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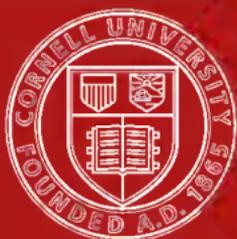
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PRINCIPLES AND METHODS
OF
INDUSTRIAL PEACE



PRINCIPLES & METHODS
OF
INDUSTRIAL PEACE

BY

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PREFACE

THE scope and purpose of this book is sufficiently explained in the introductory chapter to Part I. The work upon which it is based was begun in the spring of 1902. The preliminary results were used in an essay which obtained the Adam Smith prize at Cambridge in 1903, and also in a course of lectures delivered by me as Jevons Memorial Lecturer at University College, London. Since that time I have carried the analytical work somewhat further, have endeavoured to take account of a number of recent writings bearing upon the subject, and have recast the whole of my original draft.

The investigation has proved difficult, and the conclusions now offered are tentative and provisional. On the one hand, for the successful application of general economic principles to the problems of real life, there is needed an experience and a knowledge of men, with which an academic student can scarcely be equipped. In all probability, therefore, there will

appear defects of detail, and more serious errors of proportion, which the practical man will need tolerance to forgive. On the other hand, the more theoretical side of the subject has not hitherto been widely discussed, and though, in regard to it, I have derived great help from Professor Marshall's *Principles of Economics* and Professor Edgeworth's *Mathematical Psychics*, some of the work to be done was of a kind usually called original. In such work there are invariably gaps and errors.

The more complicated parts of the main problem have required for their solution the employment of a technical apparatus. As, however, "Industrial Peace" is a subject, interest in which is not confined to the narrow circle of economists, I have endeavoured in the text to suppress this apparatus and to translate semi-mathematical reasoning into language intelligible to the ordinary reader. In Appendices A and B some parts of the logical machinery employed have been preserved; but they are not necessary to the understanding of the general argument. The scope and drift of this will, it is hoped, be made clear by the analytical table of contents, in which it is concisely summarised.

The books, official publications, and magazine articles to which I am conscious of obligations, are

referred to in footnotes. My main sources for facts have been the seventeenth volume of the Report of the United States Industrial Commission and the series of Blue Books on Strikes and Lock-outs published annually by the British Board of Trade. In the matter of general economic principles specific acknowledgment is, of course, impossible. My main obligations under this head are, as already indicated, to the writings of Professors Marshall and Edgeworth. For private help my best thanks are due to Mr. C. P. Sanger of University College, London, who has very kindly read the whole of my MSS. Professor Nicholson, as one of the examiners for the Adam Smith prize, has allowed me to see some of his criticisms of my first draft, and Mr. J. M. Keynes of King's College, Cambridge, has given me valuable help in connection with Appendix A. My chief indebtedness, however, at once for the suggestion of this subject as one suitable for investigation, for detailed criticism, for encouragement, and for general guidance is due to the teacher whose pupil it is my privilege to be, Professor Alfred Marshall.

A. C. PIGOU.

KING'S COLLEGE, CAMBRIDGE.

February 1905.

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PART I
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ERRATUM.

- P. 236, After Proposition 8 of Appendix B, *read*—Footnote: By the analytic method the above proposition can be readily established independently of similarity between the supply and demand curves.
-

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PART I
HISTORICAL AND DESCRIPTIVE

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INTRODUCTION

MODERN devices for promoting industrial peace have been excellently described in more than one well-known work.¹ Their distribution in space and development through time have been made the subject of careful study. They have been classified; to some extent they have been submitted to analysis; but they have never, so far as I am aware, been viewed comprehensively in the light of an "end." It is to this task that the following pages are devoted. The question raised is not, What have Arbitration and Conciliation done? nor yet, How have they done it? but rather, What *ought* they to do, and how *ought* they to do it? The problem is one of "practical," rather than of "theoretical philosophy."

To some, perhaps, this observation may suggest enterprises of a very formidable kind. There is, however, neither intention nor necessity to undertake them. The inquiry is, indeed, an ethical one, but it can, for the most part, be conducted without reference to those fundamental controversies in which the

¹ e.g. *Industrial Peace*, L. L. Price, 1887; *Conciliation and Arbitration in Labour Disputes*, Jeans, 1894; Report of the Royal Commission on Labour, 1894; Report of the Industrial Commission, U.S.A., vol. xvii., 1901; *The Methods of Industrial Peace*, Gilman; *The Adjustment of Wages*, Ashley.

science of the "good" is involved. The strenuous debate still raging as to the topography of that promised land has not proved incompatible with agreement as to the general direction in which it lies from our present habitations. The question, whether or not such and such a change would be an improvement on the existing state of things, is often answered in the same way by thinkers whose fundamental doctrines are quite irreconcilable with one another. Thus, if only a scheme were found by which rich and poor could be bound together in closer unity, all schools of thought would welcome that result; and their agreement in this is sufficient for our purpose, even though they immediately dispute as to whether it is good because it makes men happier, or because it is a step towards the moral union of the Kingdom of God.

In the same way fundamental political controversies may be successfully evaded. For is there not a general consensus that crying for the moon is not to be commended, and that the reformer, who "seeks a little thing to do, sees it and does it," is less contemptible than certain poets have imagined? Many persons, doubtless, believe that the present social system is a bad one, and even that it does not give us the best of all *possible* worlds; but it is no part of their creed to seek in industrial conciliation and arbitration a weapon by which its overthrow may be consummated. Like their opponents, they are satisfied if, by this mild palliative of human ills, the existing order may be made to work a little better than it does at present.¹

¹ Cf. Marshall, Preface to *Industrial Peace*, p. ix.

It is, thus, legitimate for a writer on Industrial Peace to remain upon the surface of things, accepting the social system as he finds it, and making no attempt to pierce beneath those *media axiomata* of conduct with which "common sense" is content. To the solution of his problem, therefore, philosophy proper has no contribution to make. With concrete economic analysis, however, the case is very different. This is the instrument of knowledge, by which the leading part must be played. For, in order to determine the merits of any scheme of industrial policy, we need to discover the sequence of effects to which it is likely to lead. Consequently, we must know, both how given motives will operate under given conditions, and also what the motives and conditions prevailing in real life, as a matter of fact, are. In the search after this knowledge we shall turn, in the first instance, to a study of the way in which the existing machinery of industrial peace has grown up, and of the results which it has hitherto achieved.

CHAPTER I

THE BACKGROUND OF HISTORY

§ 1. A HISTORICAL background is desirable. It need not, however, take the form either of a detailed narrative, or of an abstract of one department of economic history. What is wanted rather is a brief analytic account of the broad causes lying behind the modern movement. All the causes cannot possibly be given; for this particular plot of the industrial field is not separated by any hard and fast lines from the country round, but is influenced indirectly, and modified in nature, by the rains that fall and the winds that blow there.

Organised action among workpeople has, of course, many forms; but it is obvious that no form of it is possible until industry has become so far differentiated that a distinct class of workmen, divorced from ownership of the means of production, has arisen. This is merely another way of saying that a particular device for wage adjustment cannot grow up until the wage system itself has come into being.

Secondly, workmen's combinations will not arise without a motive. While, no doubt, most men are concerned to better themselves, it does not follow that they look to do this by improving the status of their present

occupation. On the contrary, the ideal of the journeyman in the earlier stages of industrial development was, like that of professional men to-day, not so much to increase the emolument of the office he then held as to be called to another and more lucrative one. Under these conditions there was little to be gained by combinations of employees as such, nor were those most capable of organising them likely to remain long enough in the ranks to do so. Consequently, "it is not until the changing conditions of industry had reduced to an infinitesimal chance the journeyman's prospect of becoming himself a master that we find the passage of ephemeral combinations into permanent trade societies."¹

Thirdly, the growth of these societies implies a certain power of inter-communication among the men. Hence, it is favoured by common nationality and language,² uniformity in the work performed by con-

¹ Webb, *History of Trade Unionism*, p. 6. Instability of industrial status largely accounts also for the had organisation of most women's trades (cf. Labour Commission Report, p. 96). It is also one of the causes of the inferior organisation of American workmen, as contrasted with those of this country. "The chances of getting on have hitherto been so much greater than in England that class feeling and class loyalty have been feebler. . . . The leaders have often been of a lower calibre, or the better men have risen out of the labour ranks and left the movement" (Ashley, *Econ. Rev.* July 1892, p. 312). Mr. Booth points out that the same cause partially accounts for the lack of organisation prevailing among shop-assistants (*Industry*, vol. v. pp. 177-78).

² Another cause of inferior organisation in America is "the fact that a large number of the workers are immigrants from Central and Eastern Europe, ignorant of the English language" (*Times Special Correspondent with the Moseley Commission*, Dec. 23, 1902). Cf. Aldrich, *American Federation of Labour*, p. 263. Cf. also Ashley on the anthracite regions of the U.S.A. He points out that in 1869, when most of the workmen were British immigrants, there was a

siderable numbers,¹ the existence of oratorical gifts and the improvement of education;² it is encouraged by every development of the newspaper and the railway; it is made easy where industries are localised,³ and most easy of all when to propinquity of dwelling is added propinquity of work in large factories and mines.⁴

A stimulus to activity is provided wherever there is "discontent shot with the colours of hope," but it is naturally strongest in times of suffering and in the presence of oppression.⁵ In the first quarter of last century discontent was stirred in this country by the

strong Union known as the Working Men's Benevolent Association. This was destroyed by a strike in 1876, and foreign workers took the place of English. From that time forward, there was no organisation among the men till 1900, when the Union was reformed with the help of the Bituminous United Mine Workers' Association (*Adjustment of Wages*, p. 128).

¹ Cf. Ashley, *Adjustment of Wages*, p. 162.

² It may be that the relatively dull intelligence of agricultural labourers has much to do with the absence of Unionism among them. Mr. Ludlow points out that their lack of interest in Unionism was, when he wrote, paralleled by an equal disregard for political questions (Ludlow and Jones, *Progress of the Working Classes*, 1832-67, p. 5).

³ "The large number of American workmen who frequently move from place to place" is noted by Aldrich as a third cause of bad organisation (*American Federation of Labour*, p. 263). The localised Nottingham hosiery and glove trade and the mining industries were among the first to be organised well enough for formal collective bargaining.

⁴ The later development, through disorder, war and lack of capital, of factory production on the Continent is, of course, largely responsible for the later development of Unions there (cf. Bolen, *Getting a Living*, p. 171).

⁵ Mr. and Mrs. Webb point out, however, that there were labour combinations in England in the eighteenth century, which were developed, not to fight oppression, but to improve conditions already fairly satisfactory (*History of Trade Unionism*, p. 38). Cf. the unionising of San Francisco labour during the prosperity of 1901 (Page, *Pol. Sc. Qrly.* Dec. 1902, p. 664 seq.).

ruinous effect of war, bad harvests and a bad poor-law; by the distresses of a period of industrial transition, rendered worse than they need have been through the inhuman conduct of employers who had risen from the ranks; by the contrast between widespread poverty and the sudden fortunes of these men; and by the incapacity of legislators to deal effectively with new and unprecedented problems. Hope was stirred by the brilliant rhetoric of socialist writers, by the great French uprising, by a sense of the power of numbers. All the conditions were present that might be expected to prelude an uprising of the sons of labour.

§ 2. For any such movement union of some sort, however slight and evanescent, is, of course, essential. But the weapon of which combinations avail themselves must be determined by conditions of "time, place, and circumstance." The employed, like all other classes, are at once brigands, citizens, and workmen. To gain their ends they have three appeals—to violence, to the Government, and to a strike. To all or any of these they may resort. Under a non-democratic constitution, in the presence of a strict and partially administered combination law, every weapon save that of violence is rendered blunt and ineffective. The very system under which they live is an enemy to the proletariat, whose one hope lies in a semi-revolutionary subversion of it. Unless, through centuries of despotic paternalism, the popular character has been shaped to fit its environment, riots follow, and arson, machine-breaking, and secret murder. There are "random strikes of the belly," breaking out spasmodically, rising for a few days to a white-heat of fury, but

with no machinery and no leadership, and soon dying out in sullen surrender.¹

When the Government is strong, this kind of weapon, employed alone, is not effective, and the use of it, besides involving immediate conflict with the law, may even lead to the fashioning of further repressive statutes. Consequently, so soon as may be, recourse is likely to be had to a less perilous arm. Violence will then, not indeed disappear altogether from industrial conflict, but become a subordinate adjunct to the political and economic weapons. The less perfect these are the more frequently it will be invoked,² but eventually, among the strongest trades, an industrial blockade may come very near to being truly "pacific."

The political weapon will, of course, be resorted to, as soon as the workmen have power to wield it, if there are any glaring disabilities under which they

¹ The stage through which England passed under the combination laws lasted somewhat later in Continental Europe. In France combinations of workmen were illegal until 1884, and in Italy till 1890. In both countries labour conflicts are still much more warlike in character than they are in England. Of the peasants of Southern Italy in particular, Professor Nitti has observed that "they do not strike, but, by way of reacting against the wrongs done them, destroy or damage by stealth their masters' farms, inflicting immense losses" (*Econ. Jour.* 1893, p. 731). Similar remarks apply to recent conflicts in Austria-Hungary and Russia (cf. Bolen, *Getting a Living*, p. 171).

² Thus, it is a general rule that the more unskilled a trade is, or, which generally comes to much the same thing, the worse it is organised, the greater is the amount of violence with which its disputes are apt to be accompanied. Cf. Drage, *Labour Problem*, p. 317. In the United States, where the level of organisation and consequent economic strength are lower for all grades of skill than in England, violence is also more prominent (cf., e.g., the chargea of poisoning connected with the Homestead strike, Taussig, *Econ. Jour.* 1893, p. 317).

are placed by law. Thus, we note the steady pressure exerted by the English Labour organisations, especially during the period of the Junta's dominance, for reform in the legal status of workmen and their Unions. When, however, employer and employed have been made equal before the law, an important parting of the ways occurs. It becomes possible for the workmen, either to press home their advantage with the political weapon, or to concentrate attention upon the economic one, to the free use of which all obstacles have at length been removed. They will probably, in some degree, seek to do both these things,¹ and the relative stress laid upon the two methods will vary with the extent of their power in Parliament. Thus, it would not be true to apply to Australia a generalisation, which is undoubtedly valid for England and America, namely, that the economic weapon has recently superseded the political in many important uses.²

Whenever this shifting of the centre of interest occurs, a change tends to take place in the prevalent form of organisation; for, while political propa-

¹ A fusion of the two methods occurs when a strike is undertaken to compel the Government to enact a law. Such strikes have recently taken place in Belgium and New Zealand. In France the coal strike of October 1902 was of this character in its earlier stages (*Labour Gazette*, Oct. 1902, p. 282). In like manner in 1840 the Lancashire cotton operatives went on strike, and "decided not to return to work until the Charter became the law of the land" (Chapman, *The Lancashire Cotton Industry*, p. 224).

² In the last few years there have been signs in this country of a movement in the opposite direction, as evidenced by the development of the Independent Labour Party. "The Taff Vale judgment virtually brought the separate Labour Party into existence; and the difficulty of upsetting that judgment, and of amending the law of conspiracy, will nurture, develop, and fortify it in the future" (Dilke, *Independent Review*, June 1904, p. 66).

gandism can best be carried on, at all events, till centralisation is very highly developed, through localities, economic pressure works most freely through trades. The labour unit ceases to be composed of the men who live in such and such a place, and becomes those engaged in such and such an occupation.¹ Nor is this change in the composition of the unit the whole result effected. Resort to the method of blockade tends also to modify the way in which the different units are held together. Increased power has to be given to the central executive of the Union, for societies that permit impetuous branch officials to plunge them into expensive conflicts will very soon be eliminated by bankruptcy.²

§ 3. Along these lines the ground is gradually prepared for the beginnings of industrial diplomacy and peace. The employers at first regard the men's organisations with dislike, and seek, with the political weapon, to destroy them. Baffled in this attempt, they still refuse to add to that of the law their own "recognition," maintain that "the adjustment of wages is a matter that belongs exclusively to each employer and the persons in his employ,"³ and endeavour to

¹ This movement is exactly seen in the gradual supersession of the Knights of Labour by the American Federation of Labour. Cf. Aldrich, *American Federation of Labour*, p. 234-36. Cf. also the decay of the general Merchant Guild in the early towns before Craft Guilds organised along the lines of separate industries, the collapse of Owen's Grand National Union of Consolidated Trades, and the dwindling of Trade Councils from their temporarily prominent place during the "Parliamentary period" of the 60's and 70's.

² For an extended argument upon this point, cf. Webb, *Industrial Democracy*, ch. ii.

³ Ashworth, *The Preston Strike of 1854*, p. 70. The narrator treats this view as obviously correct.

crush their adversaries by forcing upon them the notorious "Document."¹

But, whether they "recognise" the men's societies or not, they are compelled to take note of them. For the relation of these bodies to a single employer is of the same kind as that which the latter bears to a single workman. The men "fix upon a firm or group of firms thought to be unable to withstand a stoppage of work, and bring to bear upon these isolated employers the full resources of a powerful Society."² The employers, therefore, find it necessary to bury their jealousies, and themselves in turn to combine.³ A strike against one manufacturer is met by a lock-out on the part of all. There is a kind of double blockade, the Berlin Decrees *plus* the Orders in Council.

Such disputes are ruinous to both sides. The essential aim of either party is, not so much to secure a particular immediate advantage, as to impress upon opponents a sense of its own power, and to instil into

¹ This was employed with nominal success in the Engineers' Strike of 1852, and again in the Flint Glassmakers' Dispute of 1858, and the Londoner Builders' Dispute of the following year.

² From the employers' Manifesto in *The Engineering Strike*, p. 54. Cf. Chapman's account of the policy pursued in the 30's by the Trade Unions in the cotton industry (*The Lancashire Cotton Industry*, p. 210).

³ *e.g.* in the case of the Master Cotton Spinners' Federation of Lancashire, started in 1887 (Schulze-Gaevernitz, *Social Peace*, p. 166). American illustrations are the rise of Building Contractors' Council of Chicago (1897), formed avowedly to resist the Building Trades' Council (Miller, *Chicago Journal of Political Economy*, June 1901, p. 331), and the Stove Founders' National Defence Association, formed in 1886 to resist the Iron Moulders' Union (*Industrial Commission*, xvii. 347). Cf. also a paper by Pfahler, *Annals of American Academy*, July 1902, Liefmann, *Unternehmervverbände*, p. 72, and Booth, *Industry*, vol. v. p. 142.

them a disposition to yield to reasonable demands in the future.¹ Thus, the conflict is likely to be carried much further than the importance of the nominal point of difference could warrant. So soon, however, as the first great battle is over, the object of impressing the other side has been accomplished once and for all. In subsequent struggles the real point at issue is far less momentous, and, consequently, diplomatic adjustment begins to be looked upon more favourably.² Employers and employed sometimes come together to arrange terms after a conflict; would it not be better for them to meet earlier and prevent one taking place? Under the stern logic of monetary loss, most of the masters modify their peculiar notions of dignity and consent to negotiate with their "hands" upon a level of admitted equality.³

The sense of the evil of conflicts is, of course, keenest just after one has taken place, and, therefore, the formal introduction of regular diplomatic methods most frequently occurs as an element in terms of settlement.⁴ When, however, peace-promoting machinery

¹ Cf. Clark, *The Problem of Monopoly*, p. 62.

² Cf. Appendix A, § 7.

³ It is not suggested that self-interest alone brought about this change of attitude. Better education, as Schulze-Gaevernitz points out, made the second generation of last century's manufacturers much more humane men than their fathers had been (*Social Peace*, p. 57). Probably, also, the more orderly character which strikes were gradually assuming helped to bring employers to take a more sympathetic interest in their workmen's grievances.

⁴ Mr. Mundella's scheme for the hosiery and glove trade of Nottingham was accepted after an eleven weeks' dispute; the Brooklands agreement after one lasting twenty weeks. In the terms of settlement of the British engineering dispute of 1897, machinery for the discussion of differences was provided. At the close of the Danish iron trade dispute in the same year it was agreed "to try to arrange disputes by

is common enough to be well known, industries may sometimes adopt it, by way of imitation, without any such special stimulus.¹ In these cases the initiative must generally come from the side of the better-educated party.² It is likely, therefore, to be taken in times of improving rather than of declining trade, because, first, in such times the masters will have a greater inducement to propose arbitration, and, secondly, the men will be less inclined to treat their suggestions as a veiled device for reducing wages.

§ 4. When once the two sides consent to meet,³ a

a meeting of representatives from either side before either a strike or lock-out shall be declared," and to establish a permanent court of arbitration (Flux, *Econ. Jour.* vii. p. 622). An American instance is afforded by the development of conciliation in the stove-foundry trade immediately after a great conflict. The terms of settlement of local disputes frequently contain a clause providing for arbitration upon such minor matters as may arise under it, e.g. the Leicester masons in 1898 (*Strikes and Lock-outs*, 1898, p. 101). The perception of the evils of strikes *by others*, immediately after the Dock Strike, led to the formation of the London Conciliation Board. Several Australasian legal enactments have had a similar origin.

¹ e.g. the Scottish iron trade in 1897.

² Cf. Senator Hanna's speech, *Annals of American Academy*, 1902, p. 25. Mr. Jeans writes: "It was the employers who introduced conciliation into nearly every industry in which it is now a feature" (*Conciliation and Arbitration*, p. 113). It is true that there are early English cases in which the men offered to arbitrate in particular disputes (engineers, 1851; Preston weavers, 1853; West Yorkshire miners, 1858), and the masters refused (Ludlow and Jones, *Progress of the Working Classes*, p. 241). But this was during the period in which the latter were denying any recognition whatever to Trade Unions.

³ A good instance of mere agreement to meet and nothing more is afforded by the Joint Committee for the weaving and winding industries of North and North-East Lancashire. "Its business is 'preliminary and consultative only.' It is 'not authorised to come to any final conclusion in any of the matters brought before its notice.' The

long step in advance has been taken, and each successive encounter of this kind makes the next at once easier to bring about and more likely to succeed. For, "brought together as they have been, face to face, in the meetings, both sides have learned to see things in a clearer light, and, too, false pride and obstinacy—always barriers to amicable understanding—have been broken down." ¹

The spirit of sympathy, thus developed, reacts upon the mechanism of industrial peace. Not only does this experience lessen severe "objective" shocks, through the gradual disappearance of such things as insolent conduct and disloyalty to agreements; ² but also, with the growth of friendly relations, the same objective shock becomes "subjectively" less severe. Just as a limb is supposed to withstand a harder blow on a warm day than on a cold one, so, in an atmosphere of mutual good-will, the mechanism of peace can be extended to work that will impose a severer strain upon it. When the successful adjustment of minor matters has secured for it the confidence of the parties, it is likely to be resorted to in quarrels of greater importance. There may thus eventually emerge a permanent scheme of "general" peace-promoting machinery, which, when once the difficulties of initiation have been overcome, will possess a high degree of stability.

§ 5. The movement towards industrial peace does

two sections can only 'report to their constituents the general result of the discussions'" (*Strikes and Lock-outs*, 1896, p. 150).

¹ Carroll D. Wright, *Industrial Conciliation Conference*, p. 137.

² Cf. the account given by D. J. Keefe, President of the International Longshoremen's Association of America, of the relations between that body and their employers after the introduction of arbitration agreements (*ibid.* pp. 188-91).

not, however, advance continuously without let or hindrance. For, after a time, the spirit, which gave life to, and grew through, the mechanism, seems to become developed enough to break free from it and subsist alone. One part after another of the elaborately constructed machinery falls into disuse. Formal arbitration disappears; the Board for minor questions meets less and less frequently, both parties being content to let the secretaries adjust their differences;¹ finally, even these officers become useless, since the cordiality of feeling has become such that any difference is easily settled on the spot.

This tendency,—which can be observed in many concrete cases,²—always, in seeking to realise itself, lets loose forces of an opposing character. The mere fact that wages have for a long time been adjusted without a conflict leads to a gradually enfeebled sense of the evil of strikes and lock-outs. Therefore, the enthusiasm for preventatives dwindles, and men grudge the sacrifices required to ensure that these

¹ e.g. in 1900 the Secretary of the North of England Iron Board was able to report that “during last year the standing committee had not a single case to deal with” (*Strikes and Lock-outs*, 1900, p. 86).

² Thus the representative of the boot and shoe trade before the New York Industrial Conference observed that “inasmuch as we had agreed to arbitrate, we don’t arbitrate at all—we settle it up amongst ourselves” (*Industrial Conciliation Conference*, 1901, p. 66). Mr. Whitwell, before the Labour Commission, expressed the opinion that since the North of England Iron and Steel Board was started, more disputes were settled at home because “the feeling of respect on both sides has decidedly increased, and, with that, the feeling of reasonableness and mutual confidence” (Group A.Q. 15,073). In Northumberland the men have come to know the principles upon which the Joint Committee adjusts wages, and, consequently, these adjustments are often made locally and sent to the Committee merely for ratification (*Précis to evidence of Labour Commission*).

shall be effective. They become less willing to confer full powers upon their leaders, and limit their right of making small concessions. Even when the authority of the executive is not, in this way, formally reduced, they grow restive under an essentially military organisation, and accord to it a less ready obedience.¹ As a consequence, employers, finding negotiation clogged and unsatisfactory, may be tempted, as for a time in the South Wales coal dispute of 1898,² to stand aloof from it altogether.

Furthermore, amongst coal-miners, where Unions have been organised mainly for fighting purposes, a long period of peace is likely to lead to a diminution in the membership.³ Under a sliding scale, for example, the men see that the scale gives them everything for which a Union exists, and begin to withhold their subscriptions. Upon the masters' side the same thing occurs.⁴ Both organisations grow weaker, and an inferior type of official comes to the front. Forgetting the distresses of conflict, each side endeavours to take advantage of the weakness of the other, and, through

¹ Thus Mr. Stobart, in evidence before the Labour Commission, said that he thought the executive of the Durham miners "had lost that hold on the men they used to have" (Group A.Q. 2019).

² Cf. Price, *Econ. Jour.* 1898, p. 463.

³ This consideration is of small importance in regard to Unions which provide "friendly" as well as "fighting" benefits. Except among the coal-miners (cf. Ashley, *Adjustment of Wages*, p. 182), where special "friendly societies" often take over the former function, the better-to-do and better-organised workpeople seldom combine in merely fighting societies.

⁴ For example, a good number of the iron and steel masters of the north of England hold aloof from the Board, but follow its decisions in the matter of wage rates (Labour Commission, Group A.Q. 15,030 and 15,166).

the blundering of two sets of inexperienced diplomatists, causes of difference are rapidly multiplied.¹

All these things tend to bring about a recrudescence of conflict. But, though the movement towards industrial peace is not continuously upward, it is certainly upward on the whole. For, when the methods of diplomacy have once been adopted, they are likely, though temporarily abandoned, to be remembered and resumed so soon as more experience has been gained of the evils with which they were designed to cope. This conclusion is borne out by the history of our own coal and boot trades. It is well represented in an illustration which Professor Edgeworth has employed in another connection. "Suppose that, as a party of mountaineers press up a steep slope, the opposing crest gives way and they are carried down by a sort of avalanche, and landed on a new inclined plane. Again they urge their toilsome march upwards, and again, before the crest is reached, they are precipitated on to another ledge below, and so on till they are brought to a stop on some steep and comparatively firm slope."² Their path in space is not regular, and sometimes it seems to lead directly away from the goal to which they aspire. To one, however, who takes a general view, the main trend of their progress is clear, nor need momentary reverses spoil his hope that at last, on the distant summit, they will stand to behold the eternal stars.

¹ Cf. Booth, *Industry*, vol. v. p. 152.

² Pure theory of taxation, *Econ. Jour.* 1897, p. 69.

CHAPTER II

THE ADVANTAGES OF INDUSTRIAL PEACE

§ 1. FROM the way in which the organs of industrial peace have developed the transition is easy to what they have shown themselves able to perform. In this investigation, since we are concerned, not with a statistical summary of their past achievements, but with *potentialities*, attention will be concentrated upon their more, rather than upon their less, highly evolved forms. The advantages attributable to them are both direct and indirect. The direct advantage is the obvious one of peace itself. The indirect advantages fall into two groups, depending mainly, the one upon the *principles*, and the other upon the *methods*, employed in the settlement of differences.

§ 2. In the direct advantage of peace, one element, of course, consists of the settlement and conclusion of disputes; but, in this matter, as with the system of law in general, a far more important element is the settlement of differences before they become disputes. "Would any sane Board of Managers," asks a writer in the *Engineering Magazine*, "attempt to run a railway, or start an electric-lighting plant, or operate a mill or factory, or send a liner to sea, with a mechanical equipment which was certain to break down periodi-

cally and lie in inevitable idleness until repairs could be patched up? And yet that is almost an absolute analogy to the status of labour conditions throughout nearly the whole range of such enterprises." ¹ Anything that lessens the chances of these break-downs is a gain to the world at large, and, since it enables capital to charge less as an insurance against uncertainty, and thus to absorb a smaller proportion of the national dividend, especially so to the representatives of labour.

Nor is this advantage a general one only. It obviously falls also, at least in part, to the particular industries in which the cause of peace is strengthened. It must, however, be observed—a point which will be found important later on—that there is, under this head, an opening for conflict between the interests of the particular industries and those of the community as a whole. For, the losses involved in industrial disputes are divided between employers, employed, and the general public, and the proportion which these three divisions bear to one another is by no means always the same. It may, therefore, happen that the interest of the community would be better served by peace on given terms than by war, even though war would be preferable from the point of view of one, or even of both, of the parties primarily interested. The extent of this disharmony varies with the amount of the loss with which the public is threatened. In the case of industries providing the necessaries of life and comfort, such as those concerned with food, transport, or coal, it may sometimes be very considerable.

§ 3. Of the indirect advantages, that group which depends upon the principles of settlement employed

¹ Goring, *Engineering Magazine*, xx. p. 922.

is, in theory, sharply distinguished from the rest. At this stage there is nothing further to be said concerning it, save that, the sounder the principles are, the better the settlement based upon them will be, and the more satisfactory the general result.

§ 4. The second group of indirect advantages can, unlike the first, be fully secured if the parties *think* that the principles are sound, even though, as a matter of fact, they are not. They turn chiefly upon the character of the machinery of peace and can be classed roughly under three heads.

In the first place, it appears that arbitration and conciliation are doing something to bridge that gulf between employers and employed, for which the introduction and development of the "great industry" are, in large part, responsible.¹ It is not, indeed, possible that the head of a large business, employing, perhaps, many hundred hands, can, by any device of organisation, however ingenious, be brought into that relation with his men which was occupied of old by the small

¹ Cf. Report of Anthracite Coal Strike Commissioners, U.S. Bulletin of Labour, No. 46, p. 489. Opposition to conciliatory machinery upon the ground that it "takes the soul out of business," diminishes the friendliness of relations between employers and employed, and supplants an elastic by a rigid system, can scarcely be sustained. In the first place, these evils result from the existence of opposing organisations, not from the means whereby these are brought into communication with one another. In the second place, care can be taken that representative negotiations shall supplement, and not supersede, those of a more direct character. Finally, the existence of a common organisation for bargaining, extended over a large part of the trade, is not necessarily incompatible with arrangements for profit-sharing and so forth between particular firms and their employees, and, even if it were, might still be valuable, in cases where these more intimate relations cannot be established (cf. Labour Commission Report, p. 38).

master working beside them on the bench. The physical separation must to a large extent continue. But, upon this physical separation there has gradually supervened a moral separation, involving, on the one hand, distrust, and, on the other, too often something of a cynical indifference. It is this spiritual barrier that mutual organisations of employers and employed are helping to break down.

While it is obvious that the *extent* of their service in this direction cannot be estimated, the *manner* of it is readily displayed. To begin with, there is the broad fact that, as conflicts become less frequent, the spirit of conflict is likely, *pari passu*, to diminish. But this is by no means the whole effect of common meetings. A more subtle reconciling influence continuously operates through them. It affects, in the first instance, the attitude adopted towards one another by the *representatives* of the two sides. At the Board itself mutual misunderstanding and prejudice is gradually cleared away. When the employers listen to the restrained and able advocacy of the men's representatives, they can hardly continue to regard their employees merely as "hands," or their leaders as "paid agitators." When these, again, deliberate upon the masters' replies, and note respectful sympathy in their attitude, they too are likely to modify still further an opinion, which may once have been willing to brand all employers as "money-bags" and merciless oppressors of the poor. In fact, an opportunity is given for "adding the human to the cash relationship."¹ This change of

¹ Martin, "Social Value of Trade Unions," *Journal of Ethics*, July 1902, p. 443.

tone is brought about, partly by mere force of contact between men who, after all, are of like passions with one another, and have a common share in that "touch of nature" which makes for unity; and partly by the new knowledge of facts which discussion affords, and the consequent realisation, upon either side, of the real difficulties that often dictate the policy of the other—a policy perhaps hitherto regarded as the outcome of mere wanton opposition to themselves. For, as the President of the Northumberland Coal-owners' Association observed, in opening the Burt Hall at Newcastle: "In the old days when they did not meet the men, they were often, no doubt, misrepresented to each other, and indirect information as to their feeling on any matter was very different from direct statements face to face."¹ In those old days we had, from the leaders of the men, speeches of this kind: "The *Manchester Guardian* is the Bible of the manufacturers, the *Examiner* and *Times* is their Testament, gold is their God, silver their Jesus Christ, and copper their Holy Ghost."² In these new days we read that, during the cotton lock-out of 1893, which caused acute and widespread distress, "the friendship existing between the officers of the unions and the secretaries and members of the committees of the employers' associations was most marked, it being quite customary for them to meet

¹ Quoted by MacPherson, U.S. Bulletin of Labour, May 1900, p. 486. It should be remembered, in trying to estimate the moral effect of meetings between the two sides, that those who give opinions are likely to attribute an undue relative importance to the effect in that region which they know best—i.e. the Board itself—where, of course, the effect will be greatest.

² From a speech of Mr. Grimshaw, a leader in the Preston strike of 1854 (quoted by Ashworth, *The Preston Strike*, p. 38).

upon equal terms almost daily in places of public resort.”¹ As one of the pioneers of conciliation expressed it, the system “lubricates the machinery of bargain-making” and does away with much of the friction formerly existing.²

So far as the masters are concerned, this modification in the attitude of their representatives is itself nearly tantamount to a similar change in that of the whole body. For, in the first place, the number of the representatives is generally an appreciable proportion of the whole, and, in the second, the means by which information can permeate a body of educated men engaged in similar occupations are exceedingly efficient. Furthermore, it is not merely among the other masters that the new spirit of the Board is apt to be spread, nor perhaps is this the most important sphere of its activity. For, after all, the owners of large businesses, though perhaps indifferent, will hardly, in any case, cherish a spirit of active hostility or bitterness towards their men. It is among their officials and servants, who are less far removed from those under their authority, that this attitude of mind is likely to be, at once more common, and more hurtful to the persons towards whom it is entertained.³ When, however, these officials

¹ *Labour Gazette*, April 1893, p. 7. Cf., to a similar effect, the report of the operative cotton-spinners on the employers' recent proposals (*Conciliation in the Cotton Trade*, 1900, p. 14).

² Rupert Kettle, *Lecture on Masters and Men*, Royal School of Mines, 1871.

³ Cf. also Marshall, *Principles*, p. 636: “An employer suffers more or less from anything that injures his workpeople, while the exactions of an unjust foreman are but little held in check by regard for his own ultimate interests.”

see that their masters are not above meeting representatives of the men on equal terms and in a spirit of friendly discussion, any arrogance that may previously have given a harsh tone to their own attitude cannot fail to be softened down. And thus we get a result of wide importance, suggested and illustrated by the words which Sir David Dale used at the recent Berlin Labour Conference: "The introduction of Joint Committees, on which the workmen are equally represented, has had the effect of establishing better relations between the foremen and the miners."¹

With regard to the men, the process of permeation is likely to be more complicated and less smooth. For it is clear, on the one hand, that the representatives can hardly imbibe the new spirit unless their tenure of office is a fairly long one; and, on the other, that, if this is the case, the proportion of the workmen that will ever come into personal contact with their employers must be extremely small. "The representatives are so few that not much is effected in a social way,"² or, in other words, the *direct* moral influence of the Board upon the men's side does not reach very far. But, on the other hand, the representatives upon whom the uniting force of personal contact is brought to bear, though few in number, are generally

¹ Quoted by Schläffle, *Theory and Policy of Labour Protection*, p. 170. The reference is to the Durham and Northumberland Joint Committees. Mr. Trow speaks in the same strain of the influence of the committee in the iron and steel trade, in leading to more courteous treatment of the men by the managers (Labour Com. Group A.Q. 15,172).

² Opinion of the men's officials of the Boot and Shoe Union of Northampton; quoted by MacPherson, U.S. Bulletin of Labour, May 1900, p. 491.

of a special quality, and more than ordinarily well fitted to hand on the torch to others. They are probably the leading spirits of their industry, and the influence of leaders is perhaps the greater in proportion as their followers are drawn from classes unaccustomed to intellectual pursuits.

Furthermore, it is certain that whatever influence they are capable of wielding they will be compelled to bring into play. For, as representatives, they have to defend their conduct of the affairs of those who have elected them. They are apt to be denounced for yielding to the tyranny of employers and becoming "masters' men," and, in mere self-defence, are bound to explain that reasonable and humane considerations have governed the action of both sides upon the Joint Board.

Nor are the utterances of their representatives the only doorway through which the influence of the machinery of conciliation can play upon the men. The mere knowledge that a Joint Board is in existence does something to engender in them a kindlier feeling towards their employers. For they have in it a material witness of the willingness of the latter to treat with them as persons entitled to combine for common ends, and worthy of the steel of argument. The contradiction thus publicly given to that old inherited prejudice, wherein service is associated with a servile status, does much to remove the bitter sense of oppression and injustice, which the contrast of a democratic polity and a feudalised industry is continually forcing upon the British working man.¹

¹ Cf. Foxwell, Introduction to Menger's *Right to the whole Produce of Labour*, pp. xiv. xv. : "The peculiar danger of modern societies

A second advantage, bound up in a very close way with that which has just been discussed, is the intellectual, as distinguished from the moral and sympathetic, education which Joint Boards promote. Through them employers can get to know and realise more fully the true conditions under which their workmen's lives are passed. For instance, in the iron and steel arbitrations in the north of England, the eagerness of the men's representatives to have the luncheon interval early, because they had had nothing to eat since half-past five, may have made live to more than one employer a fact which had before had little more than a paper significance. And, on the other side, the men's representatives get to know something of the real difficulties of business management. Their minds gain breadth and a better sense of proportion, and this economic education they gradually disseminate among their constituents.¹

The third advantage in this group consists in the reflex influence exerted by Joint Boards upon character, through the changes which they induce in the organisations of employers and employed respectively. is the startling contrast between their political and economic development. In politics, equality; in economics, subordination. One man one vote; why not also, one man one wage?"

¹ The importance of this increase of knowledge is well illustrated by the following quotation from Mr. Carnegie's book, the *Empire of Business*, p. 87: "Speaking from an experience not inconsiderate (*sic*), I make this statement. Capital is ignorant of the necessities and the just dues of labour, and labour is ignorant of the necessities and dangers of capital. That is the true origin of friction between them. More knowledge on the part of capital of the good qualities of those that serve it, and some knowledge upon the part of the men of the economic laws which hold the capitalists in their relentless grasp, would obviate most of the difficulties which arise between these two forces, which are indispensably necessary to each other."

Depending for their own origination upon the existence, in however rudimentary a state, of these bodies, they, in turn, react upon them. They tend to foster, on the one hand, cohesion, and, on the other, representative, as distinguished from delegated, government; in fact, they help to strengthen and centralise the organisations on either side.

The stimulus to cohesion¹ consists in the fact that the men under a Board must bargain as one body, the minority submitting to the will of the majority. Even if a section thinks it could make a better bargain for itself, it must subordinate its own interest to that of the whole.² The immediate cause of this may be mere egoistic foresight—the opinion, for example, that the Board is useful and is impossible on any other terms. But even so, cohesive action, whatever its motive, can scarcely fail indirectly, and in the long run, to strengthen the cohesive spirit.

Among the employers the same thing is found. Mr. and Mrs. Webb observe that one reason for masters disliking arbitration is that unscrupulous firms can repudiate an award and undercut those who honourably carry it out.³ Here again, recalcitrant members, first brought to more loyal conduct by a

¹ It is interesting to note that a strike, itself the very opposite of conciliation, may sometimes be organised with the object of stimulating cohesion. Thus the "business agent" at Chicago stated that the reason he put forward the machinists' demands at the time he did in 1900 was in order that a strike might be brought about, and that it might then be possible to work up a stronger organisation among the men (Bogart, *Yale Review*, Nov. 1900, p. 303).

