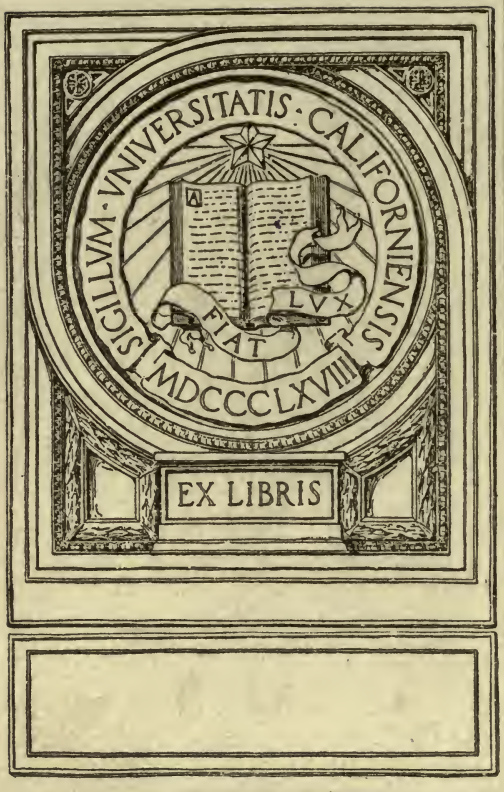


SEASONAL TRADES



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SOCIAL INVESTIGATION AND
RESEARCH

SEMINAR BY MR. SIDNEY WEBB, ASSISTED
BY MR. ARNOLD FREEMAN

SYLLABUS

The object of this Seminar will be to enable those who take part to discover for themselves how to study a given subject ; to bring out the points of interest in apparently unpromising material ; to accustom the students to use the different methods of investigation and the principal sources of information, and make them realise, by personal experiment and mutual criticism, both how such studies are apt to fall short of accuracy and completeness, and in what manner these defects may be remedied.

The subject chosen for study—selected partly because of the interesting problems it affords in connection with Unemployment, the Standard of Life, the maintenance of the family group, the enforcement of a National Minimum, and the economic competition among different industries for the nation's capital, brains, and labour—is "Seasonal Trades in the United Kingdom." After an introductory lecture, in which these trades will be briefly described, the sources of information and the methods of study indicated, and some of the points for investigation discussed, each student will be expected to undertake one trade or part of a trade for individual study. At the first or second meeting the various trades or parts of trades will be allotted among the students, according to individual preference and opportunities. Each student will then set to work to prepare, during the ensuing three months, with such suggestions and advice as can be given, as accurate and complete a survey of the trade as time and opportunities may permit. The object will be, not at first to write a finished monograph, but to make a preliminary sketch of such a monograph, with detailed studies of portions of the field for subsequent incorporation. For this purpose as much individual guidance and tuition will be afforded as may be practicable. As far as possible, each student will be given an opportunity during 1911 to read the paper, in whole or in part, at a meeting of the Seminar, when suggestions will be made for its improvement and completion. Errors and omissions will be pointed out, additional sources of information will be suggested, and further points for investigation will be indicated. Each student will be expected to continue to work on the trade allotted, gradually elaborating the sketch into a finished monograph, and taking advantage of such opportunities for consultation and discussion, and for personal investigation and research, as can be afforded.

Whatever proves to be of value in the work done may eventually be published, in one form or another, under the names of the respective authors.

Admission to the Seminar will be exclusively by permission of Mr. Sidney Webb. The number will be limited, and confined to those prepared to study some particular trade in the manner indicated. Individual consultations and tuition, so far as this is possible, will be arranged to suit mutual convenience ; and the dates and hours of meeting of the Seminar will be fixed from time to time as may be found generally convenient, but such meetings will probably be at 5 or 5.30 p.m. Application for admission should be made, if possible, before 15th September. Late applications will be considered subject to there being still places vacant.

Open to students paying either the Composition Fee or the Research Fee.

SEASONAL TRADES

BY VARIOUS WRITERS

WITH AN INTRODUCTION BY
SIDNEY WEBB

EDITED BY SIDNEY WEBB, LL.B.
AND ARNOLD FREEMAN, M.A.

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PREFACE

THE "Seasonal Trades," in which several millions of our fellow citizens find their livelihood periodically interrupted from no fault of their own, have, in the last decade, often been referred to. But they seem never to have been made the subject of detailed study. The nineteenth century economists, as appears from the first of the following chapters, scarcely deigned to notice the seasonal tides upon the industrial ocean; and practically no attempt seems to have been made to ascertain, by specific investigation of facts, how far the current generalisations as to rates of wages and conditions of employment were borne out by the actual phenomena. The bibliographical information in the present volume indicates how scanty is our stock of knowledge on the subject. From philanthropic motives, during the past two decades, special attention has been paid to dock and wharf labour, and to the building trades; but the problem of their "seasonality" has not been specifically studied in connection with that of other industries.

The present volume is the outcome of a Seminar at the London School of Economics and Political Science during the session 1910, in which Mr. Arnold Freeman, to whom the putting together of the book is almost wholly due, acted as my assistant. Prepared amid examination and other pressure, in competition with other studies, and necessarily under stress of time, these chapters of "students' work" inevitably fall short of the highest standards of scientific investigation or economic scholarship. But they represent no small amount of patient, original, and independent research, and personal inquiries into the various trades; they add something to our available stock of knowledge; and,

taken together, they serve to bring home to us some of the realities of economic pressure that lie beneath and behind all our abstractions about the capacity of "the labour market" for an indefinite "absorption" of the temporarily unemployed!

We may realise from the variety of industries dealt with in this volume—a selection which is but a sample of many others—that practically all trades are "seasonal" to a greater or less extent. Sometimes the recurrent seasonal slackness affects practically all those engaged in the industry; sometimes the weight falls upon particular classes of operatives only, but upon the whole of those classes; and sometimes all the burden has to be borne by a fringe of "casual hands." A change from one to another of these varieties of "under-employment" has sometimes been counted as progress! Any statistical or quantitative estimate of the amount by which the volume of employment is greater at one time than another, it is almost impossible to obtain, though Mr. Frank Popplewell has managed to secure valuable information on this point with regard to Gas manufacture, and Mr. A. D. Webb affords some indication with regard to the building trades. Still more difficult is it to trace exactly on what classes, in what places, and upon which individual workers the burden of a recurrent cessation of the means of livelihood actually falls, and how it affects the life of the household. But every student of the problems of the poor, and every philanthropic worker, knows what difficulties and dangers, how many tragic family breakdowns and degradations of the Standard of Life, these recurrent periods of "slackness" are responsible for.

Is there any need for such purely "seasonal" fluctuations of employment at all? The question seems at first sight vain, for how can we get rid of the alternations of summer and winter, of seed-time and harvest, of light and darkness? It was, however, one of the valuable facts revealed by the late Royal Commission

on the Poor Laws, that, taking all the industries of the United Kingdom together, there is no such striking difference in the total volume of employment from one month to another as is commonly supposed. It is simply not true that we may take it for granted that business is brisk in the spring and dull in the winter. Miss Poyntz brings out in the present volume the fact that, although there is a slack season in nearly all trades, this occurs at different parts of the year. There is, as the Board of Trade, from accurate statistics of the past decade, is able positively to testify, no month in the year in which some great industry is not at its very slackest, and equally no month in the year in which some great industry is not at its very busiest. Thus, taking the actual facts of the last ten years, whilst January is the slackest month in iron-mining and the furnishing trades, it is actually the busiest at the docks of London and other ports (except those dealing with the Baltic), and one of the busiest for coal-mining; in February the plumbers have most unemployment, but the paper-making trade is at its briskest; in March and April the coopers are at their slackest, but the steel-smelters, the great industries of the textiles and multifarious furnishing trades are busy; May and June are the worst of all months for the great industry of coal-mining, as well as for the London dock-labourers, but they are the best of all months for the wide ramifications of the clothing trades, as well as for mill-sawyers; July sees the iron and steel and tin-plate works at their lowest ebb, but the railway service and all the occupations of the holiday resorts are near their busiest; in August and September the paper-makers, printers, book-binders, textile operatives, and tobacco-workers are more unemployed than at any other time, but (besides the railway and steamboat lines and all occupations of the holiday resorts) all forms of agriculture harvesting are at their height; the clothing trades are at their very slackest in October, but the iron and steel works are

then at their busiest; November, on an average, sees the best of all months for printing and bookbinding, tobacco and tin-plate, and for most of the metal trades; December is the worst of all months for carpenters and engineers, mill-sawyers, and coach-builders, leather-workers and brush-makers, but then it is the best of all months for coal-miners, the very extensive theatrical industry, the Post Office service and the producers of gas and electric light. If the Board of Trade had available statistical evidence as to other industries, there is every reason to believe that we should find the same "infinite variety" in their seasonal slackness.

Now, I have ventured to postulate as an economic hypothesis, to be tested by the facts whenever we can ascertain them, that *there is, in the United Kingdom of to-day, no seasonal slackness in the community as a whole.* Leaving aside for a moment the "cyclical" fluctuations of trade, about which we hear so much, and which make the aggregate volume of business differ *from year to year*; and ignoring the chronic "under-employment" of the casual labourer, of which Mr. W. H. Beveridge has discovered the cause, I suggest that—so far as mere "seasonal" changes are concerned—the volume of employment in the aggregate probably remains pretty constant throughout the year. Stating it definitely, I venture to say that if we could get accurate statistics of the total number of wage-earners actually in employment in the United Kingdom this week we should find it to be very nearly identical with the total number for any other week of the present year. This is almost certainly true with regard to the great mass of unskilled and only slightly specialised labour, which makes up more than half of the whole.

An economic explanation can be given for this hypothetical paradox. In a highly-evolved industrial community, with occupations of the most multifarious kinds, the "product" of industry comes to market uninterruptedly throughout the whole year. There is,

in such a community, no special month of harvest. Translated into practical life, we may say that nearly all of us get our incomes week by week, or quarter by quarter, fairly evenly, throughout the year; and we nearly all of us spend our incomes as we get them. It is true that we do not spend them each week in the same way. Sometimes most of us are buying clothes, and sometimes, most of us, holiday amusements; and this variation in demand causes the seasonal fluctuations in particular trades. But week by week we are all using or consuming much the same amount in the aggregate, giving, in the aggregate, the same number of orders, to the same total amount; and, therefore, indirectly setting to work, in the aggregate, the same amount of labour.

From this hypothesis there seems to flow the momentous conclusion that the seasonal alternations of over-pressure and slackness to which so many workers are subjected, with such evil results, are due only to failures of adjustment. There is no more "inevitability" about them than about the rattling of a motor-car. They mean only that our statesmen have not yet given themselves the trouble to make the social adjustments, and to employ the various devices, by which these calamitous dislocations of the lives of so many hundreds of thousands of households can be prevented.

This is the sort of problem which is going to make Twentieth Century economics even more fascinating, and perhaps even more practically useful to Humanity, than Nineteenth Century chemistry or physics. However, it was not the business of my Seminar to discover any practical plan for preventing Seasonal Unemployment; though the brilliant paper on "The Waiter," by Mrs. Drake, affords some suggestive hints; and Mr. Carter's study of the gradual evolution of the great industry which supplies us with Bicycles may give us some more. What Miss Calver has to tell us about the Boot and Shoe industry; and Mlle. Bourat about the various branches of work in Skins and Furs, bring their

own contributions to the problem; whilst the accounts given by Miss Charlotte Saunders of the Millinery trade, and by Mrs. Drake of the Tailoring trade, remind us of the infinite complexities of the economic "philosophy of clothes."

By what steps can we proceed to such a "regularisation" of these seasonal trades, and such a "dovetailing" of their unspecialised and unskilled labour, as would prevent the recurrent fluctuations of employment to which they are now subject? This is "another story," which is perhaps out of place in such a volume as this. Those who are interested to pursue the subject will find in the lately published volume, "The Prevention of Destitution," by S. and B. Webb, an elaborate exposition of the policy by which, as it seems to the writers, the great bulk of involuntary unemployment and "under-employment" can be actually prevented.

SIDNEY WEBB.

June, 1911.

The members of the Seminar have asked me to express their thanks to Mr. B. M. Headicar, Librarian of the London School of Economics, for the valuable help he has given them in the preparation of these papers.

February, 1912.

ARNOLD FREEMAN.

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The first part of the report
 is devoted to a general
 description of the
 country and its
 resources. It is
 followed by a
 detailed account of
 the various
 industries and
 occupations of the
 people. The
 report concludes
 with a summary
 of the principal
 facts and a
 list of the
 names of the
 persons who
 were engaged
 in the
 work.

INTRODUCTION

SEASONAL TRADES

By JULIET STUART POYNTZ, M.A., Columbia University

UNEMPLOYMENT, with its train of consequent evils, is so conspicuous a feature of our present social system that it has been considered by some an essential, by others a distinctive, feature of that system. It may be neither. The former view can be corroborated or controverted only when, with the passage of time, improved statistics and legislative experiments have shown us whether unemployment is a *necessary* consequence of the capitalistic organisation of industry. But *distinctive* of capitalism it certainly is not. From ancient times through the Middle Ages, with their severe penalties for vagrancy, and the period of the Enclosure Acts to the French Revolution, we hear behind the scenes in history the cries of the workless and the starving. It is undoubtedly true, however, that the evil was much aggravated by the industrial revolution, which resulted in the creation of an enormous floating proletariat held within the industrial system by a frail nexus and ready to drop out at the slightest disturbance of conditions. Under the new economic system the causes and consequences of unemployment changed their character, and it appeared in the light of a new phenomenon which had arisen with the capitalist order. But although it became at once one of the most serious and complicated of all those serious problems raised by the new system, not until recently has political economy attempted anything like a complete analysis of the question. At the onrush of a flood the people, in their first impulse of fright, are little concerned to study the question dispassionately and scientifically. Only when the first

shock of the disaster is past do the searchers crawl about among the wreckage seeking the cause of the disaster and striving to discover whether amid that scene of devastation there is anything to be saved, anything to be reconstituted. So with the industrial revolution the consequences of the upheaval were so overwhelming and tragic for the workingman that they left those few who were interested in his fate standing with open-mouthed horror and dismay. Decades elapsed before they became fully conscious of the futility of such an attitude and turned their energies to taking arms against this "sea of troubles" by a scientific analysis of the forces which were at work to produce it. This analysis has shown the problem of unemployment to be more difficult and complicated than the most acute of early nineteenth century thinkers ever dreamt. They began by considering the most apparent aspects of the problem which they explained as the inevitable concomitant of a too rapid growth of population, or those aspects most obviously connected with the system of capitalist production, and therefore concentrated their attention upon the appearance of unemployment in connection with the introduction of machinery and new processes or with industrial crises. But the investigations of recent years have contributed a vast amount to our knowledge of the causes for the exclusion of workers from the industrial organisation. The effects of the introduction of machinery and labour-saving devices have been found to be more or less transitory. The bogey of over-population, if it has not been frightened away for all time, has at least been temporarily banished. The superseded numbers in the former case and the superfluous numbers in the latter starve, not because of their mere superfluity, but because of the mal-distribution of wealth which deprives them of their consuming power. But, leaving out of this discussion this question of an ultimate or permanent mal-adjustment of the factors of production, we find that unemployment is in large

measure to be accounted for by fluctuations in industrial activity.¹ Modern industry, highly dynamic as it is, naturally leaves a good deal of waste in the course of its rapid development. Change of method, change of process, change of organisation, all contribute to the casting aside of out-of-date machinery—human as well as inanimate. The lack of centralised control and system which is characteristic of competitive industry produces many conflicting demands for labour, and in connection with the instability of trade which results from a highly developed, easily adaptable machine industry, it operates to keep on call to meet these fluctuations a large number of hands, a part of whom must always be unemployed. It is convenient for purposes of classification, though it does not cover the whole field, to distinguish the fluctuations of industry as *cyclical*, *seasonal*, and *casual*. *Cyclical* fluctuations accompanied by crises have hitherto attracted the most attention. They extend over a series of years and involve long periods of expansion and contraction in industry as a whole. Their cause is still dubious. Political economy, in ascribing it to anything from over-saving to sun-spots, has vindicated its oft-disputed claim to imagination. *Casual* fluctuations are those which take place within the week or month from day to day, arise from more easily ascertainable causes, and are confined to separate trades or sections of trades or to individual businesses. *Seasonal* fluctuations, with which we shall be occupied, are those recurring with some regularity within the year from month to month in separate trades or sections of trades. But these three types of movement are usually found in conjunction, and as yet it is impossible to analyse this resultant into its component elements. In any given movement of industry it is impossible to say precisely and quantitatively how great influence is to be ascribed

¹ Cf. on this question W. H. Beveridge: *Unemployment, a Problem of Industry.*"

to any of these tendencies individually. One may be predominant or they may occur in combination, all having about equal force. The curve of employment for any given month of the year in a case where it would normally rise under seasonal influence may fall according to the cyclical movement. Not only quantity, but also direction, is thus often difficult to determine, and only by comparing figures for several years are we able partially to correct our results.

X Trades show marked differences in the comparative degree to which they are subject to these influences. The cotton trade, for instance, is affected mainly by cyclical fluctuation, and to a comparatively small extent by seasonal; the building trade conspicuously by both cyclical and seasonal; and "docking" by all three—cyclical, seasonal, and casual. Although the term "seasonal trade" is frequently used, it is almost as incorrect to speak of a "seasonal trade" as of a "cyclical trade," for both these terms imply the existence of non-seasonal and non-cyclical trades; whereas investigation indicates that there are practically no trades which are not subject to seasonal as well as to cyclical fluctuations. Seasonality, if less uniform and simultaneous in its action than cyclical movement, is a hardly less universal phenomenon in the industrial field. In the words of the Board of Trade Memorandum in the Report of the Poor Law Commission,¹ "seasonal fluctuation is found to a more or less marked degree in nearly every industry," though "the importance of seasonal fluctuation varies greatly as between different trades. The seasons on the whole are least marked and least regular in industries connected with the manufacture and use of metals—engineering, shipbuilding, miscellaneous metal trades, iron and steel working, tin plate and steel sheet milling. Seasonal fluctuation is not so much absent here as liable to be overridden by

¹ Minutes of Evidence, Poor Law Commission, Appendix, vol. ix. Cd. 5,068, pp. 638-655.

other movements, in particular cyclical fluctuation. In other trades—printing, building, furnishing, clothing, and at gasworks, tramways, and the London docks—seasonal fluctuation is a prominent and regular phenomenon.”¹

Indeed, so far-reaching is this seasonal tendency, that it would be quite erroneous to think of it as peculiar to manual industry, for it permeates every department of social activity and its appearance in the manual industries is only one aspect of this larger phenomenon. From the Bloomsbury beggar whose “flush” season begins with the advent of the tourist in the spring to the barrister who drops work for recreation in the summer, all feel the influence of seasonal tendencies. The liberal professions and clerical pursuits are all affected to a greater or less degree. But it is with the manual worker living at the margin of sustenance and paid a bare existence wage, and that only for the time he is actually working, that the phenomenon assumes a vital and overwhelming importance. The manual worker could undoubtedly contemplate the cessation of his none too agreeable labours with as much complacency as the stock-broker starting for his summer vacation if it were not for the fact that his income and with it clothing, food, and shelter for himself and his family, cease with cessation of employment. The hope, often uncertain, that his trade will revive in a few months and reabsorb him is small comfort in the immediate necessity. His small savings quickly vanish, and every possession

¹ Cf. discussion in Bowley: *Elementary Manual of Statistics*, chap. viii, *Employment*, p. 151. Mr. Bowley points out that in a few occupations employment is practically regular, modified only by occasional overtime or temporary engagement of extra hands. Among these are the Army, Navy, government Services (police, sanitation, etc.), and railways, and perhaps other land transport services. Nearly as regular are domestic service, and the manufacture and distribution of ordinary food and drink. In another group, employing about 2,000,000, the length of the working week is regulated according to the demand for the product, the workers being put on short time, when the market is overstocked, but not ordinarily dismissed. The statistics of unemployment, strictly speaking, do not relate to either of these groups.

above the margin of necessity finds its way to the pawn-broker—clothing and furniture, home itself, taking home to mean something more than four bare walls. The skilled worker is often protected to a certain extent by a meagre insurance allowance, and the unskilled worker by the occasional possibility of an alternative occupation, but irregular employment brings in its train at its best uncertainty of income and the lowering of the standard of life, and at its worst demoralisation and the break-up of the family.

It is characteristic of a philosophy like that of the competitive industrial régime which can think of a "labour market" where human life is bought and sold at auction, that it feels compelled to ignore the considerations just mentioned. If there is no demand for "labour" at a given time, then "labour" must wait, although waiting means being deprived of sustenance. Each trade, each sub-section of a trade, must have at its beck and call a sufficient number of "hands" to fill all the demands of the trade on its busiest day. Thus arises a situation analogous to that which Mr. Beveridge analyses for casual occupations. About each trade there tends to accumulate a pool of labour large enough to satisfy the highest potential demand of that industry, and the sum of all these pools forms a "reserve army," a great convenience for the employer, who can draw upon it at need and feels no responsibility for its maintenance while on reserve. As has been said, "to capitalists concerned only for present profit, this extreme discontinuity of employment offers several advantages. Where the industry is seasonal or otherwise irregular in volume, as in the case of dock labour and the clothing trade, the employer is able, without expense to himself, to expand or contract his working staff in exact proportion to the state of the weather or change of tides or seasons. The giver-out of work can at any moment quadruple his production to fulfil a pressing order, and then drop back to the current demands of a slack season

without incurring factory rent or other standing charges. The army of men and women standing at his beck and call cost him nothing except for the actual hours that they were at work. And the very existence of such a 'reserve army' places each member of it more completely at his mercy with regard to all the conditions of employment."¹

In the discussion of this question one naturally turns to the economists of the nineteenth century for their ideas on the subject, especially as the problem of unemployment and its consequences was, if anything, more serious then that at present. A review of the ideas of the Manchester School on this question yields small results. The economists of that school, concerned with propagating the idea of freedom of industry, were not likely to undermine their arguments by emphasising their fundamental point of weakness, the effect of *laissez faire* upon the workers, for whom the doctrine became, in the words of Buvet, *laissez faire la misère, laissez passer la mort*. The Manchester School regarded with blind optimism the sufferings of the victims of their system in this "best possible of worlds," and looked upon periodic depression and unemployment as inevitable—just as one looks for breakdowns in a motor-car—as "the shadow side of progress itself." They were concerned with describing and developing the technique of capitalism for the capitalist, and were as little diverted from their task by the consideration of the disastrous consequences for the workers as is the student of

¹ S. and B. Webb: *Industrial Democracy*, 1902, p. 434.

² Sir Robert Giffen, in his inaugural address as President of the Royal Statistical Society in 1883, concluded: "Thus the rich have become more numerous, but not richer individually; the 'poor' are, to some smaller extent, fewer; and those who remain 'poor' are, individually, twice as well off on the average as they were fifty years ago. The poor have thus had almost all the benefit of the great material advance of the last fifty years."—Majority Report of the Poor Law Commission, p. 308.

Mr. Giffen tells us (essays in *Finance*, Second Series, p. 379) that "periodic starvation was in fact the condition of the masses of the working men throughout the kingdom fifty years ago."—Foxwell, *Essay on Irregularity of Employment*, p. 19.

aviation at the present day by the frequent casualties resulting from the use of airships. As Ricardo says: "In rich and powerful communities where large capitals are invested in machinery, more distress will be experienced from a revulsion in trade than in poorer countries where there is proportionally a much smaller amount of fixed, and a much larger amount of circulating, capital, and where consequently more work is done by the labour of men. . . . This, however, is an evil to which a rich nation must submit; and it would not be more reasonable to complain of it, than it would be in a rich merchant to lament that his ship was exposed to the dangers of the sea, while his poor neighbour's cottage was safe from all such hazard."¹

X (Adam Smith considers seasonality of employment as it affects the rate of wages. "The wages of labour in different occupations vary with the constancy or inconstancy of employment. Employment is much more constant in some trades than in others. In the greater part of manufactures, a journeyman may be pretty sure of employment almost every day of the year that he is able to work. A mason or bricklayer, on the contrary, can work neither in hard frost nor in foul weather, and his employment at all other times depends upon the occasional calls of his customers. He is liable in consequence to be frequently without any. What he earns, therefore, while he is employed, must not only maintain him while he is idle, but make him some compensation for those anxious and desponding moments which the thought of so precarious a situation must sometimes occasion. Where the computed earnings of the greater part of manufactures, accordingly, are nearly upon a level with the day wages of common labourers, those of masons and bricklayers are generally from one-half more to double those wages. Where common labourers earn

¹ Ricardo: Principles of Political Economy and Taxation, chap. xix, Changes in the Channels of Trade. p. 161 in The Works of David Ricardo, 1846.

four or five shillings a week, masons and bricklayers frequently earn seven and eight; where the former earn six, the latter often earn nine or ten, as in London, the latter commonly earn fifteen or eighteen. No species of skilled labour, however, seems more easy to learn than that of masons and bricklayers. Chairmen in London, during the summer season, are said sometimes to be employed as bricklayers. The high wages of those workmen, therefore, are not so much the recompense of their skill, as the compensation for the inconstancy of their employment.

“A house carpenter seems to exercise a nicer and more ingenious trade than a mason. In most places, however, for it is not universally so, his day-wages are somewhat lower. His employment, though it depends much, does not depend so entirely upon the occasional calls of his customers; and it is not liable to be interrupted by the weather.

“When the trades which generally afford constant employment happen in a particular place not to do so, the wages of the workmen always rise a good deal above their ordinary proportion to those of common labour. In London almost all the journeymen artificers are liable to be called upon and dismissed by their masters from day to day, and from week to week, in the same manner as day-labourers in other places. The lowest order of artificers, journeymen taylorers, accordingly, earn there a half a crown a day, though eighteen pence may be reckoned the wages of common labour; but in London these are often many weeks without employment, particularly during the summer.”¹

Thus to Adam Smith, as to many economists after him even down to the present day, the question of irregular employment is mainly a question of wages. Later “Manchesterians” instead of studying the problem further, contented themselves with repeating in

¹ Adam Smith: *Wealth of Nations*, Edited by E. Cannan, 1904, chap. x, part 1, p. 105.

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Alexandrian wise the words of the Master; as, for instance, McCulloch, who agrees with Dr. Smith that the wages of irregular workers should afford them "some compensation for their anxious and desponding moments which the thought of so precarious a situation must sometimes occasion."¹ Nassau Senior, who also repeats Adam Smith, believes that the anxious and desponding moments "are compensated, and, in most dispositions, more than compensated, by the diminution of his toil. We believe, after all, that nothing is so much disliked as steady, regular labour; and that the opportunities of idleness afforded by an occupation of irregular employment are so much more than an equivalent for its anxiety to reduce the wages of such occupations below the common average."²

W. T. Thornton and Ricardo are silent on the subject, as are also, among the French economists, J. B. Say, Bastiat, and Chevalier.

With a visionary impracticality far surpassing that ascribed to the socialist, the individualist of the early nineteenth century confidently expected that with the fulfilment of his ideal of the free play of industrial forces, every individual would find his place in the industrial system. Professor Foxwell has provided us with a good comparison. "Ricardo and the economists of his school, more familiar with the money market than with industry, greatly underrated the difficulty which the weaker classes find in adapting themselves to sudden changes. These writers seem to consider the effect of an industrial disturbance as very much the same as that of a pail of water thrown on a pool, over whose surface it soon spreads equally. The real conditions of industry more nearly resemble those of a viscous glacier. The

¹ McCulloch: *A Treatise on the Circumstances which determine the Rate of Wages and the Condition of the Labouring Classes* (London, 1851, p. 53). Cf. also J. R. McCulloch's *Principles of Political Economy* (Edinburgh, 1825). No reference to the subject occurs in any of his other works.

² Nassau Senior: *Political Economy* (1850), p. 200.

glacier changes its form under severe strains, but only slowly and at the cost of much fracture and internal disturbance.¹

But when it became apparent that, in spite of the progress of *laissez faire* and the increasing freedom of industry, not only did the individual not find his place in the industrial system, but his hope of ever finding it was diminishing, Malthusianism provided the best *apologia* for the capitalist system by relieving it of all responsibility for the fate of "the unhappy persons, who, in the great lottery of life, have drawn a blank,"² and presented it with a strong shield and buckler in the doctrine of over-population. Malthus' solution of the problem of unemployment was simple, and is best expressed in that familiar passage which disappeared from the later editions of his works: "A man who is born into the world already possessed, if he cannot get subsistence from his parents on whom he has just demand, and if society do not want his labours, has no claim of *right* to the smallest portion of food, and, in fact, has no business to be where he is. At Nature's mighty feast there is no vacant cover for him. She tells him to be gone, and will quickly execute her own orders if he does not work upon the compassion of some of her guests."³

These conclusions did not, however, appear final to the working man or his sympathisers. As Sismondi exclaimed to Ricardo, "What! Is wealth then everything? Are men nothing?" The indifference of the orthodox political economy to the plight of the workers was more than compensated for by the indignant eloquence of the socialists. From the beginning they looked upon unemployment as one of the prime evils

¹ H. S. Foxwell: *Irregularity of Employment and Fluctuation of Prices*, p. 12.

² Malthus: *An Essay on The Principles of Population* (London, 1798), p. 204.

³ Malthus: *An Essay on The Principles of Population* (London, 1803), p. 53.

of capitalism and made the right to work one of the foundation stones of their system. We find in none of them, however, a complete scientific analysis of the various types of unemployment and their causes. Their attention was attracted especially by industrial crises, with which were associated the most lasting and disastrous forms of unemployment. Moreover, they felt that unemployment, of whatever kind, was only a concomitant of the capitalist system, and that nothing was to be gained by particularising. Thus we find in them little which bears upon the question of seasonal unemployment proper, but their treatment of unemployment as a whole sheds light upon this among other aspects of the question.

The individualistic economy has left it to the individual to find his place in the industrial system. But, asked the socialist, how was a man free to find work when the means of working were at the disposal of the capitalist alone? The new industrial system, with its minute division of labour and large-scale production for distant markets, monopolised the whole economic field. Life beyond its boundaries was impossible. Hence the enunciation of the Right to Work—a formula popularised by Fourier¹ and emphasised by his school, the head of which, Victor Considérant,² demanded its recognition even within the capitalist system.³ It saw its heyday in 1848, when, defended by Louis Blanc,⁴ it became the foundation principle of the ill-fated ateliers nationaux,⁵ wherein the State assumed the responsibility of employing in public works

¹ Casually in *Théorie des quatre mouvements*, 1808; more completely in *Théorie de l'unité universelle*, 1822.

² See Considérant: *Théorie du droit de propriété et du droit au travail* (Paris, 1839).

³ For the development of the idea see Rudolph Singer: *Das Recht auf Arbeit in geschichtlicher Darstellung*.

⁴ Louis Blanc: *Le Socialisme, droit au travail* (Paris, 1848). Louis Blanc: *Histoire de la révolution du 1848* (Paris, 1870).

⁵ For the reasons for their failure see Emile Thomas: *Histoire des Ateliers Nationaux* (Paris, 1848).

all who could not find work elsewhere. It is evident from a list of 110 irregular occupations, together with the daily wages and average amount of unemployment during the year in each, which he gives in his "Organisation of Labour," that Louis Blanc appreciated the evil of seasonal irregularity as well as the more general aspects of unemployment. The figures were collected by himself from 1,500 workpeople in 830 workshops in Paris. This list is interesting as the first attempt at a statistical statement with regard to seasonal trades.¹

FEMALE LABOUR.		Daily Wage (francs).	Mos. out of employment during year.			Daily Wage (francs).	Mos. out of employment during year.
Washerwomen ...	...	2	4	Patchers ...	...	1.25	3
Shoebinders ...	...	0.75	3	Ironers . . . . .	...	2	3
Knitters ...	...	0.75	3	Dyers ...	...	2.25	—
Embroiderers ...	...	1.50	4 or 5	Vermillion makers ...	...	1.50	4
Polishers of metals ...	...	2.25	5				
Polishers of china ...	...	1.75	5	MALE LABOUR.			
Card makers ...	...	1.50	3	Straw hatmakers ...	...	4	7
Cardboard makers ...	...	1.50	3	Silversmiths ...	...	3	3
Bonnet makers ...	...	1.25	4	Armourers ...	...	4	4
Candle makers ...	...	1.00	4 or 5	Gold-beaters. . . . .	...	3.50	3
Shoemakers ...	...	1.25	—	Jewellers in gold . . . . .	...	3.75	5
Colourists ...	...	2	4 or 5	Butchers ...	...	3	3
Straw-bonnet makers . . .	...	2	6	Bakers... . . . .	...	3.75	3
Milliners ...	...	1.25	4	Harness makers . . . . .	...	2.25	3
Coverlet makers... . . . .	...	1.25	4	Button makers ...	...	2.75	3
Veil makers ...	...	1.25	5	Hatters . . . . .	...	3.50	5
Gilders on wood... . . . .	...	1.50	5	Sausage makers (food given) ...	...	1	4
Encarteuses ...	...	1.25	5	Carpenters ...	...	4.50	4
Button makers ...	...	1.25	4	Cartwrights . . . . .	...	3	5
Flower makers ...	...	1.75	5	Carvers . . . . .	...	3.50	4
Fringe makers ...	...	0.75	3	Compositors . . . . .	...	3.50	3
Glove makers ...	...	1.25	4	Confectioners ...	...	3.50	5
Waistcoat makers ...	...	1.50	4	Boot makers. . . . .	...	2.75	3
Trousers makers ...	...	1	—	Curriers. . . . .	...	4	4
Shirtmakers for shops. . . . .	...	2	4	Cutlers . . . . .	...	3	3
Dressmakers. . . . .	...	1.50	4	Tilers ...	...	4.50	4
Painters on glass ...	...	1.50	4	Gilders on wood... . . . .	...	3	3
Lace women ...	...	1	3	Gilders on copper ...	...	3.75	4
Cotton winders ...	...	2.50	6	Cabinet makers ...	...	3	3
Gold workers ...	...	1.50	4	Embossers ...	...	3.50	4
Boot-hole workers ...	...	1.50	4	Compass makers . . . . .	...	4	4
Feather dressers... . . . .	...	1.50	4	Spectacle makers. . . . .	...	3	6
Instrument polishers... . . . .	...	2	4	Umbrella makers. . . . .	...	3	4
Silver & enamel poli'rs . . . . .	...	2.25	6	Piano makers ...	...	4	3
Cotton joiners ...	...	0.90	3				

¹ Louis Blanc : Organisation of Labour (1848 translation), p. 30.

The evils of irregularity of employment combined with low wages may have been expressed more scientifically but never more eloquently than in the words with which he closes his survey: "What tears each of these figures represents! What cries of agony! what curses violently repressed in the abysses of the heart! Behold, nevertheless, the condition of the people of Paris—the city of science—the city of the arts—the glittering capital of the civilized world; the city which, however, reproduces in its physiognomy but too faithfully all the hideous contrasts of a so highly vaunted civilisation; the magnificent promenades, and the filthy streets, the glittering shops, and the gloomy factories, the theatres of song, and the obscure retreats of tears; the monuments of triumph, and the halls for the drowned; the Arc de l'Etoile and the Morgue!"

In England the principle of the right to work early found a defender in Robert Owen, who, aghast at the havoc wrought by industrial crises and unemployment,

	Daily Wage (francs).	Mos. out of employment during year.		Daily Wage (francs).	Mos. out of employment during year.
Tiamen	3.25	3	Paviers	4	4
Typefounders	3.50	4	House painters	3.50	5
Brassfounders	4.25	3	Carriage painters	2.75	5
Ironfounders	4	3	Wig makers	0.85	5
Sweeps	4	6	Do., badly lodged & fed	—	—
Glovers	3.50	—	Plumbers	4.50	4
Watch makers	4	4	Porcelain makers	3.75	—
Printers	4	4	Binders	3	3
Printers on stuff	4.25	4	Saddlers	2.75	5
" lithographic	3.25	4	Locksmiths... ..	3.50	4
" on coloured			Glass blowers	4.25	3
" paper	3.50	4 or 5	Stereotypers	3.50	3
" copper plate.	4	4	Tailors... ..	3	5
" of music	3.25	4	Stone cutters	4.25	4
Lamp makers	3	4	Tanners	3.50	4
Masons	4	4	Paperhangers	4	4
Martlers in building	4	4	Dyers and scourers	3	4
Martlers in clocks.	4.25	3	" in silk	3.50	—
Farriers.	2.75	3	Weavers	3.50	3
Joiners in buildings	3	4	Coopers	3	3
Joiners in chairs... ..	3.50	3	Turners in wood... ..	3.50	4
Opticians	3	6	" for chairs	3.50	4
Goldsmiths	3	6	" in copper.	3.75	4
Lacemen	3	4	Varnishers	4.25	4

proposed that the state should provide industrial and agricultural occupations for the unemployed by means of which they might produce for their own consumption and thus protect themselves from the consequences of industrial fluctuation.¹

At the hands of Marx the whole treatment of the problem was submitted to revision. He extended the analysis of unemployment by explaining the nature of the "reserve army" of labour, which was kept on hand to respond to the fluctuating calls of capitalistic industry, the "disposable industrial reserve army that belongs to capital," quite as absolutely as if the latter had bred it at its own cost, "a man of human material always ready for exploitation." "The course of modern industry," he says, "depends on the constant formation, the greater or less absorption, and the reformation of the industrial reserve army or surplus population. . . . The whole form of the movement of modern industry depends, therefore, upon the constant transformation of a part of the labouring population into unemployed and half-employed hands."² It is interesting to note that this idea of the importance of the reserves of labour as a source of unemployment, though much amplified and corrected since the time of Marx, still forms the keynote of the best analysis of the subject.³ For Marx unemployment constituted the *reductio ad absurdum* of capitalistic industry which, through its own inherent weaknesses, would soon collapse.

Modern economists of the more academic type have generally avoided the question of unemployment, and with it that of seasonal fluctuation. Cairnes, Jevons in his *Principles of Political Economy*, and Professor Fawcett in his *Manual of Political Economy*, say nothing of either, and John Stuart Mill repeats the remarks of Adam Smith. Gide refers to unemployment and slack time as to an ever-increasing degree the

¹ See Heinrich Herkner: *Die Arbeiterfrage*, p. 36.

² See especially W. H. Beveridge: *Unemployment*.

chronic evil of modern industry. J. S. Nicholson devotes no special attention to the question. Marshall, in his *Principles of Political Economy*, makes scattered references to the subject, especially as it affects the rate of wages, but attempts no systematic treatment of it. Of the American economists, F. A. Walker is the only one to consider the question in any detail.¹ He attributes irregularity of employment to the nature of individual occupations, the force of the season, social causes and industrial causes of a general character, but his brief treatment of the subject adds little to our knowledge.

But if the early socialists regarded the question of unemployment too broadly for scientific purposes and if the economists, old and new, have neglected it entirely, it has found ample recognition from a new school of thinkers—the recent writers on social policy.²

This is undoubtedly due in part to the spirit of humanitarianism which has characterised the last half of the nineteenth century, but much more to the growth of democracy which has enabled the workers to force their grievances upon the attention of Parliament and to demand redress. Political economy is much more political than it likes to admit. With the possibility of the legislative redress of wrongs it becomes necessary to understand these wrongs. There is thus arising a new body of material, an applied science of political economy, which approaches economic problems from the standpoint of the supreme value of the human personality as such. This new tendency is responsible for a vast literature on the causes of and remedies for various types of unemployment,³ which has finally come

¹ In *The Wages Question* (New York, 1876).

² Cf. G. Schmoller: *Über einige Grundfragen der Sozialpolitik und Volkswirtschaftslehre* (1898), and R. van der Borgh: *Grundzüge der Sozialpolitik* (1904), part 2.

³ G. Adler points out in his article *Arbeitslosigkeit* in Conrad's *Handwörterbuch der Staatswissenschaften*. As early as 1819 Simonde

to be recognised as the predominant social question of the day. It may be, though we are not ready to admit it, as Professor Adler says in the article quoted in the note, that nothing has been contributed to the theoretical analysis of the problem of unemployment since Marx, yet modern writers on social policy have not been ready to accept his dictum that in this problem lay the key to the collapse of the present industrial system and have directed their efforts toward the elimination of its worst evils even within the present system and possibly its entire eradication for all practical purposes. The masterly work of W. H. Beveridge,¹ before referred to, and the analysis made by Sidney and Beatrice Webb in "The Prevention of Destitution," and other recently published material take this point of view. Unemployment in its economic aspect is attributed in large part to the dissipation of the demand for labour into countless independent smaller demands through the lack of central organisation of industry and to the necessity for the maintenance of reserves to meet all fluctuations. It is suggested that the State should be the helpmate of private industry and co-operate with it by organising the demand for labour under its own authority through an efficacious system of public labour exchanges, and, frankly recognising the need for reserves of labour, should provide for the maintenance of this labour while on reserve and its preservation in efficient condition.

In the Reports of the Poor Law Commission the latest work upon unemployment is crystallised and the new conception of the problem prepared for embodiment in remedial legislation. [The recommendation of the Majority Report² include a national system of

de Sismondi had proposed the organisation of employers to provide insurance against unemployment. There are also a number of valuable monographs on special Seasonal Trades such as, especially that of N. B. Dearle: Problems of Unemployment in the London Building Trade, 1908.

¹ Unemployment—a Problem of Industry (1909).

² Majority Report of the Poor Law Commission, p. 440.

labour exchanges to assist the mobility of labour and collect statistics of unemployment, improvement in technical training, extension of the school age, facilities for technical education and physical training, the regulation of employment by investigations and conferences of the Board of Trade to assist in decasualisation, injunctions to public authorities and government departments to regularise their work and undertake their irregular work in slack times, a scheme of subsidised unemployment insurance and a Public Assistance Authority to prepare for the return of the worker to independent life through home assistance for the better class of applicants, agricultural and labour colonies for those in need of training, and at the bottom of the scale a scheme of compulsory detention colonies, the assistance from the Poor Law to be accompanied by disfranchisement for three months. From this scheme the Minority Report dissents, considering the Majority Report with regard to the unemployed "as even more inadequate and reactionary than with regard to the Poor Law. To undo the work of the Unemployed Workmen Act of 1905, and to thrust back the necessitous workman into a sphere of a resuscitated Poor Law authority under a new name seemed no solution of the grave economic and social problem of unemployment." The second part of its Report, entitled "The Remedy for Unemployment," is devoted entirely to an elaborate analysis of the distress from unemployment as it exists to-day, together with proposals for its reform. The remedial treatment is to be suited to the special needs of each class of cases, in view of the fact that distress from want of employment is a constant feature of industry and commerce as at present administered, and that men in distress from want of employment approximate to one or other of four distinct

¹ The Remedy for Unemployment, Part II. of the Minority Report of the Poor Law Commission (Reissued with introduction by S. and B. Webb under the title The Public Organisation of the Labour Market).

types requiring distinct treatment: "The men from permanent situations, the men of discontinuous employment, the under-employed, and the unemployable." The seasonal workers come largely, though not entirely, under the heading of men of discontinuous employment, for whom "the same prompt and gratuitous machinery for discovering what openings exist, anywhere in the United Kingdom, is required, not only for individuals exceptionally unemployed, but for the entire class, at all times; in order to prevent the constant "leakage" of time between job and job, and to obviate the demoralising, aimless search for work. The principle of the need for reserves of labour in modern industry receives full recognition. The simple fact that a man is on reserve should be no cause for his distress nor for disfranchisement or other deterrent treatment. The need for deterrent treatment will be restricted to the pathological cases of vagrancy and incapacity which will soon be singled out with a thorough organisation of the national labour market through the national labour exchange; which, in addition to its other duties, should devote itself especially to dovetailing seasonal and casual employments, and that resort to it should be made legally compulsory for certain scheduled trades in which excessive discontinuity of employment prevails. The Minority Report also demands the raising of the school age limit, the reduction of hours in certain cases, the regularisation of the national demand for labour by the arrangement of public work in a ten years' programme which would adapt itself to the fluctuations of industry, the subsidising of out-of-work benefit, the absorption of the surplus unemployed in day training depôts or residential farm colonies where they shall be kept in efficient condition, and, lastly, the confinement of those convicted of offences such as vagrancy, non-support, etc., in detention colonies.

¹ For summary see also S. and B. Webb: "Prevention of Destitution," p. 151, and compare evidence given by Sidney Webb before the Poor Law Commission. Appendix, vol. ix, "Minutes of Evidence," p. 18a.

The point which strikes one especially in these outlines is the progress made by the analysis of unemployment in spite of the paucity of statistics. The inadequacy of general unemployment statistics in all countries is too well known and too often lamented to need further comment here.¹ And seasonal unemployment, as one aspect of the larger question, suffers along with it from a lack of statistical investigation. This has not precluded the formation of some very definite conclusions on the subject, but the analysis could be carried much farther and practical remedial measures would be more assured of thoroughness and success if we had more exact statistical information. What we already possess is of great value in indicating general tendencies—the most important and most recent being the memorandum handed in by the Board of Trade to the Poor Law Commission.² The information there given was obtained from three main sources:—

(1) Reports by trade unions of the number and proportion of their members unemployed at the end of each month; or what is known as the trade union unemployed percentage.

(2) Reports by employers as to the average number of days or of shifts worked per week in each month or in the last week of each month, in coal and iron mines and iron and steel works.

(3) Reports by employers as to the actual number of persons employed or paid wages by them daily or in the last week of each month.

The trade union percentage has the advantage of being ascertainable for various industries, and for a number of years thus eliminating to some degree the effect of purely cyclical variations. Figures are also given showing the number of years during which the variation

¹ See Majority Report of Poor Law Commission, p. 396. Cf. Otto Most: Arbeitslosenstatistik—Kritische Bemerkungen. Article in Jahrbücher für Nationalökonomie und Statistik (July, 1910), p. 1.

² Published in Minutes of Evidence, Poor Law Commission, Appendix, vol. ix, Cd. 5068, pp. 638-655.

I.—PERCENTAGE UNEMPLOYED AT END OF EACH MONTH IN TRADE UNIONS.
 Mean of Period, 1897-1906.¹

MONTH.	CARPENTERS AND JOINERS.			PLUMBERS.			STEEL SMELTING.					
	Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.		Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.		Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.				
		Increase.	Decrease.		No change.	Increase.		Decrease.	No change.	Increase.	Decrease.	No change.
January ...	5.22	4	4	2	6.71	9	1	4.19	6	4	—	
February ...	4.80	2	8	—	7.26	8	1	4.10	5	4	1	
March ...	3.84	—	9	1	6.94	2	7	2.71	2	8	—	
April ...	3.15	—	10	—	6.53	3	7	4.08	6	3	1	
May ...	2.88	2	7	1	6.35	2	5	3.11	3	6	1	
June ...	3.07	5	2	3	7.07	8	2	4.22	6	1	3	
July ...	2.88	—	10	—	6.93	3	7	5.28	6	3	1	
August ...	2.87	5	4	1	6.01	1	8	3.90	3	7	—	
September ...	3.39	9	—	1	5.92	4	5	3.44	5	4	1	
October ...	4.11	9	1	—	6.15	5	5	2.98	3	6	1	
November ...	4.54	9	1	—	5.94	3	6	3.51	7	2	1	
December ...	5.93	10	—	—	6.17	7	3	3.52	6	4	—	
Number covered by returns (June, 1906).		56,406				10,554				12,898		

¹ Tables from Board of Trade Memorandum on "Seasonal Trades," Cd. 5068, p. 640.

MONTH.	ENGINEERING.			SHIPBUILDING.			METAL TRADES (VARIOUS).			
	Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.		Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.		Average percent- age un- employ'd at end of each month.	Of the 10 years' number showing in each month.		
		Increase.	Decrease.		No change.	Increase.		Decrease.	No change.	
January ...	4.53	—	10	8.02	1	8	2.28	7	3	—
February ...	4.41	2	7	6.81	1	8	2.28	4	4	2
March ...	3.97	2	7	6.09	1	9	2.50	8	2	—
April ...	3.78	2	8	6.29	—	6	2.42	3	6	1
May ...	3.59	3	7	5.94	—	6	2.20	1	8	1
June ...	3.67	6	3	6.24	1	3	2.16	5	2	3
July ...	3.68	5	4	6.13	1	6	2.38	5	4	1
August ...	3.95	9	1	6.79	—	2	2.42	4	2	4
September ...	4.23	6	3	8.13	1	1	2.51	6	3	1
October ...	4.41	7	2	9.16	1	2	2.09	3	6	1
November ...	4.52	4	4	9.86	2	3	2.06	5	4	1
December ...	5.33	10	—	9.83	—	4	2.30	7	1	2
Number covered by returns (June, 1906).		151,791			57,851				15,252	

	HAT-MAKING.	CLOTHING (1899-1906 ONLY).	FURNISHING.
January ...	4.16	2.44	7.88
February ...	3.34	2.25	6.47
March ...	2.95	1.82	3.25
April ...	2.86	1.46	2.38
May ...	2.51	1.19	2.45
June ...	2.85	1.34	3.20
July ...	3.21	1.51	4.09
August ...	3.37	1.99	4.05
September ...	3.10	2.55	4.19
October ...	2.94	3.01	4.45
November...	4.22	2.99	4.93
December...	4.65	2.71	7.07
Number covered by returns (June, 1906).	5,410	1,856	14,100

	MILL SAWYERS (1900-1906 ONLY).	COOPERS.	COACHBUILDING.
January ...	4.56	8	5.23
February ...	4.34	8	4.02
March ...	4.33	5	2.75
April ...	4.00	3	1.89
May ...	4.07	3	1.64
June ...	3.63	2	1.70
July ...	3.73	1	1.79
August ...	3.94	2	2.58
September ...	4.01	6	3.19
October ...	4.43	4	3.96
November...	4.41	5	4.72
December ...	5.17	7	5.84
Number covered by returns (June, 1906).	4,602	4,899	8,719

	BRUSH-MAKING.		LEATHER TRADES.		PRINTING AND BOOKBINDING.	
	Number covered by returns (June, 1906).	Value	Number covered by returns (June, 1906).	Value	Number covered by returns (June, 1906).	Value
January ...	5.89	1	5.33	4	4.60	9
February ...	4.48	—	4.84	2	4.14	1
March ...	3.27	1	4.69	3	3.64	10
April ...	2.42	1	4.63	6	4.21	9
May ...	2.67	5	4.23	1	4.50	1
June ...	3.84	10	4.45	5	4.54	3
July ...	5.34	9	4.72	4	3.91	4
August ...	6.33	9	5.00	2	5.69	10
September ...	5.68	3	5.30	7	5.25	—
October ...	4.51	1	4.82	7	4.28	1
November ...	4.22	3	5.58	2	2.82	1
December ...	12.14	10	5.81	6	4.04	10
Number covered by returns (June, 1906).		1,728		4,553		54,345

	TOBACCO.	
	Number covered by returns (June, 1906).	Value
January ...	5.76	10
February ...	6.47	6
March ...	7.38	8
April ...	7.76	8
May ...	8.27	6
June ...	8.58	3
July ...	9.27	6
August ...	9.41	3
September ...	7.28	—
October ...	5.12	1
November ...	3.15	1
December ...	4.72	9
Number covered by returns (June, 1906).		2,472

II.—DAYS WORKED IN COAL MINES AND IRON MINES, AND SHIFTS WORKED IN IRON AND STEEL WORKS.¹

Month.	Coal Mines, 1897-1906.						Iron Mines, 1897-1906.						Iron and Steel Works, 1898-1906.		
	Average number of days worked per week.	Of the 10 years.			Average number of days worked per week.	Of the 10 years.			Average number of shifts in last week of month.	Of the 9 years.					
		Inc.	Dec.	No change.		Inc.	Dec.	No change.		Inc.	Dec.	No change.			
January	5.08	—	10	—	5.46	2	8	—	5.44	4	5	—			
February	5.38	10	—	—	5.75	10	—	—	5.47	5	2	2			
March	5.34	3	7	—	5.80	6	3	—	5.47	4	2	3			
April	4.98	—	10	—	5.62	—	10	—	5.48	4	4	1			
May	5.26	8	2	—	5.79	10	—	—	5.48	3	5	1			
June	4.93	1	9	—	5.72	2	8	—	5.44	—	9	—			
July	4.98	7	3	—	5.69	5	4	—	5.35	1	8	—			
August	5.00	5	5	—	5.70	9	1	—	5.40	7	2	—			
September	5.33	10	—	—	5.82	10	—	—	5.49	8	1	—			
October	5.41	6	3	1	5.81	3	7	—	5.49	6	2	1			
November	5.39	4	6	—	5.80	3	7	—	5.47	1	7	1			
December	5.41	8	1	1	5.80	6	4	—	5.48	5	3	1			

¹ Board of Trade Memorandum, Report of Poor Law Commission, Cd. 5068, Appendix xxi., D.

