted during 1915 and 1916 that it was as difficult to convince the Treasury of the need for encouraging fresh departures as it was many employers. Indeed, the mind of the majority of employers by the spring of 1916 had become much more open than that of the officials at the Treasury or at the Inland Revenue. They expressed the traditional way of looking at these things, and the struggle that preceded the provision of better arrangements for the taking

<sup>1</sup> *Health of the Munition Worker*, p. 43.

of meals in works may be taken as a characteristic example. When we urged the necessity of the provision of canteens as the result of the recommendations of the Health of Munition Workers Committee, employers naturally claimed that the cost of the provision of the canteens might be allowed as a business expense. The Treasury, through the force of habit, was willing enough to endure a system whereby hundreds of millions were expended in contracts without the institution of adequate arrangements for ascertaining that the price to be paid was a fair one ; but when it became a question of allowing a few thousands for the provision of simple kitchens and mess-rooms wherein workers could have a cheap meal at their own expense and avoid having to rush home and back in a hurry or to eat their lunch under the shelter of a wall or huddled anywhere out of the cold, then it became a battle royal. Judging from the protests we had to overcome anyone might have thought that the whole Income Tax Law and system would fall to pieces if this little concession were granted. It is to be hoped that if ever a Labour Government comes into power it will make one of its tasks to be a revision of the system of working cost allowances, because adequate allowances are just as much needed, say, for machinery installation in the interests of industry itself, as they are for promoting cleanly and wholesome conditions for the conduct of the work itself. The only Treasury problem involved is to secure that the allowances are really devoted to the purposes for which they are assigned. At present such allowances are utterly inadequate, and often enough they result in funds that ought to be used for improvement purposes being distributed as additional bonus shares and thereby promoting a further inflation of capital and an intensification of the difficulties of re-equipment.

In the end, it was arranged that " approved expenditure " on the provision of canteens should be

regarded as a business expense, and not taxable as profits. In consequence, the movement for the promotion of adequate arrangements for the supply of cheap meals in works made great headway. There came to be thousands of canteens where previously there had been no facilities whatever, and a great variety of co-operative workers' arrangements sprang up around them. They were run on self-supporting lines, and many of the canteens left substantial profits, which were devoted to improved messroom accommodation, club-room equipment, recreation and other purposes, as well as to cheapening of the meals themselves. Notwithstanding war prices, the usual charge in 1917 for a cut from the joint and a liberal helping of vegetables was 7d. or 8d.; puddings were from 1½d. to 2½d. In many places a halfpenny was charged for heating the meals brought by the workers themselves and taken in the messrooms, and hot water for tea in most cases was provided gratis. In practically all the great establishments a buffet was established where refreshments could be had in breaks and by those on night duty.

The reports on this branch of the work show that it was possible to trace the effects of these homely and sensible improvements in the improved nutrition and health of the workers as well as in a diminished sickness rate and in less broken time.

*Welfare*—Those who are interested in the details of the arrangements which developed out of this side of State work should study the Reports referred to, but there was perhaps as grim a tussle against old-fashioned prejudice in respect of those activities which were grouped as "welfare" as in any. This work opened a new chapter in industrial method. Cleanliness of factories, provisions for washing, for drying clothes, investigation into the methods of ventilation, heating and lighting, posture when at work, the provision of suitable seating accommodation, of inexpensive and appropriate types of clothing

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and arrangements for its economical supply, assistance with transport to and from work, compilation of lists of suitable lodgings, and a host of other simple, homely and practical things, entered into the tasks of welfare superintendents. According to the definiteness with which the causes of ill-health, lost time, accidents and so forth emerged, so there sprang up—especially in chemical works—a cluster of health services which varied from simple measures developed by the workers themselves to the more elaborate provisions of nurses, ambulances and so forth. Many of the most serviceable and practical suggestions came from managers or from works committees where there was a go-ahead spirit, but the fact that there was a central agency competent to collect, examine and disseminate such suggestions was of the first importance.

A picture of the sort of thing that was accomplished may perhaps best be afforded by quoting from a First and from a Second Report, at a six months' interval, on the conditions in one of our largest firms. Without quoting subsequent reports on this case it is sufficient to say that before twelve months had elapsed all the improvements suggested had been effected, and many had been instituted even of a superior kind on the initiative of the firm itself. It is right to emphasize this latter fact because there is no suggestion whatever of disparagement in quoting the earlier reports. The improvement was solely due to the fact that there was in existence a State system for initiating and encouraging improvements.

## STATE ON FIRST VISIT

Girls taken on promiscuously.

Factories dirty and badly kept.

*Washing accommodation :—*

Totally inadequate and unsatisfactory; little hot water; merely complying with the legal requirements.

*Sanitary accommodation :—*

Inadequate, dark, ill-kept and unsupervised.

*Cloakrooms :—*

With few exceptions inadequate, dark, ill-kept and unsupervised. Sometimes absent.

*Overalls :—*

Provided in filling factories only. Caps of thick serge and very hot.

*Canteens :—*

Very unsatisfactory, dirty and ill-equipped.

*Messroom :—*

Lacking in almost all cases.

## STATE ON SECOND VISIT

Girls carefully selected.

In most parts well kept.

*Washing accommodation :—*

Ample supply of good troughs, with hot water laid on, towels provided.

*Sanitary accommodation :—*

Greatly increased, well lighted, well kept, and adequately supervised (with one exception, which since visit of February is receiving attention).

*Cloakrooms :—*

Provided everywhere, generally good, sometimes cleverly adapted, matron in charge of each, day and night. Well lighted and well kept.