² e.g. the Flint Glassmakers of York in 1895 agreed to a uniform catalogue of prices for the whole country, "though it was made clear that the new list would involve a reduction of their own earnings" (Webb, *Industrial Democracy*, p. 281).

³ *Ibid.* p. 228.

perception of their own ultimate interest, may eventually rise, through practice, to true loyalty of heart.

The effect of regular arrangements for negotiation in strengthening central government in the Associations is equally obvious; for, in the absence of an authoritative treaty-making power, their higher forms cannot easily be developed. This centralising influence, though perhaps of little account on the side of the employers, is very important on that of the employed. A remarkable instance of its operation is afforded by the agreement which terminated the Danish iron trade dispute in 1897. In connection with a clause providing for arbitration, "the men's Union agreed to changes in its rules, of which one of the most important was that which deprived branches of the right to call out, on strike pay, a portion of their membership, not exceeding five per cent, without first obtaining permission from the Executive Committee of the Union."¹ In the United States a similar tendency has been displayed. Settlements arrived at locally by incompetent and irresponsible persons were continually violated.² Consequently, the chief officers of the Unions have in many cases found it necessary to intervene and, in some sense, guarantee the carrying out of local agreements and awards.³ But, in so far as they do this, they naturally require to have some say as to the content of these settle-

¹ Flux, *Econ. Jour.*, 1897, p. 623.

² Especial complaint is made in this respect concerning the plumbing trade.

³ e.g. the Massachusetts Boot and Shoe Union pledges itself to provide competent men to any firm whose employees insist on striking in violation of a local arbitration agreement (*Industrial Commission*, xvii. p. 409).

ments. They may stipulate that no agreement be entered into locally without their consent,¹ or may provide, in conjunction with the masters' executive, a central Court for arbitrating appeals from local tribunals,² or may even erect new central machinery for the direct settlement of "general" questions, only leaving to the separate localities the task of "applying" the decisions reached to their own special circumstances.³ There can be little doubt that this increased centralisation affords to the general body of the men valuable lessons in discipline and self-control, though these, perhaps, are not acquired without some loss of individual responsibility and initiative.

§ 5. The foregoing various advantages, though analytically distinct from one another, are, of course, present together in the concrete. They are thus, in many cases, mutually stimulating. Sympathy tends to the search for knowledge; knowledge furthers sympathy; both of them check strikes, and the absence of strikes promotes both of them. Improved organisation makes for peaceful settlements; these, if arranged on sound principles, give satisfaction and encourage a further development of the experiment. There is, in fact, a continuous interplay of action and reaction, advance in one direction being both cause and consequence of advance in others.

Though, however, the various effects of industrial peace harmonise with one another in general, it cannot be said that the harmony is complete, or

¹ e.g. the Brewers' Union, U.S.A.

² Agreement between the International Typographical Union and the American Newspaper Publishers' Association, 1901 (*Industrial Commission*, xvii. p. 366).

³ As is done in Durham.

that an arrangement which will maximise one group of benefits must *necessarily* maximise the others also. It will not, for example, always happen that the award, which would best encourage sympathetic relations between employers and employed, will be the one economically most advantageous either to the world at large or to the parties directly concerned. By paying attention exclusively to one of these elements of advantage, we should reach a conclusion different from that suggested by exclusive attention to the other. For a correct solution, therefore, both need to be considered and weighed. In the result it will be found, in some cases, that a decision, inferior from an economical point of view, is yet the best on the whole, and, in others, that a suggested means of uniting employers and employed in bonds of fellowship ought to be rejected because of its high economic cost to the community.¹ The conclusion reached must often be a compromise framed upon a rough estimate of factors which it is impossible accurately to measure. Consequently, throughout the second part of this book, it must be remembered that principles of settlement, which would be wise and right if people fairly understood them, cannot always be applied without modification to differences made complex by the presence of ignorance or passion.

¹ As in the case of the French and Belgian *syndicates mixtes* (*Econ. Jour.* 1895, p. 641), or Mr. Smith's Alliances, which threaten a serious loss to the consumers both directly and through retardation of progress in the trade. Of organisations of this kind the Labour Commissioners write: "It may be hoped that such combinations would in the end either fail from within or be defeated by competition arising from unexpected quarters, or be destroyed by changes in methods of production" (Report, p. 112). Cf. also Marshall, Preface to *Industrial Peace*, p. xxiv.

PART II
THE PRINCIPLES OF INDUSTRIAL
PEACE

INTRODUCTION

§ 1. In 1866 Mr. Rupert Kettle wrote: "It is too much the fashion to regard the rules (of political economy) as mere theories; they are, in fact, as easy of practical and familiar application as a spirit-level and a pair of compasses, and an arbitrator, undisturbed by the emotions of the conflict, would apply them to the facts before him almost as easily as an artisan uses those simple instruments."¹ This is one view of the question. Another distinguished arbitrator, Judge Ellison, in commenting upon a difference in the Yorkshire Coal Industry in 1879, expressed, with equal emphasis, a precisely opposite opinion: "It is for the employers' advocate to put the men's wages as high as he can. It is for the men's advocate to put them as low as he can. And, when you have done that, it is for me to deal with the question as well as I can; but on what principle I have to deal with it I have not the slightest idea. There is no principle of law involved in it. There is no principle of political economy in it."²

These apparently conflicting opinions might ex-

¹ *Strikes and Arbitrations*, 1866, p. 6; quoted by Crompton, *Industrial Peace*, p. 28.

² Webb, *Industrial Democracy*, p. 229.

cusably be cited as illustrations of a widespread confusion of thought, which prevailed in the early days of industrial arbitration, and is scarcely yet removed. The confusion is, however, verbal rather than real. The point which Judge Ellison saw clearly was that, so far and for such time as the organisations of employers and employed may be regarded as monopolistic bodies, any bargain between them will be economically indeterminate. From this it follows directly that no positive law can be formulated in accordance with which settlements *will* be made.¹ Sir Rupert Kettle, on the other hand, regarding political economy as an ethical science, maintained that its teachings revealed a normative law, in accordance with which settlements *ought* to be made. When the two views are confronted in this clarified form, the second not only ceases to conflict with the first, but actually requires it as a condition of its own validity. For, as Kant taught long ago, "ought" implies "can," and has no place in a mechanically determined universe. If the rate of wages were at every moment rigidly fixed by natural forces, arbitration awards would be at once superfluous and futile. It is only because there is a margin of economic indeterminateness that the possibility and the need of them exists. If, therefore, in conformity with modern usage, we accept Judge Ellison's conception of political economy as a positive science, we may also accept the limit that he puts to its authority, acknowledging that, while its truths should serve as lights to prevent our deviating into wrong paths, they do not, of themselves, suffice to set us on the right one.

¹ For a further discussion of this point cf. Appendix A.

This admission, however, in no way impugns the legitimacy of Sir Rupert Kettle's appeal to political economy as understood by him. In substance his view also was correct, though, of course, it failed to realise the great complexity of the practical problem.

§ 2. The purpose of this part of my work is to attack that problem from a general point of view, and, so far as possible, to display the broad principles upon which the settlement of industrial differences ought to be based. The standpoint taken will be that of an umpire approaching a controversy which has not as yet led to a stoppage of work. Arbitrations "after the fact" are in the main similar, but are sometimes complicated by the question how far either party should be advantaged or penalised in consideration of the attitude assumed by it in the earlier stages of the controversy. If, for example, employers or employed have previously refused an offer of arbitration made by the other side, it may seem desirable that, like litigants who have declined money paid into Court, they should reap some detriment from their action. For, if no attention is paid to such a circumstance, the temptation to obstinacy is likely to be increased, and victory will be sought, first through conflict, and, only after that attempt has failed, by peaceful means.¹ Questions of this order do not, however, call for general discussion, since the answer to them turns, in each particular case, almost entirely upon details.

§ 3. Our subject-matter thus consists of industrial differences in their purity, untouched by secondary

¹ American workmen are accused of pursuing this policy. Cf. Cummings, *Quarterly Journal of Economics*, ix. 362.

pleas concerning the manner in which they have been conducted. These differences are not, however, all of a type. Consequently, before they can be properly discussed, some form of classification is necessary. From the present point of view, the most convenient form is based upon the character of the material point in debate. When worked out, a classification on these lines yields two divisions, each in turn containing two subdivisions. The divisions comprise, on the one hand, differences concerning the "demarkation of function," and, on the other, those concerning the "fraction of wages." Of these two groups, the latter has hitherto been far the more important. From the tables printed by the United States Industrial Commissioners it appears that, during the period 1881-1900, the percentage of establishments involved in strikes, whose causes fall within that group, was some 84 per cent of the total number affected by strikes.¹ In Great Britain, from 1893 to 1900, the percentage of persons affected by strikes and lock-outs arising from such causes was 87 per cent of the whole.² In France and Austria, the other two countries for which recent figures are supplied, the percentage is also between 80 per cent and 90 per cent.³ In view of these facts, the inquiry which follows will be chiefly concentrated upon this class of difference.

§ 4. Differences concerning the "fraction of wages" may be subdivided into—

(1) Those connected with the reward of labour, generally raising an issue as to the money rate of wage, but sometimes touching such matters as work-

¹ Calculated from *Industrial Commission*, xvii. p. 653.

² *Ibid.* p. 658.

³ *Ibid.* pp. 660-61.

shop fines or the amount of special allowances, whether in money or in kind :

(2) Those connected with the doing and bearing of the employees, generally involving questions of hours or of working rules.

With regard to the relative importance of these sub-classes, the tables already quoted give, for the United States, 53 per cent of all disputes to the former, and 29 per cent to the latter ; for Great Britain, 71 per cent to the former, and 16 per cent to the latter ; for France, 64 per cent and 11 per cent, and for Austria 55 per cent and 28 per cent respectively. These figures are necessarily of a rough character, but there can be little doubt as to the conclusion to which they point, viz., that the former of the two groups of causes is considerably the more important.

Differences as to demarcation of function include, besides the well-known but relatively unimportant "demarcation disputes" between kindred trades,¹ all quarrels arising out of alleged interference on the part of the Unions with the work of management. They generally relate either—

(1) To the way in which work is apportioned between different classes of workmen and machine tools, or

(2) To the sources from which the employer draws his "hands" and material, or the destination to which his finished product is sent.

The former of these two subdivisions embraces several of the most important recent disputes. In

¹ For a full discussion of the mechanism best adapted for dealing with these disputes, the reader is referred to Mr. and Mrs. Webb's *Industrial Democracy*, p. 522 *seq.*

the American railway strike of 1886,¹ the great English engineering dispute of 1897,² the Danish iron and building dispute of 1899,³ and, to quote a later, though more trivial instance, the Grimsby fishing dispute of 1902,⁴ "the complaints of the masters appeared to be principally that their men did not permit them to have a free hand in arranging how work should be done, and how many men should be set to any given task."⁵

The second subdivision has been relatively unimportant in this country, but distinctly prominent in the United States and in Australia. It includes all questions concerning discrimination against, preference to, or exclusive employment of the members of Trade Unions.

¹ Taussig, *Quarterly Journal of Economics*, x. p. 413.

² Cf. pamphlet published by Amalgamated Society of Engineers, containing correspondence on the strike. Cf. also *Strikes and Lock-outs*, 1897, p. liv. etc.

³ Flux, *Econ. Jour.* 1899.

Times, Sept. 25, 1902.

Flux, on Danish dispute, *Econ. Jour.* 1899, p. 457.

CHAPTER I

PRINCIPLES OF WAGE SETTLEMENTS

§ 1. THE purpose of the three following chapters is to investigate the principles in accordance with which differences about wages and hours of labour ought to be settled. At the outset a fundamental question has to be faced: Is it desirable that arbitrators should take the general trend of economic forces for granted, or that they should introduce a bias into their awards with a view to improving the distribution of wealth? Ought they, in short, to try to modify long-period competitive results? The problem thus raised does not readily yield to direct attack. It can best be solved by the gradual development of a case at first simplified by abstraction.

Let us suppose a world in which the wealth and temperament of everybody, whether employer, workman, or consumer, is precisely similar. Under these conditions, it can be proved that the wage rate most conducive to the immediate satisfaction, both of the whole community, and—except when an alliance can restrict output and exact monopoly rates from the consumers—of the minor system comprising employers and employed, is that fixed by the free working of

demand and supply.¹ The natural or competitive solution of the wages problem is, from the standpoint of the moment, also ethically the best.

In real life, however, similarity of the kind postulated does not exist. In a great number of instances the "consumers" of a manufactured commodity are, on the average, more wealthy than the workmen engaged in producing it. Whenever this is the case, the economic harmony disclosed in the preceding paragraph breaks into discord. It becomes plain that the general welfare of the community would be increased if, by means of an artificially elevated wage, money could be transferred from the pockets of the consumers to those of the workpeople.² This transference would, indeed, involve a decrease of satisfaction to the former class which, measured in terms of money, would exceed the gain to the latter, and so lead to an *apparent* loss upon the whole. Since, however, a sovereign to a rich man means less than the same sum to a poor man, there would not necessarily be any *real* net loss. On the contrary, the evil of diminished and diverted production would often be more than outweighed by the good of improved distribution.

Nor can this conclusion be overthrown by a reference

¹ Cf. Marshall, *Principles of Economics*, p. 532.

² Similar reasoning shows that, in industries where the workpeople are richer than the consumers of their goods, an artificially *reduced* wage might yield an immediate advantage. This case is not, however, of sufficient practical interest to demand discussion here. Much of the argument which follows will, if inverted, apply to it. The advantage could scarcely be maintained, unless, as in the case of medical services, the low wage accepted on account of poor customers were balanced by a higher one for the same work exacted from those who were better off (*i.e.* unless price discriminations were practicable).

to the superior wealth of the body of employers, and the suggestion that, in practice, artificial wage-rates can seldom be maintained except by devices, such as Mr. Smith's Alliance schemes, involving the exaction of a special toll by this class. For it does not follow that the harm resulting from the gain, at the consumer's expense, of rich employers, need always be as great as the good resulting from the gain of poor workpeople. Hence, a series of wage rates artificially raised above the normal level, even when awarded in connection with one of these alliances, may, so far as direct effects are concerned, benefit the community as a whole. There is, in short, *prima facie* ground for believing that arbitrators, in framing their awards, ought to take account of the relative wealth of the different parties concerned.

§ 2. This conclusion must not, however, be admitted without further examination. For, attempts to improve distribution, as it were from the outside, carry with them important indirect effects for which the *prima facie* argument has found no place.

At the outset it may be postulated that no artificially enhanced wage ought to be established, unless, on the whole and in the long run, it is expected to benefit the workpeople primarily affected. It is true that cases are conceivable in which such a wage, by stimulating new methods of production, might at once damage their interests, and advance those of the community as a whole.¹ Exceptions of this kind are, however, as is argued subsequently, very unlikely to occur. Furthermore, even if this were not the fact, it is probable that the unpopularity

¹ Cf. Part iii. chap. iv. § 3

accruing to arbitration in general through the action of arbitrators, who should deliberately sacrifice their clients on the altar of the common good, would more than outweigh whatever direct benefit might result. Hence, broadly speaking, any attempt to raise wages above the normal level will stand condemned if it can be shown in reality to injure the workpeople to whose interest it seems *prima facie* to redound. That it will in fact have this result in many instances, there are, however, strong reasons to believe.

In the first place, the increase made in the "fraction of wages" diminishes the attractiveness of the trade in question to capital and employing skill. The flow of these into the trade and the total amount of labour which they purchase are both reduced. Nor does the extent of the former reduction afford an adequate measure of the latter. For a larger proportion of the capital and employing skill, which continues to come into the industry, seeks the co-operation of factors of production other than the labour whose wages have increased. Thus, both through an absolute diminution in the extent of the industry, and through the substitution of alternative—probably mechanical—methods of manufacture, the amount of employment available for the workpeople affected is diminished.

According to the conditions of demand, the decrease of employment will be either more or less than proportionate to the increase of wage rate. If it is much more than proportionate, the enhanced wage is necessarily accompanied by a net loss to those who receive it. For their total earnings will be much reduced, and the forced leisure which some of them

obtain, though perhaps a partial, will not prove an adequate, compensation for this loss. Nor is this a hypothetical or unreal suggestion. On the contrary, not only has Mr. Booth given us modern instances of its operation, but, so far back as 1831, the Royal Commissioners on Trade Combinations showed themselves fully alive to its practical importance. In the course of their report, they write as follows: "In the evidence of Mr. Galloway, in 1824, the mill-wrights are said, in the plenitude of their power, to have insisted that a journeyman should be employed at a rate of £2:2s. per week to turn a grindstone; but the consequence was the eventual ruin of the mill-wrights, and the merging of the trade into that of the engineers. The calico-printers' union had a regulation by which grounding, or printing with whole blocks on undyed pieces, was to be charged 10d., and half-grounding 16d.; the Scotch and Irish printers having made no regulations on the subject, they counteracted the Lancashire workmen, and, instead of 10d. and 16d., performed the work for 4d. and 6d.; the consequence is, that shawls and handkerchiefs done by the block, which, ten or fifteen years ago, were extensively printed near Manchester, have now left that district."¹

In other cases, owing to the immobility of the product or to other causes,² the demand for labour is so inelastic that the fall of employment will be less than proportionate to the rise of wages. In these cases the indirect effects produced upon the supply of capital and employing power, though they will diminish, will

¹ Report on Combination of Trades, 1831, p. 62.

² Cf. Part ii. chap. iii. § 16.

not destroy the advantage which high wages give to those concerned. Except, however, when the entrance to the favoured trade can be artificially restricted, we have still to consider the indirect effects upon the supply of labour. Reflection upon these shows that the presence of a relatively high reward in that trade will cause labour to flow into it, until equilibrium between the real earnings to be obtained there and elsewhere is restored. Nor does this merely mean that things are left as they were before. For, though ultimately the earnings of the trade are brought into conformity with the general level, that level is itself reduced below what it would have been in the absence of interference. This result follows from the proposition that the earnings of labour are equal to its marginal productivity, and that, in a developed community like our own, labour, when left free, tends to flow into those channels in which its marginal productivity is greatest. If these premisses are accepted, it is obvious that earnings all round—and in the trade primarily affected, among the rest—must fall when the natural flow of labour is diverted by artificial means.

Nor is the practical conclusion obviated by the reply that, if the "fraction of wages" is raised proportionately in all industries no process of diversion will occur. For, the demand for labour in general, as distinguished from particular kinds of labour, is bound, in any country, to be highly elastic. Capital migrates abroad with great readiness, and may also be reduced in total amount.¹ Hence, any advantages which an all-round rise of this kind appears to yield

¹ Cf. Gilman, *Industrial Peace*, p. 416.

are reversed by indirect effects operating upon the supply of capital and employing power. Consequently, such a rise stands condemned without reference being necessary to the indirect effects upon the total supply of the labouring population.

§ 3. In one important respect, however, the argument of the earlier part of the last section requires qualification. Underlying the whole of it has been the tacit assumption that the problem can be treated as one of industrial mechanics, and that we are merely concerned with external forces operating upon objects which themselves remain unchanged. For the purpose of a first approximation these assumptions are legitimate. In the last resort, however, mechanical analogies must give place to biological.¹ For, an artificially increased wage rate may indirectly influence the quality and general efficiency of the workpeople. In these circumstances, an advance in their fortune, artificially secured, need not involve a decline in the demand of capital and employing power for their services. On the contrary, the tendency brought into play may be one to level up the value of these services rather than to level down the payment received for them. With increased nourishment, leisure, and so forth, the work done may gradually become a different commodity, really worth the higher wage. In short, the biological law of functional adaptation supervenes upon the mechanical laws of equilibration.²

¹ Cf. Marshall, *Econ. Jour.* viii. p. 43.

² Mrs. Webb points out (*Co-operative Movement*, p. 19) that this idea played a great part in the philosophy of Robert Owen. It can be expressed technically in the statement that capital invested in labour may, if sufficient time is allowed, yield an "increasing return."

In cases of this kind, a policy of wage settlements in excess of the rate which is normal to existing conditions of efficiency is advantageous both to the workpeople concerned and to the whole community. There is, however, less scope than at first appears for successful action by arbitrators along these lines. For this there are several reasons, all of them grounded upon the circumstance that improvements in efficiency do not follow immediately upon an increase of wages, but take time to work themselves out. Hence, the efficiency wage paid in the industry is for a time abnormally high and initiates a series of reactions.

In the first place, a force comes into play tending to break down this wage. New men, attracted to the industry by its apparent advantages, see that, by accepting a little less than the Union rate, they can secure regular employment and high earnings; whereas, if they are loyal to the Society, they find themselves continually out of work. Nominally, no doubt, they may hold out for the stipulated rate, but what is to prevent their contracting to give exceptional intensity of labour in exchange for it? Or may they not, as was so often suggested before arbitrators in the North of England iron trade, waive their claim to little extra advantages by which real wages are commonly enhanced? There are, in fact, numberless subtle ways in which a rift in the Trade Union dyke may be effected. "You will need," writes Professor Marshall, "to watch the vast net-work of bye-paths by which, when one person is willing to sell a thing at a price which another is willing to pay for it, the two manage to come together in spite of prohibitions

of King or Parliament, or of the officials of Trust or Trade Union.”¹ So far, however, as the rate is thus broken through by new-comers, the original workpeople find it difficult to maintain it for themselves, with the result that the award given is only partially enforced.

In the second place, except when an employer takes a strong personal interest in his workpeople as individuals, he is likely so to act as greatly to diminish such opportunity as there is for better wages to react upon efficiency. The conditions of work and wage, which would maximise a man's usefulness during his working life, are frequently higher than those which would maximise it during the period in which he is likely to remain in a particular factory, or even in a particular trade. The conditions which would maximise the efficiency of his children as well as of himself are probably higher still.² But, except under a slave economy, neither the employer concerned nor even his descendants can reap any direct reward from increases in the wage rate designed to promote advantages of this order. Hence, if he is selfish, he will not care for these advantages. On the contrary, when the rate of pay for the work of relatively incompetent persons is raised, self-interest prompts him, not to retain his old hands until higher wages have so improved them as to make them worth what they receive, but rather to take on new hands who are worth this sum already. The proceedings of the Dock Companies in importing country labour, after the great strike had won the docker his “tanner,”

¹ *The Old Generation of Economists and the New*, p. 17.

² Cf. Booth, *Industry*, vol. v. p. 136.

afford a concrete illustration of this tendency.¹ It is, of course, true that, *where the area covered by the award is large relatively to the amount of superior labour available*, a considerable number of the old employees will receive the new wage. Still, even under the most favourable circumstances, the prospect of ultimate benefit is reduced.

Furthermore, it is only in those industries where efficiency is low that any important reflex influence upon it is likely to occur. And it is just in these industries that, owing to the lack of organisation on the part of the men, awards covering wide areas are least readily obtainable. Where the men possess an organisation adequate to secure "extensive" awards, they are generally so efficient already that the concession of advantages beyond the normal will improve their quality but little.²

These considerations, though they set a strict limit to the extent of the qualifications required in our previous conclusion, do not justify the exclusion of all qualification. In particular, in controversies concerning the length of the working day, the possibility of a reflex influence upon efficiency should be kept prominently before arbitrators' minds. For it seems not improbable that, in a number of cases, the length

¹ The case is the same with abnormally low wages. Thus Clifford draws attention to the fact that it is the *old* men who remain on the farms, while the young men go away (to earn the higher wages of the towns), (*Agricultural Lock-out*, p. 236 n.).

² Thus, it has been suggested that a reason why profit-sharing and other forms of patronal policy have been less successful in England and America than on the Continent of Europe is, that the general efficiency level in the two English-speaking countries is relatively high (Hadley, *Economics*, p. 377).

of day at which this would prove to be a maximum is less than the length which is actually worked.¹ The proper qualification, however, in its general form, as distinguished from its application to particular cases, can scarcely be formulated definitely. Little more can be said than that, when in doubt between a higher and a lower wage, arbitrators ought to act upon the principle of awarding the higher one. If they do this, they may occasionally do good, and can scarcely do harm. For, while it is possible that an artificial gain, inadvertently introduced, may make workpeople more efficient, it is also possible that the

¹ This maximum point, of course, varies greatly in different industries. It is not, for example, the same for miners as for tram conductors, or for that class of worker, typified by shop-assistants, whose work largely consists in waiting for work. Nor is it the same when the time actually spent at work is all the time involved as it is when an hour or so is occupied in going to the scene of work. Thus, in the engineering strikes of 1897, it was contended, on behalf of the men, that nine hours at the shop often meant twelve or fourteen hours away from home (*A. S. E. Manifesto*, p. 29). The point also varies according to the degree in which the speed of work depends upon machinery. Messrs. Hills observed in 1897 (*ibid.* p. 41) that the effect of shortened hours upon efficiency had been much the most marked in the case of hand-work. Furthermore, if the men conceive a particular number of hours to be "just," this fact alone may cause the concession of it to increase their efficiency by preventing listless work due to a sense of irritation. The effect also depends upon the way in which the extra leisure is spent. For example, Schäffle (*Labour Protection*, p. 69) lays stress on the fact that in Switzerland the introduction of the eleven-hours day "has not led to the greater frequenting of public-houses." This consideration further suggests that the effect may be different according to the manner in which the extra leisure is conceded. It has, for example, been suggested that the concession of a complete Saturday half-holiday is more beneficial than that of an equal number of hours distributed throughout the week, because the former gives an opportunity for athletics, and the latter chiefly for resort to injurious places of entertainment.

artificial loss which accompanies it may stimulate employers to ingenious inventions.

§ 4. The conclusion so far reached is a general one. Subject to the argument of the previous section, it is opposed to attempts on the part of arbitrators to improve long-period distribution, because these attempts are found, in ordinary cases, to injure the group of workpeople whose good is directly sought, and hence, in general, to injure the working classes and the community as a whole. In industries, however, the entrance to which can be restricted, this harmony between the particular and the general interest breaks down. An artificial wage may frequently benefit the workpeople directly concerned, though it is very unlikely to increase welfare on the whole. As Professor Marshall observes: "In trades which have any sort of monopoly the workers, by limiting their numbers, may secure very high wages at the expense partly of the employers, but chiefly of the general community. But such action generally diminishes the number of skilled workers, and in this and other ways takes more in the aggregate from the real wages of workers outside than it adds to those of workers inside; and thus on the balance it lowers real wages."¹ Cases of this kind, owing to the difficulty of enforcing restrictive regulations, are not, however, very numerous. Though in certain Unions the old apprenticeship rules are still nominally retained, they are, for the most part, practically ineffective. Even in the industries where no one is allowed to become a journeyman without having first been an apprentice, it does not follow that he will

¹ *Economics of Industry*, p. 391.

not be employed on journeyman's work. And, however strict some districts may be about their rules, the faithlessness of others, coupled with the growing mobility of things and people, goes far to nullify the effect of their policy. On the whole, therefore, it is true already that trades can rarely make themselves "close corporations," and in the future, as the sentiment and law against industrial monopolies develops, it is likely to become still truer. At the same time, it must be recognised that exceptional cases, though comparatively unimportant, nevertheless exist.¹

While conflicts of interest between the work-people of a trade and the community are rare, those between the *present representatives* of these work-people and the community are both common and far-reaching. Harmony only prevails when "the trade" is taken to include both all those now in it and all who will be in it during the periods directly or indirectly affected by the award. It is not, however, the trade in this sense which has to determine whether or not any given settlement shall be accepted. It is those at the moment in the trade, or rather that portion of them which constitutes the Trade Union. There is no general reason to anticipate a consensus between the interests of this comparatively small section and those of the whole trade over the whole of time. On the contrary, the Unionists of to-day may obviously gain by an artificial wage-rate, provided only that the injury it ultimately causes is delayed

¹ Among them perhaps the Boiler-makers Society ought to be included. Cf. Knight's evidence, Labour Commission (Group A.Q. 20,765-66).

beyond their own lifetime. Nor is it necessary that the evil effects should be postponed for so long a period. For, even though Nemesis comes early, she may pass over the door-post of their houses. If, through old association or acquaintance with the machinery used, they have a kind of vested interest in the jobs of particular employers, or if they are men of more than ordinary skill and usefulness, the gain from high wages is likely to fall to them and the suffering to others.¹ Their privileged position may be so strong that, when new men try to force it by cutting the wages rate, the attack may for a long time prove unsuccessful. And even though, as is likely to be the case, it succeeds ultimately, and the old employees have, in consequence, to lessen their demands, the gain which they have already secured may be great enough to outweigh the loss incurred towards the close of their lives.

The probability of a divergence of this kind between the interests of present Union members and the ultimate interests of the trade is greater the longer the time required for learning the work. When this is very long the fear of new competitors will be relatively unimportant, and the divergence, both real and anticipated, may be correspondingly large.

§ 5. In the presence of these breaks in the economic harmonies, it is evident that the policy appropriate to arbitrators needs to be further investigated. It is still in the main true that a bias away from the normal wage level will, if introduced into their awards, be injurious to the community as a whole.

¹ Cf. Booth, *Industry*, vol. v. pp. 238-9.

But arbitrators need to consider, not only what policy is ideally best, but also what is practicable, and it will often not be practicable to refuse to present members of a Trade Union or Employers' Federation a series of wage settlements whose condemnation rests solely in the fact that it will damage their descendants or successors. The policy of avoiding bias away from the normal would, in short, if rigidly maintained, lead to the award of settlements which one or both the parties to a difference would reject. In such cases, whether or no the region of practicable awards is formally delimited beforehand,¹ arbitrators are

¹ Such formal limitation of liability is common both in international and in industrial treaties. An instance under the latter head is afforded by the terms of settlement of the South Wales Coal Dispute in 1898. These set up a sliding scale, to last till 1903, but "If, after the first day of September 1899, the employers, by virtue of this agreement, reduce the wages of workmen below 12½ per cent above the standard of December 1879, the workmen shall have the right of giving six months' notice to terminate this agreement on the first day of any January or July next ensuing, notwithstanding clause 2 of this agreement" (*Strikes and Lock-outs*, 1898, p. li.). A similar principle underlies the constitution of the Conciliation Board for the coal industry of the federated districts. Its rules, as framed in 1899, provided that it was "to determine the rate of wages from the first of January 1899 to the first of January 1901, *within the following limits*, namely, that during such period the rate of wages shall not be below 30 per cent above the rate of wages of 1888, nor more than 45 per cent above the rate of wages of 1888." When in 1900 it was decided to continue the Board till January 1904, limits were again imposed upon its discretion, the maximum being raised to 60 per cent above the standard of 1888 (*ibid.* 1899, p. 91). There is a similar limitation in the lace trade, where the maximum single wage change may not exceed 7½ per cent, and in the Brooklands agreement, where it may not exceed 5 per cent (*Industrial Commission*, xvii. pp. 502-3). The minimum wage provision in various local boot and shoe and building arbitration schemes has a like effect. The conditions often laid down in arbitration agreements as to the time for which an award shall be binding, or

bound to abandon any policy which would lead them to pass beyond it. It is futile for them to aim at an ideal which they are certain to miss, and the missing of which will involve great cost and injury. They must content themselves, in each particular case, with the nearest approach towards that ideal which the prevailing conditions allow.¹

as to whether it shall be in the form of a scale or of a fixed wage, are in principle similar. These are special instances of formal restrictions imposed upon the amount of discretion allowed to mechanical or human arbitrators, but the same principle is equally, though less obviously, involved in the tacitly preserved right to abandon or reject any sliding scale or award which proves "outrageous."

¹ This recognition of the essentially relative character of the ideal at which arbitrators must aim reminds us that there are a number of other circumstances besides the intentions of the parties, with regard to which this relativity has to be borne in mind. In composing a particular wages difference it is generally necessary for an umpire to take for granted the existing manner in which other factors or agents of production are paid. When, for instance, it is urged, with regard to joint stock companies, that the salaries of managers and officials ought to slide as well as those of manual workers, or, with regard to these and other undertakings, that the earnings of debenture-holders ought to slide, or that, in accordance with the policy of the North-Eastern Railway towards the Cleveland iron firms (Jeans, *Conciliation and Arbitration*, p. 38), charges for transport ought to vary with fluctuations in the price of the goods transported, the answer very likely is that our counsellors are wise, that we would act on their advice if we were able, that the sum-total of satisfaction would be increased if it could be followed, but that, as a matter of fact, the thing cannot be done. Or again, when bad times come to a group of firms, and the badly organised workmen see their wages reduced and those of their "stronger" companions maintained, they are probably right in considering themselves unjustly treated. But, if an arbitrator has to settle this case, and if he finds that it is not practical politics to establish a common wages-board for all classes of workmen, and that the better organised are determined to accept no reduction, then he simply has to make the best of that fact, and content himself with maximising satisfaction relatively to it.

NOTE TO CHAPTER I

To the claim for wage adjustments above the "normal" there corresponds in certain cases one for adjustments depressed below it. Manufacturers in out-of-the-way districts continually urge that the inferiority of their machinery or the magnitude of their freight-charges justify the payment of a wage lower than the average.¹ Employers in towns demand permission to cut their money wage as low as, and therefore their real wage much lower than, that paid by their country competitors.² In the Yorkshire dyeing trade agreement the profits of individual firms are deliberately made a factor in determining the wage to be paid by them.³ In the coal trade of Illinois, Indiana, Ohio, and Pennsylvania, "the scale is nicely adjusted so that the districts with the better quality of coal and the lower railway charges are required to pay enough higher wages than other districts to counterbalance their superior natural advantage."⁴ The British Board of Admiralty, modifying their original action upon the "fair wages" resolution of the House of Commons, has adopted a policy of like effect, in order to avoid handicapping the London contractors.⁵ Despite the authority with which this policy is supported, it requires but little reflection, in the light of what has been said, to show that, if by any means avoidance of it is possible, it ought not to be pursued. For under it, the circumstances of badly-managed and badly-situated firms being improved relatively to those of the well-managed and well-situated, the ability which makes for large profits is discouraged, and stupidity and ignorance encouraged. Above all, industries are bolstered up in districts to which they are not suited, and prevented from migrating to others where production could be conducted more economically.

¹ Cf. Webb, *Econ. Jour.* 1896, p. 388.

² Cf. the town employers' arguments in the boot and shoe trade, U.S.A. (C. D. Wright, *Bulletin of Labour*, Jan. 1897, p. 35), and those used by the London Master Builders in 1891 (*Strikes and Lock-outs*, 1891, p. 267).

³ Clause 8 of agreement (*ibid.* 1896, p. 173).

⁴ From a eulogistic description by J. R. Commons, *Amer. Review of Reviews*, March 1901, p. 333.

⁵ Cf. *Econ. Jour.* 1896, p.154.

Consequently, the national dividend is diminished, and the working classes as a whole, in the long run, injuriously affected.¹

As before, however, so in this case, it may be impracticable, and even if practicable, unwise, for arbitrators to aim directly at any wider good than the immediate interests of their clients. Consequently, when labour is imperfectly mobile, it may sometimes be necessary for them to grant the demands of weak firms in spite of the fact that the summary destruction of these would be to the general advantage.

¹ The correctness of this view is clearly recognised in the policy of the Lancashire cotton spinners (cf. Chapman, *The Lancashire Cotton Industry*, p. 251).

CHAPTER II

STATISTICAL DETERMINATION OF THE NORMAL WAGE

§ 1. In the course of the preceding chapter it was found that some qualifications were needed to the judgment that arbitrators ought not to bias their awards away from the normal wage, both on account of the possibility of reflex influence upon efficiency, and on the score of practicability. These qualifications do not, however, in any way detract from the fundamental importance of the normal wage in all arbitration and conciliation proceedings. It remains true, as Professor Marshall declared before the British Association in 1889, that, "The first point which Courts of conciliation and arbitration have to consider is, what are the rates of wages on the one hand and of profits on the other, which are required to call forth normal supplies of labour and capital respectively; and, only when that has been done, can an inquiry be properly made as to the shares in which the two should divide between them the piece of good or ill-fortune which has come to the trade."¹

The normal position is often at, and always near, the centre about which oscillations due to temporary

¹ Presidential Address to Section F, p. 32.

causes ought to be regulated. It is essential that this centre should be found, since otherwise to any claim for a change of wage, in consequence of a fluctuation in demand or supply, it might be answered that the present wage is *not* adapted to the conditions prevailing before the change, and is adapted to the new conditions. The way to find the centre is, first to determine the normal wage, and then to qualify it, along the lines indicated above, according to the particular circumstances of the case under discussion.

The "normal" required for this purpose may, in most industries, be equated to the general level of efficiency wages.¹ Allowance being made for irregularity of employment,² it is "about on a level with the average payment for tasks in other trades, which are of equal difficulty and disagreeableness, which require equally rare natural abilities and an equally expensive training."³ When, however, there is a cause at work promoting a continuous fall in the demand for the products of any industry, the normal relevant to that industry will, so long as the cause remains, lie below the general efficiency level: in the presence of a cause of opposite character, it will lie

¹ Professor Clark appears to hold that it may always be so equated ("Authoritative Arbitration," *Pol. Sc. Qrly.* Dec. 1902, p. 565).

² The calculation of this allowance involves, of course, great practical difficulties, especially when a piece-rate and a time-rate trade are being compared (cf. award of Anthracite Coal Strike Commissioners, U.S. Bulletin of Labour, No. 46, pp. 473-75).

³ Marshall, preface to *Industrial Peace*, xiii. It is interesting to note that this may necessitate both that the nominal wages of good men shall be higher, and that those of bad men shall be lower, in the country than in the towns; for, in towns, good men can always be certain of work, while the prospects of employment for the others are, owing to less stringent competition, brighter in the country.

above it. Both these cases are of practical importance. During the second third of last century, expansion of the kind here discussed was very evident in the transport and iron industries, and could have been fairly inferred, by any one called upon to arbitrate, from the recent mechanical and other discoveries. Much the same may be said of the brewing industry, the operating cause in this case being the growth and dissemination of wealth. At the present time the rubber industry, through its connection with the manufacture of autocars, finds itself in a similar position. On the other hand, excellent illustrations of decay are afforded by British agriculture in the face of American railway development, the Hereford building trade between 1875 and 1890,¹ and the London cab trade at the present time.

In all such cases the inevitable lagging of supply behind demand makes it necessary to reckon the normal wage at something other than that prevailing in trades in general. An allowance has to be made under this head, the amount of which depends upon the strength of the cause at work and the time required to learn the trade. If the cause has remained constant for a considerable period, it will be equal to the average difference, during the period, between the efficiency wage in our industry and that which has prevailed in others.

§ 2. In theory, therefore, there is no objection to a direct calculation of the normal wage in the trade with which we are concerned. In practice, however, the measurement of such a quantity as the general level of efficiency wages—the basis from which any

¹ Cf. F. W. Lawrence, *Local Variation of Wages*, p. 52.

such calculation must start—presents enormous difficulties. It would scarcely be possible to reach a concrete result unless these could be evaded by Mr. Bowley's statistical device of substituting an estimate of *changes* for one of absolute amounts. In order to avail ourselves of this method, we need to find some model year, which both parties agree to have been fairly satisfactory in the particular industry, and then to calculate the extent to which the general level of efficiency wage has altered since that time. Upon this plan no special treatment is required for decaying and expanding trades, provided only that they were decaying or expanding in a similar manner in the period chosen as a model. The wage prevailing in our industry at that time has merely to be multiplied by the ratio of the present general wage index to the then general wage index, and the result is the figure we require.¹

It is no doubt true that this method of determining the normal in any one industry would be impracticable if wage settlements by Conciliation Boards were universal. Under such circumstances reference to the conditions in other trades would be useless, since, if each endeavoured to follow the rest, none would move at all. This difficulty would need to be met by a more complex procedure. First, the wage prevailing at the old normal period should be multiplied by the ratio of the new to the old level of the retail prices of com-

¹ Mr. Virtue argued on these lines for a rise of wages in the anthracite coal region, U.S.A., pointing out that a wage index number, prepared by the Department of Labour, and believed to "approximate very closely to the actual conditions of the whole country," showed, for the preceding ten years, a distinct upward movement (*Jour. of Pol. Econ.* Dec. 1900, p. 10).

modities consumed by working men, the rents of their houses being, of course, included among these prices. For, in order to restore things to the position of our model year, equality of real, and not merely of nominal wages is required. When this has been reached, we have the old normal reconstituted. This, however, is not necessarily identical with the new normal, since the general conditions may be changed. Capital, for example, may have expanded or contracted relatively to population, sufficiently, in the one case, to increase, and, in the other, to diminish the share of the national dividend which is due to labour. Should either of these things have happened, a further allowance must be made, the amount of which can be roughly estimated upon the basis of the changes which have occurred in the rate of interest and in the general percentage of unemployment.