III.—PERCENTAGE PROPORTION OF THE NUMBERS EMPLOYED IN THE UNDERMENTIONED TRADES AT THE END OF EACH MONTH, FROM OCT., 1906, TO SEPTEMBER, 1907.¹ (Mean of the Numbers Employed in Twelve Months = 100).

Month.	Building Trades.				Clothing Trades.					
	Skilled Men.	Labourers.	Lads & Boys.	All Branches.	Dressmaking.	Court Dressmaking.	Mantles, Costumes, etc.	Corset.	Shirt and Collar.	
1906.	October	102.3	105.4	101.3	103.4	107.1	113.1	101.6	97.2	98.8
	November	98.9	100.5	100.5	98.7	103.6	105.3	93.0	98.0	99.0
	December	89.5	91.6	97.6	91.0	96.3	98.5	89.7	97.7	98.5
1907.	January	91.0	92.9	98.0	92.3	96.1	92.6	101.3	100.7	99.2
	February	95.3	94.5	98.2	95.3	95.8	98.1	105.6	101.4	99.8
	March	103.3	101.7	100.6	102.4	105.6	111.4	110.3	103.3	101.0
	April	105.5	104.6	102.5	104.9	110.6	118.7	107.2	103.6	101.5
	May	104.4	103.8	101.3	104.0	112.3	119.3	104.0	103.4	101.5
	June	101.8	103.2	99.6	102.1	112.0	119.3	97.9	100.0	101.3
	July	102.6	100.8	99.6	101.8	104.3	89.3	91.4	100.5	99.2
August	105.6	102.7	100.4	104.2	64.7	43.6	95.4	96.3	99.4	
September	100.0	98.5	99.7	99.4	92.0	90.6	102.3	97.4	100.1	
Month.	Cotton.	Woollen.	Worsted.	Flax.	Jute.	Lace.	Hosiery.	Glass.		
1906.	October	99.5	99.2	97.8	98.9	98.3	97.1	98.0		
	November	99.8	99.1	97.9	99.2	98.6	98.5	98.4		
	December	99.9	99.3	98.5	99.5	97.8	99.3	94.1		
1907.	January	99.8	99.0	98.9	99.0	97.2	100.5	98.5		
	February	99.8	99.2	100.0	98.6	97.5	100.3	96.4		
	March	99.9	99.7	100.8	100.6	97.5	100.3	101.4		
	April	100.4	100.1	101.6	100.9	100.9	101.6	101.5		
	May	100.1	100.3	101.6	100.8	101.7	101.5	101.5		
	June	100.3	100.8	101.5	100.9	101.1	99.7	101.2		
	July	100.2	100.8	100.8	100.4	101.6	100.1	100.4		
August	100.3	100.9	100.4	100.5	101.5	100.3	101.0			
September	100.4	100.9	100.6	100.9	102.1	101.3	101.8			

¹ Board of Trade Memorandum, Report of Poor Law Commission, Cd. 5068, Appendix xxi., D.

in the average direction took place, thus making it possible to estimate the extent of the cyclical influence and to determine what trades show marked seasonal variations regularly recurring from year to year. In coach-building, where, for instance, the resultant direction of variation is found in the first and last five months of the year for all ten years, the industry is evidently influenced by pronounced and regular seasonal variations.

But the trade union percentage is not necessarily an index to fluctuations in employment in general. The figures are given only for trade unionists in certain selected highly organised trades which pay unemployed benefit. A large body of more poorly organised trade unionists, and the great mass of non-unionist labour, skilled and unskilled, and most of sweated and casual labour, are entirely left out of this survey. Then, too, it is just the trades which suffer most from seasonal and casual fluctuations which are least able to pay unemployment benefit. In fact, the record of the payment of unemployment benefit is the source of the statistics. Some of the trades, as is pointed out, are especially susceptible to cyclical fluctuations—such as engineering, shipbuilding, and building. Among the unions omitted are several in which employment is much more steady, such as railway servants, textile workers, and coal miners. As is pointed out in the evidence given by the Board of Trade witnesses, “I should like to mention this as regards our own figures: we can only get the figures for the carpenters and plumbers in the building trade; although they show considerable unemployment at the present time, I should say that there are probably more unemployed among the bricklayers, the labourers, and the masons, because theirs is outside work. Therefore, in that particular trade our figures, which illustrate the position of the carpenters and plumbers, may not, I think, fairly represent the amount of unemployment in the building trade; in fact, I think they probably under-

estimate it. Our figures may exaggerate in some particulars, and under-estimate in others, the amount of unemployment even in the case of the trade unions.”¹ The last objection to the trade union percentage is that there is no means of ascertaining the distribution of unemployment among the members, and this defect detracts greatly from their usefulness in connection with the problem of seasonal fluctuations.

The statistics referring to days or shifts worked per week, useful as they are in giving an index to seasonal fluctuation in industry and trade, are not statistics of unemployment properly speaking, since the quantity of labour remains fairly constant and only the time worked is the varying factor. Figures of the third type are valuable in that they throw light on certain trades and classes of labour not included in the trade union unemployed percentage, but as they refer to one year only the influence of cyclical fluctuation cannot be estimated.

This memorandum, incomplete as it is and restricted in scope, is yet, together with the Board of Trade Reports in the *Labour Gazette*, the best piece of statistics bearing upon the subject of seasonal fluctuation. The statistics obtainable from the records of pauperism and the distress committees are of less value, but they possess the advantage of applying to a class of labour comparatively neglected in the other returns.

In Germany the attempt was made in 1895 to collect on a large scale statistics of unemployment and of seasonal unemployment, for the conjunction of the winter census of population and the summer census of occupations in the same year provided the opportunity for the collection in connection with both of statistics of unemployment which could be compared and made the basis for conclusions on seasonal unemployment.²

¹ Minutes of Evidence, Poor Law Commission. Appendix, vol. xix., Cd. 5068, Q. 98850.

² See Viertel jahrheften zur Statistik des Deutschen Reiches, Heraus gegeben vom Kaiserlichen Statistischen Amt. Ergänzung zum Vierten Heft- (1896).

UNEMPLOYED IN OCCUPATIONS EMPLOYING OVER 100,000 WORKERS,
SHOWING VARIATIONS BETWEEN JUNE 14, 1895, AND DECEMBER 2, 1895
(IN GERMANY).¹

Occupations.	Unemployed.		Workers, 14/VI./'95.	Of these per cent. Unemployed.	
	6/14/95 14/VI./'95.	2/XII./'95.		14/VI./'95.	2/XII./'95.
Agriculture ...	35,004	196,274	5,522,902	0.63	3.55
Forestry ...	1,263	4,470	107,417	1.18	4.16
Smelting ...	2,358	2,435	148,633	1.59	1.64
Coal, etc....	4,823	7,481	325,991	1.48	2.30
Brickmaking, etc.	1,810	14,984	176,234	1.03	8.50
Ironworking ...	3,086	5,290	132,808	2.32	3.98
Lockmaking ...	9,736	12,539	271,853	3.58	4.61
Machine-making, etc. ...	3,281	4,033	138,044	2.38	2.92
Spinning & wind- ing ...	2,709	3,504	167,523	1.62	2.09
Weaving ...	5,601	6,615	406,648	1.38	1.63
Cabinet making ...	8,064	10,827	250,772	3.22	4.32
Baking ...	6,131	8,192	140,893	4.35	5.81
Butcher's trade...	5,135	6,443	107,394	4.78	6.00
Tobacco ...	2,312	2,825	135,319	1.71	2.09
Seamstresses ...	4,988	9,887	129,314	3.86	7.65
Tailoring...	6,873	11,510	233,752	2.94	4.92
Boot-making ...	3,762	5,930	186,440	2.02	3.18
Building ...	10,725	29,942	365,474	2.93	8.19
Masons ...	10,598	94,495	427,221	2.48	22.12
Carpenters ...	4,147	19,972	164,229	2.53	12.16
Goods and Pro- duce merchants	17,720	21,443	520,646	3.40	4.12
Post and telegraph	271	360	122,251	0.22	0.29
Railway service ...	942	1,206	257,179	0.37	0.47
Lodgings and re- freshment ...	8,061	15,603	316,591	2.54	4.92
Domestic service .	32,098	46,013	570,888	2.04	2.93
Irregular labour...	17,723	57,905	200,919	8.82	28.82
State and muni- cipal service ...	1,491	1,931	252,915	0.59	0.76
Education ...	1,175	939	232,848	0.50	0.40

¹ Compiled from Vierteljahrshefte zur Statistik des Deutschen Reichs; Ergänzung vom 4 en. Heft, p. 6ff. Herausgegeben vom Kais. Stat. Amt.

UNEMPLOYED PERCENTAGE (GERMANY, 1895) COMPARED FOR JUNE 14th AND DECEMBER 2nd.

UNEMPLOYED PERCENTAGE (ALL OCCUPATIONS): June 14, 1895 ... 1.85;
December 2, 1895 ... 4.78.

With least deviation from average per cent.

OCCUPATIONS.	June 14, 1895.		December 2, 1895.		
	June 14/'95.	Dec. 2/'95.	Unemployed in per cent of workers.		
	OCCUPATIONS.		June 14/'95.	Dec. 2/'95	
Brushmaking	1.89	2.97	Sails, nets, sacks	3.14	4.98
Hand-shoemaking	1.88	2.30	Tailoring	2.94	4.92
Beet-sugarmaking	1.88	3.63	Lodging, refreshments	2.54	4.92
Gasworks	1.85	2.64	Peddling	0.64	4.88
Tin foundry	1.82	3.12	Brewing	3.38	4.84
Explosives and Combustibles	1.82	1.89	Coppersmiths	4.69	4.82
Waterworks, ice, mineral water	1.80	2.80	Electrical Engineering	2.52	4.71
Wheelwrights, etc.	1.83	3.54	Peat-digging	0.91	4.63

With greatest deviation from average per cent.

Sea and coasting vessels ...	13.81	32.74	Factory workers, artisans, etc. ...	...	4.96	35.66
Subsidiary to commerce, packers, etc. ...	8.95	10.60	Sea and coasting vessels ...	...	13.81	32.74
Irregular wage-labour ...	8.82	28.82	Irregular labour ...	...	8.82	28.82
Store fitters ...	8.56	6.30	Stone-layers ...	...	3.34	26.77
Paper-hangers ...	6.87	13.81	Masons ...	...	2.48	22.12
Private secretaries, clerks ...	6.16	9.46	House painters ...	...	3.57	21.15
Milliners ...	6.12	8.57	Roofers	3.21	21.15
Painters and sculptors ...	5.41	18.54	Plasterers	3.05	20.46

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With lowest deviation from average per cent.

Charcoal, peat, resin ...	0.65	4.41	Metal toys	2.59	0.89
Peddling ...	0.64	4.88	State and municipal service ...	...	0.59	0.76
Agriculture ...	0.63	3.55	Journalists, etc. ...	...	0.67	0.49
State and municipal service ...	0.59	0.76	Railway service ...	...	0.37	0.47
Education, etc. ...	0.50	0.40	Toys, porcelain, glass ...	...	0.83	0.42
Church and religious service ...	0.47	0.25	Education, etc. ...	...	0.50	0.40
Railway service ...	0.37	0.47	Post and telegraph service ...	...	0.22	0.29
Post and telegraph service ...	0.22	0.29	Church and religious service ...	...	0.47	0.25

In both cases inquiry was made as to the fact of unemployment, its duration, and as to sickness or other incapacity on the part of the worker. These statistics are valuable in many ways. They cover a wide field, including all classes of labour and all trades, all persons, in fact, occupied in industry exclusive of civil servants, and they give an indication of the numbers, sex, and age of the unemployed and of the duration of unemployment. They form the basis of most of the speculation on unemployment that has been made since they were published, but as statistics of seasonal unemployment they show great defects. They were taken for one year only, and thus it is difficult to allow for cyclical variation. They were taken on two set days, one in June and the other in December, and thus do not show the complex fluctuation throughout the year which is characteristic of seasonal unemployment, and which must be taken into account in determining remedial measures, such as insurance or dovetailing of occupations. But they do give us an idea, inexact though it may be, of the comparative activity of a large number of trades in summer and winter.

The results from statistics as they at present exist are thus disappointing. They have points of weakness in every part. At present and presumably for some time to come they throw no light on certain aspects of the problem which seem most essential for its solution. What about the actual life of the people behind the percentages? What do they do when their income ceases? Are there other members of the family who help to tide over? What is their standard of life, and how is it affected by the irregularity of their employment? What makes the trade seasonal, of what character is the seasonal fluctuation, and how many of the workers does it affect? What are the conditions of employment within the trade? How are these affected by the seasonal variations? These are the vital questions, and yet they cannot be answered except by a

careful study of a selected number of cases. And this study cannot always be quantitative. Valuable as are statistics for giving some indication of the magnitude of the problem and of the more general conditions of its solution, they are far from furnishing a complete and satisfactory means of comprehending the nature of that problem. The work of analysis can better be done by a more descriptive method. Such an analysis lights the way along which future statistics should be collected. "Every trade has got to be considered by itself, and each trade has a history of its own."¹ The structure and economic characteristics of the individual trade as effecting its workers must be examined into. This sort of investigation has already been started with the publication of special monographs on certain trades or on the industrial conditions of special localities.² This is the type of analysis which is aimed at in the essays in this book.

In seeking for the causes of seasonal fluctuation, the attention is arrested by the relation of the word "seasonal" to the climatic changes within the year. And indeed the influence of these is probably always present to a greater or less degree in all cases of seasonal variation. As there is in the world of plant and animal life a tendency toward emancipation from the tyranny of the seasons, so in industrial life where every advance of civilization has made man more independent of his physical environment, this tendency is still more apparent. In the course of this development, seasons, once all powerful in their control over industrial habits, have left their impress upon social institutions, which in turn guide the current of industry. But leaving aside these historical considerations, climate and weather obviously still exert a very powerful and direct influence

¹ Minutes of Evidence, Poor Law Commission, Cd. 5068, Q. 98850.—Evidence of Board of Trade witnesses.

² For example, N. B. Dearle: Problems of Unemployment in the Building Trade, 1908. Eleanor F. Rathbone: Report of an Enquiry into the conditions of Labour at the Liverpool Docks, 1904. Howarth and Wilson: West Ham. Davies: Life in an English Village.

day by day and month by month over the needs and preferences of men, shaping the character and controlling the periodicity of social and economic activities. It is often impossible to draw a hard and fast distinction between these three underlying influences—climatic, social, and economic. They act in combination and interact upon each other until they become well-nigh indistinguishable. Foggy, rainy weather creates a demand for umbrellas, shipping is delayed by winds and storms, there is an increased demand for coal for heating in winter. Here the influence of the weather is simple and direct.¹ In the case of gas, the predominant factor determining its consumption for lighting is the climatic—the simple physical fact that there is less daylight in winter than in summer, and on the other hand that the heat of the summer makes cooking with gas the preferred method for that season. In the building trade, on the other hand, the complication of causes is well illustrated. The brief daylight of winter hinders all kinds of work, and the frosts and dampness are special obstructions to the bricklayers, painters, plasterers, masons and their labourers, while the employment of carpenters and plumbers, who work inside, is less affected.² Considering only the influence of climate, we should expect a single large fluctuation in the trade with the crest of the wave in summer. Instead of that we find a complicated curve with several “crests.” There is a uniform depression in winter, but this is due not only to bad weather, but to the social fact that with residences and offices occupied in winter there is little demand for repairs, and that tradition and other social forces have concentrated renovation and repairing at certain other points in the year; even thus much more

¹ Cf. Report of Special Committee of Charity Organisation Society on Unskilled Labour (1908).

² Minutes of Evidence, Poor Law Commission, Cd. 5068, Q. 98850-99005; and N. B. Dearle: The Building Trades and the Organisation of Public Work: Paper read at National Conference on the Prevention of Destitution, 1911.

*Tradition
conservation.*

building could be done in winter than is the case at present were it not for the economic advantage of working at other seasons on account of the greater cost in the winter, a fact of great importance in a highly competitive organisation of industry.

Social activity, social traditions, and social customs, influenced either now or originally by climate, as we have said, are a powerful factor in seasonal fluctuation. Each social season makes its own demands upon industry, and the various trades rise to activity in answer to those demands—the Court dressmaker, the draper, the jeweller, the florist and the coiffeur for the Court season, the printer, the House of Commons waiter, the journalist for the parliamentary season, the porter, the cabman, the trunk-maker, the sporting goods maker for the holiday season, the tailor, the gun-maker, the beater-out for the hunting season, the toy-maker, jeweller, and postal clerk for the Christmas season. The more advanced the culture and the more integrated the social life, the more highly differentiated in time as well as otherwise will be the demands of society upon industry. Of all these demands, those made by fashion are the most tyrannous and exacting. It tends to concentrate demand at certain periods of the year, the fashionable seasons. It is responsible for the violent fluctuation in the dressmaking and millinery trades, and for much irregularity in other trades. The London “season” affects almost all branches of industry—upholstery, decorating, catering, goldsmiths’ work, drapers’ sales, clothing, printing, and so on. And through the vagaries in the style of goods produced, fashion is one of the least calculable of all influences affecting industry and tends to increase irregularity. Where the style of the product is fairly uniform it is possible to manufacture to stock, or at least to anticipate the demand somewhat. But where the style cannot be foreseen on account of its rapid and irrational changes, it becomes necessary to defer production until the last minute and then

manufacture at high pressure. Scientific instruments, chemicals, household utensils, cotton thread, and other staple products whose style changes little, can be manufactured to stock, while in the case of hats, clothing, boots, silks, and many other commodities of fashion it is impossible to distribute production evenly over the year. Hats trimmed before the season's style was set would be unsaleable. Even in the cycle trade this consideration plays an important part. The buyer wants the latest model, and withholds his order until the beginning of the season.¹ In dressmaking, especially, every department is absolutely under the domination of the season's style. Cut, fabric, lining, design, and trimming are vital questions that can only be answered when the dictators of fashion have promulgated their edicts; whereupon production begins with a rush.

X In many other trades the cause of irregularity is more purely economic. It may be due to the greater economy of production possible at certain seasons, as in the case of the building trade, or to variations in the supply of raw material. The handling of goods at the docks depends upon the time of their arrival. Dundee Harbour, unlike other ports, is busiest in the winter, for Dundee is the centre of the jute industry, and the raw jute imported direct from India to Dundee arrives between September and April and gives employment to large extra staffs in the discharge of the cargo.² "In the case of tea, the busy season begins with the imports of China tea in the end of June or beginning of July, and continues till November. In December and January it falls away. In India teas the season is later, full work running from August to January, while in February and March it decreases and comes to an end for the season. In the case of coal, ice, and hard woods, trade is more or less regular throughout the year, and the same is now largely true of frozen meat. The import of deals

¹ See Mr. Carter's paper.

² Minutes of Evidence, Poor Law Commission, Cd. 5068, Q. 9049ff.

continues at its busiest from April till the end of October, when it rapidly declines, the trade being largely dependent on the extent to which frost affects the Baltic ports. In the fruit trade the soft fruit is followed by the hard, and employment is at its best from the middle of October till Christmas, when, after a break of a fortnight, it continues good until March is reached. The autumn sales in wool are a matter of common knowledge, but those in May are also considerable."¹ The jam industry depends upon the fruit season, and the trade of the greengrocer upon the vegetable season.

Industry being an organic whole with each part vitally connected with every other, any irregularity in one division is inevitably a cause of disturbance in all proximate divisions. A trade may be seasonal merely because other trades are seasonal which supply it with material or which buy its products for further use in manufacture. Or in a single industry the impetus to irregularity is carried from the first causes, weather or fashion, to the retailers, from them to the wholesalers, from them to the manufacturers, and thence to the markets for raw material or machinery. Often the connection becomes quite obscured, as in the cases cited by Mr. Aves,² where the Lancashire cotton strike of 1893 is reported as having been a cause of great slackness in the London pianoforte and harmonium trade of that year.

As might be inferred from the complexity of their causes, seasonal fluctuations are by no means long, simple curves, but show every kind of irregularity. A glance at the accompanying chart, which shows the curves of unemployment for the various trade unions,³ will demonstrate how complicated are the fluctuations taking place within each trade and how they differ in

¹ Report by Mr. A. D. Steel-Maitland and Miss Rose E. Squire on the Relation of Industrial and Sanitary Conditions to Pauperism, Cd. 4653, p. 49.

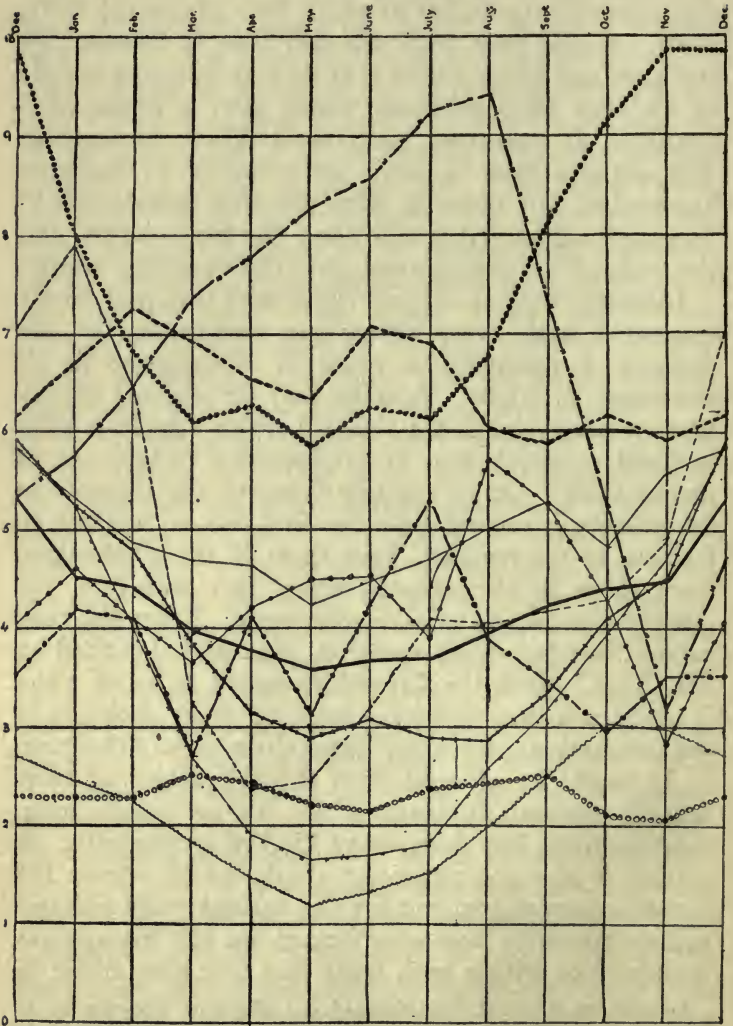
² Booth, London: First edition, ix., 394.

³ From the tables given in the Board of Trade Memorandum, see pp.23-26, and remarks.

SEASONAL TRADES

SEASONAL FLUCTUATIONS IN EMPLOYMENT

According to Trade Union Unemployed Percentage at end of each month.
 Mean of Period, 1897-1906.^a



- | | | |
|-----------------------------------|-----------------------------------|----------------------------|
| •••••Shipbuilding 57851 | •••••Steel Smelting . . . 12898 | —Tobacco 2472 |
| —•••••Building 56406 | •••••Printing & Bookbinding 54345 | —Leather Trades . . . 4553 |
| —Engineering 151,791 | •••••Metal Trades (various) 15252 | —Clothing 1856 |
| —•••••Plumbing 10554 | •••••Furnishing 14100 | —Coachbuilding . . . 8779 |

^aCarpenters and Joiners only.
^bCompiled from figures furnished in Board of Trade Memorandum Report of Poor Law Com. Cd 5068, p.640, 99

the different trades. Coach-building shows a long, even fluctuation with the point of greatest unemployment (5.84) in December, and of least (1.64) in May. The tobacco trade, too, shows a simple fluctuation, but in the opposite direction and of wider extent (3.15—9.41). From the slackest month, August, trade improves rapidly until November, when it declines gradually and uniformly until the summer. In the clothing trade the percentage varies in a long, low, simple wave from the slackest month, October, to the fullest month, May. The furnishing trade shows a comparatively simple fluctuation, but the rate of variation changes considerably at different times of the year, the sharp improvement from January to April being succeeded by a long, slow decline. In steel smelting there is a much more complicated movement. The greatest unemployment is found in July; a steady improvement follows until the end of October, then a falling off in November and December and a further decline in January, a slight recovery in February, a brisk improvement in March, an equally rapid decline in April, an improvement in May followed by a steady, rapid decline until July. In this curve there are three crests of unemployment of unequal height and inclination concentrated within the seven months from January to August. Shipbuilding, on the other hand, shows a simple, extensive variation with the percentage of unemployment always high. In plumbing we find a complex wave with two main crests of unemployment in February and June, and a smaller one in October. The engineering trade does not experience violent fluctuation. Printing and bookbinding, however, show many idiosyncrasies. From the slackest period, August, employment improves rapidly until November. Then ensues a steady decline until January, an improvement until March, followed by a decline until August, broken only by a spurt in July. Thus we find here three high-water marks of employment. The building trade shows a fairly wide fluctua-

tion between winter and summer. Among the carpenters and joiners, the trade union percentage falls from 5.93 in December to 2.87 in August, while among the plumbers it never falls below 5.92 (September), and rises to 7.26 in February. The great complexity and individual differentiation of seasonal fluctuation is apparent from these illustrations. From the table on page 45 it is evident that every month, except July, is the busiest period for one or more trades, and that every month except April and May is the slackest for others. The slack periods may occur in any month of the year; they may extend over a long or short period of time; they may be of great severity and responsible for much unemployment, or they may be so light as to cause no great alteration in the numbers employed in the industry; they may recur regularly from year to year with about the same intensity, or they may vary from year to year. The fluctuation in the industry may be a simple one, with one full and one slack period connected by a simple curve, or it may be two or threefold and present great complexities. Even within the bounds of a single industry the fluctuation is not necessarily uniform. The plumbers have a busy season in the autumn after the other building workers,¹ and a shorter busy season in the spring; the painters suffer acutely from seasonal fluctuations, while the employment of the carpenters and joiners and plasterers is more normal. The bricklayers are more affected by the winter than any other section of the trade. The masons are generally fairly regular, as they are engaged on large contracts, while in the gas industry one branch of the trade shows a fluctuation in the opposite direction to that of other branches.² In the bespoke tailoring trade³ the slack

¹ For the interesting details as to the building trade see N. B. Dearle: Problems of Unemployment in the Building Trade, and Third Report, Committee on Distress from Want of Employment, p. 439.

² Cf. Mr. Popplewell's paper.

³ Mrs. Drake points out that this section of the tailoring trade is more sensitive to seasonal influences than others. Mrs. Meyer and Clementina

season is particularly long, in the coat-making branch and covers almost half the year, while a small number of people engaged upon hunting coats or theatrical coats are busy throughout the year.

But complicated as are seasonal variations in industry, the problem of their effect upon employment is even more difficult, for these two questions must be kept distinct. Variations in employment by no means follow variations in trade. Indeed, they may be of an opposite nature. The employment in a variable trade may be regular,¹ while that in a comparatively stable trade may be very irregular, especially in cases where casual labour is used. The percentage of unemployment in the trade unions is not very helpful, unless we can show the distribution of the unemployment among the members.² Half the workers unemployed for a short time constitute a very different problem than a tenth of the workers unemployed for a long time. The question is not merely, how does a trade fluctuate, but rather how is the employment in the trade adjusted to these fluctuations. Great diversity exists on this point in the practice of employers and the demands of trade unions. Two general methods of adjustment may be distinguished, the first by adjusting the work to the workers, the second by adjusting the workers to the work. According to the first method slack trade brings slack employment, fluctuations being met by slack time and overtime while the number of workers is kept fairly constant. This method is peculiar to coal-mining, the textile industries, and to a certain extent in the boot and shoe trade. In other industries it is customary to regulate production by increasing or decreasing the staff of workers. Among such industries we can place building,

Black: Makers of our Clothes, pp. 28-29. Compare also the remarks of Miss Saunders and Miss Calver on the Millinery and Boot trades.

¹ As Mrs. Drake well shows in the case of the migratory waiter.

² Mr. Beveridge makes some speculations on this point: "Unemployment," pp. 71-4.

engineering, shipbuilding, iron and steel works, and dock labour.¹ But this distinction is more or less academic. In point of fact, it would not be possible to classify industries thus rigidly, for combinations and variations of both methods are often in use in the same industry, and the employment of casual labour often enters to complicate the question.

Many employers make an effort to keep a staff of permanent men, among whom there may or may not be a certain sharing of work, and to supplement these by casual or irregular workers. In the building trade an employer often has such a nucleus of permanent men, but even in slack periods he will also employ a certain number of irregular men—a number which rises to large dimensions in the full season. The proportion of permanent men varies greatly in different industries and with different employers. During the six slack months in the jam factories quite half the workers are dismissed and the others have to “stand by”—that is, wait without pay in the factory for work.² Among mantle makers the wages are lower in the slack season. Among milliners a small proportion, including the very best hands, are kept

¹ See Bowley: *Elementary Manual of Statistics*, p. 151. Sir H. Llewellyn Smith thinks that a distinction may be drawn between piece-work and time-work trades—the former tending to adjust fluctuations by short time and the latter by dismissal. But he says that this is not universally true, and that trades tend to move from one class to the other, *e.g.*, the introduction of the factory system and machinery into the boot and shoe trade is tending to convert that industry from one fluctuating by adjusting the time to one fluctuating by adjusting the workers. In dock labour on the other hand, owing to the increase of the permanent element, the opposite process is going on and the fluctuations tend increasingly to take the form of sharing an irregular amount of work among the whole number and to keep those that are employed at more or less regular work.

² Minutes of Evidence, Poor Law Commission, Cd. 5,066, Appendix xlviii.—Evidence of Mrs. E. J. Macrosty. Compare the statement in Poor Law Commission: *Special Report by Constance Williams and Thomas Jones*, Cd. 4690, p. 9. Some “make to stock in slack seasons, others work fewer hours; some employ half the workers half the week; others again dismiss the least skilled and share what work there is among the more skilled. In some factories several devices will be found combined. The greatest diversity prevails and sudden increase of orders frightens the unready employer into engaging a number of extra hands to be dismissed when the spurt is over.”

in the slack season, others lose one or more days a week, others take a long holiday, and many ordinary hands are dismissed. In clothworking about one-quarter of the men are discharged in slack time. Among the hatters some shops retain all the workers on slack time, while others thin the ranks. In extra leather bookbinding the men are put on short time in some of the shops; in others there is a regular staff with extra hands taken on at need. In the white lead industry the work is fairly regular, although the workers themselves are constantly shifting to and fro. In portmanteau making and leather dressing there is much overtime. In printing an effort is made to keep a nucleus of skilled workers. In the manufacture of billiard tables it is said that 75 per cent. of the workers have regular work.¹

Among goldsmiths and jewellers the masters share work among a permanent staff since there are many secrets and special patterns, and adjust production by overtime and short time.¹ Among wireworkers the work is spread in slack time as far as possible. The time workers work alternate weeks and the piece workers have only half or three-quarters time.¹ In the piano trade large firms do not discharge men but adjust the work by short time and overtime. In second-class shops only two-thirds of the men are regular; while many of these and most third class shops shut up entirely three or four months, and some only keep a regular staff which works short time and overtime when necessary. The staff has, perhaps, eight months full work to four of half or three-quarter time.² In French polishing and undertaking the demands of the busy season are met by irregular extra men. In the aerated water manufacture the numbers employed in summer and winter vary very greatly. A certain number of hands, both men and girls, are retained all the year, but for the three or four

¹ Booth : London, 2nd edition, Second Series, vol. ii, pp. 321, 239, 115, 141, 64 ; vol. iii., p. 47.

² Booth : London, 2nd edition, Second Series.

full summer months a larger amount of casual labour is employed. In the building trade many employers keep a permanent staff supplemented in the busy season by seasonal workers and casuals. In many cases the latter two classes form the main body of the workers.

These examples serve to illustrate the wide diversity in the methods of adjusting employment to seasonal fluctuations. Where special skill or trustworthiness of character is a desideratum the employer will endeavour to keep as many as possible of the men possessing these qualities in permanent employment. Even among quite unskilled workers it is often to the employer's advantage if they have a special knowledge of his business to give as many as possible permanent work. For many employers the slack period provides an opportunity of weeding out the less efficient. Where knowledge of the work is easily picked up and bodily strength is required rather than skill or reliability it is convenient for the employer to take on and dismiss workers according to the exigences of his business. And, in general, where any part of the labour market is overstocked, the employer tends to become more reckless in his hiring of labour.¹ In trades where the supply of labour is low and it is difficult to get "hands" at short notice, the employer takes care to arrange his work to give his staff as regular employment as possible.

The employment in seasonal trades may be considered as of three types—permanent employment, irregular seasonal employment, and casual employment. These may, and frequently do, all co-exist in the same "seasonal trade," but the difficulty is to determine in what proportions. The amount of actual unemploy-

¹ Report by Mr. Cyril Jackson and Rev. J. C. Pringle on The Effects of Employment, or Assistance given to the 'Unemployed' since 1886 as a means of Relieving Distress outside the Poor Law, Cd. 4795, p. 31. Mr. Samuel Gompers, President of the American Federation of Labour, says: 'In all the large centres of industry there is an overcrowded labour market. Employers have now a practically unlimited supply of labour on which to draw. The result is that what had been previously the production of months is now condensed into a few crowded weeks.'

TABLE SHOWING THE SLACKEST AND BUSIEST MONTHS IN THE YEAR IN CERTAIN INDUSTRIES.

Figures in brackets = mean percentage unemployed in Trade Union.

MONTH.	BUSIEST SEASON.	SLACKEST SEASON.
January	London Docks, 15,236 employed daily.	Furnishing (7.88); Iron mining, 5.46 days a week.
February	Paper-making (2.74).	Plumbers (7.26).
March	Steel Smelting (2.71); Textiles.	Coopers.
April	Brush-making (2.42); Furnishing (2.38).	—
May	Engineering (3.59); Shipbuilding (5.94), Hat-making (2.51); Leather (4.23); Coach-building (1.64); Clothing (1.19).	—
June	Millsawyers (3.63).	London Docks (13,560 daily); Coal-mining, 4.93 days per week.
July	—	Steel Smelting (5.28); Iron and Steel Works, 5.35 shifts a week; Tinplates, 361 mills.
August	Carpenters and Joiners (2.87); Coopers.	Printing and Book-binding (5.69); Paper-making (3.64); Tobacco (9.41).
September	Plumbers (5.92); Iron Mining, 5.02 days a week.	Metals, Various (2.51); Textiles.
October	Iron and Steel Works (5.49 shifts a week).	Clothing (3.01).
November	Metals, Various (2.66); Printing and Bookbinding (2.82); Tobacco (3.15); Tinplates, 390 mills.	Shipbuilding (9.86).
December	Coal-mining, 5.46 days a week.	Carpenters and Joiners (5.93); Engineering (5.33); Hat-making (4.65); Leather (5.81); Millsawyers (5.17); Coachbuilding (5.84); Brushmaking (12.14).

¹ From Board of Trade Memorandum, Cd. 5068, App. xxi. D.

ment among the seasonal and casual workers depends on the opportunities for sandwiching or dovetailing occupations and jobs. The professional casual of the unskilled class, well known to foremen, and with a highly developed talent for piecing together scraps of work from everywhere, may have, on the whole, fairly regular employment, while the highly skilled artisan specialised in his own trade may be for six months or more without work. A large amount of dovetailing takes place among seasonal workers. Many regular waiters, gas workers, go to the brickfields in the summer, while others work at deal-carrying, dock labour, and building work. Some even act as bricklayers' labourers or go house-painting and decorating in the summer.¹ The women who work at indiarubber works in the winter go to laundries in the summer.² Workers in piano manufacturing, which is slack in winter, spend the summer as cabinet makers, an allied trade which is active then.³ The "sandwich man" often goes to the country in the summer picking peas, hops, and fruit. Other transitions are from pattern-making to carpentering, from instrument-making to electrical work, from military harness-making to boot-making.⁴ Match girls go to the jam factories and hop-fields in the slack months. Boatmen who work at boating at Brighton for about five months of the year are sometimes employed as fish hawkers in the winter, or as at Scarborough go "stoning" for the County Council."⁵

The dovetailing of industrial with agricultural occupations did much to mitigate the evil effects of the industrial revolution by supplementing industrial employment.⁵ This form of dovetailing is still prevalent ✓

¹ Report of Special Committee of C.O.S. on Unskilled Labour, p. 171.

² Booth: London, 2nd edition, Second Series, p. 357.

³ Booth: London, 1st edition, vol. ix, p. 360.

⁴ Charity Organisation Review, vol. xiii, pp. 8-13.

⁵ J. A. Hobson, Evolution of Modern Capitalism, p. 52: "The town workers were not specialised in manufacture to the extent which prevails to-day. Large numbers of them had allotments in the country to which

on the Continent. In northern Russia it has done much to alleviate the condition of the peasants,¹ while in Belgium it is widespread. There the "half and half" labourers, half agricultural, half industrial, work in the sugar factories at certain periods, harvesting at others, going to the collieries in winter to resume work in the fields in the spring.² But in England this phenomenon is much less frequent, and it tends to disappear entirely with a highly developed industrialism.

At first thought it would appear that a policy of complete dovetailing of occupations provided an easy way out of the difficulties of seasonal and casual employment. But such a policy is fraught with numerous difficulties. Labour is not the free fluid mass it is sometimes supposed to be. For the unskilled workers free movement from trade to trade is much easier than for the skilled. The builder's labourer often goes to the gasworks in the winter, to railway, vestry, or carmen's work, hawking, and jobs on the ice, while the skilled worker in the same trade sits idle. The latter is hedged about by many restrictions. The specialisation of skilled occupations and the time necessary to learn them constitute a primary obstacle to dovetailing. Even in the same trade the transition between very similar occupations is often difficult. A worker on light boots can seldom turn out a well-finished pair of heavier ones,³ and in bookbinding "forwarders" and "finishers" cannot interchange. The leather binder may take up the cloth work, but the cloth worker cannot work in the leather shop. The close demarcation of trades is furthered~~ed~~ favoured by trade union policy as being

they gave their spare time, and many had pasture rights and kept their cattle on the common lands. . . . The combined agriculture and manufacture often took the form of a division of labour according to the season. Where the weaving was not concentrated in towns it furnished winter occupations to many men who gave the bulk of their summer time to agriculture."

¹ See Pavel Milyukov : *Russia and its Crisis*, 1905.

² E. Vandervelde : *Modern Socialism*, pp. 204ff.

³ See Miss Calver's paper.

essential to the organisation of labour.¹ It often goes to absurd lengths,² and there is a movement among unionists to reconsider this policy and institute a closer federation between or even amalgamation of certain subdivisions now so carefully distinguished.³

Among women workers fluidity of labour is hindered to a still greater degree by many prejudices on the part both of employers and employees.⁴

The hierarchical arrangement of occupations prevents the skilled man from filling his idle time with less skilled work. Not only does less skilled work injure the *finesse* required in the highly skilled workman, but there is also a strong prejudice against such a descent. One foreman says that a mechanic who is out of work would not go to the gasworks in the winter; he believes he would rather starve. It is generally found out, and would be against him on the next job. "They would say, 'He is only a gas stoker; he is no mechanic.'" It would also hurt him physically in the exactness of his handiwork if he were shovelling coals into a gas furnace

¹ Cf. Evidence of Mr. Ramsay MacDonald, in Minutes of Evidence, Poor Law Commission.

² See S. and B. Webb: Industrial Democracy, chap. xi, The Right to a Trade.

³ Report by Mr. Cyril Jackson and Rev. J. C. Pringle, on The Effects of Employment, or Assistance given to the "Unemployed" since 1886 as a means of Relieving Distress outside the Poor Law, Cd. 4,795, p. 63.

⁴ In the case of women's employments especially "custom, the deliberate policy of the employer, the class feeling of the operatives, the expectation of marriage, the Factory Acts, the attitude of the men's unions, sift and separate the workers. One employer will not engage married women; another will not employ girls under eighteen; another will start a woman at 10s. and dismiss her if she can not earn 12s. 6d. in a few weeks; while a fourth will cut down a girl's piece-rate if she is making 'too much,' because she is a girl. The 'niceness' and 'nastiness' of occupations exercise a selective influence and restrict mobility. A trade or factory requires a reputation for the one or the other. The 'genteel' girl goes to one and the 'rough' girl to the other, and they form non-competing groups. The makers of hats and floor brushes do not mingle. The weaving girl has no knowledge of the spinning girl in the textile town; the packer and sorter is 'superior' to the calender hand in the laundry; the bottler of lemonade does not move to the collar factory in the slack season." Poor Law Commission: Report by Miss Constance Williams and Thomas Jones, Cd. 4690, p. 10.

and came to carpentering afterwards.¹ This exclusiveness extends in many cases to the more skilled of the unskilled labourers. A scaffolding hand in the building trade would do nothing else.² These limitations which surround the skilled workman are of great importance, for few occupations are entirely unskilled, and there are thus few alternatives for the man of any degree of specialisation.

But though deficient in industrial mobility, the skilled worker seems to have the advantage in place mobility, and moves about more rapidly from one centre of industry to another, according to the state of the labour market.³ This is probably due, among other causes, to the fact that the income of the unskilled worker is eked out by the earnings of other members of the family, and the effect of moving upon the family budget must be considered. The unskilled worker further suffers from the over-supply of low-skilled labour, so that his chances of securing regular employment even with skilful dovetailing are minimised.

The question of seasonal unemployment has often been considered a question of wages—that is, of making the wage high enough to tide over the period of unemployment.⁴ This view, although it has undoubtedly had the effect of raising wages to a slight degree in trades especially subject to seasonal fluctuations, seems to overlook the complexity of the question, the widely differing period and distribution of the unemployment, and the necessity and impossibility of distinctive arrangement for individual cases. The workers even in the same trade suffer, as we have seen, from greatly

¹ Evidence of Mr. Evans: Special Report on Unskilled Labour of Committee of C.O.S., p. 112.

² Third Report, Committee on Distress from Want of Employment Q. 10927.

³ Majority Report of the Poor Law Commission, p. 348.

⁴ Cf. article *Arbeitslosigkeit*: Conrad's *Handwörterbuch der Staatswissenschaften*, and evidence of Mr. Beveridge before the Poor Law Commission, Cd. 5,066, p. 17.

varying degrees of irregularity. The seasonal workers may form a comparatively small percentage of those occupied in the industry. It would be impossible to pay them wages higher than the average for the industry, and few employers would be willing to pay all the higher wage necessary and adequate to support the seasonal minority through unemployment, nor would the exigencies of a competitive industry and a competitive labour market permit of such an arrangement, while it is particularly out of the question for unskilled and semi-skilled labour. Before it could be instituted seasonal unemployment would have to be much more definite than it is, and much more uniformly distributed over all members of a trade. Even supposing such a system to be possible, it is doubtful whether it would alleviate the evils of irregular employment. It does not prevent the demoralisation due to long periods of idleness; nor does it ensure that the addition to the wage would be saved for the period of unemployment. (Among those living under great economic pressure there is a tendency for the standard of life to expand as far as possible within its narrow confines, like a gas under high pressure.) The worker spends the larger part of whatever wages he gets. This holds true even when the wage becomes quite high. In America the iron-worker on the great skyscrapers finds ways to spend most of the high wage he earns for half the year, and often lives in great straits for the other half. (Irregularity of income apparently encourages improvidence.) Systematic arrangement of a family budget is possible only on the basis of a definite and regular income. In fact, the actual money value of the wage decreases with its irregularity. In the Liverpool docks, we are told, the custom is not uncommon for fish-hawkers to advance money to dock labourers' wives by lending them a shilling and selling them a shilling's worth of fish. The fish is really of the value of about twopence, while a liability is created of two

shillings, to be met in the course of the next week.¹ The waste due to the impossibility of systematic planning of expenditure and the higher prices paid because of credit make the wage quite inadequate even where the average throughout the year is normal. An interesting case is cited in the report below referred to of a painter who had kept a careful record of his jobs during the year 1906-7, who was always in distress, though the average of his wages was above the margin.²

All who have experience of such situations testify to the nerve-racking effect of habitual running into debt with the prospect of paying out of the wages of uncertain future employment.³ To look upon such a *modus vivendi* as a "form of retrospective saving" or "an inverted form of thrift" is to emphasise the mathematical at the expense of the human aspects of the question. As a matter of fact, the nervous reactions to such demoralising influences are so powerful as to transform many strong-willed, well-intentioned workmen into the irregular material that overfills the army of casual labour or even into the will-less, hopeless, indifferent objects called the unemployable. Demoralisation, moral and physical, is the inevitable result. One

¹ Report of Special Committee of the Charity Organisation Society on Unskilled Labour.—C. J. Hamilton, p. 60.

² *Ibid.*, p. 55—

1906. January ...	... 1 week	45 hours a week,	at 8½d. an hour.
February...	... 4 weeks	45 " "	8½d. " "
March ...	... 1 " "	55 " "	9½d. " "
April to October	6 mths.	55 " "	8½d. " "
October to February, 1907:	Out of work and earned nothing, but a few shillings for odd jobs.		

"Thus he averaged at least 23s. a week throughout the year. Nevertheless, he was never out of debt and difficulty in the winter. Money earned in the good season was largely spent in working off arrears of rent and in redeeming the furniture from pawn. All his saving was, as it were, done backwards, involving heavy interest. He was a man of temperate habits, of more than average skill, and well spoken of by his employers."

³ We are unable to share the satisfaction of one writer who, speaking of homes furnished in an "ample and often substantial manner," where the furniture is pawned and sold regularly, alludes to this procedure as a "peculiar form of thrift," and says, "the device has very obvious advantages." The disadvantages seem more obvious.

foreman speaks vividly of the effect of a spell of unemployment. The man's skill deteriorates "because he does not get enough food for a start and is not half worth his money. . . . I naturally have to get a job out as quickly as possible; it is my duty to do so. If I employ a man who cannot do his work and he fails in an hour or two because, perhaps, he has not been fed for weeks as he ought to have been, I have to dismiss him. I do not know the cause of the failure, and I do not ask the cause. I cannot go to him and say, 'My man, have you not had anything to eat for a week?' or something of that sort. I simply say, 'Come to the office and get your money.'"

It is probable that the results of seasonal fluctuations of industry occupy a more important place with relation to general questions of unemployment and distress than has generally been assigned to them. Not only do seasonal trades often employ casual labour in large quantities to fill the demands of the busy season, but the irregularity of habits and demoralisation of character which result from unemployment lasting over even a small part of the year are largely contributory to that mental diathesis which unfits the worker for any but casual labour. It is a generally admitted fact that regularity of employment is essential for the preservation of the physique and morale of the worker. A keen observer, and one well acquainted with conditions in London, says that the poverty that is due to low wages is, in London, less in volume as well as less acute than that which is consequent on some form of lack of work.¹ He quotes the words of a working man, who says: "The great curse of a journeyman's life is irregularity of employment. When I thought it likely that I should be thrown out of employment it seemed to paralyse me completely, and I used to sit at home brooding over it until the blow fell. . . . The fear of being turned off is the worst thing in a working man's life, and more

¹ Mr. Aves in Booth, London, Second Series, vol. v., p. 314.

or less acutely it is almost always, in the case of the vast majority, present to his mind."¹ "In a fluctuating trade," say the tailors, "many who depend for the necessaries of life on their daily toil are often deprived of employment in the most inclement season. They wander through the country from city to town, and from town to village, in search of employment, but, alas, in vain. This continues, until, upon the mind of an honest man, the thought rests like an incubus, when and how shall I relieve myself of this degradation?"² Such a state of worry and apprehension weakens ambition, will-power, enterprise—all the qualities essential for success in so hard an economic struggle. In fact, drunkenness among workmen has sometimes been considered proportionate to the extent of irregularity of employment in the trade³

For women workers the evils of seasonal employment are even more conspicuous than in the case of men, and its effects more disastrous. "The great cause of women's unemployment," says Mrs. MacDonald, "is the seasonal nature of trade—especially in London, where the London season causes too much extra work. Seasonal slackness is as often due to short work as to no work at all; but a girl who for months is doing only a few hours a day, or two or three days a week, is not earning a living wage, and is no better off than if totally unemployed for a shorter period."⁴ The inadequacy of their wages quite precludes the idea of saving enough for slack times—even that "retrospective" form of saving which consists in pawning household belongings. Living with the greatest difficulty on the margin of sustenance, the cessation of their meagre

¹ Mr. Aves in Booth, London, Second Series, vol. v., p. 231.

² Preamble to the Rules of the Amalgamated Society of Tailors, Manchester, 1893. Quoted by S. and B. Webb: *Industrial Democracy*, 1902, p. 430.

³ G. Drage: *The Unemployed*, p. 159.

⁴ Evidence of Mrs. Ramsay MacDonald: *Minutes of Evidence, Poor Law Commission, Cd. 5066, Q. 82467.*

income leaves them absolutely helpless and face to face with starvation.¹ In this weak position it is often difficult for them not to follow the only road which seems to lead away from pauperism. Perhaps some day, when the question is investigated as it should be, it will be possible to show statistically the degree to which the ranks of prostitution are recruited from trades of irregular employment. In the case of very irregular occupations, such as the millinery and clothing trades, it seems to be often deliberately used to dovetail into other occupations, the workers being forced to take it up in periods of slack trade until with revival of activity they return to work.²

In general we find that the problems of unemployment in seasonal trades are of much the same nature as that of unemployment in general. There is usually, though not always, the nucleus of permanent, regular workers, sometimes large enough to account for the large majority of the hands employed and sometimes reduced to a negligible fraction. By their side are the irregular workers, hired for a few hours, a day, a week, a month, or part of a year. The tendency of each trade is to keep attached to itself in employment, under-employment, or unemployment, a sufficient number of hands to meet all possible demands of the trade. Sudden

¹ Minutes of Evidence, Poor Law Commission, Cd. 5066, Q. 82467, § 21. "To tide over the period of unemployment the women are in a most hopeless case. Then there is no charing to be had; they pawn nearly everything, get credit from the smaller tradesmen and go without. The shop-keepers inform me their takings are extremely low during this period, one general shop that caters for dinners, ham and beef, etc., finding that women go without dinners at this period, discontinues this part of its business, and, excepting bread and tea, almost everything is at a standstill."