*Overalls :—*

Good overalls and suitable caps, provided and kept in repair throughout.

*Canteens :—*

Ample accommodation, but the catering, which is done by outside agencies, is still unsatisfactory. Much cleaner and better kept.

*Messroom :—*

Several very good mess-rooms built or adapted; insufficient owing to lack of space. Well kept and well supervised. No shop is without provision for making tea and heating food, though even this has sometimes been difficult to manage. Some

STATE ON FIRST VISIT

*First-aid arrangements :—*

Inadequate, sometimes lacking.

*Seats :—*

Not enough seats in shops.

*Housing :—*

Conditions chaotic; most workers slept two or three in a bed, used day and night.

*Supervision by women :—*

Practically non-existent. In one case a manageress with no previous training of any kind, and in another case a supervisor who was quite unsuitable.

STATE ON SECOND VISIT

further arrangements are being made. There are twelve in use, and others being made, where there were only two before.

*First aid :—*

Doctor in charge, and definite arrangements for first aid for every shop. Nurses on duty in most cases day and night.

*Seats :—*

Still inadequate in many cases. Manager's opposition strong, but gradually being overcome.

*Housing :—*

Officer appointed to make arrangements *re* lodgings.

*Supervision by women :—*

A Welfare Department has been formed with an able woman at its head. She has had many grave difficulties to face, and although she has made great improvements, she is fully alive to the need for further progress.

The success of welfare work depended primarily upon the tact, good sense and training of those who were put in charge of it. No headway could be made unless good relations could be established with the management on the one side and with the workers on the other. As in most other things, however, excellent personal qualities were not sufficient unless they were reinforced by knowledge and training, and it was on that account that there sprang into existence at the provincial universities, in London and in other industrial areas, special courses of training

in welfare work adapted to the needs of the district. The whole scheme of welfare work, based as it very largely was upon the adoption of the practices of a few far-sighted pioneers, brought a fresh point of view into industry generally. I think the practical value of it convinced multitudes of people that the machine-like notion of the human worker, in its overlooking of his physical and mental reactions to the conditions and character of his employment, was not only wasteful and unsound in itself, but was uneconomical when regarded as an ingredient in labour's cost.

Since those days the powers of the State have been surrendered, but it is probably true to say that a good deal of what was then learnt has become incorporated in industrial practice. In 1916 I appointed Mr Robert Hyde to have charge of boy welfare work, and the tributes to his usefulness in its many-sided, cheerful and manly aspects provided some of the most cheering episodes of those days. The Industrial Welfare Association, of which he is now the head, is continuing and supporting the same kind of work, and it is maintained, I believe, almost entirely by those leaders of industry who became convinced of its value during the war. In this case, as in the rest, it is true to say that no one of the useful and amply justified improvements in the conditions of industrial life referred to in this chapter would have been possible on any substantial scale if the State itself had not moved in the matter, had not prompted investigation, published results, urged their application, and, finally, taken power to enforce them when necessary.

*Other Working Conditions.*—Finally, reference may be made to a typical side-issue in inquiry as affording a glimpse of the value obtainable from properly conducted researches.

Dr H. M. Vernon, on behalf of the Fatigue Research Board, made some inquiries into the influence of ventilation, and two examples of his results may be



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quoted on the output in tin-plate manufacture. The men who work in steel works in very hot positions near rolling-mills and furnaces were found to be affected in regard to their output and their health by the character of their clothing and by the extent to which cool air was or was not introduced near the workplaces. It was found that where there was good ventilation in the hot places the mean output in the summer months was only 2.9 per cent. below those of the winter months; but in the factories where there was no such artificial ventilation the summer output varied from 6.8 to 9.2 per cent. below the winter output. Vernon's conclusion was that<sup>1</sup>:

"It is probable that thoroughly efficient ventilation may increase the average output of a factory by 12 per cent. or more."

Similarly it was found that when men worked under these hot conditions in two 4-hour shifts instead of in a single 8-hour shift, the hourly output was increased by 11.5 per cent. Anyone who has been down a coal mine will recognize how a single observation of this kind is destructive of the quackery involved in the recent liberal increase of the hours permissible in mines.

It was found by Doctors Collis and Hilditch that tinplate workers were from twice to five times more subject to rheumatism, rheumatic fever and neuralgia than brass-casters, brass-polishers, grinders, cutlers, and other similar workers, and this prompted an inquiry into the clothing of the tin-plate workers when at work. It was the practice before starting work for the men to put on a loose flannel shirt ending at the waist and open at the neck, and thereby keeping the upper part of the body cool; but throughout the shift they wore the trousers and pants in which they came to work. These garments were generally thick and woollen, and the lower part of

<sup>1</sup> No. 1 of Reports of Industrial Fatigue Research Board, p. 29.

the body was kept unnecessarily warm, and their underclothing became saturated with perspiration, and chilling took place before they could change. It was therefore suggested that the men ought to wear grey flannel trousers, without pants, in their working places. The results showed that the increased output and the increased comfort and health more than compensated for the trivial expense of the supply of the flannel trousers.

The department of work referred to in this chapter is particularly open to being depreciated on the ground that it is "molly-coddling," interfering and such-like, although people who talk in this way can never have been confronted with the realities of industrial conditions, and there is no reason why we should allow their loquacity to deter us from a right course of action.

The work of course needs to be conducted in the sensible and practical way that characterizes British people, but the opportunities for improvements are almost infinite, and the experiences of the war period make it practically certain that healthy and much-needed improvements in the conditions of industrial life will never be proceeded with as they ought to be until the State has the wisdom to equip itself with the powers to foster their development and the courage to exercise them.

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