Under the present constitution of our industry, it does not, however, seem necessary to resort to this complex device. The normal in any occupation at any time can be calculated with sufficient accuracy by reference to a model year and to changes in the index numbers of general wages.

CHAPTER III

WAGE FLUCTUATIONS

§ 1. THE results reached hitherto are confined, in theory, to the broad conclusion that settlements ought not, in general, to be biased away from a centre often identical with, and always calculable from, the "normal" wage; and, in practice, to certain rough indications of the way in which this normal wage may be ascertained. There remains, however, a further theoretical question, and, bound up with it, a corresponding problem of practice. The argument against a bias towards artificially enhanced wage rates rested upon a consideration of the influence which such a bias would have upon future supplies, on the one hand of capital and employing power, and, on the other, of labour. But a system of wages oscillating equally upon both sides of the central position need not have any different effect in these respects from one which remains continually fixed at that position. The influence of the upward movements may be balanced by that of the corresponding downward movements. Nothing which has been said, therefore, has any direct bearing upon the question whether the wage should be fixed or should vary with the fluctuations of the market.

That problem now demands investigation. For simplicity, we assume the normal wage to be already determined, and to be identical with the centre away from which awards are not to be biased. We thus postulate a trade in general equilibrium, which is neither expanding nor decaying on the whole, but in which the demand for labour now falls below, and now rises above, its mean level.¹ In such a trade we have to compare the consequences of fixing wages permanently at the normal rate with those of allowing them to move freely in accordance with the oscillations of the demand for labour.

In the first place, consider a rise in this demand. If the fixed wage system is adopted, the nominal rate obviously remains unaltered. Hence, we should expect that the amount of labour provided would also be unaltered, and, consequently, that the total of work done would be less than if the wage fluctuated. This, however, will not really be the case. For, though the wages per man remain the same, those per efficiency unit of labour are raised for new employees. An adjustment is brought about, either by employers taking on inferior men at the wage formerly paid to good men only,² or by resort to overtime at special

¹ If the supply of labour was taken to vary, the demand being constant, the argument, though different in form would be the same in substance.

² It may be suggested that under a piecework system this device is impracticable, since a given wage is necessarily related to a given output, whoever the worker may be. But (1) equal pieces are not always of the same quality, and are not always obtained with the same amount of injury to the employer's property (*e.g.* in coal-mining, a ton of coal badly cut may deteriorate the general conditions of the mine in the neighbourhood); and (2) even when two pieces are similar in all respects, one man, in finishing his, may

rates. In either case more is paid for the new labour units than for the old. The same addition is made to the total labour employed as would have accrued had the general wage rate been raised in an equal proportion. The difference is that the employer, by fixing what practically amounts to two prices as between his new labour and his old, preserves for himself a sum of money which, under a one-price system, would have been added to the remuneration of the latter. That this is the essence of the matter becomes particularly clear when attention is concentrated upon the method of overtime. Suppose that the normal working day was six hours at sixpence per hour—sixpence being the equivalent payment for the disenjoyment caused to the workman by the sixth hour's work. Suppose, further, that the disenjoyment of an extra hour's equally efficient work, to a man who has already worked six hours and received three shillings pay, is measured by sevenpence. Then the employer can obtain seven hours' work from that man, either by raising the general rate per hour to sevenpence, or by paying the same as before for a six hours' day, and offering sevenpence for one hour of "overtime." The amount of work done is exactly the same on either plan; the only difference is that, if the former is adopted, the employer pays over to the workman an extra sixpence, which, under the latter, he retains for himself.

In the second place, take the case of a fall in the demand for labour. If the wage rate remains at the old level, the quantity of labour, which it will pay occupy the fixed plant of his employer for a longer time than his neighbour.

the employer to keep at work, will be diminished. If the rate is lowered, it may still be diminished, but not in so high a degree. Hence, in bad times more work is done under a reduced than under a constant wage.

From a combination of these results, it follows that, over good and bad times together, a wage system fluctuating on both sides of the normal level in accordance with temporary movements of demand and supply, means more work and a larger national dividend than one permanently fixed at that level. This gain arises directly out of superior adjustment between demand and supply. It is the fruit of improved organisation, and is similar in character to the gain produced by improved machinery. It is not retained for long as an exclusive possession of the industry which first secures it, but is distributed over the community as a whole, with the result that a new general equilibrium is established somewhat more advantageous than the old. So far as practicable, therefore, it appears that, in the interest alike of their clients and of the country, arbitrators should not fix the wage rate at the normal level, but should introduce short-period oscillations in accordance with the temporary conditions of demand and supply.

To this conclusion there is, however, an objection, the limits of whose validity demand careful investigation. It has been urged that fluctuations in the earnings of individual workpeople tend indirectly to impair both the moral character and the economic efficiency of those concerned. Thus, Professor Chapman writes: "It may be argued that there is far more chance of a somewhat steady wage, which varies

infrequently and by small amounts only, contributing to build up a suitable and well-devised standard of life, than a wage given to sudden and considerable alterations." ¹ So far as this is the case, it follows that the direct advantages of a wage rate fluctuating with demand and supply may be more than counteracted by indirect disadvantages. The national dividend will, indeed, be enhanced for the moment, but it may ultimately be diminished in a more than corresponding degree, through the injury done to the quality of some of the nation's workers. Thus, limits to wage fluctuations might need to be set in the purely economic interest of the community; and, when account is taken of its moral interests, might require to be contracted still further.

In an examination of this argument it is necessary, first, to point out that the case is somewhat misrepresented when the evil anticipated is referred to the bare size of the fluctuations which occur. These are greater in the case of an income varying between two pounds and four pounds a week than they are in that of one varying between two pounds and three; but nobody would seriously maintain that the latter of these incomes is, on the whole, to be preferred. It thus appears that, unless a wage fluctuating with demand and supply involves, not merely a greater distance between the average level in good and bad times, but a level in bad times absolutely lower than that which would be found under a fixed wage, there is nothing to be said against it.

In the second place, an exact view of the problem requires that for the word "wages" there be substituted

¹ *Econ. Jour.* 1903, p. 194.

“earnings.” Professor Chapman would scarcely contend that it was better for a workman to maintain the old wage rate and to secure work for only half the week, than to accept a rate 25 per cent lower and to work full time. Hence, the case contemplated by him really arises only when the fluctuating system causes earnings, and not merely wages, to fall in bad times further than they would do under a scheme of fixed rates.

If, for the moment, questions connected with distribution between different individuals are left out of account, we may, therefore, put aside, as unaffected by the above objection, all cases in which the average earnings, or, what comes to the same thing, the total earnings, of the body of workpeople concerned, do not touch a lower level under the fluctuating than under the fixed system. The cases thus excluded embrace all those where the nature of the demand for labour is such that a fall from the rate we have called normal of one per cent causes a percentage increase in the amount of labour required of more than one per cent.¹

It may, indeed, be objected that the abstraction here made of the way in which work and wages are distributed renders this result of no value for practical

¹ From this point onwards it will be necessary to make use of the terms elasticity of demand and supply. “The *elasticity of demand* in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price. . . . Speaking more exactly, we may say that the elasticity of demand is one, if a fall of 1 per cent in price will make an increase of 1 per cent in the amount demanded” (Marshall, *Principles*, p. 177). Throughout this book *elasticity of demand* is used in Professor Marshall’s sense: and *elasticity of supply*, a term not yet sanctioned by his use, to signify corresponding phenomena on the supply side.

purposes. In real life, it may be urged, though the workpeople in general earn more in bad times under the fluctuating system, yet those particular workpeople who are so skilful as to command employment always, earn less, and it is stability in *their* earnings rather than in those of others that is of especial importance. Since, however, these superior workpeople are presumably better off than their less skilful fellows, this latter statement is highly disputable. For, there can be little doubt that fluctuations in the income of a poor man cause more disenjoyment,¹ and, hence, loss of efficiency, than fluctuations of the same size in that of a rich man of similar temperament. Hence, the rejoinder fails, and it follows that, when the elasticity of the relevant part of the demand for labour is greater than unity, Professor Chapman's argument is of no force against a fluctuating wage.

In the case of a highly inelastic demand, the result at first sight appears to be different. Under these conditions the total earnings of the workpeople will touch

¹ The proof of this proposition is as follows: When a man gets $(n-1)$ shillings to-day and $(n+1)$ shillings to-morrow, instead of getting n shillings each day, there is a loss of utility, other things being equal, measured by the difference in utility to him between the n th and the $(n+1)$ th shilling. In the present case, therefore, our proposition is that, when m and n are positive integers, {the utility of the n th - the utility of the $(n+1)$ th shillings} is greater than the {utility of the mn th - the utility of $(mn+1)$ th shilling}. This will follow if it can be shown that, in the case of a typical individual, the rate at which utility diminishes, itself diminishes as wants become satisfied. In diagrammatic language the latter proposition is that the utility curve constructed by measuring money along ox , and increments of utility along oy , is convex to the origin; in mathematical language that $\frac{d^2U}{dx^2}$ is negative. It is submitted that, when once this proposition is clearly stated, it commends itself to common-sense almost as decisively as the law of diminishing utility itself.

a lower level under the fluctuating system. If it were the fact that in good times adequate provision was usually made for bad times, the consequent evil might not be great. But, as everybody knows, the ordinary workman does not follow Professor Smart's excellent advice, to "conform his expenditure and his savings to the standard wage, and regard what he sometimes gets above that standard as an insurance fund against what he will at other times get below it."¹ Rather, after the manner of the agriculturalists of the eastern counties, with their high earnings at haysel and harvest,² he is likely to alternate between periods of wastefulness and want. Hence, it is probable that considerable net evil remains.

Against this, however, there has to be set the fact that, under a fixed wage, the total of available employment being smaller, more workpeople are likely to be thrown out of work altogether. It is not, of course, certain that this will be the case. In some industries, notably that of coal-mining, a constriction of employment is met by short time all round instead of by a reduction in the numbers of the staff; and, in others, as among the iron-workers of the North of England, the workpeople sometimes arrange among themselves to "share work."³ Nor is this the only

¹ Smart, *Sliding Scales*, p. 13. It may be noted that the pawn-shop and the power to get credit afford, for short periods of unemployment, a partial, though probably an injurious, substitute for saving.

² Cf. Clifford, *Agricultural Lock-out of 1874*, p. 245. Mr. Clifford suggests, as a remedy, *yearly* hirings, with slight extra payments at times of exceptionally hard work.

³ Sometimes arrangements of this kind are formally organised. Mr. Bolen instances a local Printers' Union in the United States, which, in a period of depression in 1896, forbade its members to work, individually, more than five days a week. That the practice of work-

method of escape. The establishment of a sufficiently high rate of out-of-work benefit by Trade Unions would afford an equally efficacious remedy. In practice, however, these palliatives have been found applicable only within very narrow limits. On the one hand, employers, anxious to permit nothing which might drive away the nucleus of men best acquainted with their business, often look askance at work-sharing pressed over far; on the other hand, no Trade Union ventures to put its out-of-work benefit very high, lest its unemployed members, becoming careless in seeking work, cause an intolerable drain for their support upon their more fortunate, and probably more competent, fellow-members.¹

Hence, even in the case of a highly inelastic labour demand, the evil attaching to a fluctuating

sharing existed in earlier times is shown by the proceedings at the old "houses of call" of the London Tailoring Trade (cf. *The Gorgon*, Oct. 3, 1818, quoted in Galton's *Tailoring Trade*, p. 152).

¹ If it were not for this consideration, it might be argued that out-of-work pay ought actually to exceed the ordinary wage. For the unemployed workman has greater opportunities for seeking enjoyment, and, therefore, a given sum of money has a higher marginal utility to him than to the man at work all day. This argument would, *ceteris paribus*, be valid if the average earnings rate were high, but not if it were low, since the physical needs of the man in work will cost more to satisfy than those of the man subjected to no strain. It would also be valid, *ceteris paribus*, if the work were so exhausting as to leave the worker with little desire, at the end of the day, beyond that for mere leisure, but not necessarily if it were of a kind to leave the activities stimulated. In this connection, it must be noted that exhausting work itself stimulates the desire for alcohol, but that the pleasures resulting from the satisfaction thereof are apt, in Bentham's phrase, to be impure. It may be noted further, that uneven distribution of work about the average is anti-utilitarian in just the same way as uneven distribution of wage: (cf. Edgeworth on distribution according to capacities, *Math. Psychics*, p. 130 seq.).

wage is matched by another attaching to a fixed one. This does not, of course, destroy the abstract possibility of a case occurring in which the magnitude of wage fluctuations ought to be artificially limited. It does, however, suffice to throw the burden of proof upon those who would maintain, in any particular instance, that such a case has occurred. For, the two evils noted above are so vague and indefinite that it will often be practically impossible to weigh them against one another. Under these circumstances, an arbitrator's decision must be based upon the one fact which is known, namely, that a wage fluctuating with demand and supply is superior in respect to its effect upon the national dividend. In general, therefore, the right policy for him, in the differences which come up for settlement, is to aim at establishing such a wage.

§ 2. This result carries with it the implication that, if economic considerations alone are taken into account, the wage level ought to fluctuate from moment to moment, never remaining the same over a period of more than infinitesimal duration. For, even though changes in the conditions of demand or supply occur only at intervals, yet, in strictness, the wage appropriate to any given change varies in accordance with the period which has elapsed since the change occurred. It is, in short, a function of the time since which, as well as of the amount by which, demand or supply has oscillated.

This point is brought out very clearly when attention is directed to the reactions on the side of supply induced by oscillations of demand. A diminished wage will command a smaller number of labour units per week after a little than it does at first,

because men will gradually seek and find occupation elsewhere. Similarly, in the case of an increase, a wage augmented by a given amount will command more labour units, when time has been allowed for new men to come into the trade, and when, therefore, labour units can be furnished by them as well as by the overtime exertions of the "old gang." Hence, the only correct adjustment to a given oscillation of demand would consist in a movement of wages most considerable at first, and thereafter gradually falling back towards its old level.

When it is supply that oscillates, the case is similar with regard to the reactions upon demand. So soon as we take account of the element of time, it becomes necessary to allow for the working of the law of substitution. If the price of one factor of production (labour) is raised, the amount of it demanded gradually diminishes with the growth in the employment of other factors—whether different kinds of labour or mechanical tools—in its stead. In like manner, if the price of one factor is lowered, the amount of it demanded gradually increases as it is introduced into uses to which it could not, hitherto, be profitably put. Hence, the only correct adjustment to a given oscillation of supply would consist, in exactly the same way, of a wage at first abruptly altered and then slowly moving back towards its previous amount.

Thus, it appears that, whenever the unit of time over which wage adjustments are made is of more than infinitesimal length, there is a failure to reach the position of maximum satisfaction, similar in character to the failure which occurs when ordinary commodities

are bought and sold in units of more than infinitesimal magnitude.¹

This circumstance is, however, for several reasons, inadequate to justify a perpetually fluctuating wage. In the first place, to the establishment of such a wage there are insuperable practical obstacles. Time is required for the collection and arrangement of the statistics upon which the changes must be based. Considerations of book-keeping and ordinary business convenience come upon the stage, and fix a lower limit beyond which the interval between successive settlements must not be reduced. Of course, this limit is not always the same—in a small local industry, for example, it will probably be lower than in a great national one; but, in every case, it must lie considerably above the infinitesimal level which pure theory recommends. So far as it is possible to judge from the practice of those industries in which the interval is determined, as under a sliding scale, by considerations of convenience alone, it seems as though the length of this minimum period in large staple industries may be reckoned at not less than two or three months.²

In the second place, considerations of a general character frequently make it advisable that the actual interval between successive wage settlements shall be considerably in excess of this minimum period. When, for instance, settlements are effected by elaborate and formal arbitration proceedings, the working of these may involve so much friction that it is the part of wisdom to undertake them as seldom as possible.

¹ These considerations lead up to the argument of Appendix B, Proposition 4, which may be read in this connection.

² Cf. for illustrations, L. L. Price, *Industrial Peace*, p. 80.

It is true that, if the interval chosen is long, and if, during the course of it, the wage fixed at the beginning becomes decidedly inappropriate to the changed conditions, the knowledge of that circumstance may itself generate friction. Furthermore, the wage change which has eventually to be made may be greater than it would have been had the interval been shorter, and this *may* increase the friction more than in proportion to the increase of the change. Nor is it an adequate reply that, since demand and supply may oscillate in either direction, the change required is as likely to be diminished as to be increased by an addition to the length of the interval. For, though this contention would be valid in a world about which we were entirely ignorant, in the actual world there are cyclical movements of expansion and depression, and, therefore, for the kind of periods with which arbitration is concerned, demand and supply are more likely to move continuously in one direction than to oscillate backwards and forwards. Lastly, if a settlement is to determine the wage rate for a long time ahead, that fact alone enhances its importance, and, therefore, probably the friction involved in reaching it. These considerations weaken the case for a long interval between successive wage changes.¹ The difficulties to which they point can, however, be diminished by the adoption of a rule that, whenever the change in some objective index exceeds a given amount, the wage rate shall be raised at once, without regard to the ordinary interval. Nor would they be decisive even in the absence of this device. In spite of them, therefore, it remains true that, in some circumstances, an interval considerably

¹ They are clearly less important as regards successive scale revisions.

longer than the minimum fixed by convenience is, though economically inferior, yet, on the whole, the best.

§ 3. Whatever interval is selected, the statement that wages ought to fluctuate in accordance with demand and supply must be understood relatively to the length of that interval. The list of demand prices—the demand schedule in Professor Marshall's terminology—is the list of wage rates which employers would offer in order to attract such and such various quantities of labour per week over the average of that period. Similarly, the supply schedule is the list of wage rates by which employees would be induced to provide such and such various quantities over the average of the period.¹

The terms being thus defined, we may proceed with our analysis. A change will be required in the wage rate paid to any group of workpeople, when an oscillation occurs either in the demand schedule or in the supply schedule of their labour. Whichever schedule has oscillated, the extent of the appropriate change is a function at once of the form of the oscillating schedule, of the form of the stationary schedule, and of the amount of the oscillation. Except, however, in regard to this last variable it is not the same function in the two cases. In the first instance, therefore, attention will be directed exclusively to oscillations in labour demand, the labour supply schedule being assumed to remain unchanged. We shall investigate in turn the way in which the wage change required by a given oscillation in labour demand depends upon the form of the supply schedule and of the demand schedule respectively.

¹ Cf. Appendix B, introductory sentences.

§ 4. Under the former head the fundamental proposition is that, other things being equal, *the more elastic the supply the smaller the wage change ought to be.*¹ For, if there are other occupations and places from which labour can readily be diverted without loss of efficiency, a small wage change will suffice to attract a considerable quantity of it to the industry in which it is required. In general, therefore, the following results hold good. First, when, as with the Scottish shale and coal-miners,² a small industry is neighbour to a kindred and very large one, the wage change corresponding to a given oscillation of demand should be less than in an isolated industry. Secondly, a set of circumstances, which would justify a given change in the wages of workmen specialised to a particular industry or locality, would justify a smaller change in those of labourers, whose lack of skill, or managers, the general character of whose skill, renders them more mobile. Thirdly, among workmen trained to a particular job, the fluctuations corresponding to a given change in one industry employing them should be smaller when there are other industries in which their services are required. Thus, in a boom or depression in the coal trade, the wages of mechanics employed in the mines should fluctuate less than those of hewers.³ Finally, when

¹ Cf. Appendix B, Proposition 1.

² Cf. Sheriff Jameson's award in the shale-miners' recent arbitration (*Econ. Jour.* 1904, p. 309).

³ When specialisation, either to trade or place, is very high, the labour supply will, for considerable variations of wage, remain practically constant. The workman may know that his skill is useless in other districts or occupations, and may therefore be driven to accept a great drop in wages before leaving. Nor (except in the case of

wages are paid by the piece, the percentage fluctuation corresponding to a given fluctuation in demand should be smaller than when they are paid by the time. For since, under the latter system, a rise of pay has not the same effect in inducing workmen to pack more labour into an hour, the elasticity of the supply of efficiency units is lower.

Furthermore, in industries subject to regular seasonal fluctuations, many of the workpeople will have prepared themselves for their slack periods by

navvies and other labourers, the muscular character of whose work makes it specially dependent upon their nourishment) need his efficiency suffer appreciably. Thus, the supply may be perfectly inelastic.

In certain circumstances it may even have a negative elasticity. In the first place, where wages are paid by the piece, the men, in order to maintain their accustomed weekly earnings, may actually do more work when their wages are reduced. Mr. C. M. Percy holds that this habitually happens among coal miners (*Econ. Jour.* vol. iii. p. 646). Mr. (now Lord) Brassey holds that the converse of it would follow a rise of wages in India, and Dr. Schulze-Gaevernitz refers on the point to the sports and idle days of the English richer classes. In the second place, when account is taken of the increased marginal utility of money to a workman whose earnings are diminished, it appears that the phenomenon of negative elasticity may appear even under time-wages. Its occurrence is less probable the larger the workmen's "reserve funds," whether directly accessible in the Union Treasury, or individual savings, or goods capable of pawning, or, indirectly, in the earning capacity of their families and their own credit. The part of this fund that is really available is likely to be larger in summer than in winter, because urgent needs are then less numerous, and larger to a group of single men than to one consisting mainly of those burdened with the care of young children. Its magnitude and importance are often considered slight. But the South Wales coal trade dispute of 1898 and the Penrhyn Quarry dispute brought out the fact that workmen, who are fairly skilled and have more or less settled homes, even though they have no Union funds to draw upon, possess a very considerable real reserve (cf. *Econ. Jour.* 1898, p. 420).

the acquisition of some form of skill for which the demand at these times is apt to increase. Hence, within the normal limits of seasonal fluctuations, the supply of labour will be fairly elastic. Therefore seasonal price changes should not seriously alter wages.

So far of the general problem. We have still to inquire whether the wage fluctuation corresponding to a given change in labour demand should be related to it in the same way, whatever the direction and magnitude of this latter change may be. The answer must be in the negative, since the supply of labour will not have the same elasticity for all amounts.

We may, indeed, presume that the elasticity will not vary greatly for changes in demand fairly near to the normal. The entrance and the exit to most trades are about equally open, and many industries exhibit the characteristic, which Mr. Hooker noted in the north of England mining districts, when he wrote: "I believe that the migratory miners (if I may call them so), include a large number of skilled mechanics, who divide their time between mining and their other handicraft according as either industry offers a better chance of profit."¹ A moderate upward movement in demand should, therefore, in general be met by about the same percentage of wage change as an equal downward movement.

When the labour demand falls considerably the case is different. There is a limit, beyond which the wage cannot be reduced without reducing the available amount of the labour in question to zero. This limit will be determined, for unskilled men, by the conditions

¹ *Statistical Journal*, Dec. 1904, p. 635.

of life in the workhouse, and, for skilled men, by what they can earn in unskilled occupations. Thus, if the labour demand has fallen in more than a moderate degree, a further fall should be accompanied by a less than proportionate fall, and eventually by no fall, in wage.

These considerations justify, in regard alike to unskilled and to skilled labour, the establishment of a minimum wage under a sliding scale without any corresponding maximum.

When the labour demand rises considerably, the effect upon unskilled wages should be proportionate to that produced when it rises a little. In the case of skilled labour, however, the percentage of wage increase should be greater. For, while the power of those already in a trade to work extra hours and the probable presence of a floating body of unemployed will enable a moderate addition to the labour supply to be made fairly easily, these resources will be ineffective when a large addition is required.¹ This consideration affords an argument in favour of the device of the "double-jump" after a certain point has been reached, which is found in the old scale in the South Wales coal industry,² and also in certain English sliding scales.

§ 5. From the line of thought just developed, it

¹ When skilled and unskilled workmen are employed together in an industry, the above method indicates the relation which ought to subsist between the changes introduced into their respective wage rates in response to a given change of price. In the upper reaches of the scale the percentage of change should be considerably higher for the skilled wage; in the lower reaches the percentages, and in the lowest of all the *amounts* of the change in the two cases, should tend to equality.

² Gilman, *Industrial Peace*, p. 137.

follows that, when there is perfect mobility between the various parts of any industry or district, or, in other words, when the elasticity of supply is infinite, the level of efficiency wages should be the same throughout the region affected.¹ This result is of great importance; for it constitutes the theoretical basis of the "rule of thumb" ordinarily employed in the solution of a large class of "interpretation differences." That rule does not, of course, stipulate for equality of money wages, but postulates an allowance for differences in the cost of living,² in social amenities, and in other incidental advantages.³ Neither does it require equality even of real wages, per hour's work or per given output. For, on the one hand, men vary in skill and strength,⁴ a young man probably doing more work in an hour than an old one; on the other hand, account must be taken of the excellence or otherwise of the tools, stations, and so on with which different employees

¹ Cf. Appendix B, corollary to Proposition 1.

² Mr. and Mrs. Webb suggest that "the assumed differences in the cost of living, taking one thing with another, resolve themselves practically into differences in the rent of a workman's dwelling" (*Econ. Jour.* 1896, p. 388). It does not appear that this important and convenient proposition has as yet been proved, though, as Mr. Sanger has pointed out to me, Mr. F. W. Lawrence's conclusion, that wages in different towns vary roughly with the square root of the population, suggests that rent is at least an important factor.

³ e.g. Mr. F. W. Lawrence suggests that the relative roughness of the town of Cardiff partly accounts for the relatively high wages prevailing there (*Local Variations in Wages*, p. 45).

⁴ For the outside statistician a serious impediment to calculation is the circumstance that the same name is used to cover workpeople of very different grades of skill; e.g. a bricklayer in the south of England is a man who can do "forehand" work only, in the north one who can do "overhand" work also (Lawrence, *Local Variations of Wages*, p. 56).

are supplied.¹ That allowances should be made under these heads is generally agreed, and provision for their calculation is made in various ways. Sometimes they are estimated directly, as occasion arises, by a committee of experts, like that which adjusts the relative wages paid for work in the different *seams* of the same mines in Northumberland. In other cases, as between the different *mines* in Northumberland,² and in the "lists" of the boiler-makers and cotton-spinners, a single estimate is made and the ratio established thereby subsequently stereotyped.

In the concrete application of this rule there is probably some lack of scientific accuracy. As between the different firms in a district,³ or even between different departments in the same firm,⁴ mobility may often be less complete than is demanded for its theoretical justification. Nevertheless, the practical value of the rule is great. The reason for this is that awards upon "general questions" cannot, in the

¹ *e.g.* an extra wage will need to be paid to a man working in a bad part of a ship's hold or in a narrow mine seam which has become flooded with water. Under both time- and piece-wages a subtler problem may sometimes need to be solved—whether, namely, a given fraction of the standard efficiency should earn the same fraction of the standard wage. An employer might be inclined to urge that a slow workman is worth to him less than half as much as one double as quick, because he deprives him of the use of his machine for longer. (Cf. Marshall, *Principles of Economics*, p. 632.)

² Cf. Munro, *Brit. Ass.* 1885, p. 16. The right ratio is there taken to be that which prevailed in November 1879.

³ The prevalence of anything in the nature of "black-listing" of course impedes mobility, while "travelling benefit" and information given by Union secretaries increases it.

⁴ *e.g.* in a recent controversy the Pullman Company claimed to differentiate, according to relative demand, between the wages of their repairing and those of their construction departments.

nature of things, enter into the concrete details of individual wages, but can, at best, provide a framework into which these have to be fitted. When they have been given, "il y a là, si l'on veut, la base du contrat pour tous les ouvriers, mais son application même sera la formation du contrat pour chacun d'entre eux."¹ Hence, it is essential that provision be made to prevent the application of general awards being managed in such a way as to reverse their main intention.² For this purpose some rule of interpretation, simple and easily handled, is absolutely required, and none more satisfactory than that of equal wages for equal efficiencies is likely to be found.

§ 6. The next fundamental proposition is that, other things being equal, *the more elastic the labour demand, the greater the wage change corresponding to a given oscillation of labour demand ought to be.*³ In order that this result may be fruitful in practice, means must be found for ascertaining the form of the demand schedule for labour in particular concrete cases. These means are to hand in the twofold connection which exists in every industry (1) between the condition of the employers' demand for labour and that of their demand for the commodity; and (2) between this and the demand for the commodity on the part of the public.

The relation of the employers' demand for labour to their demand for the commodity varies in accordance with a number of circumstances. In the first place, it depends upon the general nature of the

¹ Raynaud, *Le Contrat Collectif*, p. 116.

² Cf. Schulze-Gaevernitz, *Social Peace*, p. 230.

³ Cf. Appendix B, Proposition 2.

industry concerned. In the case of manufacturing firms, since, in the normal condition of things, these are not usually working their plant to its full capacity, additional labour is likely to yield an increasing return.¹ Consequently, the employers' demand for labour will tend to be less elastic than their demand for the commodity to whose manufacture it contributes. In other cases the conditions of diminishing rather than of increasing returns are likely to prevail. Thus, of the mining industry, in times of expansion, Mr. Hooker writes: "The increased numbers are, for the most part, set to extract coal from seams which cannot be worked at a profit when prices are low"; and he adds: "South Staffordshire represents the extreme case, where the increased difficulty in working other seams (or their greater distance from the pit's mouth) leaves room for but few extra hands."² In such cases the employers' demand for labour will be more elastic than their demand for the commodity.

In the second place, the relation depends upon the character of the supply of the other factors, material or human, employed in the manufacture of the commodity. The less elastic the supply of these factors, the less elastic, other things equal, will be the demand for the services of our particular group of workpeople.³ When, on the other hand, the supply of these factors is very elastic, so that considerable additions are forthcoming at only slightly higher rates, the demand for the workpeople's services will also be elastic. In the case of firms employing a large staff of officials at fixed

¹ Cf. Flux, *Economics*, p. 62.

² *Stat. Jour.* 1894, p. 635 n.

³ Cf. Marshall, *Principles of Economics*, p. 458.

annual salaries, the extra work done by them in good times may involve but little extra expense to the business. The supply of their work may thus have a negative elasticity approximating to minus one,¹ and the demand for our workpeople's services will be even more elastic than in the previous case.

In the third place, the relation depends upon the availability of substitutes for these workpeople. Other things being equal, the demand for their services is more elastic the more readily substitutes can be found. It is therefore more elastic—

(a) The greater the mobility of labour already trained to the trade ;

(b) The slighter the special training required ;

(c) The less easy it is for disputing workmen to prevent others from taking their places, whether by appealing to sympathy generated through former membership of the Union,² by picketing, by "slugging," or by other means ; and, in particular, the less easy it is to enlist on their side, as the dockers did in 1889, more skilled workpeople, for whose services the demand is more urgent than for their own ;

(d) The less readily the services performed by the workpeople can be taken over by machinery ;³

(e) The less the power of the workpeople to make substitutes for their services useless to the employers,

¹ A supply curve of this elasticity throughout its course is represented graphically by a rectangular hyperbola.

² For the importance of this consideration, cf. Webb, *History of Trade Unions*, p. 430.

³ It is possible that a rise in the demand for the commodity may enable machinery to be profitably substituted for hand-labour to so great an extent that the demand for that labour is actually diminished. Changes of this kind, however, require, in general, periods of time longer than those relevant to arbitration problems.

by causing them to be boycotted either as sellers of finished goods or as purchasers of raw material.¹

In the fourth place, the demand will be less elastic the smaller the proportion of the cost of the complete commodity which is due to the particular class of labour concerned.² Thus, in general, the elasticity is small (1) when the fixed capital is large relatively to the circulating capital, and (2) when, like the engineers engaged by building firms, the workpeople in question are employed only incidentally, and as a trivial part of the total producing force.³

The relation between the employers' demand for labour and their demand for the commodity being established, it is necessary to determine the relation of the latter to the public demand. Since we are concerned with short periods, in which the amount of plant laid down and the employers' own work may be taken for granted, it appears at first sight that this relation will be one

¹ The former kind of boycott is the more effective because it prevents employers from compensating themselves by the sale of accumulated stocks at high prices. In ordinary cases the conditions of successful boycotts are—

(a) That the goods of offending firms can be made easily distinguishable;

(b) That they are largely consumed by the working classes either directly or in their capacity as controllers of Government purchases (cf. the Fair Wages Resolution of the House of Commons, *Strikes and Lock-outs*, 1891, p. 103);

(c) That the law does not intervene strongly against compound boycotts—a condition not fulfilled in England (*Industrial Democracy*, 1902 edition, p. xxviii.-xxix.), and that anti-boycott provisions are not contained in the wages agreements of the bulk of other workmen. (Cf. on the general subject, Bolen, *Getting a Living*; Gilman, *Industrial Peace*, p. 103, 273; Report of Anthracite Coal Strike Commission, U.S. Bulletin of Labour, No. 46, p. 503-4.)

² Cf. Marshall, *Principles*, p. 457.

³ *Labour Gazette*, 1897, p. 163.

of identity of form. With regard to rapidly perishable commodities, an assumption to that effect would probably not be far from the truth. In regard, however, to commodities which are capable, in any important degree, of being made for stock, the employers' demand is likely at any time to be somewhat less elastic than the public demand; for an increase in the latter would be partly met from stock, and a decrease would lead to more making for stock; and, thus, if a 10 % change in price caused a given movement in the amount required by the public, it would cause a smaller movement in that required by manufacturers.

Finally, to complete the determination of the conditions of labour demand, the character of the public demand itself must be ascertained. This will vary with the nature of the service rendered by the commodity,¹ with the existence or otherwise of alternative sources of supply, whether at home or abroad,²

¹ It should be noted that, when firms produce, with the help of the same class of labour, commodities of which an upward movement in the one is connected, through the influence of the seasons or otherwise, with a downward movement in the other, the oscillations in labour demand are connected with oscillations, not in either of them singly, but in both together. Thus, Mr. Booth shows that, "in the case of gas-stoves, those used for cooking are especially in request in the summer, and those for heating in the winter; while, in the lighter metal trades, coal-scuttles and water-pots form the staple commodities, and these again represent a winter and summer demand" (*Industry*, v. p. 253).

² The Federated Coal Miners (Yorkshire, Lancashire, etc.) are stronger for achieving a rise than the Northumberland and Durham miners, because the price of their coal can be forced up further against consumers without a serious reduction of sales. "The Midland market is mainly an inland and home market, and the demand, to a considerable extent, has to wait and go on piling itself up until it can be satisfied; while half the northern coal goes to foreign markets, which could readily be supplied from foreign sources" (Ashley, *Adjust-*

and with the readiness with which substitutes can be obtained.

The foregoing various considerations are of such a character that it is useless to attempt any balancing of them together in the abstract. For the concrete solution of any arbitration problem they are all necessary. It is by them alone that we are enabled to infer the form of the labour demand, and hence indirectly the extent of the wage change which, other things being equal, is appropriate to different *oscillations* of demand.

So far of the general argument. There remains, as in the case of supply, the minor question whether the labour demand is equally elastic for all quantities demanded. The answer appears to be that it is likely to be least elastic when unusually small or unusually large amounts of labour are being utilised. In the one case there may be danger of organisation deteriorating, or machines being spoilt, or the place of work injured, if the number of men employed is reduced below a certain minimum; and masters may be willing, in order to avoid losses of this character, to pay a rate of wages which involves positive loss on the least productive labour units on their books.¹ In

ment of Wages, p. 41). Hence in 1893 the northern men could not strike.

¹ Cf. the case of the Pullman Company's construction department in 1894, when the Company found it to their interest to continue taking contracts "at less than the cost of the raw material and labour employed in the work" (Winston, *Chic. Jour. of Pol. Econ.* Sept. 1901, p. 541). Cf. Carnegie, *Empire of Business*, p. 155, and the following quotation from the *Economist*, Oct. 25, 1902, p. 1639: "We in this country know how difficult it is to restrict the normal output of a well-developed coal-field. So much loss and damage are incurred, or at all events risked, by the shutting down of pits otherwise healthy,

the other case, when plants are being run to their full capacity, there is a physical obstacle to adding still further to the staff in mere lack of floor-space. Thus, when the elasticity of the commodity demand is the same for all changes in the quantity demanded, that of the labour demand will generally be least for large increases and decreases. Hence, other things being equal, a considerable oscillation in demand should be accompanied by a change of wage less than proportionate to that which occurs when a moderate oscillation takes place. In concrete cases this result must be balanced against that reached at the end of § 4.

§ 7. Hitherto, our inquiry has been confined to the form of the supply and demand schedule for labour. We have now to seek for some method of ascertaining the amount of the latter's oscillations. Here again recourse must be had to the twofold connection between (1) the employers' demand for labour and their demand for the commodity, and (2) this latter demand and the public demand for the commodity.

When the employers' commodity demand oscillates by a given amount, it is obvious that, *other things being equal*, their demand for any one kind of contributory labour will oscillate by an equal amount.¹ Subject to the above italicised condition, I shall now examine the relation in which oscillations in the employers' and in the public's demand for the commodity stand to one that a coal-owner will rather go on, year after year, working at a loss than shut down at what may be a much greater loss. This is why coal-mining is an industry of such variable and varying returns, apart from the variable qualities of the seams and strata."

¹ This follows at once from Professor Marshall's analysis of *Derived Demand*, *Principles of Economics*, p. 455.

another. At first sight this relation might be supposed to be one of quantitative equivalence. As a fact, however, the employers' demand usually oscillates through the smaller distance of the two. The reason for this is to be found in the common practice, already alluded to, of making for stock.¹ In bad times the employer is glad to acquire and warehouse more goods than he wishes, for the moment, to sell, while, in good times, because he has these goods to fall back upon, his demand for new ones rises less far than that of the public whom he supplies. His demand this week is, in short, derived from the anticipated public demand of a considerably longer period, thus divesting itself to some extent of temporary oscillations. The more durable an article, and the less subject it is to fashion changes,² the further this tendency will be carried, and the narrower will be the limits within which the employers' demand oscillates relatively to a given oscillation in the public demand.

It must not, however, be inferred that the relation between the two oscillations can be expressed by a constant numerical fraction. On the contrary, if, in response to a given percentage elevation of the public demand, the employers' demand is elevated through a percentage five-sixths as great, it is not to be expected that the same proportion will hold good for larger changes of public demand. As a rule making for stock is carried up to a certain point for a small inducement, and, after that, is extended only with

¹ This practice will be more profitable, and will tend to be carried further if the rate of discount is low than if it is high; and the rate is likely to be low during periods of business depression.

² Philosophic and optical instruments are cited by Mr. Charles Booth as instances of this class of article (*Industry*, v. 253).

great reluctance. Hence, the public demand is apt to undergo slight oscillations without producing on the employers' demand any appreciable effect. But, after a point is passed, further oscillations in it tend to be accompanied by further oscillations in employers' demand whose magnitude rapidly approaches towards equality with theirs.

These considerations justify the provision, which Mr. Price tells us is found in most sliding scales, that alterations in the price of the commodity must exceed some definite amount before any alteration takes place in wages.¹ They also serve as a ground for the rule, which, in practice, is universal, that, when wages are conjoined to prices under a sliding scale, the percentage change in wages shall be smaller than the percentage price change to which it corresponds.²

§ 8. What has been said serves to show that the connection between the employers' and the public's demand for the commodity is less simple than at first appears. Nevertheless, the connection is perfectly rigid and definite. In every industry the one demand is a function of the other, and could, with sufficient knowledge, be inferred from it. In order, therefore, to complete the chain which binds oscillations in labour demand to facts susceptible of direct observation, we have only to find some index with which to measure the oscillations in public demand.

Other things being equal, these latter oscillations bear a definite relation to changes in the price of the commodity, in the "margin" between its price and that of the raw material, in amount sold, and in

¹ *Industrial Peace*, p. 97.

² Cf. Marshall, *Economics of Industry*, p. 381 n.

“profits.” So long as other things remain the same, it is theoretically indifferent which of these indices we select. Our choice may be guided by considerations of convenience, and, so guided, it naturally lights upon prices.