² Arthur Sherwell: Life in West London, p. 146-7. "It is at present a notorious fact that, in the West End of London at least, milliners, dress-makers and tailoresses are frequently driven upon the streets in the slack season, returning to their shops with the advent of the new season's trade. In other words, *morals fluctuate with trade*. . . . The danger is also painfully real in the case of a large number of young women who are employed temporarily as 'season' hands in the large drapery and other establishments of the West, and who are dismissed with only a week or nine days' 'deferred' wages, at the close of the short season. The circumstances of such girls, if self-dependent and friendless, are perilous in the extreme."

rushes produced by wealth, fashion, or the exigencies of trade are met by taking on a large number of these workers who stand ready, and dismissing them when the spurt is over. Thus reserves accumulate around each trade, forming a permanent surplus of irregular and casual labour. This surplus again contributes to the intensification of the evils of irregular employment by relieving the employer and the public of any anxiety as to the supply of labour to meet their often capricious demands. Painfully long hours and frightful pressure of work characterise the "season" in certain industries, not so much because these are really necessary as because an overfull labour market makes heedfulness superfluous and makes it possible for the employer to meet the most tyrannous and thoughtless demands of his clientèle. X

Are these conditions which seem to arise quite naturally from the present organisation of industry inevitable? Even in the absence of conscious interference they do not seem so. There seem to be operative in the evolution of industry itself certain forces which make for greater regularity of employment, by affecting either seasonal fluctuations of industry directly or their influence upon the labour market. As the industrial area widens, as the source of supply of raw materials, the field of production, and the markets become national rather than local and international rather than national, the maladjustments due to operation in a small field tend to disappear and the individual local fluctuations to neutralise each other. X Even an economic product like a wheat crop, which seems so completely under the domination of seasonal influences, is, considering the production of the world as a whole, not seasonal at all. There is no month of the year in which a wheat crop is not produced in some country of the world. The migratory waiter, whose labour market seems to be the wide, wide world, stands a much better chance of steady employment than he who is confined to

Causes 1. the narrow sphere of London.¹ Many manufacturers are able to keep their factories running continuously in what, from a local point of view, is a highly seasonal industry by enlarging the markets for their products, and supplementing home orders by the demands from the export trade. All the causes we have described as productive of seasonal irregularity in industry—weather, climate, taste, fashion, custom, source of supply—exhibit more varied differentiation as we widen the area under view. The “seasons” occur at different times in different countries, in different metropolises, London, Paris, Berlin, New York, Melbourne, Johannesburg, and even in different cities of the same country.² Thus the expansion of the market for the English silk industry, which in the eighteenth century was characterised by fluctuating employment and low skill, has greatly diminished the irregularity.³

2 The process which is continuously in operation by which large scale production replaces small scale production tends, though not invariably, to eliminate causes of fluctuation. In the building trade it is the small contractor working on the small job who is responsible for the worst fluctuation.⁴ In fact, the tendencies to variation are in inverse proportion to the size of the contract. Small contracts can be crowded into the months where the work can be done most cheaply and conveniently, whereas with large contracts the work once begun must be continued irrespective of season.⁵

¹ Cf. Mrs. Drake's paper.

² On the other hand the production for distant markets and a less easily ascertainable demand allows room for miscalculation.

³ J. A. Hobson : Evolution of Modern Capitalism, p. 329.

⁴ Dearle : Unemployment in the Building Trade, p. 71. But compare statement of Sidney Webb, Minutes of Evidence, Poor Law Commission, Cd. 5068, Q. 93065, that the mere increase in the size of the unit tends in the building trade to cause men to be taken on and dropped as required when the jobs are in separate localities.

⁵ There are of course many exceptions to this statement. In the india-rubber industry it is just with the large contractors on cable and telephone work that the greatest irregularity occurs.

The concentration of industry further tends to eliminate the leakage of employment which takes place when a large number of competing employers keep their separate forces of workers. When this process of concentration reaches its final stage in the development of trust monopolies the process of regularisation of the year's work usually reaches its highest development. It does not pay the trust to run its elaborate plant in irregular, spasmodic fashion. The labour forces, like all the other forces of production, are organised to the highest point of efficiency. Following the idea that Professor Foxwell expresses in saying that the level road is the easiest to work, production is concentrated on a part of the plant, and this is run regularly throughout the year at its full capacity. The number of workers is diminished, but those who remain have steady employment. In the case of the whiskey trade in the United States, when it was only an industrial pool, each distillery ran below full capacity, one 40 per cent., and another even 28 per cent.; but when the eighty distilleries had become a trust, the following year all were closed by the twelve best situated and best equipped, and these ran at full capacity with an output equal to the previous eighty.¹

X The influence of machinery upon seasonal unemployment seems favourable, whatever it may be, upon unemployment in general. The absence of complicated machinery on the one hand and the presence of comparatively *simple* machinery² on the other makes possible greater seasonal concentration of work. This is especially evident in the millinery and clothing trades, where the extra demand can be met by taking on a large number of extra "hands" and working them extra time.

¹ J. W. Jenks: *Trusts and Production*, p. 371. Quoted by Hobson, *Op. cit.*, p. 222.

² Macrosty: *Trusts and the State*, page 122. "The use of machinery also permits a more speedy responsiveness to the whims and freaks of fashion, and consequently induces unexpected alterations of demand in the luxury trades."

X
4
Where the plant is elaborate and equipped with expensive machinery the employer will be apt to make great efforts to have it used as continuously and regularly as possible.¹ This even leads in many cases to the dovetailing of several industries or trades in the same factory, such as, for instance, the manufacture of type-writers, sewing machines, bicycles, motor-cycles, and automobiles.² In large factories for the manufacture of india-rubber goods the variety of products makes it possible to transfer workmen from one department to another, and consequently few are discharged.³ In the lighter metal trades coal-scuttles are made in winter and water-pots in summer. With the manufacture of jam and marmalade is combined the making of sweets and the potting of meat, so that the time of the majority of the employees is occupied. An artificial florist employing over 200 girls and women in a trade which lasts for six months in the year has introduced a second trade, the preparing of quills for hat trimming⁴ and now the workers are employed all the year round. Versatility in the industry is thus as important a factor in the regularisation of work as versatility in the worker, but the tendency is checked in both cases by the excessive specialisation of modern industry. Sura

In its effect upon the individual workman machinery probably makes for greater regularity of employment, despite the fact that the specialisation of the machine-hand weakens his economic position and makes him subject to greater irregularity by diminishing his adaptability,⁵ for, as on the other hand, it lifts him

¹ Cf. Report of Special Committee of the Charity Organisation Society on Unskilled Labour, by C. J. Hamilton, p. 8.

² Cf. Mr. Carter's paper.

³ But in some ways the need for adaptability is diminished. Prof. Marshall is quoted as saying "while there is a constantly increasing subdivision of labour, many of the lines of division between trades which are normally distinct are becoming narrower and less difficult to be passed." Booth : London, 1st edition, vol. ix., p. 349.

⁴ Booth : London, 2nd edition, Second Series, vol. iii., p. 354.

⁵ Poor Law Commission, App. Vol. xvii. Interim Report No. 1, p. 9.

from the ranks of totally unskilled labour and gives him some small hold upon his job.

But though there are economic forces of various kinds brought into play by the progress and development of industry which tend to regularise employment, these tendencies are slight in comparison with the magnitude of the forces with which they are in conflict, and some more conscious effort at adjustment is required. It has been suggested by some that this effort should be mainly on the part of the public, and the exhortations of "Consumers' Leagues" have been directed to persuading the public to avoid making additional demands at periods of great seasonal pressure. This idea finds its most complete embodiment in the *Ligue Sociale d'Acheteurs*, of France,¹ the motto of which, "Vivre c'est acheter, acheter c'est pouvoir, pouvoir c'est devoir,"¹ is convincing but for its middle term. In the exaggeration of the power and good-will of the customer lies the fallacy of all such movements.²

Although some measures might be taken to good advantage in the trades of fashion and luxury to restrain the irresponsible capriciousness of the buyer, such methods are applicable only to a very limited number of trades and of doubtful efficacy even in these. The one

¹ The advice given for the various months to consumers is interesting:—

FEVRIER :—

Ce mois-ci chôment : Tailleurs, Couturières, Lingères, Modistes, Chapeliers, Chemisiers, Tapissiers. Le travail diminue chez les Fourreurs.

Février est le mois le plus pénible de la morte saison. Donnez les travaux qui peuvent être exécutés en tous temps. Faites faire dès maintenant vos réparations en tous genres ; ne les gardez pas pour la période de presse. Chez les tailleurs on trouve déjà les draperies nouveautés.

NOVEMBRE :—

Ce mois-ci grande presse chez les Tailleurs, Couturières, Lingères, Modistes, Chapeliers, Chemisiers, Tapissiers, Fourreurs.

Ne faites pas de commandes pouvant entrainer le travail du dimanche ou de la veillée. Ne faites pas de commandes au dernier moment. N'acceptez pas de livraison tardive. Durant ce mois brumeux, les pneumonies, la tuberculose guettent l'ouvrière qui sort fatiguée de l'atelier à une heure trop tardive et doit regagner son logis lointain sans avoir rien mangé depuis midi. Ne soyons pas responsables de la veillée homicide.

² These consumers' leagues not to be confused with those whose main aim is to reduce the price of products for the consumers.

notable exception is the case of the purchase of Government supplies. Here is a consumer *en gros* whose purchases might very well be made with discretion and foresight.¹ As it is now, the sudden demands due to the financial arrangements of the Government and the general lack of arrangement of public work with reference to trade fluctuation are responsible for much irregularity.²

3) The recklessness or selfishness of the employer, of course, often causes an unnecessary amount of irregularity of employment. There are many trades where the employer undoubtedly finds it to his advantage to keep a large fringe of superfluous labour attached to his business in case of an extra demand. He keeps them by sharing out carefully among them all whatever work there is. They are encouraged under penalty of being ignored in the future to sit about all day near the office ready to be called, but are paid nothing except for the time they are actually occupied. This is conspicuously the case in dock labour, sweated industries, and many women's trades such as jam-making, box-making, and the manufacture of aerated water. Furthermore, the foreman or giver-out of work finds it to his advantage to be always conferring a favour upon the man he employs, and a very marked favour upon those whom he employs frequently and constantly. "This we believe to be the real objections to the schemes for diminishing the irregularity of employment in the docks and warehouses of Liverpool by an association among the employers of labour, so ably and powerfully urged by the leading men of that city for many years. The men

¹ Report of Poor Law Commission : Appendix, vol. xix., Cd. 4795, p. 87
 "Thus, for instance, there are probably 3,000 public buildings in London, work in connection with the internal cleaning of which might very well be postponed until the slack months." Report of London County Council to Central Committee, London Unemployed Fund.

² *Op. cit.*, p. 134 : "A few municipalities have endeavoured to relieve the labour market by putting in hand municipal work in slack seasons or years, but the general complaint is that they employ a considerable amount of labour at intervals and push through large schemes, *e.g.*, for drainage, tramways and other road work in one year and do little the next."

responsible for getting the work done are afraid to give the men security of tenure for fear it should weaken their power over them.¹ In another town the same report states that the manager of the gas undertaking said that to dovetail the unskilled labour needs of corporation departments into each other in order to secure constant work for the men would be absolutely subversive of discipline! In so far as such an attitude on the part of the employers is responsible for irregularity of employment the best remedy is probably some form of penalisation for excessive use of seasonal and casual labour or of preferential treatment as a reward for the regular employment. Such a policy could be exercised by the Government through the Insurance Act, or similar legislation, or most efficaciously through its control of an efficient system of national Labour Exchanges.

How much can be done by the voluntary co-operation of employers to mitigate excessive irregularity is shown by the history of decasualisation under the London and India Docks Company²:—

1887	...	16	per cent.	permanent	men
1891-92	...	45	”	”	”
1894-1901	...	64	”	”	”
1902-4	...	78	”	”	”
1903	...	82	”	”	”

Much more could be done along this line if it were not so difficult to arouse interest and a sense of responsibility in the employers. Furthermore, this sort of organisation is usually limited by being confined to a particular industry or locality.

Considering the paramount importance of regularity of employment in preserving the standard of life, an importance even transcending that of the wage, it seems extraordinary that no Trade Union regulations have

¹ Report of Poor Law Commission. Appendix, vol. xix., Cd. 4795, p. 31.

² Report of Special Committee of C.O.S. on Unskilled Labour, p. 64.

been devised to insure continuity of employment.¹ Even the unemployment insurance and the travelling benefit are arranged more to protect the standard rate from under-bidding than to make any adequate provision for slack time. Unemployment insurance while it was still exclusively in the hands of the Unions, although it accounted for a larger part of the expenditure of the Unions, could not be considered a really adequate compensation for the absence of the weekly wage, and was an actuarial possibility only in the most highly skilled and best organised trades. It will need a vast extension at the hands of the Government both as to the size of the allowance and the classes of workers to whom it is granted before it can claim to compensate for irregular employment. If it receives such an extension it will cease to be an actuarial proposition, and the question then arises whether the funds appropriated to subsidising private industry in this way could not better be expended on some other solution of the problem.

The main point of attack on the part of Trade Unions at the present time seems to be overtime. The "The aim, therefore," they say, "should be to regulate the supply of labour in each trade in accordance with the demand in that trade. If this is so . . . there appears to be only one possible way in which it can be done, and that is by regulating the working hours per day or per week in accordance with the number of workers in the respective trades and the demand for labour in that trade. That is to say, that changes in the demand for labour which continually occur, notwithstanding all we can do to prevent them, should be met in times of slackened demand by reducing the number of working hours per day per man . . . the object being to keep all employed."² Such a policy is, of course, feasible (

¹ Cf. S. and B. Webb : *Industrial Democracy*, 1902, p. 431. "We touch here the 'dead point' in our analysis of Trade Union regulations." See also the remainder of this excellent chapter on *Continuity of Employment*.

² Report of Poor Law Commission : Cd. 4795, Appendix ii., p. 124.

only when there is assurance of the re-expansion of the industry. In Leeds the Union of the Boot and Shoe Operatives had arranged with the employers to allow two shifts of men working half-time each. This had prevented wholesale discharges, but the wage was, of course, reduced below any living wage scale.

The Lancashire cotton operatives resist overtime on principle and thereby greatly diminish the tendency to seasonal fluctuation in the trade which emanates from the dealings on the Stock Exchange.² The recent introduction of heavier locomotives on the railways and the consequent reorganisation of traffic might have meant wholesale discharges had not the Railway Servants' Association made arrangements to minimise the effects of the transition from busy to slack seasons by shortening hours, paying out-of-work benefit, and acting as labour exchanges in the trade.¹

In the glass works when work is slack the bottle-hands work alternate weeks, drawing out-of-work pay from their Union during the idle weeks.¹

The unions have found a vulnerable point of seasonal irregularity in overtime, for from it arise some of the worst evils of irregularity. But the trades in which overtime is found to the greatest extent are often those where the workers are least organised to resist it, and the law, if there is any, is often evaded. Without doubt seasonal unemployment and under-employment could be much diminished by distributing the work more evenly throughout the year by means of restriction of overtime, general shortening of the working day, and short time rather than dismissal during slackness.

The principle of adapting the work to the workers by adjusting hours according to the state of the trade is capable of much extension. It has already done much

¹ Twenty-ninth Quarterly Report of the General Federation of Trade Unions, pp. 9, 10. Quoted in Report of Poor Law Commission, Appendix, vol. xix., Cd. 4795. Report by Mr. Cyril Jackson and Rev. J. C. Pringle.

² Report of Poor Law Commission, Appendix, vol. xix., Cd. 4795, pp. 31, 132.

in industries like coal and cotton, where it is the recognised method of meeting fluctuations, to diminish the severe effects of these upon the workers by retaining within the industry only those for whom there is a reasonable expectation of fairly regular work from one year's end to another and by distributing among these whatever work there is. But such a policy suffers from many limitations if put forward as a general panacea for irregularity. It can only be applied successfully in trades which are not subject to great fluctuations. If from the structure of a trade or the nature of its fluctuations the application of such a principle should involve continuous under-employment for any length of time or continuous over-employment it would not have remedied the evils of irregularity.

There is another line of policy from which most may be expected in dealing with seasonal fluctuations, that is, the regularisation of the employment of the individual worker, regardless of these fluctuations, by providing opportunity for the systematic dovetailing of jobs. This task is attended with great difficulties, the most important of which have already been described. It involves the whole policy of deseasonalisation of seasonal workers and decasualisation of casual workers, and could only be carried out through a highly organised public labour market where the fluctuations in the demand for labour in separate businesses and separate trades could be brought to a focus and neutralised. Whether this neutralisation could ever be complete is a question to which only the attempt itself could supply the answer. Certain considerations would indicate that the tendency is in that direction. At least, for trade unions, there does not seem to be a very considerable fluctuation in industry as a whole. In the accompanying table the average of the trade union unemployed percentage is given for a period of ten years to eliminate the influence of cyclical fluctuation. There is an average variation of only 1 per cent. between

GENERAL PERCENTAGE OF UNEMPLOYMENT OF ALL TRADE UNIONS MAKING RETURNS SHOWING SEASONAL FLUCTUATION
for separate years 1901-1910, and average fluctuation for the whole period.¹

—	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Mean.
1901---	4.0	3.9	3.6	3.8	3.6	3.5	3.4	3.9	3.7	3.8	3.8	4.6	3.8
1902---	4.4	4.3	3.7	3.9	4.0	4.2	4.0	4.5	5.0	5.0	4.8	5.5	4.4
1903---	5.1	4.8	4.3	4.1	4.0	4.5	4.9	5.5	5.8	5.8	6.0	6.7	5.1
1904---	6.6	6.1	6.0	6.0	6.3	5.9	6.1	6.4	6.8	6.8	7.0	7.6	6.5
1905---	6.8	6.2	5.6	5.6	5.1	5.2	5.2	5.4	5.3	5.0	4.7	4.9	5.4
1906---	4.7	4.4	3.9	3.7	3.6	3.7	3.6	3.8	3.8	4.4	4.5	4.9	4.1
1907---	4.2	3.9	3.6	3.3	3.4	3.6	3.7	4.0	4.6	4.7	5.0	5.6	4.1
1908---	5.8	6.0	6.4	7.1	7.4	7.9	7.9	8.5	9.3	9.5	8.7	9.1	7.8
1909---	8.7	8.4	8.2	8.2	7.9	7.7	7.9	7.7	7.4	7.1	6.5	6.6	7.7
1910---	6.8	5.7	5.2	4.4	4.2	3.7	3.8	4.0	4.3	4.4	4.6	5.0	4.7
	5.7	5.5	5.0	5.0	5.0	5.0	5.0	5.5	5.6	5.9	5.6	6.0	5.4

¹ Compiled from returns in *Board of Trade Labour Gazette*, and A. L. Bowley: "Elementary Manual of Statistics," p. 158. Some of the figures from the *Labour Gazette* are different from those given during the month, owing to subsequent corrections made possible by additional information.

X the months of maximum and minimum unemployment. These figures relate, of course, to the more highly skilled occupation and to the better grades of labour, and it is possible that if figures were obtainable for all classes of workers they would show a more marked seasonal differentiation.¹ However X this may be, it is certainly true that industry as a whole X suffers much less from seasonal fluctuation than individual trades, and that every effort toward the organisation of the labour market would reduce the fluctuations in the demand for labour to correspond to the lower fluctuations in industry. The barriers between industry and industry, trade and trade, place and place, could be made more passable by assisting mobility in various ways. When there was definite, reliable information as to the exact location and nature of all X demands for labour it would be easy to dovetail these X demands as compared with the method of groping in the dark which characterises the unorganised labour market. X Dovetailing could be further assisted by industrial training of a general or technical character, which would increase the adaptability of the worker and counteract the restrictive tendencies of too great X specialisation. Trade unions might be induced to insist X less strongly upon the demarcation of trades where transference of labour could be effected. The reserves in each trade could thus be employed at another trade while on reserve, and the present superfluity of hands reduced.

But it must be remembered that even if there were

¹ The German statistics already referred to have the advantage of including all classes of labour. The percentage of unemployed workers as compared with the whole population was 1.77 on the 14th of June, and 4.80 on the 2nd of December, 1895. Prof. von Mayer thinks the difference between winter and summer employment should normally be even greater inasmuch as 1895 was a year of increasing trade and rising employment and the December figure also had the advantage of the Christmas pressure. The official commentary, however, is that the December figure is probably exaggerated.

The winter seems a definitely slack time in Germany, Cf. Handwörterbuch der Staatswissenschaften. Art. Arbeitslosigkeit, by G. Adler; and Hirschberg: "Die Lage der arbeitenden Klasse," p. 10.

THE UNEMPLOYED IN COMPARISON TO TOTAL NUMBER OF WORKERS IN THE MAIN DIVISIONS OF OCCUPATIONS IN GERMANY. 1

OCCUPATION.	Number of workers.						Per cent. of these unemployed.					
	June 14, 1895.			December 2, 1895.			June 14, 1895.			December 2, 1895.		
	Male.	Female.	Both.	Male.	Female.	Both.	Male.	Female.	Both.	Male.	Female.	Both.
A. Agriculture	3,317,749	2,406,277	5,724,026	3,348,900	2,427,900	5,776,800	0.76	0.56	0.67	3.06	4.39	3.61
B. Industry, etc.	5,374,832	1,132,013	6,506,845	5,425,300	1,142,200	6,567,500	2.61	2.37	2.57	6.38	3.97	5.96
C. Commerce	1,117,962	376,992	1,494,954	1,128,500	380,400	1,508,900	2.82	1.55	2.50	4.49	2.06	3.88
D. Domestic service, etc.	223,985	1,547,822	1,771,807	226,100	1,561,800	1,787,900	7.75	2.10	2.81	21.36	3.56	5.81
Total, A.-D.	10,034,528	5,463,104	15,497,632	10,128,800	5,512,300	15,641,100	2.13	1.44	1.89	5.40	3.91	4.88

1 Vierteljahrshefte zur Stat. des Deutschen Reichs (Kais. Stat. Amt.) Ergänzung vom Vierten Heft (1896), p. 4

THE UNEMPLOYED AS COMPARED WITH THE TOTAL NUMBER OF WORKERS IN THE FOLLOWING OCCUPATIONS IN GERMANY.¹

Occupations.	Workers, 14/vi.'95.	Per cent. of these Unemployed.	
		14/vi.'95	2/xii.'95
I. Agriculture	5,607,313	0.66	3.62
II. Forestry and fishing	116,713	1.19	4.76
III. Mining and smelting	564,922	1.47	2.03
IV. Other extractive industries	468,489	1.47	5.76
V. Metal working	719,775	2.89	3.75
VI. Machine and instrument making	304,463	2.57	3.44
VII. Chemical industry	92,582	1.94	2.29
VIII. By-products of forestry	38,116	2.09	2.74
IX. Textile industry	878,494	1.64	1.92
X. Paper industry	121,526	2.60	2.86
XI. Leather industry	123,914	3.46	6.04
XII. Wood and timber industry	456,229	2.93	4.00
XIII. Food	656,970	3.27	4.35
XIV. Clothing and cleaning	775,671	3.13	5.42
XV. Building	1,151,851	2.87	15.61
XVI. Printing	106,536	4.18	4.38
XVII. Artists, etc.	18,765	3.59	5.51
XVIII. Factory operatives, artisans, etc. ²	28,542	4.96	35.66
XIX. Commerce	626,637	3.52	4.20
XX. Insurance	18,216	1.50	1.73
XXI. Transport	533,150	1.30	3.04
XXII. Lodging and refreshment	316,951	2.54	4.92
Total	13,725,825	1.77	4.80

¹ Vierteljahrshefte zur Statistik des Deutschen Reichs (Kais. Stat. Amt.) Ergänzung vom Vierten Heft.—(Berlin, 1896; p. 5.)

² Without further distinct classification.

no seasonal variation for industry as a whole and even if the labour market were a unit, this would not mean that dovetailing could be done so perfectly that there would not still be seasonal unemployment to a greater, or less degree, especially with skilled workers, due to the economic laws of friction and inertia and to the fact that labour is semi-solid rather than fluid in its movements. Furthermore, the policy of deseasonalisation and decasualisation involves with the permanent employment of some the ousting of others. The provision

for these others who would be either really useless to industry and superfluous or else on reserve ready to be reabsorbed is too large a question to discuss here; if by State employment, then for the sake of the workers as well as of the State which runs the business and pays the expenses it must be real productive work—not the indiscriminate, aimless sort of work which is often given as relief in the attempt to avoid unfriendly competition with private industry on the market. If, on the other hand, the principle of maintenance of workers while on reserve is accepted, the suggestions made for an elaborate system of industrial training could be developed with a special endeavour to fit workers for the transitions made necessary by seasonal fluctuations.

THE WEST END TAILORING TRADE

By BARBARA DRAKE

SEASONAL fluctuations in the tailoring trade may be attributed to three main causes, the first two of which are constant, or normal, and the third of which is inconstant, or varies at different times and in different places: (1) The need for special clothing at the commencement of the hot and cold seasons, *e.g.*, the demand for flannel suits in the summer and for overcoats in the winter. (2) The desire for new clothes in the spring. Suits that may be worn throughout the year tend to be bought as the first spring days reveal the shabbiness which passed muster through the winter. (3) Social custom or fashion. The demand for clothes to meet the exigencies of "Society," a demand which may or may not correspond with the normal demand noted under (1) and (2).

In the West End the London fashionable season combines with the normal demand of the spring and early summer to expand trade to a point of exceptional activity during May, June, and July; and, although no exact estimate can be formed, the extent to which fashion determines the excessive seasonal fluctuations of the West End trade may be inferred from the total collapse of the summer "boom" caused by so untoward an event as King Edward's death at the commencement of the summer season. Moreover, the West End trade is mainly a "bespoke" trade, a fact which renders it peculiarly sensitive to the effects of seasonal fluctuations. In the great wholesale, or ready-made, trade, orders may be forestalled in the slack season to meet the expected demand of the busy season. Or, as in the export trade, orders given beforehand may be executed over a period of several months, and dovetailed in with the home trade. Seasonal variations are thus met and

to some extent regularised; and where, as in the case of the factory with heavy standing expenses, regular employment is a matter of all-importance to the employer, fluctuations due to seasonal causes are almost eliminated. But in the bespoke trade the dependance of orders upon the immediate needs of the customer makes no adjustment of this kind possible; and the West End employer resorts to the expedient of reducing his standing expenses to a minimum. Thus, with the exception of the "cutter," employees rarely work on the premises of the employer. The cutter holds a privileged position. His work is regular throughout the year. His wages are seldom less than £2 a week, and may rise to £20 in a big firm, with a possible share in the profits as well. Indeed, the constant fear of the employer is that a smart cutter will leave him to set up for himself, carrying with him a large *clientèle* of customers and journeymen tailors. In some cases a clever young journeyman rises to the dignity of a cutter, but more often the cutter enters the firm as a "trimmer," and from the first stands in a class apart. But if the cutter is excepted, out-work is the rule; and, although this is less universally so in outlying districts, where rents are lower and the fluctuations of "Society" less than in the great centre of the West End trade—Mayfair, that fluctuations in trade, and not high rents, are of the two the more dominant factor in determining the prevalence of the out-worker system, is suggested by the discovery of empty workshops, or backshops, in many of the more central West End districts. The in-worker system is, however, to some extent practised by firms who do a large trade in ready-made as well as in bespoke goods, and who are, therefore, able to supplement their bespoke work by making stock in the slack season. But even here a certain number of supplementary out-workers are employed in the busy season, so that the brunt of the excessive irregularity of the bespoke work is thrown on the out-workers. In

addition, again, to seasonal irregularity, the growing frequency of "specials"—orders to be delivered within a narrow time-limit—incline the employer, in the small select West End firm, to the more elastic system of out-work; the anxiety of the employer to suit the convenience of his customer being still further increased in certain branches of the trade by the possible alternative to the latter of a high-class ready-made garment. The workers also, in some ways, incline to a system which offers them greater opportunities to dovetail in the "specials" of more than one employer. Nevertheless, the in-worker system has the distinct preference; it is generally agreed that accommodation is better,¹ wages are higher, and hours incomparably more regular in the workshop of the employer than in that of the workman or sweater, a superiority attributed to the more stringent enforcement of the Factory and Workshop Act and to the stronger position of the in-worker for collective action against reduced rates or excessive overtime.² The objections sometimes made by the men to work in where a small staff of in-workers are employed together with a large staff of out-workers are objections directed not against the in-worker system, but against a practice which throws on the in-workers so employed the whole burden of unremunerative work for fidgetty customers, as well as that of alterations. The "bushel," or tailor employed on alterations in the "ready-made altered to fit" trade, is also an in-worker; but he stands in a separate category to the highly-skilled tailor of the high-class bespoke trade.

Thus, with little or no abatement, the full force of the excessive seasonal fluctuations of the West End trade falls on the West End journeyman tailor. The

¹ A certain number of in-workers are still employed under bad conditions in underground workshops. But many of these workshops have been closed during recent years, owing in part to Trade Union action, and the number of men so employed is said to be comparatively few.

² The low rates paid in the case of certain classes of goods made in direct competition with factory-made goods are due to other causes, and affect in-workers and out-workers alike. See later.

year begins badly, and the first two months, January and February, are dead. Trade somewhat revives in March, shows a more hopeful expansion in April, and reaches a climax in May, June, and July, when every available man, woman, and child is pressed in to bear the burden and reap the harvest of the summer season. An abrupt check follows in August; and there is little doing again until the end of September, when trade wakes up afresh for a quiet winter season, through October, November, and December. Seasonal fluctuations are said to be on the increase. The summer season, which formerly commenced in April, is now postponed until May; and this compression of a four months' season into a three months' season has considerably increased the seasonal pressure of recent years.

The number and variety of methods under which the work of the journeyman tailor is carried out are beyond description. One method merges into the other; and every conceivable method, individual or collective, by which a coat, waistcoat, or trousers, may be "created," "made," "thrown together," or merely "turned out"—to use the most opprobrious term ever given by a tailor to the stitching together of a garment—is indiscriminately practised, by in-worker and out-worker, in the great workshop of the West End—Soho. Nevertheless, this variety of methods may be grouped under two main systems, *the individual system* and *the sectional system*, each with characteristic features of its own.

THE INDIVIDUAL SYSTEM

The old-fashioned journeyman tailor, who cut and made a garment throughout, has disappeared, and, as already remarked, the "cutter" and "tailor" belong to two separate and distinct branches of the trade. Again, coats, waistcoats, and trousers, each go to separate hands to be made. Coats are largely made by Englishmen, Swedes, and Jews; waistcoats by men and women, English or Jewish; trousers by Englishmen and

Germans. Low grade trousers, where the coat only of the suit it fitted, in many cases, go out of the district to be made. This, together with the fact that it takes nearly four times as long to make the coat as the trousers accounts for the comparatively small number of trouser hands discovered in the district. "Cut is better than ever, but the art of the tailor has gone," said an employer in a flourishing West End concern, himself risen from the "boards," and the son and the grandson of a journeyman tailor, "the modern tailor is not a tailor at all." But in spite of these disparaging remarks, a modified form of the old-fashioned tailor still exists in the man who, if he no longer "cuts," at any rate, "makes" a garment throughout, or with the help only of a woman to fell in linings, and sew buttons and buttonholes. This man still retains much of the old-world craftsman. His work is hand-sewn; or if the machine is used, it is used only for minor details, such as sleeve-linings or pockets. He has something also of the unique quality of the artist. He cannot always be replaced; and, "in the individual manipulation of a garment to suit the idiosyncrasies of the individual figure," to use his own expression, his particular style suits the style of a particular "cutter." To some extent, he makes his own terms with his employer; and, in the frantic rush of the summer season, he alone among his fellows stands firm, and point blank refuses to turn night into day at the beck and call of either shop or customer. He is probably an Englishman, possibly a Swede or German—rarely a Jew; and he forms the large majority of the 2,000 trade unionists of the West End district.

The average earnings of the tailor of this type are from £2 to £3 a week, seldom falling below £1 in the dead season, and rising to £4 or more in May, June, and July. If he works by time, he takes £2 to £2 5s. for a fifty or fifty-two hour week. But, as a rule, he works by the piece, according to the tailor's log. This

log is an elaborate piece-work scale on a time basis, agreed between the Masters' Association and the Amalgamated Society and the London Society of Tailors and Tailoresses. The rate per hour is cited at 6d., 6½d., or 7d. But in practice this rate works out at something between 9d. and 11d. an hour,¹ for unless alterations are excessive, the log-hour takes little longer than forty minutes for an average workman working under modern conditions. A dress-coat works out from 25s. to 30s., or more; a morning coat, 20s. to 25s.; a jacket, 16s. to 20s.; waistcoats, 5s. 9d. to 12s. 6d.; trousers, 5s. 9d. to 10s. 6d.; overcoats, 18s. to 25s., or more. Waistcoats are sometimes made throughout by women, who, in this case, work from the same log as the men. But, except for an occasional instance of a woman trouser-hand, this is the only skilled branch of the trade undertaken by women. The work is sometimes carried out in the workshop of the employer, but most often in the home of the worker, or in the hired "sitting." Rent, where one room is used as a workshop, is rarely less than 12s. or 15s. a week for two rooms; and gas amounts to another 4s. or 5s.; or for the hired sitting, 2s. 6d. to 3s. for the tailor, and another 1s. or 1s. 6d. if he employs a woman. The accommodation in workshops let out in "sittings" is, as a rule, excellent, both as regards space, cleanliness, light, and ventilation; and they are seldom open before seven, or after eight. This form of workshop exists mainly in Soho, and is made use of by men living outside the district. The tailor pays his woman anything from 3s. to 5s. a day, according to the skill and rapidity with which she works. She saves his time in the less skilled work, and the net takings of a tailor who employs a woman are somewhat higher than the figures previously quoted. The woman sticks by her tailor through the ups and downs of the season; and, catching something of her master's spirit, she will not hesitate to desert him in the busy season if

¹ In some cases the log-hour works out at 1s. 1d. or even more; but this is exceptional.

he has failed to provide her with work, by taking over the felling himself, in a time of slackness. But, as often as not, the man dispenses with a hired woman, and if he is helped at all is helped only by his wife. Women prefer to work for men of this type, and say the work is more regular and the strain far less than on the sectional system; the same instinct which leads the men to demand fair treatment for themselves leads them to pass on the same to the women.

The well-established reputation of many of the older firms employing individual methods enables these, in some degree, to withstand any excessive pressure on the part of customers. The old-established firm has also the occasional advantage of a Continental custom, and foreign orders may, to some extent, be dovetailed in with those of the customer at home. Nevertheless, seasonal fluctuations remain considerable. The practice is for out-workers to work on the regular staff of a single shop, or if a second shop is worked for, it is as a shop supplementary to the first shop. Thus, a "regular" at one shop will be a "casual" for "specials" at another. The aim of the employer is to secure, as a regular staff, a number of highly-skilled workmen, sufficiently large to meet the needs of the busiest season. In the slack time, the work is evenly distributed among the regular men; and an employer will advance money sooner than lose a capable workman. But the number of these "regulars" is limited by the refusal of the men to continue attendance at a shop unless they receive a certain minimum of employment throughout the year; and the employer is thus compelled to recruit from outside in the busiest season. So that, in addition to the men regularly employed, there is a small outer fringe of less competent workers who are regularly employed in the busy time only, or for little more than five or six months of the year, and who eke out a precarious existence by odd jobs "on their own." But the number of these casuals is few; and the employer most often turns to

recruit from the better grade workmen in the sectional group, a practice which, no doubt, is not without influence in the progressive displacement of the individual by the sectional system.

Employers complain that there is a shortage of highly skilled workmen in the trade, and efforts have been made for the revival of apprenticeship. But the feeling of the men is, that, although the demand for highly skilled workmen exceeds the supply at certain seasons of the year, and although piece-work prices are, on the whole, increasing, the aggregate amount of employment and wages is less each year, and that trade itself is falling away from those firms who have not betaken themselves to the sectional system. Hence, parents feel little encouragement to put their boys to a five years' apprenticeship, when the more rapidly acquired skill of the sectional system may be picked up for the asking. There is also some prejudice felt on the part of British parents against entering their sons to a trade which is already overrun by the foreigner.

THE SECTIONAL SYSTEM

This branch of the trade is almost exclusively Jewish; and the influence of the Jewish character may be traced in the variety of methods, in the absence of fixed standards, and withal in the strong vitality, which are the distinctive features of the sectional group. The patient endurance and nervous apprehension of the Jew are qualities weak to resist an industrial pressure; which his facile intelligence and his indefatigable industry are quick to evade. The Jew is the despair of the Trade Union official. But in the pliability of the Jew is strength as well as weakness, and the Jewish branch of the trade has shown a vigorous growth in recent years.

The many and various degrees of division and subdivision of labour practised on the sectional system are beyond description. The aid of a woman to do felling and buttonholing is itself a form of division of labour;

but the sectional system proper begins when one or more skilled tailors are engaged for hire by another, who acts as middleman, or "sweater," and each man performs a special part in the process.

The following is a common method of sectional work: the middleman fixes the garment, and passes it on to the tailor or "maker" to baste for fitting; from this it passes to the "machiner" to machine the main seams; again back to the fixer to fix the shoulder seams, collars and sleeves; back again to the tailor to put in the stitching; and at last to the women to fell in the linings and stitch buttons and buttonholes. The garment is then ready to go out to the "presser," and after a final inspection from the middleman "fixer," the finished article is returned to the shop. The middleman is paid by the piece, and is responsible to the firm for the execution of the work. As a rule he contracts that this shall be carried out, either by himself, or else by his "hands," under his own supervision and on his own premises. The tailor or "maker" employed by the middleman is paid by the day. A good average figure is 8s. for a thirteen hours' day; but it may be anything from 5s. (rarely less), to 10s. For a skilled workman it is seldom less than 6s. or 7s. A tailor taking 5s. (or less) is probably employed, either on low grade work, or as a less skilled tailor under one more highly skilled, where two tailors are employed in the same team. Overtime may be paid at a higher rate, at the same rate, or not at all, according to the agreement between the middleman and tailor. The machiner works by the piece; 1s. 3d. to 1s. 6d. for a garment taking about two hours to machine is a common payment. In the small home-workshop, the machiner passes from place to place, visiting perhaps as many as five or six workshops during the day, and using the machine of his employer. His total daily earnings average much the same as those of the tailor; and those of the under-machiner, where a second is employed, the same as those of the second

tailor. The women are paid by the day, or week; 3s. 6d. is a common figure for a twelve hours' day, but it may vary from 2s. 6d. to 5s.; or if by the week, anything from 15s. to 25s. for an exceptionally quick hand. If button-holes are taken home, they are paid for at an average piece-work rate of 1d. each; and 5s. a day may be earned in this way by a good worker. These women are in many cases Englishwomen; for the Jewess, unless she is the wife or daughter of the middleman, shows little inclination to enter the men's trade. The work is heavy; the combined system of piece-work and time-work, under which the piece-worker screws up the time-worker to his own pace, tends to undue speed; and except in the waistcoating, a woman has no opportunity to rise to the more skilled branches of the trade, or—dream dear to the Jewish imagination—to become a middleman herself, a fascinating but remote possibility in the ladies' trade. A girl, or "runner" to shop, probably a learner, is also kept at a few shillings a week, unless a child or other attendant is available. The presser most usually works apart in his own workshop, and bears his own heavy working expenses. Anything from 9d. to 1s. 6d. is a common charge per garment. The presser's profit, if he employs two or three men under him, at 5s., 8s. or 9s. a day, is much the same as that of the middleman in an average home-workshop, that is to say, anything from a deficit to a net profit of £4, £5, £6, or even more a week. In many of the smaller workshops, the middleman makes as well as fixes the garment himself, and dispenses with the tailor. In the larger workshops two or more tailors with women to correspond are employed by the same middleman, either together in the same team, or in separate teams, according to the sub-division of the work. It is seldom that the middleman takes no active part himself.

The men are sometimes employed on the premises of the employer, but more often in the home or workshop of the "sweater." In the former case, especially where

stock is made and work in consequence more regular, the place of the middleman is sometimes taken by a salaried "fixer." In the latter case the brunt of seasonal variations together with the heavy standing workshop expenses are borne by the middleman. Rent for an average home-workshop, including two or three small living-rooms, of which one may possibly be let off to a hand, varies from 20s. to 25s.; and the gas bill rises to another 6s. or 7s. The hand closely follows the fortunes of his master through the ups and downs of seasonal variations, and any lack of consideration shown by the sweater in the slack season, meets with swift retribution in the busy season. The middleman, or sweater, bears an evil reputation. Where low grade work is carried on extensively, high profits are no doubt extracted, and the disparity is considerable between the earnings of the sweater and his hand; but even then the sweater seldom earns more than £10 to £12 in a busy week; and these cases are rare. For profits are soon cut down by the competition of sweaters among themselves; a man passes readily from the ranks of a hand to the ranks of a sweater; and a workshop is soon opened by an energetic man wherever a good profit is to be made. Moreover the hand has too intimate a knowledge of his master's affairs not to resent any profit he regards as excessive—a resentment quickly expressed by desertion in the busy season. Hence the earnings of the one closely follow the profit of the other, and the sweater is little better off than his workpeople. Indeed in some cases his net profit is actually less than the wages of the man whom he employs; and, were it not for the strong Jewish preference for profit over wages, it would be hard to explain the constant desire of the well-paid hand to embark on the greater cares and no less precarious livelihood of the sweater; for it is not uncommon for a sweater to return to work as a hand, a sadder but a wiser man, after a gallant but unsuccessful attempt to carry his workshop through the dead season.

Thus, degrees of division and subdivision of labour, the grade of the work, and the earnings of the men vary indefinitely; but the statement is substantially correct, that the greater the subdivision of labour the lower the grade of the work, and the lower the grade of the work the lower the earnings of the worker, whether sweater or hand.

It has been already remarked that the best workmanship on the individual system is not competed with; but, short of this, the sectional system in its higher grades runs close its rival. Even the machine is sometimes dispensed with, and the seams hand-sewn; and many smart firms in the Bond Street district are mainly supplied on the sectional system. Log rates are paid in some instances; but payments vary indefinitely below the standard rate; and the tendency of the newer system is to displace the old, by a reduction in rates, as well as by a more expeditious return of the work. Lower rates in the higher grades of the work are to some extent compensated by the more economical methods of the sectional system, which enable the production of good-class work without increasing the speed, lengthening the hours, or lowering the earnings of the men. In the lower grades of work, low rates are again to some extent compensated by the greater use of the machine and by lower standards of workmanship, *e.g.*, soap instead of stitching. But rates are also lowered by the cut-throat competition between the Jewish tailors themselves, and fall to a level, low out of all proportion to the greater economy, or the less skill or labour put into the work; in some cases the piece-work rates for bespoke garments, made according to West End methods, that is to say, "tailored" and not "ballooned" together, fall from 16s. or 18s. to as low as 7s., 6s., or even 5s. 6d., so that the sweater's profit is reduced to a minimum and the earnings of the hand to the bare subsistence wage of 5s. a day, or less. Not only will the Jewish middleman seldom hesitate to undercut his rival by taking work

below the current rate, but he will also in the dead season supplement the highly paid work of a high-class firm by taking second-rate work at a lower rate from a second-rate firm. The intention is to "take it out of the job" by scamping the work, and to make the same or little less profit than before. But the methods of work of a first-rate team are not so easily laid aside; and, in many cases, the same work is performed at a lower rate all round. For, in a job of this kind, hands seldom object to meet the sweater half way; and on one occasion, a middleman was found simultaneously receiving from two firms, the one a superior Bond Street "log" shop, and the other a smart cheap concern in Oxford Street, the respective rates of 16s. and 10s. for two identical garments, the greater exactions as to workmanship coming from the cheaper firm—a practice which, often resorted to, opens the way to the subsequent cutting of rates. Another factor in the reduction of rates is the growing competition of the factory in better class goods, in the high-class "ready-made altered-to-fit" garment, and in the "wholesale bespoke" garment, a garment made in the factory to the choice and measurements of a particular customer. This competition is most noticeable in the loose fitting overcoat, which lends itself easily to modern factory methods; and bespoke rates for making coats of this kind have fallen out of all proportion to those in any other branch of the better class trade. The competition of the factory is again traced throughout all lower grades of the trade. Whatever the capacity of the West End sweater to "squeeze," or be "squeezed," rates fall to a limit below that at which he is able to compete; and goods, formerly made in the district, now go outside to be made in the factory. The practice sometimes resorted to, of making stock at a lower rate in the slack season, although an immediate advantage to the men, also contributes to lower rates. The bespoke rate tends to fall to the stock rate. Yet if the lower rate for stock is refused the work passes out to be

made in the factory, possibly to the provincial factory of the same firm, and the job is lost to the West End man. Indeed, it is only in so far as the bespoke trade lies beyond the competition of the factory, that tailoring flourishes in the West End.

There is a strong feeling among Trade Unionists and others that the provisions of the Trades Boards Act should be extended to cover the sectional branch of the West End bespoke trade.¹ The extension of the Wages Board from the "ready made" trade to the "wholesale bespoke" trade is already inevitable, as the two methods of industry are indiscriminately carried out by the same workpeople in the same factory or workshop. But no official definition as to what constitutes "wholesale bespoke" tailoring has yet been arrived at. The definition rests under the Act with the Board of Trade; and the opinion is common among tailors that to cover the necessary ground this must be worded so as to include "any clothing which is produced on the sectional system where the sewing machine is an integral part of that system." Such an extension of the Act will no doubt tend to accelerate the process by which the West End bespoke trade is passing to the factory wherever effective competition exists between the two systems; for no handicraft, or hand-driven machine, can compete for long in the same class of goods with the power-driven machinery of the factory. But the process cannot be regarded as an industrial evil, except in so far as it may inflict hardship on the individual men displaced. The factory doing a good-class trade will absorb a larger number of workers in regular employment; the high rates of the skilled West End tailor, whether working on the individual or on the sectional system, will no

¹ The above was written in January, 1911. Since then the Board of Trade has decided to sanction the extension of the Trades Board Act to all branches of the trade where the "sectional" system is employed. The provision comes into force January, 1912. The minimum wage for men has been fixed at 6d. an hour, working out at 26s. for a 52 hours week, and for women at 3½d. an hour, working out at 14s. 1d. for a 52 hours week.

longer be undermined by cut-throat reductions to compete with the factory in certain branches of the trade—reductions which affect the trade as a whole; and, while the standard of workmanship will not be deteriorated for the select few who are able to pay a high price for their garments, the great mass of middle-class consumers will enjoy the benefit of a good supply of cheap well-made clothes, unhaunted by the shade of the sweated worker. Moreover the process is already inevitable; and, by the establishment of a minimum rate, the displacement of the sectional system by the factory system will take place in a manner not unlike that by which the individual system is at present undergoing displacement by the sectional system in all but the highest grades of work, that is to say, by the progressive supersession and not by the progressive demoralisation of the workers employed in the displaced branch of the trade.

However, it is not the low rates of pay which are the worst features of the West End tailoring trade; for these rates, if measured on a time basis, are high rather than unusually low. As previously stated, the lowest skilled male hand seldom takes less than 5s. a day; the slowest woman seldom less than 2s. 6d.; and normal rates are considerably higher. Indeed the unskilled hand finds no place in the West End. The wife of the casual labourer, who gluts the market in other trades for which little training is required beyond the normal feminine ability to sew, is excluded from West End tailoring by her lack of precision and speed; even the "greener," unless he finds work among his own people, serves his apprenticeship elsewhere; and those who fall below a certain standard of skill are driven from the district, in all probability to do the slop work of the East End. Thus, in so far as sweating exists in the West End, it is the sweating of the skilled workman and not of the unskilled; and it is not the low rates of pay, but the irregular work, the long hours, and the

high pressure under which work, when it comes, is carried out, which are the great evils of the West End trade. For less consideration is shown by employers to workpeople in the sectional group than in the group previously described; and the brunt of seasonal variations is borne by the sectional worker. Indeed the very resistance in the one group increases the pressure on the other. Individual aptitudes count for less, and the relationship between "cutter" and "maker" is less personal and intimate. Workers are more easily replaced; and less effort is made to retain men through the dead season. Hence, a firm's regular staff of workers of this type is less definite, and the men in return work for an indefinite number of shops—a practice which, while it offers on the one hand greater opportunities to employers and employees to average daily fluctuations, on the other tends to disorganise the work. In the rush of the summer season, it is the firm best able to cope with "specials" which does the best trade. So long as the "cut" is smart, rapid delivery counts for as much as, or more than, good workmanship; and an ever-ready alacrity to meet the most exacting demands of the most inconsiderate customer, is among the most valuable qualifications of the West End tailor. In the busy season sixteen or eighteen hours a day, for six or even seven days a week, will be worked for several weeks on end. Overtime is extended until after midnight; button-holes are given out to the women to be worked at all night; and the presser takes up the process in the small hours of the morning when the others leave off, so that the finished garment may be delivered in the shop by 9.30 a.m. sharp. In fact, in many cases, workshops are never closed; and the men drop to sleep on their stools, or lie down in their clothes too exhausted to return home to rest. This is specially so among hands who reside outside the district, such as the casuals imported from the East End in the height of the season. But the number of these latter is necessarily limited to

the limited workshop accommodation of the district. The close attendance upon the shop, the constant need of the outside machiner and presser, as well as religious and social customs, confine the Jewish home workshop within narrow areas; and overcrowding is more easily checked than overtime. Sanitary regulations of all kinds are indeed more strictly enforced than those relating to the limitation of hours, and workshops are clean—cleaner than the ordinary living-rooms of persons of the same class. But little enforcement is possible in the domestic or small home-workshop of the provision which limits the women's work from 8 a.m. to 8 p.m., in the rare visits of the Factory Inspector, the offending women are smuggled into the back room, or if needs be, into bed; and the Inspector has not the face to disturb "my sister asleep." (This failure is the more to be regretted than any effective enforcement of the Factories and Workshops Act would at the same time check the excessive overtime of the men, for the work is seldom able to proceed for any length of time without the help of the women.) These long hours of persistent toil inevitably affect the health of both men and women. Meals are taken at any time, and in any shape. The men go for hours without food, and are then too tired to eat. The whole household is demoralised; and, whether windows are open or closed, the air becomes vitiated during the heat of the long summer day. Perhaps the presser's workshop suffers most heavily; windows are shut to keep in the damp atmosphere favourable to the work, and the heat rising from the steaming irons and wet cloth is intolerable. But everywhere men and women look haggard and white; few do not suffer from indigestion and nervous strain; all are anæmic; and the prevalence of phthisis, or consumption, is excessive. Over one-third of the cases of consumption known to the Westminster Health Society in North Westminster (Soho, Strand, and Mayfair areas) are tailors, or members of a tailor's family; and of these four-fifths are

Jewish. These figures are the more significant in that the earnings of the tailor average considerably higher than those of other wage-earners in the same district; and the incidence of consumption normally follows that of poverty. Indeed, outside the privileged individual system, it is rare to find an elderly tailor at work; the consensus of opinion among Trades Union officials, as well as among the men themselves, is that the tailor on sectional work is worn out between forty-five and fifty, and that the presser and machiner are those to drop out first. Perhaps the men suffer more severely than the women. The readily available reserve of semi-skilled wives and daughters, who may at any time be pressed into work, tends to relieve the seasonal pressure upon the less skilled, or women's section of the trade; and, although there is no effective enforcement of the twelve hours' limit, some protection from the regulation is no doubt gained.

With the feverish rush of the summer season must be contrasted the depressing slackness of the early year. After a good season, the midsummer rest is frankly enjoyed by the West End tailor. To use his own expression, he has "caught himself up" with something besides to tide him over the August holiday; and the delights even of Margate and Clacton are not altogether unknown at this time of the year. But little is again saved in the quiet winter season; and during the trying months of January and February the tailor has all he can do to keep above water. For weeks on end he may average but one or two days a week; and a varying state of indebtedness is the normal condition of the tailor in March. Credit, however, is not hard to obtain, so long as the man is known in the district; and, except among the poorest, the standard of living is seldom sensibly lowered. But signs of despondency and harassment appear in all; and the nervous depression of the early months of the year is an ill preparation for the strain of the ensuing season. In view of the regular

recurrence of the winter slump, it is difficult to explain why so little preparation is made by men, many of whom have incomes averaging 30s. or more a week after payment of rent and workshop expenses. But the improvidence of the tailor would seem to be in direct proportion to the irregularity of his work; for it is among the more regular workmen of the individual group that the greatest efforts are made to provide against the needs of the dead season.

Employment is more regular with the cheaper and less fashionable firms outside the Mayfair district (*e.g.*, Holborn, Victoria, Strand)¹ than with the more fashionable firms within the Mayfair district; and at first sight it appears as if the lower earnings of the men in the lower grades of the trade were to some extent compensated by a greater regularity of work. But, the practice previously alluded to by which highly skilled workmen pass into lower grade work in the slack season, and the corresponding practice by which less skilled men are drawn to higher grade work in times of pressure, tend to pass on the excessive seasonal fluctuations of the fashionable tailor to the tailor in the grade below him. A sweater attached to a high-class firm has almost invariably a second-class firm to fall back on. Thus, not only are earnings less, but irregularity is actually greater in the lower than in the higher grades of the work; and seasonal variations press most heavily on those least able to bear them.

Seasonal fluctuations are again aggravated by the pernicious "special." The sole order of the week, in a time of slackness, may necessitate high pressure work all night; and this practice of turning night into day is not without effect in preparing the ground for the continuous work of the summer season.

The Jew is burdened with a more vivid imagination and less solid nerves than the average Englishman. He

¹ Firms in the Kensington, Fulham, Hammersmith and Notting Hill districts tend towards the in-worker system.

dare not refuse a job; better work all night than lie awake and think of the other fellow who has stolen a march on him; so that short of extending to the men the protection of the Factory and Workshop Act in regard to the limitation of hours, there seems to be no effective means of checking the excessive overtime worked at present in the trade. The whole paraphernalia of men, women, flaring gas, machines, irons, and garments cannot be smuggled away as the one or two offending women; and an 8 a.m. to 8 p.m. time limit, or other limit on the basis of a fixed period for all alike would be checked at once by the Factory Inspector. Nor would the regulation affect employment in the West End trade to any great extent. Except in so far as the bespoke garment can be interchanged for the high-class "ready-made" or "wholesale bespoke" garment, trade cannot leave the district; and here, as we have seen, it is already passing to the factory. The West End customer will be compelled to wait, if the West End firm is compelled to withstand his call for undue haste; and the effect will be for the customer to exercise a greater forethought in orders for bespoke garments, with the result to eliminate the "special," to prolong the busy season, and to confine hours within normal limits throughout the year. The curious admixture in the Jewish character of industrial strength and industrial weakness will thus, from an element in the trade of disorganisation, become one making solely for progress and development.

To sum up, social custom and the normal demand for clothes in the spring and early summer together cause the excessive seasonal fluctuations of the West End tailoring trade. These fluctuations are passed on by the West End firm, with a minimum discount, to the out-worker; and, owing to the greater resisting powers of the tailor working on the "individual" system, they press most heavily on the "sectional" or Jewish branch of the trade. Here, again, the higher grade workman passes on seasonal pressure to the grade below him.

But the resistance of the Englishman is now exchanged for the pliability of the Jew. As trade expands, men push up from the lower grades of the trade to the higher, until workers are drawn from outside the district; and, as trade contracts, men press down from the higher grades of the trade to the lower, until it no longer pays to take work at the price. Thus the paradox arises, that the greatest irregularity in trade is with the high-class firm, while the greatest irregularity of employment is in the low-class work; so that seasonal pressure is passed on from grade to grade until the spent wave is lost from sight among the slop workers of the East End.

BARBARA DRAKE.

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THE WAITER

By BARBARA DRAKE

SEASONAL fluctuations in the hotel and restaurant trade are determined by the seasonal character of the client catered for. Thus, employment varies from the temporary job of a fashionable seaside hotel or a summer dinner-garden, open only for a short season of the year to meet the occasional wants of the tourist or pleasure-seeker, to the regular work of a commercial hotel or an old-fashioned chop-house, open year in year out to meet the every-day needs of the workaday public; and the waiter falls under three categories—the migratory waiter, the resident waiter, and the casual waiter.

The Migratory Waiter.—The trade of the migratory waiter is cosmopolitan in character and international in extent.¹ He is the waiter of fashionable seasons, of holiday trips, of seaside resorts, riverside haunts, of “cures” and “baths,” and of exhibitions. He is a Frenchman, a German, an Italian, an Austrian, a Swiss, or within the British round of migration sometimes an Englishman. And he follows his clients from place to place as the season follows the season.

In the hotel or restaurant open only for a few months in the year, the practice is for two or more separate establishments in two or more separate localities to be

¹ The figures given in the Census of 1901 for hotel and restaurant employees (England and Wales) are as follows:—

28,625	barmen.
14,078	cellarmen.
18,849	others.

TOTAL 61,552

The figures for the Census of 1911 are not yet out; but the waiters included in “others” will certainly show a large increase in numbers.

under the control of a single management. In this way one fashionable season is dovetailed in with another, and with a minimum of dislocation of work the same men are drafted on from place to place. The success of a fashionable hotel or restaurant is made or marred by the quality of the *personnel*. A permanent staff of employees is therefore essential; and many men, whose range of migration extends over two continents, are no less regularly employed than the London resident, who is drafted from the Popular Café to the Earl's Court Exhibition for the summer months, or to and fro from the City eating-house to the West End restaurant for the respective needs of the "lunching" and "dining" seasons.¹

In the hotel or restaurant open all the year round the practice is to employ a permanent staff, and to take on extra men of the migratory class for the busy season. A private exchange of waiters between two or more local establishments under the same, or even under separate, managements is again practised to a small extent. But where a fixed staff is already employed the extra "hand" soon falls into ways of the house; and the rule is for seasonal men to be taken on for the job only, either directly, or through one of the many trade societies which within a single generation have sprung up and covered the globe with a network of employment agencies.

These societies deserve special consideration. First and foremost stands the Geneva Association of Hotel and Restaurant Employees, established in 1877, with over 140 branches all over the world (*directorium*, Dresden) and over 15,000 members (London branch, 1,600; 90 per cent. waiters). To members a small subscription of 3s. a month covers engagement at any

¹ The waitress is not infrequently employed during the day in West End restaurants of a popular character, and her place taken by the city waiter in the evening. But there is no real competition between waiter and waitress; for the "lunch" served in establishments of this kind is more in the nature of the light refreshments of the tea-shop—the special sphere of the waitress.

branch of the society. To non-members a fee varying from 2s. 6d. to 20s. is charged for a permanent situation, according to the class of the work; or a fee of a few pence for a job by the night. Every care is taken to select the right man for the right post. The preference is given to members over non-members, but this is provided only that the man is qualified for the job. Each branch of the society is in active communication with the other. A paper is circulated to advertise vacancies and other matters affecting employment. Men are advised as to trade conditions without as well as within their own districts; and journey-money is advanced if necessary to men of known character. The association acts also as a friendly and provident society, and provides to its members sick pay, old age pensions, and death insurance. Membership is in the main German; but all nationalities, including the English, are to some extent represented. The Hotel and Restaurant Employees' (Union Ganymede) Friendly Society, established 1878, comes next, with 200 branches all over the world (*directorium*, Dresden), and over 10,000 members (London branch, 1,000). The conditions are much the same as those of the "Geneva," except that a fee for engagement is charged to members as well as to non-members. The main membership is again German. Another society international in organisation is the Swiss Union Helvetia, an off-shoot from the "Geneva," established in 1886, with some seventy branches (*directorium*, Lucerne), and 4,000 members (London branch, 750). Conditions are again much the same. Another smaller society on similar lines is the Austrian International Society of Chefs and Waiters (*directorium*, Frankfort), with some 400 members (London branch, 200). Another is the Christian Home for Waiters, a religious institution of German origin, established in 1890, in connection with the Young Men's Christian Association, with eighteen branches (*directorium*, Berlin), and some 1,000 members (London branch,

170). But this association gives exchange facilities only, and acts as a club but not as a friendly or provident society. Another is the Caterers' Employees' Union, a branch of the German *Verein der Gastwirtsgehilfen*, established in 1899, with some eighteen branches and some 11,000 members (London branch, sixty). Again, others are the Loyal British Waiters' Society, 500 members; the Italian Society of Hotel and Restaurant Employees, 600 members; the Italian Mutual Aid Society, 270 members; the Swiss Society of Hotel and Restaurant Employees; and the City Waiters' Club. But the latter five are in London only; and, in addition to a host of private agencies run for profit, serve the needs of the resident rather than of the migratory waiter. These associations, with the single exception of the Caterers' Employees Union, are not trade unions. But, within the last few years, a *Kartel* representing five or six of the more influential societies has been formed to protect the interests of the men, and so far as possible to regulate trade conditions. In this way a minimum wage has been fixed for boys of 5s. a week and laundry. The Caterers' Employees' Union, the only trade union or fighting "red" society since the break up of the Amalgamated Waiters' Society some ten years ago, is not represented on the *Kartel*, and although powerful in Germany, has little hold in England. Indeed, the "red" union is looked upon somewhat askance by the more moderate non-militant "yellow" societies of the English *Kartel*; and the efforts recently made by the "red" party to resist the influx of foreign waiters during the Coronation "boom," and thus to strengthen the position of the waiter in London, have met with little or no support.

Thus exchange facilities are well provided for in the trade, if not too well and to the extent of overlapping, at any rate, in London. And—last but not least—the social qualities and the social opportunities of the waiter himself are a never-failing source of mutual intelligence.

Many and various are the rounds of migration. The Riviera, Italy, Egypt, Switzerland, and the South Coast in the winter; the fashionable seasons of London, Paris, and other great cities in the spring; in the summer the British and foreign seaside seasons, Switzerland again; the "Spas" and Scotland in the autumn. Within the British area seasonal activity is greatest in the spring, summer, and early autumn, and least from October to March. The London season, and later on the British seaside seasons, attract to this country large numbers of young foreigners each spring, and the expense of the return journey to the winter resorts of the Continent, together with the lavish open-handedness of the British public, tend to retain them. So that, with the exception of those men who return to winter abroad in the trail of a rich and idle class, the tendency is for the foreign migrant to remain. But beyond the quiet invalid season of the South Coast, there is little doing in a seasonal way after the close of the holidays at the end of September. The busy official and professional classes, merchants, and tradesmen—even the inmates of the country house, who make up the main hotel population of the summer months, retire for the winter to work—or sport; and a surplus of waiters congregates in London and gluts the winter market. Thus the trade of the migratory waiter, unlike that of the resident, is regular in direct proportion to the fashionable character of his clientèle; and the fine gentleman who follows his clients for a winter in Monte Carlo, a summer at the "Ritz" or the "Piccadilly," and an autumn at the Homburg "Baths," pursues a more even path than the dapper youth, who slaves the summer at the Earl's Court Exhibition or the great White City, follows on to a season at Scarborough or Margate, and hurries back to London to seize the first chance of a regular berth, or to eke out a slack time with the "banquets" and hotel dinners which forms the *gros pièce* of his middle-class clients in the winter months. But, whatever the trials of the migratory waiter, he has

one great pull over his fellows—he is an unmarried man and free to decamp. For, when the migratory waiter makes a home and takes a wife, he enters a new phase, and seeks at the same time a resident situation.

The Resident Waiter.—The resident waiter caters for the normal needs of a single district. The class falls roughly into two sections:—the foreign section, which, recruited from the migratory branch, supplies the main body of hotels and restaurant employees in permanent situations; and the British section, which, notwithstanding a less professional training, still holds its own in certain fields, and supplies the old-fashioned English family hotel, the provincial hotel (outside the fashionable holiday resorts), the wayside inn, the station restaurant, the ship's steward, the old-fashioned chop-house, the West End Club, the University "scout," the House of Commons, and other essentially British institutions.

In London, although seasonal variations in the high-class hotel trade are considerable, the number of men employed in hotel work varies little throughout the year. Two or three extra hands taken on for the summer season is an average addition, even in large establishments. The staff of a good hotel is not easy to reduce. Nor are suitable men always to be had in the busy season. And again, high rents prohibit the practice by which in other fashionable localities a special wing is opened for the season only. So that the full months of May, June, and July are met by longer hours and a greater pressure of work, and the empty months of August and September by a succession of holidays to the staff. In the second-class hotel the fashionable season is less marked, and the depression of August and September is in a great part relieved by the influx of foreign and provincial tourists. The hotel winter season commences again in October, and a fair average trade is carried on from October to March.

Seasonal effects are more acute in the London restaurant trade. Extra men are engaged on all sides

for the summer months; and by those firms who do a big trade in the exhibitions, the summer clubs, and other seasonal resorts, the numbers taken on are very considerable. These men belong in part to the migratory class. But, in the same way that the prosperity of the British seasonal trade tends to retain a surplus of men in the country, so the prosperity of the London season tends to fix a surplus of men in London. Both share in the bounty of the London season, and both contribute to clog the London market in the winter months. Individual hardship is sometimes considerable. Elderly or less efficient men are squeezed out. Even the resident at times leaves home and seeks work elsewhere, but the married man tied to the district, of necessity, suffers the most severely. Against this, the exhibitions and other summer resorts remain open through August and September, and the seasonal trade continues to be enjoyed by the Londoner after the seaside exodus of his migratory competitors. So that notwithstanding a steady winter season, and although the slack time for the London man in regular employment occurs in August and September, unemployment—or rather semi-employment in banquets, hotel dinners, etc.—is greatest in the winter months.

The unfashionable British section of the trade is less affected by seasonal variations. A regular staff is the rule. In the station restaurant, the City chop-house, and other old-fashioned eating-houses, the waiter is most active in the winter, or whenever a square, sit-down meal is most at a premium. The ship's steward, if not a member of a permanent staff, yet dovetails in one trip with another; but in this trade the more fashionable lines are already invaded by the foreigner. The Oxford or Cambridge "scout" has regular employment for six months of the year only, but he supplements this with seasonal jobs—at any rate for the long summer vacation, or follows an undergraduate as valet or "loader." The House of Commons has a small staff of whole-time

men, supplemented for "dinner" by the "lunch" waiter from the City. Notwithstanding that for several months of the year the House is not sitting, many men have held the same posts for over twenty years. And finally, the waiter in the West End Club works for a fixed wage with a bonus at Christmas, and employment is more on the lines of domestic service.

The Casual Waiter.—The casual waiter caters for the private entertainment, for the "at home," the dinner-party, and the ball. He is mainly recruited from domestic service, and he is almost invariably an Englishman. He is engaged by the day, or more often by the night, either through a catering firm, or directly by his clients. His busy season in London is May, June, and July. But, as he is seldom altogether dependent on his trade as a waiter, and has other employment as hall-porter, commissionaire, caretaker, postman, clerk, or even small tradesman, he is not affected to a vital degree by seasonal fluctuations. He stands, therefore, in a class apart, and is not to be confused with the waiter employed in winter banquets and other temporary hotel and restaurant jobs as part of the rotation of his normal work.

The main position in the trade is thus seen to be occupied by the foreigner. Indeed, notwithstanding many efforts on the part of the Loyal British Waiters' Society to train and place boys, and although a preference is given by certain firms to British subjects, the British boy shows little or no inclination to take the trade up as a serious profession at all. The long hours, the evening work, the seven days a week, and perhaps also the subservient character of the service, are distasteful to him. Nor has he the disposition to acquire the foreign speech, the polished manners, or the epicurean faculty, which are the requisite accomplishments of a successful hotel or restaurant career. So that even the British boy who adopts the calling tends to drift into the more out-of-the-way and amateur walks of the trade.

National distinctions of a lesser degree are again found among the foreigners themselves. Thus, the Italian and the Frenchman tend to monopolise the first-class restaurant trade and excel in appearance and manners. The German, again, is first for hotel work, and excels in intelligence and education. Next the German stands the Swiss. But distinctions of this kind are only drawn in a small number of select firms; and German, Italian, Swiss, Austrian, and Frenchman, each and all, are to be found in hotel, restaurant, grill-room, and foyer, sometimes indiscriminately but more often marked off in separate nationalities. For, wherever a nationality is once established, the foreign rival tends to be excluded.

But, if the success of the foreigner is in part the result of natural aptitude, it is more often that of prolonged training. The foreign boy commences work at 14 or 15 years of age with a two years' apprenticeship in his own country as *commis omnibus*, or boarding-house boy. At 16 or 17 he has already learned the rudiments of his trade; and, having saved the money for his passage and kit from a minimum salary of a few marks a week, he finds his way to London, Paris, or some other great city. They arrive each spring—anæmic but alert and intelligent youths—and may be seen in shoals at the London offices of the "Geneva" or "Ganymede." A boarding-house situation is again found, at 5s. a week with board, lodging, and washing; and for another six or eight months the boy learns the language and the ways of the country. From this he either continues his education elsewhere, or takes his first place in a hotel or restaurant as *commis débarrasseur*, or clearing-away boy. A first-class establishment is hard to get into; indeed, in many houses of great reputation these boys are the sons of proprietors or managers, and pay big premiums for the privilege to pass through the ranks and learn the trade from the bottom. The ambitious boy will also at this stage take a turn in the

kitchen, and with a view to future contingencies gain a practice in carving and a more intimate knowledge of the contents of dishes. But, in the normal course, the *commis débarrasseur* passes at once to a *commis de rang*, or waiter's assistant; is a full-blown *chef* with charge of the table by the time he has attained his 24th year; and from thence upwards may rise, in the degree to which he is favoured by wits and fortune, to head-waiter, superintendent, or even manager. During this period of training the foreign youth returns for two or three years' military service in his own country. This service comes between 20 and 22 years, just at the time when the boy is beginning to earn good money, and is felt by many to be a considerable hardship. So far as possible the time is served in the mess-room or as an officer's servant; and many seek and find exemption on account of short chest measurement or other physical defect.

Earnings follow as a rule the class of the establishment. In a good London house the *commis* earns from 15s. to 20s. a week, or as a *commis de rang* earns 20s. to 25s., the *chef de rang* earns an average of £2 to £2 10s., or in a first-rate house £3, £4, or even £5 and £6 a week; and the head waiter takes anything up to £10 or £12. In a City chop-house 30s. to £2 is good average pay. The same in many commercial or provincial hotels. In the small station restaurant earnings seldom exceed £1 to £1 10s., and may drop to even less. In the House of Commons there is a fixed fee of 3s. 6d. an evening, in addition to tips. And 4s. is a common fee for a job by the night, or 6d. extra if a white waistcoat is worn. The worst-paid posts are, perhaps, to be found in the small, cheap restaurants of out-of-the-way quarters, and these are not uncommonly the last resorts of the waiter who fails from inefficiency or age.

Earnings are made up in the main from the clients' tips—T.I.P., to improve promptness—together with a small commission on bills or a small regular wage paid by

the house, from which fines are deducted for breakages, mistakes, unpunctuality, incivility, etc. Under normal circumstances these fines average some 2s. a week, but may reach as much as 10s. or 12s. and even exceed the commission or wage. Breakages are sometimes commuted for a regular deduction of 1s. 6d. or 2s. a week from each waiter for "glass money." But the practice is protested against by the men—whose feelings are sometimes expressed by deliberately breaking their money's worth. The old custom of a fee from the waiter for his table is still adhered to in a small number of old-fashioned firms, but is no longer common. Not only is the practice objected to by the present generation of waiters, but employers prefer a system which allows them a more complete control of their men. Tips are either kept by each waiter for himself, the *chef de rang* paying the wage of the *commis* or two *commis* under him, or else tips are pooled and shared out once a week under what is known as the "trunk" system, a system introduced by the "Ritz" and now practised by the greater number of first-class restaurants. The system is justified by the great difference in amount of the tip given for identical services. Nevertheless, the method is disliked by the men on the grounds that the "trunk" is unduly shared in by the head-waiter and superintendent, and that wherever the "trunk" system is introduced the regular wages of superintendence tend to be reduced by the management at the expense of the waiters' tips. It speaks well for the honour of the trade that no charge is ever levelled against the system for the opportunity it offers the waiter to take advantage of his fellows and to levy toll on tips on their passage to the "trunk." In the establishment where tips are forbidden by the rule of the house a fixed salary is given instead, or else the guarantee of a certain commission; and, although this wage seldom exceeds £2 for a *chef de rang*, the preference is growing among waiters for situations of this kind.

Outside a few select firms, and excepting the small number of hotel hands employed as *chef d'etage*, employment in hotel or restaurant is interchangeable. But each grade of establishment has its own standard of skill, as well as of manner, dress, etc.; and each waiter has special qualifications to serve a particular class of client. So that there is little or no competition between men in different grades of the trade.

The hours of service are long, twelve or fourteen hours a day is a common average, and in many establishments little less time is worked on Sundays. The restaurant waiter works as a rule in two shifts: First shift 9 a.m. to 3 p.m., and again from 6 p.m. to 12 p.m.; and second shift from noon to midnight. So that a slack week or so between seasons, or in London the August and September holidays, are physically needed for recuperation and rest; and the waiter in constant employment is glad of the respite and seldom unable to afford it.

The standard of living is high. The waiter has free board, and although he has much to complain of in many instances, on the whole he fares well. A smart appearance is expected of a *chef de rang* in a fashionable house. However, a decent second-hand suit may be had for anything for a few shillings upwards and will last for years. Washing, on the other hand, is an expensive item, and cannot be carried out at home. Shirts alone seldom amount to less than 2s. a week; and a white waistcoat is an additional expense.

The trade runs in families. In the foreign section the young men on their migratory rounds are often the lodgers of married friends and relations; and overcrowding is not uncommon in the full season. Nevertheless, the home of the foreigner compares well with that of the Englishman of the same class. The German

¹ The fare varies considerably in different establishments. In certain London establishments where the men sleep in the accomodation is said to be very bad indeed. But this concerns the waiter perhaps less than the kitchen employee.

hausfrau, the Frenchwoman, and most of all the Italian, are better managers and far better cooks than the average Englishwoman. Indeed, in many marriages of mixed nationality, the indifferent housekeeping of the English wife is a chronic source of friction. The German and the Swiss in many cases settle down and remain in the country, and the children grow up to be British subjects. But, unless he marries an Englishwoman, this is more rare with the Frenchman or the Italian; the children are put out to nurse in the old home, and the end is never far from sight of a small business or a few acres of land and a bourgeois old age in the old country.

The *beau ideal* of the waiter is best expressed in the words of the Secretary of the Geneva Association:—

“ The patience of Job,
The wisdom of Solomon,
The wit of a diplomat,
The skill of an artist,
The bearing of a prince.”

But, whether such a paragon exists or not, the waiter is a man selected from his fellows by personal qualities and years of training. He is not replaced from outside his own numbers. The relationship between the waiter and his client is said to grow less personal and more mechanical, with a corresponding falling off in the waiter's tips. Nevertheless, the demand for qualified men is on the increase; and the waiter who knows his trade commands an excellent position. But, against this, few men unless they rise to the post of head-waiter, remain in the trade after 45. Ousted by the younger generation, the waiter retires on his savings to continue a somewhat precarious career as small lodging-house keeper, small tradesman, etc.—if indeed he does not give up altogether to live on his wife. Many others drop out earlier. Unsuitable boys are already sifted in the boarding-house period. Later on, the close proximity to a wealth and luxury not his own, and the artificial

conditions under which life appears to him, expose the youth to many temptations; or, the strain of rapid service, the long hours, the heated rooms—together perhaps with a too free indulgence in the half-finished bottle and the half-emptied dish—undermine his constitution. A dismissal for drunken or disorderly behaviour, a few months out of a job, even a shabby or seedy appearance, stand at once against him; and the waiter who starts on the downward track has not far to go before he goes under.

To sum up, seasonal fluctuations in the hotel and restaurant trade vary with the seasonal character of the client catered for. But, by reason of the mobility of the migratory waiter, and of the alternate trade of the casual, the waiter who caters for the most seasonal class in many ways suffers least from seasonal causes.

In London the number of men employed in the hotel trade is comparatively stable throughout the year. But, in the restaurant trade, large numbers of extra men are taken on for the summer months to meet the demand of the great exhibition and other seasonal expansions. The same men, in part London residents and in part migrants collected in London after the close of the seaside seasons, clog the market in the winter months. So that, although trade depression is greatest in August and September, unemployment is greatest from October to March; and the married man tied to the district, of necessity, suffers the most severely. Nevertheless, it cannot be established that at all times, somewhere, a season is in progress which will repay the waiter for the expense of migration. Indeed, the one and only summer holiday taken by the great middle classes of Northern and Central Europe, and the tendency in a Northern climate to dine out in the summer and to stay at home in the winter, so far as they show anything, show the contrary.

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THE CYCLE INDUSTRY

By G. R. CARTER, M.A.

THE manufacture of cycles, tricycles, and especially of motor cycles and carrier cycles, is essentially a modern industry; its growth is of comparatively recent date. Only during the last twenty years or so has it settled into its place as one of the recognised industries of England. Its structure and organisation has not even yet wholly emerged from the formative stage. Curiously enough, the origin of the cycle dates back to the seventeenth century, at least, and it is almost an impossible task to trace the development of the modern cycle through all its varied forms and endless "patents." The first direct ancestor of the modern cycle was introduced into England by a Frenchman in 1770. It was a fearful and wonderful contrivance termed the velocipede, or "dandy-horse." The year 1867 saw the inception of cycling proper, when a machine was introduced having steering handle, pedals, and cranks. Mechanics at once began to seek to perfect this new means of locomotion, though for years the making of a cycle was still regarded as "a blacksmith's job." From 1867 invention followed invention in an endless succession, an immense impulse being given to the industry by the invention of the low safety cycle (about 1870), and the pneumatic tyre (1888).

Partly on account of the modern character of this industry, less information of a precise or comprehensive character, is available. The few publications having any bearing upon the subject are either of a technical character—dealing with the construction and repairing of cycles, etc., or of a general character—dealing with the records and history of cycling as a sport and pastime.

Similarly, until quite recently, statistics concerning the industry have been conspicuously lacking. In the various reports issued by the Board of Trade, the cycle industry has either been neglected altogether, or included indiscriminately with engineering trades. Even in the Census of Production (1907), it was found impossible to isolate the statistics relating to the cycle industry and its allied branches in any satisfactory manner. Only of late years have import and export statistics relating to cycles, motor cycles, parts, automobiles, etc., been published separately.

The trade reports in the *Labour Gazette* are extremely general in character, and afford no precise index. There are no Trade Unions specifically comprising cycle workers, they are found in a variety of Unions according to their particular trade. These Trade Union reports afford little direct assistance.

Cycle workers, displaced during the slack season, seek work at their particular trade in any industry as braziers, general mechanics, electro platers, enamellers, etc., and not specifically as cycle workers. Consequently, the information available from Labour Exchanges is rendered difficult of interpretation.

For these reasons, and also on account of the extremely specialised character of the various branches within the industry, reliable information can be obtained only by direct inquiries among those connected with the various branches—managers, foremen, employees, Trade Union officials, etc. These sometimes hesitate to supply more than a general review, partly for trade reasons, partly because of the multitude of specialised sections and varying conditions to be taken into consideration.

Under the circumstances, therefore, the proposed inquiry must be "general" rather than "particular," "qualitative" rather than "quantitative" in character.

In the development of the cycle industry Coventry has played a leading part. Its rise and growth is indissolubly connected with the efforts and inventive skill of

Coventry men. A citizen of Coventry, Mr. J. B. Starley, is rightly deemed the "father" of the industry. The Coventry Machinists Company made the first English bicycle (1869). In their works the founders of the leading English cycle firms learned their business. After the many vicissitudes of its economic history, the ancient city of Coventry has become the hub of the cycle industry for the whole world. The mechanical devices used in former trades, and the mechanical skill of its citizens, have been utilised in the processes of cycle manufacture—now the leading occupation of the city.

From 1870, the Coventry Machinists Company sought to develop a home trade in cycles. With the improvements in construction, demand increased by leaps and bounds. New cycle works were set up at Coventry, in the Birmingham district, and in London. Originally, cycles were used only for sport and pastime. At the present time, cycles, motor cycles, carriers, etc., are used for manifold business and commercial purposes, and their manufacture is a recognised industry, in which over £30,000,000 of capital was invested by 1903.

Some figures appended indicate the modern position of the industry, although the trade has increased enormously since they were collected in 1907.

The figures on p. 110 refer only to the cycles and motor cycles, etc., produced in factories specially devoted to their manufacture. A considerable quantity are produced by general engineering firms also, exceeding in value £1,000,000 per annum. The manufacture of cycles, parts, etc., and the repairing carried on in "workshops" as distinct from factories, is also excluded from the figures; although the repairing work is very considerable in these workshops, and also the making of accessories. It is quite clear, however, that the industry is mainly carried on in specialised factories.

The all-important event in the development of the industry was the boom of 1895-7, and the subsequent depression from 1897-1900. The phenomenal increase

OUTPUT OF CYCLE AND MOTOR FACTORIES.

Figures of Quantity to nearest 100; figures of Value to nearest £1,000.

	England and Wales.	Scotland.	Ireland.	United Kingdom.
NUMBER OF QUANTITIES.				
Motor vehicles (other than cycles)	—	—	—	8,700
Motor Chassis	—	—	—	1,500
TOTAL: Motor Vehicles and Chassis	9,700	500	—	10,200
Cycles (with or without tyres)	572,500	9,500	800	582,800
Motor Cycles	3,500	—	—	3,500
OUTPUT IN VALUE.				
Motor Vehicles (excluding Motor Cycles)	£	£	£	£
Motor Chassis	—	—	—	2,939,000
	—	—	—	638,000
TOTAL—Motor Vehicles and Chassis	3,382,000	195,000	—	3,577,000
Cycles (with or without tyres)	3,224,000	34,000	5,000	3,263,000
Motor Cycles	133,000	—	—	133,000
Motor Parts and Accessories	461,000	12,000	—	473,000
Cycle and Motor Cycle Parts, etc.	72,000	—	—	72,000
Lamps	81,000	—	—	81,000
Saddles	1,472,000	6,000	—	1,478,000
Other Parts and Accessories...	97,000	3,000	—	100,000
All other products... ..	1,088,000	70,000	21,000	1,179,000
Repairs	248,000	39,000	—	287,000
Work in progress	—	—	—	—
TOTAL—Value of Goods made and Work done...	10,258,000	359,000	26,000	10,643,000

of demand during the boom, and the critical period following, permanently affected the organisation of the industry. Two immediate results of the boom were the importation of foreign cycles—especially American—and the undue expansion of the home industry. Works and output were increased, and almost every firm received financial inflation. With the reaction of 1897-1900, enormous financial loss was sustained amounting to almost £15,000,000, but several peculiar consequences ensued:—

1. The American cycles, so largely imported, proved quite unreliable, and have never since obtained any considerable market in England.

2. With the boom, a vast quantity of automatic machinery was introduced, and with the slump came a reliable bicycle at a low price—formerly an unknown combination. This gave a new impetus to the trade.

3. Inefficient makers were eliminated, and the surviving firms compelled to attain the utmost efficiency. The expansion of the industry since 1901 has been steady and sure.

4. The transference of the manufacture of cycles to the Midlands was completed. The London firms were unable to withstand the highly equipped Midland firms, and dropped out.

5. Some assert that the seasonal character of the industry has since become more pronounced, if it does not really date from this period. The adoption of automatic machinery during the boom enabled makers to produce vast quantities of cycles so rapidly, that the season's demand could be easily met by working the factories at full pressure during the season alone. When the season's demand fell off, slack work was immediately the result. Formerly, the manufacture of a cycle took a much longer period, and makers were engaged all the year in preparing machines to meet their rush of orders. One official stated that regular overtime, even in winter

months, was not an uncommon occurrence in some works.¹

Since the industry is so exceedingly specialised, some outline of the various branches of its modern organisation (since 1895) is necessary in order to analyse the operation and effects of seasonal variations within it, for both their operation and their effects vary somewhat considerably in the various branches.

As was seen from the appended figures, the bulk of the manufacturing is in the hands of firms possessing specialised factories producing cycles, motor cycles, parts, etc. About half-a-dozen of the cycle manufacturers produce motor cars also. In all, the leading firms number about a dozen or so. The "Cycle Manufacturers" do not make their own supplies of tyres, wheel rims, chains, accessories—bells, lamps, etc.

1. The "parts" and "accessories" are purchased from firms who specialise in making certain of them, *e.g.*, Dunlop Tyre Company for tyres, wheel rims, pumps, etc.; Lucas Ltd. for lamps, bells, etc.; Perry and Company for cycle chains.

The specialisation is carried to a very high degree. Traders testify to the increasing specialisation of the industry, and its tendency to reduce the effect of seasonal variation in the trade. Considerable plant is necessary, and the large investment of fixed capital would not be profitable in this seasonal trade unless the producing firm can ensure a large and fairly constant output. The quantities required by individual "cycle manufacturers" would not justify the outlay of capital for independent plants. It is more profitable to all con-

¹ However, it must be noted that in the branches where the automatic machinery is most largely employed, *viz.*: turning and pressing of parts, every effort is made to keep the expensive machines at work as regularly as possible in order to keep down fixed charges. In these departments it is probable that the existence of costly machinery makes for regular work, if it is at all possible. It is found in practice that turners, pressers, and automatic toolmakers appear to suffer least from seasonal variation (compare later), they produce parts, etc., for stock.

cerned to purchase supplies of these parts, accessories, etc., from firms specialising in certain kinds of them. These firms are thus finding a larger demand and securing more constant employment for their works. The centre for the manufacture of accessories and parts is Birmingham.

ii. The "Cycle Manufacturers" purchase their supplies of steel tubes, bars, wire, accessories, etc., and thence produce the finished cycle. This branch of the industry is centred at Coventry. Here the leading works are situated, and here the industry can be seen at its best. Large quantities of cycles are produced at Birmingham, some few individual firms have their works at Redditch, Nottingham, Wolverhampton. All the leading cycle-makers produce motor cycles as well as cycles and carriers. The present tendency is to include the manufacture of automobiles also. As will be seen, this additional activity tends to spread the operation of seasonal trade over a wider area and mitigate its effects upon the cycle manufacturers.

iii. Apart from firms specialising in the manufacture of cycles, carriers, etc., several engineering firms, *e.g.*, in Birmingham and Glasgow, produce cycles, motor cycles, and automobiles almost as "side lines." They are few in number, but do a considerable trade, and their various activities place them in a very favourable position as regards the "seasonality" of the cycle trade.

iv. A further class of "cycle manufacture" is that carried on in "workshops." Formerly, this represented a considerable portion of the trade, but it has been rapidly declining. At present they are represented in various localities by small enterprises, which purchase the "parts" of the cycle, and "assemble" them into a machine, sold as their own special make. These enterprises vary in size. Some have small workshops with several mechanics, others are carried on by a mechanic (with one or two helpers) who has saved a little capital,

and combines cycle assembling and repairing with the work of agent for some cycle manufactory.

The increasing use of automatic machinery has placed the manufacturing trade under the control of the large firms. Their vast output and low costs enable them to hold the market. The small workshop and the independent mechanic retain the repairing work as their main business. Easily accessible to riders in their particular districts, they are usually kept busy with individual orders.

v. In centres like London, Birmingham, Manchester, Bristol, etc., there is a class of workshop which possesses apparatus for re-enamelling, re-plating, as well as repairing cycles. During the season they are very busy with local orders, and when the cycle trade declines they take up plating and enamelling work of a general character.

All the big cycle manufacturers have repairing departments at their main works and at some half-dozen centres like London, Manchester, Leeds, etc.

A. The work of distribution seems to represent a distinct branch of the trade. To some extent the manufacturers retain it in their own hands, as with the typewriter industry. A large portion, however, is carried on by a distinct body of traders. All the leading cycle makers have "depôts" in half-a-dozen of the principal towns. These depôts carry a stock of cycles, parts, etc., are managed directly by the firms, and serve as distributing centres for their immediate districts. Skilled managers and salesmen arrange for sales and deliveries, and keep the works informed of the state of the trade. Repairing departments are usually attached to the "depôts," giving employment to a staff of cycle mechanics.

The export trade is usually managed directly from the works, whither foreign agents, shippers, etc., forward their orders.

B. All the cycle manufacturers have "agents" in almost every town and village in the country. These have a lavish supply of catalogues, etc., and obtain several machines for advertising to prospective buyers. They dispatch orders to works, arrange for delivery, and receive a very liberal commission of about 25 per cent. They are termed "agents" in a complimentary sense only, and are not authorised to transact any business for the cycle firms other than the sale of goods received from the firms. They are thus very useful to manufacturing firms, while they incur no expense for their upkeep when sales are not forthcoming. Since a large amount of the home trade is done on instalment systems, they facilitate the work of payments, etc.

C. Distinct and important distributive functions are carried out by "cycle factors," who are independent firms engaged as wholesale dealers in cycles, motor cycles, parts, accessories, etc. They serve as intermediaries between manufacturers and the small workshops, individual retailers, or mechanics already referred to. These "factors" employ a large number of persons and exercise very necessary functions in the trade. They carry large stocks, supply small orders, finance small traders with credit accounts, direct the flow of goods from the manufacturers, and above all push the trade at home and especially in foreign markets. They are necessary "distributing agents" rather than "mere middlemen," despite some complaints to the contrary.

The above brief outline of the main structure of the trade will facilitate the analysis of the operation and effects of seasonal variations in its various branches. For they do not altogether coincide in every case.

Regarded even in its most general aspect, the variation of trade in the cycle industry appears to be "seasonal" in the strictest sense of the word. Without exception, those engaged in the various branches assert decisively that the condition of the trade, the volume of business, in any year, or period of the year, is fundamentally

determined by the weather and the particular season. The industry is probably unique as regards the enormous influence of the weather in determining the volume of business at any time. The supply of raw materials is constant, trade conflicts are conspicuously absent, foreign competition is little felt in the home market and thoroughly matched abroad. The volume of trade is on the increase each year, and there is sometimes a scarcity rather than over-supply of some workers.

Retail agents, wholesale factors, workshop repairers and assemblers, and manufacturers all give proof to show how the cycle trade is directly and immediately responsive to the weather. In the home trade especially, the outstanding determinant condition of seasonal variation is the weather from Easter to September. Alternation of slack and busy periods according to the weather and the season, is recognised as a normal incident of the trade due to forces beyond the control of those in the business.

The busy season is considered to extend from the beginning of March until about the end of August (allowing for the modifications indicated later). The state of trade at any time within this period "depends on the weather." This is the repeated refrain with every inquiry. An early spring means an early season, a spell of fine weather at once stimulates the trade, a spell of wet weather at once checks business. The last year was given as an instance. The bright weather before Easter gave an enormous impulse to the early trade, the cold, wet period following, at once caused a decline. When the season is attended by bad weather, the industry is depressed throughout the season, *e.g.*, 1909 and 1910. When September is fine, trade continues to the end of the month.

The influence of "fashion" in connection with the seasonal variations is discernible under an interesting form.

Improvements are constantly being made in the construction of cycles, motor cycles, etc. Wholesale and retail purchasers wish to have the latest model, and there is a tendency to withhold orders right until the beginning of the season, when the new models are available. Machines of the previous season's design are "out of fashion" and difficult to sell. Thus makers and dealers do not care to produce or carry heavy stocks. They work as closely to actual orders as possible; consequently variations in the supply of orders, according to the weather and the season, are felt more directly than would otherwise be the case.

However, within "the season" indicated, the busiest and slackest periods respectively, do not altogether coincide in the various branches of the industry, either as regards operation or effects.

1. First as to the retail trade and repairing work.

A. As was seen, the retail trade is carried on mainly by "agents," and mechanics who combine workshop repairing with the business of retail dealers in cycles, parts, accessories, etc. In this branch it is considered that the opening of the season depends upon the date of Easter and the attendant weather. They exhibit the new models towards the end of February, and expect the first rush of sales about a fortnight before Easter. The busiest periods are the weeks just before Easter, Whitsun, and August Bank Holiday. During May, June, and July trade is brisk "according to the weather." Good weather continues sales into September, but they finally decline in this month. London retailers find August a slack month on account of the holidays. At seaside towns the season opens a little later—about the end of April—and is busiest towards the close—July, August, and September. In London most of the sales are made in April, May, and June; in provincial districts they are distributed more evenly from April until September.

B. The busiest period for repairing work is February,

March, April, and May. Machines are overhauled, replated, etc., ready for the fine weather. During June, July, and August, and early September, repairing work is fairly constant according to the defects developed, and replacements required. During the busy period, those dealers who have workshops engage several half-skilled fitters as helpers, usually at 6d. or 7d. an hour. Time work is invariably the system of payment for repair work in workshops, depôts, and factories alike. Much overtime is worked from March to the early part of June. Work falls off with September; the bulk of the trained fitters are kept on through the slack months of October-January on short time. The extra hands engaged as semi-skilled helpers are drawn out about August. It is said that they find work where they can, usually as general fitters, gas-fitters' helpers, etc. The increasing use of cycles, carriers, etc., during winter months for business purposes, finds work for the regular staff of cycle mechanics in carrying out repairs. In workshops employing plant for enamelling, plating, brazing, etc., general lines are taken up in the slack months, since the managers give particular attention to the development of a wide range of activities wherever possible. The sale and repairing of gramophones, typewriters, gas and electrical fittings, roller skates, sewing machines, etc., are largely resorted to during the slack period in the cycle trade. The complimentary "agents" who have employment in other trades and take up cycle agencies as an extra perquisite, are not affected by the seasonal variation in the trade as regards employment.

2. As might be expected, the busiest season falls somewhat earlier in the wholesale than in the retail trade. Early in January wholesale traders and manufacturers' depôts commence to take in stocks from the factories. From then until March they are busy executing the large orders. In March their trade is in full swing, and this trade is considered to be at its maximum during April and May. During June and July there is

a small and steady trade in supplying "repeat" and "small" orders, almost wholly determined by the attendant weather. By August home sales have fallen off considerably. September trade depends entirely upon the orders from retailers. October, November, and December are regarded as the "dead months for the selling side," although from a correspondence point of view business begins to open up soon after the Cycle and Motor Show, held at the close of November. Here dealers inspect the new models and negotiate for the placing of orders ready for delivery in January and February.

From general inquiries it does not appear that the seasonal variation occasions very considerable dislocation in the wholesale branches, for several reasons:—

(a) Wholesale factors carry on business in a variety of lines—cycles, motor cycles, cars, carriers, tyres, parts, accessories, roller skates, etc. Slack trade in one line is neutralised by openings in other lines—*e.g.*, their trade in roller skates and gramophones revives in the winter. There is a steady demand for carrier cycles, parts and accessories, and tyres for cycles and automobiles, all the year.

(b) All the wholesale factors engage in the export trade to an increasing extent. Export statistics show that this is fairly constant throughout the year, and factors utilise it to the full during the slack period in the home trade.

Thus wholesale firms carry practically the same staff all the year round. Extra time is worked during the busiest period until the end of May, while in return the working day is reduced from October until December. It was stated that the reduction in staff usually takes place only in the correspondence and order departments from September until January. The general testimony is that throughout this branch the seasonal variation is becoming less pronounced. The trade has emerged from the experimental stage. The various uses of

cycles, carriers, motor cycles, etc., for business and commercial purposes, the variety of markets now touched, are creating a more constant demand for goods all the year through.

3. A distinctly specialised branch of the industry is that engaged in supplying tyres (motor and cycle), wheel rims, valves, etc., to cycle manufacturers, wholesale factors, and retailers. Here the busy season commences very early. From November until April this branch is very busy supplying the cycle and automobile manufacturers with tyres, rims, valve fittings, etc. In February the rush of trade with wholesale factors and retailers begins, and continues until August, varying in volume according to the weather. Fine weather means more frequent use of tyres, etc., and more speedy replacements. August marks the first decline in the trade. September usually means steady employment if the stocks of dealers have been exhausted.

Short time is sometimes worked in October and early November, although the heavy demand for tyres for commercial purposes, especially during the winter months, when they wear badly, makes for regular work. This branch of the industry does an enormous trade and appears to suffer least from seasonal variation. Those in the trade report an increasing demand for and at times a scarcity of labour. They refer to the busy and slack periods as being "essentially comparative," since there is a heavy demand at all times.

4. Seasonal variation in the branches manufacturing complete cycles, motor cycles, carriers, parts, and accessories.

(a) The manufacture of accessories, parts, etc., is centred in the Birmingham district. It is mainly carried on in factories specially devoted to these purposes, though a considerable number of "workshops" find employment in the trade. There is the utmost differentiation and specialisation in the processes of manufacture. Different sets of workers perform different

operations in the production even of the smallest accessories like bells, valve fittings, etc. The work is generally of a light character, due very largely to the extensive use of automatic machinery. The majority of the workers in these branches are females (women and girls) employed at the various processes. Wages are usually paid according to a piecework basis, the current rates, and the nature of the operations, methods of training, etc., are excellently described in "Women's Work and Wages."¹ The great extent to which automatic machines are used in the manufacture of accessories and parts has led to the displacement of men in these branches, the work becoming of a lighter and routine character, which, as a manager put it, "will not stand a man's wage." The seasonal variation does not appear to be so pronounced in these branches as in the manufacture of cycles, since there is a more constant demand for parts and accessories. Moreover, they can be produced for stock during the slack seasons. The busiest season in the factory is from about November until May, when the trade falls off until November. September and October are the slackest months. When trade declines, short time is worked as far as possible, but it is inevitable that a considerable number of workers must be displaced. It is very difficult to trace what becomes of these, but it is stated that they usually find employment at their particular trade in some of the numerous "small industries of the district," as machinists, polishers, platers, etc. The needle, button, and electroplating trades, which revive during autumn and winter months, offer numerous openings. In many cases some "home trade" is taken up to tide over the slack period. The lack of Trade Union statistics, the impossibility of analysing Board of Trade returns, preclude any collection of definite statistics. In fact, the variety of the "sectional trades" and the specialisation of the workers make this impracticable.

¹ Pages 50, 121, 130, 312, and *passim*.

(c) There are about a dozen leading firms engaged in the manufacture of cycles, motor-cycles, carriers. About half a dozen include the making of automobiles; one or two produce general engineering products also. As was indicated, these cycle manufacturers purchase their supplies of accessories, tyres, chains, wheel-rims, steel tubing, bar, and wire, and thence produce the complete cycle, etc. Within the cycle factories extreme differentiation of processes is the order of the day. Each factory is divided into different "shops," where specialised sets of workers perform distinct operations. In every department automatic machinery is employed to an enormous degree. Even within one department the workers may be subdivided into a number of sets carrying on certain operations.

This extreme specialisation increases the difficulty of indicating the operation and effects of seasonal variation in this branch of the industry, since they do not altogether coincide in the various sections or departments. In addition, the standing of the particular firm and the character of its trade produce further modifications. General statement, therefore, becomes extremely difficult.

The accompanying figures supply the best indication as to the number of persons engaged in the manufacture of cycles, motor cycles, carriers, parts, etc. The figures for England and Wales may be taken as referring almost wholly to the Midland centres—Coventry, Birmingham, Wolverhampton, Nottingham, Redditch. The figures for Scotland apply to the Glasgow district, those for Ireland mainly to Belfast and Dublin. The total of 46,800 excludes the large number engaged by general engineering firms in producing cycles, parts, etc., and also excludes those employed in "workshops." The figures given refer only to specialised "factory" workers in the cycle and allied trades. Since 1907 the total of 46,800 has greatly increased, the bulk of the increase going to Coventry, where the increase of general

CYCLE AND MOTOR FACTORIES.
Per Census of Production (1907)—PART II.

	MALES.			FEMALES.			MALES AND FEMALES.		
	Under 18 years of Age.	Over 18 years of Age.	Total.	Under 18 years of Age.	Over 18 years of Age.	Total.	Under 18 years of Age.	Over 18 years of Age.	Total.
ENGLAND AND WALES.									
Wage earners	4,810	30,434	35,244	1,284	3,557	4,841	6,094	33,991	40,085
Salaried persons	646	3,232	3,878	279	589	868	925	3,821	4,746
Total	5,456	33,666	39,122	1,563	4,146	5,709	7,019	37,812	44,831
SCOTLAND.									
Wage earners	268	1,203	1,471	8	17	25	276	1,220	1,496
Salaried persons	35	188	223	11	38	49	46	226	272
Total	303	1,391	1,694	19	55	74	322	1,446	1,768
IRELAND.									
Wage earners	34	130	164	—	7	7	34	137	171
Salaried persons	—	24	24	—	6	6	—	30	30
Total	34	154	188	—	13	13	34	167	201
UNITED KINGDOM.									
Wage earners	5,112	31,767	36,879	1,292	3,581	4,873	6,404	35,348	41,752
Salaried persons	681	3,444	4,125	290	633	923	971	4,077	5,048
Total	5,793	35,211	41,004	1,582	4,214	5,796	7,375	39,425	46,800
MALES.—Under 18 Over 18									
FEMALES.—Under 18 Over 18									
1,582. 4,214.									
1,582. 4,214.									

population since 1901 constitutes a record of 52.01 per cent. The growth of the cycle and motor trade largely accounts for the difference.

It is not possible to estimate exactly the number of "cycle workers" employed by engineering firms and workshop owners, but the next census of persons directly employed in the manufacture of cycles, motor cycles, automobiles, etc., must greatly exceed that of 1907.

Available evidence justifies several important generalisations. The majority of the workers in these allied trades are males over 18—usually skilled mechanics. The females engaged in the industry are employed for the most part in producing accessories (lamps, bells, saddles, etc.), tyres, valves, and small parts. Where women and girls are employed in cycle factories their work is usually of a lighter, routine character. Some of the leading firms employ a minimum of female workers just for wrapping finished cycles. In the Coventry and Redditch district relatively little female labour is employed in cycle manufacture; it is in the neighbourhood of Birmingham that the greatest number of women and girls are employed in cycle factories, working somewhat indiscriminately at the different processes. This is quite in keeping with that striking feature of industrial life in Birmingham, viz., the large percentage of females employed. "In certain industries they form by far the major portion of the workers; in the general industries of the town they form a large percentage."¹ In the Birmingham district alone does the employment of women and girls in the cycle industry appear to be on the increase. The use of automatic machinery makes much of the work of a routine and lighter character, but whereas girls are taken on for this work in Birmingham, youths seem to be given preference in the other cycle making districts. The manufacturing work carried on in general engineering

¹ Report of Cost of Living of the Working Classes—Birmingham.

works, and in workshops is almost exclusively done by males.

Owing to the number of branches included within the "cycle industry," each cannot be taken in detail. Only the most important and typical—the making of finished cycles, carriers, motor-cycles, and interchangeable parts—can be considered separately.

The factories of the various firms are divided into various departments or "shops." The raw materials—steel tubes, bars, wires, etc.—are issued from store-rooms to the turnery departments, where wonderful automatic machines fashion them into axles, hubs, cones, cups, etc.—the component parts for cycles, carriers, etc., etc. The routine nature of this work admits of the employment of youths or women as machine minders, though most of the leading firms employ only male "turners." Somewhat similar are the press shops, where handle-bar hoops, crank brackets, and other parts are shaped by powerful presses. This work is more intricate, and requires trained mechanics for the heavier and more intricate portions. Skilled workmen termed "hardeners" next heat these parts with a special chemical mixture to harden the steel to the requisite temper.

In the next department, skilled mechanics, assisted by youths as learners, construct the frames, forks, bars, for cycles, carriers, motor cycles, from supplies of steel tubing. By means of molten brass the joints in the frames, and forks, etc., are welded together, a task requiring all the skill of a trained "brazier." The rough edges of the joints are cleaned by "filers," or sand blasters, who direct powerful jets of sand against the rough edges.

The "polishing shop" comes next. Here the frames, forks, handle-bars, etc., are polished on emery wheels preparatory to being enamelled or plated. In all the best factories only men and youths are employed as "polishers," since the work is sometimes heavy, and always dirty. In the Birmingham district, youths and

women are frequently employed to polish the lighter and smaller parts, the heavier portions being sometimes left to men.