§ 9. Under such circumstances the practical problem remains of how best to select a group of prices to serve for an index. Technical matters as to the accountant side of price ascertainment and so forth need not be discussed here.¹ The essential point to be borne in mind is that it is *merely* as an index of demand changes, and not for their own sake, that prices are required. All that we need is a series of figures whose movements are not importantly deflected by circumstances irrelevant to our immediate purpose. So long as this condition is realised it does not matter in the least whether the prices chosen are “average,” “typical,” “realised,” “quoted,” “newspaper” prices of the commodity concerned, or even of some different commodity, in which it forms an important ingredient.²

When, however, this test of freedom from the influence of inconstant external causes is applied, we may reasonably suspect “newspaper” prices, since they are apt to be collected on a different basis on different occasions. “Quoted” prices are doubtful, since the freaks of speculation “on Change,” which help to mould them, scarcely have time to eliminate one another during the short periods intervening between successive

¹ The reader is referred to Mr. L. L. Price's *Industrial Peace*.

² *e.g.* the Cleveland iron-stone workers' wages are determined by a scale based upon fluctuations in No. 3, Cleveland pig-iron (Price, *Industrial Peace*, p. 90).

adjustments.¹ Prices realised by a single typical firm may be influenced sporadically by fluctuations in managing ability, good fortune, and so forth. But, when the firms of whose prices account is taken are fairly numerous, inconstant causes of this kind are likely to be eliminated;² for an exceptional increase of competence in some managers will probably be balanced by a corresponding decrease in others.³ The consensus of practice in taking the average realised price of a good number of firms appears, therefore, to be justified by theory.

§ 10. The same remark applies to the practice embodied in all sliding scales of making wage changes depend, not upon contemporaneous, but upon antecedent price changes. For, while the links, on the one hand, between the labour demand and the employers' demand for the commodity, and, on the other hand, between the public demand and the price index, both hang about a single point of time, the intermediate link between the employers' and the public's demand for the commodity in all cases bridges an appreciable interval. Oscillations in the employers' demand lag behind the primary oscillations to which

¹ Nevertheless, the West Cumberland pig-iron industry bases its scale on the prices declared on the Glasgow Exchange (Jeans, *Conciliation and Arbitration*, p. 79).

² In view, presumably, of considerations of this kind, the renovated Staffordshire sliding scale in 1888 was established, not on the old basis of a single brand of Lord Dudley's coal, but "upon the average selling price of all qualities of coal throughout the district" (Labour Commission, "Digest of Evidence," p. 95).

³ When, however, an industry is dominated by a combine, the divergence between the qualities of the men at the head at one time and at another cannot be eliminated by any such process of averaging. It is difficult in that case to see how those fluctuations of fortune, which are due to fluctuations of management, can be distinguished in practice from those due to general causes.

they correspond. As Mr. Cree has pointed out, it is generally only after prices have remained up for some little while that employers think seriously of expanding their business,¹ and they hesitate in a similar manner about reducing production when a depression sets in. The labour demand at any time is thus ultimately a derived function of the public demand for the commodity which existed at an earlier time.

Where this view of the matter is in fair correspondence with the facts, the supposed defect in sliding scales, that they fix *future* wages by *past* prices,² is really an advantage. Nor is it any answer to say that, though past prices do as a fact determine the employers' demand for the commodity, and hence for labour, they ought not to do so. It is the actual condition of things, and not the condition which would prevail, if men were wiser than they are, which is alone relevant to our problem. Professor Chapman's objection is more important. He argues that an intelligent anticipation of events before they occur is coming to influence more and more the conduct of industrial concerns; and that, so far as this tendency prevails, the adequacy of past prices as an index of future demand necessarily diminishes. "Why, then, should wages automatically fall when the leaders of industry have cast their eyes over the future, and proclaimed the need of an enlarged output and more hands? Or why should wages rise when employers see that good trade is behind, and are preparing for a period of marking time?"³

¹ *Criticism of the Theory of Trade Unions*, p. 17.

² Cf. Ashley, *Adjustment of Wages*, pp. 56-7.

³ Chapman, "Some Theoretical Objections to Sliding Scales," *Econ. Jour.* 1903, p. 188.

The answer to this argument is found in a closer analysis of the phrase "public demand." In the present connection it signifies the demand, not of the ultimate consumers, but of those intermediate dealers who buy from the manufacturers, and whose operations are the proximate cause of changes in wholesale prices. Where such persons are present, it is extremely improbable that prices will fall when the anticipation of the leaders of industry are roseate, or rise when they are gloomy. For these anticipations will generally be shared by the dealers, and, if so, will be reflected in their present demand and, hence, in present prices. Professor Chapman's objection is, therefore, only relevant in cases where the forecasts of manufacturers and dealers are at variance. Since, however, the former forecasts are in the main based upon the latter, such cases will be exceedingly rare.

§ 11. At this point, it is necessary to revert to the condition *other things being equal* which has underlain the whole of the reasoning of the four last sections. In real life these other things are often not equal. For the present we are not concerned with the assumption of stable conditions in the supply of the labour whose rate of wages is directly in question. Apart from that, "other things" embrace all the remaining factors which are required in the manufacture of the commodity. These are raw material, the service of auxiliary workpeople, and the service of machinery. We have now to take account of possible changes in the circumstances attending their production. A given oscillation in one direction of the supply schedule of any one of them causes the employers' demand for the labour, whose

wages we are considering, to oscillate in exactly the same manner as an equal oscillation in the opposite direction in his demand for the finished commodity. Hence, in order to infer the oscillations in labour demand from those in the employers' commodity demand, we need to subtract from the latter whatever oscillations occur in the supply schedules of the other factors of production.

The only circumstances in which no provision has to be made for corrections under this head are (1) when the supply schedules of the other factors are certain not to oscillate, and (2) when the part they play in the cost of the commodity is so small that their oscillations can be neglected without serious inaccuracy. It is not easy to imagine a case in regard to which the former of these conditions could be postulated. The latter, however, holds good in extractive industries such as coal-mining, where nearly the whole cost of production is labour cost.

Except in these cases, the index afforded by price changes is seriously defective. A fall in price will occur in consequence of a fall in the demand for the commodity, and also in consequence of a *cheapening* in the supply of the raw material. Thus, there are two routes connecting changes in price with changes in labour demand. A price movement caused in one way indicates a fall; caused in another way, a rise. If, for example, the price of iron goes up on account of an increase in the public need for iron, there is a rise in the demand for iron-workers' services; if, however, it goes up because a strike in the coal trade has rendered one of the constituents used in making it more expensive, there is a fall in this demand. It

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is obvious that, in the latter case, wages ought not to follow prices, but should move in the opposite direction.¹

§ 12. As a way of escape from these difficulties, it is sometimes proposed to use for an index, not the price of the finished commodity, but the margin between its price and that of the raw material used in making it. "Margins" are utilised with apparent success by the officials of the Cotton Workers' Union, who obtain them by "subtracting the price of raw cotton (calculated from the five leading sorts) from the price of yarn (of eleven kinds) or of calico (of twenty-three kinds)," ² and order their wage negotiations accordingly. This index has the advantage of moving similarly in response to a fall in the demand for the commodity and to an increase in the expense of obtaining raw material.

It must, however, be remembered that, among the contributory factors to the production of the finished article, raw material is only one. The conditions of supply of auxiliary labour and of the services of machines are also liable to vary, but their variations are not reflected in any change in the "margin." Mechanical improvements, for example, mean in effect a cheapening of the help rendered by machines. When such improvements are occurring, margins are liable to mislead in the same manner as, though in a less degree than, crude price statistics.

Furthermore, margins, equally with prices, and because prices enter into their construction, are subject to a serious practical inconvenience. They

¹ Cf. Appendix B, Proposition 5.

² Schulze-Gaevernitz, *Social Peace*, p. 160

are not likely to afford a good index in industries where the general level of elaborateness and so forth in the goods is liable to vary. In such cases an apparent change in price may really indicate nothing more than a change in the kind of article manufactured. This difficulty is specially likely to occur when prices are deduced from the quantities and values of exports, since there is reason to expect that the cheaper varieties of goods will gradually yield place in foreign trade to the finer and more valuable varieties.

§ 13. These considerations suggest that a still better index is afforded by output or profits. Since these indices take account of factors, which margins ignore, a plea for a reduction of wages based upon a fall in the margin can always be met by a proof that the output or profit of the industry, or of the representative firm in it, has increased. Nor will any rejoinder be valid to the effect that the increase has only occurred *in consequence of* the fall in price.

There are, however, obstacles in the way of both the above indices. The employment of output is rendered difficult by considerations affecting the element of time. As has already been observed, a given change in labour demand is generally correlated with a change in public demand occurring previously. This change in public demand is in turn correlated with a contemporaneous change in prices, margins, and profits (in the sense of net receipts). Therefore, changes in any of these indices, determined on the record of the past two or three months, may fairly be used as data for wage changes in the next two or three. A change in the output, however, consequent

upon an oscillation of public demand, occurs, not contemporaneously with, but subsequently to, this—at the same time, in fact, as the change in labour demand itself.¹ Therefore, since statistics take some time to collect, output is necessarily a very inconvenient index. In like manner it appears, from the report of the negotiations for conciliation in the cotton trade in 1900, that there are very great practical difficulties, at all events in that trade, in arriving at a satisfactory estimate of “representative profits.”² An obvious difficulty, for example, is the reckoning, that ought to be taken, of firms which have failed altogether.³

The net result of the above considerations is that attention should, when practicable, be directed, not to one, but to all of the available indices, and that these should be employed mutually to check one another. It is, thus, all to the good that, as Professor Ashley informs us, “the accountants, it is understood, who are acting for the Board of the federated districts, have recently been instructed to prepare statistics of output as well as of price.”⁴

§ 14. At this point it is necessary to advert to a fundamental objection which, if it holds at all, applies equally to the employment of all of the indices of

¹ Cf. Appendix B, note to Proposition 5.

² Mr. L. L. Price, in discussing these negotiations, speaks of a “profits” scale in the cotton trade as a “closer approach to the conception of profit-sharing than that made by the usual type of sliding scale” (*Econ. Jour.* 1901, p. 244). This view appears to be erroneous so long as the “profits” of the *representative* firm are taken as the index. Of course a system which should make the wage paid by individual firms fluctuate with their own particular “profits” would be an entirely different thing.

³ Cf. Sheriff Jameson’s award in shale industry, *Econ. Jour.* 1904, p. 316.

⁴ *Adjustment of Wages*, p. 58.

demand change which have been discussed in this chapter, though in practice it is generally urged only against regular sliding scales based upon prices. This objection is in essence that either party can, if it chooses, "rig" the index.

On the side of the men it is often urged that a scale tempts employers to cut prices in the hope of recouping themselves out of the pockets of their employees. This argument is, in the first place, invalid generally, whether employers are combined or not, since under no practicable form of scale would the gain on reduced wages equal the loss on reduced price. Secondly, in the case of a trade comprising large numbers of competing employers, it is doubly invalid, since the effect on the index brought about by the action of any one firm must be negligibly small. Of course it is conceivable that, if the index were obtained from the sales of a "typical firm," other firms might combine to bribe it into selling below the market rate. This rather "academic" danger can, however, obviously be met by an enlargement of the basis upon which the index rests.

On the side of the masters, it may be argued that the men under a scale are tempted to work slackly or to adopt a policy of stop-days, in order to make prices rise, and so, for the moment, to benefit themselves. This form of argument is invalid unless the men are rigidly combined. For, to act in the way suggested would not be to the direct advantage of any one man, since his effect upon output would be negligible and he would lose, under piece wages, in pay, and, under time wages, in prospects of employment. In a rigid combination the danger contemplated is real. The

stimulus to monopolistic action is, however, no greater when wages are arranged with the help of an index than when they are arranged otherwise. On the contrary, if anything, the danger is diminished, since the adoption of "ca' canny" devices would be exceedingly likely to lead to a rupture of the industrial agreement, by the maintenance of which the men are presumably benefited.

§ 15. Hitherto, the supply schedule of the labour whose wage we are considering has been treated as fixed. It is, however, as indicated in § 3, equally liable with the demand schedule to oscillations. When these occur, the appropriate wage change is, as in the cases of oscillations of demand, a function of the form of both schedules, and of the amount of the oscillation.

With regard to the form of the supply schedule, the fundamental abstract proposition is that *the more elastic the supply, the greater is the wage change appropriate to a given oscillation of supply.*¹ All the circumstances, therefore, which are shown in § 4 to diminish the wage change appropriate to a given oscillation of demand, tend, when the oscillation is on the side of supply, to augment that change.

With regard to the form of the demand schedule, the corresponding proposition is that *the more elastic the demand the smaller is the wage change appropriate to a given oscillation of supply.*² Here again, therefore, all the circumstances, which diminish the wage change appropriate to a given oscillation of demand, tend to augment it for oscillations of supply.

Such oscillations as occur will, as a rule, be caused by temporary expansions or contractions of

¹ Cf. Appendix B, Proposition 6.

² Cf. Appendix B, Proposition 7.

neighbouring or kindred industries. A depression, for example, in the contiguous agricultural districts, or in the Northumberland mines, necessarily increases the number of men on the look-out for employment in the Durham pits.¹ The extent of the oscillations so caused can be roughly inferred from the wage movements which have occurred in these allied industries.² Some guidance on the matter can also be obtained from the figures of unemployment in the industry with which we are primarily concerned.

§ 16. It is thus apparent that, for a complete determination of the wage change appropriate to any set of circumstances, it is not sufficient to examine oscillations of demand alone. An oscillation of supply may also have occurred during the period under review, and, if so, will necessitate a corresponding adjustment. The circumstances on both sides must, therefore, be considered in combination. The incidents of the one may necessitate either an addition to, or a diminution of, the wage change suggested by those of the other. An excellent illustration of this is afforded by the Scottish shale dispute, to which reference has already been made. There the arbitrator found that a rise in the price of shale product,

¹ Cf. Hooker *Stat. Jour.* Dec. 1894, p. 631.

² Thus, the coal-owners of the federated districts sought to justify their demand for a reduction of wages in 1893 by showing that, between 1891 and that year, the wages in other mining districts had fallen on their respective standards by the following percentages (*Labour Gazette*, July 1893, pp. 60-1).

Northumberland	16¼ per cent.
Durham	15 „
Fife and Kinross	37½ „
South Wales	42½ „

indicating an increase of labour demand, made for an increase of wages; but that, on the other hand, depression in the kindred industry of coal-mining, indicating an increase of labour supply, suggested a reduction in wages; and, balancing these considerations together, he concluded that they neutralised one another.¹

The necessity of regarding these two groups of independent causes sets a limit to the accuracy of any mechanical device based upon one group only. This constitutes a fatal argument against the claims to scientific perfection sometimes advanced on behalf of sliding scales. Under them oscillations in labour supply are altogether ignored, and the inaccuracy introduced on this account has sometimes proved so great that it has been necessary for one party voluntarily to concede to the other terms more favourable than those which the scale decreed.

The recognition of this fact is not, however, equivalent to the rejection of sliding scales in practice. Though a scale maintained unchanged for ever would certainly do harm, one in which arrangements are made for revision at short intervals,² and in which, perhaps, the scope of possible error is limited by a maximum and a minimum point, may easily, for all its inaccuracies, do a considerable amount of good.

¹ *Econ. Jour.* 1904, p. 311. Cf. Appendix, B Proposition 8.

² These intervals may be determined either on a certain date or on the occurrence of a certain event, *e.g.* the coming into operation of the maximum or minimum provision. A third device is that adopted by the Sons of Vulcan (U.S.A.), whose scale runs on indefinitely subject to thirty days' notice on either side. (Cf. post, p. 141 n.)

CHAPTER IV

PRINCIPLES OF SETTLEMENT IN DEMARCATION DIFFERENCES

§ 1. THE principles of settlement applicable to differences arising out of the demarcation of function must next be considered. The first subdivision under this head consists of controversies about the apportionment of work between different classes of workmen and machine tools. These need not detain us long. Since the employer is specially trained to workshop management and to the organisation of production in the most economical way, all questions concerning the substitution of one factor of production for another should be left absolutely in his hands. If the rank and file of the army interfere in the general's business the campaign against nature will inevitably be worse conducted. The productive forces of the country will be less efficiently employed, the national dividend will be diminished, and all classes will suffer an unnecessary and easily avoidable loss. This evil would at any time be serious, but, in an epoch when the "work fund fallacy" has won converts among artisans and has roused in them dislike and opposition to labour-saving machinery, its gravity is exceptionally great. The right principle of settlement here is absolutely

clear: the work of business management must be left to the business manager.¹

§ 2. A more difficult problem arises in connection with the second subdivision of demarcation differences, —those concerning the sources, from which the employer draws, and to which he sends, his supplies. It is not, indeed, proposed, under this head, to discuss the claims of workmen to prevent employers from dealing with boycotted firms, or of employers to blacklist particular workmen. For, in the first place, these claims are seldom urged in the United Kingdom, and, in the second place, no “principles” for their settlement can be formulated without special reference, in each case, to the excellence or otherwise of the object at which they indirectly aim.² Even, however, when attention is confined to the section of this subdivision, which covers questions concerning the relations of Unionist and non-Unionist workmen, we are unable to lay down any rules of universal application.

It is true that, in one point, experience appears to be decisive. The refusal of employers to deal with Trade Union officials ought, wherever practicable, to be disallowed by arbitrators. For, however aggressive and injurious the early policy of a workmen’s society may be, and however ineffective its executive in

¹ This is not incompatible with a recognition of the workpeople’s right to some influence over the physical conditions, in the matter of sanitation, convenience, and so forth, under which their work is performed. Cf. Raynaud, *Le contrat collectif*, p. 221.

² It may be argued generally that secondary boycotts and blacklisting should both be suppressed by the State, just as “uncivilised” methods of warfare are sometimes suppressed by international conventions; cf. Anthracite Coal Strike Commission, U.S. Bulletin of Labour, No. 46, pp. 503-4.

securing obedience to agreements voluntarily made, the mere fact of recognition has been found, in innumerable instances, to lead to great improvements in these respects. Unions ought to be recognised, if only with a view to converting them to moderation. "If the energy of the employer is directed to discouragement and repression of the Union, he need not be surprised if the more radically inclined members are the ones most frequently heard."¹ But, on the other hand, "in proportion as the Union is recognised and cordially accepted, not only by the employer class but by the general public, are the men of most intelligence and reasonableness selected by their fellows to manage the affairs of the Union and to guide its policy."²

In addition, however, to the simple demand for recognition, there are apt to arise differences touching discrimination against, preference to, and exclusive employment of, the members of a Trade Union. In all such controversies the right solution can only be found after the character of the particular Union concerned has been determined. The better it is, and the more sensible its rules, the stronger will be the measures which an arbitrator is justified in sanctioning with a view to enhancing its power. Thus, any Union which is not thoroughly vicious might advance a valid claim for the relief of its members from overt adverse

¹ Report of the Anthracite Coal Strike Commission, U.S. Bulletin No. 46, p. 489.

² Sir David Dale. Refusal to recognise the Union officials or to negotiate with any one except their own employees is now, despite Lord Penrhyn's recent action, very rare among English employers. In the United States and on the Continent it is more common, and played an important part in the anthracite coal strike of 1902, and the Creusôt ironworks dispute of 1899.

discrimination. The demand for preference to its members, whereby, of course, considerable pressure is brought to bear upon other employees in the trade to join its ranks, would require somewhat fuller justification. Great care would need to be taken that it was only granted where it would really convert non-Unionists to Unionism—not where it would merely enable a monopolistic corporation to profit at the expense of less fortunate workmen. It should, therefore, be strictly confined to societies which are practically open to any person engaged in the industry. If a Union has unreasonable entrance fees, the condition of preference should be that it reduce these to a stipulated level.¹ In certain circumstances, it might also be required to accept alterations in its rules (as, for example, the disfranchisement of minors in matters of industrial policy),² calculated to facilitate the reference of future differences to arbitration; or, to introduce improved arrangements for an appeal to the central executive, whereby employers should be freed from undue interference at the hands of incapable local delegates.³ When the Union rules are already satisfactory, and when, as in the North of England iron trade and the South Wales coal-fields, the organisations that negotiate about wages, and whose agreement

¹ As in the judgment of the New Zealand Arbitration Court in the case of the Wellington carpenters and joiners. *Industrial Commission*, xvii. p. 535.

² Cf. Report of the Anthracite Coal Strike Commission (U.S. Bulletin No. 46, p. 491).

³ Cf. J. R. Commons' remarks on "A New Way of settling Labour Disputes," *American Review of Reviews*, March 1901, p. 333. He points out that, in Illinois, the subordination of the shop representatives to the central executive of the Union has removed the objection previously felt by many mine-owners to the employment of Unionists.

really determines the general rate, comprise only a small proportion of the men in the trade, there is much to be said for applying the stimulus of "preference." For if, by this means, non-Unionists can be induced to join, not only is the cost of the peace-preserving machinery spread over a larger number of persons, but the efficacy of the Union as an agent for enforcing moderation upon its local branches is enhanced.¹

The demand for the exclusive employment of Unionists is considerably stronger meat. It is true that, in so far as the compulsion exercised upon non-Unionists by this concession is greater than that exercised by preference, the above advantages are secured even more completely. But, on the other hand, many persons would resent so great an infringement of their liberty, and would choose idleness rather than surrender. Under these circumstances, there is to be set upon the debit side of the account both an economic loss and the moral evil of bitter feeling. In industries in which non-society men are numerous these two items are likely to be of great importance. Hence, exclusive rights cannot safely be conferred upon a Union unless it already extends over the great bulk of the trade. In that case, however, the good, equally with the evil, effect of a stimulus to non-members must be trifling. On the whole, therefore, at all events in a country where personal independence is prized as highly as in England, the wisest policy for arbitrators will be to reject all claims for exclusive employment.

¹ Cf. Part III., Chap. I., § 2.

PART III
THE MACHINERY OF INDUSTRIAL
PEACE

INTRODUCTION

§ 1. "TRUST in machinery," writes Mr. Gilman, "as a substitute for specific kindness, is one of the besetting sins of social reform."¹ In industrial, as in international negotiations, "perfection of machinery counts for so little, the existence of good faith and good-will for so much."² Stress upon the precise construction of the apparatus of industrial peace is therefore very apt to be misplaced. The life is more than meat and the body than raiment. "A living organism must take the place of a mechanical instrument," if the public cause is really to be advanced; the temper in which controversies are conducted is the primary consideration, forms and rules of procedure essentially subordinate and secondary.³

§ 2. Nevertheless, it would be foolish to deny that the machinery employed is certain to have some, and

¹ *A Dividend to Labour*, p. 359. Cf. Report of Anthracite Coal Strike Commission, U.S. Bulletin of Labour, No. 46, pp. 464-65.

² *Edinburgh Review*, "The Conference and Arbitration," July 1899, p. 191.

³ Sir Rupert Kettle mentions that an attempt to settle a difference in Staffordshire was frustrated by the masters giving the men obviously inferior seats in the hall, and greeting them with, "Well, what have you chaps got to say for yourselves?" In the engineering strike of 1872 very bitter feelings were roused on account of a reply sent to the men through the employers' solicitor.

may have considerable, effect. In view of the importance of industrial peace to the welfare of the whole community, this consideration both justifies and requires a thorough investigation of the methods appropriate to it. As in the case of principles, so also here, a necessary preliminary to analysis is a classification of differences. For our present purpose, however, the scheme previously given is not a fruitful one. We are driven, rather, to follow two lines of thought, neither of which afford exact or sharp distinctions, but both of which, as will presently appear, somehow run together and yield a compound classification, efficient in practice though barbarous in theory. They turn, respectively, upon the degree of self-sufficiency enjoyed by the parties to the difference and upon the extent of the theoretical ground which they have in common.

§ 3. Under the former of these two heads the determining factor is the relation between the bodies which control negotiations and those which are directly affected by their result. Both the employers and the workpeople implicated may be entirely independent, or both may be subordinate branches of larger organisations; or the employers may be independent and the workpeople a branch; or the employers a branch and the workpeople independent. This distinction is, however, somewhat blurred in practice, because to be a branch of a wider organisation is not the same thing as to have no control over negotiations affecting one's own interests. The extent to which local organisations are subordinated in this matter to the national Union varies greatly in different times and places. They may be left entirely free;

they may be free to make, but not to violate agreements; they may be offered advice or deprived of strike pay; or they may be mere branches, compelled to carry out the instructions of the central executive. Consequently, in this form of classification, no sharp divisions can be drawn.

§ 4. The same remark applies to the latter of the two forms distinguished above. In every industrial difference there is *some* common ground between the parties. Even when they diverge most widely, both sides agree that the decision ought to be "just." Sometimes the full limit of agreement is expressed by this phrase. A case in point is the coal strike of 1893, in which the masters understood by justice payment according to efficiency, and the men, in a vague way, payment according to needs. An equally wide divergence occurs in many of those differences which turn upon the employers' allegation that the men are interfering with their proper function of management.

The common basis is wider when it is agreed, whether formally or informally, that justice, rightly interpreted, is the doctrine that the wage level should move in the same general direction as some accepted external index. This stage is often reached when the wages of a small group of workmen are in question; for, it is generally recognised that these ought not, as a rule, to move very differently from the average wage level of other men in the neighbourhood engaged in similar employment. It is also reached, in certain cases, with regard to the wages of larger groups, when the doctrine is accepted that, other things being equal, wages ought in some sense to

follow prices. This was the case when Mr. Wheeler was asked to arbitrate in Cumberland in 1875. It was agreed that a given year should be taken as normal, and that he should "make his decision on a comparison of the contemporary conditions of industry with those of that year."¹ Similarly, throughout the nine reports of arbitrations in the north of England iron trade, Mr. Price observes—and the present writer can confirm his conclusion—that "there is a general agreement that the basis of award is to be primarily the relation of wages to selling price."²

The common ground here, however, is merely that wages shall rise when prices rise and fall when they fall. The question of what proportion should hold between the two movements, or what change on the one side "corresponds" to a given change on the other, is left undefined. Within the limits to which this indefiniteness extends there is nothing concrete for an arbitrator to interpret.

A further stage is reached when the exact proportion that the wage change ought to bear to a given change in the index is agreed upon. This is done where employers and employed, in any locality or firm, accept, as in the spinning industry, the average efficiency wage of the trade or district as their own standard, or when wage is related to price by a definite sliding scale. Here the interpretation of the agreement and its application to particular cases involves merely the correct ascertainment of what changes have, as a matter of fact, taken place in average efficiency, in wage, or in price, as the case may be.

¹ Schulze-Gaevernitz, *Social Peace*, p. 190.

² *Industrial Peace*, p. 62.

§ 5. The discussion of the two preceding sections exhibits the appropriateness to our problem of Professor Marshall's motto, *Natura non facit saltum*. In real life no sharp divisions are to be found along either of the lines of classification which have been discussed. This, however, is not the last word upon the matter. It may still be necessary, here as elsewhere, for the student with a practical end in view to depart somewhat from the majestic continuity of Nature, and to erect an arbitrary landmark of his own.

Such a landmark is afforded by the common division of industrial differences into "those which concern the interpretation of the existing terms of employment," and "those which have to do with the general terms of future employment."¹ This distinction is analagous to one familiar to the theory of jurisprudence. "The settlement of such general questions may be likened to an act of legislation; the interpretation and application of the general contract may be likened to a judicial act."² The place assigned to any particular difference is made to turn primarily upon the question whether or not it is governed by a formal agreement between the parties. All differences which arise when there is such an agreement are called "interpretation differences," and are distinguished from "those which arise out of proposals for the terms of engagement or contract of service to subsist for a future period."³ Furthermore, these differences are often identical with those which superior organisations undertake to settle on behalf of their local branches; they "are for the most part limited

¹ *Industrial Commission*, xvii. p. lxxv.

² *Ibid.* p. lxxvi.

³ *Labour Commission Report*, p. 49.

to particular establishments, of little importance and often purely personal";¹ dealing, it may be, with controversies of fact concerning quantity² or quality,³ or the more precise definition of the mutually accepted pattern of quality itself.⁴ "General questions," on the other hand, are, for the most part, equivalent to those in which independent organisations are directly concerned; they are "frequently of wide

¹ *Labour Commission Report*, p. 49.

² *e.g.* the amount of coal actually cut or the number of hours worked. Such differences can often be prevented from arising by provision made before the fact. The institution of check-weighmen, and mechanical devices for recording the exact minute at which different individuals begin their work, are instances in point. When the latter method is adopted, it is, of course, still possible for differences to arise as to the accuracy of the instrument. "A very common ground of complaint (in the Lancashire cotton trade) is that the indicators, which measure the lengths of yarn spun—in accordance with which the Oldham workers are paid—are not going right" (Schulze-Gaevernitz, *Social Peace*, p. 153).

³ *e.g.* "The cotton-spinner finds his list of prices [*i.e.*, piece-work rates] a delusion, if his mules have to be frequently stopped to repair breakages caused by the bad quality of the raw cotton" (Webb, *Econ. Jour.* 1896, p. 380). The same class of differences often arises in the boot and shoe trade. The danger of conflict in such cases can be reduced by arrangements for setting aside samples for future adjudication.

⁴ There is no hard and fast line between these differences and the preceding group. Illustrations are found in questions as to the proper piece rates for work on new machinery or in the dirty parts of a mine. A detailed instance comes from the boot trade. "The workmen claimed an extra when glacé goat boots are bound or beaded in whole or part, while the employers contended that an award which had classed them as No. 3 on statement, covered the boot, whether bound, beaded, or otherwise. The arbitrators decided that 'when the leg is bound or beaded it shall be classed as No. 2; when with raw edge-linings turned in or slip insertion, it shall be classed as No. 3; no restriction on binding or beading vamps, goloshes, or toe-caps in either case'" (*Strikes and Lock-outs*, 1900, p. 91).

interest, affect large bodies of men, and are the most general cause of strikes and lock-outs on a large scale." ¹ Thus, for some purposes the two lines of classification converge, and together form the basis of a useful working distinction. In the discussion which follows, however, it will generally be found necessary to employ them separately.

¹ *Labour Commission Report*, p. 49; cf. to the same effect *Industrial Commission*, U.S.A., xvii. p. lxxv.; and Webb, *Industrial Democracy*, p. 226. Of course it is not maintained that interpretation disputes in this sense are necessarily of minor importance. Rather, it is obvious not only that, as in the case of judge-made law, the act of interpretation may slide insensibly into that of alteration (cf. *Strikes and Lock-outs*, 1894, p. 54), but also that what is called interpretation may cover as wide a field and raise questions quite as fundamental as those treated in the general agreement. For example, there is no difference in this respect between the question of how many pounds a ton of coal is to be taken to contain, or how much "topping" the men must put upon a car-load (cf. Roberts, *Yale Review*, May 1901, p. 30), and the question of what the wage per ton or car-load ought to be. Furthermore, in certain cases, general questions will really be decided on what are apparently interpretation references. For example, in the pottery boom of 1871, it was arranged that, for each branch of the trade, an individual case should be selected for arbitration, and that the whole branch should act in accordance with the result (Owen, *Potteries*, p. 142). On subsequent occasions exactly the same result was achieved by general arbitrations of the ordinary type.

Similarly, it is not true that differences as to the terms of a future contract, to be made otherwise than by interpretation of some overshadowing agreement need necessarily affect large bodies of men. In cases where the local branches of ill-organised trades have to negotiate new contracts for themselves without reference to such an agreement, the number of men affected by any difference which may arise will be small. Instances in point are the Sunderland house-painter's agreement in 1896, and the Reading building-trade agreement in 1898. The distinction which the British and American Commissioners draw is a practical rather than a logical one.

CHAPTER I

THE PROBLEM OF MINOR DIFFERENCES

§ 1. A FULL discussion of the best method of settling minor differences would involve the introduction of technicalities; and it is only the broader aspects of the problem that fall within the scope of this work. The most important distinction for the present purpose is that between cases in which the two associations, whose branches are involved in controversy, are loosely and indefinitely held together and those in which they are highly centralised.

Let us take first the problem of weak Associations—those, that is to say, in which the local branches are to a large extent independent. Under these circumstances the danger of conflict is great. Hence, the chief aim to be held in view in the construction of machinery for settling differences is the restriction of opportunities for the development of what have been called “matters of sentiment.” To this end it is desirable that the negotiators selected should be men whose personal interests are not directly involved. Use should be made of the discovery enshrined in duelling etiquette, that a man’s friends can generally handle delicate business more satisfactorily than him-

self. Negotiations should be conducted by means of representatives.

One method of representation is the reference of differences to the central officers of the Union. These probably have the advantage in experience and education. Their superiority over local officers is illustrated by the history of the Taff Vale dispute, in which, according to the judge who tried the case, the local secretary acted "in a double character, now as a conciliator, now as a stirrer up of strife," but the general secretary worked all along for peace.¹ The successful adoption of this form of representation assumes, of course, that the Society's officers are recognised and received by the employers whether they are actually engaged in the trade or not.

A second method is that of a formal Conciliation Board for a given area, composed of an equal number of representatives of both sides. When only a small proportion of the men belong to a Trade Union, this arrangement may, indeed, be the only practicable one, and, in any case, it possesses considerable advantages. In the first place, a thoroughly representative Board carries with it a weight of authority and a claim to confidence which agreements entered into by the Executive of a weak Union could not command; and, in the second place, the regular meetings of such a Board serve indirectly, by acquainting employers and employed with one another, to improve the relations between them and gradually to make practicable, as the French *Conseils de prud'hommes* seem to be

¹ Judge's summing up *Taff Vale Railway Co. v. Amalgamated Society of Railway Servants* (*Times*, Dec. 20, 1903). Cf. similarly Bogart's article on the U.S. machinists' strike (*Yale Review*, Nov. 1900 p. 311).

doing, the peaceful settlement of more important differences. In practice this method is commoner than direct dealing between the two Executives. It is illustrated by the Joint Committees of Northumberland and Durham, and by those large annual conferences in Illinois, which "apply" to that state the general decisions of the wider four states conference.¹

However the machinery is constructed, it is desirable, in order to the elimination of friction and acrimonious discussion, that the number of appeals to it be reduced to the lowest possible point. To this end, and also lest, with time, a small seed of irritation should grow to dangerous proportions, efforts should be made to accommodate differences at or near the original point of impact. Between this point and that of submission to a Conciliation Board a number of intermediate stages may be introduced. There may be a discussion between the men directly affected and the manager; that failing, between the shop representative or the branch secretary of the Union and this official; that also failing, between the two secretaries or vice-presidents of the Conciliation Board; and, as a final stage before the formal appeal, by the sub-committee of the Board itself. In many conciliation schemes, notably that adopted by the lace trade,² elaborate provisions are made for utilising these intermediate stages, while in other systems the same object is attained by injunctions inserted in the rules

¹ *Industrial Commission*, xvii. p. 333.

² Cf. *Strikes and Lock-outs*, 1895, p. 253-54. Cf. also the agreement in the sew-round branch of London boot and shoe trade (*ibid.* 1896, p. 171), the rules of the Conciliation Board in the brass foundry trade (*ibid.* 1897, p. 127), and the terms of settlement of the great engineering dispute (*ibid.* 1898, p. lvii.).

prohibiting appeals to the Board except in the last resort.¹

Finally, all the arguments which point to a restriction of references to the Conciliation Board may be urged with still greater force in favour of restricting those to arbitration proper. The settlement of differences by this means obviously threatens an amount of friction and irritation only less than that involved in a stoppage of work itself.

§ 2. In the case of strong and highly centralised associations, peace in true interpretation differences is reasonably assured whatever the particular mechanism employed may be. In this statement some emphasis must be laid upon the word "true." Its terms scarcely apply to those local controversies which, appearing under the guise of interpretation differences, are really test-cases, whose result is intended to serve as a model for the general practice of the industry.² The question raised in these cases is really that of the general rate of wages, a more important and, therefore, a more explosive topic.

With regard to true interpretation differences, however, the above generalisation is supported both by experience and by analysis. The history of the Durham and Northumberland Joint Committees, the successful operation in minor questions of the Midland and North of England Iron and Steel Boards, and the practice of the national associations of the boot and shoe³ and plumbing⁴ industries afford evidence

¹ *e.g.* North of England iron and steel trade Conciliation Board, bye-law, No. 20.

² Cf. footnote, p. 119.

³ Cf. *Strikes and Lock-outs*, 1895, p. 252.

⁴ Cf. *Ibid.* 1897, p. 123.

to this effect. A similar state of things prevails in America. As the "national" and "international" Unions develop, we find them pressing for, and, in one case, even "ordaining" the formation of local agreements for the settlement of differences by conciliation, or, failing that, by arbitration. Instances are found in the typographical, bricklaying, plumbing, tailoring, baking, brewing, boot and shoe and blacksmiths' trades.¹ In like manner, the increasing control of Union Executives over the weapon of "boycotting" is being accompanied by a decline of disputes conducted by that means.²

Theoretical reasoning points in the same direction, indicating clearly that, as unions and employers' federations become more centralised, both their interest in maintaining peace among their branches and their power to enforce their will are increased.

First, with regard to interest. Among loosely linked Associations a local dispute may be confined to the persons or groups with whom it originates. It may be fought out with the funds belonging to the branches, and have but a trifling effect upon the fortunes of the Associations as a whole. Under such circumstances, there is little to induce the central executives to lay a restraining hand upon their members. They may even witness, without protest, the violation of awards given by arbitrators to whom local differences have been voluntarily submitted. Their interest may need to be stimulated by the device of deposits of

¹ Cf. the accounts of conciliation and arbitration in these trades in *Industrial Commission*, xvii. Reference to arbitration is generally lacking in the bricklayers' agreements.

² Cf. Gilman, *Industrial Peace*, p. 274.

caution money. Thus, after the great strike of 1895, the national Associations in the English boot and shoe trade agreed to place £1000 each with trustees, part of which should be forfeited should either be "deemed to have broken an agreement, award, or decision"; and, "if any provision of this agreement, or of an award, agreement, or decision be broken by any manufacturer or body of workmen belonging to the Federation or National Union, and the Federation or the National Union fail within ten days either to induce such members to comply with the agreement, decision, or award, or to expel them from the organisation, the Federation or the National Union shall be deemed to have broken the agreement, award, or decision,"¹ and shall, therefore, render themselves liable to forfeit some or all of their deposit.

When, however, centralisation is greater, and local combatants are to some extent supported by central funds, the need for artificial stimulation to the central executives diminishes. These tend, of their own accord, to plead for peace and to further it by such devices as the guarantee of local arbitration agreements.² When centralisation is carried so far that

¹ Provision 9 of the agreement, *Industrial Commission*, xvii, p. 506. When the Union failed to expel the London strikers in 1899, Lord James awarded £300 damages from the Union's deposit to the masters (*ibid.* p. 505). There was a similar provision in the revised Yorkshire dyeing trade agreement of 1896, where it was provided that any one causing his society to be fined should be dismissed from his club and forfeit all its benefits (*Strikes and Lock-outs*, 1896, p. 173). Evasion of the fine by refusal to replace money withdrawn under it can be met by a rule that in that case the whole deposit shall be forfeited.

² e.g. the agreement between the American Newspaper Publishers' Association and the International Typographical Union (*Industrial Commission*, xvii. p. 366).

the central organisations upon both sides identify themselves with, and take into their own hands, the quarrels of their branches, the forces tending against a rupture become very powerful indeed. The importance of the point at issue remains the same as before, but the loss to be anticipated from a conflict is raised from the cost of a local, to that of national, struggle. It is true, no doubt, that, if centralisation is developed upon one side only, the stimulus to peace need not necessarily be increased. Though the party whose organisation remains unchanged will now be willing to accept a number of settlements against which it would hitherto have fought, its opponent, if the probable cost to it of a conflict is reduced in absolute amount, will refuse a number formerly acceptable to it.¹ This consideration is not, however, of real importance, since in practice, as has already been indicated, the development of organisation upon one side is almost invariably followed by a corresponding development upon the other. Hence, in general, wherever industrial unions are centralised, their *interest* in imposing peace upon their branches is considerable.

In like manner, their power to realise this interest is, in many cases, also considerable. For, since the highly centralised associations are almost invariably those which pay large benefits, the penalty of expulsion, open to them in the last resort against members who disobey their orders, can be appealed to with great effect.² Among unions of workpeople the

¹ Cf. Appendix A, § 10.

² The Gasworkers' Union, in the Grimsby fishing dispute, used the curious argument that, because their members had claims on the sick and benefit funds, therefore they could not expel them for breaking an arbitration award (*Times*, Sept. 27, 1902).

pressure, which can be brought to bear in this way, is often quite irresistible.¹ Among employers' associations, indeed, the smallness of the "benefits" available may cause it to be slight.² Provided, however, that the workmen's society is powerful, there is always available, against recalcitrant individual firms, the formidable weapon of a strike supported by the other masters.³ Hence, from every point of view it appears that under strong associations the peaceful settlement of interpretation differences is practically assured.