The parts to be "plated" are passed on to the "plating shop," where they are scrubbed clean in a soda solution and immersed in electric plating-vats. Afterwards they are polished with felt "mops" to give the nickelled surface a bright appearance.

In some factories, usually in Birmingham, women and girls are employed to clean the parts, string the small parts—nuts, bolts, etc.—on wires ready for plating, and afterwards "mop" the nickel to brightness. In other factories, men and youths are usually employed, although it is generally said that, except for working at the plating vats, women and girls are more deft in cleaning parts, etc., and wiring them together.

Polished parts that are to be enamelled, *e.g.*, frames, forks, mudguards, are taken to the enamelling shop, where they are enamelled black, green, red, etc., as required. The "enamellers" are usually men, assisted by youths, though women and girls are sometimes employed on lighter portions.

The enamelled parts are afterwards ornamented with lines of green, red, or gilt, with monograms and other devices by skilled workmen called "liners." This calls for highly skilled hand work, and liners are very well paid and much in demand.

In a specialised "wheel shop" the boughten wheel rims are fitted with spokes and hubs. Semi-skilled machine minders fashion steel wire into spokes, pass them on to youths (and sometimes women and girls) who fit them loosely into the hubs and rims, and in turn pass them on to the expert wheel builders. These are skilled mechanics, who finish the wheels and "true" them to accurate shape. They are usually trained workers assisted by youths as learners.

All the completed parts are gathered in a storeroom, whence they are issued to skilled mechanics, termed

“finishers,” or “assemblers,” who fit them into complete machines. They are usually trained workmen, assisted by learners. The lacing of dress guards on ladies' cycles is usually done by females. Youths, and sometimes females, affix the smaller parts and accessories, and wrap the bright and enamelled parts with cloth ready for the workmen who pack the cycles for delivery.

It is already seen how numerous and specialised are the different sets of workers. In addition to these there are numerous toolmakers and toolsetters, who prepare and attend to the tools used in the many automatic machines. These, like the pattern makers who prepare designs for tools, are skilled workmen. Numerous storemen look after the storerooms where the output of the various shops is stored and checked. “Chargemen” are put over a set of machines or workers, foremen superintend the individual “shops,” messengers, usually youths, transport material from one shop to another.

In addition, there is a staff of mechanics and engineers to look after the motive power, usually gas or oil; warehousemen to receive and dispatch goods; carpenters to make crates, and wooden bodies for carriers, etc.

Of course, some of the branches overlap in the making of cycles, motor cycles, carriers, trailers, etc., *e.g.*, the turning, pressing, and hardening of parts, building, brazing, polishing, enamelling of frames, plating, wheel building. But with the motor cycles and carriers the work is heaviest and calls for male workers.

The casting of motor cylinders, the construction of engines, gearing, etc., for motor cycles, is carried on by a distinct set of skilled mechanics in a special department of the factory. Cycle manufacturers producing automobiles carry on this work in distinct shops, staffed by skilled mechanics, smiths, coachbuilders, invariably males, highly trained, or in training as apprentices.

The extreme differentiation of the processes of cycle

making results in the existence of a great variety of rates for payment of wages. What is termed "the staff" are paid on time rates exclusively, *e.g.*, clerical workers, foremen (about £3 per week), chargemen, storemen, warehousemen, packers—semi-skilled labourers—receive about 27s. per week on the average. Patternmakers, toolmakers, and toolsetters average about 38s. per week, and insist upon time rates. Engineers, fitters, repairers, are usually paid time-work rates, on an average of 36s. per week of fifty-four hours.

The above sections are invariably males in all localities, the other sections of workers may be men, women, girls, or youths, according to the class of work and the class of factory, as already indicated. In all these sections, however, earnings are usually based upon piecework rates, whatever the workers, factory, or the locality. Thus earnings vary widely according to the skill and deftness of the individual worker. In some cases the earnings quoted for the same section range from 36s. to 50s. per week. Piecework rates are mutually arranged between employers and workers in all the best factories, especially where workers are Trade Unionists. In such cases employers guarantee that ordinary and overtime rates shall be paid to pieceworkers.

The average earnings of braziers per normal week (fifty-four hours without overtime) is about 35s., turners about 36s., filers, or sand blasters, about 30s., enamellers 30s., liners 38s. to 40s., finishers 36s. to 38s., smiths 36s. to 38s., wheel truers 37s., etc. These figures apply only to adult male workers. Special rates are usually given for special classes of work, *e.g.*, for special grades of machines, heavy parts for motor cycles, carriers, trailers; gilt lining has a higher rate than plain, coloured lining. As far as possible rates are strictly adjusted to the class of work, *e.g.*, 10½d. per pair of wheels finished, 6d. for polishing a handle-bar, 3d. each for forks, 7d. for gear sets, 6d. for brake sets and parts,

etc. Rates and earnings are stated (officially) to be highest in the Coventry district. Here the workers are mostly males, trained, and best organised in Trade Unions.

The piecework rates for work done by females or youths are less than those paid to men in the same sections, according to the class of work, for it is usually of a lighter character, or more routine work. It is not possible to verify a statement sometimes made that the rates are not always only "proportionately less" when women, girls, or youths displace men from lighter work in any section.

Owing to the many differences between the varying classes of work it is not possible to make any decisive generalisation. The average earnings of females doing work in cycle factories, calculated usually upon a piecework basis, are as follows:—

Pressers and turners, girls, 7s. to 8s. per week; women (over 18), 10s.

Polishers and enamellers, girls, 7s. to 8s. per week; women (over 18), 10s. to 11s.

Packing and wrapping, girls and women, 6s. to 8s. per week.

Plating, girls and women, 9s. to 11s. per week.

These are average earnings, but differences in skill and deftness produce considerable variation in individual earnings.

During the busy periods the earnings of time-workers and pieceworkers are considerably augmented by overtime, which is paid for by extra rates. However, the overtime of female workers is strictly limited by the regulations of the Factory Acts, as extended to metal trades in 1895. Male workers, however, considerably increase their earnings during busy periods by working overtime. Several firms prefer to work overtime with their existing staff than to increase the staff during busy times, for this latter course only increases the number displaced in slack periods.

Outside the Birmingham district, women and girls do not seem to be causing any real displacement of men in the cycle manufacture. In Birmingham the lighter and more routine work is being taken over by women and girls (of course, it has been seen that the majority of those making accessories, small parts, are females). In 1907 it was estimated that 1,409 out of 4,736 employees in cycle and motor factories at Birmingham were females. (Report on the Cost of Living in Birmingham: Board of Trade.) At present several of the cycle factories there contain a larger proportion of females than males.

On the other hand, in the Coventry district female labour is not on the increase in cycle factories. In 1907 only 602 females were employed in the cycle and motor manufacture. The girls are going into the watchmaking trade, which boys are forsaking, since they can earn more in cycle and motor factories, where strict apprenticeship is not required as in the watchmaking trade. Youths are taking over the lighter routine work which, as a manager said, "will not stand a man's wage."

It is difficult to state precisely how the various trades are learned. Strict apprenticeship is not required by employers or Trade Unions in every section. However, in certain sections, *e.g.*, toolmakers, pattern makers, mechanics, motor mechanics, carpenters, lads are expected to serve several years as learners and then as improvers before they are recognised as capable of earning full rates. In other sections, *e.g.*, platers, braziers, enamellers, finishers, youths are employed as helpers and continue as such until they are considered worthy of full rates. Liners, wheel truers, cycle testers, require a considerable period as learners before they become helpers and then full rate workers. Some of the workers, *e.g.*, braziers, polishers, mechanics, acquire their training in other hardware or engineering trades.

The growing use of automatic machines makes it possible for youths and females to pick up the working

of the machines for turning and pressing parts in a very short period, after initial instruction by a foreman or another worker. The work of wrapping, lacing dress guards, fixing tyres and accessories, scrubbing parts for plating, rough polishing, calls for little skill and training, and is "picked up" by youths and girls in a few days.

In the manufacturing of accessories and small parts, where the processes are so highly differentiated and so largely performed by automatic machines, a very brief period is required by youths and girls as learners.

However, in all the leading cycle factories increasing emphasis is placed upon the necessity of securing workers who are skilled specialists in their particular departments. Thus a regular period must be spent by beginners in all the important sections as learners and helpers, before they are recognised and paid as fully capable workers. The firms located in the Coventry district are confining their employees more and more to skilled male workers, with youths as learners. The heavy work required for motor cycles and carriers is telling in favour of male workers just at present, since the demand for these is increasing.

Periods of Variation in Branches making Cycles, Motor Cycles, and Carriers.—Seasonal variation, in the branches producing cycles, motor cycles, and carriers, is tending more and more to coincide with the variation in the wholesale trade. Manufacturers are avoiding stocks, and directly adjusting the volume of work at the factories to the volume of orders being forwarded to them by the factors. Thus, with the home trade at any rate, the volume of work at the factories is tending to become directly responsive to changes in the weather and seasons.

It is a significant fact that the financial year of all the leading manufacturing firms ends by September. Some close their financial year at the end of July, with the majority it ends by August. The busiest period is

considered to be over by the end of July. It is significant also to note that all contracts for materials entered into between various firms are to be terminated by September 30th in each year. The output required at any time, except at the beginning of the season, is the final circumstance which determines the volume of employment in the factories. As the season draws on to a close, makers produce cycles, etc., only on orders, so as to avoid being left with stocks.

The rapidity with which orders have to be executed and delivery completed, is considered by those in the trade to increase the alternation of busy and slack periods.

In October cycle makers decide upon the models for the coming season. Pattern-makers and toolmakers are at once set to work preparing tools, designs, etc., for producing these "new models." They are exhibited at the "Show" late in November, and catalogued and inspected by buyers, who decide upon their patterns and place the large stock orders. Having made an estimate of trade prospects, most branches of the factories are set in motion by the end of December. From December until March the works are very busy stocking their "depôts and supplying the large stock orders of factors, dealers, etc. With March the retail season opens up, and from March until the end of May the works are running at fullest pressure. Provided the weather is normally fine, the firms consider that *the* busiest period at the works is from February until the end of May, when much overtime is worked. In June and July the works are busy according to the volume of orders arriving and the state of the weather in the home market areas. Managers begin to adjust employment and output closely according to orders. With the close of July pressure has fallen off, and staffs are reduced according to the output required. During August trade is quiet, according to the sales of retailers and their calls for repeat orders. Taking the trade generally, the close of

August, September, October, and early November represents the slackest period at the works. The number of employees is at the minimum, and short time is being worked. Towards the end of November and early December work begins to revive in preparation for the coming season.

The above is the most general statement of the variation in the manufacturing branches. It is confirmed by comparison of the views of managers, employees, Trade Union and Board of Trade reports.

But closer analysis shows that certain modifications must be made with respect to the position of particular firms, and particular classes of workers within this general period of variation. As was seen, the busiest months in the making of accessories seem to fall a little earlier than is the case in the making of cycles. Also the variations seem somewhat less pronounced, since demand is more constant and they can be made for stock.

Similarly in the cycle factories, some departments can produce for stock, *e.g.*, turners and pressers, and some departments have a more constant demand, *e.g.*, for motor cycles and carriers.

The chief modifications applying within this general period of variation are:—

(a) The trade in motor cycles and carriers is somewhat more even than that in cycles. Thus the variation of employment in these branches is somewhat less pronounced than in the cycle department. Instances are given by managers and Board of Trade reports of how motor cycle workers are on overtime when the cycle trade is declining. Of course, it is clear that the "general" course of the variation coincides in either case.

(b) Some firms seem to be less strongly affected by the variation than others. Those in the Coventry district seem to be least affected; those which possess a special reputation—special branches of export trade

falling busiest in the autumn months, and controlling a number of activities (carriers, etc.)—feel the effects of variation in the home trade least of all. One firm, with a special reputation for its motor cycles—the Triumph—have been working day and night throughout the year, yet unable to cope with demands. It is said that their export orders are usually postponed until the slack home season.

(c.) The general variation seems to affect sections of the cycle workers somewhat differently within the general period. Thus, motor mechanics are affected less than cycle workers, toolmakers are least affected since they are busy in the “slack months” preparing tools, and in the busy months in renewing and repairing them. Turners, pressers, and those making parts by means of automatic machinery can be kept on producing for stock for some time. For whatever the new models may be as regards design of frames, the turned and pressed parts are much the same and can be safely stocked. Also these are required for motor cycles and carriers; there is a wider demand for parts. Thirdly, since automatic machinery is fixed capital, the firms seek to keep this department running whenever possible to keep down fixed charges. It seems probable also that these sections feel the revival of trade first of all, sometimes in October, judging by available reports.

The sections wherein hand labour is most important, appear to feel the variation earliest and most of all. When the necessary output declines, reduction of staff in these departments is the quickest and easiest means of reducing output of complete machines and working costs, without increasing the burden of standing charges. Such sections are those engaged in the final processes—plating, enamelling, wheel building, finishing, wrapping, packing, and also the filers, truers, and polishers.

However, these distinctions must not be pressed too far, because as the season wears on to a close and orders decline, output must be checked generally by reductions

of workers all round the shops. This unpleasant work of selection is usually left to the "shop" foreman.

Extent of the Variation.—In this connection only general estimates are possible owing to the extreme difficulty of obtaining statistics. As there is no specific Trade Union for cycle workers, the returns of Trade Unions afford little direct assistance. Cycle workers, in their various sections, are included indiscriminately in the returns of other Unions, e.g., Amalgamated Society of Engineers, United Machine Workers Association, General Union of Braziers and Sheet Metal Operatives, etc. The returns of these Unions apply to a variety of trades, and isolation of cycle workers is impracticable. Similarly with the returns of Labour Exchanges. Displaced cycle workers seek work at their particular trade—braziers, polishers, machinists, etc.—not specifically as cycle workers. Thus analysis of returns is not possible, especially in a district like the Midlands, which teems with so many "allied trades" in the metal and hardware industries.

Those connected with the various branches of the "cycle industry"—makers, factors, dealers, employees, officials, etc., are unanimously of opinion that the operation and effects of seasonal variation within the industry are becoming less pronounced and distressing. The industry has emerged from the experimental stage, and is settling down into its proper place as a recognised industry, and not as a device for securing large and quick returns during the season.

However, it is clear that some reduction of employees is inevitable during the slack periods. In some cases it is said that the men are the first to be sacrificed, especially where females and youths are employed. But in all the better class of firms, and especially in the Coventry district, unskilled and semi-skilled workers are dispensed with first. Of late years increasing efforts are being made by the leading firms to retain their skilled workers in every department as a regular staff, by means

of short time during the slack season. Firms are coming to emphasise more and more the necessity of a skilled staff of workers for the production of high class machines.

This seems the present tendency, and consequently the seasonal variation is tending to become less serious for the workers. It is said that in former years employees were dismissed indiscriminately as soon as the slack season commenced, only a few being kept on at regular time. Now the tendency is to keep as many of the skilled workers as possible employed, on short time if necessary, as a regular staff, wherever possible. Some opening is sought for capable men somewhere under the firm.

i. But some other circumstances have facilitated this policy of recent years. First, the home trade appears to be becoming far less seasonal. Cycles, motor cycles, carriers, etc., are being used more and more for commercial and business purposes throughout the year. They are becoming means of transport and locomotion, rather than means of pleasure and pastime in the summer alone. Thus a more constant demand is arising.

ii. The leading firms are developing a wider range of activity, *e.g.*, cycles, motor cycles, carriers, roller skates, automobiles. It is clear from inquiries made, that seasonal variation does not altogether coincide in these sections, *e.g.*, except in January, the stocktaking month for buyers, there is a steady and increasing demand for tradesmen's carriers every year. They are being recognised as the most economical form of distribution. Similarly, the trade in motor cycles and automobiles is said to be "more even" than that in ordinary cycles. The cumulative effect of such circumstances is to give the firms more openings for the maintenance of a regular staff of capable workers.

iii. The export trade in cycles, motor cycles, carriers, automobiles, parts, accessories, etc., is rapidly expanding, while the importations are decreasing. As the

Cycle Trade (April 14th, 1911) has put it: "The returns dealing with the export and import of cycles confirm in the most striking fashion the general impression that the oversea trade of 1911 is increasing all round . . . while the returns for motor cycles are even more gratifying." Managers of various firms consider that the increasing volume of the export trade, and the many directions in which it is developing, is the most striking and promising feature of the industry. It must tend more and more to diminish the effects of seasonal variation. The home market is no longer the sole source of the demand. The seasons of England and those of various countries differ. Variations in demand from certain markets neutralise those in other markets. A more constant trade is arising. The variation in the home demand is being neutralised.

The general impressions of those in the trade are confirmed by statistics in the monthly returns of the Board of Trade of Imports and Exports for several past years.

The busy period for trade with Eastern markets comes considerably earlier than that in the home trade. The Continental trade also falls earlier than the home trade, while in "Western" and Canadian markets trade is said to become busiest about six weeks after the English season. As a whole, the monthly returns show that the export trade becomes a valuable resource to makers when the manufacture for home markets begins to fall off.

IV. There is an increasing demand for cycles, carriers, etc., for public and Government service. Firms securing such contracts can dovetail them into the slack period. Most departments requiring machines, etc., have instructions to place orders for stores during slack periods if possible. The General Post Office, the largest buyer, is most typical. Contracts are usually placed with the chosen firms about June or July. They have to be completed within six months, although delivery of all

machines may extend over twelve months. Contracts for cycle stores, accessories, etc., are usually given about July or August. Firms securing Government orders find them a valuable asset during the slack period. A typical firm is Messrs. Alldays and Onions Ltd.: on June 25th 1904, August 4th 1906, July 3rd 1907, July 8th 1908, July 1909, July 1910, they received large orders for machines for the use of the General Post Office. They came just as the home demand was falling off.

v. Employers and Trade Unions of employees are seeking to improve the conditions of the industry by improved organisation and joint action.

However, it must ever be remembered that the weather experienced during "the season" has an all-important effect upon the volume of trade, especially from the home market. This is a circumstance beyond the control of those in the trade, hence the increased importance of the tendencies indicated above.

Lack of definite statistics makes it difficult to determine precisely what becomes of those employees inevitably displaced during the slack periods. In the Birmingham district it is said that the females usually find openings in the numerous small trades of the district at their particular processes, as machine-minders, polishers, pressers, platers, etc. These classes of labour are very interchangeable in the many "small industries" of the district. Many go into the jewellery, needle, button, pen, fancy-ware factories, which are said to present openings about this time. Some go into laundries, screw, pin, paper bag, and electro-plating factories. It is said that others become servants or take up some "home working" trade.

There is said to be a strong demand for youths and boys at most periods in most trades, but they readily return to the cycle factories when work revives, since they can earn more money there.

Reductions of employees are generally spread over

all the various sections when the season declines, thus dovetailing becomes more difficult between the various sections. Yet whenever an opening is possible in some other departments of a firm, capable men are given the first opportunity.

Those who are "suspended," seek employment as general mechanics, or at their particular trade in other industries as braziers, polishers, platers, etc. The Midlands offer a favourable sphere for dovetailing in this manner. There are a large number of allied trades, and Board of Trade reports (*e.g.*, in the *Labour Gazette*) show that the seasonal variations do not coincide in point of time. In the Nottingham district, displaced cycle mechanics find employment as general mechanics in the factories making lace and hosiery machinery, which are not subject to seasonal variation like the cycle industry. In the Coventry district the ordnance factories become busy when the contracts have been placed, and offer openings, when the cycle trade declines, for tool and pattern makers, mechanics, etc. In this district there is an increasing demand for labour in the cycle and motor industries; immigration is constantly taking place to meet this demand, as shown by the record increase in the Census returns, and in the reports of the Medical Officer of Health for Coventry. The effects of seasonal variation in the Cycle trade appear to be at their minimum in Coventry, where the leading firms are situated, where they have many activities, and where the industry is seen at its best.

Here, also, the workers are mostly males, skilled workers, and best organised. For the influence of Trade Unions in the industry appears to have been most salutary. There is no union expressly formed to comprise cycle or automobile workers. The workers either join some union connected with their particular section (*e.g.*, some of the numerous Trade Unions which honeycomb the metal trades in the Midlands, Progressive Metal Workers, General Union of Braziers and Steel

Metal Operatives), or they join some union connected with the engineering trades generally. In the Coventry district the strongest are the Amalgamated Society of Engineers, the Steam-engine Makers' Society, Amalgamated Society of Toolmakers, United Machine Workers' Association, and the United Pattern-makers' Association.

These have been able to negotiate with the Coventry Engineering Employers' Association for the mutual observance of "working conditions jointly agreed upon" in the factories of the district. These have an important bearing upon the question of conditions of work and seasonal variation in the cycle industry, viewed in the widest sense, *e.g.*:—

I. 54 hours shall constitute a week's work, and shall terminate at 12 o'clock noon on Saturday.

II. 45 hours shall constitute a week's work on night work, and time and a quarter be paid on day-work rates, and after 45 hours time and a half on day-work rates.

III. Allowances shall be made for out work.

IV. When men are asked to work on Bank Holidays double time to be paid.

v. Young workers to be allowed to improve their position, and a fair wage to be paid for ability.

VI. Disputes to be settled by a joint conference of representatives of masters and men, without stoppage of work.

VII. Where men work piecework, ordinary and over-time rates of wages to be guaranteed. Piecework rates to be mutually arranged between masters and men. Bonus moneys to be paid direct through the pay office. (This did away with sub-contract work once in vogue.)

VIII. (a) In view of the special conditions of trade in Coventry (*e.g.*, the rush of orders requiring rapid execution during busy periods, etc.), the Employers' Association are unable to agree to a limitation of over-time in all cases to 32 hours per month, but agree to a maximum of 15 hours in any one week, and that

systematic overtime be deprecated as a method of production, and an effort be made to limit overtime to 32 hours per month, where possible.

(b) Extra rates to be paid for overtime, meal-time being allowed.

(c) When departments are working less than a normal week, overtime is paid for time worked in excess of the reduced working week.

The influence of Trade Unions has certainly improved the conditions of working; they have stood out successfully for the retention of workers during the slack periods by short time, transference to other departments, working of stock, etc., wherever possible. The out-of-work benefits have enabled displaced workers to tide over slack periods and find openings elsewhere. In the districts of Coventry, Redditch, and Nottingham, where the workers are mostly males, the unions are strongest and working conditions best.

In the neighbourhood of Birmingham, where so many females and youths are employed as cycle workers, the effects of seasonal variation appear most pronounced. When bad weather has shortened the season, considerable dislocation is produced. Just here, also, the Trade Unions have obtained least hold over the workers. Still, in view partly of the relative position of the cycle trades among the many trades of the district, and the variety of openings presenting themselves in these "allied trades," it does not appear that very considerable distress results, beyond what is normally anticipated.

In the Coventry districts, where the cycle industry occupies such a predominant position, the effects of depression or variation would be felt all the more keenly but for the circumstances indicated earlier.

The working conditions in the factories furnish little cause for complaint. All the factories of the leading firms are well lighted and ventilated, provided with various accommodations for improving unpleasant work like polishing, moping, plating, etc. In many cases

kitchens, mess-rooms, reading and recreation rooms, are provided for the workpeople. In all the large factories every arrangement is excellent.

The social conditions of the workers in Nottingham, Redditch, and especially in Coventry, appear to be very good indeed. It has been stated on excellent authority that, taking wages paid all round, wages in Coventry district are higher than in any town in Britain, with the exception of London. Housing conditions are excellent. There was, in 1901, little overcrowding in the technical sense, namely, about 2.96 per cent. of the total number of dwellings. A large portion of the town has been built of recent years, as a consequence of the regular influx of workers into the cycle and motor industry. The increasing demand for labour, and increasing population are creating a strong demand for houses. Yet rents are reasonable; and the prices of commodities also. As the Report on the Cost of Living of the Working Class shows, Coventry compares very favourably with any town.

In Nottingham and Redditch also, the standard of life of the cycle workers appears to be very high. However, in these towns, and to a far greater extent in the Birmingham district, the cycle workers are only a section of the workers. Their social conditions in Birmingham, and, in fact, their working conditions in Birmingham, are dependent upon the general conditions of this city—the home of the workshop and hardware factory. The class and conditions of the cycle workers differ considerably from those of Coventry, and are much similar to those of the generality of metal and hardware workers in Birmingham. They do not represent so distinct a class of workers as is essentially the case in the Coventry district.

As the tendencies which are at present exhibited within the cycle industry, in its kindred branches, become more fully developed, the decrease in the operation and effects of seasonal variation will probably

be more than maintained. Specialisation is the order of the day in the manufacture of accessories and small parts. The firms specialising in these branches will thereby secure a large and more constant demand for their products.

Further, the firms producing the complete cycles are paying increasing attention to the production of automobiles, and tending to make the production of cycles one of a number of allied lines, manufactured for a variety of markets.

The scheme for State Insurance against unemployment also has an important bearing upon the subject of this inquiry. For the group of allied trades termed the "Cycle Industry," certainly appears to fall within the category of "Engineering Trades" to be included under the scheme. In some cases they are almost inseparable—*e.g.*, workers employed in engineering works producing cycles, motor-cycles, etc., tool and pattern-makers, mechanics, turners, etc.

The combined influence of these various circumstances would seem to be making very strongly for the reduction of the operation and effects of seasonal variation in the cycle industry to a minimum. The organisation set up in the Labour Exchanges already appears to have been very beneficial in this connection, for the various branches of cycle manufacture are closely allied with many of the "small kindred trades" that honeycomb the Midland centres. Towns like Birmingham, Coventry, Nottingham, Redditch offer a favourable sphere for dovetailing between these allied trades. The Labour Exchanges seem to have provided the machinery necessary to put it into effective operation.

One is now in a position briefly and generally to survey the results of the foregoing analysis of the cycle industry from the point of view of its seasonal variations. It seems very evident that it affords an excellent example of an industry which is influenced

by fluctuations of trade essentially seasonal in character. The demand for labour falls off at certain periods most directly on account of climatic conditions and social habits arising out of these climatic conditions. These fundamental causes for the seasonal fluctuations are, in general, quite independent of the wishes and character of the workers, employers, or traders; that is, as far as their extent, or the total volume of the unemployment occasioned, are concerned. Of course, the exact incidence of unemployment within the various sections, or establishments, will be determined by some of the varied considerations indicated above—the character of the sectional trade, the reputation, trading connections, activities of the particular enterprises, etc. The variation of trade in the industry, regarded in its most general aspect, is also influenced by conditions other than the seasonal fluctuations—*e.g.*, cyclical fluctuations of the engineering trade or of trade generally, etc.

For the above reasons, the cycle industry presents a peculiarly interesting field of inquiry. The varied character of the seasonal fluctuations within it necessitates careful analysis and discriminating treatment of the problem; yet at the same time, this very variety suggests and facilitates the solution. The fact that the tendencies at present dominant within the industry are very favourable is an additional advantage.

The differences in the period of fluctuations of trade in the various sections tend to mitigate the severity of their effects; the fact that the fluctuations in these trades do not coincide in point of time with those of the many allied trades, increases greatly the possibilities of “dovetailing” work within the whole group. The close connections existing between these trades, as regards the skill required from individual workers, modify the limitations of skill placed upon such movements of labour.

The fact that the industry is in no sense parasitic, also that the workers are as a rule well paid, and

employed under good conditions while at work, make less necessary a large range of movement. The bulk of the male workers can become members of Trade Unions and secure the support of the out-of-work benefits; the majority of the workers can make some provision against the seasonal fluctuation which is recognised as a normal incident of the industry.

The concentration of the manufacturing work as regards location modifies the limitations which considerations of distance might place upon the mobility of labour within it, or upon the dovetailing between the groups of allied trades. Not only is the manufacturing work highly localised, but it is concentrated in the very localities in which the allied trades are most largely established.

The concentration of manufacturing work under the control of large firms, which possess a wide range of activities, facilitates the dovetailing or movement of labour between different departments of the same firm. Such firms can also employ to the fullest extent the policy of "elasticity of working hours"—overtime, short time, etc.—as a means of working off seasonal fluctuations with a minimum of dislocation.

Thus the fuller development of favourable tendencies already indicated, and the operation of unemployment insurance in conjunction with the Labour Exchanges, should go far to ease over and minimise the dislocation and distress which may arise from seasonal fluctuations in the cycle industry. Few industries seem to present a wider, more varied, or more favourable sphere of operation for the Labour Exchanges as a means of neutralising the effects of fluctuations in employment.

Many experienced investigators have concluded that seasonal fluctuation is at bottom largely a question of wages, rather than of unemployment. Fortunately, the cycle industry seems to be on the whole self-supporting from an economic point of view. The problem of seasonal fluctuation within it is not further complicated

by that of under-employment. The workers, temporarily displaced, have opportunities to secure reserves or credit, and best of all, fresh openings for employment. These considerations, and the variety of circumstances modifying the operation of the seasonal variations in its different branches, go to determine the whole aspect of the inquiry attempted above.

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the subject "An Enquiry into the Causes of Seasonal
Fluctuations in the Cycle Trade," in connection with
Birmingham University.

NOTE.—*Vide* pp. 107-8 on the lack of precise or
comprehensive information.

THE GAS INDUSTRY¹

By FRANK POPPLEWELL, B.Sc.

THE gas industry would appear at first sight to be a seasonal industry of very simple type. The predominance of climatic conditions in determining the rate of production points to a regular fluctuation in employment from season to season and year to year, which is at once beyond the power of human control and independent of changes in fashion and the many other influences which play so large a part in the majority of trades which are subject to variation in employment. It is found, however, that the problem is not capable of such simple diagnosis. Many influences beside that of season, in its stricter sense, affect the question of regularity of employment, and these can only rightly be studied in relation to the general economic structure of the industry.

In common with other public utility services the gas industry differs from an ordinary productive industry in several particulars which have a bearing upon the problem of employment. In the first place, a large number of gas undertakings, and among them all of any considerable size, enjoy a statutory monopoly in the supply of gas within a certain specified area; and although not legally protected, the fairly large number of small companies which are operated without statutory powers as a matter of fact enjoy a similar freedom from

¹ The material on which this Paper is based was presented to the Royal Statistical Society on May 16th, 1911, in a Paper entitled "Seasonal Fluctuations in Employment in the Gas Industry." Permission to reproduce this material in a modified form has been kindly granted by the Council of that Society.

competition in the supply of their main product.¹ This immunity from competition does not extend to the by-products of the industry—coke, sulphate of ammonia, and coal tar and tar products, which are sold in the open market side by side with the similar products of other gas-works and of coke and chemical works.² Gas, again, is in competition with electricity as an illuminant, with electricity, steam and oil as a power-producer, and with electricity and coal as a heating agent.

Along with the advantages which it confers an Act of Parliament or Provisional Order imposes certain obligations upon an authorised gas undertaking in respect to the illuminating power of the gas supplied. This requirement is rapidly becoming unnecessary. The incandescent mantle owes its illuminating power entirely to the heating property of gas; and for all purposes other than illumination heating power is the only important consideration. Except for the survival of the bat's-wing burner a non-luminous gas would, therefore, fulfil all

¹ The statutory monopoly is usually conferred by an Act of Parliament or Provisional Order. In 1909, 500 companies and 292 local authorities were working under powers of this kind, all of which were engaged in the manufacture of gas with the exception of two companies and seven local authorities; these were engaged in distribution only, purchasing their gas in bulk from other concerns. In addition, one company and one local authority had obtained powers but had not yet commenced the supply of gas. A few concerns are operated under powers of a general nature conferred by Public Health and similar Acts, and these do not rank as statutory undertakings. One or two local authorities, and over eight hundred companies, all small, were without powers of any kind. The main disadvantage under which a non-statutory undertaking works is that, without the permission of the local authority concerned, it is debarred from raising the streets and roadways for the purpose of laying mains. Further, a statutory undertaking is more favourably situated in respect to the borrowing of capital. As they grow in size and require to extend their plant, the non-statutory companies frequently apply for and obtain powers in order to borrow on more advantageous terms.

² Coke for metallurgical purposes must conform to certain standards in physical character and chemical composition (in the matter of size, porosity, strength, and freedom from sulphur), which are incompatible with a coke made under conditions in which quantity and quality of gas produced are the first consideration. Coke from gas works and coke from coking works proper are therefore supplying different markets, and not being effective substitutes are, except in rare instances, not in real competition at all.

the necessary requirements; and such a product could be supplied, in the form of "blue water-gas" made from coke, much more cheaply and with the expenditure of considerably less labour than ordinary coal-gas.

The effect of protecting the gas industry in the way described results in a great variation in the prices charged in different localities. When the manufacture of gas was largely a hand industry no one works enjoyed much advantage over any other in the matter of labour costs of carbonising, and cost of production was determined chiefly by the price of coal, which, per 1,000 cubic feet of gas made, varied, in 1883, from ninepence in Newcastle-on-Tyne to nearly two shillings in Richmond. Position with regard to cheap supplies of coal is still the predominant factor determining cost of production, but a considerable saving can be effected in labour by the use of machinery, and the extent to which mechanical devices are employed is an important secondary influence in regulating cost. The use of machinery is a function of the size of the producing unit and hence the smaller works are in a much less favourable position in regard to costs, relatively to the huge works, than was formerly the case.

But other considerations besides costs of production enter into the determination of prices charged. In the case of private companies the proportion of profits to price is sometimes regulated by a sliding scale, in other cases dividend-policy is conducted on no consistent basis from one year to another. In the case of local authorities an important part is played by the controversial system of profit-making in aid of relief of rates. It can be seen that the price-policy pursued in each locality must considerably influence the competition between gas and other sources of power, heat and illumination, and ultimately affect the amount of labour employed in the gas industry by varying the proportion in which the respective industries share in the different services.

The gas industry has not followed upon the lines of many other productive industries in undergoing concentration into a smaller and smaller number of works. A gas undertaking is established in a centre of population, and with growth in population and also in the employment of gas, this undertaking increases the size of its works.¹ But when an entirely new district springs into being a new gas works is usually erected, and the industry has thus become spread like a network over the whole country. This wide distribution prevents the men who are thrown out of employment as a result of the seasonal nature of the industry from being concentrated in a few centres, and allows advantage to be taken of the opportunities afforded for summer employment by the special industrial characteristics of a very large number of districts.

Among authorised undertakings the growth in both number of concerns and quantity of gas sold has been more than twice as rapid in the case of local authorities as in that of companies; and although no information is available as to the non-authorised undertakings, these are usually the smaller concerns which, as they expand, obtain powers and fall into the category of authorised undertakings. The movement in the direction of municipalisation is therefore growing, but not at a rapid rate. Municipalisation is favourable to gas-workers to the extent to which a local authority is able to accommodate in its other services men who are thrown out of employment in the gas-works in the slack season.

Concentration of another kind has, however, taken place to a certain extent, notably in the case of the two largest London companies. The Gas Light and Coke Company has absorbed one after another the City of London, Great Central, Victoria Docks, Equitable,

¹ Between 1882 and 1909, the gas sold per authorised undertaking increased from 129,000 cub. ft. to 224,000 cub. ft. in the case of companies, and from 143,000 cub. ft. to 223,000 cub. ft. in the case of local authorities.

Western, Independent, Imperial, London Gas, and West Ham Gas Companies; while with the South Metropolitan Gas Company have been amalgamated at various dates in its history the Surrey Consumers, Phoenix, Woolwich Equitable, and Woolwich Consumers' Gas Companies. Growth of this kind has not usually resulted in the closing down of the works taken over, and the two companies referred to now operate respectively ten and six different establishments. The combination of a large number of productive establishments under single management, unaccompanied as it is by the concentration of production into a smaller number of works, is thus without effect upon seasonal fluctuation in employment. With this slight sketch of the general structure of the industry attention may now be directed to the special problem of seasonal unemployment. This subject will necessarily be introduced by a short account of technical processes.

The usual method of manufacturing coal gas in this country consists in heating coal out of contact with air in long fireclay ovens or "retorts" until it ceases to lose in weight. The retorts are set six or eight together in a furnace, the whole constituting what is called a "bench." They are heated from outside by a coke fire, or more usually in modern plants by means of "producer gas" made by blowing steam and air through red-hot coke in large iron vessels or "producers." After the coal has been charged into the retorts, still red-hot from the previous charge, the doors are sealed up and the distillation is continued for about six hours. At the end of that time the coke left in the retort is withdrawn on to the floor of the retort-house, and the retort is then ready for a fresh charge. The gaseous products of the distillation are led off during the whole time the coal is being carbonised, through pipes at each end of the retort, into a long curved trough or "main," in which they are caused to bubble through water. Here the greater part of the coal-tar contained in the gas condenses, and the

water dissolves out some of the ammonia, and also acts as a trap to prevent the back-flow of gas to the retorts when they are opened for discharging. Thence the gaseous products pass through long cooling pipes to "washers" and "scrubbers," when the last traces of tar and ammonia are extracted. It then remains to remove the gaseous impurities. This is effected by passing the gas over various chemicals in large iron boxes or "purifiers." From there the coal gas of commerce is led into the gas-holders ready for distribution to the consumer.

The coal-tar and ammonia-liquor, after separation, are either sold direct in their crude state or else are further treated in the gas-works for the production of sulphate of ammonia and a variety of valuable chemical by-products of tar distillation. The most usual practice among gas-works is to work up the ammonia liquor, but to dispose of the tar in its crude state to chemical manufacturers. Such coke as is required for the heating of the retorts is taken while still hot to the furnace or the gas-producer. The remainder is quenched with water on the retort-house floor and when cool is removed and stacked for sale.

The carbonising process is continuous and goes on day and night, week-day and Sunday, without intermission. In order to provide for the continuous manning of the retorts, engines and purifiers the labour is organised in shifts which replace each other at regular intervals. Three shifts per twenty-four hours is the practice followed in about three-quarters of the industry; over the remaining quarter the men work on a two-shift basis. Under the three-shift system the nominal hours of duty are from 6 a.m. to 2 p.m., 2 p.m. to 10 p.m., and 10 p.m. to 6 a.m., and a gang of men usually charges a set of retorts every hour. Under favourable conditions the drawing of the previous charge and the recharging of a set of retorts occupies from a half to three-quarters of an hour, and in the last

charge of the shift the men exert themselves to get the work finished in as short a time as possible. They are then free to leave, and the men on the new shift only come in when the charge is ready to withdraw. In this way the actual length of shift is reduced to something like seven and a half hours. When, however, the retorts are "rough" and the pipes bad, requiring to be "tried" before the next charge commences, the interval between the charges is reduced and the actual length of shift tends to lengthen out to the nominal period of eight hours. No special meal times are allowed, the men taking their food as they can between the completion of one charge and the commencement of the next. Under the two-shift system the hours worked are from 6 to 6 on both night and day shifts. Charging usually takes place every two hours and lasts for an hour. Under favourable conditions the work can be contracted into about three-quarters of an hour, so that the actual length of shift is ten and three-quarter hours.

This is the usual practice, but variations occur in the directions of both increasing and decreasing the intervals between successive charges. In some works where the twelve-hour shifts prevail, charging takes place every hour as under the eight-hour system and in this case the men are sometimes hard put to it to get in sufficient time for their meals. In other works charging takes place every two hours on the eight-hour system and every three hours on the twelve-hour system. An exception also occurs to the continuity of the carbonising process in the case of a number of works where no gas is made during the greater part of Sunday. One twelve-hour or two eight-hour shifts are dropped and the men are called in only in case of a sudden demand for gas such as occurs in foggy weather. But four-fifths of the shift-men in the industry work on the average seven shifts per week. The work is usually divided unequally between successive weeks. "For example, at some works six and eight shifts in alternate weeks constitute

full time, at others, six, seven, and eight shifts in regular succession, while at works where seven shifts are worked, the shifts on one day of the week may be of unequal length and thus provide a weekly change for each relay of workpeople in the hours of commencing and leaving work."

In addition to coal-gas a certain number of the ordinary gas undertakings manufacture, for admixture with coal-gas, a product known as "carburetted water-gas." This is made by the action of steam on red-hot coke, whereby a non-luminous and highly poisonous "blue water-gas" is produced which is then rendered luminous by a process of "carburetting." This is effected by passing the gas through the vapour of oil or spirit, the heavy hydrocarbons of which become admixed with the "blue" gas and give to it a high degree of illuminating power. There are no by-products from carburetted water-gas, but the gas contains impurities of much the same kind as coal-gas and similar methods of purification are adopted.

A characteristic feature of the gas industry is that it combines with large-scale production distribution to the retail consumer. Corresponding to these different industrial functions the labour employed is found to be of distinct types, each of which exhibits special characteristics in the matter of organisation and more especially in relation to the problem of seasonal fluctuation in employment. It is convenient to divide the men employed in connection with the service of gas supply into three classes, to be described respectively as "Retort-house men," "Yardmen," and "Outside men." The first-named class is engaged in the actual operations of manufacturing and includes coal-porters, coal-wheelers, coke-spreaders and wheelers, firemen, stokers, retort-cleaners, pipe-cleaners and retort-labourers, and a proportion of firemen and engine-drivers and boiler-attendants. All these men work on the shift system.

Besides them, the men employed on the purifiers and in the manufacture of sulphate of ammonia, and the valvem^{en}, who belong to the category of 'Yardmen' also work in shifts. Retort-house men constitute something like a third of the total numbers employed in connection with the service of gas supply. The yardmen just referred to constitute about another third and include, in addition to the classes of labour mentioned, tradesmen like platers, rivetters, smiths, hammermen, bricklayers and retort-setters, carpenters and joiners, painters and fitters, and also stove-repairers, coke yardmen and a host of general labourers. These men are employed in and about the works mainly in connection with the repair and upkeep of the plant and machinery and in carrying out works of new construction and alteration.

The remainder of the employees of a gas undertaking are the outside men employed in connection with the distributive side of the business. They comprise such classes of labour as gas-fitters, service-layers, main-layers, main-layers' labourers, meter inspectors, meter repairers, automatic meter rent collectors, carmen and carters, lamplighters and a certain number of general labourers. With the exceptions mentioned yardmen and outside-men work a day of normal length.

It is estimated that the average number of men of all classes employed in connection with the service of gas supply was, in 1907, about 80,000.¹ Whether this

¹ The two sources of information for estimating the total number employed in the industry are the statistics of the occupational census for the British Isles in 1901, and the triennial returns of persons employed in factories and workshops published by the Factory Department of the Home Office. The occupational census of 1901 shows 54,110 persons as engaged in connection with gas-works service. The details of occupation included under this head comprise gasman, fireman, stoker, scoop-driver, retort-labourer, purifier, coke-filler, service-layer, pipe-layer, meter-inspector, lamplighter, lamp-cleaner, valveman, coal-porter (if working in gas-works). Of the 68,234 persons employed in an ordinary winter week of 1906 shown by the Earnings and Hours Inquiry of the Board of Trade 50,235 were engaged in the occupations enumerated above. The large number of general yard-labourers, carmen and carters and undefined workers employed in gas-

number has increased or decreased since that time it is impossible to say.

In the old days the charging and drawing of the retorts was carried out entirely by manual labour; further, the whole of the operations connected with the carbonising process were carried out in the heated atmosphere of the retort-house. The work was therefore of an extremely arduous character, and although the introduction of machinery has considerably lightened the labour of the stokers the conditions as to temperature remain and only men of muscle and physique can stand the strain of retort-house work. It is not surprising, therefore, to find that lads and boys below 20 years of age number less than 5 per cent. of the total personnel of the industry. Many of these are apprentices and learners to the skilled trades in the yard and it is rare for a lad to be employed even as a labourer in the carbonising department. For the same reason the

works are included under other categories in the occupational census. Applying the proportion arrived at from the Earnings and Hours Inquiry to the 54,110 engaged in gas-works service as shown in the occupational census, the figure of 73,500 (in round numbers) is obtained as the total number employed in the industry in 1901. This number is too low because the proportion of men engaged in the occupations specified is greater in an ordinary winter week than it would be in April when the census was taken. 73,500 therefore represents a minimum. There is no means of correctly estimating the increase in the numbers employed between 1901 and 1906. With regard to the Home Office figures, the numbers employed in non-textile factories in 1907 under the heading of "Gas" is shown as 62,234. Returns were received from 1,328 establishments; returns relating to 73 establishments, probably the new and smaller ones, were outstanding. The figure relates presumably to the average number employed during the year and falls short therefore of the number for an ordinary winter week by about 9.2 per cent. It relates, again, presumably to the men employed wholly or partly in the gas-works and not to those engaged exclusively outside. The former class comprise 54,891 out of the 68,234 shown in the Earnings and Hours Inquiry. Applying corrections for these two variations 77,500 is arrived at as the average total number employed in 1907, or 84,600 as the total number for an ordinary winter week of 1907. This latter number is too small by reason both of the outstanding Returns and of the extent, if any, to which occupiers of gas factories may have returned such classes of labour as mechanics, carpenters, gas-fitters, etc., under headings other than "gas." Making allowance for these factors it is seen that the average number for 1907 probably does not very much exceed 80,000.

curve of age-distribution among the men shows that the maximum numbers are employed at ages considerably in advance of those for the general body of occupied males. In 1901 the highest point of the curve occurred at age 30, and fell very little at age 40.

The work of gas-stokers and firemen, who constitute the greater part of the retort-house labour, is unskilled in that it requires no prolonged period of training. A "green" hand can be trained to stoking in a couple of weeks. In the sense that the work demands the exercise of intelligence and the expenditure of sustained physical effort it may perhaps best be described as semi-skilled. It is somewhat surprising, therefore, to find that earnings approach or even exceed those of highly-skilled workers in other trades. For the whole of the United Kingdom the full-time weekly earnings of stokers and firemen in 1906 amounted to 37s. and 38s. 6d. respectively; the corresponding figures for the London district, which accounts for over a quarter of the men in the trade, were 41s. 11d. and 42s. 4d. These are among the highest earnings, but those of the other chief classes of retort-house, yard, and outside labour do not usually fall below 30s. for full time. The predominant rate for all occupations in 1906 lay between 30s. and 35s. The weekly earnings of all workpeople, including both those who worked more and those who worked less than full time show slightly lower ranges all round,¹ but apart from the one great factor of seasonal fluctuation the gas industry exhibits a remarkable degree of regularity in the matter of employment.

The financial position of the men is, however, not fully represented by wage statistics. A number of gas undertakings now have in operation profit-sharing or co-partnership schemes of one kind or another applying to a b o u t 18,000 men. These schemes result in

¹ A full series of earnings statistics, relating to every class of labour employed, is shown in Appendix I.

additions to wages amounting to from 3 per cent. to $7\frac{1}{2}$ per cent. of earnings.¹

In spite, however, of relatively large earnings in this trade, the rates are not so high in comparison with those in more regular occupations as to compensate for any considerable volume of unemployment, the burden of which is therefore borne by the workers and not by the industry as a whole.

There is a considerable degree of organisation among gas-works labour, but what proportion of the 89,000 men who are employed in the industry for some period every year are members of Trade Unions it is impossible to estimate even roughly. Owing to the diversity in the types of labour employed, the membership of trade societies is spread among a number of different Unions, and these are of a character which include workers in many separate industries. Of Unions which include retort-house men, the three most important are the National Union of Gas-workers and General Labourers, the Amalgamated Society of Gas-workers, Brickmakers and General Labourers, and the National Amalgamated Union of Labour. The first-named had a membership at the end of 1908 of 32,318 in some 350 branches spread all over the United Kingdom and drawn from over seventy different occupations. The membership is continually changing and it is impossible to state at any moment what part of the membership is drawn from men working in the gas industry. The contributions are 3d. a week in the case of men and $1\frac{1}{2}$ d. a week in the case of women, and provision is made for the irregular employment of the members by remitting the contributions of members unemployed or sick for six weeks and over. The benefits covered by the contributions include dispute, accident, bonus and legal aid payments. No unemployed benefit is granted except in the case of members locked out owing to a

¹ Full particulars as to profit-sharing and co-partnership schemes in operation in the gas-industry are shown in Appendix II.

dispute, in which case payments are made at the rate of 10s. a week for men and 5s. a week for women, for a period of eight weeks only.

The Amalgamated Society of Gas-workers, Brick-makers, and General Labourers is a small society with headquarters at Birmingham. It numbered under 4,000 members at the end of 1908, in about forty branches. The combination of gas-workers and brick-makers in one trade society was due no doubt to the dovetailing which formerly occurred between gas-making in winter and brickmaking in summer. Both are seasonal trades with seasons which are complementary in point of time; and when they were mainly hand industries the personnel was largely common to the two trades. No provision was accordingly made for exemption from contributions and this rule is still in force although the conditions which called it forth have completely altered. The Gas-workers, Brickmakers and General Labourers Union differs from the other two in granting unemployed benefit. This amounts to 6s. a week and runs for four weeks only in any fifty-two. The amount disbursed in unemployed, travelling and emigration benefits in 1907 was £130.

The National Amalgamated Union of Labour has its headquarters in Newcastle-on-Tyne and draws a membership of 16,543 (at the end of 1908) from a large variety of unskilled and semi-skilled occupations. Its 200 branches are found mainly in the North of England. The contribution of 3½d. per week covers dispute, trade, accident and legal aid benefits but no benefit for unemployment arising otherwise than through a lock-out.

These three Unions were all formed in the year 1889, and in 1891 the National Union of Gasworkers and General Labourers boasted a membership of 60,000, so that it has lost ground considerably since that time. There is no doubt that the adoption of co-partnership and profit-sharing schemes in the gas industry, which in some cases at least arose directly out of a desire to

prevent the possibility of a general strike, has weakened unionism among gas-workers.

In addition to these three Unions certain bricklayers' and other labourers' societies number among their membership men who find a secondary occupation as casual workers in the gas-works for intermittent periods. In some cases gas-workers are found along with men engaged in other public utility services in the Municipal Employees' Union. These Unions include only the unskilled and semi-skilled workers in the gas industry. The skilled men such as bricklayers, mechanics and carpenters belong to the Unions in their own trades, like the Amalgamated Carpenters and Joiners, the Amalgamated Society of Engineers, and so on. This fact alone, apart from the difficulties already alluded to, would make it impossible to estimate the Trade Union strength of men employed in connection with the service of gas supply.

It is evident from this account of the labour organisations in the trade that just as on the one hand it is the workers and not the industry as a whole which carries the burden of unemployment, so on the other hand it is the individual workers concerned and not the whole body of labour in the industry upon which this burden falls. Anything in the nature of insurance against unemployment among the class of labour subject to it is confined to the single small Union mentioned above, which grants an unemployed benefit of 6s. a week for four weeks in any fifty-two. Its total expenditure of £130 in 1907 on unemployed, travelling and emigration benefits combined cannot be regarded as materially shifting the risk from individuals to the general body of workers.

Before gas began to be employed to any considerable extent for industrial purposes, the winter consumption

amounted to as much as three times that in the height of summer. To-day the relative quantities are on the average in the proportion of about two to one, and the ratio may fall in the most favourable cases to not much more than one and a half to one. The effect of climate should, other things being equal, be most strongly marked in the most northerly latitudes.¹

It may be interesting to note in this connection that the adoption of a scheme of daylight-saving would result in intensifying the difference between summer and winter consumption of gas and thereby accentuate the problem of seasonal irregularity of employment among gasworkers.

Production and consumption of gas practically go hand in hand. The bulky nature of the product prevents the possibility of storage in quantity, and no method has been discovered in the way of condensation or absorption whereby this difficulty can be met. Works of the largest storage capacity cannot afford to extend the interval between production and consumption to more than about twenty-four hours, and in many works this interval is considerably less. Moreover, gas rapidly deteriorates on standing by the deposit of hydrocarbons, to which it owes its illuminating power. It is sometimes found necessary where gas has been standing in the holders during the whole of Sunday to make a gas of specially high candle-power in the first Monday shift so as to bring the mixture to the required standard. The full effect of the variation in climatic conditions is thus felt in the organisation of manufacture. On the other hand, there are large sections of gas-works employees who are practically unaffected by the seasonal changes; and even among the men engaged in connection with the actual manufacturing operations, employment is not quite directly proportional to

¹ The variation in production and in employment between maximum and minimum periods of the year is illustrated in Tables I. to III. in Appendix III.

production. Hence for the whole industry the fluctuation in numbers employed is very considerably less than that in quantity of gas made. In 1906 the numbers employed in the busiest season exceeded those employed in the slackest season by only 20.4 per cent.; and in the present year the excess is probably not greater than about 15 per cent.

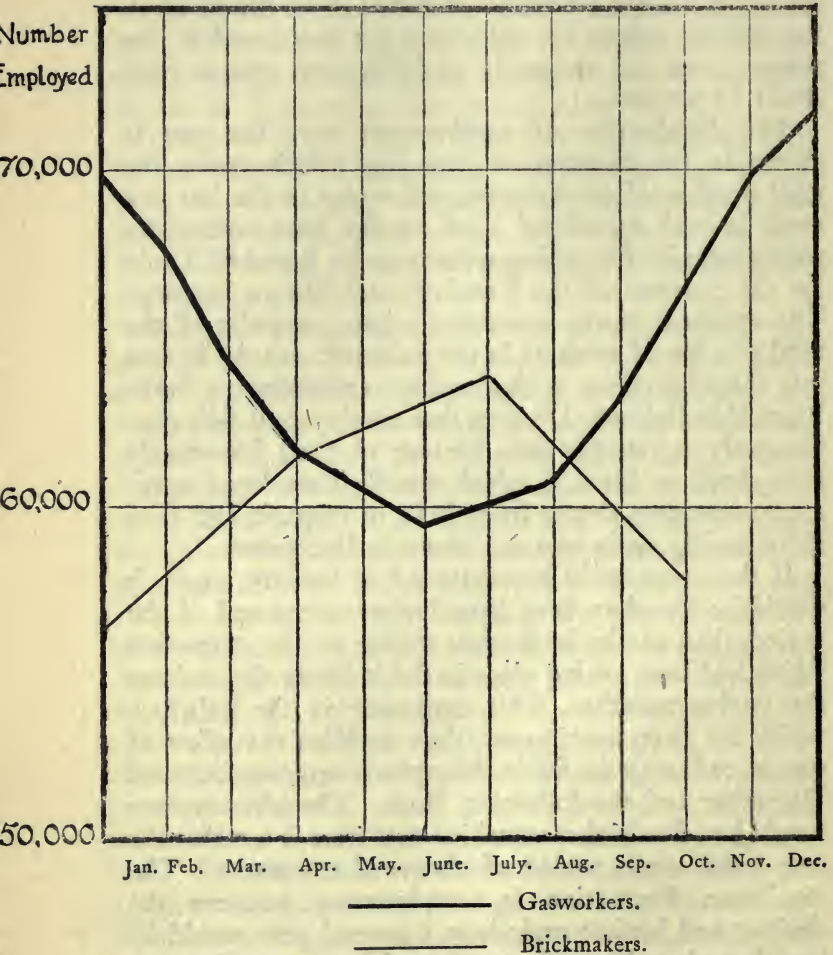
The distribution of employment over the year is shown in the diagram on page 164, which shows the total number of workpeople paid wages in the last pay week in each month of 1906 by the local authorities and companies furnishing returns to the Board of Trade for the purpose of the Earnings and Hours Inquiry.¹ The numbers shown constitute a large majority of the total number of workers in the industry, and the figures rest therefore upon a thoroughly representative basis. From this diagram it is seen that employment falls continuously and steeply from January to April, less steeply from April to June, in which month it reaches a minimum; increases slowly from June to August, and then more rapidly again to a maximum in December.

If the curve could be continued to January, 1907, it would be found to have been higher at the end of the period than at the beginning owing to the expansion which had been taking place in the industry throughout the twelve months. This expansion in the industry, which has been continuous, thus modifies the effect of season, reducing the fall in the curve in any year between December and the following June. The phenomenon would be of only theoretical interest were it not that the year 1906 was a period of abnormal expansion. The maximum fluctuation in employment between the slackest and busiest periods in a normal year would be less than that shown for 1906, and in a year of abnormally slight expansion still less again.²

¹ The figures upon which this diagram is based are shown in Appendix II., Table II.

² See Appendix II., Table III.

CURVES OF SEASONAL FLUCTUATION IN EMPLOYMENT AMONG GASWORKERS AND BRICKMAKERS.



(The figures on which this diagram is based do not include the whole of the workers engaged in the Gas industry or in Brick-making; they represent however a very large proportion of the total numbers, and about the same proportion in each trade.)

Applying the results of the curve given on page 164 for 1906 to the figure of 80,000 as the average number employed in the industry in 1907, it is seen that the numbers employed fluctuated between about 74,000 in the slackest week to about 89,000 in the busiest week. Under conditions of theoretical perfection in the organisation of the labour, there are thus some 15,000 men employed at gas-works in the year for less than a complete period of twelve months.

It will be gathered from the description of method of working given above that seasonal variation in production affects the three classes of gas-works labour in very varying degrees. Outside men enjoy the greatest amount of regularity in employment. They may increase slightly in the winter through the necessity for a greater number of lamplighters, but for the most part they remain practically constant in number the year round. Yardmen, on the other hand, are busiest in *summer*, finding their opportunity for greatest work when the carbonising plant is being worked at a minimum. It is then that retorts can be removed and replaced, machinery overhauled and repaired, and any necessary extensions to the works carried out. The increase among yardmen takes place mainly in the class of yard labourers, as it is upon this class that the extra work needed in painting the works, cleaning the purifiers and overhauling the sulphate plant chiefly falls. Mechanics, carpenters, bricklayers and other skilled tradesmen have for the most part continuous employment; any increase in their numbers is the result of the gradual expansion of the industry rather than a seasonal effect. The increase in yard labourers is met in one of two ways. Either the extra men required are taken on from outside as "oddmen" on daily engagements, or else they are selected from among such stokers, firemen, or other retort-house operatives as would otherwise be discharged for the summer.

There is thus among yardmen a slight seasonal

fluctuation in employment *in the opposite sense to that obtaining in the industry generally*, having its maximum in summer and its minimum in winter and counteracting, therefore, to the extent to which the increase in numbers is met from within the ranks of the industry the much greater seasonal fluctuation among retort-house men.

The variation in the numbers employed in the industry amounting to over 20 per cent. between the busiest and slackest seasons is thus seen to be concentrated upon the carbonising department, with the result that the retort-house men are, in December, about twice as numerous as in June.

Outside men, yardmen and half of the retort-house men, amounting in all to some five-sixths of the total personnel of the industry, thus enjoy practically continuous employment. The remainder obtain engagements for periods varying from one or two to nine or ten months duration. A certain number of retort-house operatives are enabled to convert a part-time into a permanent engagement through the opportunity provided by the slight summer season among yardmen. In some of the smaller works where there exists a more personal tie between the gas manager and his men, retort-house men are given first consideration when the reductions are made in the spring, and room is found for them in the yard during the summer by the discharge of an equivalent number of yard labourers. It might be thought that this practice would be followed pretty generally by gas managers in order to retain a permanent body of stokers and firemen in readiness for the following winter. In the small towns with their more restricted opportunities for the summer employment of displaced gas-workers this consideration does play some part. But the question of skill is not really important. As has been said, a green hand can be trained to stoking in a couple

¹ The variation in employment among the different classes of labour is illustrated in Tables IV. to VII. in Appendix III.

of weeks, and while it would be inconvenient to have to commence the autumn expansion with a large number of novices, the necessity does not arise in practice as the same individuals, with few exceptions, turn up at the gas-works winter after winter.

An exception to the regularity in method of engagement and employment occurs, apparently only among the large works, in the case of the "odd men" to whom reference has been made. These men are attached to the carbonising department ready to take the place of any of the regular men who, through illness or for any other reason, fail to turn up at the usual time. They stand in a rank when the shifts are being made up at 6 a.m., 2 p.m., and 10 p.m. (or at the corresponding times in the case of two shifts) and take odd chances. If they get a shift's work they are paid for it at the end of the shift. They are purely casuals in that their engagements are short and intermittent and their selection determined largely by chance. The usual characteristic of a casual labour market is found in the constant attendance of a very much larger number of men than is required even on the busiest day. Of 6,127 men employed by a firm in December, 1904, 315 or 5 per cent. were odd men and the number in attendance on that day was stated to be twice or thrice that number. In the following June only eighty-six odd men out of a total of 5,148 were employed. This was due partly to the smaller number of men engaged in the retort-house in the summer, and partly, it was alleged, to the greater regularity among the permanent retort-house men than among the part-timers. From the odd men, where they exist, are recruited in part the more regular hands. This casual class is fortunately disappearing with increased use of machinery in gas-works, but it still flourishes at some of the larger works and in summer is found to be made up largely of unemployed retort-house operatives.

The problem of seasonal employment in the gas industry thus resolves itself into a question of part-time

employment among a section of the retort-house men, numbering some 15,000 individuals. A small proportion of these are enabled to continue their engagements in the yard in the summer months, thus throwing the burden of the irregularity upon the class of yard-labourers, who become to this extent a purely casual class. But the large majority of the 15,000 retort-house operatives are obliged to seek work outside the gas industry for a longer or shorter period in every year.

What happens to these men during the time they are not engaged at the gas-works? What other classes of work are open to them or do they secure, and to what extent, if any, are they entirely or partly unemployed in the varying periods of their exclusion from the gasworks?

The answer to this last question, if it can be satisfactorily answered at all, must be purely qualitative. No statistics are available which would give even an approximate indication of the volume of unemployment resulting from the seasonal nature of the gas industry. The only Union which numbers retort-house workers among its members and pays unemployed benefits is the Amalgamated Society of Gas-workers, Brick-makers and General Labourers; and the period of relief is so short and the membership of the Union so mixed that no information of any value applicable to this problem is available.

The gas industry is fortunate in one respect. Its slack season falls in the summer when there is otherwise an expanding demand for unskilled or unspecialised labour. If other seasonal trades are examined with a view to discover which of them offer the likeliest opportunities for dovetailing with the gas industry it is found that the building trades, brick-making, carpentering, coopering, harvesting, mill-sawing, the clothing trade and many others are all of this kind, having their busiest seasons in one or other of the months between April and September. Not all of these, however, are available for the absorption of retort-house workers.

It has to be remembered that gas-stokers and firemen are only skilled in respect of their callings in the gas-works, and this is not to any high degree; and the rest of the carbonising men are but general labourers. Firemen and coal-porters can, and do to some extent, follow their own callings in other trades during the summer months, as on pleasure and other steamers and at the coal wharves on the lower Thames. But the majority can look only to work as labourers. The one exception to this occurs in the case of the brick-making trade. Hand brick-making requires the same characteristics of good physique and capacity for sustained strenuous effort as does gas-stoking. In the old days, when brick-making and gas-stoking were both largely manual trades, there appears to have been a regular interchange of men between the gas-works and the brick-fields, the dovetailing being almost perfect in point of seasons. The men, in fact, were men of two trades. Brick-making has now, however, become largely a machine industry and therewith less seasonal. With regard to the London district in particular the development of the large machine industry in the neighbourhood of Peterborough has had the effect of shutting up many of the hand brickyards in Kent and Essex and has thus closed one of the most suitable avenues of summer employment for gas-workers.

In spite of this change there is still a considerable seasonality in brick-making and the curves of employment in the two industries are reciprocal,¹ as the diagram on page 164 shows.

Brick-making, too, has this advantage for the unemployed gas-workers, that, like the gas industry, it is widely spread over the country. Further, the earnings obtainable in hand brick-making, which is paid piece-work, are as high if not higher on the average than

¹ Number of wage-earners employed in brick factories in 1907 (Census of Production Preliminary Tables)—January, 56,200; April, 61,445; July, 63,950; October, 57,925.

those of gas-stokers. It is not found, however, that there is now any considerable interchange between the gas-works in winter and the brick-fields in summer. It is curious that out of a sample of fifty gas-workers chosen from various parts of the United Kingdom and who had secured work in other callings during the summer months not a single one was shown as being engaged in brick-making. This may be due to a change in type of industrial character in both gas-stoker and brick-maker, resultant upon the gradual displacement of hand labour by machinery. However this may be, the evidence of representatives of the gas-workers is unanimous in stating that brick-making can no longer be looked upon as a considerable field for the summer employment of gas-workers.

Other trades which are busy in the summer are not so widespread as gas-making or brick-making, and some of them vary in their seasons from place to place, notably the different branches of the building trades and of dock labour. It is found accordingly that the actual summer occupations of gas-workers are determined largely by the opportunities offered by each locality. Openings are found in London at the docks and in riverside work generally, as well as in coal portering; in Liverpool and at other similar ports, as firemen on summer pleasure steamers; in Doncaster as builders' labourers and navvies in the new coal area now being opened up to the south of that town; in the country districts generally in harvesting, fruit-picking, and other work on the land. Other occupations in which they engage are fishing, market-gardening, fruit- and hop-picking, house- and ship-painting, carting, pump-sinkers' labouring, corn-portering, coal-portering, quarrying. A few men put in part of their slack season with the Naval Reserve; others (Irishmen) go to their farms in Ireland. The most frequent occupations are found as builders' labourers, navvies, firemen and stokers, and dock labourers.

An important point to notice is that these occupations are most of them of a casual nature. How far the men who engage in them are completely employed while excluded from the gas-works will be seen shortly. It frequently happens, however, that a man is in three or four different kinds of work in the space of a few months and in considerably more different jobs.

A second point about this summer employment is that it is almost entirely unskilled work and is remunerated accordingly.

One result, therefore, of the forced exclusion of a man from the gas-works for a period of the year is that, even if he obtains full-time employment in the interval, it is usually at the sacrifice of a considerable portion of his earning power.

Another way to look at it, of course, is to consider the part-time gas-worker as primarily a casual worker who enjoys a lucky period of high wages for a few weeks or a few months every year. This was undoubtedly the case with the Irish and other agricultural workers who, when gas-stoking was much more fluctuating than at present, used to come to the gas-works every winter in considerable numbers. But it is not true now for the greater number of the men concerned.

The most difficult point on which to get conclusive evidence has been in regard to the existence of actual unemployment and to its extent. The registers of distress committees are strangely silent as to gas-workers, the reasons being, no doubt, that in the first place the registers are in many places opened only in the winter when gas-workers are busy, and in the second place, that an unemployed gas-worker in search of work, which must necessarily be other than gas-working, describes himself as of some occupation likely to bring him employment. This second reason also explains the absence of gas-workers from the registers of the Labour

Exchanges. They no doubt register, but as labourers, painters, carmen, and so forth.

The only method of investigation available appeared to be to obtain a complete history of as many individuals as possible during the time of their exclusion from the gas-works. This has been done for four works in London, the Midlands, South Wales, and Ireland respectively. The particulars in two cases relate to the whole of the men in each works who are concerned, in the other two cases to only a section of the men. The results are therefore quite insufficient as a sample for the quantitative estimation of volume of unemployment, but they indicate quite definitely that unemployment exists. This information, which was furnished through the kindness of officials of labour organisations, states for each individual the number of weeks of employment in gas-works, the number of weeks of full employment in other occupations, the number of weeks of part-time employment, and the number of weeks of complete unemployment in the year. For the purpose of calculating the volume of unemployment the weeks of part-time employment have been taken as counting half-weeks. The results show that the forty-nine men to whom the inquiry relates were fully employed for twenty-two weeks in the year at gas-works and seventeen weeks elsewhere, partially employed for 3.3 further weeks, and totally unemployed for 9.7 weeks. The volume of unemployment thus amounts to 21.7 per cent. of their whole time.¹ The conclusion to be derived from these particulars is confirmed by the evidence of independent inquiries.

The social condition of gas-works labour is largely dependent upon regularity of employment. Five-sixths of the workers are able to secure permanent engagements throughout the year, and to a range of earnings which are high in proportion to the skill involved they

¹ Details of the results of this inquiry are shown in Appendix II., Table IV.

in many cases make substantial additions as the result of profit-sharing and similar schemes. There is little irregularity in earnings among the regular hands due to short-time or similar causes. On the other hand, the non-permanent men tend to develop into a casual class, and the odd men exhibit the characteristics of such a class in a marked degree. The men lead an irregular, uncertain life, and although they can often supplement the high wages enjoyed for a few months in the gas-works by the proceeds of odd jobs of an unskilled character, they frequently become dependent in the summer upon the work of their wives or other members of their families. Among this class overcrowding and its concomitant evils tend to become the rule.

During the last twenty-five years profound changes have been taking place in the gas industry which have exerted a considerable influence upon the problem of seasonal fluctuation in employment. These changes are interesting in themselves as showing how an economic problem has been largely modified by development both inside and outside the industry not specifically directed to this point; and their analysis is essential at the present stage because not only are the changes not yet fully worked out, but in certain directions they are likely rather to be accelerated than retarded, and to influence accordingly the consideration of any proposals for reform.

The change which has had the most far-reaching effects in connection with the problem under consideration, and which amounts to little less than a revolution in the science of gas engineering, has been the almost complete supersession of hand labour by machinery and mechanical devices generally.

Originally the whole work of actual production of gas—the assembly of the coal in the retort-house, the charging and withdrawing of the retorts and the

removal of the coke from the retort-house to the yard—was carried out by manual labour. The work of stoking by this method was extremely arduous and from about 1860 onwards attempts had been made to devise machinery which should replace a portion of the labour in charging and withdrawing and thus lighten the heaviest parts of the work. The first machines were too fragile for their purpose and continually broke down under the strain. Gas managers were not particularly well-disposed towards machinery, having little trouble with their men. Up to about 1890 little or no progress had been made and carbonising was still carried out almost entirely by hand. In 1889, however, a new factor appeared on the scene in the shape of the Union of Gas-workers and General Labourers, formed in that year. This organisation had an immediate success in gaining the adherence of large numbers of gas-works employees. It was thus enabled to exert considerable pressure upon the employing concerns to grant better conditions of labour in the way of shorter hours, higher wages and less Sunday work. One of the avowed objects of the movement was the absorption of a portion of the unemployed by means of a general reduction of hours from twelve to eight. A full history of the movement is to be found in the evidence given before the Royal Commission on Labour in 1891-92 by employers, employees and Trade Union officials. Some of the men's demands were granted, but differences soon made themselves felt, the upshot being that several strikes of gas-workers occurred in London and in Lancashire.

These labour troubles caused gas engineers and managers for the first time seriously to turn their attention to the possibilities of stoking machinery. The first practical result was a manual stoking machine which relieved the men of the most trying part of the work but which did not seriously reduce the number of men required. At the same time there were introduced

mechanical conveyors for the transference of coal from yard to retort-house and of coke from retort-house to yard. In the case of gas concerns receiving their supplies of coal by water a further reduction in labour was brought about by the adoption of self-acting grab-machines for the unloading of coal barges.

It must be understood that the changes of the kind described did not take place suddenly, or in all works simultaneously. This branch of gas engineering was in its infancy and development at first was slow and tentative. The largest works were those to which the new devices made their strongest appeal. Many of the smaller works found the old manual stoking more economical than costly machine methods involving large capital expenditure and heavy repairing charges. By delaying the change for a few years the smaller concerns avoided the expense of setting up machinery of an intermediate type; they have in this way been enabled to instal plant of a later and more economical type at a single step. In the smallest works of all, in spite of the enormous strides which have been made in the perfecting of stoking machinery, manual stoking is still the most economical method of working.

Again, mechanical conveyance of coal and coke has not always been adopted alongside stoking machinery. At no time since manual stoking began to be abandoned at all has any one standard form of mechanical equipment held the field.

Before stoking machines were fairly established a new form of labour-saving device came into vogue in the shape of the inclined retort. It was seen that if carbonisation could be satisfactorily effected in retorts which were sloped at a considerable angle to the horizontal the charging of the coal and the discharging of the coke could be brought about by the simple action of gravity without the aid of machinery and with a considerable saving in labour. Among the works installing new type of plant the inclined retort for a few

years held the field. But mechanical difficulties were encountered, due mainly to the caking of the coal in the retorts. These partly neutralised the economies of the system through the extra cost involved in the labour of continually poking the coal. The advocates of machines had not been idle in the meantime and one improvement after another was effected until the horizontal retort worked by a power machine again came to the front. Since that time very few new plants have been equipped with the inclined retort. The later forms of stoking machines are operated entirely by power and effect a material reduction in retort-house labour. They are of several types, compressed air, steam and electricity being variously employed as the motive power. With their mechanical differences we are not concerned. Each has its advocates, and while the effect in reducing the labour of stoking is not the same in all, the differences in this respect among the various modern machines are insignificant compared with that between any one of them and the old method of manual stoking.

During the last two or three years a labour-saving device of still more pronounced type has been brought into use in the vertical retort. This can be charged and discharged by gravity and is not subject to the same disadvantages as the inclined retort. When, further, the vertical retort is worked on a continuous system, the coal being fed in automatically in a continuous stream and the coke similarly discharged, the last word in mechanical carbonisation would seem to have been said for the present. To the gas engineer, however, the reduction of labour costs is not the only or even a prime consideration. He has to take into account the quantity and quality of both gas and coke produced; and these are dependent upon the system of carbonising adopted. Further, labour is only one item in the total cost of production; and as the capital expenditure and especially the repairs account are apt to grow disproportionately in these very elaborate mechanical devices

it may well happen that a system in which labour is reduced to a minimum is found to be not the most economical method of gas production when the total cost bill comes to be made up. It is with respect to charges for interest, repairs and renewals that the two or three systems of continuous vertical retorts recently introduced are at present on their trial.

This, very briefly, is the history of gas engineering on its mechanical side during the last twenty years.

The results of the development at each stage are illustrated in Tables VIII. to XI. of Appendix III., in which the labour costs of carbonising per ton of coal are shown in most cases for different systems in the same works. This is the only basis for comparison, because the special circumstances of each works in regard to the method of dealing with coal and coke, and the arrangement of the works, naturally affect the cost of carbonising. It is seen that the labour costs of carbonising per ton of coal have been reduced from between 2s. 6d. and 3s. 6d. to about 9d., and that under favourable conditions this last-named figure may again be reduced by one-half. It will be obvious from the brief description of gas-making given above that the results of these changes are confined to the retort-house labour—the stokers, firemen, and coal and coke wheelers. The yardmen indeed have benefited by the change because the use of machinery has increased the number of mechanics required. The outside men are unaffected.

Where mechanical conveyors have been introduced, it is the lower-paid labour which is displaced; but the great change has been in the replacement of highly-paid stokers by stoking machines. The wages of machine men are not very different from those of stokers and broadly speaking it may be said that the reduction in actual labour is proportional to the reduction in the labour cost of carbonising.

The direct influence of machinery on actual numbers of men employed is illustrated by Tables XII.-XV. of

Appendix III. The results exhibited are rather those caused by the general development of mechanical methods of carbonising over a period of years than those due to any one particular type of machine.

The changes in the numbers of persons employed and in the variations between summer and winter employment at the several periods shown in the tables referred to are the result of a number of influences, of which mechanical stoking is only one. The single influence of machinery can therefore only be studied in the numbers of men employed per unit of gas made.

Summarising the results on this basis, it may be said that the number of retort-house men employed per million cubic feet of gas made per week has been successively reduced from something over twelve to between two and three.

The bearing of the change described upon seasonality of employment is a most important one. The introduction of machinery has resulted in a diminution in the proportion of retort-house men to the total staff by reason both of the decrease of stokers and firemen, and of the increase in the yardmen (due to the greater number of mechanics required per ton of coal carbonised). There has been, at the same time, for reasons only indirectly connected with the use of machinery, an increase in the numbers of outside men employed. The section of gas-works employees most subject to fluctuation in employment has thus become a much smaller proportion of the total number, and the *percentage* fluctuation has been correspondingly lessened. Whether the actual number of retort-house men in the whole industry has suffered diminution will be discussed shortly.

No measure of the influence of mechanical developments alone upon the seasonal fluctuation in employment is available for the whole industry. The foregoing figures, however, both those relating to the labour costs of carbonising and those relating to the number of

men employed per unit of gas produced, mark the point to which the whole industry is tending in this respect. Not very many years ago the laborious hand-stoking predominated in all but the largest works. To-day all but the very small works have substituted machine-worked horizontal or inclined retorts and these in their turn are being overlapped by the continuous system of vertical retorts. In many works not large enough to warrant the installation of power machinery the manual stoking machine represents an intermediate stage. The combined effect of stoking machinery and of other changes which have taken place in the industry alongside mechanical development and which are now to be considered can fortunately be studied for the whole industry and a definite measure of the result obtained.

Another change in the internal organisation of the industry has taken place in the last fifteen years with results similar to, but less pronounced than those wrought by mechanical development. This is the partial replacement of coal-gas by carburetted water-gas. It can be seen from the description given of its method of manufacture that carburetted water-gas is a very much simpler body to make than coal-gas and requires considerably less labour. On the other hand the oils necessary for its carburetting are costly. It is found, consequently, that while the total cost of production of water-gas is slightly higher than that of coal-gas, the item attributable to labour is about a half of that in the case of coal-gas produced by modern machinery and about the same as that to which the inventors of the continuous vertical-retort systems hope to reduce the labour cost of carbonising coal.¹

The conditions determining the production of water-gas are four. In the first place a water-gas plant is much more elastic than a coal-gas plant. It can be put in operation at short notice; and, unlike coal-retorts, which must be worked continuously, it can be worked for a

¹ See Table XVI. of Appendix III.

few hours at a time and then shut down. A water-gas plant is thus extremely useful as a stand-by in cases of sudden emergency such as a heavy winter fog.

Further, the illuminating power of carburetted water-gas is greater than that of coal-gas made from the varieties of coal now usually supplied to gas-works, and the addition of water-gas thus raises the candle power of the mixture of the two, which is the form in which the water-gas is sold. A slightly higher initial cost may thus be compensated by the use of inferior and therefore cheaper coal.

Again, while the cost as delivered in the holder is normally higher for water-gas than for coal-gas, this is partly determined by the value of coke in each locality. It may well happen that in a town where the demand for coke is small it pays to make the excess of coke produced in the coal-retorts into water-gas rather than to sell it in the open market.

On the other hand water-gas is extremely poisonous and demands elaborate precautions to be taken against the slightest leakage in "producer," "carburetter" and "purifier" as well as in the pipes. For this reason many gas managers refuse to have anything to do with it. Of the 704 authorised gas undertakings in 1909, only 135 made water-gas at all. The percentage admixture of water-gas with coal-gas is, on the average, about 30 per cent., though in some cases it rises to over 50 per cent.

The proportion of water-gas to total gas made by authorised gas undertakings has increased from about 5 per cent. in 1898 (the first year for which separate statistics are furnished) to about 12 per cent. in 1909. But the increase was largely concentrated into the first five or six years of this period and since 1904 there has been little change in the relative proportions of the two kinds of gas.¹

It is impossible to say whether conditions are likely to

¹ See Table XVII. of Appendix III.

arise under which the replacement of coal-gas by water-gas will be accelerated. A limit is fixed to its extent by the dependence of the water-gas plant upon coke produced in the coal-gas department—unless coke is to be purchased outside, an unlikely event. But this limit has been far from reached for the whole industry.

Though it reduces the labour of production by 50 per cent. the effect of the use of water-gas upon fluctuation in employment has so far been very slight owing to the small aggregate quantity of it made. And this effect is likely to diminish with the increasing efficiency of stoking machinery.

The other kind of change affecting seasonal fluctuation in employment to which reference has been made relates to the growth of new sources of demand for the product which are almost independent of season. This is a change outside the control of the industry itself, but it has been carefully fostered by those responsible for the working of gas undertakings. Gas companies and authorities nearly always offer a lower rate for gas consumed in manufacturing operations; and the growth of consumption in this direction during the last ten or fifteen years has been remarkable. It is impossible to obtain any measure of this change, but some idea of its importance may be gained from the mention of a few of the chief manufacturing operations in which gas is now employed. The use of the gas-engine for power purposes is a development of quite recent years, but its growth in favour has been rapid and the number of such engines at the present time must be considerable. The larger gas-engines are provided with their own equipment for gas production, but for engines of less than 150 H.P. the manufacture of "producer gas" *in situ* is uneconomical; the smaller gas-engines are run almost exclusively by gas purchased from public gas undertakings. But gas-engines are not the only field of employment of gas for industrial purposes. The Gas Light and Coke Company in London has a consumption

of millions of cubic feet a day by the big newspaper companies. The *Times*, the "Associated Press," *Lloyd's*, and the *News of the World* all use gas under pressure for the purpose of melting their type-metal. The Birmingham Corporation supplies gas under pressure for melting purposes to a large number of the metal-working shops of that city. A town of so slight an industrial character as Edinburgh finds it profitable to supply gas at a specially low rate for gas-engines, branding machines, linotype machines, laundry machines, kilns, coffee-roasters, blow-pipes, bronzing machines, heating-irons, soldering apparatus, tailors' irons, upholsterers' irons, laundry irons, enamelling stoves, muffles, drying stoves, gas-hammers. These are but a few examples. The importance of this development from the point of view of the subject under consideration lies in the fact that consumption of gas for these many industrial purposes is independent of climatic conditions and is subject only to the ordinary exigencies of productive industry. To the extent to which gas is used in manufacture seasonal fluctuations in production practically disappear.

A second factor which has exerted a profound influence on the climatic fluctuation is the increasing use during the last ten or fifteen years of gas for cooking purposes. It is interesting to learn that the period of greatest consumption of gas during the year from one of the large London companies occurs, not as one might imagine on a foggy day in winter but during a couple of hours in the forenoon of a Sunday in summer; and this entirely through the demands of the domestic gas-stove. The effect of the growth in consumption of gas for domestic purposes is greater than that of its increasing use for manufacturing purposes because recourse is had to the stove to a greater degree in summer when there is no kitchen fire to be utilised than in winter. Hence a counter-season is set up which tends to neutralise the effects of climatic conditions.

An indication of the rapidity of growth in the use of stoves is to be found in the figures of stove rentals per unit of gas sold over a period of years. In the case of twelve London suburban companies this figure rose from 0.61d. in 1898 to 1.90d. in 1909, notwithstanding the fact that the actual rates charged decreased.

The combined effect of the increasing employment of gas for purposes other than illumination is strikingly exemplified in the figures available as to consumptions of gas by day and by night respectively. Night consumption represents mainly gas utilised for lighting and subject, therefore, to a seasonal variation; day consumption represents gas for purposes not so subject. It is found that for the whole year the quantity of gas used between 6 a.m. and 6 p.m. is nearly equal to the quantity used between 6 p.m. and 6 a.m.; and at certain periods of the year and in certain localities day consumption actually exceeds night consumption.¹

The effect of these changes in the character of consumption is not separately capable of definite measurement over the industry as a whole. It varies from works to works in accordance with the industrial character of each locality, and also with the policy pursued by the gas company or local authority in the matter of differential rates. It may be noted, however, that development in the direction of balancing the load of production as between summer and winter is more valuable from the point of view of the gas operative than the changes wrought by the use of machinery, because in the former case regularity of employment is accompanied rather by an increase than a decrease in the total numbers employed.

The net result in the matter of seasonal fluctuation in employment of all the changes in both production and consumption which have been discussed is that the difference in numbers employed between the busiest and slackest weeks of the year respectively decreased from

¹ See Tables XIX. to XXII. of Appendix III.

53.4 per cent. in 1885 to 20.4 per cent. in 1906.¹ The former period was one of hand stoking exclusively; water-gas had not come into the field; and the application of gas to industrial and domestic cooking purposes was in its infancy. By 1906 the utilisation of some form of machinery was general in all but the small works, and it has been seen to what point the opening up of new avenues of employment for gas had advanced at this date. Since 1906 progress in the replacement of old plant by new has been continuous and development in the other directions more than maintained. The maximum fluctuation in employment among gas workers probably does not now exceed 15 per cent.

It has been seen that developments in the science of gas engineering have resulted in a material decrease during the last twenty years in retort-house labour per unit of gas produced. Each introduction of a new mechanical appliance causes for the time being an increased staff of mechanics. But while the diminution in the labour-cost of carbonising has been continuous throughout the period there is no evidence to show that the labour-cost of repairs has similarly expanded.²

The mechanical difficulties are greatest while a new system is still in its experimental stages, but every effort is made to avoid the repetition of breakdowns and the necessity of frequent repairs. For any one method of working the cost of repairs and renewals tends steadily to diminish. It is evident, therefore, that in the long run the decrease in retort-house labour consequent upon the introduction of machinery has not been in any way compensated by the increase in yardmen.

The increased use of gas-stoves and the introduction of the incandescent mantle have called forth new classes of labour for installation, repairs and maintenance work in connection with these appliances. These classes belong mainly to the class of "outside men." It is not

¹ See Table XXIII. of Appendix III.

² See Table XXIV. of Appendix III.

possible to estimate the proportion of this increase which belongs to labour alone, and thus to determine whether in a single works the total labour per unit of gas is constant, or increases, or diminishes.

While the proportion of retort-house labour to total staff has thus been diminishing the liability to unemployment of retort-house men depends upon the actual numbers employed at different periods, and these again depend upon the relative rates of decrease in retort-house labourers per unit of gas produced and of increase in total production of gas. The former rate cannot be measured for the industry as a whole and the only method of determining whether the improvements in the matter of fluctuation of employment wrought by the various changes in both production and consumption described above have been effected at the expense of the total number of men employed in connection with the service of gas supply is to see how this number has varied over a period of years.

Unfortunately the statisticial material available does not allow of any very definite conclusion being arrived at on this point.¹ All that can be said is that the rate of increase in the numbers employed in the industry has been less rapid in recent years than formerly and that it may have already reached a standstill or even be declining. If this is the case then not only the relative but the actual number of men subject to potential unemployment is on the wane.

The facts revealed in the foregoing analysis of the conditions affecting regularity of employment in the gas industry may now be summed up briefly.

Five-sixths of the men in the industry enjoy practically regular employment throughout the year. The remainder, numbering some fifteen thousand men, obtain only part-time engagements and are obliged to seek outside the industry means of livelihood for periods varying from one or two to nine or ten months in every

¹ For detailed analysis of this point see Appendix IV.

year. They are the men engaged in connection with the actual manufacturing operations and the fluctuation in their employment is caused by the seasonal nature of the demand for gas. This seasonal character of the industry, which was very much greater twenty years ago when gas was employed almost exclusively for purposes of illumination, has undergone considerable modification through the growth of new sources of demand for gas of a kind which are, for the most part, independent of climatic conditions. In some cases, indeed, these new uses of gas are subject to a slight summer increase, thereby counteracting the predominant fluctuation. A more powerful influence in reducing the extent of irregularity of employment has been the conversion of the greater part of the industry from a hand-worked to a machine-worked process. The introduction of mechanical devices has reduced the proportion of the retort-house labour to the total number of men employed and thereby decreased the percentage fluctuation in employment between winter and summer over the whole industry.

The development which has been at work in the industry, producing these changes, is still active. On the side of consumption its rate of progress will undoubtedly continue and probably be accelerated in the future; and evolution on the mechanical side is by no means worked out.

As long of course as the production of gas is determined jointly by its use for a purpose which is subject to a seasonal fluctuation and its use for purposes which are practically independent of season complete regularity cannot be attained. But it is a reasonable assumption that in no very long time continued development upon present lines will have reduced the number of men in the industry subject to potential unemployment to a small fraction of the whole.

This study may be concluded with one practical suggestion. It appears that a portion, at any rate, of

the irregularity might be met by organisation within the industry. Twenty-five per cent. of the men who work in shifts are on a two-shift basis. In the case of these six or seven thousand men a material reduction in irregularity could be effected by shortening the length of the shift in the summer months from twelve hours to eight, so as to spread the work done over a larger number of hands. The practice has been successfully carried out at the Rotherhithe works of the South Metropolitan Gas Company for many years. The men working on three shifts do, not a third less, but a sixth less work per shift than on the two-shift system and their wages are reduced *pari-passu* with the work done. As far as can be ascertained no other company or authority has adopted this scheme. In the case of the South Metropolitan Company, which operates six establishments, the matter of shifts has been decided in each case by the men themselves, with the result that in two works eight-hour shifts are worked throughout the year, in three twelve-hour shifts are worked throughout the year, and only in the single case quoted is the organised short-time system described practised. The conclusion would seem to be that the men themselves are unwilling to forego the loss in earnings which a change in length of shift between winter and summer involves. To the company it is a matter of indifference since the payments made are in proportion to the work done in either case. Another reason is probably to be found in the fact that, while it lasts, the work is much more strenuous on the three-shift system, as a greater amount of stoking work has to be compressed into a given time; and conditions in the retort-house are such that the work is sufficiently exhausting even in winter without increasing its rate in the summer months. In at least one works this consideration has led to a three-shift system being worked in winter and a two-shift system in summer, the men doing an equal amount of work in either case, but spreading it over a longer period in the hotter weather.

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APPENDIX I.—Continued.

Occupation. ¹	Workpeople who worked Full Time. ²		All workpeople (including those who worked less or more than Full Time.)	
	Number.	Average Earnings for Full Time.	Number.	Average Earnings of all Workpeople.
Boiler Attendants...	698	33 5	856	32 10
Valvemen ...	277	35 2	325	35 2
Platers ...	51	37 1	93	37 1
Riveters ...	26	35 7	43	36 11
Smiths ...	360	33 4	631	33 5
Hammermen ...	264	25 4	458	25 10
Bricklayers and Retort Setters...	397	39 0	706	37 6
Carpenters and Joiners ...	298	36 8	467	36 10
Painters ...	185	30 0	280	29 11
Engine Fitters ...	310	37 4	686	38 4
Gas Fitters (in Works) ...	418	31 3	813	32 4
" (House) ...	1,205	30 7	2,887	32 2
Outside Fitters and Service Layers	853	30 1	1,659	31 1
Main Layers ...	328	29 10	637	31 3
Main Layers' Labourers ...	1,210	24 1	2,502	24 4
Meter Inspectors ...	1,120	30 7	1,275	30 5
Meter Repairers ...	363	32 0	522	32 0
Automatic Meter Rent Collectors	804	33 6	861	33 3
Stove Repairers ...	453	25 7	953	26 0
"	90	51 5	97	50 9
Lamplighters	2,323	23 11	2,806	23 7
"	95	24 1	194	22 1

Carmen and Carters—									
One Horse ... ..	... ..	... ..	... ..	... ..	485	25 5	768	25 11	
Two or more Horses	... ..	... ..	... ..	... ..	21	27 10	22	27 9	
Coke Fillers	... ..	... ..	... ..	... ..	461	24 7	1,006	24 11	
" "	... ..	... ..	... ..	... ..	513	42 4	976	38 8	
Yardmen and General Labourers	... ..	... ..	... ..	... ..	4,517	23 6	9,090	23 11	
" "	... ..	... ..	... ..	... ..	504	38 8	873	35 7	
Other Men	... ..	... ..	... ..	... ..	3,059	30 1	5,212	29 7	
" "	... ..	... ..	... ..	... ..	287	40 9	348	38 11	
All Men	... ..	... ..	... ..	... ..	42,563	32 6	65,158	31 1	
APPRENTICES (ALL AGES) AND LADS AND BOYS (UNDER 20 YEARS OF AGE.)									
Full Timers—									
Apprentices	... ..	... ..	... ..	... ..	316	s. d.		s. d.	
Retort Labourers	... ..	... ..	... ..	... ..	50	11 2	393	11 2	
Mechanics' Lads and Boys	... ..	... ..	... ..	... ..	543	18 9	64	17 5	
Other Lads and Boys	... ..	... ..	... ..	... ..	1,136	11 11	933	12 2	
" "	... ..	... ..	... ..	... ..	47	13 0	1,639	13 6	
" "	... ..	... ..	... ..	... ..		8 4	47	8 4	
All Lads and Boys	... ..	... ..	... ..	... ..	2,092	12 6	3,076	12 10	

¹ In this Table only the principal occupations are separately classified. Where the numbers returned under any one heading, either as time workers or as piece workers, were insignificant, they have been included under "Other Men," etc.

² The number of days or shifts constituting a full week varies in different occupations, some men working six days, others seven days per week; others thirteen days per fortnight, and so on.

APPENDIX II.

TABLE I.—Particulars of gas companies with profit-sharing or co-partnership schemes in operation in 1909.
(From Labour Co-partnership for January, 1910.)

Name of Company.	Number of years scheme has been in operation.	Capital in 1909, total share and loan.	Number of employees under agreement of profit-sharing and co-partnership.	Amount divided among employees for year ending June, 1909.	Amount per cent. on wages.	Total profit to employees since adopted.	Amount of shares held by employees in the company, market value, June 30, 1909, about	May employees be on the Board of Directors?	Number of employees' representatives on Board.
South Metropolitan.	20	£ 8,325,340	5,138	£ 37,123	7½	£ 464,347	£ 375,000	Yes	2 Workmen's 1 Officers'
Commercial ..	Since 1901	2,528,280	1,221	5,417	5	40,089	43,920	No	None
South Suburban ..	" 1894	831,363	582	3,034	6	33,452	34,637	Yes	2
Newport ..	" 1900	318,380	156	384	3.41	3,180	3,607	No	None
Chester ..	8	242,190	66	297	5	1,916	1,610	No	None
Leamington ..	1½	79,790	116	413	5	625	670	No	None
Rugby ..	—	—	—	—	—	—	—	—	—
Walker and Wallsden ..	1	272,918	99	360	4	360	423	No	None
Wrexham ..	1	109,290	61	{ Dec. 31, '08 } 256	6	256	None as yet	No	None
Tunbridge Wells ..	Since June 30, 1908	174,000	130	425	4	425	550	No	None
Tottenham ..	—	723,410	601	2,300	4½	6,272	{ Shares 7,914 } { Deposits 4,356 }	No	None

TABLE I.—Continued.

Name of Company.	Number of years scheme has been in operation.	Capital in 1909, total share and loan.	Number of employees under agreement of profit-sharing and co-partnership.	Amount divided among employees for year ending June, 1909.	Amount per cent. on wages.	Total profit to employees since adopted.	Amount of shares and deposits held by employees in the company, June 30, 1909, about	May employees be on the Board of Directors?	Number of employees' representatives on Board.
Croydon ..	.. Since Dec. 13, 1908	£ 690,612	478	£ 1,245	3	£ 1,245	£ —	No	None
Gloucester ..	.. 1	228,000	113	361	5	361	—	—	—
Bournemouth ..	.. 1	651,259	390	1,609	Sliding Scale depending on price of gas	1,609	1,609	No	None
Wellingborough ..	.. 1	90,853	59	242	5	242	242	No	None
Gas Light and Coke	Since Jan. 1, 1909	27,452,193	8,439	38,683	5	38,683	None	No	None
Grantham ..	.. <i>No figures available</i>								
Cardiff ..	.. Since June, 1909	645,085	185	655	4	655	Nil	No	None
Watford ..	.. Since July 1, 1909	165,532	106	Nil	—	—	—	No	None
Total ..		43,528,495	17,940	92,804	4.85 average	593,717	474,538		

TABLE I.—Continued.

The Board of Trade *Labour Gazette* for October, 1910, shows two other companies, and also gives particulars of the Grantham Gas Company:—

Company.	Date of adoption of profit sharing.	Number of employees in 1909.	How bonus treated.
Cambridge University and Town Gas Light Company..	1909	182-249	Retained in Company for investment in ordinary stock until £20 worth held: then' part invested with Company, part withdrawable in cash.
Dartford Gas Company	1909	45-51	
Grantham Gas Company	1909	47-56		Retained by Company for investment in stock.
			Much the same arrangement as at Cambridge.

TABLE II.

Number of workpeople paid wages in the last pay week in each month of 1906 by the local authorities and companies furnishing Returns to the Board of Trade for the purpose of the Earnings and Hours Enquiry.

Month.	Workpeople.	Percentage of average weekly number.
January	69,863	108.2
February	67,510	104.5
March	64,085	99.2
April	61,507	95.2
May	60,500	93.7
June	59,691	92.4
July	60,033	93.0
August	60,647	93.9
September	63,130	97.7
October	66,304	102.7
November	69,880	108.2
December	71,854	111.3
Average weekly No...	64,584	100.0

TABLE III.

Gas sold by authorised undertakings, 1899-1909.¹

Year. ²	Gas sold by authorised gas undertakings in thousands of cubic feet.	Increase on previous year.	Percentage increase on previous year.
1909	177,687	3,730	2.1
1908	173,957	1,068	0.6
1907	172,889	4,944	2.9
1906	167,945	6,537	4.0
1905	161,408	5,828	3.7
1904	155,580	3,902	2.6
1903	151,678	3,945	2.7
1902	147,733	3,674	2.6
1901	144,059	3,640	2.6
1900	140,418	4,697	3.5
1899	135,722	—	—

¹ The gas sold by authorised undertakings, represents a very large proportion of the total production of the industry.

² The returns relating to local authorities are for the twelve months period ending March 31 in the following year. The returns relating to gas undertakings other than those of local authorities are for the calendar year.

TABLE IV.—*Unemployment Enquiry.*

—	Number of men.	Number of weeks in gas works.	Number of weeks in full employment elsewhere.	Number of weeks of part-time employment elsewhere.	Number of weeks of total unemployment.
Mean for each man..	49	1,081	831	162	474
Total volume of unemployment per man	—	22.0	17.0	3.3	9.7
		$9.7 + \frac{3.3}{2} = 11.3 \text{ weeks.}$			

APPENDIX III.

TABLE I.—*Production of gas at a gas works in the South of England in 1910.*

Week in	Cubic feet of gas made in week.	Percentage of June production.
June	23,888,000	100
December	38,484,000	161

TABLE II.—*Production of gas, and number of men employed, at a gas works in the South of England in 1910.*

Week in	Cubic feet of gas made.	Percentage of June production.	Number of men employed.	Percentage of June employment.
June ..	27,334,000	100	5,461	100
December	51,760,000	189	6,480	119

TABLE III.—*Production of gas, and number of men employed, at a gas works in the North of England in 1909.*

Week in	Cubic feet of gas made in week.	Percentage of June production.	Number of men employed.	Percentage of June employment.
June ..	3,051,000	100	95	100
December	7,435,000	244	115	121

TABLE IV.—*Number of men of each class employed at a gas works in June and December, respectively, in 1910.*

Class of Labour.	June 24.	December 23	Percentage increase or decrease on June.
Retort-house men ..	1,059	1,547	+ 46.1
Yardmen other than mechanics and fitters ..	1,498	1,453	— 3.0
Mechanics and fitters ..	717	732	+ 2.1
Other men	2,187	2,748	+ 25.7
Total	5,461	6,480	+ 18.7
Make of gas (in cubic feet)	27,334,000	51,760,000	+ 89.3

TABLE V.—Number of men of each class employed at a gas works in June and in December, 1909.

Class of Labour.	June.	December.	Percentage increase or decrease on June.
Retort-house men ..	15	43	+ 186.6
Yardmen	56	48	— 14.3
Outside men	24	24	0
Total	95	115	+ 21.1
Make of gas (in cubic feet)	3,051,000	7,435,000	+ 143.7

TABLE VI.—Number of men employed in a gas works in last week in each month of 1909.

Month.	Shiftmen	Percentage of number employed in June.	Yardmen	Percentage of number employed in June.	Total.	Percentage of number employed in June.
January ..	306	160.2	344	93.2	650	116.1
February ..	295	154.4	338	91.6	633	113.0
March ..	280	146.6	338	91.6	618	110.3
April ..	208	108.9	352	95.3	560	100.0
May ..	189	98.9	367	99.4	556	99.3
June ..	191 ¹	100.0	369	100.0	560	100.0
July ..	185	96.8	378	102.4	563	100.5
August ..	218	114.1	377	102.1	595	106.2
September.	236	123.5	363	98.3	599	106.9
October ..	279	146.0	373	101.0	652	116.4
November.	328	171.7	370	100.2	698	124.6
December .	338	177.0	394	106.8	732	130.7

¹ The reason for the increase in June is that a number of shiftmen away on holiday were paid when absent, and were therefore carried on the books.

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TABLE VII.—*Number of men employed in the carbonising department of a gas works in June and in December, 1910.*

Labour.	June.	December.	Percentage increase on June.
Stokers	15	21	40
Machine men	6	12	100
Firemen	8	18	125
Barrow men	—	5	—
Retort-house labourers	8	12	50
Coke conveyor men	6	4	— 33
Engine drivers	2	4	100
Boiler men	5	5	—
Coal wheelers	4	7	75
Total	54	88	63
Gas made (in cubic feet)..	23,888,000	38,484,000	61

TABLE VIII.—*Comparison of costs of carbonising in hand-stoked horizontal retorts, and in inclined retorts respectively, at the Coventry gas works in 1906-07.*

Men.	Hand-stoked horizontal retorts.	Wages per ton.	Inclined retorts.	Wages per ton.
	£ s. d.	d.	£ s. d.	d.
Foremenstokers (proportion)	3 03 8 10	1.27	74 13 5	1.27
Stokers	4,4 01 6 11	18.47	1,125 0 2	19.19
Coal wheelers	782 7 4	3.28	112 15 11 (coal elevator men)	1.92
Coke wheelers	1,569 4 1	6.58	—	—
Pipe Jumpers	209 0 6	0.88	51 8 6	0.88
Removing pan ashes	245 8 8	1.03	7 16 1	0.13
Boiler and engine tenters	218 14 5	0.92	53 16 1	0.92
Total	7,729 10 9	32.43	1,425 10 2	24.31
Coal carbonised	57,190 tons	—	14,070 tons	—

TABLE IX.—*Comparison of costs of carbonising by hand stoking and by means of the Jenkins-De Brouwer stoking machine, at the West Bromwich gas works.*

—	Manual stoking.	Machine stoking.
	d.	d.
Total labour costs (pence per ton of coal carbonised)	24.00	15.25
Other costs (pence per ton of coal carbonised)	5.04	4.52
Total costs (pence per ton of coal carbonised)	29.04	19.77

TABLE X.—*Comparison of costs of carbonising by hand stoking and by means of the Fiddes-Aldridge stoking machine at the Wavertree gas works, Liverpool.*

	Hand stoking.		Machine stoking.	
	s.	d.	s.	d.
Labour costs per ton of coal carbonised	2	5	1	8

In this case the stoking machine was not fully employed. It was calculated that with the machine working at its full capacity the labour costs of carbonising would be reduced to 1s. 3d. per ton of coal carbonised.

For the system of continuous vertical retorts no comparative figures are available. But at the St. Helens Gas Works the cost of labour after the coal is delivered into the bunkers (including feeding the coal into the retorts, discharging the coke from the bottom of the retorts into coke barrows, and wheeling and tipping it into the coke yard, attending to the producer, and looking after the driving engines, exhauster and pump) for a small Glover-West continuous vertical retort plant was 9.5d. per ton of coal carbonised. It was calculated that the plant could be doubled in size without increasing the labour required, and that the cost of carbonising would in that case be 4.25d.

The other chief system of continuous vertical retorts—the Woodall-Duckham system—also claims to reduce labour costs of carbonising to about 4.5d. per ton, a result already attained in Switzerland, but not so far, it is understood, in this country. The actual costs of carbonising by these systems are dependent upon the methods of coke and coal handling; and the conveyor has apparently not up to the present been combined with either of the above systems.

Actual cost of carbonising by other systems at various works are shown below.

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TABLE XI.

Works.	System.	Cost.	Cost of hand stoking at same works.
		d.	d.
Oldham ..	West's compressed air combined drawing and charging-machine ..	16.48	43
Wellingborough ..		(including interest, depreciation, &c.)	
Chester ..	Ditto	17.25	—
Derby ..	West manual-machine ..	14.93	28.17
	De Brouwer projector ..	12.4	—

Table XII. relates to a single concern at three dates in its history. In 1891, the introduction of machinery, conveyors, grabs, etc., had just begun ; in 1904-5, these were established through a large part of the works ; in 1910, mechanical equipment of one sort or another was complete.