§ 3. Under these circumstances, the chief qualities required in the machinery for settling differences are convenience, expedition, and cheapness. This machinery is the organ of forces, which already constitute an adequate guarantee of peace, and it does not, therefore, need to be fashioned with a view to augmenting their persuasive power. Hence, those intermediate stages, found necessary when the danger of conflict was a real one, may with advantage be eliminated.

Under a full-fledged system of Joint Boards the

¹ Cf. *Labour Commission Report*, p. 53.

² In the boot and shoe industry in this country it has even been suggested that the benefits are negative, and that unscrupulous employers rather like to escape from the Association. On the other hand, positive benefits of some importance, in the form of "mutual protection of manufacturers in case of strikes by the levying of assessments, the performance of work by other establishments for factories in which strikes are in force, and by various other methods," are to be found in the United States Stone Founders' National Defence Association (*Industrial Commission*, xvii. p. 347). Similar remarks apply to our own Coal-Owners' Association in South Wales (cf. *Jeans, Conciliation and Arbitration*, p. 73).

³ Cf. below, p. 181.

first stage to be abolished should be that of reference from the Standing Committee to the Board itself. The committee may be given an umpire of its own, to whom, in case of disagreement, reference may be made direct. Among the better known systems in which this change has been successfully effected are the North of England Iron and Steel Board¹ and the Nottingham Hosiery Board.²

Next, the Standing Committee itself may be passed over, with its secretaries, vice-presidents, and all the appurtenances thereof. No formal reference will then be left between the point of impact of the difference and the stage of arbitration proper.³ The process of

¹ In the revision of its rules in 1883 (cf. Schulze-Gaevernitz, *Social Peace*, p. 215).

² *Ibid.* p. 141. An instance in which reference to the full Board is not only retained in case the committee disagrees, but can even be demanded by either side when that body is unanimous, is afforded by the rules of the West Cumberland Limestone Board (*Strikes and Lock-outs*, 1900, p. 96-7). The Nottingham Lace Board goes even further, providing that no decision of any section of the Board can be considered as binding until it is ratified by the full Board (*Industrial Commission*, xvii. p. 502).

³ In order that mere misunderstandings may not be forced to arbitration, the stage of informal discussion between the aggrieved workpeople and the manager should still be retained. It has, indeed, been observed that, in the opinion of some employees, if a man follows up an unsuccessful appeal to the manager with a successful appeal to the Board for the reversal of the said manager's decision, he will soon after find his services dispensed with (cf. Reynolds, *Industrial Conciliation Conference*, p. 36). This difficulty, however, even so far as it touches individual complaints, will disappear as the subordinate officials of employers themselves become imbued with the conciliatory spirit; whereas, if the grievance is common to all the men in a firm or a pit, it is their authorised representative who brings it before the manager, and so prominent a person, despite of certain complaints made by the miners to the Labour Commission, is scarcely likely to be turned off without good grounds.

this evolution is well illustrated by the practice of the Joint Committee, as developed in Durham and Northumberland. "If it declares itself competent, it decides at once in many cases, *i.e.* when the facts are obvious. If evidence is needed, the Committee can itself call witnesses and examine documents. It is much more usual, however, for two commissioners to be chosen, one from each side, who, like the Lancashire secretaries, go to the place where the dispute arose and make the needful investigations on the spot. They present their reports to the next meeting of the Committee, which then makes its decision. Often, however, the Committee entrusts the two Commissioners with the final settlement of the matter, thereby putting them in the position of arbitrators. If they cannot agree, an umpire is nominated by the chairman of the Committee in Northumberland, while in Durham the rules provide that he is to be the county-court judge in this case—the chairman, Mr. Maynell himself. In less important matters the Committee frequently deposes an expert to decide the matter; in fact there is great elasticity in the choice of means."¹ In other industries the process has been carried still further. "Among some branches of the iron and steel trade (of America) certain technical differences of a minor character are left largely to the decision of a paid and trained adjustor."² A similar arrangement is found between the members of the Engineering Federation and the Boiler-makers' Union in the neighbourhood of Newcastle. "Technical delegates employed by the masters, and district delegates, employed

¹ Schulze-Gaevernitz, *Social Peace*, p. 176.

² Durand, *Industrial Conciliation Conference*, p. 153.

by the men, meet daily to settle prices for new work.”¹ The most complete example, however, is afforded by the famous “professional experts” of the Lancashire cotton industry. These officials merge the functions of arbitrators and conciliation secretaries, leaving no place whatever for the Board and its Standing Committee. The efficiency of their work has been deservedly eulogised by Mr. L. L. Price and Mr. and Mrs. Sidney Webb. They possess in a high degree that technical knowledge and judicial power of sifting evidence, which are generally considered the chief qualities required for the correct solution of interpretation differences. Reference to them involves complete separation of the machinery for settling minor differences from that for general questions. This division of labour—technical points being referred to technical experts, and general questions to “the magnates of the trade”²—is to be found also in the machinery affected by the Durham and Northumberland coal industry, and has the advantage, both of economy, and of ensuring that a rupture on a general question shall not involve the break-up of the interpretation machinery.

§ 4. Since, as we have seen, when strong organisations exist, it is the fact of their existence, rather than the machinery which they employ, that makes for peace in minor matters, this chapter ought not to conclude without some reference to the question how far governments can, and ought to, promote their

¹ Macpherson, U.S. Bulletin of Labour, May 1900, p. 471, reporting a statement by Mr. J. Robinson, one of the secretaries of the Employers' Federation.

² Cf. Ashley, *Adjustment of Wages*, p. 77.

development. On the strength of what has been said, we may certainly pronounce against any policy of legal obstruction to the formation of industrial combinations, such as prevailed in England before 1825, and on the continent of Europe till within the last quarter of a century. It is, however, a more difficult question whether special positive privileges should be conferred upon these bodies in regard (1) to their relation with non-Unionists, and (2) to the legal protection of their funds. It is, indeed, obvious that advantages in these respects ought not to be conceded except upon some such conditions as were suggested by the Royal Commission of 1867, namely, that the rules of the favoured Associations "were free from certain restrictive clauses, such as the limitation of apprentices, or of the use of machinery and the prohibition of piece-work or sub-contract."¹

In the matter of the State's attitude towards non-Unionists, it is possible, after what has already been said on the general subject of discrimination, to go somewhat further. It is sufficiently clear that the State, as such, should not take any pro-Union action more decided than that appropriate for unofficial arbitrators; and, in view of the general arguments against direct State action, it should probably be even more passive than they. Thus, though we may approve of the practice of the New Zealand Arbitration Court in forbidding adverse discrimination in the cases which have come before it, we can scarcely extend our approval to the action of the New South Wales Legislature in making such discriminations

¹ Cf. Webb, *History of Trade Unions*, p. 253.

finable offences under a general law, independently of the character and rules of the Union concerned.¹

In regard to the corporate funds of Trade Unions, the English law, as established by recent decisions, makes them liable to damages for torts or for malicious persuasion to a breach of contract.² It is held by some that this liability ought to continue, but that the law of agency should be modified as regards workmen's combinations in the direction of greater leniency. Unless this is done, it is feared that the development of centralised government will be impeded. Thus, Mr. Asquith has urged that, since the difficulty is "almost insuperable for a great trade combination to direct and control, often at a great distance, the conduct of every one who technically might be said to be an agent of the central authority," a too rigid construction of the law might compel "the great Unions to abandon their authority over trade disputes," separating strike from friendly benefits and retaining the latter alone in their own hands.³ On the other side, however, it may be urged with equal plausibility that, the more serious the effect which the action of inadequately controlled agents may have upon the Union's funds, the stronger is the centralising influence at work. The solution seems to be that centralisation will be helped forward most effectively by a law made as stringent as possible, subject only to the condition that escape from its dangers can be effected more easily by completing, than by abandoning, central

¹ New South Wales Arbitration Law, § 35.

² The Taff Vale decision makes them liable under these heads (Cf. Ashley, *Adjustment of Wages*, p. 175 and 178).

³ As reported, *Times*, Feb. 7, 1903.

supervision over branches. Centralisation is not, however, the only object which the State should have in view. Before, therefore, the advisability of changes in the law can be determined, it is necessary to take account of important political and social considerations. When it is proposed to revert by Act of Parliament to the condition of complete legal immunity, which, till within the last few years, was understood to prevail, these considerations assume a still more prominent place. The whole problem is exceedingly complex, and judgment upon it may well be suspended until the Commission, now sitting, has published its report.

CHAPTER II

THE PROBLEM OF GENERAL QUESTIONS

§ 1. UNDER a purely voluntary system, when neither the Government nor public opinion effectively intervenes, there is no superior body to press for a peaceful settlement of general questions, in the way that Trade Unions and Employers' Federations can do when the disputants are subordinate branches of these organisations. There is still, however, an appeal from Philip drunk, in the shape of the momentary "self" of the Union or Federation, to Philip sober, in the shape of the more permanent "self." In order to this result all that is necessary is that the bond between the two organisations should be, as it were, solidified through time. If their future can be bound rigidly to their present, it will be to their interest on the whole to agree to terms, or the risk of terms, which, on the ground of immediate interest alone, they would reject. Since momentary divergences of strength oscillate equally on both sides of the general average divergence, the side which is for the moment exceptionally strong will be ready to forego the use of its advantage, if some guarantee can be provided that its opponent will return the compliment later on. When this is done, the dangers due to the momentary

divergences, which arise out of the seasons, the season and so forth, cease to be important. The effect produced is similiar in kind to that secured by treaties of arbitration entered into by the Governments of two nations.

The required guarantee is provided wherever there is an understanding or agreement that differences occurring within a given period shall be settled, if necessary, by mechanical or human arbitration. For this reason quasi-permanent systems have a better chance of resolving differences than *ad hoc* conferences assembled for the purpose of dealing with one single emergency. This conclusion holds good even when, as in the Federated Districts Coal Board and numerous other instances, no formal sanction is attached to the arbitration treaty. Hence, it may be laid down that the formation of industrial agreements, extending over as long a period as possible, is, in all circumstances, a desirable means to the promotion of industrial peace.

This conclusion receives further support from a second group of considerations. In industrial negotiations, as in other things, practice makes perfect. If the field is kept prepared for the erection of instruments of peace, that fact alone tends to persuade the general body, both of employers and employed, that resort to force is not "the right thing." Their general attitude is modified, and the burden of proof shifted from those who decline trial by battle to those who advocate it.

Nor does the argument stop at this point. The beneficial results noted in the last paragraph are still more effectively promoted when the "permanent possi-

bility" of peaceful machinery is exhibited in material form. In other words, it is desirable to add the element of endurance, not merely to the agreement between the parties, but also to the representative assembly, in whom the execution of its provisions is vested. As Professor Foxwell has observed, "the fact is, that where human beings are concerned, where personal relations should be formed, and where moral forces are at work, a certain permanence of conditions seems to be essential. The altruistic and social feelings, which are the very cement of the social fabric, and enormously lessen the irksomeness of effort and the friction of industry, seem to require time for their development, and frequently cannot exert their full strength unless they are embodied in the symbol of an organisation."¹ No doubt, when the Associations upon both sides are exceptionally strong and the relations between them exceptionally satisfactory, this consideration loses much of its importance. It may well be, for example, that, in the case of the Boiler-makers' Society, informal discussion between the executives of employers and employed leads to results so satisfactory that the construction of a more elaborate system would be a work of supererogation. In general, however, we may take it that the part of sound policy will be to foster not only quasi-permanent agreements but also their embodiment in quasi-permanent Boards.

¹ *The Claims of Labour*, p. 190. The same idea is at the root of Mr. Crompton's opinion "that these meetings should be regular, and not merely called when the dispute has reached a certain point, opinions have been formed and feelings excited. By having meetings regular, a system and habit of settling difficulties grows up and becomes a business matter rather than a party struggle."

I. INDUSTRIAL AGREEMENTS.

§ 2. At this point the discussion must bifurcate. First, we must examine the form which the agreements ought to take, and, secondly, that most appropriate to the Boards.

Under the former head, there are, broadly speaking, four possibilities: first, a rigid agreement as to the precise level of wages to prevail over a subsequent period; secondly, a more elastic agreement as to the relation which wages shall bear to the price of the commodity or to some other index of the trade's prosperity; thirdly, an agreement more elastic still, merely providing that all differences which occur during its currency shall be discussed by representatives of employers and employed, and, if necessary, submitted to arbitration; and, finally, an agreement, on the pattern of the preceding, but without any provision for arbitration in the last resort. Each of these methods possesses advantages of its own, the relative importance of which will vary according to the special circumstances of different industries. One of them will be preferable in some cases, and another in others. Though, however, no general comparison of their merits is possible, yet considerations can be indicated upon which particular comparisons must depend. The strength of the different forces at work can only be estimated in the concrete; but the directions in which their presence may be looked for are susceptible of abstract determination.

§ 3. In the first place, agreements which definitely fix the wage throughout the period of their currency

have to be balanced against various forms of sliding scales. If the period which they are supposed to cover is equal to the minimum period for which a single wage settlement can in practice be made to run,¹ it is obvious that the scale resolves itself into a fixed award, and in no way differs from a settlement possessing that character in name as well as in fact. When, however, the period taken is long enough to allow the real character of a scale to be displayed, there can be no question but that it is economically superior to a fixed award framed to cover the same total length of time. This conclusion is applicable to the case of America, where awards are often framed to last for a year, and still more to that of New Zealand and Australia, where they are given for two or three years. To assert this is not to deny what has already been freely granted—that scales are liable to serious error. It is merely to maintain that, under a fluctuating industrial system, where every settlement must involve some error, the amount of this will be less when arbitrators of given skill award a scale for two years than when they award a fixed wage for that period.

This conclusion, though important and obviously true, is not, however, sufficient to justify a general practical judgment. The fact is that sliding scales are often regarded with suspicion, and even with positive aversion.² Many of the popular objections

¹ Cf. Part II., Chap. III. § 2.

² For statements of the current objections, cf. articles on "Sliding Scales" by Professors Smart and Munro, Mr. L. L. Price's *Industrial Peace*, and Mr. Jeans' *Conciliation and Arbitration*. One objection is based upon the inconvenience, under scales, of dealing with long contracts. Professor Ashley suggests that a reason for the greater

are, indeed, invalid,¹ and, as against many others, provision can be made in the terms of the scale itself. The important question, however, from the present point of view, is not whether a hostile attitude on the part of either party is justified, but whether, as a matter of fact, it exists. When this is the case, it is impossible to deny absolutely that the establishment of a fixed wage over a given period may be preferable to the most carefully guarded scale; for, as Professor Petritsch has remarked in another connection, there are circumstances in which "the least reasonable policy may prove the most effective."²

§ 4. In the comparison just concluded no reference was made to the fact that scale agreements can frequently be made for a longer period than is possible with fixed awards.³ This point is, however, important. The formal reopening of the wage question is, under the most favourable circumstances, a serious matter; it is almost certain to generate some irritation; if the difference goes to arbitration, it may generate a great deal; if an actual stoppage of work occurs, it may mean heavy material loss both to the disputants themselves and to the general public, coupled, not improbably, with lasting injury to the moral relations between employers and employed. Would it not,

success of scales in the iron, as compared with the coal trade, is the absence, in the former, of this method of business (*Adjustment of Wages*, p. 149).

¹ Cf. Part II., Chap. IV. § 14.

² "The Fiscal Question and Austrian Experiences" (*Econ. Jour.* 1904, p. 28).

³ In this respect a scale bears some analogy to a will drawn with hypothetical provisions for children as yet unborn. Such a will is obviously less likely to require revision than one drawn up with reference only to the existing state of affairs.

therefore, be wise for other industries to imitate the policy of the north of England iron-workers (1872) and the Durham coal-miners (1877), and institute sliding scales simply with a view to diminishing the frequency of fundamental controversies?

The answer to this question is not, however, so simple as it seems. Of course, if we had merely to decide between a scale and a fixed award, each to be followed by chaos, the fact that, under the former system, chaos might be postponed, would give to it an important advantage. In practice, however, even when there is no definite agreement, there is often a moral certainty that, on the termination of a fixed award, some form of peaceful machinery will be brought into play. We thus pass imperceptibly away from our first method of single fixed awards into a comparison between our second—that of sliding scales—and our third and fourth—agreements to settle differences by conciliation or arbitration.

On the whole, it appears that, compared with these alternatives, the amount of friction generated is likely to be smaller under a system of scales. No doubt, the fact of the wages question being reopened less frequently is not, by itself, conclusive. For, when it is reopened, just because the period to be affected is longer, the controversy is likely to be more severe. On the other side, however, it must be remembered that, under industrial agreements, opportunities for friction may arise at the return, not merely of the periods for settling wages, but also of those for renewing the industrial agreement itself. It is true that these periods need not recur except at considerable intervals; that, unless some controversy

happens to be on the *tapis* at the time, they may often pass almost without observation; and that, under agreements like those of New Zealand, which, in the absence of specific action to the contrary on the part of either party,¹ renew themselves automatically for a second period of the same length as the first, they are particularly likely so to pass. Still, for purposes of comparison, the possibility of a less placid progress cannot be entirely ignored. Furthermore, apart from this consideration, it is probable in many cases that, when the importance of an issue increases in a given ratio, the severity of the argument upon it will increase, not in the same, but in a smaller ratio. Wherever this is so, the friction evolved in framing

¹ The policy of automatic renewal after a given date, subject to short notice from either party, which was adopted in the Durham agreement of 1899 (*Strikes and Lock-outs*, 1899, p. 94), is less satisfactory. It is probably inferior even to the plan of allowing agreements to terminate on a given date, or on the occurrence of a given eventuality, without any formal provision for renewal. For, under that arrangement, repeated renewals, with or without modification, for a period as long as the original one, might come to be regarded as a matter of course, the real burden of initiation being shifted, as in the case of the "expiring laws continuance" bill, upon those who opposed it.

In cases where settlements run on, subject to notice, some definite length of notice should be required. For, if the announcement of a wish to terminate and actual termination were synchronous, there would be no room for the negotiations which are naturally stimulated by the knowledge that the existing arrangement will lapse automatically on such and such a day.

From the point of view of scientific accuracy, the period of notice ought to be as short as is compatible with adequate deliberation, since, from this point of view, we must, of course, have as many wage changes as possible. But, when the relations between the parties are bad, there is an advantage in a long notice, because it weakens the force of an immediate feeling of economic strength upon one side or the other, which might act as an inducement to reopen the wages

a wage regulator for two years will be less than four times as great as that evolved in framing one for six months. This, as was argued in an earlier chapter, will often be the case even where the long-period regulator is a mere fixed award. When it is a sliding scale, the argument, as was there pointed out, becomes considerably stronger.¹ Hence, we may conclude that, so far as friction is concerned, sliding scales are superior to their competitors.

This point is not, however, equally important in all cases. Where the relations between the parties are bad, and where, therefore, the absolute amount of friction is likely to be great, it is of more account than where relations are good. In the latter case, the friction is, in any event, so small that fifty per cent enhancement or diminution of it is scarcely worth considering. Under such circumstances a comparison of the merits of scales and industrial

question, if it could be reopened at once. When nothing more can be done than give notice of an intention to reopen it three or six months hence, the reflection that, by that time, the present relative superiority in strength may have disappeared, and that the other side is certain to do what it can to make it disappear, will act as a deterrent. Its influence in this direction is similar in kind to that which would be exerted by the universal recognition of a divine law, that the first shot should never be fired till three months after the declaration of war.

A point of minor importance is the date which should be chosen up to which an agreement holds. This sometimes raises controversy, because the relative strength of the parties may be different at different seasons of the year. The men employed in building, for example, strongly object to agreements which terminate in mid-winter (cf. Aves, "Recent Labour Disputes," *Econ. Jour.* 1897, p. 128), and the masters to having the wages question reopened after they have taken their contracts for the year (cf. Mr. Lennard's remarks in the boot and shoe arbitration, 1892, p. 24).

¹ Cf. *ante* pp. 75-6.

agreements should turn mainly upon their respective economic effects.

It will be remembered that, when scales were compared with fixed awards covering an equal period, an advantage was observed to attach to them in point of scientific accuracy. This advantage cannot be claimed so confidently when the alternative to one scale is not one, but a series of fixed awards. Indeed, if the period of the scale is a long one, the settlements under it will almost certainly prove inferior in this respect. However carefully it is designed, there will inevitably occur broad changes, whether in the number of men normally trained to the trade, or in the number of people accustomed to the commodity produced by it, which can scarcely have been allowed for beforehand, but which react upon and modify the general form of short-period supply and demand, thus rendering the old scheme of relations between wages and prices obsolete. So far, therefore, as a scale pretends to permanence, it is fairly exposed to the objection which Mr. and Mrs. Webb urge against scales in general: "There seems no valid reason why the wage-earner should voluntarily put himself in a position in which every improvement of productive methods, every cheapening of the cost of carriage, every advance in commercial organisation, every lessening of the risks of business, every lightening of the taxes or other burdens upon industry, and every fall in the rate of interest,—all of which are calculated to lower price,—should automatically cause a shrinking of his wages."¹

¹ *Industrial Democracy*, p. 577, n. Cf. also Mr. Cree's objection, *Theory of Trade Unionism*, p. 36.

It is not, however, certain that a scale designed for a comparatively short period—to supplant, for example, some three or four fixed wage settlements—will on the whole be less accurate than they. Whether it is so or not will depend upon the length of the interval over which each of them is made to extend. It has already been indicated¹ that, unless that interval is as short as the minimum period of adjustment under the scale, a better total result is almost certain to be given by the part of the scale which corresponds to the first of the series of fixed awards. Whether this advantage will continue as against the second or third awards, or whether, on the contrary, it will be counterbalanced by an excess of error during their course, depends, partly upon the character of the fluctuations which occur, and partly upon the elaboration of the scale itself. The forces involved are complex. They are not the same in any two cases, but vary in accordance with the special circumstances of the industry concerned.

Whenever, therefore, the alternative to a scale is an agreement to fix wages by conciliation or arbitration at intervals longer than the minimum period of scale adjustments, no general statement can be made as to the relative economic advantages of the rival methods. When, on the other hand, fixed awards can be made as frequently as scale adjustments, a more definite conclusion emerges. Under these circumstances, provided, of course, that the arbitrators follow sound principles, the agreement system is bound to yield superior results. The framers of awards under it have access not only to the data, in accordance

¹ Cf. *ante*, p. 138.

with which the scale moves, but also to other data not susceptible to mechanical manipulation. It is, therefore, to be expected that changes like those which have recently come up for discussion in the Welsh and Scotch coal-fields would—whatever their other results—at least promote increased economic accuracy. According to one of the proposals made in South Wales, adjustments were to take place at intervals identical with those appointed under the old scale, but, in place of the rigid connection between wage and price, it was merely provided that “in considering any proposal for an alteration in the general rate of wages, the price of coal shall be a factor, and for this purpose the said $16\frac{1}{2}$ per cent (above the standard of December 1879) is to be considered as equivalent to an average selling price of large coal of 15s. 6d. per ton.”¹ The compromise arrived at by the Scotch Conciliation Board is similar in effect: “The average net realised value of coal at the pit-bank for the time being, *taken in conjunction with the state of trade and the prospects thereof*, is to be considered in fixing miners’ wages between the minimum and maximum for the time being, and *in current ordinary circumstances* a rise or fall of $6\frac{1}{4}$ per cent in wages on the 1888 basis for every $4\frac{1}{2}$ d. per ton of rise or fall in the value of coal is reasonable.”²

Upon the whole, when account is taken both of

¹ *Times*, Dec. 1902: Draft proposals. The agreement finally reached is in principle similar (cf. *Labour Gazette*, April 1903, p. 91).

² Quoted by Ashley, *Adjustment of Wages*, p. 66. Cf. also the “Thornycroft scale” of the Midland Iron and Steel Board, with its general understanding that wages shall follow the price of “marked bars” and its “special temporary advances or promises” on exceptional occasions (Ashley, *British Industries*, p. 55).

the question of friction and of economic results, it appears that, where the relations between employers and employed are bad, a sliding scale, if practicable, is to be preferred to an industrial agreement, but that, where the relations are so good that adjustments can safely be made by conciliation or arbitration at very frequent intervals, the reverse conclusion generally holds.

§ 5. We have next to compare mere agreements to submit differences to conciliation with those under which provision is also made for arbitration in the last resort. The relative merits of the two plans have long been the subject of vigorous controversy. Mr. Durand, Mr. and Mrs. Sidney Webb, and M. Raynaud¹ argue in favour of the former, and the Lancashire cotton trade and most of "the important systems of collective bargaining in the United States"² follow their views in practice. Other thinkers, on the contrary, agree with Mr. Crompton that all conciliation agreements should contain a clause providing for "some power in reserve by which recurrence to strikes may be avoided"³ and are, in turn, followed by many of the best-developed English industries. Thus, in nearly all the conciliation schemes of the iron and steel, engineering and ship-building trades,⁴ as well as among the coal-miners of Northumberland, Durham, and the federated districts, permanent provision is made in one way or another for reference to arbitration. Local agreements to the same effect

¹ Cf. *Le contrat collectif*, footnotes to pp. 119 and 142.

² *Industrial Commission*, xvii. p. c.

³ *Industrial Conciliation*, p. 134.

⁴ *Industrial Commission*, xvii. p. 495.

exist in our hosiery, lace, boot and shoe and building trades, and also in the local branches of many American industries.

Before entering upon the merits of the controversy between the two methods, we may note a preliminary matter upon which the champions of both views are agreed. Everybody admits that, in differences so important as "general questions," a settlement by arbitration will almost always stir up *considerably* more irritation and bad feeling than a settlement by mutual agreement on a Conciliation Board. An arbitration tribunal is a ponderous machine, whose operations are detrimental to the building in which it stands. Consequently, resort to it should never take place except in cases of absolute necessity. Conciliation should be developed and arbitration reduced to a minimum.¹ In the United Kingdom it may safely be said that there is no trade in which the relations between employers and employed are so good that this proposition fails. In the United States the case seems to be still stronger; for there, to allow the conditions under which they shall work to be determined by an outsider is "peculiarly obnoxious to the workmen," and they will never agree to it till conferences have failed and no other resort is left.²

Hence, in general questions, even when there is an arbitration agreement in reserve, it is well to enforce delay, in the hope that the greater coolness of an adjourned discussion may bring about a settlement. The Federated Districts Coal Board realises this so fully that, when they fail to agree, a second

¹ Cf. Crompton, *Industrial Conciliation*, p. 134.

² Cf. Aldrich, *U.S. Federation of Labour*, 1898, p. 253.

meeting is held of which twenty-one days' notice must be given. At this meeting the neutral chairman is present, but he only exercises his casting vote after another effort has been made to bring about a settlement acceptable to both sides.¹

Admitting, however, that arbitration is a *pis aller*, the question still remains whether provision should be made for resort to it in the last instance. The argument in favour of incorporating a clause to this effect in "industrial agreements" is drawn from the obvious direct advantages derivable therefrom. In the absence of such a provision, differences may entail strikes and lock-outs, with all the material loss and mutual irritation which these involve. And, even if a *modus vivendi* upon the immediate issue be found, we can never be certain that the controversy will pass away without incidentally destroying the established conciliatory system.² If, however, the means of securing an arbitrator are provided beforehand, both sides have guarded themselves, in a calm moment, against a possible future access of passion and excitement. Their policy is similar to that of a person who, unable to trust his will to be sober, goes voluntarily into an inebriate home. The *vis inertiae* is thrown upon the side of peace, since there is no

¹ A recent agreement in the Oxford building trade contains a clause devised to reduce still further the prospect of true arbitration: "If the parties (after one or more adjournments) cannot agree . . . the chairman of the Board shall have power to decide it. *Before deciding any question so submitted to him, the chairman of the Board shall be at liberty to put the question to the (majority) vote*" (*Strikes and Lock-outs*, 1894, p. 297).

² This result came about in the federated coal district in 1896 (MacPherson, U.S. Bulletin of Labour, 1900, p. 478).

escape from an amicable solution except the strong step of withdrawal from the Board.

The opposing argument depends upon certain indirect disadvantages, to which the adoption of an arbitration clause is said to lead. In the first place, the representatives of the two sides will not make so serious an effort to agree; on the one hand, they may hesitate to offer concessions lest, in the subsequent arbitration, their suggestions should be used against them;¹ on the other hand, they may "feel obliged to win, if possible, through the odd man." In the second place, the possibility of gain, unbalanced by the danger of a stoppage of work, will tend to the multiplication of speculative differences.² Hence, though one or two strikes will be prevented, the number of differences, which reach the stage of arbitration, will be so far increased that the friction generated, and unhappiness caused, may be greater than they would have been had no arbitration provision existed. This danger is, indeed, comparatively slight when the parties are on good terms with one another, and are educated up to a proper appreciation of their own ultimate interests. It can also be obviated, in some degree, by a rule enabling the arbitrators, at their discretion, to order either side to pay the whole cost of the arbitration.³ It is evident, however, that it cannot be eliminated altogether.

¹ Cf. the discussion in the boot and shoe trade conference previous to arbitration in 1893. The employers were careful to insist that the concessions they proposed were not to be taken as prejudicing their case in the event of arbitration becoming necessary.

² Cf. Castle, *Industrial Conciliation Conference*, p. 180.

³ As in the rules of the Iron-Founders' Board for the North-East Coast.

Between these two conflicting sets of arguments no general *à priori* decision can be made. Until we know the temper of the parties in each particular case, their affection or otherwise for a "policy of pin-pricks," the strength of their organisations, the power of the leaders over the men, the probability that an award will be obeyed, and, indeed, every detail bearing on the problem, it is impossible to judge whether a permanent provision for arbitration would be a good thing or a bad. For, by a "good" thing we mean, strictly, a better thing than the most probable alternative, and it is obviously impossible to determine what is good in that sense, until we know the nature of the said alternative. It *may* be a strike, but it *need* not be. A number of Conciliation Boards, including those of the iron-founders of the north-east coast, the Leicester dyeing trade, and the Scotch coal trade, while not possessing a regular arbitration clause, nevertheless provide for arbitration by "mutual consent," if, when the time arrives, both parties desire it. Of course, an intractable difference is more likely to end in a strike under this system than under that of the Iron and Steel Boards. But this result is indecisive so long as we are unable to gauge the chances, under the two systems respectively, that the stage of intractability will be reached.

Furthermore, arbitration may take place even though the industrial agreement does not mention it. In some cases, no doubt, neither side will dare to propose this solution, lest its doing so should be taken for a sign of weakness. But what is the *probability* that the deadlock will remain unbroken,

either when the Conciliation Board stands alone, or when the problem is modified by the presence of a London Conciliation Board, or a Massachusetts Board of Arbitration, or a French *juge de paix*, ready to intervene and originate the suggestion? And, lastly, even if a strike is admitted to be the alternative, how are we to measure its evil, or balance it against that involved in a rigid system, when we do not know how long it is likely to last, or what chance there is of arbitration or conciliation *after the fact*? And, even if we do know this, by what device can we compare the bitterness which industrial litigation on the one hand, or war on the other, will leave in the memories of men, whose sensibilities, opinions, education, and reading are very various, and to us, in great measure, unknown? The problem is one which a man of practical experience and sound judgment might possibly solve for the particular trade in which his life had been spent. It is not one to which any general solution is possible, or in regard to which an academic student can profitably offer an opinion.

II. THE CONSTITUTION OF TRADE BOARDS

§ 6. We thus reach the second division of our inquiry—that touching the constitution of the bodies in which the working of industrial agreements is vested. This problem also is one which the mere student can only discuss broadly, since its detailed solution demands technical business knowledge.

Boards of Conciliation may conveniently be examined first. In their constitution the essential point

is that the representatives of either side, and particularly of the workmen, should have the confidence of their clients. The mechanism by which this can best be secured varies somewhat according to the character of the Union.

The first question concerns the number and method of selection of the representatives. When organisation is weak, the scheme, which naturally suggests itself, is that of bringing together in conference several hundred persons, among whom practically every branch and district of the trade has a representative.¹ "Large representation of the parties," it is said, "is needed to bring out the real desires, the real interests, of the great mass of employers and employees who are to be so profoundly affected by the agreement. Moreover, if you have a small number of conferees only, the reasons why the various terms of the agreement have been reached are not understood generally by all concerned, and dissatisfaction with them is likely to arise."²

At the same time, it is obvious that a meeting of five or six hundred men is not the best conceivable institution for drawing up an intricate agreement. This has already been recognised in the celebrated system of the United States bituminous

¹ By way of illustrating the great size to which these meetings sometimes attain, Mr. Durand refers to the bituminous coal industry, in which "the joint interstate conference consists often of 150 employers and 500 of the other side" (*Industrial Conciliation Conference*, p. 46). In 1901 the men's representatives numbered 499, and the employers' 182 (*Industrial Commission*, xvii. p. 327). A good description of the various American conference systems is given by J. R. Commons, *American Review of Reviews*, March 1901.

² Durand, *Industrial Conciliation Conference*, pp. 45-6.

coal-mines. The real government there is conducted by a kind of cabinet. "A study of the proceedings of the joint conferences shows that the greater part of the work of bringing about an agreement is performed by the Joint Scale Committee (a body consisting of four representatives of masters and men respectively from each of the four states of Pennsylvania, Ohio, Indiana, and Illinois), the ultimate question of the precise rate of wages being usually referred by that committee to a sub-committee of sixteen members. The Joint Scale Committee reports from time to time to the convention the progress which is being made, and, after discussion in general conference, the unsettled questions are referred back for further discussion. When the Joint Scale Committee makes its final report, it is usually adopted unanimously without change."¹ The function of the large conference is, in short, not so much to negotiate as to appoint negotiators. Little difference would be made if the "two estates" of employers and employed were to meet in separate rooms, and, after the manner of the American associations of longshoremen and dock managers,² discuss their differences by delegates.

Hence, it would seem that the actual negotiators should always be few in number. When the Associations on either side are weak, each group may sometimes need to be appointed by large conferences; sometimes, as in the English Iron and Steel Boards, by the employers and employed connected with separate

¹ *Industrial Commission*, xvii. p. 327. The same method is adopted in the conference for "applying" the general agreement to the special conditions of Illinois (*ibid.* 333).

² Cf. Gilman, *Industrial Peace*, p. 306.

firms or districts.¹ When the Associations are strong, neither of these devices is necessary. The confidence of the rank and file in the Board can be obtained indirectly instead of directly. The important thing is that the chief Association officials should have confidence in it. If they are convinced, the loyalty of the rest is as well assured as it can be; if they are not convinced, the authority of the Board is worthless. Consequently, though delegates from different works may still attend to supply information, the Board ought, essentially, to represent the Associations themselves. The old forms, where they exist, may be retained, and new Boards may be started, whose forms are copied from the old.² But the representatives must always be controlled by the officials of the Associations, and, in many instances, may also, with advantage, be appointed by them.³

§ 7. The next point has reference to procedure. The fact that "general questions" are important, and bear directly upon the permanent interests of all concerned, makes the discussion of them, both on the

¹ *e.g.* The West of Scotland Manufactured Steel Trade, 1890; Scottish Iron Trade, 1900; West Cumberland Limestone Board (*Strikes and Lock-outs*, 1900, p. 96).

² *e.g.* in the North of England Iron and Steel Trade all the men at each works elect the operators' representative, but they would not elect a non-Unionist, because he could not bind anybody (Trow, *Labour Com.*, Group A.Q. 15,399).

³ *e.g.* Federated Districts Coal Board, Northumberland Coal Board, North-East Coast Iron-Founders' Board, Brass Foundry Trade, Bradford Slubbing and Yarn-Dyeing Board. In some cases more than one Association elects representatives. Thus, the Durham Coal Board includes nine representatives of the Miners', three of the Workmen's, three of the Mechanics', seven of the Engineers', and fifteen of the Employers' Association. The organisation of the Nottingham Lace Board is similar.

Board itself and among those who will be bound by its decisions, peculiarly delicate. Consequently, even when the relations between the parties are good, it is important that everything which might engender irritation should be excluded from the machinery for dealing with them.

From this principle the most obvious deduction is that technicalities and lawyers should not be admitted before the Board. Such a policy—apart altogether from the obvious saving in cost and time—tends to reduce to a minimum the appearance, and hence, indirectly, the reality, of the opposition between the parties. There is less of a struggle for victory, and, therefore, less fear of the introduction of “matters of sentiment.” The weight of these considerations is now widely recognised. In New South Wales the employment of lawyers is discouraged by a provision that their costs may not be charged upon the unsuccessful party. In New Zealand they are not admitted at all except by mutual consent. In the practice of the chief English Boards and in the report of the Labour Commission, the policy of excluding them, and the legal forms which may be expected to accompany them, is fully recognised. Finally, the conciliatory, as distinguished from the litigious character of negotiations, is often still further emphasised by an arrangement, in accordance with which the chairman (a representative employer) and vice-chairman (a representative workman) sit side by side at the Board, thus securing opportunities for conference at critical points in the discussion.¹

¹ As in the Midland Iron and Steel Board (Jones, *Ashley's British Industries*, p. 57).

A second inference is that the Board should not be allowed to pronounce upon any matter by the vote of a bare majority. When the solidarity of the two sides is complete, there is, of course, little prospect that any vote will be given, which is not either unanimous or equally divided. In cases of inferior organisation, however, there is always the possibility of defection on the part of one or two representatives of either party. To allow the result of the discussion to be determined by such an incident is to court the gravest dangers. So much dissatisfaction might be aroused that the whole conciliatory machinery would be immediately overturned. It is true that these difficulties do not seem to have been experienced in this country, and that, in a number of instances, the rules provide for a bare majority vote.¹ In the United States, however, where, owing to the weakness of the Unions, there is the greater probability of cross-voting, the case is very different. Thus, Mr. Durand, Secretary of the Industrial Commission, asserts, both that the bare majority method will not work, and also that decision by unanimous agreement has become the ordinary practice.²

Thirdly, it will not, as a rule, be desirable for the meetings of the Board to be conducted, like those of

¹ Of course in such cases arrangements are always made to ensure that the numbers of employers and employed with an opportunity to vote shall be equal (*e.g.* in the Federated districts, the Northumberland and Cumberland Coal Boards (*cf.* rule 13 of the latter Board, *Strikes and Lock-outs*, p. 251).

² *Industrial Conciliation Conference*, p. 43. It may, perhaps, be suggested that a decision by a large majority, *e.g.* seven-eighths of those present, would be a still better plan, as it would eliminate the possibility of obstructive tactics on the part of a single faddist.

the American interstate bituminous coal conferences,¹ in public. It may, indeed, be held that such a system has educative advantages; but, on the other hand, the policy of deliberation *in camera*, which is usual in England,² may be expected to conduce better, both to frankness in the discussion itself and to uncomplaining acceptance of the decision reached.

Fourthly, it is desirable that the negotiators should be chosen at regular intervals rather than *ad hoc*. If any formality is needed to bring about their appointment after a difference has become acute, there is always a chance that defiant spirits may refuse to endorse that formality, and so make a conference impossible. When the opposing organisations are highly centralised, this consideration is, in view of the permanence of the officials, a matter of minor importance, but, in cases where the real discussion is conducted on an elected Board, that body should be maintained permanently in being.

Lastly, it seems unwise, *if it can be helped*, to allow anything in the nature of a referendum from the appointed negotiators to the main body of either employers or employed. The ill-informed popular discussion, which would necessarily follow, could hardly fail to stir up irritation and water the seeds of conflict. This proposition holds good whether or not there is a provision for arbitration in the last resort.

When there is no such provision, and when the Conciliation Board cannot agree, it seems, indeed, at first sight, as though an appeal from the representatives to their constituents is worth trying as a forlorn

¹ *Industrial Commission*, xvii. p. 327.

² *e.g.* in the Federated District Coal Board.

hope to prevent war. Practically, however, such a provision will often do more harm than good. On the one hand, if the men's representatives think a point worth fighting for, their constituents are perfectly certain to be at least as bellicose as they. If they do not think it worth fighting for, were there no referendum, they would arrange it; if there is a referendum, they may be weak enough to shift the responsibility, and the men may elect to fight. Furthermore, the employers will probably limit their attempts at conciliation when failure to agree means to them, not the absolute certainty of a strike, but only a probability, the extreme greatness of which optimism may lead them to minimise.¹ Hence, the chance of an agreement being reached, so far from being augmented, is actually reduced.