TABLE XII.— *Number of men employed in a gas works in 1891, 1904-05, and 1910 respectively.*

Labour.	June, 1891.	December, 1891.	June, 1905.	December, 1904.	June 1910.	December 1910.
Retort house..	621	1,552	1,431	2,344	1,059	1,547
Others ..	2,319	2,089	3,717	3,783	4,402	4,933
Total ..	2,940	3,641	5,148	6,127	5,461	6,480

Percentages.

Retort house..	100	249.9	100	163.8	100	146.0
Others ..	100	90.1	100	101.7	100	112.0
Total ..	100	123.8	100	119.0	100	118.6

The next table relates to a works in two periods separated by the whole change from manual stoking to modern machine stoking. It shows only the men in the carbonising department, but these in detail.

TABLE XIII.—Number of men employed in carbonising department of a gas works in summer and winter of the years 1880 and 1910 respectively.

	1880.		December per- centage of June numbers.	1910.		December per- centage of June numbers.
	June.	December.		June.	December.	
Stokers	26	62	238.4	15	21	140
Machine men ..	—	—	—	6	12	200
Firemen	—	—	—	8	18	225
Retort house lab- ourers	10	9	90	8	12	150
Coke conveyormen	—	—	—	6	4	66.6
Engine drivers ..	—	—	—	2	4	200
Boiler men ..	2	2	100	5	5	100
Coal wheelers ..	2	24	1,200	4	7	175
Barrow men ..	4	41	1,025	—	5	—
Total	44	138	—	54	88	—
Percentage of June numbers	100	313.6	—	100	162.9	—
Make of gas (1,000 cub. ft.) per week	4,834	14,693	—	23,888	38,484	—
Percentage of June make	100	303.9	—	100	161.1	—
Number of retort- house men per 1,000,000 cubic feet of gas per week	9.1	9.3	—	2.2	2.2	—

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TABLE XIV.—Numbers of men employed at same gas works in June and in December weeks, at periods when manual-stoking, manual-machines, and power-machines were in use respectively.

	Hand-stoking.		Manual-machines.		Power-machines.	
	June.	December.	June.	December.	June.	December.
Retort - house men ..	26	49	30	53	31	43
Yardmen ..	32	34	41	38	35	39
Outside men..	18	21	24	24	26	24
Total ..	76	104	95	115	92	106
Make of gas (in cubic feet) per week ..	2,076,000	5,611,000	3,051,000	7,435,000	3,763,000	7,956,000

Percentage of June numbers.

Retort - house men ..	—	188.4	—	176.6	—	138.7
Yardmen ..	—	106.2	—	92.6	—	111.4
Outside men..	—	116.6	—	100.0	—	92.3
Total ..	—	136.8	—	121.0	—	115.2
Make of gas ..	—	270.2	—	243.6	—	211.4

Number of men per 1,000,000 cubic feet of gas made per week.

Retort - house men ..	12.5	8.7	9.8	7.1	8.2	5.4
Yardmen ..	15.4	6.0	13.4	5.1	9.3	4.9
Outside men..	8.6	3.7	7.8	3.2	6.9	3.0
Total ..	36.6	18.5	31.1	15.4	24.4	13.3

In the next table comparative figures are not available, but it relates to a works where machine-stoking was exclusively used, and the figures as to number of men per unit of gas made can be compared with the similar ones in Tables XIII. and XIV.

TABLE XV.—Numbers of men employed and make of gas in June and in December, 1910, at a works employing machine-stoking exclusively.

Labour.	June.	December.	December percentage of June numbers.
Retort-house men	73	154	211
Others	396	438	111
Total	469	592	126
Make of gas (in cub. ft.) per week	26,600,00	53,200,000	—
Percentage of June make ..	100	200	—

Number of men per 1,000,000 cubic feet of gas made per week.

Retort-house men	2.7	2.9	—
Others	14.9	8.2	—
Total	17.6	11.1	—

TABLE XVI.—Numbers employed in manufacture of carburetted water-gas and of coal-gas respectively.

—	Carburetted water-gas.		Coal-gas (Average of Year).
	June.	December.	
Number of men employed in gas production	56	125	110
Cubic feet of gas made per day ..	4,400,000	13,200,000	5,000,000
Make of gas per man per day (in 1,000 cubic feet)	78.6	105.6	45.4

TABLE XVII.—*Make of coal-gas and of water-gas by authorised gas undertakings.*¹

Year. ²	Number of cubic feet of gas made in thousands.		Proportion of water-gas to total gas.
	Coal-gas.	Water-gas.	
1898	138,147,000 ³	7,404,000 ⁴	5.3
1899	147,156,000 ³	10,077,000 ⁴	6.8
1900	152,008,000 ³	12,108,452 ⁴	7.9
1901	156,687,000 ³	15,366,000 ⁴	9.8
1902	160,579,000 ³	16,868,000 ⁴	10.4
1903	164,208,000 ³	17,907,000 ⁴	10.9
1904	149,895,000	18,752,000	11.1
1905	155,168,000	19,737,000	11.2
1906	161,763,000	20,078,000	11.0
1907	168,227,000	20,260,000	10.7
1908	168,290,000	21,629,000	11.3
1909	169,922,000	23,625,000	12.1

¹ The authorised gas undertakings constitute a majority of all gas undertakings; and as the non-authorised undertakings comprise only the smallest concerns which are not working under an Act of Parliament or a Provisional Order, the authorised undertakings represent all but a small fraction of the total productive capacity of the industry. The figures given in Table XVII. represent approximately the same proportion of the total make of gas produced in each period.

² See note² to Table III. of Appendix II.

³ Including water-gas.

⁴ Quantity of water-gas supplied.

TABLE XVIII.—*Stove-rentals per 1,000 cubic feet of gas sold, charged by the Brentford, Bromley, Croydon, South Suburban, Hornsey, Lea Bridge, Mitcham, Richmond, Tottenham, Wandsworth, West Ham, and West Kent Gas Companies in each year from 1898-1909.*

Year.	Stove-rentals per 1,000 feet of gas sold.	Year.	Stove-rentals per 1,000 feet of gas sold.	Year.	Stove-rentals per 1,000 feet of gas sold.
	d.		d.		d.
1898..	0.61	1902..	0.90	1906..	1.49
1899..	0.67	1903..	1.02	1907..	1.63
1900..	0.75	1904..	1.17	1908..	1.75
1901..	0.81	1905..	1.32	1909..	1.90

TABLE XIX.—Normal day's consumption from a gas-works in January and June respectively, in the years 1903 and 1910.

Year.	Period of day.	Normal day in January		Normal day in June.	
		Cubic feet of Gas (thousands)	Percentage of day's make.	Cubic feet of Gas (thousands)	Percentage of day's make.
1903..	6 a.m. to 6 p.m.	47,757	53.6	22,634	50
	6 p.m. ,, 6 a.m.	41,329	46.4	22,621	50
1910..	6 a.m. ,, 6 p.m.	56,165	55	30,221	54
	6 p.m. ,, 6 a.m.	46,335	45	25,335	46

TABLE XX.—Summer and Winter consumption of gas at a gas-works in the South of England in 1900 and 1910 respectively.

Period.	Day (6 a.m.—6 p.m.)	Night (6 p.m.—6 a.m.)	
		Actual consumption.	Percentage of day consumption.
	Cubic feet.	Cubic feet.	
June 23, 1900	9,936,000	11,764,000	118.4
December 22, 1900	21,896,000	21,814,000	99.6
June 25, 1910	14,961,000	12,595,000	34.2
December 24, 1910	24,967,000	23,871,000	95.6

TABLE XXI.—Summer and Winter consumption of gas at Stretford gas work. (in 1,000 cubic feet).

	Summer.		Winter.	
	Day (6 a.m.—6 p.m.)	Night (6 p.m.—6 a.m.)	Day (6 a.m.—6 p.m.)	Night (6 p.m.—6 a.m.)
1890..	32	148	168	421
1909..	369	375	730	966

SEASONAL TRADES

TABLE XXII.—Output of gas at Great Yarmouth in millions of cubic feet, and proportion due to day consumption.

Year.	1887.	1897.	1902.	1905.	1908.
Yearly total gas sold	.. 109	132	158	158	175
Day percentage ..	.. 28	37	42	43	45

BOARD OF TRADE EARNINGS AND HOURS INQUIRIES OF 1885 AND OF 1906.

TABLE XXIII.—Number of workpeople employed by gas undertakings furnishing returns.

	1885.		1906.	
	Number.	Percentages.	Number.	Percentages.
Number of persons employed in <i>maximum</i> weeks	35,737	153.4	71,854	120.4
Number of persons employed in <i>minimum</i> weeks	23,283	100.0	59,691	100.0

TABLE XXIV.—Wages and Wear-and-Tear Costs 1873-1909.

Year	Wages (carbonising) per 1,000 cub. ft. of gas sold.	Wear-and-tear per 1,000 cub. ft. of gas sold.	Total distribution-charges per 1,000 cub. ft. of gas sold.	Year	Wages (carbonising) per 1,000 cub. ft. of gas sold.	Wear-and-tear per 1,000 cub. ft. of gas sold.	Total distribution-charges per 1,000 cub. ft. of gas sold.
1873 ..	d. 5.28	d. 4.29	d. 2.00	1894 ..	d. 4.27	d. 4.13	2.56
1876 ..	3.68	5.01	1.87	1897 ..	4.19	3.48	2.93
1879 ..	3.49	5.93	2.39	1900 ..	4.06	4.34	3.44
1882 ..	3.33	4.83	1.83	1903 ..	3.33	4.06	3.31
1885 ..	3.32	4.40	1.92	1906 ..	2.56	4.25	3.92
1888 ..	3.34	3.22	1.73	1909 ..	1.90	4.08	5.31
1891 ..	4.56	3.91	2.31				

The sudden advance in the figures between 1888 and 1891 is due to the introduction of the 8-hour day, in place of the old 12-hour day, which began with this Company in 1889. The amount of work per man was not reduced in the proportion of 3 to 2, as the men did only a sixth less work in the 8-hour shift than in the 12-hour shift. But wages per shift remained the same, and the cost of the change, which was thus borne entirely by the Company, amounted to £70,000 a year in wages. Part of the increased cost was met by the introduction of machinery about the same period, but the combined

effect of the reduction of the hours from 12 to 8, of the introduction of machinery, and of the increase in production which took place in this period, was to increase the total wages of production, repairs, and distribution per ton of coal carbonised from 7s. 3d. to 9s. 5d. between 1888 and 1891. Details are shown in the following Table :—

Wages paid per ton of coal carbonised.

Year.	Carbonising, coke handling, and by-products.		Repairs and distribution.		Total.	
	s.	d.	s.	d.	s.	d.
1888 ..	5	1	2	0	7	3
1889 ..	5	8	2	2	7	11
1890 ..	6	10	2	4	9	7
1891 ..	6	8	2	3	9	5

APPENDIX IV.

The effect of technical developments upon the total numbers employed in the gas industry.¹

Number of persons employed in non-textile factories returned to the Home Office as being employed under the heading "gas."

Year.	Number of returns received.	Number of outstanding returns.	Number of earlier returns used for the outstanding returns.	Number employed.
1895 ..	568	5	—	52,120
1896 ..	—	—	—	51,702
1897 ..	690	10	—	53,475
1898-99 .	776	6	—	57,101
1901 ..	1,071	—	—	66,619
1904 ..	1,018	153	95	62,784
1907 ..	1,187	214	141	62,234

The figures for the later years are more defective than those for the earlier years both because "outside men" (not included) now comprise a larger proportion of the total numbers in the industry than formerly, and also on account of the larger number of outstanding returns in 1907. Even allowing for these necessary corrections the results are inconclusive.

¹ Though some of the changes have been taking place since about 1890, they have been largely concentrated into the last twelve years, and until the results of the Census for 1911 become available, the statistics of the occupational census are useless for the purpose in hand. The only material that can be used is information contained in the Factory Department Returns of persons employed in non-textile factories under the heading "gas." These are subject to the limitations described in an earlier part of the paper, the most serious of which from the present point of view are the incompleteness in individual returns made, the probable omission of "outside men," and the possible omission of the "tradesmen" (*i.e.*, the mechanics, fitters, carpenters and plumbers) due to the return of these under headings other than gas,

MILLINERY

By CHARLOTTE K. SAUNDERS, M.A. (Lond.)

MILLINERY is apparently an artificial product of modern civilisation. It is the result of Fashion rather than of necessity, and we can imagine a new Rousseau upsetting the whole of the trade's equilibrium by a zealous "no-hat" crusade. The Egyptians, Greeks, and Romans seem to have done well without hats, even as do the Orientals of to-day, to say nothing of those few Westerns who enthusiastically adopt Greek modes. Ancient sculpture and early Italian painting show us how much variety could be got in braidings, beadings, embroideries, and drapings; while the combination of hat and drapery, which was the nucleus of the modern hat, became familiar to us last summer, when fully-dressed mediæval pageant players went forth daily to rehearsals.

The mediæval "hennin," as this draped pinnacle hat was called, is said to have been introduced by Isabella, Queen of England. Its successor, another combination of hat and drapery, was called by its friends an "escoffion," and by its enemies (the clergy), "the horned beast," or "the picture of Satan." It was in vogue during the whole of the fifteenth century, being succeeded in the Renaissance epoch by the simple "coif" or close-fitting cap, often of fine linen edged with hand-made lace. Even great ladies thought it no shame to be their own lace-makers and milliners. Queen Elizabeth, with her passionate love of change in dress, seems to have varied the "coif" with a smart jaunty hat, stiff with jewels, and necessarily small because of the huge ruff.

In Cavalier times, broad-brimmed hats were worn by both men and women. They were simply trimmed with drooping feathers, calling for no particular skill in the trimmers. Any tendency towards intricacy in hats was checked by the severe Puritan taste; and plain untrimmed hats were found sufficient. In France, however, extravagance in braids, laces, and embroideries crept in, until Richelieu found it necessary to forbid the purchase of "Milanese" goods, as these hatters' wares were called. The French fashions were brought over by the returning Royalists at the Restoration, and French goods were in as great demand in fashionable Cheapside as they are to-day in Mayfair and Belgravia.

That material century, the eighteenth, went to extremes in millinery, and the Chantecler and aeroplane hats of our own day are insignificant in comparison with the unspeakable horrors of that time. Women carried on their heads, not only amazingly architected coiffures half as high as themselves, but miniature men-of-war, cooing-doves, windmills, and temples to Cupid. There were, however, such picturesque modes as the Gainsborough hats, which we know from the eighteenth century painters.

In France, millinery fashions seemed to follow political ones, the Charlotte Corday "capote" giving place to Hussar and military styles, which in turn disappeared in favour of English masculine styles when Napoleon went to St. Helena. England cannot dictate to Paris in millinery, however, and France recovered, to become dictator once more, after the Bourbon Restoration.

The accession of Victoria brought with it a Puritan simplicity in dress, the orthodox headgear being the poke-bonnet. This simplicity, however, did not last long, and modern complexity shows itself in millinery as much as in anything. With the multiplication of processes, we have an infinite variety of materials, of textures, and of colours. As in other occupations, so

in the clothing trade, specialisation has had to set in, and the manipulation of hats is a business by itself, needing specially gifted and carefully trained artists.

A milliner, or "milaner," to use its original spelling, was, before this specialisation, one who did various kinds of sewing. As early as 1738, the term milliner implied a woman (*v.* Robinson of Kendal's play, *The Intriguing Milliners*; 1738); but originally a "milaner" was a man of Milan—not one occupied particularly with hats, but with all sorts of small articles, cutlery, needles, arms and armour, textile fabrics, ribbons and gloves. They were, then, practically haberdashers, and it was into the Haberdashers' Company that they went. That important livery company had, by the reign of Henry VII., completely amalgamated with the old guild of the "Hurers," or cap-makers. For long, two sorts of haberdashers were recognised, the haberdashers of small wares and those of hats. The earliest example given by the New English Dictionary of "mylloner" in connection with hats is, "1530. Privy Purse Expenditure. Hy. VIII. 33 Paied to the Mylloner for certeyne cappes trymmed . . . with botons of gold." It is noteworthy that it is the men in this case who need their hats trimmed, the women being satisfied with a simple headdress.

Specialist as she is, the milliner of to-day cannot complain of monotony, unless, of course, she be a "wholesale" hand copying the same model day after day. Some guess at the variety of processes can be made on inspecting a millinery window, and confirmation of the guess, on looking through one of the many excellent handbooks of Practical Millinery now published. Milliners have to make, as well as to trim, hats, and this involves the making and covering of wire and buckram shapes, the sewing together of straw-plait, the tucking of chiffon, the stretching of refractory, flat silk velvet to curved shapes, or in this season of straws,

the forced marriage of a straw under-brim with a recalcitrant upper-brim, as well as the more interesting processes of making bows, fancy cabuchons, flower-mounts, or of that most momentous proceeding, the nice adjustment of the trimming to the hat—a process requiring an artist's eye and judgment, as well as lightness and delicacy of touch. An artist, too, is needed for inventing shapes of designs exclusive to her own firm, for the value of a model depends to as large an extent on its uniqueness as on its intrinsic beauty. We can imagine how surprised our ancestors of the uniform head-gear would be, could they know of the care taken to produce curves or angles suitable to the face of the purchaser of the hat. In this difficult matter, the eye of a trained artist is necessary. So much handwork is needed in millinery that we feel we might quote it to the shades of Ruskin and William Morris, to spoil their contrasts between modern mechanical tendencies and mediæval artistry; but, unfortunately, this season shows us how Fashion can, by a decree that her votaries shall wear blocked hats and Tagel straws, discourage West End hand-made—milliner-made hats—and encourage factory work, doubling the usually short season of the Luton girls. Probably the straw hat and feather cleaner who is mentioned in the Woman's Industrial Council Pamphlet, "The Home Industries of Women in London (1908)," as bemoaning the decay of her industry through the drapers' taking up millinery and through the use of wire shapes, is, this year, less perturbed in mind, in view of her brighter prospects.

The routine work of the milliner, the making of bandeaux, wire frames, covering shapes and sewing together straw-plait, can hardly be more interesting than the work at Luton, where at any rate Tagel straws are sewn together by hand. The milliner is not the ideal mediæval artist, making an article right through from beginning to end; indeed, the apprentices, improvers, and junior assistants often have very little of the more

artistic processes to do. At the same time, they are not shut in, in uninteresting seclusion, with their preliminary efforts. They are surrounded by beautiful things in the way of trimmings, bright flowers, feathers, velvets, silks, gauzes, tulles, chiffons, nets, and similar milliners' wares, and can watch the evolution of the hat from its skeleton shape to its perfect artistic form. A visitor to West End workrooms or City workshops is struck by the pleasant surroundings—the large, light, airy rooms and the gala appearance of their contents. This cannot be without influence on the health of the workers, who must feel far more cheerful than, say, some of the stenographers in dingy City offices.

According to a Board of Trade Report,¹ the number of milliners in London three years ago was just over eleven thousand, their numbers being small compared with those of dressmakers. The estimate of a writer in a girls' paper² fifteen years ago is probably applicable to milliners to-day. She computed that half the number of milliners work for a bare subsistence wage, one-third for a wage-insuring independence, while a sixth struggle for a starvation wage. No one without a special bent for millinery is likely to get into the fortunate third. One hears on every side how necessary it is that girls entering the trade must have natural aptitude; for, it seems, a milliner, like a poet, or an artist (the latter is a juster comparison), is born, not made. This has a direct connection with seasonality: for good hands with really artistic ability are too valuable to be lost, and they are kept on and paid in slack times; are paid for holidays and in times of sickness. For those without talent for millinery, the trade offers no alluring prospects, and such people should no more think of entering it than people destitute of a musical ear should be made to waste time at the piano or violin. The girl who is going to do more than earn a bare subsistence wage is the one who

¹ Report of Board of Trade Enquiry into Working Class Rents, 1908.

² *Millinery as a Career in Life* [in] *Girl's Own Paper*, January, 1898.

has an instinctive feeling for harmonies of colour and, more especially, a sense of form—of line, and of proportioning masses. This, and not so much the value of the material employed, makes the worth of the hat. One may see in the wholesale manufacturer's showroom hats priced at 3s. or 4s., which by the substitution of a quill, panache, cabuchon, or other trimming for what is already on them, would be translated from dowdiness to smartness or to beauty. When the wholesale manufacturer tells you—maybe, in an aggrieved tone—that he has seen one of these low-priced hats of his, with hardly any addition, on sale for 35s. in the West End, one knows that the change was one of quality rather than one of quantity—indeed the improvement might have been arrived at by subtraction rather than by addition or substitution of trimming. The difference in price is in direct proportion to the difference of skill of the designer and the factory hand.

This distinction brings us to that which exists between the two branches of the millinery trade—the City and the West End. These branches are, roughly speaking, the wholesale and the retail.

The wholesale houses seem to consist of two kinds—wholesale manufacturing houses and warehouses. The warehouses themselves have millinery or hat manufacture departments (or both), but their supply is augmented by supplies from the former source, so that, for this part of the business, they are middlemen.

It is difficult, with wholesale work, to differentiate between millinery and hat manufacture. It is not to be done by distinguishing between hand and machine work—for a wholesale manufacturer has some straws sewn together by hand and others by machine. Some have to be arranged on wire shapes by hand, others are gummed and blocked by machinery. We have noted the hand-sewn Tagel straws of the Luton factory hands, and this sewing together of straw is a process a West End milliner also performs. On the same premises straw-plait

is made up into hats, the subsequent blocking done by men, and the hats trimmed or "semi-trimmed" by a staff of millinery assistants. This year, blocked hats simply trimmed with straw ornaments, beaded cabochons, and swathing scarves, have been much worn, and hence the volume of "City" millinery must have increased and that of the more elaborate "West End" work decreased.

Some wholesale houses do work of as fine a kind as West End retail houses, making hats of which the wholesale price is £10 10s., and, indeed, supplying with such goods some of the well-known Regent Street shops. Such houses need a milliner to do their designing who shall differ in no way from one in a fashionable retail millinery establishment.

In spite of such cases as these, however, City millinery can be well differentiated from that of West End. The work is comparatively mechanical, the worker repeating the same model, often with amazing rapidity of workmanship. This difference in the character of the work naturally creates a difference in the sets of workers. In the West End millinery, more actual milliners, *i.e.*, designers who originate models or "copyists" who copy models (which come in many cases from Paris) are needed, and work is done at tables presided over by a milliner, who is helped by several assistants (the number varies according to the customs of the house) and apprentices. In the City work, the girls work each on her own account, and as there is not the supervision of the presiding milliner, and the work is piece-work, they enjoy a freedom unknown to the West End workers.

The City worker learns her work as best she can, making the first hats slowly, and probably indifferently, but spurred on to efficiency by the direct relation between pay and results. Apprenticeship, in the ordinary sense of the term, does not obtain in this wholesale work. The "apprentice" is paid, not by the firm, but

by the worker, and as in the case of West End apprentices, pay has to be given all the year round. The taking on of an apprentice is a commercial speculation for the worker. If she thinks that her apprentice will be sufficiently smart to supplement her output of work in the busy season so much as to justify her paying out a small weekly sum during the long slack season, she may embark upon the speculation. I have been told by a worker that the risk is seldom undertaken, however, except in the case of a girl wishing to benefit a young friend. Newcomers (who have experience in some branch of millinery work) are helped by the already experienced hands, and much kindness, the exercise of which handicaps the worker in her own progress, is said to be shown by one to the other. Occasionally, would-be learners are taught, in the slack time immediately preceding the busy season, the necessary process for the work they will do then. In the between season time, "sample-hands" have made, either from their own designs, or from instructions given them (sometimes by the head of the firm) or from "models," samples for the travellers of the City warehouses to take round to their customers. Orders are then placed and work begins, the favourite shapes being made in large numbers. Even the high-priced wholesale hats of more exclusive designs are repeated.

Some City houses employ out-workers, in many cases girls who have married and find it necessary to supplement a husband's small earnings or to avoid distress through his unemployment. Some of the workers, again, have a mother and sisters who, though obliged to be at home, can spare part of each day, in the busy millinery season, to do work taught them by the in-worker. I am told by a City hand that they themselves sometimes take work home; but that it is exceptional, as few girls can do more than the day-work, which, when done in a race against time, entails a very heavy strain, and results, by night, in a state of absolute fatigue. An employer says

that work done out of hours at night at home causes the worker to come late next morning and to work less quickly : so that commercially it pays better to keep the in-workers and out-workers distinct from one another.

In West End retail work, originality is an indispensable thing in designs. Again, emphasis is laid on quality rather than on quantity, and the speed with which a wholesale worker turns out one hat after another is impossible for workers who make, perhaps, no two hats alike.

The West End workers (exclusive of the buyers, men or women, who are salaried persons, sometimes earning from £700 to £1,500 a year) are divided into three classes. There is the small class of milliners proper, a bigger class of apprentices, and then the bulk of the workers, who are millinery assistants. A milliner will have charge of a table of ten to sixteen hands (though in small firms the number would be less), amongst whom are a few apprentices.

The milliner is the person upon whom the burden and responsibility of designing falls, and I am told that it is a most nerve-racking occupation, this of seeing that a large table of hands is kept constantly at work on hats, each of a new design. Naturally, the firm's reputation depends upon the distinction of the designs, and when it has a milliner who gives to the work turned out a certain style which stamps the hat as coming from that house, her value is greatly enhanced.

This distinction must be supplemented by exclusiveness of design, for the hat to be of great value in a customer's eye. The happy knack of style is possessed by many French milliners, and as they have the daintiness and lightness of touch often denied to the more serious Britisher, they are much in request.

Some milliners have the commercial responsibility of their table, having to do the booking and ensure a certain weekly profit.

It is the milliner who puts the finishing touches to a

hat and who arranges the trimming on a hat, made or prepared by her assistants. On a wire-shape made by the workers according to some design, or, maybe, on a manufactured flexible rush foundation, is sewn the material needed—straw-plait, silk, lace, velvet, beaver-cloth, or fur, as the case may be. On the other hand, it may be a blocked shape which has to be prepared: curves altered, dispensed with or introduced (by damping and ironing processes); linings of straw, satin, velvet, or other material put beneath the brim; or part coverings stretched on the crown or upper brim. These more or less routine processes (which, of course, need much skill) fall to the assistants; some of the simpler ones, including bandeau-making and making head-linings, to the apprentices.

City and West End workers have differences in rates of pay, as in their processes. Their hours, however, are nominally the same—8 a.m. to 8 p.m. As this period included a breakfast hour in the days of living-in, the hour of beginning work has been put later (8.30, 8.45, or 9, both in wholesale and West End) to suit the needs of girls living, for the most part, out in the suburbs. The leaving hour, too, is generally 7, or even 6.30, on weekdays, and 1 or 2 on Saturdays, both in the City and the West End. In busy seasons the legal hour is often reached; but Factory Inspectors say that actual overtime is rarely applied for. Booth, writing in 1896, was told by employees that they were kept working in the busy season from two to four nights a week, notice for only one night having been forwarded to the Factory Inspector; that girls were sent to a private room to finish their work. This, to-day, judging by what employees say, is not so. "Working late" means generally no more than going beyond the traditional 6.30 or 7 p.m. to the legal limit, 8 p.m.

The time-workers in the wholesale, one is told, often go half an hour to an hour late in the morning, the

worker having the feeling that the disposition of her time is her affair.

The wages of millinery workers are, by reason of their infinite variety, a complicated subject with which to deal. The statistics given in the *Earnings and Hours Inquiry Report on the Clothing Trades* (1906) show that the annual wage per head for millinery and dressmaking (taken together; probably lower for millinery only) is a comparatively low one. These trades rank tenth (in the case of factory work) and fourteenth (in the case of workshops) in a list of sixteen trades. For women, 13s. 10d. is given as the workshop average and 15s. 5d. as the factory one. Some firms think this average too high; others too low. The average, 12s., given in Cadbury's "Women's Work and Wages," seems to be lowered, because it includes the wages of apprentices. "City" girls, with their long periods of slackness, probably do not have nearly so high an average as 13s. 10d. Booth considers that the low wages of milliners are due to the fact that milliners were first liver-in, and then that through the exigencies of space and the willingness of girls to sleep at home, living-out became the rule, without a fair corresponding rise in wages occurring. With the growing differentiation between business London and residential London the problem has arisen. To this is due the alteration of the hour of beginning work from 8 to 8.45 or 9 o'clock. This accounts, too, for the milliners receiving tea, and, in some rare cases, lunch. I have been assured, too, by workers, that the millinery hands in some firms rank below assistants, having worse conditions for meals and worse cloakroom accommodation, and that the milliner only by special privilege has meals with the assistants.

This differentiation is disappearing now. Booth speaks of it in his "Life and Labour in London" as existing in 1896. He said that the condition and standing of resident milliners were similar to those of shop assistants, whereas weekly employees were regarded

as workroom hands, and, as such, of lower social grade, though much above factory girls. (The latter remark would not need to be made nowadays.)

Whether it be true or not that the millinery hands may be taken as representing those of a liver-in, without the just addition which should have been made in new conditions, it is certain that the masters do not take that view of the case, and the few millinery hands who still live in, get what has been vaguely described to me as "a very small" wage in addition to their board-residence.¹

General wages in millinery are said to have gradually decreased of late years; so that the above average, for that reason, may now be regarded as too high.

Assistants in West End retail work, once out of their apprenticeship, begin to earn about 5s. weekly, and advance yearly according to ability, getting 6s. 6d., 7s. 6d., 8s., 10s., 12s., 15s., up to 18s. or 19s., even perhaps £1. Booth's statement of 16s. to 20s. weekly as wages of first and second hands still holds good. One may say, however, that the bulk of experienced millinery hands are earning about 13s. to 19s. a week. When one takes into account their slack times and the expense of their journey to town, their lot does not appear a very happy one.

The wholesale hands do not earn in accordance with seniority but with their skill. Some firms say that the average earnings of a competent hand are about 15s., and superior to those of a retail West End firm, in that a junior who would earn, say, 7s. 6d. or 10s. there, could make that average with City work. Other firms put the average far lower than 15s. by reason of the long seasonal slackness. Wages vary, too, according to the kind of work done, and the worker is not allowed to choose the best paid. Some hats have more work in them—and work of a more unpleasant kind—than

¹ Booth says (*Life and Labour of the People in London*, 1896) that the wages of resident milliners were £20-£80.

others; and while one worker may manage by hard work to make five or six hats daily at 10d. each, another may make fewer of a less well-paid article. Babies' millinery is said to pay the worker less well, presumably because there is not the same discrepancy here between cost of material and cost of finished article as in the case of ladies' millinery. In the composite "Women's Work and Wages" (Cadbury, Matheson, and Shann) 10s. is given as the average weekly earnings for babies' millinery work as against the general average, 12s.

The "City" workers have great variations in their weekly wage; such varying figures as 6s. 4d., 10s. 1d., 13s. 7d., 16s. 9d., 18s. 1d., 20s. 8d., 35s. 10d., and 38s. 2d. appearing as the weekly earnings of a wholesale hand. Amongst these workers are to be found married women who have been obliged to return to work because of their husband's unemployment, and sometimes old women (in contrast with West End workrooms, where the workers all seem to be young), who though slow now, are able to earn a small weekly wage to enable them to exist. The latter are not encouraged, as rents are high and a quick producer brings greater returns to the employer.

Though slow workers earn very little for long hours spent, there does not seem to be evidence of sweating here as in dressmaking. No instances are quoted in the Sweated Industries Exhibition Handbook, and the workers seem to complain, not of the pay, but of the shortness of the seasons during which it can be earned.

Apprentices are seldom found in connection with the wholesale houses. Even their small wage of 1s. or 2s., being constant throughout the year, is a burden on the assistant during the time when she is earning practically nothing. In the West End, apprentices are still to be found, but are gradually degenerating—so the manager of a big firm says—into mere "trotters"—*i.e.*, girls who do odd jobs and run errands to match trimmings and make little purchases. Ten years or more

ago, apprentices generally paid a premium, say of £5 5s. Now premiums are no longer customary, but the apprentice gives, even in fifth-rate firms, one or two years for nothing. In an article entitled "Millinery as a Career in Life" in *The Girls' Own Paper* for 1892 a premium is mentioned as a matter of course, while in an article of four years later in the same magazine, though the change is not commented on, the writer speaks of apprentices as giving no premium, but as receiving no salaries for the first year. Now one finds but a few rare cases where the premium system is still in vogue. *The Earnings and Hours Inquiry* of 1906 gives 4s. 4d. (and more for Westminster and Chelsea; 4s. 6d. and 5s. 9d. respectively) as the London average weekly wage, and 3s. to 4s. for the provincial; but this average, like that of the assistants, is said by people who know—*e.g.*, by London Girls' Club organisers and by employees—to be lower now. Apprentices are paid all the year round, in slack and busy seasons alike.

Milliners—*i.e.*, those who design or copy models—are, on the whole, well paid. The pay varies with the status of the firm. In the best firms milliners earn from £2 to £5 or £6, the latter sum being usually that paid to a French milliner and seldom reached by an English one. The high rate of pay, again, usually obtains where the milliners are few in proportion to the whole millinery staff. Where the groups are small and numerous, and this is generally the case in firms where the millinery staff numbers hundreds, the milliner in charge of each group has a lower salary, one varying from 25s. to 35s. In this case, there would be a forewoman over the whole staff, some of whose duties would correspond with those of the milliner in charge of a small staff. The wages of a milliner are paid weekly, and are paid all the year round, in slack and busy times, holiday times, and times of sickness. She had needs be well paid, as not only are her duties responsible and arduous, but she can only count on earning in

this way during the best years of her life. A milliner is not considered efficient after the age of 35 (or even younger); her best years are from 25 to 30, when she is full of "dash" and responsive to ideas, and expresses her character in her work. Sometimes a milliner who has passed her youth, will, during her holiday, receive a notice of dismissal, without having any reason assigned. Some of these milliners set up for themselves in the suburbs; for their good pay has enabled them to save capital to do this, or, perhaps, to take a boarding-house. Others, again, manage millinery shops or departments in provincial towns. Undoubtedly, too, many of them, smart and well-dressed as they usually are, marry with the facility of Gaiety girls.

Wholesale firms also employ designers, whose work occasionally is similar to that of the West End designer, but generally of a simpler sort, suiting with the fact that the millinery sold in large quantities is usually of a more ordinary and commonplace design. Wholesale manufacturers keep on during the slack season "sample hands," girls who design and make hats for travellers from the City warehouses to take round to retail shops, so that orders may be placed by the beginning of the season, when the hands return to work. These designers and sample hands are, like the West End milliners, paid weekly and kept on all the year round.

There are two minor classes of millinery workers who must be taken into account—the girls who, for a few shillings weekly, make small purchases and match trimmings. It is to this class of "trotters" that millinery apprentices to-day are said to be degenerating.

Then there are the millinery showroom girls, whose duties need no explanation. Their work is light and pleasant, consisting chiefly in being of good appearance and manners. In firms where many goods are sent on approval, or ordered to suit the customer's taste, the showroom hand has very light work. She is usually a "pocket-money" girl, receiving about 5s. a week. In

cases, however, where the showroom hand has much selling to do, she is paid a better wage, receiving between 10s. and 30s. weekly.

Most important are the millinery buyers, who are indifferently men or women. Particular business ability is required, and services are well paid, the millinery buyers in the best firms getting from £700 or £800 to £1,500 a year.

The millinery trade, more, perhaps, than any other clothing trade, certainly more than dressmaking and corset-making, is marred from the employee's point of view by seasonality. We have seen already that only two small classes, milliners and apprentices, are paid all the year round. The largest class, that of the assistants, is worst treated. Not only are these girls given long unpaid-for holidays, but, in very many cases, the employers do not trouble to mitigate the evil. One is told that they are turned off suddenly, without warning, the employer fearing, say at Christmas, that if they get wind of a likely discharge, they will leave earlier than he would wish, to get one of the many temporary jobs vacant at Christmas time.

The comparatively few milliners who live in seem not to be discharged in slack times, and probably this accounts for the fact that a well-known West End firm, where this system still obtains, has always a very large number of applications for possible vacancies. Why living-in should affect discharge one hardly sees, but it seems to do so; for another fashionable West End firm says that it has to keep on its staff of a hundred French girls (whose fares from home it has paid), and consequently discharge more of the English workers, who have homes to go to. Undoubtedly, a millinery assistant must be a girl who has a home and parents able to keep her in slack times; and one hears of many sad cases where girls, through removal or death of parents, have had to become self-supporting. One wonders whether the seasonality of millinery has increased of late years;

for, in the *Girls' Own Paper* of January, 1896, mention is made of a Milliners' and Dressmakers' Provident Association, which, since its institution in 1849, had paid out £14,000. This association guaranteed to girls under 20, who paid £1 a year, those under 25, who paid £1 5s. a year, and those under 30, who paid £1 15s. a year, 12s. a week in case of sickness or inability to work (presumably enforced absence through slackness) and a permanent income after the age of 55. I have found no one among the many millinery workers with whom I have come in contact, who has heard of this Provident Association; and, as one milliner laughingly observed, it must have died of bankruptcy years ago from the over-draughts of its members.

There is nothing inherent in the nature of coverings for the head to cause their making to be seasonal. One can infer from the preliminary sketch of millinery through the centuries that the seasonality is from artificial causes. It is true we have summer and winter, with their differing climatic conditions; but, in England at any rate, the difference is not so sudden nor so great as to occasion rushes in millinery making. No doubt such places as Liberty's and Sheba's, where the style is that of the firm rather than that dictated by fashion, pursue the even tenor of their way in millinery with nothing more than the fluctuation due to the opening of the hot or cold season. Even then, if the change is to be made in materials rather than in style, provision can be made beforehand in what would have been a slack season, and a rush, that great disorganiser of labour, avoided.

It is doubtless that elusive and magic thing, Fashion, the adherence to which is in itself perhaps only a fashion, a temporary artificial thing of a slavish period which will vanish with the development of individuality and its expression in dress, that is to be blamed for most of the seasonality in the clothing trades. We are told, for instance, by dressmakers, that the tendency of feminism

is towards independence in taste in dress which renders possible the making of dresses in the "between seasons." We can imagine that a Ruskin-William Morris art crusade would be similar in tendency. A greater catholicity in dress is certainly observable nowadays amongst the professional classes, but it has not yet penetrated the class called Society, for which the West End caters. In suburban shops, which serve the working and middle classes, no such marked seasonality is found as in the West End, as will appear presently from statistics.

Both wholesale and retail have two seasons, November to April and July to October in the former case, and January to June or July and September to November or December in the latter. Only rough indications can be made, as seasons are modified for various firms by causes which will duly appear. The period November to April may be continuous for some firms, but in most there is a lull in trade from early December to Christmas, corresponding with a similar but later lull, late December to mid-January, in the retail.

Existing statistics with regards millinery relate to a selected number of firms only; but statistical truth is reliable for a careful selection of firms as for the whole number. What makes the statistics less valuable, however, for one searching for evidence of seasonality, is that wholesale and retail millinery are not treated separately, and as the wholesale millinery hands are busy when the retail workers are slackest, and there is little dovetailing between the two branches, the figures tend to give a false impression and show a greater uniformity in trade activity than really exists. Thus there does not appear any such discrepancy as actually occurs in one West End firm (probably typical) where numbers vary from 200 to 500 in slack and busy seasons respectively. The statistics, however, enable one to make many interesting comparisons, both between the West End and London

¹ Earnings and Hours Enquiry Report on the Clothing Trades, 1906.

as a whole, between London and England generally, and between South England and Scotland. We see, for example, that Glasgow and Edinburgh are busier in the dead English season of August than in June, a fact to be accounted for by the tourist trade and the shooting season, which begins on August 15th. We find, again, that for all England the busiest millinery season is May. While that is true of London, it is not true of the North, where the season seems to be later, the season in London having probably been made earlier by the Court and the consequent "Season."

The monthly percentages of employment in the United Kingdom are:—

Jan.	Feb.	Mar.	Apl.	May.	June.
90.4	93.6	103.7	108.6	111.1	109.8
July.	Aug.	Sept.	Oct.	Nov.	Dec.
98.7	79.8	100.4	105	101.8	97.1

Figures for London do not differ greatly from these; but if those for the West End are isolated, and from them percentages calculated, they show much more marked seasonal fluctuations. For instance, the August fluctuation seems not to be great by the figure 79.8, but it is made less by the fact that City workers begin to be busy in August. The August percentages of workers for Chelsea and Kensington, Westminster, Marylebone and Paddington, are 52.1, 61.9, and 66 respectively, and in these numbers are included a number of apprentices at a few shillings weekly. Similarly the percentages for May and June do not show the increased West End activity then, because the slackness in the wholesale keeps it down. The fluctuations appear in the appended totals and percentages of workers for the three districts, Westminster, Chelsea and Kensington, Marylebone and Paddington, and may be compared with the more even numbers of the rest of London, which themselves differ little from those given above.

Westminster, Chelsea, Kensington, Marylebone and Paddington.						
WORKERS ...	Jan. 6282	Feb. 6575	Mar. 7342	Apl. 7575	May. 7768	June. 7603
(Average 6904)						
PERCENTAGE...	90.9	95.1	106.2	109.6	112.4	110
WORKERS ...	July. 6580	Aug. 4309	Sept. 7047	Oct. 7620	Nov. 7292	Dec. 6916
(Average 9604)						
PERCENTAGE...	95.2	62.3	102	110.3	105.5	100.1

From the general statistics it appears that August is the slackest month, the next in order of slackness being January, February, and December—that is to say, in the summer holiday time and at Christmas. Many employers say that their girls, coming as many of them do from good homes, do not mind the holidays, and in summer-time actually ask for a longer time than the month or six weeks given them. But all the millinery hands I have met told a different story, showing no partiality whatever for these long, unpaid holidays. Some firms are generous enough to pay for a fortnight of the slack time, but most do not. The wholesale workers in many firms have longer periods of slackness than the West End hands, and no employer ever pretends that *they* are glad of their holidays or that they display an appetite for more.

The wholesale trade has even a shorter spring season now than it had years ago, and this is partly due to the falling off in Australian trade, which, in years gone by, prolonged the season by a month or so. Even if Australian trade had not fallen off, it would have not have lengthened the season as it used to do, but would have accentuated the stress of the busy season, making the disparity between busy and slack times greater than before. This is due to the tendency towards putting forward the seasons, evidence of which is seen in the windows being full of spring flowers while we are still shivering in winter blasts and plodding through snow and slush; or in displays of velvets and felts, which cause a hot thrill to run through muslin-clad wayfarers who seek some refuge from the still scorching rays of the early September sun, pitying, perhaps, as they

glance at the autumn millinery, the girls who have had to sew velvet, beaver, cloth, and fur during the sultry August days. Consignments which once reached Australia in July must now arrive in May, though this putting forward is caused not only by the above-mentioned general tendency, but also by the fact that now for bulk are substituted models which have to be copied by Australian milliners before the season commences. This substitution is due not only to the great cost of bulk (and the value of 'trimmed hats is quite disproportionate to their bulk) but to Australia's development along its own lines since the Federation of 1900, so that it has tended to depart from fashions suited only—or, perhaps, even here *unsuited*—to European conditions, and develop modes of its own, in accordance with which purpose, consciously or unconsciously, the tariff wall was raised against imported hats and millinery. ²One English firm which had gradually lost all its Australian trade, said that some of its best hands were tempted to go to Australia by the good offers made them. This was in the case of hat manufacture, which, as I have already said, is, in such firms as this one, closely bound up with wholesale millinery, as it is, too, in the figures of the Board of Trade returns. Australia has a demand for good, moderate-priced hats, and though Melbourne can have nothing too "smart" and "European" sent it, Adelaide, Sydney and Australia generally have quieter, more rational tastes, while such semi-tropical places as Brisbane have different needs in millinery. The Australian working man's wife is said to be a more self-respecting, better-dressed (as her husband is better paid) individual than her English sister. She buys more hats and discards them when they are worn out, rather than when Fashion decrees

¹ Untrimmed hats are packed more easily, the flat brims together, the crowns separately; and with them a model showing how brim and crown should be combined.

² This firm was mentioned by Mrs. Oakeshott in her investigation for the Women's Industrial Council as having a big Colonial trade.

their rejection, and this makes for a greater evenness in trade. It has been said with reference to the growth of Australian millinery trade that although scarcity of labour is a difficulty, there have been many women since the Melbourne Bank crisis who have thought seriously of work for themselves and daughters and of the desirability of self-support, so that the sewing trades, amongst which millinery is one of the most attractive, have received an unusual share of favour.

The following totals (compiled or copied from Board of Trade returns for the years 1900-1909 inclusive) show the general increase in exports to the British possessions and the decrease in those to Australia. Although the figures apply to both hat manufacture and millinery (and it must be remembered that many straw hats are made by wholesale milliners by hand or by machine), there is a closer connection than there seems to be, as Australian hats made in the country would be trimmed or "semi-trimmed" there, while those sent from England can equally well be sent trimmed with bands, braids, cords, cabuchons, or other semi-trimmings.

It will be noticed that exports of hatters' wares to Australia have quadrupled in the ten years, while the exports of hats have diminished by nearly one-half. From these tables one sees that the Australian trade, once more than two-fifths of the total colonial (itself bigger than that with foreign countries), is now less than one-fifth of it. Our trade with New Zealand, Canada, and South Africa is not decreasing, nor in the case of South Africa at any rate is it likely to do so. White labour there is extremely costly, while Kaffir girls cannot be trained to the skilled processes necessary in millinery and hat manufacture. Johannesburg, the gold mine centre, has smart tastes and money to gratify them, and naturally demands more than colonial catering. The South African seasons (*i.e.*, the natural, not the artificial ones) alternate with ours, and this fact causes work for them to be done in our slack times, and mitigates the

TOTAL EXPORTS OF HATS TO THE BRITISH POSSESSIONS.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
	£	£	£	£	£	£	£	£	£	£
Straw ...	327,883	333,384	389,890	349,493	356,294	342,534	347,677	356,129	330,222	369,365
Felt ...	417,155	469,646	435,975	387,915	369,845	378,174	416,341	465,837	416,738	411,908
Other Sorts ...	8,933	15,733	15,078	18,532	24,322	42,859	61,072	68,631	87,346	98,143
TOTALS	752,771	818,763	840,943	755,940	750,461	763,567	825,090	890,597	834,306	879,416
Hatters' Wares...	100,099	93,882	119,400	137,089	139,365	154,178	192,415	232,290	178,841	251,722

EXPORTS OF HATS TO AUSTRALIA.

	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
	£	£	£	£	£	£	£	£	£	£
Straw ...	158,684	151,572	151,662	112,535	129,847	114,495	107,365	101,792	71,642	79,245
Felt ...	144,008	131,566	113,777	80,971	81,096	73,502	82,577	88,335	74,564	66,208
Other Sorts ...	2,762	3,603	1,818	1,795	2,755	5,865	11,141	14,109	22,910	21,550
TOTALS	305,454	286,741	267,257	195,301	213,698	193,862	201,083	204,236	169,116	167,003
Hatters' Wares...	8,796	9,341	14,012	10,681	6,732	14,795	25,749	24,586	26,079	32,532

effects of seasonality. The benefit is felt by wholesale rather than by retail firms, and this is fortunate, as it is the worker there who feels the long slack seasons most, being least able—so far as my inquiries amongst the workers go—to support themselves.

Dovetailing.—It would seem, at first sight, that the sequence of wholesale and retail seasons offers a splendid opportunity for dovetailing of workers, but this is not so. Firstly, it would need an equality in numbers, which actually does not exist. Secondly, it would necessitate a similarity in workmanship, which, again, is not found. The West End worker does not seem to apply for wholesale work in August, as that would disqualify her for returning to West End work and necessitate her leaving the wholesale work when it was at its busiest. If stress of circumstances compelled her to begin City work in this way, she would be likely to continue in it, just as some of the junior millinery hands actually do in other employments which they have entered in their long slack season. The West End worker has neither the speed nor the mechanical regularity of workmanship of the City hand, and the head of a City house says that he can see at a glance by which class of worker a hat has been made. Any power of varying styles, trimmings, colours, shapes, which had to be cultivated in West End work, is useless here, where dozen after dozen of one sort have to be made with all the speed possible. Again, the West End firms, though obliged to employ some City hands in the busy months, April to June, when the wholesale trade is languishing, do not appreciate the character of the work they do. "It is not 'thorough,'" they say, "and calculated to alienate custom on that account." To give an illustration:—A West End girl would sew separately on the brim of the wire skeleton, binding, upper and lower straws; a City girl would do the three in one, thus detracting from the hat's resistance to hard wear. In spite of this, numbers of City hands have to be taken on in the West End busy season

as the supply of workers is not equal to the demand. There are, as has been said, some wholesale houses which do high-class hats (including hats at £10 10s. wholesale), and their workers would differ little or not at all from the West End retail ones, and so easily get work in April, May, and June. Sometimes these transfers are made through buyers, who are acquainted with each other. Some City workers do not seek West End work, but go to their City house daily in a Micawber-like hope of something's turning up, making just a shilling or two a week to cover their travelling expenses, and certainly getting no moral benefit from the demoralising period of lounging. I have heard of a few workers who were waitresses during this slack time, and doubtless those dependent on their earnings try for temporary employment of that sort.

The West End "Season" absorbs a great deal of temporary labour. There are many firms which keep a permanent staff and take on, in addition, "season hands" for three months. These hands seem mainly to be people not in need of earning a living, but content to get good pay for the three busy months. It is astonishing how permanent millinery staffs are, the same girls coming back to their firm year after year after the long period of slackness. Some millinery hands have been with the same firm fifteen, sixteen, or twenty years. Season hands in the wholesale are often married women, who wish to add something to their scanty means. Some firms, when accommodation is limited, employ out-workers during the busiest weeks. Perhaps some of these hands do this in the intervals of some other trade, as Dickens's Jemima Evans, who "to the useful pursuit of shoe-binding superadded that of straw bonnet making."

At Christmas-time both City and West End firms have a period of slackness, in the case of the former extending from early in December to just after Christmas, with the latter from late December to the middle

or latter end of January. Some of the smartest Court milliners are, however, kept from being slack at this time by preparations for the Monte Carlo season. Those girls in houses where millinery forms but one branch of a very large business are needed in the busy departments during Christmas week and again during the preparations for and the duration of the January sales, though some girls are not found capable for such work; these firms, too, are often able to give extra employment to suitable girls at the end of the summer millinery season in connection with the July sales, but sales and bazaars do not absorb all the hands. Those who are not in such firms find work in Christmas bazaars, such as, for example, Gamage's and Boots's. The wholesale workers are most fortunate in this employment, as they are free early in December, while the West End worker is not told till the last moment (late in December) of her discharge, too late to get a post elsewhere, the employer fearing that if he tells her of the likelihood, she will leave him several weeks before he wishes it—while there are still important orders to execute.

Unemployment depends much on the organisation of the head of the department and the personal interest he or she takes in the employee's welfare. In some firms discharge is prevented by the slack time being spent in making articles such as head ornaments for evening wear or in making a big supply of bandeaux and head-lining for the busy season; but this cannot be a general remedy, as in the first instances the head ornaments can be bought more cheaply wholesale, and in the latter case bandeaux may not be needed the next season if Fashion decrees a flat rather than a raised effect, and in any case it would appear bad economy of production to allow skilled hands to do the work generally left (unfairly) to the unpaid apprentice. In some cases the head of the firm has the circumstances of each discharged girl inquired into, and needy cases are dealt with. This, however, does not seem to be general, and there is much resentment at the

arbitrary way in which many discharges are made. A forewoman, if she has to make a definite weekly profit on her table, can, and does sometimes, by equalising amounts, postpone discharges for a few weeks. This, one of them said, she considers only due to girls who, in the busiest weeks, have, by sheer, determined concentration on their work, doubled the normal output. One worker I knew of in a firm of great repute in the world of fashion, was indebted to the employer for philanthropically putting her into another department on half-pay!