On the other hand, if there *is* provision for arbitration, an intermediate reference to the Board's constituents is at least equally dangerous. For, again, the men are practically certain to support their leaders, and it will hardly conduce to calmness or good feeling should they vote in a body against the very

¹ This argument is more strong, but the preceding one is considerably less so, when the referendum is on the plan of that provided for in the rules of the American Amalgamated Association of Iron, Steel, and Tin Workers. Here, in cases where the conference between employers and employed fails to agree, "it requires two-thirds of all the members of the organisation voting to insist upon the demands which have given rise to the disagreement" (*Industrial Commission*, xvii. p 340). This provision forms part of the plan recommended by the Anthracite Coal Commissioners for the future regulation of that industry (U.S. Bulletin of Labour, No. 46, p. 654). Furthermore, it may be argued that, in certain exceptional cases, the referendum affords an opportunity to the men's representatives of climbing down without great loss of *amour propre*.

terms which an arbitrator afterwards finds it his duty to enforce. The off-chance of avoiding arbitration is a worse argument for the referendum than the off-chance of avoiding a strike.

What has been said against this policy in cases where the Conciliation Board has failed to agree has, of course, still greater force in those where it has succeeded. If there is no arbitration clause, a referendum, under these circumstances, might not improbably substitute war for peace. If, on the other hand, there is such a clause, the referendum would be futile, since an arbitrator, called in through the refusal of either side to endorse the Board's decision, is practically bound to reiterate that decision,¹ if not still further to stiffen it in opposition to the dissatisfied party.

The conclusions of this section are, of course, subject to the general caution that what appears to be ideally best is not always practically possible. When the men's organisation is weak and the control of their leaders slight, acceptance by referendum may sometimes be the only form in which acceptance for a decision can be secured at all. In the Grimsby fishing dispute, the officials of the Gasworkers' Union even found it necessary (?) to take a ballot as to whether a decision promulgated, not by a conciliation committee, but by a regularly appointed Board of Trade arbitrator, should or should not be accepted.²

§ 8. Our last problem concerns the constitution of

¹ As Lord James of Hereford did in 1902, when the employees had refused to accept a 10 per cent reduction, agreed upon by the Federated Districts Coal Board (*Labour Gazette*, July 1902).

² *Times*, Sept. 27, 1902.

an Arbitration Board. We need to inquire into the qualities required in it, the number of persons of whom it should be composed, and the appropriate method of their appointment. These points may be examined most conveniently in the order in which they have been named.

With regard to the first, the qualifications most important for a successful panel appear to be (1) that it should be thought—and this includes the further condition that it should be—unbiased; (2) that it should be thought competent; and (3) that it should be competent.

The need of a reputation for impartiality greatly narrows the field of choice. On the one hand, employers will not be enthusiastic over a politician in the House of Commons, because the workmen's votes are worth the winning.¹ On the other hand, the men will think that any member of the professional classes must, from the very nature of his life and upbringing, be "unconsciously biased" in favour of "Capital."² Hence, though a judge or a Member of the House of Lords may satisfy the masters, the men's ideal arbitrator can hardly be other than one of themselves.³ Unless, therefore, there happens to be available some one like Mr. (now Sir David) Dale, or Mr. Fielden,

¹ The temptation of a political arbitrator to consider his own popularity may, however, be diminished if he has to say Yes or No and cannot split the difference (cf. *Industrial Conciliation Conference*, p. 117).

² Cf. Webb, *Industrial Democracy*, p. 231.

³ The smallness of the available field is brought out in the following rule of the Board for Carpenters' Work in Chicago: "The umpire must be in nowise affiliated or identified with the building industry; he may not be an employer of labour nor an employee, nor an incumbent of a political office" (*Industrial Commission*, p. 386).

personally known to, and trusted by, both sides,¹ the choice can hardly be other than a compromise. Under these circumstances, the best way out of the difficulty may often lie in the selection of some man of outstanding eminence, whose conscious motives, at all events, whatever may be said of his sub-conscious ones, are above suspicion. Such a man, moreover, if, like Lord James or Sir Edward Fry, he serves in the same way without payment frequently, may gradually win for himself a large measure of respect and confidence throughout the industrial community. Another satisfactory solution would become possible if the British Labour Commissioners' suggestion of the governmental manufacture of professional arbitrators were followed.

In the second place, arbitrators must be thought competent. It will often be difficult for persons who have been brought up in a particular trade to realise that any one without "practical knowledge" of it can be capable of forming an intelligent judgment upon a question of wages. The natural inference is that the rule of the Midland Iron and Steel Board, which requires the independent chairman to be personally connected with the industry,² should be generally followed. Since, however, practical knowledge is scarcely found except among masters or men who have been, or are, actually engaged in the calling, and since the impartiality of such persons is likely to be doubted, this solution is not free from difficulty.

¹ Even Sir David Dale, though entirely trusted by the men's representatives, seems to have been on one occasion suspected by some of the rank and file, who knew him less well (cf. Price, *Industrial Peace*, p. 50).

² *Industrial Commission*, xvii. p. 500.

Rather, we are again driven to invoke outstanding eminence, coupled, if possible, with the lawyer's faculty for grasping some, and pretending to grasp many, things with great rapidity. Such a person, listening patiently to a prolonged argument, can often give the impression of having understood the whole of it, so that, if he has fairly numerous opportunities of arbitrating in the same trade, he will soon be able to establish a considerable reputation for ability.

Thirdly, the tribunal ought to *be* competent, lest the results of its decision bring arbitration into discredit. In order to this, "practical experience" of the industry is not, in general questions, of any great importance. The decision of such matters "calls rather for a general economic knowledge of the industry concerned, and, inasmuch as all industries are connected, an acquaintance with the condition of the whole national trade."¹ This third consideration, therefore, points, like the two preceding, to the selection of some person of acknowledged general ability.

§ 9. This conclusion implicitly determines the number of persons by whom the arbitration panel should be constituted. Eminent outsiders are not likely to be obtained in groups. If their services are to be secured at all it is practically necessary that the panel shall consist of a single man. This, however, is not the only argument against a compound tribunal. Reasoning of a general character shows that, even when practicable, such an arrangement is, except in interpretation differences, decidedly to be deprecated. The compound body in its most attractive form comprises one representative of each side, and an umpire,

¹ Schultze-Gaevernitz, *Social Peace*, p. 165.

selected either by them or by the principals, to be referred to in case of disagreement. The argument in favour of it is that the two representatives may possibly agree. On one occasion Messrs. Mundella and Williams succeeded in doing this, and, in a miners' strike on the Loire, Mr. Jaurès and the employers' representative have recently followed their example. A decision reached in this way is likely to command a higher degree of confidence than one imposed upon the parties by an arbitrator. On the other hand, agreement between the representatives is improbable, and the real decision will generally rest with the umpire. When this is the case a compound tribunal resembles an elaborate machine, two-thirds of which is ornament. Nor is this all. So often as a division of opinion emerges in this type of tribunal the authority of its decisions is weakened. It is true that the division can be concealed by devices like that of the Staffordshire potteries' agreement. "The award when given in such general arbitration shall be signed by the umpire and the arbitrators, and shall be issued as their joint award, signified by their individual signatures thereto, and nothing shall be divulged by any of them, or appear on the face of such award, to signify whether the umpire and arbitrators are unanimous in their decision, or whether it is only the award of the majority of them."¹ It may, however, be questioned whether makeshifts of this kind are really of much avail. For is it not highly probable

¹ *Strikes and Lock-outs*, 1892, p. 217. There is the same rule for the National Arbitration Board, agreed upon in 1901 between the American Newspaper Publishers' Association and the International Typographical Union (*Industrial Commission*, xvii. p. 367).

that, in spite of, or perhaps partly because of, them, the Board will be *thought* to have disagreed, and is not this the important point? Except, therefore, when the opinion of the parties tends strongly in favour of multiplicity, it seems clear that the panel had best be a single man.

§ 10. Finally, we have to consider the method of an arbitrator's appointment. There are several different ways in which he may be chosen.¹ Perhaps the most satisfactory is that of the Durham Wages' Board, where he is elected at the first Board meeting of each year. Annual election of this kind, while not incompatible with prolonged tenure of office, avoids some of the dangers involved in a permanent or very long appointment. For, great friction might arise if one side came to consider the arbitrator at once irremovable and biassed in favour of their opponents. Furthermore, election at fixed periods is superior to election *ad hoc*, because an arbitrator is most likely to command confidence if he is chosen by agreement of both sides, and he will seldom be so chosen if his election is deferred until after a difference has arisen.

When, in spite of these considerations, an *ad hoc* appointment is preferred, the most obvious arrangement is that the parties should first try to agree on an arbitrator, and, if unsuccessful, should accept one nominated by an impartial outsider. There is, how-

¹ The Window Glass Cutters' League of North America has the following interesting method of selection: "If the arbitrators cannot agree on the referee, then each arbitrator shall write two names of disinterested parties, not in any way connected with the glass business, on slips of paper, and all names put into a bag, and the first name drawn out shall be the person selected as the referee" (Rule 18, *Ibid.* p. 365).

ever, a danger that they may try, *and fail*, to agree on the very man who is afterwards imposed on them from without, or that they may have urged against some other suggested name reasons which hold equally as against him.¹ It is, therefore, more satisfactory for them to nominate an impartial person, such as the Speaker of the House of Commons, whose duty it shall be to appoint an arbitrator when requested to do so, no name having previously been discussed by the Conciliation Board.²

¹ *e.g.* in the boot and shoe arbitration, 1893, the masters refused to accept Sir Charles Russell as arbitrator on the ground that he was a politician, and the impartial outsider subsequently chose Sir Henry James.

² It is, of course, possible that, even when a standing arbitrator is appointed annually, the Conciliation Board may sometimes fail to agree on a name. To meet this case it was provided in the constitution of the Federated Coal Board, 1893, that if the two sides could not agree on a chairman at their annual meeting, the Speaker was to nominate him. Under similar circumstances, in Northumberland, the chairman of the County Council nominates after conferring with the parties. The justification for an attempt at agreement previous to outside nomination in these cases is that the probability of success is much greater than it is in the case of *ad hoc* appointments.

CHAPTER III

THE PROBLEM OF MEDIATION

§ 1. THE general argument of the last two chapters has shown incidentally that interpretation differences are resolved more easily than general questions. There is, indeed, no doubt that very much stronger sanctions can be set up for the peaceful settlement of controversies between groups of persons comprised within superior organisations than is possible in the case of disagreement between the main bodies of these organisations themselves. Consequently, of the many peace-promoting schemes initiated within different industries, those for dealing with minor matters have attained the greater measure of success. No doubt, their prospects are less good when the connections between the branches and the dominant organisations are loose and indefinite than when they are finely wrought. Still, they are in the main, as the history of the Durham and Northumberland coal industry suggests, decidedly better than those of general wages' boards. The problem of determining what should be done in any industry when, through the non-existence or the failure of a Conciliation Board, a dead-lock has occurred, is, therefore, more relevant to general than to minor questions.

The first solution which needs to be considered is that of friendly mediation. In behalf of this the general argument is strong and straightforward. When once a difference has become accentuated, and, still more, when it has developed into an open conflict, both sides are apt to be striving for the "mastery," as well as for the particular object in dispute. They stand to lose dignity as well as money, and, consequently, their obstinacy will exceed anything which the material point alone could warrant. Not only is this, as a matter of fact, the case, but it is frequently known to be so by the parties themselves. They will often have considered some matter worth the *chance* of a rupture, but not worth the certainty of one.¹ Hence, when the rupture actually arrives, all that may be needed is some device for facilitating withdrawal, without undue loss of dignity, from a position assumed for purposes of bluff. Even if, in the earlier stages of a conflict, such a provision is ineffective, a point is sure to be reached sooner or later when one party would be willing to yield, if it could "save its face" in doing so.² Hence the opportunity for the "good offices" of a mediator. The mere suggestion from him that a conference should be held may, in some cases, of itself suffice to bring about a settlement;³ and, where it falls short of this large measure of success, tact and a genial luncheon party⁴ may still indirectly

¹ Cf. Appendix A, §§ 8 and 10.

² Cf. Jeans' *Industrial Conciliation and Arbitration*, p. 9.

³ *e.g.* in 1893 a case occurred in which "the offer of the (London Conciliation) Board to assist in securing a settlement was followed by the termination of the dispute without the necessity for any further action on its part" (*Econ. Jour.* 1895, p. 140).

⁴ Cf. Mr. and Mrs. Webb's opinion of the efficacy of Lord Rosebery's

advance the prospects of peace. For, in the presence of a mediator, the element of "proper pride" and "courage never to submit or yield" is eliminated by the suggestion that reconciliation is made as a favour to a friend and not as a concession to an adversary.¹

In many cases, good offices which do not effect an actual settlement may secure that a difference shall be resolved by arbitration instead of by industrial war. Perhaps the most effective way in which a mediator can forward this result is by helping the disputants in the difficult task of finding some mutually acceptable person to decide between them.² In this matter the assistance of the British Board of Trade is frequently invoked, the rules of no less than thirty-five Conciliation Boards providing for the reference of differences which they cannot themselves settle to an arbitrator appointed by it.³ In the same way, an increasing number of joint agreements in Massachusetts stipulate for the reference of such differences to the decision of the State Board.⁴

§ 2. Since there is, thus, scope for mediatorial intervention, it becomes important to examine the different institutions through which it may be made to work.

luncheon party in conciliating the parties in the coal dispute of 1893 (*Industrial Democracy*, p. 242).

¹ Cf. Report of the New York State Board, 1895 (*Industrial Commission*, xvii. p. 455).

² *Labour Commission*, Report, § 307, p. 101.

³ Report on the Conciliation Act, 1901, p. 10. The rules of the Brass Foundry Board are typical: "Any matter which cannot be amicably settled by the Board shall be referred to the Board of Trade to be dealt with under the Conciliation Act" (*Strikes and Lock-outs*, 1897, p. 128). Cf. also the recommendation made by the National Plumbing Board to the Local Boards (*Ibid.* 1897, p. 123).

⁴ Cf. Gilman, *Industrial Peace*, p. 338.

There are three kinds of mediators—the eminent outsider, the voluntary Board, and the Board connected with some part of the governmental system of the country. These are not mutually incompatible, but can advantageously be used to supplement one another. The great advantage of the first is that the intervention of men like Bishop Westcott,¹ Lord Rosebery,² Lord James,³ or Mr. Asquith,⁴ of itself tends somewhat to smooth the course of events by flattering the disputants with a sense of their own importance. The ordinary Board of Mediation, whether voluntary or official, has not, as a rule, such great names to conjure with, and is, so far, inferior. Hence, for a certain class of cases, the distinguished outsider cannot be dispensed with.

§ 3. On the other hand, a Board, since it is always in being, is more readily brought into play, and has a better chance of making its voice heard in that breathing space before a strike or lock-out actually begins, when mediation is most likely to succeed.⁵ Hence, it too has its sphere of usefulness—at all events so long as its members are not paid in a way which tempts them to foster disputes.⁶

¹ The Durham Coal Strike, 1892.

² The Federation Coal Strike, 1893.

³ The Clyde and Belfast Engineering Dispute, 1895.

⁴ The London Cab Strike.

⁵ Cf. *Industrial Commission*, xvii. p. 444, on the Massachusetts Board: "When once a strike has reached an acute stage, and the feelings of the parties are strongly aroused, efforts at mediation or arbitration are not apt to be successful." Cf. also the report of the New York Board for 1895 (*Ibid.* p. 455): "Disinterested (private) citizens are diffident about meddling in these disputes. A strike may go on indefinitely without an effort to adjust differences."

⁶ Cf. Judge Backhouse's Report on the New Zealand Conciliation Boards (U.S. Bulletin of Labour, No. 40, p. 553).

It is, indeed, sometimes urged that the above conclusion only holds good of Boards partaking of an official character. Whereas, it is said, in this country a great number of voluntary Boards have been set up by the Chambers of Commerce and Trades Councils of different towns,¹ none of them, except the London Board, has produced the slightest effect. In short, according to this argument, the voluntary system has been tried and found by experience to be worthless. The evidence adduced, however, is inadequate to support so sweeping a conclusion. The Boards which have failed are exclusively *municipal* Boards, and, with labour organised as it is in England, the conduct even of purely local differences is not likely to be left altogether to the men on the spot. May it not, then, be fairly urged that the failure of these Boards is due, not to their voluntary character, but to the narrowness of the area which they cover; and does not the comparative success of the London Board add weight to this suggestion? If, however, the facts can be thus explained, they do not warrant us in supposing that local voluntary Boards would fail if tried on the less completely unionised soil of the Continent. Still less do they prove that a voluntary *national* Board, like

¹ The following extract from the rules of the Derby Board is typical of the character of most of them: "As soon as it shall come to the knowledge of the secretaries that any serious labour difficulty has arisen, it shall be their duty immediately to summon a meeting of the Board, to consider the propriety of offering its services with a view to the peaceful settlement of the difficulty. If it shall be decided to do so, the secretaries shall address the disputants, inviting them to a friendly conference, to be either strictly private, as between the disputants themselves, or to be held in the presence of the members of the Board at the discretion of the disputants" (*Strikes and Lock-outs*, 1891, p. 328).

that suggested by Mr. Ritchie in 1899,¹ and, under the name of the "Industrial Department of the National Civic Federation,"² actually adopted, with the most encouraging results, in the United States, would fail in the United Kingdom.

§ 4. Nevertheless, though to refuse a place to voluntary Boards would be foolish, there are undoubtedly certain advantages, available to governmental agencies, which lie beyond their reach. In the first place, the latter possess exceptional facilities for ascertaining the existence of differences at the earliest possible moment. Administrative officials can be required, as under the arbitration law of Massachusetts, to supply them with immediate information whenever a strike or lock-out occurs or is seriously threatened.³ In the second place, they have greater financial resources, and are likely to be more liberal in the use of them.⁴ Thus, it is probable that the trained

¹ Cf. *Econ. Jour.* 1899, pp. 147 and 337.

² Cf. Paper by Hon. Oscar Strauss, *Annals of American Academy*, July 1902, p. 37 *seq.*

³ Willoughby, *State Action in Relation to Labour*, p. 89. The importance of this early information is brought out in the reports of the New York Board, where it is observed that State mediation before the event is in many ways of greater moment than State arbitration after it (cf. Cummings, *Quarterly Journal of Economics*, i. 495). Of course, when the mediatorial agency is allowed to intervene on its own initiative only after a strike has begun, as in the French law of 1892 (*Industrial Commission*, xvii. p. 511), its ability to get early information becomes of less value. There does not appear, however, to be any valid reason for this restriction upon the justices' discretion (if it be granted that they are intelligent enough to act at all), and it is not imposed upon either the voluntary Boards in England or the State Boards of the U.S.A.

⁴ Thus the cost of proceedings under the French law are included among the compulsory expenses of the Commune or Department concerned (*Ibid.*).

ability which the Board of Trade can command has a good deal to do with the preference displayed for it, as against local Boards, by the parties to disputes covering a small area. Lastly, when, as on the plan adopted in England, the emissaries employed are sent out directly from a central State department, instead of being, as in France, mere local officials endowed with mediatorial powers, they are likely to wield a modicum of reputation which may help them considerably in their work.

§ 5. Thus, we conclude generally that eminent outsiders, voluntary Boards of Mediation, and official agents of mediation are all valuable in their spheres. It must not, however, be forgotten that they are also dangerous. As an indirect effect of their presence, the development of peace-promoting machinery within separate trades—a far more effective solution than non-compulsory good offices are ever likely to be—may be checked. To prevent any such result, discretion on the part of the intervening body is essential. It should never arrogate to itself the claim to more than a transient usefulness, and should carefully encourage—as the British Board of Trade,¹ and the American Civic Federation aim at doing²—the formation of mutual Boards in the industries with which it is brought into contact.

¹ Conciliation Act, 1896.

² Cf. Gilman, *Industrial Peace*, p. 299.

CHAPTER IV

THE PROBLEM OF COERCIVE INTERVENTION

§ 1. JUST as differences may prove too hard for voluntary conciliation schemes, so too they may defy the efforts of mediators. The possibility, or rather, except in the developed industries of countries which have reached a high stage of industrial peace, the frequent occurrence, of these intractable controversies raises the question whether, and how far, resort should be had to the coercive powers of the State. Intervention of this kind may take place in a great variety of ways. In the first place, reference must be made to those schemes which empower disputants to enter the net of compulsory adjudication whenever both of them wish to do so. Of such schemes examples in actual life are fairly numerous. In New South Wales, Mr. Wise's recent measure empowers any industrial Union to make an agreement relatively to any industrial matter with another Union or with an employer, which, "if made for a specified term not exceeding three years, and, if a copy be filed with the registrar, will be binding on the parties thereto, and on every person while he is a member of any Union which is a party to the agreement"; and declares "that any such agreement, as between the parties bound by

the same, shall have the same effect and may be enforced in the same way as an award of the Court of Arbitration.”¹ The second part of the New Zealand law contains provisions identical with this in all essential respects.² Mr. Mundella’s abortive English Act of 1872, the Massachusetts provision that, when both parties refer a difference to the State Board, the decision automatically becomes binding, and the Federal Railway Act of 1898, enabling interstate carriers voluntarily to establish Arbitration Boards with compulsory powers,³ are similar in character and intention. The English law has proved a dead letter, and was repealed in 1896, but those of Massachusetts and New Zealand have had such measure of success that Mr. Gilman in America,⁴ and a minority of the Labour Commission in⁵ this country, recommend that Trade Unions and Employers’ Federations should be endowed with so much of legal personality as would enable them to enter into binding industrial agreements.

In opposition to this policy it is urged, first, that, when once arbitration has been agreed upon, a sense of what is fair and a wholesome respect for public opinion already afford an adequate guarantee that awards will be obeyed; secondly, that the introduction of a legal sanction would so far destroy the honourable one that the *net* sanction would be no stronger than before; and thirdly, that, through the association in the popular mind of the idea of compulsion with

¹ *Labour Gazette*, Feb. 1902, p. 39.

² Text of the Law, Part II.; *Industrial Commission*, xvii. p. 524.

³ *Ibid.* p. 423.

⁴ *Methods of Industrial Peace*, p. 401.

⁵ Report, p. 116.

that of arbitration, "resort to [Conciliation Boards] for their various purposes would be made less freely than at present."¹ On the other side the following answers may be made. First, as is shown later on in this chapter, legal sanctions *can* be made so powerful that their attachment to an award is practically certain to procure its execution.² Secondly, since non-coercive arbitration would still be open to those who preferred it, there is little reason to believe that differences which, save for the change, would have been settled peaceably, will now involve a conflict. Thirdly, the effect of coercive sanctions in checking resort, even to those Courts to whose awards they are attached, is much slighter than is generally supposed. In some cases their influence would actually tend in the opposite direction. In differences where each party considered itself, and knew that the other party considered itself, the stronger, there might be no settlement procurable under a system of weak sanctions, from which one or other of them would not think it worth while to break away. Under such circumstances arbitration might be declined from dislike to the risk of these ineffective sanctions. If, however, the sanctions offered were strong, the case would be different. A series of possible settlements would be opened up, which, when awarded, could not be profitably violated by either side; and the risk of which both would be willing to incur, since the extra loss involved in failure would be balanced by an extra gain in

¹ *Labour Commission*, Report, p. 99. Of course, universal compulsion in awards unaccompanied by universal compulsion of reference would have this effect in a far more marked degree.

² Cf. post, § 4.

success.¹ Finally, the power to invoke legal sanctions may strengthen the hands of the leaders of either organisation against their discontented followers. This consideration is especially important when, as in the United States, the direct control of the Executives over individual members is comparatively slight. It is not, however, to be ignored even here, for, though, in our greater Unions, breaches of award in defiance of the central authority are rare, among the low-skilled industries they are fairly common.² On the whole, therefore, the case seems to be made out for some system under which opportunities for referring differences to a Court with legal powers is given to those who desire to avail themselves of it.

§ 2. Closely related to the above problem is the question whether it should be competent for organisations of employers and employed to invoke State aid in "extending" agreements to persons who have not directly participated in framing them. In the Australasian colonies several laws to this effect are in operation. In New Zealand the authority of the Arbitration Court has been gradually developed. At first it could only settle the dispute immediately before it, but "in 1900 the scope of awards was extended to bind, without further proceedings, any one who, during their currency, should enter any industry regulated by them. Power was also given the Court to extend an award so as to include any employer or Union, not a party thereto, but engaged in the same industry as that to which the award

¹ Cf. Appendix A, § 11.

² Cf. *Labour Commission*, Report, p. 53. Cf. the Grimsby fishing dispute and the attitude of the Gasworkers' Union.

applied.”¹ The New South Wales Legislature comes to the same point still more directly, enacting that “in any proceeding before it, the Court may . . . declare that any practice, regulation, rule, custom, term of agreement, condition of employment, or dealing whatsoever in relation to an industrial matter shall be a common rule of an industry affected by the proceeding.”²

In the laws of both countries it is provided in effect that any person or group of persons, to whose work an award has been thus “extended,” may lodge a protest and demand to have the special circumstances of his case considered; and provision is also made for allowing exceptional rates to old or inferior workmen.³

¹ Reeves, *Econ. Jour.* Sept. 1902, p. 324.

² Law, § 37 (1). The New Zealand amendment of 1901, and the New South Wales provision that any Union, whether registered or not, may be made a defendant and bound by an award, may suggest that non-Unionists can escape. But this is not really the case in either country, because, when all employers can be bound (*e.g.*) to pay a given wage, it is obvious that all employes who choose to work for them are similarly bound to receive it.

It may also be suggested that the existence of a registered Union among *some* of the workers in a trade is necessary to enable an industry in which the workmen are oppressed to be interfered with. In New South Wales, however, good employers may, in these cases, initiate a “proceeding” by summoning bad ones, while the registrar can bring before the Court any matter whatsoever. In New Zealand it appears to be true that a trade, in which none of the employes are Unionists, may escape, but, on the other hand, since any five persons can constitute a registered Union for the purpose of the Act, such a condition of affairs is hardly likely to arise.

³ New Zealand Act, § 68; New South Wales Act, § 36 (a), 37 (2), 38. There are similar reservations with regard to the wages *minimum* in Victoria, introduced into the *amended* Factory and Workshops Act of 1900 (Webb, *Industrial Democracy*, 1902 edition, xxxviii.).

In favour of authoritative extension it may be urged, first, that, for lack of it, agreements entered into by the great majority of those engaged in an industry are liable to be disrupted by the competition of a few "bad" employers,¹ and, secondly, that State action is proved to be an effective remedy, since the New Zealand law "is generally conceded to have accomplished the prevention of undercutting by a few unscrupulous employers, to the prejudice of the fair-minded majority."²

On the other side, however, several answers of weight may be given. In the first place, State action of the kind contemplated would dangerously facilitate the formation of rings and alliances to the detriment of consumers. Secondly, there would always be immense practical difficulty in determining the lengths to which extension should be carried. For, the similarity between the products of different districts in an industry is often more apparent than real, and, when this is the case, the maintenance of a parallel

¹ Cf. Marshall, Preface to *Industrial Peace*, p. xii. An illustration of the effect of this kind of competition is afforded by the statement of a firm of brick-makers given in the Blue Book on strikes and lock-outs for 1892. This firm writes: "Our neighbour and ourselves were the only firms who gave way to the demand of the workmen, the rest of the manufacturers in this district stopping their works the whole of the season. Our neighbour gave in at once, as he holds his brickfield under a lease, and is obliged to pay a royalty on a minimum quantity, whether made or not. We did not consider that the prices realised for bricks justified the men in asking for an advance, but we felt compelled to give in, in order to protect ourselves against our neighbour, who would not only be making an extra price by the stoppage of our works, but would be taking our customers," *Strikes and Lock-outs*, 1892, p. 157.

² Mr. V. S. Clark's report to the U.S. Bureau of Labour on New Zealand conditions (quoted by Gilman, *Industrial Peace*, p. 394).

movement between the rates prevailing in them is not in accordance with the conditions of demand and supply. This difficulty may be illustrated from the voluntary arrangements which have prevailed at one time or another in this country. Thus, in 1874 a combined scale was constructed for the iron trade of the Midlands and the north of England. In the north, however, iron rails were still the chief product, while in the Midlands manufacturers were already engaged in producing bars, plates, and angles. For the former the market was falling, but it was rising for the latter, with the result that the employers of the north were compelled, at the first adjustment under the scale, to raise wages 3d., although the price of their own chief ware was falling. Consequently, the scale collapsed within the year. Similarly, there existed for some time in many parts of Lancashire an understanding that the wages of cotton-spinners should rise and fall with advances and reductions in the Oldham district. But, "the increasing specialisation of districts, with respect to the yarns produced in them, was instrumental in rendering unworkable an arrangement which had at least been possible, if not desirable, some time before. What had been one market for yarns, roughly speaking, became many markets; and the prices for different ranges and qualities of yarn beginning to move more independently, rendered any sliding arrangements between the lists unsatisfactory."¹

It is true, no doubt, that a policy of "extension" does not absolutely require a rigid parallelism in the movement of rates between the different districts,

¹ Chapman, *Econ. Jour.* 1899, p. 598.

since the horizontal adjustment between them might be revised periodically. Though, however, by this device, one difficulty would be removed, it would only be at the expense of introducing another. For, the varying circumstances of the different districts and factories would demand greater elasticity in the "extensions" than the patience and wisdom of the officials concerned would often prove adequate to afford. This difficulty has been found a serious one even under the compulsory policy of Victoria. Though due provision is made for permitting inferior workmen to accept less than the standard wage, yet, "except in the case of old servants, employers are chary of employing men with a license. There is, first of all, the dislike of both masters and men to asking for the permit, and, in the second place, the employers do not wish the public to think they are paying wages below the minimum, being afraid that it may imagine a wrong cause for their doing so."¹ Thus, authoritative extension not infrequently leads to a number of men being thrown out of employment, who might otherwise have been working with advantage both to themselves and to the community. Finally, when the workpeople's organisation is powerful, extension by authority is superfluous, because private enterprise is sufficient to ensure it. The employers are anxious to have recalcitrant competitors brought into line, and the workpeople are no less anxious to help them. Hence, "Trade Unions assist employers' associations to coerce employers into submission to an agreement which they have not signed," and "collective bargain-

¹ Judge Backhouse's Report on the working of the Victoria Wages Board (U.S. Bulletin of Labour, No. 40, p. 560).

ing thus extends over a much larger field than trade unionism.”¹ In Illinois, for example, the United Mineworkers’ Society “is expected to strike or threaten to strike in order to bring the rebellious operators to terms,”² and in practice it has generally been successful in securing this result. Hence, on the whole, it does not appear that “authoritative extension” is a policy worthy of adoption—at all events in a country which has held aloof from authoritative arbitration in general.

§ 3. In the next place it is necessary to consider those groups of schemes which compel the reference of differences to arbitration without the previous consent of the parties. The case for this class of coercive intervention is generally based upon the injury done by industrial disputes to persons other than those directly engaged in them. It is not often developed merely from a consideration of the interests of the disputants themselves, since an argument upon those lines would need to surmount the grave *prima facie* objections to all forms of paternal legislation.³

The reality of the diffused injury involved in forced stoppages of work does not require elaborate demonstration. No doubt, in certain cases, the direct loss may be largely compensated by the stimulus indirectly given to improvements in machinery, organisation of work, and so forth. Mr. Nasmyth, for example, in his evidence before the Trades Union Commission of 1868, put this point very strongly. “I believe,” he

¹ Gilman, *Industrial Peace*, p. 116-17.

² *Industrial Commission*, xvii. p. 329. Cf. J. R. Commons, *American Review of Reviews*, March 1902, p. 333.

³ Cf. Sidgwick, *Elements of Politics*, p. 131.

said, "that if there were a debtor and creditor account made up of strikes and lock-outs with the interests of society, up to a certain point they would be found to have been a benefit. Such has been the stimulus applied to ingenuity by the intolerable annoyance resulting from strikes and lock-outs, that it has developed more than anything those wonderful improvements in automaton machinery that produce you a window frame or the piston rod of a steam-engine of such an accuracy as would make Euclid's mouth water to look at. These things are pouring in in quantities as the result of the stimulus given to ingenuity through the annoyance of strikes. It is not being coaxed on by some grand reward in the distance, but I think a kick from behind is sometimes as useful as a gentle leading forward in front."¹ These indirect effects of conflict are, of course, important, and the benefit of them tends, in the long run, to be distributed among the community as a whole. But, it would be paradoxical to maintain that the reaction of the industrial organism against the evils threatening it ordinarily outweigh those evils themselves. By adapting itself to injurious changes of environment it can, indeed, lessen, but it cannot altogether abolish, the damage to which it is exposed. An excellent parallel is afforded by the case of a blockade instituted by one power against the ports of another. The im-

¹ *Minutes of Evidence*, p. 71. Clifford (*Agricultural Lock-out*, p. 179) describes the way in which farmers were stimulated by the 1874 dispute to improve their organisation, and to do the same work as before with fewer men. In like manner, the anthracite coal strike in the United States seems to have led to the invention of economical methods of employing other fuels which "have come to stay" (cf. *Economist*, Oct. 25, 1902, p. 164).

mediate effect upon neutrals is an obvious, and sometimes a considerable, injury. By altering the direction and character of their trade they may reduce the extent of their losses. It is conceivable that, in a particular case, the search for new trade openings may lead to the discovery of one, *which otherwise would not have been found*, and which is possessed of advantages great enough to outweigh all the evils of the blockade period. Any such result is, however, extraordinarily improbable, and nobody, on the strength of it, would dream of suggesting that blockades in general are likely to do the world more good than harm. So with industrial disputes. It is conceivable that one of them may stir to action some otherwise mute, inglorious inventor; but, it is immensely unlikely that it will, at best, do more than slightly antedate his discovery. On the other side there is the dead loss to the world of the surplus satisfaction dependent upon those services of capital and labour which would have been, but are not, rendered by persons engaged in the affected industry.¹ There is a further loss of the same kind from the consequential stoppage of employment in the related industries, whose raw material is cut off, or whose products cannot be worked into their final stage. There may be injury of a more lasting character to the workpeople whose industrial career is thus interrupted, lasting debts contracted to meet a temporary emergency, permanent damage to their children's health through the enforced period of in-

¹ The net contraction in these services is not, of course, measured by the immediate contraction in the firms affected by the dispute; for, the stoppage probably leads both to more work at the same time elsewhere and to more work in those establishments themselves at a later time.

sufficient nourishment. To have enumerated these evils is implicitly to have recognised that the net amount of them is different in different industrial disputes. It varies, partly with the degree to which the commodity, whose production is interrupted, is consumed by the poorer classes; partly with its necessity for the continuance of life, health, security, and order; partly with the extent of the interdependence between the industry primarily affected and other industries. It is thus evident, both that the preservation of peace in the separate industries is, in general, a matter of importance to the community as a whole, and also that the degree of importance attaching to it is greater in some cases than in others.

§ 4. In order to complete the *prima facie* case for intervention it is necessary to show, not only that there is an evil in existence, but also that coercive action may be expected in some degree to mitigate it. In other words, we have to prove that the compulsory reference of any particular controversy to an arbitration court, with or without legal powers, is likely to make the occurrence of a stoppage of work less probable than it would otherwise be. It is necessary to insist upon the fact that this is the form in which the question ought properly to be put. In many discussions of compulsory arbitration, critics of that policy argue as though they had destroyed its basis when they have shown that, in cases of extraordinary obstinacy on the part of workmen or employers, industrial awards could not be enforced. This statement is, no doubt, correct, but it is not relevant to the practical issue. When Sir Edward Fry asks how people are to be compelled to continue in a particular

industry at a loss,¹ the answer is that they cannot be so compelled. When others point out that workmen, desirous of violating an award, could evade the payment of a fine by breaking up their Union, and could not, without great inconvenience, be distrained upon or imprisoned, it must again be admitted that the contention is sound. But, to prove that a law is likely sometimes to fail in its purpose, is a very different thing from proving that it ought not to be passed. If an argument of that kind were admitted, it would lead to the repeal of almost every enactment in the Statute book. It is not impossible for murderers and incendiaries both to break the law and to escape the penalty. Judges may order a mother to deliver up her child to the custody of such and such a person; but, if she chooses to disappear, or, in the last resort, to destroy either the child or herself, they cannot compel her to obey. Nobody, however, cites these obvious facts to demonstrate the folly of our laws. It is always *possible* for people, who desire to do so, to commit acts injurious to the State. The relevant question is, "Can an Act of Parliament make it *less likely* that they will do this?" If so, how much less likely, and at what expense in incidental disadvantages?"

In order to establish the *prima facie* case for intervention, all that is necessary is an affirmative answer to the first of these three questions. Such an answer, it would seem, must inevitably be given except in regard to cases where awards can be violated in ways which it is impossible to prove.

¹ Cf. his paper, "Conciliation and Arbitration in Wage Disputes," *Law Magazine and Review*, Nov. 1898.

This latter condition appears to be realised in regard to violations of a collusive character. When, for any reason, a group of employers and employed agree upon terms different from those imposed by the Court, no permission to inspectors of factories,¹ or the registrar of Trade Unions,² to initiate proceedings against them is likely to have much effect. For, under these circumstances, there are innumerable ways in which their action can be concealed—perhaps the most obvious being the open payment of legal wages, immediately followed by some reverse transference of money not mentioned in the books. This difficulty is almost certain to occur when awards are “extended” from one district to another, and is noted by Miss Collet as being widely prevalent in the Chinese factories of Victoria.³

In the absence of collusion, however, the case is different. No doubt, when the method of violation is, not an open cessation of work, but a policy of “ca’ canny,” it is technically difficult to prove the facts.⁴ But there is no reason to suppose that the difficulty will be greater than that frequently experienced in ordinary litigation; in either case the business of the Court is to sift the question as fully as it can, and to pronounce judgment upon whatever evidence is available. The possibility of error suggests, indeed, that the sanction of opinion or of law will sometimes

¹ As in the New Zealand Amending Act (*Labour Gazette*, March 1902, p. 70).

² As in the New South Wales Act, 1901 (*ibid.* Feb. 1902, p. 39).

³ *Econ. Jour.* Dec. 1901, p. 561. In Appendix A it is shown that the temptation to collusive disobedience begins when an arbitrator fixes the wage outside the *locus of settlement rates*.

⁴ Stress is laid upon this point by “Z” (*Econ. Jour.* 1899, p. 87).

be applied wrongly; but, it does not affect the question whether these sanctions are real or imaginary. That problem can be solved most readily by an examination of the procedure available under each of them in turn.

In the first place, consider the *sanction of opinion*. A practical application of it is found in the arbitration schemes of Massachusetts¹ and Indiana² and in the Federal Railway Act (since superseded) of 1888.³ The Court is legally empowered, when a dispute is in progress, to do everything necessary for the formulation of a sound judgment upon its merits. Employers' books may be called for and witnesses compelled to attend. Finally, a report is drawn up upon the whole matter, and may be published by governmental authority.⁴

Decisions announced in this, or any other way, by investigators having access to the necessary information are bound to influence opinion in some degree. At present, in labour conflicts, one set of newspapers almost invariably takes the side of the employers and another that of the employed, with the result that the general public is too confused and divided to bring effective pressure to bear upon either. The history of the Dock strike, however, shows that, on those rare occasions when it is in any measure united, the moral force of its opinion is very great. On that

¹ *Industrial Commission*, xvii. p. 440.

² Gilman, *Industrial Peace*, p. 343.

³ *Industrial Commission*, xvii. p. 423.

⁴ In his independent report as a member of the Labour Commission, Sir John Gorst expressed himself as personally in favour of the adoption of a scheme along these lines in England (*Labour Commission, Report*, p. 149).

occasion the employers declared that they yielded in consequence, not of the effects of the strike itself, but of pressure from outside.¹ Its force is also often felt in obviating what are popularly considered unfair methods of warfare. Hence the anxiety of both sides in a labour dispute to put their case in the best light before the public, and not to be thought to demand anything injurious to complementary groups of workpeople. Hence, also, the hesitation with which mine-owners and railway companies employ their power of evicting those strikers who are also their tenants. Nor is the moral force the only one available, for, in these days of "shilling funds," sympathy has a way of translating itself into the material form of pecuniary assistance.² If, then, by means of an authoritative official pronouncement upon the merits of a dispute, the sympathy of impartial persons could be definitely enlisted in favour of a particular solution, a real sanction would be attached to that solution and the prospect of its adoption strengthened.

The sanction of legal enforcement may assume either of two forms. The first of these consists in pecuniary fines, and is widely adopted in Australasia. In New Zealand the violation of an award is penalised to an amount not exceeding £500, assessed in the first instance upon the offending organisations. To prevent evasion by dismissal or "strike in detail" the Amendment Act of 1900 lays down that the dismissal of any worker, or his discontinuance of work, before the

¹ Cf. Mr. Norwood's letter (*The Dockers' Strike*, p. 137).

² Cf. Mr. Burns' account of the support given to the dockers by the East End shopkeepers in 1889 (*New Review*, Oct. 1899, p. 420, etc.).

dispute is disposed of, shall be finable to the extent of £50, unless the Court is satisfied that such stoppage was not connected with the dispute.¹ It is further provided that, if the property of an Industrial Union "is insufficient fully to satisfy the judgment debt, its members shall be liable for the deficiency,"²—a provision the execution of which is thought by some to be practicable, because in New Zealand "a very large proportion of the Trade Unionists own their own houses."³ Lest individuals should escape liability by resigning membership of the Union, the Act also stipulates that such resignation may only take place after three months' notice has been given of the same.

Despite these precautions it must, no doubt, be admitted that, if the workpeople are the recalcitrant party, and if their Union is ready to divest itself of its corporate funds, the efficacy of the above sanction cannot be other than slight. To distraint upon the goods of 100,000 men is not an easy task, and the ultimate threat of imprisonment, though originally included in the New Zealand law, and still contemplated in those of South Australia, New South Wales, West Australia, and, for cases of "wilful and contumacious disobedience," Indiana,⁴ is likely to evoke so much sympathy for the victims that it is practically excluded.

¹ *Labour Gazette*, March 1902, p. 70. The Chicago Strike Commission proposed a similar regulation in connection with the suggested system of compulsory arbitration upon American railways (cf. Schloss, *Econ. Jour.* 1895, p. 85).

² Act as amended in 1898, §§ 75-81 (6).

³ Lloyd, *A Country without Strikes*, p. 149.

⁴ *Industrial Commission*, xvii. p. 434.

To divest itself of its funds and to scatter them among its individual members is, however, a serious matter for a Trade Union. To escape the legal penalty in this way is not, therefore, to escape all penalty. The necessity for self-destruction, if an award is to be broken and a fine avoided, itself constitutes a sanction of considerable weight. Indeed, it may be expected that, unless the fine was very large, this method of escaping it would be considered a far more serious blow than the payment of several times its amount. Hence, in general, legal enforcement by the method of fines adds a real sanction to the awards to which it is attached.

Furthermore, among a people respectful of law, it may fairly be argued that the infliction of a fine will stand for a symbol and will marshal the forces of opinion in a way that a non-official "recommendation" could not do. When this is so a small material penalty will carry with it a much more considerable moral one.

Lastly, procedure by fine is not the only method of legal enforcement. On the part both of employers and of employed there is always a margin between the wage rate which they would elect to resist by a temporary stoppage of work, and that which would drive them to abandon the industry altogether. Of this margin the State can make use in two distinct ways.

On the one hand, in certain specially situated industries, it is in a position to threaten either side with expulsion from their occupation unless the award is accepted. When, for instance, as in ordinary or street railways, a business depends upon franchises

granted by authority, it may be made a condition of the original concession that any refusal to accept the awards of a properly constituted court shall cause the concession to lapse.¹ Pressure of an analogous kind may be brought to bear upon those classes of workpeople on whom it is practicable to impose the tenure of a license as a condition precedent to the exercise of their calling; refusal to accept an award may be penalised by the withdrawal of the license.

On the other hand, a method identical in effect, but of wider application, consists in direct support by the State to the party in whose favour the Court has decided. If it is the employers who are obdurate, Government can forcibly prevent them from obtaining other workpeople, and, meanwhile, maintain their old workpeople, either by distraint upon their goods, or at the expense of the revenue. If the fault lies with the workpeople, it can, by stringent regulations against picketing, by "police power, backed at need by military power,"² make it impossible for them to interfere with their employers' business: if need arises, it may help the latter to continue at work with men drawn from the united services, or, in certain cases, specially trained beforehand;³ or, finally, it may resort to the policy of a direct subsidy. By differential treatment upon these lines, it can make it absolutely certain that the party resisting the decision of the Court shall be

¹ Cf. Mitchell, *Organised Labour*, p. 345.

² J. B. Clark, "Authoritative Arbitration" (*Pol. Sc. Qrly. Dec.* 1902, p. 558).

³ The new Dutch railway law constitutes a permanent official railway brigade for the express purpose of dealing with railway strikes (cf. Pierson, *Econ. Jour. Dec.* 1903, p. 549).

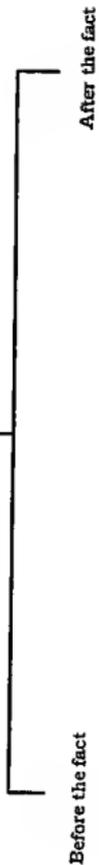
defeated in the ensuing struggle, and shall thus be deprived of any third way between surrender and a permanent change of occupation. Nor is resort to such measures rendered impracticable by the chaotic character of the procedure which they would involve. They cannot be laughed out of court as meaning a ceaseless conflict between the executive and rebellious associations of employers or employed. For, the certainty of their success is such that, so soon as the Government was understood to be determined upon them, resistance would never take place. At the worst, a single exhibition of force would be sufficient :

That great two-handed engine at the door
Stands ready to strike once and strike no more.

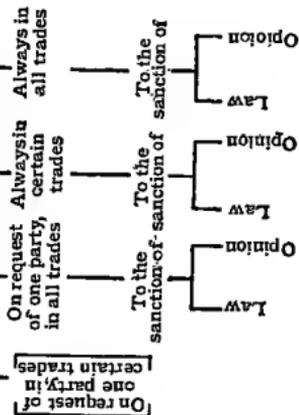
The sanction of this form of legal enforcement is the most powerful of all that are available.

§ 5. The *prima facie* case for intervention is thus established. Industrial conflict involves grave evils to the community at large, and, by resort to the sanction of opinion or of law, the probability that such conflict will occur can be reduced. We have now to enter upon a general inquiry as to what, if any, forms of coercive policy these considerations tend in practice to justify. The number of possibilities is so great that, in order to an intelligent discussion, some attempt at classification is necessary. There is, therefore, offered on the opposite page a logical tree embracing various conceivable kinds of arbitration law. Certain of these are evidently impracticable. Thus, sporadic coercion by Act of Parliament cannot in real life be levelled against particular employers and employed merely upon the ground that a stoppage of

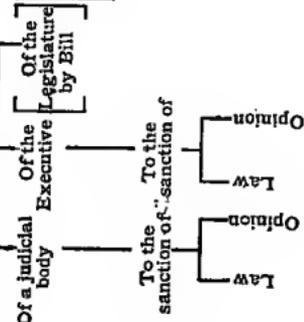
Compulsory Reference



Automatically



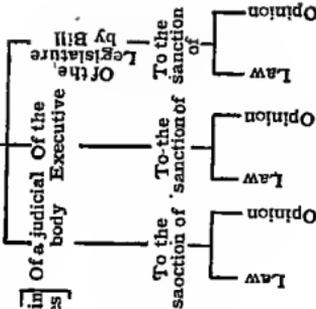
At discretion (full or limited)



Automatically



At discretion (full or limited)



work seems *likely to take place*. Certain others are evidently futile. Thus, where one or two trades are selected for special treatment, presumably because peace in them is particularly important to the public, there can be no ground for making this treatment conditional upon a preliminary appeal from one of the parties. Others again are practically certain not to exist independently. Thus, in the matter of *automatic* coercion independently of any request from either side, no argument can be urged for it *after the fact* which is not still more powerful as regards *before the fact*. The three foregoing groups of schemes do not, therefore, call for direct discussion. They are, for this reason, enclosed in square brackets, and not developed under their appropriate sub-heads. Leaving them aside, we are left with six forms of discretionary coercion after the fact, and four forms of discretionary, and six of automatic, coercion before the fact. Many of them are, of course, capable of being united, and are united in various ways in existing and proposed laws.

§ 6. Of those sixteen forms two are at present available in England. These are coercion by opinion and by law respectively, exercised after the fact, at the discretion of the legislature acting by means of a Bill. This ultimate means of self-defence few people realise to lie in, and nobody proposes to remove from, the hands of the community. Its necessary place in the economy of government was recognised long ago by Jevons in his section on Industrial Emergency:¹ "We can easily conceive conjunctures to arise in which perfectly legal action may inflict the highest

¹ *The State in Relation to Labour*, p. 138-40.

injury on society. If any very large proportion of the colliers of the kingdom, for instance, were to leave work, even after due legal notice, they might bring the industry of the country to a standstill. Not only industry, indeed, but the sustenance and health of millions of their fellow-citizens would be imperilled. . . . We cannot seriously contemplate the idea of a coalless and foodless nation, perishing because some quarter of a million colliers refuse to work. . . . There should be some legal authority capable in the last resort of obliging citizens to perform certain essential duties, whether it be the stoking of gas retorts, the mending of water conduits, or the mining of coal, essential for the life of the nation." In the sovereign body of the State authority of this kind necessarily resides. Only recently in the colony of Victoria it was exercised—or rather threatened, for the threat proved sufficient—to meet the grave emergency of a universal railway strike. Its unquestionable title to continuance rests upon the platitude that necessity knows no law.

§ 7. When, however, it is a question of adopting any of the other rules of compulsion which have been referred to, we pass to more disputable ground. The problem is similar in kind to that concerning retaliation in tariff disputes. Nobody denies that cases are conceivable in which a special Act of Parliament, imposing discriminating duties upon imports from a given country, might be desirable or even imperative. But, the harmony breaks into discord when it is proposed that the Legislature should entrust a permanent deputy with the power of imposing these duties at will. Whether or not such a deputy,

external to the Legislature, should be appointed is the fundamental question in our present inquiry also. Before, however, an attempt is made to weigh the *general* claims of coercion by non-legislative authority, some discussion is needed of the relative merits of its different forms.

In the first place, attention may be directed to the two main subdivisions under the head of *discretionary* compulsion. Coercive reference to legal sanctions at the discretion of a *quasi-judicial officer* exists in New South Wales, where such reference may be ordered, either before or after the fact, by the registrar of Trade Unions.¹ Reference at the discretion of the *Executive* is to be found both in Australasia and in the United States. In South Australia the Government may compel disputants, whether before or after the fact, before a Court with legal powers.² In Massachusetts and Indiana, and under the United States Federal Railway Act, the Governor of the State and the President of the Republic respectively have power to invoke the sanction, not of law, but of opinion, after a stoppage of work has actually occurred, by ordering the publication of an official report upon it.

Under a bureaucratic government there is probably little to choose between the judicial and the executive form of discretionary compulsion. Under the parliamentary system, however, an executive officer would inevitably be hampered in his delicate task by the ill-informed interference of members of the Legislature. This difficulty was forcibly illustrated in the British

¹ Cf. Law, § 28 (2).

² *Industrial Commission*, xvii. p. 545.

House of Commons, when the President of the Board of Trade was urgently pressed, even by the official leaders of the opposition, to reverse his decision, reached presumably after the study of information not available to his critics, against appointing a mediator in the Penrhyn Quarry dispute. On this occasion the executive officer did, indeed, stand firm; but it is obvious that, if it were a question, not merely of mediation, but of compulsory intervention in a labour dispute, the pressure brought to bear upon him would be extraordinarily severe. Under these circumstances, the danger that his better judgment might be surrendered to the stress of political expediency ought not to be ignored.

A judicial officer, on the other hand, is relatively free from these embarrassments. Discretion would most probably be exercised by him with little reference to irrelevant considerations, and, on the whole, in a reasonable way. When the compulsory system was new and untried, action would be taken under it only in cases where the public interest was seriously affected, and where, therefore, it was likely to command a considerable body of popular support. Coercion would thus be brought into play only in big disputes, and especially in those which interfered with the transport of goods or the supply of a widely used raw material. It would, in short, be reserved as a strong remedy for a grave evil. A system worked in this spirit would have the advantage of great elasticity and of freedom to develop in accordance with the lessons of experience. If it were successful and won general approval, its sphere could be extended, and compulsion invoked in disputes which were not at first deemed important enough to warrant State inter-

vention. On the other hand, if it proved a failure, there would be no need for legislative repeal, since the powers conferred upon the discretionary authority could simply be left unused. With discretion vested in a judicial officer, the prospects of industrial peace are therefore brighter than they would be if it were vested in the executive.

In the next place, we have to consider what has been called above *automatic* coercion. As indicated in the chart, coercion of this kind may assume any of three forms. First, it may be provided that, if either side demands arbitration, the other shall be bound under penalties to accept. Secondly, in certain specified industries a general prohibition may be made against resort to strikes and lock-outs before the matter in dispute has been submitted to arbitration. Thirdly, the above law may be extended to *all* industries.

These three possible forms are only partially represented in practice. In New Zealand and New South Wales there is compulsory reference to a Court with legal sanctions on the initiation of either party, and evasion is met by penalties against any one beginning a strike or lock-out "before a reasonable time has elapsed for a reference to the Court of the matter in dispute."¹ There are no laws for reference to this class of court falling under our second and third heads, though as early as 1867 it was publicly declared that "the time had arrived when trade societies should be legally incorporated by Act of Parliament, with a proper constitution, under which strikes and lock-outs should be declared illegal, and all disagreements between employers and employed should be

¹ New South Wales, Law, § 34 (a).

referred to arbitration, the decision of the arbitrator to be final and binding.”¹ As a set-off to this deficiency it may, indeed, be noted that in practice the third and the first forms of law can hardly be distinguished. For, as Mr. Reeves observes, “the last thing to be feared under a system of industrial arbitration is an unwillingness on the part of the disputants to set the machine in motion.”² There is, however, a total lack of laws providing for automatic reference to *compulsory* courts of the differences arising in selected trades. There is an equal lack of all forms of automatic reference to *non-compulsory courts*.

The chief advantage attaching to automatic as distinguished from discretionary coercion in general is its superior fitness to deal with differences before they have led to an actual stoppage of work. It is, of course, theoretically possible for intervention at this stage to take place under a discretionary system, but it is not practically probable. For, the officer in whom discretion is vested, will naturally hesitate to do anything which might prevent the consummation of a friendly settlement between the parties themselves; he will postpone action till the last moment, and will often find himself too late to prevent a stoppage. Under automatic coercion this difficulty does not exist. Whatever the machinery of the law may be, the Court's intervention is almost certain to be invoked before the fact. Partly for this reason, partly because an automatic scheme is likely to come into play more

¹ Mr. David Smith, *Transactions of the National Association for the Promotion of Social Science*, 1867, p. 693.

² Reeves, *Econ. Jour.* 1902, p. 326. Mr. Wise emphasises the same point in regard to the special case of “sympathetic” disputes (*Australian Review of Reviews*, Dec. 1901).

frequently than a discretionary one, and partly because the prospect of its coming into play will diminish the enthusiasm for conflict in parties doubtful of their cause,¹ the actual number of stoppages which occur will probably be less. Other things equal, therefore, we may expect from automatic, as compared with discretionary, coercion both a greater saving of economic loss to the community, and, indirectly, better relations between employers and employed.

It is, however, most improbable that, as a matter of fact, other things will be equal. For, automatic coercion is likely to have important indirect effects for which discretionary coercion offers much slighter opportunity. Under the latter system, since intervention takes place rarely and only on important occasions, the prospect of it has but little tendency to check the formation of voluntary Trade Boards, there being still an obvious work for these institutions to do in the settlement of minor differences. Under an automatic system, however, the check exercised upon their formation may easily be considerable, and there can scarcely fail to result some modicum of moral loss.

Nor is this all. The greater probability of intervention means that demands can now be pressed, and obstinacy indulged in, with less danger of a conflict. Hence, the temptation will be greater to work up "speculative differences" on the off-chance of victory. For these reasons, though actual stoppages of work may be less numerous, controversies conducted

¹ Unlike a system of compulsory awards without compulsory reference, schemes comprising compulsory reference also widen the *arbitration locus* without decreasing the probability of reference. Cf. Appendix A, § 11.

in a litigious spirit are likely to be more numerous. Attention may come to be concentrated upon the external sanctions of peace, rather than upon considerations of kindness, loyalty, and fair dealing. Whether the net result of these conflicting influences will be to improve or to worsen the moral nexus between employers and employed cannot be determined in any general way. Experience hitherto has been too meagre and doubtful to justify even a probable judgment.¹ We can merely note that the material advantage of more extended peaceful practice, likely to be enjoyed under an automatic system, *may*

¹ The evidence as to the working of the New Zealand law in this respect is conflicting. Judge Backhouse affirms that the Act "has, on the whole, brought about a better relation between employers and employees than would exist if there were no Act" (Report, U.S. Bulletin of Labour, No. 40, p. 558). On the other hand, Mr. Macgregor—and in this he is supported by a ministerial organ, the *New Zealand Times* (cf. *Times*, Sept. 3, 1902)—declares that though there are no strikes "there is undoubtedly less good feeling now between employers and employed than existed before the Act" (*National Review*, 1899, p. 287). In favour of the former view it may be noted that the U.S. Industrial Commissioners affirm that private Boards of Conciliation "have rather been facilitated than suppressed by the introduction of governmental methods of arbitration and conciliation" (*Industrial Commission*, xvii. p. 545). If this is the case, it can hardly be otherwise than because the general relations between the parties have improved, since the direct influence of State intervention is clearly adverse to these Boards.

On the other hand, as was to be expected, "there would certainly appear to be a recognition that the Act has been too freely used" (Judge Backhouse's Report, U.S. Bulletin, 40, p. 557). The presence of this evil is sufficiently proved by the attempts that have been made to remedy it. Several times, when it seemed that complaints had been filed so hastily as not to allow employers time to come to a private understanding with the men, "Boards have most justly refused to hear the complaints" (Reeves, *State Experiments in Australia*, p. 120). A need has also been found for § 67 of the original Act, which, to

be accompanied, not only by no extension, but by an actual decrease, in the peaceful spirit.

In addition to these considerations, there have to be urged against automatic coercion some important direct arguments. In the first place, such a system seems to imply in the personnel of the arbitration panel a certain element of permanence. This circumstance may, no doubt, be expected, in some degree, to facilitate the acquisition by arbitrators of a reputation for fairness and wisdom. But, on the whole, the evil consequences seem likely to be in excess of the good. Such facilities as are afforded for the growth of a

check frivolous and causeless appeals, authorises the Court to dismiss any such case, and assess all costs upon the offender (cf. Lloyd, *A Country without Strikes*, p. 145-146). Similar evidence is afforded by the modifications which the other Australian States have introduced into their version of the New Zealand experiment. In Western Australia a deposit of money is required before any action in the Court can be begun (*Industrial Commission*, xvii. p. 544). Mr. Wise goes so far as to suggest that in New Zealand a firm's employees have been incited by its rivals to harass it with arbitration proceedings, and, in his own Act for New South Wales, he allows the initiative to be taken only by the "representatives of a *bona-fide* Trade Union, specially authorised by a vote of the members, whose vote is to be taken under special regulations which provide for the expression of the real sense of the majority" (*National Review*, Aug. 1902, p. 838). Finally, in New Zealand itself an amending clause was passed in 1898 (clause 29) containing a provision of like character.

Our conclusion upon this point is not, however, incompatible with Mr. Reeves' assertion that arbitration is not growing relatively to conciliation. He draws attention to the fact that inadequate attention is generally paid to the part of the New Zealand law relating to industrial agreements (*Times*, Aug. 27, 1902), and Mr. Lloyd adds that agreements originally reached by compulsory arbitration are frequently renewed by mutual consent (*A Country without Strikes*, p. 178).

Whether the optimistic opinion of these writers be right or wrong—a matter upon which it is impossible for an outsider to form an

good reputation are at least equally effective for developing a bad one. Just in so far as the Court continues in existence from one case to the next, it is liable to become "the target for criticism, partisan discussion, and popular odium."¹ It is true that this danger can be diminished if arbitrators are appointed *ad hoc* in every case, and the element of permanence relegated, as in England, to the Department which appoints them. This device is, however, at best but a partial remedy; for, while it removes the imputation of bias from the adjudicating agents, it drives it back upon their official principals.

Either form of popular distrust is important for

adequate judgment—there can be no doubt that the argument by which their critics (*e.g.* Mr. Macgregor, *loc. cit.*) endeavour to maintain the opposite view is fallacious. The Boards of Conciliation erected in New Zealand have, we are told, dwindled into insignificance beside the compulsory Court, which was originally intended merely as a kind of background and support for them; and so clearly has this been recognised that, not only in West Australia, and in an amendment to the New Zealand Act, is direct recourse to the Court permitted without any preliminary reference to the Boards, but the New South Wales imitators of the smaller colony have dispensed with conciliation altogether. This argument, however, ignores the fact that the New Zealand "Conciliation" Boards have never been true Boards of Conciliation, nor, except in a very slight degree, even of mediation. Their essential character has been that of Arbitration Courts of first instance. So far as this is the case, their slight importance merely indicates the New Zealander's preference for appellate over subordinate jurisdiction. If appeals in ordinary lawsuits were equally inexpensive, it is probable that a similar preference would be noticed, among litigants, for the judgments of the more exalted body. Had the Boards been true Trade Boards, such as have been set up in South Australia (*Industrial Commission*, xvii. p. 544), and are suggested for adoption in New Zealand itself (*ibid.* p. 536, and Macgregor, *National Review*, Oct. 1899, p. 178), the argument from their failure would have been much more cogent.

¹ Adams, U.S. Bulletin of Labour, No. 46, p. 675.

two reasons. On the one hand, by enlisting public sympathy on the side of the party against whom a decision has been given, it renders the successful working of the law more difficult. When, as in the United States¹ and in this country,² arbitrators are believed by the working classes to be biassed in favour of capital, or when, as in New Zealand, the reverse bias is suspected, the sanction attaching to awards is necessarily weakened, and the probability of their acceptance correspondingly decreased.

On the other hand—and this is a more serious consideration—it is not impossible that the general political situation may be detrimentally affected. When any organ of government, whether judicial or executive, becomes suspect of class partiality, there is a tendency for the evil to spread. Political division is pressed into the lines of class division, and an increasing prominence is given in the thought, both of electors and of their representatives, to sectional as opposed to national interests. The house is divided against itself. Each side believes that the other is perverting justice for party purposes, and, thereupon, conscientiously determines to follow its iniquitous example. If the régime of coercion has been inaugurated, not under the joint auspices of employers and employed, but on the independent initiative of men recently defeated upon the field of economic conflict, the probability that these unfortunate results will occur is very great.

Furthermore, to the suspicion of bias there has in

¹ Cf. Mitchell, *Organised Labour*, p. 345; Gilman, *Industrial Peace*, p. 155.

² Cf. Webb, *Industrial Democracy*, i. p. 230, *u.*

many cases to be added its actual existence. It may be introduced in either of two ways. First, it may be evolved out of mere incompetence. Under a discretionary system there is a fair guarantee that the arbitrators chosen will be men of intellectual eminence. State arbitrations being rare events, inaugurated only in cases of emergency, it will not be difficult to obtain, for the conduct of them, the services of "the very strongest men in the community, those of highest character and most intimately acquainted with every condition involved."¹ Under an automatic system, however, with its more or less permanent staff, and its duty of intervening in small matters as well as in great, men of this stamp are less readily available. No doubt the difficulty can be reduced if the permanent body is not a Court but a Department, and if persons of varying eminence can be called in to represent it according to the importance of the differences requiring settlement. It does not appear, however, that any method is practicable under which the bias of incompetence can be removed altogether.

Secondly, there is the danger of political bias. No doubt, the actual working of arbitration would be entrusted to persons not likely consciously to act on prejudice. But, in a democratic country the ministry, upon whom the appointment of these persons ultimately depends, is in the hands of a popular electorate. There is, therefore, a strong probability that, in the absence of generally accepted principles of arbitration, political pressure would be brought into play. In view of the importance of the working-class vote, it is possible that persons

¹ Cf. Adams, U.S. Bulletin of Labour, No. 46, p. 673.

would be selected who inclined, on the whole, to press down the scale of justice adversely to the employers. When the latter's interest was dominant in Parliament, their control over the law was used without scruple against the workmen. Should these, under the present system of government, realise the vast power conferred upon them by a compulsory system, dare we hope that they would refrain from revenging themselves by the opposite variety of class favouritism? Even though the arbitrators chosen at first were free from bias, it is doubtful if they would continue so to be, when experience revealed the subtle power of compulsion to yield a condition of things which wage statistics, uncorrected by employment statistics, cause to appear highly favourable to the poor. If once awards became prejudiced in this direction, wrong settlements would result, not merely in the trades which actually came to arbitration, but in others also. For, the bias of the Court, being known, would be discounted. Employers would yield what they would not otherwise have yielded. Aware that resistance would mean the authoritative publication of valuable business secrets or, worse still, the direct legal enforcement of a higher wage, they would incline to split the difference between "justice" and the amount of the "injustice" in which they thought it probable that the Court would indulge. The stronger the sanction available, the wider the scope of practicable error. It is even possible that peace would be maintained upon terms more injurious to the community than prolonged industrial war.¹

¹ For, under compulsory reference, coupled with coercive sanctions, the available *arbitration locus* may lie outside the *settlement locus*.

The evil working below the surface would thus be very grave. Even in a young and wealthy country it would tend gradually to sap the veins of industry; while, among an older people, face to face with sterner competition, Nemesis might follow almost immediately upon the heels of change.

§ 8. On the whole, therefore, when the three main forms of non-legislative coercion are compared, upon the assumption that each is applied to an equal range of industrial differences, the case in favour of the automatic variety appears the weakest, and that in favour of the discretionary form, at the hands of a judicial officer, the strongest. On the question of the positive, as distinguished from the comparative, advantages of the three systems, we are entitled, on the strength of what has been said, to rule out of court the automatic variety in its universal form. So far as our own country is concerned, this will be conceded even by those who reject the preceding arguments. Though, perhaps, the case would be different, on the one hand, in a nation trained in obedience to the orders of a bureaucracy, and, on the other, in one where the Government was really dominated by the labour vote, there can be no doubt that, in the United Kingdom, a policy involving so large an interference with individual liberty would be extraordinarily unpopular. This, of itself, constitutes an unanswerable reason

The result of this is not, however, *necessarily* evil, because, when one party is extremely weak, the additional region of *arbitration locus* opened up in its favour by a coercive system is more likely to be utilised by arbitrators than the additional region in favour of its opponent, and, as has already been shown, artificial benefits to the very poor may react favourably upon efficiency (cf. Part II. Chap. I. § 3).

against its adoption; for, as Mr. Pember Reeves has declared, with reference to the New Zealand law, "to attempt to force such a statute upon an unwilling people would be foredoomed to disaster."¹ As against automatic coercion, confined to a few specially important industries, whose interruption seriously injures the public, the above objections have, however, considerably less force.

The judicial variety of discretionary coercion may be ruled out as impracticable. In a country enamoured of democracy, Parliament would scarcely endow a body independent of itself with a power essentially political in its nature, and capable of affecting, for good or evil, the fortunes of a great mass of persons possessing votes. An all-round application of the executive variety must also be excluded on account of the political dangers that it involves. If, however, its range is narrowly restricted, the objections to it are, as in the case of automatic coercion, considerably reduced.

We are thus left with a choice between these two forms of coercive reference—automatic, and at ministerial discretion—both of them restricted to certain specially important industries. The latter of the two is the less stringent, since under it special cases where there is reason to anticipate failure can be excluded from reference. Hence, at the outset it is to be preferred. Cautiously introduced, it offers a prospect of direct and indirect advantages sufficient to outweigh the dangers which it threatens.

It remains to ask, under these circumstances, whether the Court, before which differences are to be

¹ *State Experiments in Australia*, p. 168.

brought, would, on the whole, be more effective if endowed with legal powers or dependent upon public opinion alone. The answer seems to be that the method of legal sanctions is, for the present at least, debarred in this country by its unpopularity. Whether or not the prejudice against it—for in the mind of the majority it is mere prejudice—will yield before the inconclusive analogy of Australasian experience is a question which cannot as yet be answered. But that it has not hitherto so yielded is clear, and a sufficient argument against the adoption of the policy.

There is, however, reason to suppose that the popular opposition to Courts, empowered merely to publish their judgments, would be much slighter. The next step, therefore, in a campaign on behalf of industrial peace should, we conclude, be the promulgation of some scheme for the coercive reference, at the discretion of a Minister, of the differences arising in certain specified industries to a Court whose awards should depend on the sanction of informed opinion. A scheme of this kind, has, in America, secured the powerful advocacy of the Anthracite Coal Strike Commissioners,¹ and may be said, in England also, to lie within the bounds of practical politics. Its enactment would be in conformity with the experimental traditions of British legislation. It would represent a policy, safeguarded, on the one hand, against the dangers of grave disaster, and opening up, on the other, possibilities of future development and a gradual advance towards a better condition of things.

¹ Report of the Commission, U.S. Bulletin of Labour, p. 512. A draft bill along these lines prepared by Mr. Adams is printed by the Commissioners, and is copied as Appendix C at the end of this book.

APPENDIX A

ON THE EXTENT TO WHICH WAGE BARGAINS BETWEEN INDUSTRIAL COMBINATIONS ARE INDETERMINATE

§ 1. THE problem of determinateness in industrial arbitration lends itself, when duly limited, to precise treatment. To this end abstraction is made both of generosity and of ignorance, and it is postulated that the combinations upon both sides consist exclusively of economic men, perfectly selfish and passionless, and endowed with full knowledge of the economic effects both of an industrial conflict and of any given bargain.

As between these combinations bargains are concluded by the fixing, not of the total amount of work to be done by the workmen, or of money to be received by them, or of both these things together, but of a *rate* at which such work as is done must be remunerated. The technical phrase appropriate to express this circumstance is that the settlement between the parties is determined by way of demand and not by way of contract curve.

In the case of pure monopolists, this limit to possible bargains is due, when established at all, merely to the influence of custom or convenience. Some of Professor Edgeworth's reasoning¹ half implies that the same conclusion holds good of industrial combinations. It may be suggested, however, that, in regard to them, the limit should be conceived, not as thus accidental, but rather

¹ *Mathematical Psychics*, p. 48.

as inherent in the nature of the bodies concerned. It is true that, if the combinations were so organised that their chief officers had the power, and could be induced by pressure from the other party, to subsidise and maintain at work individual firms or workmen whom independent self-interest would drive from the trade, they would not differ in any way from pure monopolists. In real life, however, their individual members retain the power to scatter at desire. Though severed from the outer world on the side of entrance, on that of exit they are organically united with it. This circumstance, apart from the extraneous aid of custom, is sufficient to exclude as untenable any settlements upon the contract curve except the one which falls at the intersection of the curves of demand and supply.

§ 2. In any event, whether the contract curve is excluded for accidental reasons or not, there is no dispute that it is, in fact, excluded, and that conciliation and arbitration between employers and employed can fix a *rate* of wages only. We may, therefore, pass on to inquire whether this fixing of a rate suffices to determine the total quantity of labour supplied and money paid, or whether these quantities may still vary in accordance with the higgling of the market.

Construct curves of supply and demand in the following manner (Fig. 1):—

Along Ox mark off units of labour, and along Oy units of money. Let DD' be the employers' demand curve, so that, if P be any point taken upon it and PM be drawn at right angles to Ox , PM is the rate of wages offered for the OM th unit of labour, when OM units are being employed.

Let SS' , the supply curve of the workpeople, be constructed in a similar manner.

Let the rate of wages be fixed by arbitrators or conciliators at any rate QM_1 . Then QM_1 may be either greater or less than PM .

First, let QM_1 be greater than PM .

If possible, let Q not fall upon the demand curve DD' ,

and let an amount of labour OM_1 be purchased at the rate QM_1 .

Through Q draw FQK parallel to the axis of x , cutting DD' in K ; and through K draw KHM_2 parallel to the axis of y , cutting SS' in H .

Then, from the nature of the demand curve, it follows

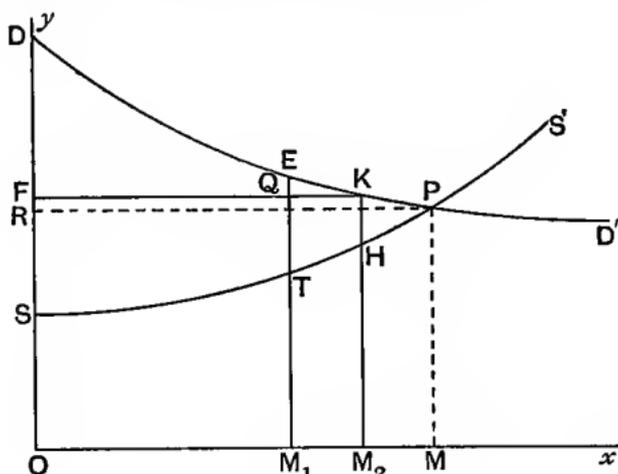


FIG. 1.

that, at the rate QM_1 , employers are willing to purchase an amount OM_2 , and prefer to purchase that rather than any less amount.

Therefore, unless there is resistance on the part of the workpeople, a position of equilibrium will be reached at the point K on the demand curve.

Furthermore, since KM_2 is greater than HM_2 , it follows from the nature of the supply curve that the workpeople (who *ex hypothesi* do not act in combination in arranging the amount of work they will supply), will prefer to supply an amount OM_2 rather than any lesser amount.

Hence, if the rate is fixed at QM_1 , both parties prefer that OM_2 units of labour should be purchased and sold rather than any lesser amount. Similarly, it can be shown that they both prefer OM_2 to any greater amount. Therefore the settlement is unequivocally determined at a point K on DD' .

In like manner, if QM_1 is less than PM the settlement is unequivocally determined at a definite point on SS' .

Hence it follows that any fixing of the rate determines a point of settlement upon either the demand or the supply curve, and that no settlement can fall anywhere except upon the one or the other of them.¹

This proposition established, there can be found—

(1) A *settlement locus* summarising the series of points upon the two curves, and, in connection with it, a *range of settlement rates* summarising the series of possible wage rates, from which, if awarded, it will not be to the interest of *both* parties to break away; and (2) an *arbitration locus* and a *range of arbitration rates*, covering respectively the points, and the rates of wages, from which it will not pay *either* party to break away.

§ 3. For the investigation of these *loci* the most convenient apparatus consists in the system of symmetric curves devised by Professor Marshall.² Amount of labour being marked off along OX , and amount of money along OY , curves of demand and supply are drawn such that, any point P being taken upon them, the rate of wage offered or required respectively for the production of OM units of labour is represented by the ratio $\frac{PM}{OM}$ (Fig. 2). In terms of this construction the *settlement locus* is represented by portions of the two curves, and the *range of settlement rates* by the tangents of the angles between the axis of x and radii vectores from the origin to all the points on

¹ When Mr. Cree objects to collective bargaining that "even if their leaders observe the agreements, a number of the men will simply move away to other occupations, till the rate has to be raised to retain them" (*Criticism of the Theory of Trade Unions*, p. 37), he is merely asserting that, when the rate fixed is less than the equilibrium rate, the contract cannot lie outside the workmen's supply curve. This is not to prove, as his argument seems to suggest, that it is economically determinate at a point.

² When these curves are employed the axes will be denoted by OX , OY ; when curves of amount of labour and wage rate are employed, by Ox , Oy .

the *settlement locus*; so that to a point on the *settlement locus*, whose polar co-ordinates are r and θ , corresponds a *settlement rate* given by $\tan \theta$.

The limits of the *settlement locus* will be set, at the one extreme, by the point on the employers' demand curve, which makes the workpeople's utility a maximum, and, at the other extreme, by the point on the workpeople's demand curve which maximises the employers' utility. Any points on the curves lying outside these two extremes would be abandoned by common consent of the parties. The whole of the portions between the extremes, except in the case of multiple maximum positions, covers points which will not be abandoned by consent, and is thus *pure* or effective *settlement locus*.

Our problem therefore resolves itself into that of determining the position of the two maximum points. In order to reduce it to manageable proportions, the abstract assumption must be made that the *marginal* demand and supply prices of n units, when n units are being produced, may be taken as identical with the *particular* demand and supply prices of the n th unit when some different amount is being produced. Unless this assumption is made, the device of "indifference curves," which plays an essential part in the ensuing discussion, would not be permissible.

We may now proceed to investigate the maximum point of the workpeople.

Draw OE, the employers' demand curve for labour, and OU, the men's demand curve for wages. Let these curves intersect at P. On the parts of them lying to the right of P, no stable settlement is possible, and these parts may, therefore, be left out of the discussion.

First, both ignore the disutility of work to the labourers, and assume that the marginal utility of money to them is constant. Then, their maximum utility point is that which yields them the maximum of cash.

In the normal case (Fig. 2), in which a horizontal line through P lies wholly above the part of OE between P and the origin, this point is P itself.

In the exceptional case (Fig. 3), however, in which the employers' demand for labour is very inelastic, there will be points on OE to the left of P, whose vertical distance above OX will be greater than PM.

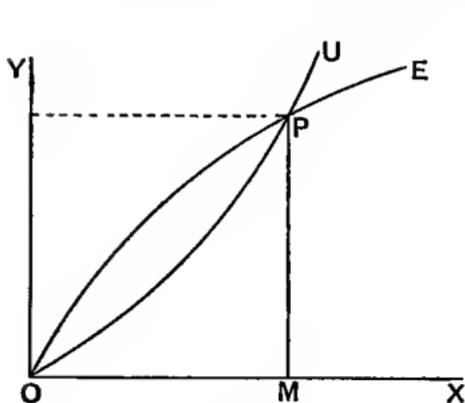


FIG. 2.

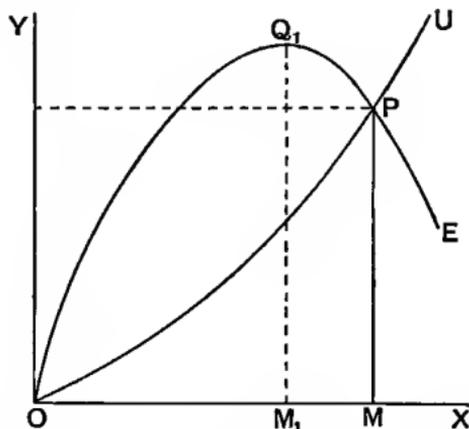


FIG. 3.

The point Q_1 , whose vertical distance above OX is greater than that of any other point on OE, represents the labourer's maximum utility point.

Secondly, take account of the disutility of work to the labourers, still assuming that the marginal utility of money to them is constant.

Through O draw an indifference curve OT (Fig. 4), such that, if any point R be taken on it and RS be drawn perpendicular to OX, then a payment RS for work OS yields a net total utility to the workmen equal to zero.

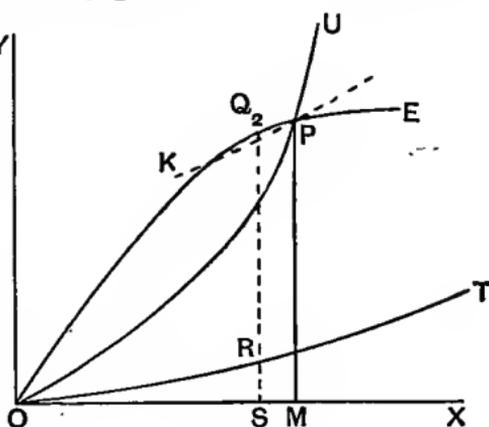


FIG. 4.

Then, the vertical distance from any point S on OX to

OT represents the allowance in terms of money that ought to be made for the disutility of rendering OS units of this particular kind of labour.

Through P draw a curve PK parallel to OT. The maximum utility point for the labourers will fall at the point Q_2 in OE vertically highest above PK.

Even in the normal case, therefore (Fig. 4), this point Q_2 may fall to the left of P.

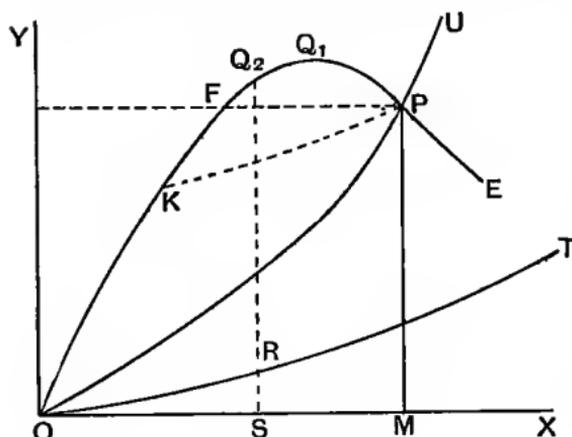


FIG. 5.

In the exceptional case (Fig. 5), Q_2 must so fall. For, provided that OE is concave and OT convex with respect to OX,¹ it lies to the left of Q_1 , which lies to the left of P. Furthermore, the concavity of OE

follows from the law of diminishing utility; the convexity of OT from considerations exactly analogous to those advanced in the footnote to p. 70. Thus the required conditions are fulfilled.

Thirdly, take account of the fact that the marginal utility of money to the workmen varies with the amount of it that they have. Let Q_3 be their maximum utility point under this condition. Then it is plain that Q_3 is not the point on OE vertically highest above their indifference curve through the origin, but is the point at which OE touches one of their indifference curves.

¹ Analytically, if OE is represented by $\phi(X)=Y$, OT by $F(X)=Y$, and the abscissa of the point Q_1 by A, the condition is that $\frac{F'(A)}{\phi''(A) - F''(A)}$ is negative. This is, of course, the case when $\phi''(A)$ is negative, and $F''(A)$ positive.

Q_2 represent a greater surplus utility to the workmen than Q_2 itself.

Therefore, a line through Q_2 , representing the same surplus utility that Q_2 does, will fall below aQ_2 , and will cut OQ_2 , which this line touches. Therefore, there will be a point on OQ_2 that will yield a higher surplus of utility than is yielded by Q_2 . That is to say, Q_3 , the workmen's *maximum* point will lie to the left of Q_2 .¹

§ 4. The employers' maximum point V_3 upon the workpeople's demand curve can be found in an exactly similar manner. The *settlement locus*, therefore, is represented by curves Q_3P and PV_3 , and the *range of settlement rates* by the tangents to the angles subtended by this succession of points with the axis of X.

The magnitude of this locus depends entirely, as the argument of the previous section must have suggested, upon the elasticities of the two curves at such points on their course as are near enough to P to be relevant to the problem (Fig. 5). This general proposition being taken for granted, four more detailed problems present themselves.

First: When the curve OU is given, what is the effect of increased bending, or inelasticity, in the relevant parts of OE upon the portion of the *range of settlement rates* which represent rates greater than $\frac{PM}{OM}$?

Second: what is the effect of this change upon the portion of the range representing rates less than $\frac{PM}{OM}$?

Third: What is the effect upon the magnitude of the whole range?

Fourth. How is the ratio between the portions of the range representing rates above and below $\frac{PM}{OM}$ respectively

¹ The above reasoning is technically imperfect, because it neglects the fact that the utility of a given sum of money to a man is a function of his leisure, which depends on the amount of his work, as well as of the magnitude of the sum. Were account taken of this, the argment would, however, become *à fortiori*. A more serious imperfection is the assumption made throughout of the absence of multiple maximum points.

affected by the comparative elasticity of the two curves?

These problems do not admit of any solution in general terms. When, however, the rate at which the wage offered or demanded changes for a given change in amount, is taken to be constant throughout the relevant parts of the curves, and when abstraction is made of the distinction between Q_3 and Q_2 noted in the last section, the following answers are readily obtained.

Let A be the equilibrium amount sold, B the equilibrium price. Let curves of amount and wage rate be employed (Fig. 7). Let x be the increase of wage above the equilibrium wage required to yield the employees' maximum, y the decrease to yield the employers' maximum, θ and ϕ the angles made by the demand and supply curves with PN .

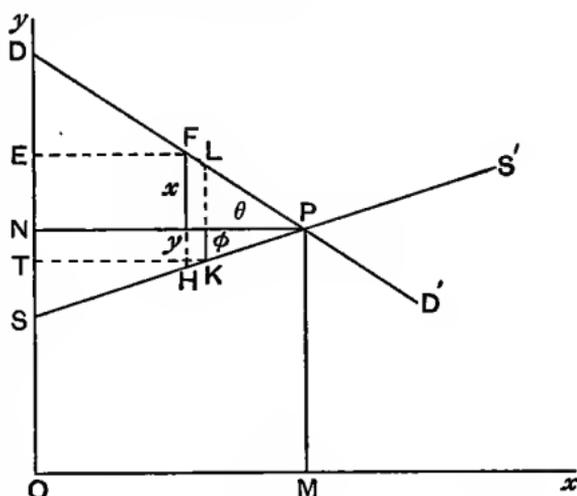


FIG. 7.

The first problem is to determine the effect on x of an increase in the value of θ .

The workpeople's net surplus receipts, when the settlement is on the employers' demand curve, are represented by the area SHFE:

$$= \{x + x \cot \theta \cdot \tan \phi\} \{A - x \cot \theta\} + \frac{1}{2} \{A - x \cot \theta\}^2 \tan \phi$$

$$= \{A - x \cot \theta\} \{x + \frac{1}{2} x \cot \theta \cdot \tan \phi + \frac{1}{2} A \tan \phi\}.$$

This is a maximum when

$$\{A - x \cot \theta\} \{1 + \frac{1}{2} \cot \theta \cdot \tan \phi\} - x \cot \theta \{1 + \frac{1}{2} \cot \theta \cdot \tan \phi\} - \frac{1}{2} A \cot \theta \cdot \tan \phi = 0;$$

i.e. when

$$2x \cot \theta \left\{ 1 + \frac{1}{2} \cot \theta \cdot \tan \phi \right\} = A ;$$

i.e. when

$$\begin{aligned} x &= \frac{A}{2 \cot \theta \left\{ 1 + \frac{1}{2} \cot \theta \cdot \tan \phi \right\}} \\ &= \frac{1}{2} A \frac{\tan \theta}{1 + \frac{1}{2} \frac{\tan \phi}{\tan \theta}} \end{aligned}$$

Therefore, other things being equal, x increases as θ increases. In other words, the less elastic is the curve which, in our other construction, is represented by OE, the greater is the *range of settlement rates* in excess of $\frac{PM}{OM}$.

The second problem is to determine the effect on y of an increase in θ .

The employers' net surplus receipts, when the settlement is on the workpeople's curve, are represented by the area DLKT :

$$\begin{aligned} &= \{y + y \cot \phi \tan \theta\} \{A - y \cot \phi\} + \frac{1}{2} \{A - y \cot \phi\}^2 \tan \theta \\ &= \{A - y \cot \phi\} \left\{ y + \frac{1}{2} y \cot \phi \tan \theta + \frac{1}{2} A \tan \theta \right\}. \end{aligned}$$

As before, it may easily be shown that this is a maximum when

$$y = \frac{1}{2} A \frac{\tan \phi}{1 + \frac{1}{2} \frac{\tan \theta}{\tan \phi}}.$$

Therefore, other things being equal, y decreases as θ increases. In other words, the less elastic is the curve OE, the smaller is the *range of settlement rates* less than $\frac{PM}{OM}$.

We thus reach our third problem, that of determining the effect on $(x + y)$ of an increase in θ .

Since within the limit of 90° , with which alone we are concerned, θ and $\tan \theta$ increase together, it is sufficient to consider an increase in $\tan \theta$.

From the above equations we obtain—

$$x + y = \frac{1}{2} A \left\{ \frac{\tan^2 \theta}{(\tan \theta + \frac{1}{2} \tan \phi)} + \frac{\tan^2 \phi}{(\tan \phi + \frac{1}{2} \tan \theta)} \right\}.$$

Differentiating with respect to $\tan \theta$, we get—

$$\begin{aligned} \frac{2}{A} \frac{d(x+y)}{d(\tan \theta)} &= \frac{2 \tan \theta \{ \tan \theta + \frac{1}{2} \tan \phi \} - \tan^2 \theta}{(\tan \theta + \frac{1}{2} \tan \phi)^2} - \frac{\frac{1}{2} \tan^2 \phi}{(\tan \phi + \frac{1}{2} \tan \theta)^2} \\ &= 1 - \frac{\frac{1}{2} \tan^2 \phi}{(\tan \theta + \frac{1}{2} \tan \phi)^2} - \frac{\frac{1}{2} \tan^2 \phi}{(\tan \phi + \frac{1}{2} \tan \theta)^2}. \end{aligned}$$

This expression can clearly be either positive or negative; e.g. if $\tan \theta = +\infty$, and $\tan \phi$ is finite, it is equal to $+1$; if $\tan \theta = 0$, it is equal to $-\frac{1}{2}$. Hence, our third problem is indeterminate. From some positions an increase of θ will augment, and for others it will diminish the total range of settlement rates.

Lastly, the answer to the fourth problem is given by the algebra of the first and second—

$$\begin{aligned} \frac{x}{y} &= \frac{\tan \theta}{1 + \frac{\frac{1}{2} \tan \phi}{\tan \theta}} \div \frac{\tan \phi}{1 + \frac{\frac{1}{2} \tan \theta}{\tan \phi}} \\ &= \frac{\tan \theta}{\tan \phi} \cdot \frac{\tan \theta \cdot \tan \phi + \frac{1}{2} \tan^2 \theta}{\tan \theta \cdot \tan \phi + \frac{1}{2} \tan^2 \phi}. \end{aligned}$$

Therefore, when $\tan \theta = \tan \phi$, $x = y$,¹ and the larger $\tan \theta$ is relatively to $\tan \phi$, the greater is the ratio $\frac{x}{y}$.

In other words, the less elastic the employers' curve relatively to the workmen's curve, the greater is the ratio of the portion of the range of settlement rates covering rates in excess of $\frac{PM}{OM}$ to the portion in covering rates less large than this.

§ 5. We may turn to the arbitration locus and range of arbitration rates. To make the problem workable it is again necessary to ignore variations in the marginal utility of money—a device which fortunately does not appear to affect the principle of the solution offered.

Let the limits of the settlement locus be found at Q and V on the respective curves (Fig. 8).

¹ This proposition holds generally whenever the curves are similar, whether or not $\phi'x$ and $F'x$ are constant; for the conditions of the two maxima are respectively $\phi x - x F'x - Fx = 0$ and $\phi x - x \phi'x - Fx = 0$.

Let the workmen believe that, by fighting, they can reach a settlement at a point Q_2 within the *settlement locus* at a total real cost to themselves, as compared with what their position would have been if they had accepted the employers' terms, equivalent to a weekly money charge C extending over the period which the settlement is expected to cover.

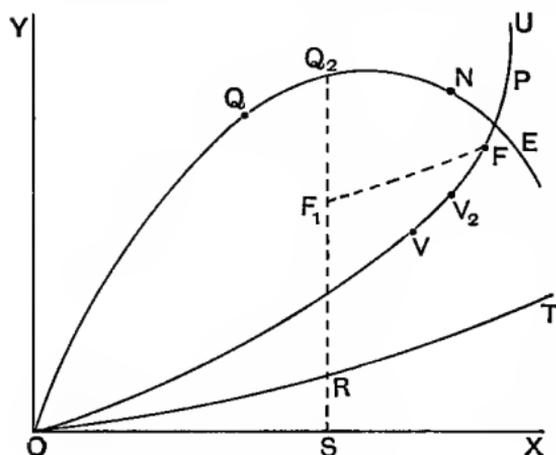


FIG. 8.

at F reached without a conflict is, from the workpeople's point of view, equivalent to (*i.e.* yields the same surplus as) one at Q_2 reached after a conflict. Hence, any settlement lying on the curve or curves between Q_2 and F is more advantageous to them than a conflict. *A fortiori* this is true of any settlement between Q and F .

In the same way, a locus VN can be found covering all the points of settlement which the employers would prefer to a conflict.

The common portion of these two loci is the *arbitration locus*, and the series of tangents to the angles lying between FOX and NOX is the *locus of arbitration rates*. An award within these limits will be more advantageous than a conflict to both parties.

§ 6. When both sides are of the same opinion as to what settlement would eventually be reached if their differences were fought out, V_2 coincides with Q_2 .

Through Q_2 draw Q_2R parallel to the axis of Y , cutting the indifference curve of the Union through the origin in R , and upon Q_2R cut off Q_2F_1 , equal to C . Through F_1 draw F_1F parallel to OT , cutting OE or OU as the case may be, in F .

Then a settlement

If, therefore, the estimated cost to both sides is positive, N will lie to the left of Q_2 and F to the right, and the *arbitration locus* will be NQ_2F .

If this locus falls entirely within the *locus of settlement* QPV, the whole of it will be pure or effective. If any part of it falls outside that locus, such part will be rendered ineffective by collusive disobedience. For our purpose it may be regarded as non-existent, just as the impure part of the contract curve is regarded in Professor Edgeworth's constructions. If, for instance, Q_2 coincides with Q, the portion NQ_2 disappears and the locus is reduced to QF. Similarly, if Q_2 coincides with V, Q_2F disappears, and the locus is reduced to VN.

In either case, however, when V_2 and Q_2 coincide, the general proposition holds good that, so long as the estimated cost of conflict is positive to both parties, there must be some positive length of effective *arbitration locus*.¹

§ 7. It is, however, possible that the net cost of conflict to one side or the other will be negative. If it is negative to the employers, N will lie to the right of Q_2 ;

¹ This conception reveals the error of those writers who hold that arbitrators are needed solely because of the ignorance of the parties, and that their function is "simply to find out what the price would naturally have tended to become" (*Social Peace*, p. 192). Dr. Schulze-Gaevernitz, who enunciates this view, suggests that "the determination of relative strength, which is the function of a contest, could be equally well performed by an exercise of the intelligence, just as we test the pressure of steam by a special gauge instead of finding it out by the bursting of the boiler" (*ibid.* p. 136). The implication of this argument is that, when all the facts are known to both sides, the *arbitration locus* is necessarily a single point. The same assumption underlies Professor Pantaleoni's statement: "If there is a stronger unit who knows his strength, he will not contract, but make use of his strength" ("Concepts of Strong and Weak," *Econ. Jour.* 1898, p. 204; cf. also *ibid.* p. 190). In fact, however, the locus, as between egoists, will not be a point unless either (1) the apple of discord is indivisible, or (2) a conflict would cost the stronger party absolutely nothing. As between perfect utilitarians on the other hand, the locus is, of course, as Professor Edgeworth has observed, always a single point (*Mathematical Psychics*, p. 53).

if it is negative to the workpeople, F will lie to the left of Q_2 . Thus, if it is negative to either, but not to both parties, QF and VN *may* not, and if it is negative to both, they *cannot* overlap. Consequently, in the one case there may, and in the other there must, be no available *arbitration locus*.

The case of negative cost to the employers may occur if their commodity is one the demand for which is highly inelastic, and if, at the time of the conflict, they have large accumulated stocks in hand. Thus, in the case of coal, it is sometimes alleged that employers are enabled by a conflict "to clear their stocks at famine prices, while postponing the fulfilment of their contracts under strike clauses."¹ It may also conceivably occur when they have reason to believe that, by precipitating a conflict in times of bad trade, they can insure themselves against being hampered by one when trade improves.²

On the side of the workpeople, negative cost is, in the early stages of industrial organisation, a fairly common phenomenon. For, at these times what the men are really aiming at is not the concession of a higher wage, but respect for their Trade Union, and consequent increased readiness to deal fairly with them in the future. Or again, the real purpose of the conflict may be to solidify the Trade Union itself, and to attract non-Unionists to its ranks. So far as conflicts are really undertaken for objects of this kind, the advantage anticipated from the acquisition of those objects needs to be subtracted from the anticipated material losses of the dispute, and, when so subtracted, may leave a net negative result. Under

¹ *Pol. Sc. Qrly.* xii. p. 426. Cf. Schultze-Gaevernitz, *Social Peace*, p. 205; and Hall, *Sympathetic Strike*, p. 70, for specific allegations concerning the federation strike of 1890 and the Ohio strike. The above would not be true in the case of a stoppage by a single firm, since the presence of other firms would prevent any great rise of prices (cf. Clark, *The Problem of Monopoly*, p. 87). It is more likely to be true of staple than of fashion goods, because, in the latter case, accumulated stocks will seldom be large.

² Cf. Chapman, *The Lancashire Cotton Industry*, p. 211.

such circumstances the men may elect to fight, even though they expect both to be beaten and to be subject to great suffering in the process.

§ 8. If the two sides are not agreed in their expectation of the settlement that would follow a conflict, there may be no available *arbitration locus*, even when the estimated cost to each side is positive. For, if employers and employed both expect to win,¹ V_2 will lie at some distance from Q_2 , and V_2N may not overlap with any part of Q_2F .

§ 9. Under these circumstances, up to the point at which F coincides with V , or N with Q , any increase in the estimated cost of conflict to either party makes it more likely that an available *arbitration locus* will exist, and, when it exists, causes the extent of it to increase.

§ 10. The party against whom the estimated cost of conflict is enhanced is injuriously affected by the fact that the addition made to the *range of arbitration rates* comprises only rates less favourable to him than those embraced within the old range. If the question is raised of the introduction of a general cause calculated to increase costs to both parties, the suggestion will be opposed by the party whose costs would be raised most, because the new portion of the *range of arbitration rates* adverse to him will exceed the new portion that is favourable.

Hence, when sympathetic strikes are available, it will be to the interest of disputing workpeople to invoke them where they reduce the help which the employers receive from their confrères more than the help which they themselves receive from sympathisers remaining at work and contributing in money to their support: in the opposite case it will be to their interest not to invoke them.² The

¹ If both expect to lose, the argument is, of course, reversed.

² This latter alternative is the one apparently realised in practice. The money help which workmen receive in conflicts generally exceeds that which employers receive, particularly when there are regular arrangements, as under the American Central Labour Unions, for summoning help from other trades (cf. Gilman, *Industrial Peace*, p. 245; Burke, *Central Labour Unions*, p. 84).

converse proposition holds good with regard to sympathetic lock-outs. Other things being equal, if the sympathetic strikes do not pay the men, sympathetic lock-outs will pay the employers. The circumstance that in practice resort to them is not growing *pari passu* with the abandonment of sympathetic strikes can only be accounted for by reference to the social obloquy which they entail upon those who employ them.

From the same principles it follows, that, given complete ignorance as to the bias of probable arbitrators, the introduction of compulsory awards will be opposed by the party against whom the sanctions attaching to them are the more stringent.

§ 11. If the sanctions are equally stringent in both directions, the change will not in general be adverse to either party. Though each is made to risk a series of settlements less favourable than any that could otherwise be imposed upon it, it also secures the chance of a corresponding series more favourable than any which it could otherwise obtain. Under these circumstances, if the State provides sanctions to arbitrations voluntarily entered into, the *arbitration locus* may be expanded to the full extent of the *settlement locus*, and stoppages of work rendered contrary to the interest of either party.

In certain circumstances, however, this result will fail. For, if the employers are so weak that the estimated cost to them already involves the coincidence or approximation of N and Q, an addition to their cost would either make no difference, or would make one smaller than the corresponding difference resulting from an equal increase in the cost to the workpeople. Hence, the change would injure the workpeople. In corresponding circumstances it would, of course, similarly injure the employers.

In an eventuality of this kind the attachment of legal or other sanctions to voluntary arbitrations will merely result in a refusal by one side or the other to arbitrate under the forms to which these sanctions apply. In such cases the State machinery will remain idle unless to the

provision for compulsory awards there is coupled one for compulsory reference to the Courts empowered to deliver them.

§ 12. In conclusion, it is necessary to note an imperfection in the foregoing analysis. The device of equating the cost of conflict to either side to a "weekly sum extending over the period which the settlement is expected to cover" leaves out of sight the possibility that the immediate pressure of a heavy charge may temporarily reduce the fortunes of either party to zero and thus expel it altogether from the field. This difficulty is not likely to have any practical importance if both sides are thoroughly solidified. A Federation, as a whole, will rarely be driven to bankruptcy or a Union to starvation. When, however, solidification is incomplete, this fate may easily threaten particular members of either association.¹ The presence of "weak firms" on the one side, and of men with families on the other, may, therefore, contract the *range of arbitration rates* more narrowly than the pure theory indicates. A process of solidification by the incorporation of many firms into one tends to expand it in favour of the employers.

¹ Cf. Marshall on Co-operation (Address, 1889, p. 11): "Departments which, if they had been independent businesses, would have sunk by accumulated losses in the early years, have been carried through the waters by the strong hand of the Wholesale."

APPENDIX B

DIAGRAMMATIC TREATMENT OF SOME PROBLEMS OF WAGE FLUCTUATIONS

PORTIONS of the central argument of Part II., Chapter III., can be expressed conveniently in diagrammatic form. In the following pages that method of expression is adopted, and the results formulated in a series of propositions.

In all of these propositions, except No. 4, the labour supply and labour demand curves are constructed to represent the series of amounts that would be supplied or demanded in response to a given series of wage rates over the average of a definite interval which is assumed to have been between successive wage adjustments.

Proposition 1.—Other things being equal, the less steep the relevant part of the (labour) supply curve the smaller is the change in the equilibrium wage caused by a given oscillation of the (labour) demand curve.

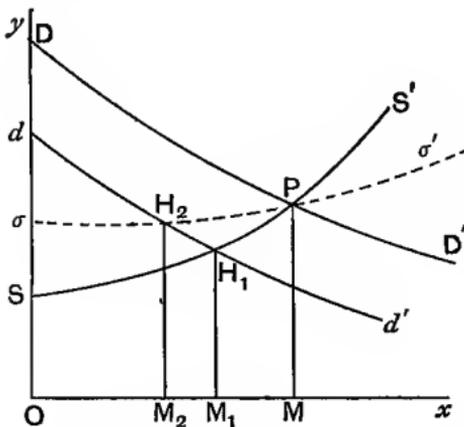


FIG. 9.

Let the demand curve (Fig. 9) oscillate from DD' to dd' .

Let H_2 be the intersection of dd' with a less steep supply curve $\sigma\sigma'$ and H_1 its intersection with a steeper curve SS' .

It is then evident, without formal proof, that H_2M_2 is greater than H_1M_1 , and, therefore, that the difference

between PM and H_2M_2 is less than the difference between PM and H_1M_1 .

Corollary.—When the supply curve takes the form of a horizontal straight line, an oscillation in demand causes no change in the equilibrium wage.

Proposition 2.—Other things being equal, the less steep the relevant part of the (labour) demand curve, the greater the change in the equilibrium wage caused by a given oscillation of the (labour) demand curve.

Let the steeper demand curve (Fig. 10) be D_1D_2 , oscillating through a vertical distance PR to d_1d_2 ; and let D_3D_4 be the less steep demand curve, oscillating through the same vertical distance to d_3d_4 .

Let SS' be the supply curve, cutting d_1d_2 in H_1 and d_3d_4 in H_2 .

It is evident, without formal proof, that H_2M_2 is less than H_1M_1 , and, therefore, that the difference between PM and H_2M_2 is greater than the difference between PM and H_1M_1 .

Proposition 3.—If a change occurs in the demand for the products of a few firms, or in the supply of raw material to those firms, the demand and supply schedules affecting all the other firms remaining constant, the effect on the position of the equilibrium wage will be less than it would have been if a proportionate change had taken place all round. Or concretely, if the demand for the services of firms making iron rails rises, while no change takes place in regard to those making other kinds of iron; or, if an

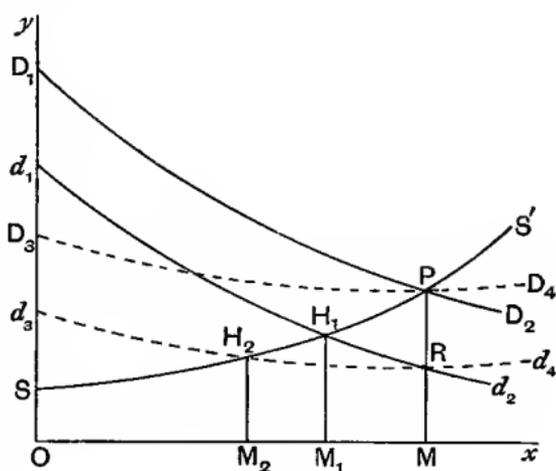


FIG. 10.

import duty is imposed upon raw material at the borders of the district where certain firms work, the effect on prices will be less than it would have been if the alteration had been general.

If we concentrate attention upon the labour demand side, it appears at first sight that the wage change should be smaller when the large area is affected, since demand is then less elastic. On the other hand, if we concentrate upon the labour supply side, the opposite conclusion seems to follow, since the supply is less elastic. It might be

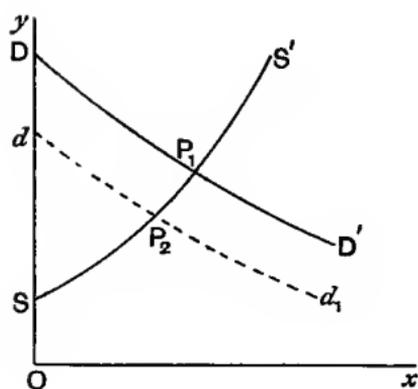


FIG. 11.

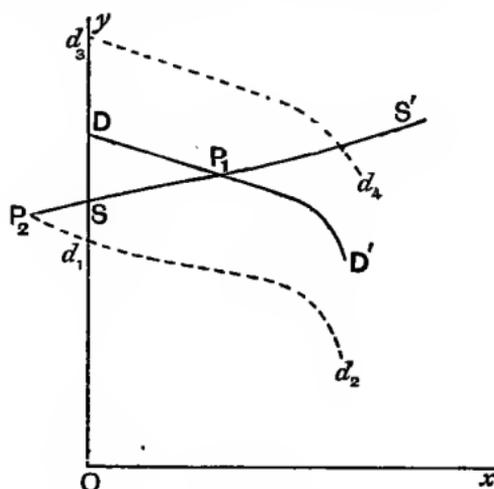


FIG. 12.

supposed, therefore, that no general conclusion upon the subject could be formulated. This, however, is not the case. Let Fig. 11 represent the circumstances of a fluctuation in demand for the output of a large part of an industry. Hence, both the labour demand curve and the labour supply curves will be somewhat inelastic. Let the adjoining diagram, Fig. 12, represent the converse case, where the proportion of the trade covered is small and both curves are elastic. Then it is, indeed, possible that, after a given fall in the labour demand curve, the point of intersection P_2 may lie as far below P_1 in the one case as in the other. In Fig. 12, however, it is very likely to lie to the left of the

demand curves in P_1, P_2, P_3 respectively. Through P_1 draw P_1M_1 , cutting D_3D_4 in H and D_5D_6 in E . Through P_2 draw P_2M_2 , cutting D_5D_6 in K . Through P_3 draw FP_3M_3 , cutting D_3D_4 in F .

Then, since supply lags behind demand over a period t , the rate of supply that would bring the system to equilibrium when the demand is represented by D_1D_2 will be forthcoming after the demand curve has been in that position over the above period.

Hence, if the demand assumes successively the three positions indicated in the diagram, and remains in each of them during the lapse of time t , then, when it is at D_3D_4 , the supply will be OM_1 and the wage HM_1 . When it falls to D_5D_6 the supply is OM_2 and the wage KM_2 . The change of price representing this fluctuation of the demand curve through a vertical distance D_3D_5 is equal to RK .

If, however, before moving from D_3D_4 to D_5D_6 , the demand curve has stayed in the former position during twice the period t , the supply during the latter half of this time will have been OM_2 , and the wage P_2M_2 . The fall of wage, therefore, when the demand curve at length moves down to D_5D_6 , will this time be equal to P_2K .

Again, if in the period t last but one before coming to D_5D_6 the demand curve was neither at D_1D_2 nor at D_3D_4 , but at D_5D_6 itself, the supply, when the demand moved up to D_3D_4 , will have been OM_3 and the wage FM_3 . When the demand falls again to D_5D_6 the supply will be OM_2 and the wage KM_2 . This change in wage therefore is equal to FT .

Thus, in these three different cases precisely the same fluctuation in the demand curve is accompanied by three distinct wage changes equal respectively to RK_1, P_2K , and FT .

Reasoning, exactly analogous to the above, applies to the case of oscillations of labour supply.

Proposition 5.—A given change in the price of the finished commodity can indicate either of two positions of the equilibrium wage, according to the cause of the change of price; a given change in margins (the supply schedules

of the other factors of production except raw material remaining unaltered), can only indicate one position of the equilibrium wage.

It has been shown in the text that the public demand is an always increasing function of the (subsequent) employers' demand. Hence, the first half of the above proposition is established if it can be shown to hold good of the price offered by employers. The "margin" is the difference between the public's commodity price and the raw material price. This is evidently an always increasing function of the difference between the (subsequent) employers' price and the raw material price, a quantity which may be called the employers' margin. Hence, the second half of the above proposition is established if it can be shown to hold good of the employers' margin.

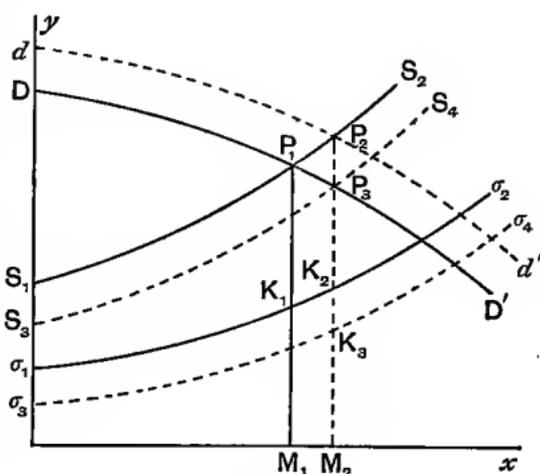


FIG. 14.

Let DD' (Fig. 14) be the employers' demand curve for the finished commodity, S_1S_2 the supply curve of the finished commodity, and $\sigma_1\sigma_2$ the supply curve of the factors required in its production other than the one, whose wage, rendered indeterminate by combination, we are concerned to regulate.

Let P_1 be the original position of equilibrium.

Take two cases, (1) that in which the employers' demand curve for the finished good rises throughout by an amount Dd ; (2) that in which the supply curve of the other factors falls throughout by an amount $\sigma_1\sigma_2$, equal to Dd .

It is clear that, if the wage of our factor be regulated on the principle accepted, the employers' price for the finished commodity will, in the first case, rise from P_1M_1 to P_2M_2 , and in the second fall to P_3M_2 . This proves that the effect on employers' price is different in the two cases.

Secondly, Required to show that the effect on employers' margin is not different. This follows at once if P_2 is vertically above P_3 . For, in the first case, this margin becomes P_2K_2 , and in the second, P_3K_3 , and, by construction, P_2P_3 is equal to K_2K_3 . If P_2 is not vertically above P_3 , let M_2P_3 , produced to a distance equal to $\sigma\sigma_2$, cut dd' in P_4 .

Then, since $\sigma_1\sigma_3 = S_1S_3$, P_4 is also upon S_1S_2 .

Therefore d_1d_2 cuts S_1S_2 in P_4 .

But d_1d_2 cuts S_1S_2 in P_2 and it cannot cut it twice.

Therefore P_2 and P_4 are coincident. Hence the demonstration follows.

It can be shown similarly that, while a scale based upon the gross receipts of a trade labours under the same disadvantages as one based upon price, net receipts afford a basis of the same type as that afforded by the "margin."

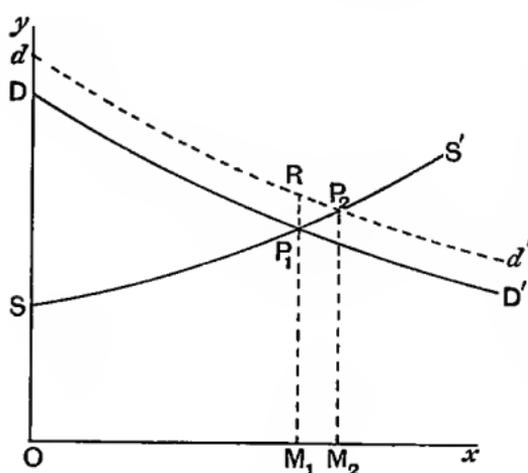


FIG. 15.

Note to Proposition 5.—There is a difficulty, in the employment of output as an index of the appropriate wage change, since a change in output occurs at the same time as, and not before, the corresponding wage change.

This difficulty is illustrated in the annexed diagram (Fig. 15).

Let SS' be the supply curve of the commodity; DD' the old and dd' the new public demand curve.

Then the immediate effect of the given alteration in public demand is to increase the price from P_1M_1 to RM_1 . This change is correlated with a *future* change in the employers' demand for the commodity, and hence indirectly in both labour demand and output. It cannot cause the output to increase before the labour demand.

Proposition 6.—Other things equal, the less steep the relevant part of the (labour) supply curve the greater the change in the equilibrium wage caused by a given oscillation of the (labour) supply curve.

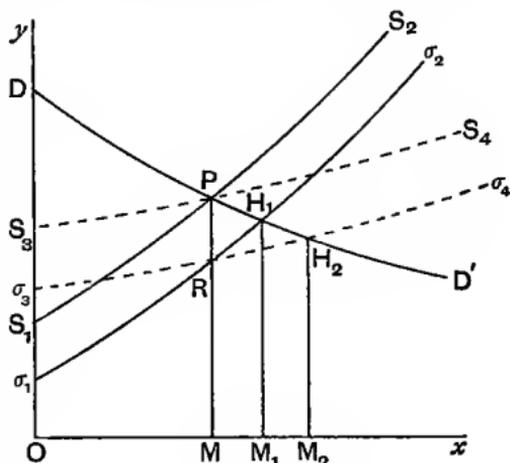


FIG. 16.

Let the steeper supply curve (Fig. 16) be S_1S_2 , oscillating through a vertical distance PR to $\sigma_1\sigma_2$; and S_3S_4 , the less steep supply curve, oscillating through the same distance to $\sigma_3\sigma_4$. Let DD' be the demand curve, cutting $\sigma_1\sigma_2$ in H_1 and $\sigma_3\sigma_4$ in H_2 .

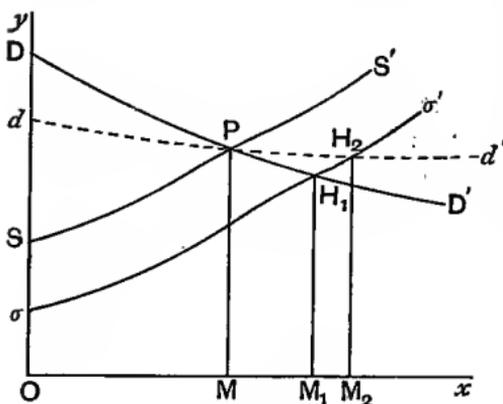


FIG. 17.

It is evident, without formal proof, that H_2M_2 is less than H_1M_1 , and therefore that the difference

between PM and H_2M_2 is greater than the difference between PM and H_1M_1 .

Proposition 7.—Other things being equal, the less steep

the relevant part of the (labour) demand curve, the smaller is the change in the equilibrium wage caused by a given oscillation of the (labour) supply curve.

Let the supply curve oscillate from SS' to $\sigma\sigma'$ (Fig. 17).

Let H_2 be the intersection of $\sigma\sigma'$, with a less steep demand curve dd' , and H_1 its intersection with a steeper curve DD' .

It is evident, without formal proof, that H_2M_2 is

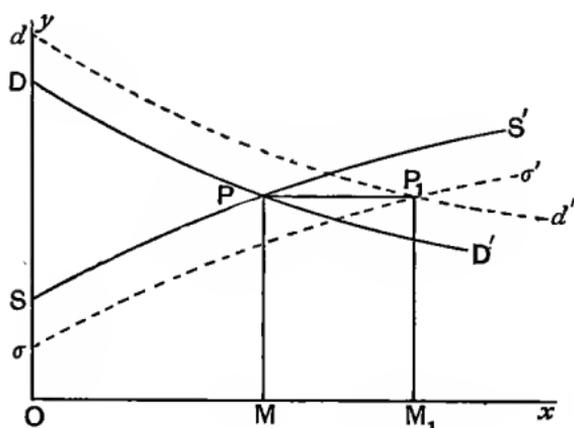


FIG. 18.

greater than H_1M_1 , and, therefore, that the difference between PM and H_2M_2 is less than the difference between PM and H_1M_1 .

Proposition 8.

—If the (labour) demand and (labour) supply curves are similar, and if the

demand curve oscillates upward through a vertical distance equal to that through which the supply curve oscillates downwards, the amount of labour employed is increased, but the equilibrium wage remains the same as before.

The curves being similar, it is evident from an inspection of the diagram (Fig. 18) that P_1M_1 is equal to PM .

APPENDIX C

MR. ADAMS' PROPOSED ARBITRATION LAW.¹

AN ACT TO PROVIDE FOR THE INVESTIGATION OF CONTROVERSIES AFFECTING INTERSTATE COMMERCE AND FOR OTHER PURPOSES

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled

Section 1.—That whenever within any State or States, Territory or Territories, of the United States, a controversy concerning wages, hours of labour, or conditions of employment shall arise between an employer being an individual, partnership, association, corporation, or other combination, and the employees or association or combination of employees of such employer, by reason of which controversy the transportation of the United States mails, the operations, civil or military, of the Government of the United States, or the free and regular movement of commerce among the several States and with foreign nations is, in the judgment of the President, interrupted or directly affected, or threatened with being so interrupted or directly affected, the President shall, in his discretion, inquire into the same and investigate the causes thereof.

Section 2.—To this end the President may appoint a special Commission, not exceeding seven in number of

¹ Extracted from the Bulletin of the Department of Labour, No. 46, May 1903.

persons in his judgment specially qualified to conduct such an investigation.

Section 3.—Such Commission shall organise with all convenient despatch, and upon giving reasonable notice to the parties to the controversy, either at the seat of disturbance or elsewhere, as it may deem most expedient, shall proceed to investigate the causes of such controversy and the remedy therefor.

Section 4.—The parties to the controversy shall be entitled to be present in person or by counsel throughout the continuation of the investigation, and shall be entitled to a hearing thereon, subject always to such rules of procedure as the Commission may adopt; but nothing in this section contained shall be construed as entitling said parties to be present during the proceedings of the Commission prior to or after the completion of their investigation.

Section 5.—For the purpose of this Act, the Commission, or any one Commissioner, shall have power to administer oaths and affirmations, to sign subpoenas, to require the testimony of witnesses either by attendance in person or by deposition, and to require the production of such books, papers, contracts, agreements, and documents as may be deemed material to a just determination of the matters under investigation; and to this end the Commission may invoke the aid of the Courts of the United States to compel witnesses to attend and testify and to produce such books, papers, contracts, agreements, and documents; and for the purposes of this section it shall be vested with the same powers, to the same extent and under the same conditions and penalties, as are vested in the Interstate Commerce Commission by the Act to regulate commerce, approved February 4, 1887, and the Acts amendatory and in addition thereto; and it shall be the duty of the said Courts of the United States to render said Commission the same aid to the same extent and under the same conditions as is provided by said Acts in aid of said Interstate Commerce Commission; and witnesses examined

as aforesaid shall be subject to the same duties and entitled to the same immunities as is provided in said Acts.

Section 6.—For the purposes of this Act the Commission may, whenever it deems it expedient, enter and inspect any public institution, factory, workshop, or mine, and may employ one or more competent experts to examine accounts, books, or official reports, or to examine and report on any matter, material to the investigation, in which such examination and report may be deemed of substantial assistance.

Section 7.—Having made such investigation and elicited such information of all the facts connected with the controversy into which they were appointed to inquire, the Commission shall formulate its report thereon, setting forth the causes of the same, locating so far as may be the responsibility therefor, and making such specific recommendations as shall in its judgment put an end to such controversy or disturbance and prevent a recurrence thereof, suggesting any legislation which the case may seem to require.

Section 8.—The report of such Commission shall forthwith be transmitted to the President and by him communicated, together with such portions of the evidence elicited and any comments of further recommendation he may see fit to make, to the principal parties responsible for the controversy or involved therein; and the papers shall be duly transmitted to Congress for its information and action.

Section 9.—The Commission may, from time to time, make or amend such general rules or orders as may be deemed appropriate for the order and regulation of its investigations and proceedings, including forms of notices and the service thereof, which shall conform as nearly as may be to those in use in the Courts of the United States.

Section 10.—The President is authorized and empowered to fix a reasonable compensation to be paid to the members of the Commission from the Treasury at such times and in such manner as he shall direct. The Commission shall

have authority to employ and fix the compensation of such employees as it may find necessary to the proper performance of his duties, subject to the approval of the Secretary of the Interior.

The Commission shall be furnished by the Secretary of the Interior with suitable offices and all necessary office supplies. Witnesses summoned before the Commission shall be paid the same fees and mileage that are paid to witnesses in the Courts of the United States.

All of the expenses of the Commission, including all necessary expenses for transportation incurred by the Commissioners or by their employees under their orders, in making any investigation under this Act, shall be allowed and paid, on the presentation of itemised vouchers therefor approved by the chairman of the Commission and the Secretary of the Interior.

Section 11.—No Commission appointed under this Act shall continue for a period of over three months from the date of the appointment thereof, unless at any time before the expiration of such period the President shall otherwise order.

THE END

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