Girls in firms which do millinery only, and that of a smart kind, have the longest slack summer period. It is often made a month shorter by the sale in June-July of Paris-bought millinery, the Paris season being earlier than the English.

Some firms have a short busy time in July in preparation for Goodwood (the third week in July), which closes the London season. Again, a little work is created in August by purchases made by American and Colonial visitors; but the general tendency is for Americans to buy in Paris.

In the summer holidays some millinery workers are able to earn a little by renovating or making hats. But this is not a very reliable source, as hats are usually bought before the milliners' slack time occurs.

A suggestion has been made as to the possibility of peripatetic milliners by a business man who commented on the lack of enterprise among them. The travels of waiters are mentioned in one of the chapters of this book, and it seems that some tailors make circular tours from London to Paris, Cairo, and back. The only approach to this in millinery is the case of Paris designers, who are engaged for a month or two in the Paris season, and then come to London for a similar period.

Nothing in the way of combination seems to be done to better the conditions of milliners. The Dressmakers', Milliners', and Mantlemakers' Union of 1878 soon

decayed, and the few in those trades who care to combine belong to the National Federation of Women Workers.

It does not appear that the seasonality of millinery can be avoided (unless the tyrant Fashion is dethroned). Doubtless the better training of girls does something towards obtaining better conditions, as employers are willing to pay in slack times the workers whose services they feel to be indispensable to them. Now that the training of apprenticeship days is tending to disappear, the recently-instituted Trade Schools are most valuable in this respect, though dealing as yet with small numbers.¹ They try to provide against the seasons of unemployment by teaching a variety of processes necessary either for City or West End work; hats of all sorts, in straw, velvet, cloth, leather, fur; children's and infants' as well as ladies' millinery; the making of fancy articles such as the hair ornaments already referred to; the history of fashion; designing, and consequently the selection and harmony of colours and of lines. The girls are also trained to be of good address, so that they can serve customers without awkwardness. Although even training in design will not give a girl taste if she has none, a girl thoroughly trained is a valuable worker and would not be amongst the earliest discharges when the season is waning. Employers who have had millinery girls from the Trade Schools speak highly of them, and they are given 7s. 6d. or 10s. weekly as an initial wage. One can imagine that if all millinery workers were equally well trained and learnt the strength of combination in a Trade Union they could effect an improvement in the conditions of milliners' wages and discharges.

There are many evening millinery classes at technical institutes in which milliners who have been unfortunate in their apprenticeship training may gain more skill and proficiency.

¹ Thirty-five girls trained in Millinery are sent out yearly.

Again, there are organised evening classes in connection with the more important of the fifty clubs composing the London Girls' Club Union, which gives an Annual Exhibition of Club Handicrafts. Millinery girls, however, are said usually not to care so much to gain supplementary knowledge of their own trade as to learn a second, as much for the sake of variety as for expediency. Cases have thus occurred where millinery has been deserted for the apparently non-seasonal trades of embroidery and book-binding. It is to be wondered whether the less attractive but also less seasonal trades of corset-making, waistcoat-making, upholstery, and book-binding will cause a desertion of the more congenial millinery and dressmaking, and thus cause better conditions to arise in them. Their inherent attractiveness probably will prevent any such change, especially as millinery is a trade which more than any other draws the "pocket-money" girl, who, though she may in a way be independent of her employer (*e.g.*, as in an actual case of a girl coming late and not heeding admonitions), yet has a demoralising influence on the trade and is not to be relied upon to fight for better hours and conditions in the same way that self-supporting women are.

Better conditions for milliners, so that the burden of long, unpaid holidays is less felt, can be hoped for in the millinery trade rather than a change in its seasonality. Even the seasonality itself might be mitigated were Fashion less tyrannous. The provincial milliners do not suffer from Fashion as their London sisters do. But nothing will ever stay human cravings after variety, and prevent change of processes such as the already mentioned block straw hat of 'this season which, by supplanting the complex chiffon lace or material hat, has caused some West End millinery girls to be on three-quarter pay already by the end of May, normally the height of the West End activity. Then, too, centralised activity in the wholesale production is merely a feature

¹ Written May, 1910.

of industrialism. While London wholesale houses are distributing centres for all England, their work must needs be heaped up into brief, intensely busy seasons preceding the retail seasons.

Again, even if Utopian dreams of abolishing Fashion were realised, evenness in production would be prevented, especially in this island of ours, by weather conditions. A September which cannot forget August will cause the new millinery to be unsold and the workers to be slack; a rainy spring will prolong the winter season, while an unusually bright and early one will cause earlier and fuller millinery activity.

The only remedies for the evils caused by seasonality in this trade seem to lie in organised dovetailing of trades, and, in view of the very large profits millinery yields, in the payment of millinery workers for slack times or such an adequate payment in busy times as will allow of provision for the period of unemployment, conditions we may hope in the future to see secured by strong combination among the workers.

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THE FUR TRADE

By MARGUERITE BOURAT

IN dealing with seasonality in Industry the Fur trade, from its very nature, seems to afford a striking type of regular annual slackness. At first sight it appears that the primary cause of fluctuation in the Fur industry, whatever branch is considered, is Fashion. This cause does not, however, stand by itself, and many other circumstances come in which we shall see in their proper place. Before proceeding to an analysis of the causes to which is due the seasonal character of the trade it is necessary to be aware of the forms under which this particular industry appears to the investigator.

The Fur industry comprehends two distinct trades :

- (1) Fur dressing,
- (2) Making up of furs,

both being affected by seasonal slackness, but in different ways.

Taken as a whole, the Fur industry is of considerable importance in England. Yet, although London is one of the largest markets of the world for fur skins and the central mart in Europe for seal skins, the number of people engaged in this occupation is relatively small. (In the East End of London the trade is entirely in the hands of Jews, but most of the best City firms are not Jewish.) The Census Report for 1901 gives the figure of 10,760 for the United Kingdom, 6,645 being male workers, 4,115 female workers. As they are described as "Furriers and Skinners," it would seem that in the above numbers are included not only fur dressers and furriers, but also skinners who belong to another trade altogether. It may be convenient to have regard to the

number given for London alone, the industry here dealt with being practically localised in the capital. We have then an aggregate of 2,760 men from 10 to 75 years old, the greater number being of between 25 and 30 (672), and 2,459 women from 15 to 75 years of age, 1,015 of whom are reckoned to be married or widowed. The greatest number of girls (563) are between 15 and 20 years old; the greater number of married women (340) are between 35 and 40.

We may check these statistics by the returns of the Census of Production for 1907. Under the heading "Fancy Fur Factories and Workshops" (including dressing and making up of furs) are given the average numbers of people at work on the last Wednesday of January, April, July, and October. Here we have 2,386 males and 2,305 females for the United Kingdom.

As these statements come from different sources, it may be unwise and misleading to make a comparison. Nevertheless, two things are worth pointing out. First of all, a slight decrease in the total number of workers: to 4,691 in 1907 from 5,219 in 1901; and if we go back to the Census Reports of 1891 and 1881 we find a similar phenomenon. Secondly, a small increase in female as compared with male labour. But, again, we have to note that these statistics are only approximate.

The Fur industry seems to have been carried on in England for a long time. Furs became fashionable here at a very early date. They were known to the Anglo-Saxons and brought into more general use by the Normans. There was, of course, no great variety in early times, and only native furs were worn. But the Crusaders brought back with them skins and furs unknown to their ancestors, and later on the discovery of America increased still further the diversity of furs in use. Venice and Genoa were in these days famous for their fur markets. However, the existence of the Skinners' Company shows us the importance even in

those days of the Fur industry in England. The Skinners ranked alternately with the Merchant Taylors sixth and seventh among the twelve great livery companies of London, and had the organisation common to these companies. The date of its foundation is not clear, but it is mentioned as a trade guild in 1319, and its first Charter was granted by Edward III. in 1327. This Charter, confirmed and enlarged by succeeding monarchs, appears to have consisted of regulations as to the dimensions, package, and other particulars of various kinds concerning the skins, to the manufacturing of furs for wear, to the restriction of selling old and second-hand furs for new ones under pain of forfeiture.

The Skinners were given power to exercise due scrutiny over all articles or men of the same "mystery" selling or working in London or elsewhere, and in any fairs or markets throughout England. One of the duties of the company appears to have been to enforce the sumptuary laws limiting the wearing of furs. The first of these dates back to the reign of Edward III., who confined the wearing of furs in their clothes to "the royal family and to the prelates, earls, barons, knights, and ladies and people of the Holy Church which might expend by year an C^d of their benefices at least."

It is needless to say that in the course of time the Skinners' Company has greatly changed, and that the privileges and power which it enjoyed in its former days are now in abeyance. It does not exercise any jurisdiction over the Fur trade at present.

The earliest record of an English Fur Trading Company dates back to 1578, when an expert was sent out to Newfoundland "to seek for furs."

In 1670 another company was founded in the Hudson Bay territory. But notwithstanding the efforts made the American Fur trade seems to have remained in the hands of the French as long as they possessed Canada—that is to say till 1763. The conquest of

Canada by England established her subjects in the great fur regions, and it was then that English people became really prominent as fur traders. London was naturally chosen as the proper place for the important fur market that has flourished since that day. At present there are ten large companies, which, at times depending on the condition of the animals' furs, collect the fur skins in different parts of the world.

There was a time when the most valuable skins were obtained from the natives in exchange for trifling things. Nowadays the trappers and hunters are no longer ignorant savages ready to barter, on the principle that "a musquet is worth as many skins as will, when piled close, be the height of the weapon from stock to muzzle." Occasionally the barter system may be employed, but under fair conditions based on market value for the man who has secured the furs with toil and risk.

The cruelty towards the hunted fur-bearing animals seems somewhat legendary. It is undeniable that slaughter is slaughter; but the way in which it is carried on is said to be now as humane as possible.

The killing of seals, for instance, is not the sort of butchery formerly described. The animal is clubbed into insensibility before being stabbed. The allegation that ewes are killed to secure the skins of the offspring before they are born is a pure myth; it would be too serious a loss to the owner. The truth is that when a live ewe happens to die, either through illness or accident, her young are taken and the skins secured.

Most of the raw skins are forwarded to London, where they are sold at public auction sales four times a year during *December* or *January*, *March*, *June*, and *October*.

Merchants and furriers of all countries come over to attend the sales and buy the fur skins, which are directly sent to the dressers and dyers.

We come now to the first branch of the Fur industry.

FUR DRESSING.

It would be difficult to ascribe to any particular country the art of dressing skins. It is one of the most primitive industries, and Mr. Poland, quoting Catlin's "North American Indian," says, "The art of dressing, so far as we have it in the civilised world, has been borrowed from the savages. And even in the present days the Kaffir is said to be a splendid dresser of leopards and antelopes, unrivalled by continental dressers."

Besides London there are only a very few places where skins and fur skins are cured. But Leipzig, Hamburg, Paris, and some remote towns in Russia have each their speciality.

Germany, for instance, is unsurpassed in the dressing and dyeing of squirrels, chinchilla, and above all, Persian and Astrakan lambs.

As for the English dressers, they are particularly skilled in the dressing of sables, martens, foxes, and chiefly in the dressing and dyeing of fur seals. This industry is completely localised in the East and South-East of London.

The firms engaged in it may be numbered at twenty, employing each from seven to five hundred workers. Some are mainly dressers, some others are dyers only, while a few are both, and even merchants as well.

Quite exceptionally a firm may be found dealing simply with sheep and goat skins, which are dressed, dyed, and made up as rugs, mats, motor-car rugs, and similar articles on the same premises.

It would be too much to say that such a business is representative; the dressing and making up being generally done quite apart from each other. Such an exceptional firm is interesting, however, as, owing to its methods of management, workers are very slightly affected by the season. In one case into which I made inquiry the staff includes about twenty men and fifty women. The greater number of women is due to the

fact that in the making up of rugs there is a large amount of sewing and lining exclusively done by women. The women workers are kept on all the year round; one-third of the men are dismissed at the end of the summer for three or four months. As a rule they are the youngest workers (the improvers), and often they are the sons of the oldest hands. When the slack time is over they are generally re-engaged.

The workers are on piece. The men earn from 30s. to 45s. a week, the lads 10s. and 12s.; the women get 12s., 17s., and 20s. a week, and the girls begin at 7s.

Coming to the general conditions of the industry, it is carried on in factories, dressing and dyeing being sometimes two separate businesses, sometimes being both pursued under the same roof. All sorts of furs required by the naturalist and the furrier are dealt with: bears, lions, seals, foxes, sables, moles, etc., besides the fur of more common animals, of which the coats are used as substitutes for what are found insufficient in number for the demand of fashion.

In each factory, whatever may be its importance, one finds as many work-places as there are different processes for the furs to pass through.

The treatment of all fur skins—except the seals, which require a special preparation—is much the same. The first stage is the work of the *fleshers*, who are hand workers, and who rid the skins of every bit of flesh. Then come the *washers*, whose work is to remove the natural grease by means of water and soda. This operation is done half by hand, half by machine. After that the skins are allowed to dry. When fully dried they have to be leathered. For that the pelt side is done over with grease, and the skins are thrown into large tubs, where they are treated either by machine or by hand.

The smallest skins (that of the mole, for instance), are not done by machine. They are put in a kind of high barrel, into which the worker gets, and then

treads the skins with bare feet till they have reached the degree of softness required. This work seems monotonous and enslaving. It is painful to see those men moving slowly and regularly always on the same spot, hands and brain at rest, deprived even of the satisfaction of seeing the work they are doing.

At this stage fur skins are handed to women, who comb and beat them, and repair all the defects before sending to the dyers.

The dyeing is full of mysteries, jealously kept secret. During the last twenty years the science of dyeing has been very much improved, and has led to a better utilisation of a great number of furs. Owing to the progress made, the rarest and most expensive furs are beautifully imitated. Musquash, marmot, rabbit, hare, when dyed with art, are splendid substitutes for the seal, sable, fox, and chinchilla. Such successes have induced some unscrupulous retailers to avail themselves of public ignorance. The London Chamber of Commerce has seen fit to issue to the British Trade a notice that misleading terms in advertising and attempts at deception are illegal, rendering offenders liable under the *Merchandise Marks Act*, 1887.

In the case of the real fur seals, their preparation is very much more elaborate than any other, and each operation is performed by a set of workers trained to the task.

First of all the skins are "blubbered." That means that the skins are rubbed over with a blunt knife in order to get rid of the fat or blubber. Although harmless to the man doing it, it is not a pleasant occupation.

After being washed with water and soda while still wet, each skin is put into a kind of frame that keeps it straight. This is what is called "hooping." The hooped skins are then hung in hot chambers, where they stay for about twenty-four hours to dry.

Then comes the important process called "unhairing." It is the removing of the long and hard hairs

that hide the short, soft, and silky ones. That operation, done by hand, requires especial skill. The skins having been soaked to the requisite amount, and heated to a certain degree of temperature, are rubbed with a particular tool, and then, owing to the preparatory process, the long hair only comes out. It is a work that has to be carefully done, as otherwise the skin would be spoiled. After being unhaired, the skins are done over on the pelt side with the oil obtained by melting the blubber, and they are leathered or softened. Sawdust is used to dry them.

When this process is over they are handed to the dyers. Only the hair side is dyed. After being covered several times with black tincture, the skins are again allowed to dry.

The English dye for seals is said to be the best. Not only its constituents, but also the atmosphere and particularly the water of London may be partly responsible for good and lasting results.

Although preference is still given to London work, France, and still more, America, strive to compete in the same field.

The last process is "shaving." It concerns only the pelt side, which must be smooth and white.

It was generally done by hand in the past, and is still so done in some firms. But a machine has been invented—it is said in consequence of a big strike led by the shavers some nine years ago—and has been used ever since in other factories.

This process seems particularly unwholesome because of the dust produced. On the whole the Fur dressing industry cannot by its nature be a healthy one. Particles of hair, sawdust, etc., are not wholesome things to breathe, and the possibility of consumption among fur dressers is obvious. As the statistics in connection with this particular point concern dressers and furriers together, this question will be dealt with later on.

What are the conditions of the workers as regards

wages? Dyers are day workers, and their wages are from 20s. to 30s. a week. Fleshers, blubberers, and shavers are pieceworkers; so are the unhairers. But whereas the former earn a weekly salary of 20s. to 35s., the wages of the latter are much more, being the highest in the trade, although they are lower than they were years ago. There was a time when the unhairers could earn £5 a week. Nowadays £3 10s. a week is the utmost they can get, 50s. being the average. The other labourers employed are time workers, and the women's wages average 15s. to 20s. a week.

As for the hours of labour in every branch, they vary according to the firms from fifty-two to sixty hours a week. Above these figures, hours count as overtime, and are better paid.

Fur dressers are by no means all of English nationality. Half of the dyers are Germans, and among the men employed in the process of leathering a great number are Russians and Poles. But these foreigners do not constitute a floating population, shifting from one country to another. They are living in England, where they have settled, most of them for a long time.

Although it would be interesting to know the number of workers engaged in the fur dressing, it seems quite impossible to discover it. As already said, the number of workers engaged in the Fur industry is not clearly shown in any official statistics. The figure, 4,691, given at the beginning of this Paper, is quite approximate, and, moreover, it concerns dressers and furriers taken together. It seems quite an impossible task to find out the proportion of the one to the other. All we can say is that undoubtedly the former are a smaller number than the latter, and if we risk an approximation we may say that dressers would be about one-fourth of the total number. To be quite accurate, it would be necessary to know among the dressers the proportion of each set of workers, because of the difference of conditions as far as seasonality is concerned. In the dressing of seals,

about six blubberers and as many washers, hoopers, and leatherers keep an average of fifty unhairers at work. But as we do not know the exact total, this information is of no great use.

Coming to the question of seasonality in the trade we may ask: Are the dressers really affected by any slack season? If we consider the workers employed in the dressing of every sort of fur, it seems that, at least in big firms, the slack season does not greatly affect them. Although fashion rules the trade, the dressing is a fairly regular business. We have to remember that it is not spread over every country; there are only a few places where the trade is carried on, and this fact diminishes to a certain extent the chance of competition. Taking also into consideration the perishable nature of the material concerned, we realise the imperative necessity for the raw skins to be dressed as soon as possible, lest they should be spoiled. It seems, then, that the condition of employment depends chiefly upon the amount of fur skins put on the market of London.

Of course, one cannot assume that all the fur skins brought here are necessarily dressed in London.

The annual statements of imports and exports may throw some light on that question, and will at the same time give a general view of the fluctuation of the trade in England. Unfortunately, in former years there was not a distinct statement for dressed and undressed skins. It is only since 1903 that figures are given separately.

It will be seen that a certain number of fur skins comes to London already dressed, and that a large quantity goes abroad undressed. But it may be said, too, that the enormous number of rabbit skins that comes and goes is not altogether for fur purposes. A good many of them go to the hatter, who undertakes the transformation of rabbit skins into felt hats. One of the earliest processes of this trade, the fur-pulling, which was so much spoken of some years ago, is therefore quite outside the Fur industry proper. It belongs

IMPORT OF FOREIGN AND COLONIAL FUR SKINS.

—		UNDRESSED.	VALUE.	DRESSED.	VALUE.
			£		£
1903.	Rabbit	44,026,517		1,372,087	
	Seal	333,843		20,784	
	All sorts	13,848,011		1,633,452	
	Totals	58,208,371	£2,251,339	3,026,323	£411,467
1904.	Rabbit	51,361,264		373,995	
	Seal	328,101		16,815	
	All sorts	10,393,694		3,206,559	
	Totals	62,083,059	£1,697,445	3,597,369	£665,681
1905.	Rabbit	55,707,650		680,154	
	Seal	263,126		8,013	
	All sorts	16,103,592		6,750,703	
	Totals	72,074,368	£2,376,718	7,438,870	£973,091
1906.	Rabbit	76,555,191		673,674	
	Seal	474,277		6,262	
	All sorts	21,224,372		4,326,357	
	Totals	98,254,340	£3,218,369	5,006,293	£708,105
1907.	Rabbit	82,463,081		284,390	
	Seal	186,819		4,609	
	All sorts	17,736,585		2,360,639	
	Totals	100,386,485	£2,847,904	2,649,638	£512,778
1908.	Rabbit	68,548,561		106,568	
	Seal	379,558		9,063	
	All sorts	16,690,141		2,169,527	
	Totals	85,618,260	£2,744,207	2,285,158	£435,348
1909.	Rabbit	66,135,374		537,051	
	Seal	288,055		18,608	
	All sorts	17,960,661		4,856,818	
	Totals	84,384,090	£3,115,573	5,412,477	£1,004,649

SEASONAL TRADES

EXPORT OF THE SAME AND ENGLISH FUR SKINS.

—			UNDRESSED.	VALUE.	DRESSED.	VALUE.
1903.	Rabbit	30,721,036		£	416,149	£
	Seal	68,198			45,530	
	All sorts	11,980,107			1,891,626	
	Totals	42,769,341	£1,591,098		2,353,305	£723,943
1904.	Rabbit	30,880,622			646,184	
	Seal	40,169			52,053	
	All sorts	10,237,001			2,048,387	
	Totals	41,157,792	£1,299,757		2,746,624	£611,438
1905.	Rabbit	37,279,689			330,589	
	Seal	35,091			33,422	
	All sorts	13,710,951			1,015,725	
	Totals	51,025,731	£1,886,309		1,379,736	£610,165
	English	56,082,803	£518,462		621,425	£434,051
1906.	Rabbit	53,388,465			658,038	
	Seal	16,143			36,893	
	All sorts	16,461,006			953,059	
	Totals	69,865,614	£2,507,221		1,647,990	£621,868
	English	64,028,874	£684,165		548,426	£412,206
1907.	Rabbit	55,600,877			389,149	
	Seal	33,686			26,960	
	All sorts	13,595,079			1,184,046	
	Totals	69,229,642	£2,358,353		1,600,155	£582,599
	English	64,194,832	£570,334		686,466	£438,153
1908.	Rabbit	50,648,552			93,789	
	Seal	15,812			12,605	
	All sorts	12,284,131			854,483	
	Totals	62,948,495	£2,103,791		960,877	£434,728
	English	57,367,550	£469,860		1,184,009	£413,373
1909.	Rabbit	17,132,423			404,214	
	Seal	22,232			2,864	
	All sorts	13,579,563			1,028,438	
	Totals	30,734,218	£2,657,022		1,435,516	£406,225
	English	52,195,272	£525,765		1,368,075	£741,544

altogether to the Felt Hat industry, and would be out of place here. Moreover, nowadays, the fur pulling is nearly all done in Belgium and France.

Again, the lack of precise statistics makes us regret the absence of any return on employment showing the effect of the state of the market on the workers. It is hardly of use to give here the returns sent to the Board of Trade by the trade unions. They may be a test as to the exactness of a regular annual slackness, but the state of a trade cannot by any means be proved by the percentage of unemployment in a society which does not count more than 184 members.

The "Fur Skin Dressers' Union" arose, like many other unions, as a consequence of the big strike led by the Dockers twenty years ago. It was founded in November, 1889, and included then about 400 members. The object of the union was to regulate the relations between employers and employed, and in that direction they succeeded in establishing a price list for the dressing of every kind of skin, from that of a bear to that of a mouse. This list has never been given up.

A special fund, to which 2d. a week is allotted, was started, for the payment of a sum at a member's death, and a member's wife's death. No provision has been made for unemployment. They cannot afford it they say.

The number of members has been decreasing every year.

In 1895 there were no more than 377; five years later they had lost a further 89 members. Then after 1900 they declined speedily to the present number of 184. Hence, the affirmation that all the dressers belong to the union leaves room for doubt. . . . Perhaps there could be some probability in the assertion, if it was said that all the seal dressers only, and further still, that only unhairers are united.

Coming back to the question of seasonality, as far as ordinary dressers are concerned, they do not seem to be particularly affected. The biggest sales of January and

March keep them busy. Those of June and October are not generally large enough to supply sufficient work, so there is some slackness before October and December. As a rule workers are not dismissed.

If we consider now the men trained and skilled in the special treatment of fur seals, we have to face a situation quite different to that concerning the ordinary dressers. Here are the labourers who actually know what slack time means in their own trade, as they are practically six months out of work during each year.

This extensive slackness, however, does not affect equally every set of workers. The blubberers, for instance, are generally fleshers and shavers as well. Blubbering and shaving being the first and the last process, it is possible for the same men to undertake both. It may be feared that the shaving machine—requiring fewer men—if generally adopted, will modify the actual state of things in the case of the blubberers, but they can be employed for the treatment of the other fur skins as fleshers.

The dyers have to suffer to a greater extent. They generally begin work in the middle of January; they are kept busy in dyeing seals till the middle of June. Then they are employed in dyeing some other fur skins till about October, after which period they are gradually dismissed; so for them the slack time lasts about three months during the winter.

Lastly, we have the men who are the most affected—the unhairers, who, however, if our conjectures are correct, do not number more than about 200.

They set to work the last week of December—on the 21st about. In certain firms they have done with the seals at the end of April; in some others they are employed again in June and part of July, and possibly in October. Summing up the time they are at work we can reckon for the unhairers not less than five complete months of slackness scattered over the spring, summer, and winter.

We are entitled to think, after what has been said on account of the Union, that the returns supplied by it will be perhaps of some value here to illustrate the extent of the slack season.

We did not choose these following years for any other reason than that since 1904 the Union does not send any figures, but only an "appreciation" of the state of employment.

	1897.			1900.			1903.			1904.		
	Members.	Unemployed.	Percentage.	Members.	Unemployed.	Percentage.	Members.	Unemployed.	Percentage.	Members.	Unemployed.	Percentage.
Jan. ...	377	45	11.9	300	19	6.3	264	4	1.51	268	43	16.
Feb. ...	377	48	12.7	299	11	3.7	281	6	2.13	264	33	12.5
Mar. ...	374	94	25.8	299	3	1.	282	13	4.61	264	36	13.6
Apr. ...	364	98	27.	302	3	1.	282	6	2.12	263	52	19.8
May ...	363	126	34.7	290	5	1.7	280	3	1.	263	61	23.2
June ...	363	240	66.1	292	12	4.1	280	4	1.4	260	92	35.4
July ...	363	246	67.8	290	205	70.7	276	15	5.4	259	148	57.1
Aug. ...	362	246	68.	289	139	48.1	272	195	71.7	256	150	58.6
Sept. ...	359	250	69.6	289	220	76.1	272	192	70.5	256	136	53.1
Oct. ...	354	250	70.6	288	228	79.2	269	120	44.6	258	162	62.7
Nov. ...	353	238	67.4	288	230	79.9	267	148	55.4	258	151	58.5
Dec. ...	353	68	19.3	288	67	23.3	268	41	15.3	255	32	12.5

As may be seen, even if it happens that as many as 80 per cent. of the workers are dismissed during the slackest part of the year, there is a small number who get constant employment. That is because a few big firms do their best to find some job—as dyers, for instance—for their workers, at least, for those they call the "most decent men." The others take up some employment quite out of their trade, as painters, cab-drivers, omnibus-drivers; some become market gardeners, some are engaged in hop-picking and in hop warehouses; some also go to the fur trade, whereas numbers are taken on in the building trade.

Just at the present unhairers are not young men, as for some time they have not trained any more apprentices. It was a decision of the Union not to open the

trade to any more people. Men of sixty are not rare among them. They remember how some twenty years ago they used to work all the year round. In their opinion the cause of their present unemployment is the Convention concerning seal fisheries. This suggestion does not seem clear, and it appears that the real cause is simple enough. It can be reduced to the plain and acknowledged fact that the fur seal species is gradually disappearing. The workers take the effect for the cause in ascribing the decay of their industry to International Convention. Since at least 1867 the protection of fur seals has been in question. When the United States leased the Pribylof Islands, it was stipulated that no more than 100,000 seals would be killed every year, "to prevent the extermination of the species." The lax observation of the provision led to some difficulties, which were settled before a Tribunal of Arbitration held in Paris in 1893, and to-day the fishing of seals in the Behring Sea is regulated by the award of that tribunal. The catching of fur seals is greatly restricted by the limitations of the fishing season and the defining of an exact area in which seals can be killed. Every year since then the number of American skins put on the market of London has diminished. In 1893, 929,478 fur seals were imported from the United States; in 1900 their number had fallen to 48,263, in 1905 to 44,566, in 1909 to 24,556. And the problem to-day is: "Will a decision be arrived at to suspend the catching for a period of ten years?"

Such a decision would be a real blow to the people engaged in the dressing of fur seals.

The fur seal remains highly prized; its rarity enhances its price, and it is said that the English will no longer buy it. So it happens that whilst it comes to London to be sold, most of it goes back to America. For example:

1903	...	45,043	seals were imported	while	34,788	were exported.
1904	...	32,569	" "	" "	19,705	" "
1909	...	24,556	" "	" "	16,843	" "

These figures exclude, of course, the made-up skins going back under the form of garments. In view of this fact, the United States are trying to secure the industry for themselves, and, as already said, they strive to compete with England in the dressing and dyeing of fur seals. Further, in order to handicap the English dressers, the tariff of 1909 established the following duties:

Furs dressed and dyed but not repaired	20% ad val.
Furs dressed and dyed and prepared for use as material...	35% ad val.

It may be said that the result is worth noticing as the same year the export of fur seals to the United States was of 16,549 *undressed* skins, and only 334 *dressed*. So small proportion of dressed seal skins had never been recorded before.

It is very likely that the action of America has induced some English dressers to advocate "Tariff Reform" for their own country. But in doing so, they do not seem, in the present case, to have paid any attention to the circumstances. It seems clear that any duty put on skins coming from America would simply stop the Fur trade between the United States and England.

The United States produce and consume most of the skins they send to London. For what reason on earth would they continue to do so if they had to pay a tax?

As for France and Germany, if they are considered as competitors, at least English dressers have fair play, as exportation of fur skins, either *undressed* or *dressed*, in both countries is completely free of duty.

Although France undertook the dressing and dyeing of fur seals, she seems to give preference to English work, as the quantity of *dressed* seals exported there is always much greater than the amount of *undressed* ones.

For instance, one finds that in

1903	7,273 <i>dressed</i> were	exported to	302 <i>undressed</i> .
1904	35,071 "	" "	2,193 "
1907	18,056 "	" "	77 "

In conclusion, we may say: It does not appear that the unhairers and other people engaged in dressing fur seals have a very good prospect before them. It is to be feared that the fur seals at some future date may remain altogether in the United States. Fashionable people of Europe will have then to satisfy themselves with musquash, coney, or even the common rabbit, skilfully treated and used as substitutes for seal. As for the English workers specially trained in the dressing of fur seals, their fate may be to disappear as do many sets of workers at each stage of the industrial evolution.

MAKING-UP OF FURS.

The making up of furs is the work of the furriers. It constitutes a trade standing by itself, requiring training, intelligence, and a special skill on the part of the workers.

English furriers are not particularly gifted, but are steadier workers than any other workmen engaged in this branch of the trade. The best furriers are either Hungarian, Austrian, German, or Russian. They have generally learned the trade in their own fatherland. After having satisfied the conditions of apprenticeship they leave their country, shifting from one place to another—to Vienna, Berlin, Paris, New York, London, improving themselves in the trade, picking up the way of each country, and learning languages. No one seems to move more readily than a furrier; hence the custom for the manufacturer to exact a written engagement when he comes across a skilful cutter. After some years of a nomad life, our furrier gets married and settles himself where he can earn the highest wages.

Purely English furriers have rarely left London, but it may be said that they are only a few. If not foreigners, good furriers are of foreign extraction, and as such they have inherited the migratory habits of their forefathers. So before the age of thirty they will have been to several other places on the Continent. It may

be believed that in every great centre where the Fur trade is carried on, the same spirit must be observed among the workers.

The facility of displacement of the workers does not seem to count as a corrective to the seasonality of the trade. Before considering the case of seasonality in the making up of furs, however, it is necessary to understand through what processes the fur has to pass, and how the trade is carried on.

First of all, as everybody knows, the work of furriers consists in making coats, jackets, muffs, stoles, etc., and also rugs and mats. Such articles require the assistance of several sets of workers quite distinct and dependent on each other.

The first process is the cutting, performed by the cutter, the highest grade among fur workers. The cutter is the skilled man able to match the skins, and to cut them according to the most fashionable shape, and in the most effective way. Then he gives the article dealt with to the sewer, a woman who sews the skins together, either by machine or, more rarely, by hand. The garment in process of treatment is then handed to the nailor, whose work is to damp thoroughly the skin with water, to stretch it and to nail it down on a board on which the pattern of the article to be made has been traced. The skin is left to dry so that it retains its shape. Next, the parts of the skin overlapping the chalked pattern are cut off, and when unnailed, the different parts of the article are given again to the sewer to be sewn together.

After that follows the work of the finisher, a woman who will put on tails, heads, or whatever is necessary to finish the article. Then comes the final work of the liner.

So we have five sets of people working to make up a fur garment: cutters being men; nailors generally lads; sewers, finishers, and liners, women and girls. The proportion of each of them varies much according to the

fur employed and to the article in process. However, it may be said roughly, that two cutters will keep one nailor and eight women busy.

The mode of remuneration, and the average wages differ with large firms, small manufacturers, and chamber-masters; with the goods dealt with (high, middle, or low class)—all being circumstances that modify the conditions of the workers engaged in the trade.

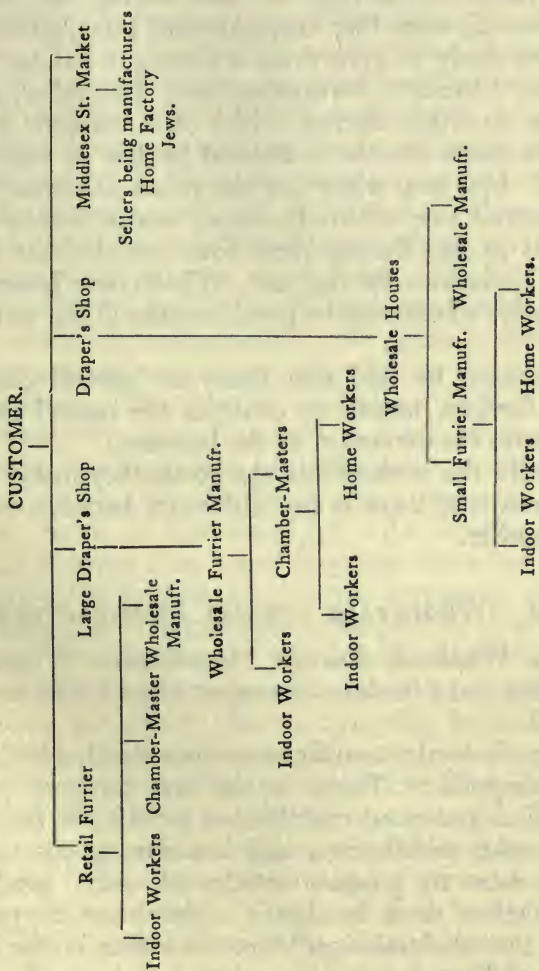
First of all, then, we will consider the customer, who according to her or his taste and means will buy her or his furs either in the retail shop of a practical furrier, or in a large high-class draper's shop, or else in a smaller shop of the same kind, unless satisfied with some choice bargains in Petticoat Lane.

The diagram on p. 262 will show how each of these places is supplied.

I.—RETAIL FURRIER.

The Retail Furrier is generally a man who has a practical and thorough knowledge of the trade. He keeps a shop of a good appearance, and does not sell anything but furs. He buys his skins, good, middle-class, or high-class, according to the part of the town he is settled in. He employs indoor workers, but occasionally he will give some pieces to be made up to a chamber-master, or will get some articles of current demand from the wholesale manufacturer. His workers belong to a good class, and have to produce work of good standard. The cutters will earn from £3 10s. to £4 a week; the nailors from 30s. to 35s.; and the women about 20s. The staff is not large, five to ten people altogether, but they are kept usually all the year round in spite of the slackness of business.

In places of this description, March, April, and May are quite slack. June, July, and August might be slack too, but when a practical furrier has got hold of his customers he may succeed in inducing them to give



advance orders for alterations to which he can during these above said months give better care. He also undertakes the storage of furs during the summer months—all work that keeps his staff busy, although he is quite ready to give them a fortnight holiday. September, October, November, and December are his busiest months, during which his workers toil the longest hours that he is allowed by law to make them work. He, too, when not too much absorbed by the commercial side of his business, works endless hours, as it is in fact during these four months that he will make his income for the year. Then come January and February, which may be good months if the weather is cold.

It cannot be said that there are several classes of retail furriers, unless we consider the capital engaged, and hence the extension of the business.

But for the workers and the goods they make, it does not seem that there is any difference between one firm and another.

II.—WHOLESALE FURRIER MANUFACTURER.

The Wholesale Furrier Manufacturer is usually a capitalist and a business manager; often a skin merchant as well.

The wholesale manufacturers are roughly divided into two categories. Those in the first category produce high-class and good middle-class articles; in the second they make middle-class and low-class goods. All of them claim to produce articles of every grade, but nevertheless there is always a dominant output that ranks the wholesale manufacturer either in the first or the second category.

The first kind supply the largest drapers' shops, and also, as we have seen, the retail fur shops, not only in London, but also all over the United Kingdom. The second kind serve the drapers' shops of a lower class,

sometimes the wholesale houses, and also do the exportation.

The organisation of the wholesale fur manufactures is multiform, and varies a great deal from one firm to another. With a few exceptions everyone of them has a staff of indoor workers, and gives work outdoors to a class of workers called "chamber-masters." According to the firm the indoor staff is of more or less importance, and the number of chamber-masters more or less large. As a clue it may be said that the higher the class of furs dealt with, the larger is the indoor staff, supervision of expensive skins being so much easier. Another difference between the two classes of firms exists with regard to the mode of remuneration. Workers employed in the first category are paid weekly, whereas the others are pieceworkers. The number of indoor workers varies from twenty-five (about) to eighty or one hundred.

Cutters in high-class manufactures receive from £2 10s. to £4; £3 10s. being about the average. A foreman earns no less than £5. As for the cutters working in lower class firms, they may reach the rate of £4 during the busy season, but the average is £2 10s. or perhaps £2. Nailors seem to be paid an equal wage, varying from 20s. to 35s. There is no more difference as far as women are concerned. In both categories the machinists get about 18s. to 25s., the finishers from 16s. to 20s., the liners from 15s. to 18s.

In wholesale manufacture of the first kind, January, February, and March are the slackest months. During that period samples are made and submitted by travelers to the retail shops. Orders being given, they start making stock in April. May and June are gradually busy. July is sometimes calm, then August is again brisk. September, October, November, and December mark the busiest season, October and November—in good years also December—being months of overwork and overtime. The full staff goes on for eight or nine months. In a very few firms workers are kept on all

the year round. More generally part of them are dismissed when the slack season comes. In some firms one-half of the workers are dismissed; in others not more than one-third or one-fifth.

The larger the indoor staff, the greater the number of dismissed people. It is easy to understand that when a big firm keeps only a small number of indoor workers, the chamber-masters employed are more numerous; so the risk of seasonality lies nearly altogether with them. The evil of slackness is always inflicted on someone. Of course, the proportion of dismissed workers of each set is in direct ratio to the already mentioned proportion between set and set. If two cutters are turned out so will be one nailor and eight women.

The way of selecting their workers when the slack season comes is in some firms as follows: Each worker has the account of the work he has done; those who proved themselves quick and skilled are certainly kept during the slack months, as the manager is anxious to secure good workers for the time when he wants them. A clever cutter will rather be kept idle than be lost for the firm. So for a woman. If she is able to finish, to line, and sometimes to machine as well, she will be kept all the year round more surely than a woman who can do only one sort of work.

Workers in the second category are affected in the same way. There are some exceptions, however, especially when the wholesale manufacturer is engaged in the export trade. Then there is, so to speak, no slack time at all. Some parts of the year are better than others, but work never stops.

January is the slackest month. February, March, and April are fairly busy; May, June, and July are quieter; August, September, October, and November very busy; December gradually quiet. Workers are not dismissed as a rule; they are put on short time. As they are pieceworkers, the result is a reduction of their wages.

In such firms the output of work is more important than a high standard.

III.—SMALL FURRIER MANUFACTURER.

The Small Furrier Manufacturers supply the Fur department of wholesale houses. They buy the skins and make up garments, caps, rugs, or mats, etc. Sometimes they undertake the two kinds of work indifferently. It happens also that some are retailers to the public as well.

Small manufacturers are generally Jews and foreigners for the first or second generation in England. Their workshops are situated in the East End.

There are several classes among them. Some buy decent skins—never expensive—as they do not do high-class work. Some others go round to the manufacturers, the chamber-masters, and buy pieces of skins that fall off when an article is cut. That means for their workers a great amount of sewing.

The better class of small manufacturers employ about eight to twelve indoor pieceworkers. Cutters are paid £2 to £3 a week, nailors 12s., machinists 8s. to 10s., finishers 15s. to 20s. They are mostly dismissed when the slack season comes. During the busiest part of the year sewing is given to women working at home; they are pieceworkers, and can earn about 8s. to 10s. a week when they get work.

As a rule the fluctuations are as follows: January very slack indeed; February also, although better; also March; April, May, June, and July are good; August slack; then come the very busy months, September, October, November, and December.

The small manufacturers of the lowest class are closely akin to the seller in Petticoat Lane. They start business when they have succeeded in saving a small capital of £50 to £100—even less. The back yard of their house is arranged as well as possible as a workplace, divided into two parts: one for the workers, the other

for the skins. The neighbourhood of Commercial Road is their quarter.

They may employ a cutter of very low grade, but they themselves are generally vaguely cutters. A lad and three or four women complete the staff. A vast amount of sewing is required.

Workers are paid 8s., 10s., and 12s. a week.

Slackness begins sometimes about the end of November or December. In January, February, and March they make samples; April, May, even June are possibly slack. They can hardly make stock unless they have orders from the wholesale houses; they could not afford it.

Then July, August, September, October, November are the months during which they must earn enough for keeping their business all the year: very poor business, as it is easy to imagine.

It is difficult to say if workers are dismissed. In that case only women would be affected by the slack season. But, as already pointed out, machinery is the chief work in such places, rugs, muffs, stoles, etc., being made out from wasted tails and small pieces of skins of a few inches square.

IV.—CHAMBER-MASTERS.

Chamber-masters considered in themselves are interesting types—at least, the high-class chamber-masters. They are generally foreigners or of foreign extraction—Hungarians, Austrians, Germans. They have learnt thoroughly the trade, sometimes in their own country, sometimes in England under their father's direction. They speak of it with a sort of fervour; it does not seem that they ever thought of taking up another trade; they were born furriers. They work chiefly for the wholesale furrier manufacturers, and occasionally for the retail furrier. They are given the skins, which they have to convert into all sorts of

articles, the price for each piece being fixed by an agreement between the employer and the chamber-master.

There are at least two classes of chamber-masters: (a) Those dealing with good middle-class and even high-class furs; (b) those working on middle-class furs. The class (a) employ from about ten up to twenty-five workers. Very often they work for one firm only, and it may happen that they are specialists; one will deal with sables, another with foxes, etc.

One finds as usual cutters, nailors, and sewers. Cutters are paid from £2 to £3 5s. a week; nailors about 30s.; machinists from 18s. to 25s.; finishers 15s. to 18s. It is interesting to notice that workers are paid weekly, and that their wages are about the same as those paid to the wholesale furriers.

It is so much the more astonishing that the chamber-master stands anyhow as a middleman between the employer and the workers. But one must bear in mind that here the best chamber-masters are concerned, that they work for the first class of wholesale manufacturers, and that it is their own interest to employ skilled workers. And the only way of selecting and securing them is to pay them the same rate they would have as indoor workers at the manufacture.

Besides, a clever and conscientious chamber-master is favoured by the firm for which he works, and, as far as possible, is kept busy all the year round. So it is possible to find a few of that kind who do not dismiss their staff. But as a rule workers employed by a chamber-master are mostly turned out during January and February, the slackest part of the year.

The class (b) is said to be engaged in a decent form of "sweating," and one will be ready to believe that this is so after the reluctance which those who belong to that class show to supply any information to the investigator. Without any great precision, it may be said that a cutter is not paid more than 30s. or 35s. a week, and that the average rate for women is 10s. to 12s. They

employ about four or five people; sometimes more, but not beyond twelve as far as we understand.

It seems that liners are mostly home workers. Of the indoor workers, half, and perhaps more, are dismissed during the slack season, which begins the last week of December and lasts till the end of April. Then the busy time comes gradually till September; October, November, and three weeks of December being the busiest part of the year.

V.—JEWISH HOME FACTORY.

Under this heading the investigator will have to tell mostly what is said, unfortunately, rather than what she saw. A visit to Petticoat Lane on a Sunday morning gives one the opportunity of enjoying the most picturesque sight in London. All the mercantile gift of the Jewish race is shown there with its entire vividness and its persuasive eloquence. Streets are packed with wanderers, eventual buyers of some bargain if it offers itself to them. Old and new things of the most heterogeneous kinds are exposed to tempt them, and even in May you find half a dozen handcarts loaded with stoles, muffs, neckties, etc., of very poor and nameless furs. Such articles are said to be made by the seller himself with the assistance of his own family. Sometimes he will take one or two of his fellow-countrymen, chiefly Russians, no more furriers than he was himself once upon a time, but who, being homeless and penniless, are only too happy to grasp the opportunity of getting a few shillings and at the same time to pick up some notion of a trade.

Such men, with their characteristic racial energy and will, generally get on sooner or later, and after a few years of experience become either petty masters like their first employer or small furrier manufacturers like those previously described.

As for the conditions of these home factories, the investigator must confess that in spite of her most

diligent efforts, she has not been able to discover any of them; she can neither give information nor say if they are like the sordid, filthy rooms described in Mr. Charles Booth's "Life and Labour of the People." There is no reason for that not being so. However, according to the Jewish Board of Guardians, things have been very much altered in the last twenty years, and perhaps one finds such bad cases rather seldom.

Poverty has diminished, as is shown by the percentage of furriers recipient of relief. After being in 1885 and for about ten years far over 2 per cent. of the assisted Jews, the proportion was no more than 1.18 in 1900 and 1.05 in 1910.

Another proof of some improvement is the relatively small number of phthisical furriers who came in 1910 under the notice of the Sanitary Committee.

According to the same source of information a strict application of the Factory Laws has highly contributed to the betterment of the conditions formerly observed.

We hope that so far a fair idea has been given concerning the structure of the trade as it is carried on in London, its chief centre in England.

It may be added that high-class dressmakers' and tailors' or drapers' shops have sometimes a fur department kept by a good cutter and his usual set of workers. His situation in such a case is exceptional, his responsibility being greater; his wages possibly reach £5 a week. But women do not get more than the average rates.

Although the Fur trade is a very skilled one, it is amazing indeed to come across so few apprentices. It seems, indeed, that each generation of grown-up workers is supplied to England by foreign countries. Besides, the system of apprenticeship is not so precisely organised as it is on the Continent. Here every nailor, a lad who has been taken as a "boy," is a candidate to the grade of cutter. If he is intelligent, the foreman or the

chamber-master may happen to be specially interested in him and help his assistant to become a good cutter. The nailor of less aptitude, after some years, will give himself as a cutter without having received any special training. Of course his prospects are more precarious.

An initiative has been taken by the Skinners' Company, which has instituted a class for furriers at the Northampton Institute, which is one of their foundations. Two courses of instruction are given there from January to June, twice a week, by an intelligent practical furrier. The first, or Elementary course, is for apprentices and others who have not been long in the trade, and its object is to lay a good foundation for a thorough knowledge of furriers' work in all its branches. The second, or Advanced course, is chiefly attended by cutters wishing to improve themselves. There is no limitation of age; the students are from 15 up to 40 years old.

Another interesting effort is made by the Jewish Board of Guardians. In order to encourage regular apprenticeship the Industrial Committee in 1867 started a workshop to apprentice girls in the art of needlework. Some years later, giving more extension to this form of intelligent assistance, it undertook, as a loan to a boy or a girl, to pay a premium to some employers willing to teach thoroughly their own trade. In 1880 only three boys applied for being furriers; in 1900 no more than two. In 1905 the figure rose suddenly to twenty-one, and in 1910 to forty-three.

The ordinary sum lent is about £17, and is gradually repaid out of the weekly earnings of the boy. The apprenticeship is for three years. At the end of the first year an apprentice receives 5s. a week; the second year, 10s.; and the third year, 15s.

In 1910 eleven girls asked to enter as apprentices in the trade, as compared with four and five in 1909 and 1908. For them the time is only about twelve months.

Although it is said that some women are cutters, this

grade of work does not seem to be coveted by any of them. Besides, their work is by no means a step towards it. The few who have reached it are, it appears, chamber-masters' daughters who are trained by their fathers.

Men are in a good position and have no fear of being ousted by women in this particular branch of employment. An effort is being made to bring female workers into the Union. For there is a Union for furriers, though a very small one, whose fate has been particularly hard. It started in 1891 with 500 members; in 1900 it broke down. It started again with 120 members, but once more did not prove to be very successful, and actually is again in way of reorganisation. Its first failure seems to have been due to some misunderstanding between the English and foreign members. After some years there was a division, and an "International Union" was founded. At the present time it has disappeared, and the new Union is trying to bring a new "*entente*" between English and foreign furriers.

It may be said also that though chamber-masters are not openly against the Trade Union, the every-day intercourses, the sort of comradeship that generally exists between them and their workers, prevent to some extent the numerous class of people employed by the chamber-masters from joining the Union.

Above all, the real bugbear of the Union is perhaps the fairly good position of the furriers. Its only claim seems to have been the Eight Hours Day. In its strong time it succeeded in obtaining it in one large firm. In another the employer readily accepted the motion under the conditions that all the staff should be dismissed during the slack time. This unpleasant prospect induced the workers to withdraw their request, and they deserted the Union.

From the statements given it may be understood that on the whole the making up of furs is relatively a good trade. There is no abject poverty among furriers.

As far as cutters are concerned, we have seen that the more skilled they are the less they are affected by unemployment and the higher are their wages.

As for those of less ability, who risk being dismissed, they can in good years get some casual job in their own trade: for instance, in a firm doing the export. If not, they can usually afford to stay idle for some weeks. When the slackness lasts beyond the normal time, then perhaps they will be obliged to put some of their most valuable belongings in pawn, or they will find a friend ready to lend them £1 or so. But they get quickly over such bad days. When the season starts again, they directly earn at least £2 a week, and they can free themselves of the debt contracted during the idle time.

Nailors are generally lads—learners. They are fewer in number than cutters, and, as a matter of fact, the effect of slackness is not very noticeable for them. One finds some men also among them, but they are not workers with any prospect in the trade. The case was given of a nailor who would not stay for any period over six months in the firm. He is associated with another man who is engaged in a seasonal industry also. They keep a newspaper-shop half of the year each, so when one starts in his trade the other has to come to the shop in order to carry on the business.

A few others are dressers as well, their slackest season being precisely the busiest in the making up of furs. As for the women, one finds the usual conditions common to female workers. They come to the trade at about 14; when they get married they mostly leave it, but do not lose touch with their employer, for during the three or four busiest months they generally come back to help or are given some work at home. Sometimes, after a few years, they come back altogether.

In a big firm of the East End, when the season is over, part of the girls are occupied in the boxes department in the same firm and so are not dismissed.

As far as liners are concerned, they are not such skilled

workers as the others. Lining of fur articles is not, so to speak, a speciality. Generally, therefore, they are employed for the same kind of work, either at home or indoors, in the mantle trade. Moreover, they are in rather small numbers, fur articles being sometimes lined with furs as well, and in that case lining belongs to the finisher's work.

So far back as an old furrier can remember women in England have always been employed in the trade; and, it is pretty certain, for more than a century. It was not so on the Continent, as it is only a short time since sewing was done by women. This fact will explain to a certain extent the reason why Jewish girls, who are foreigners as a rule, were not found in the trade some twenty years ago according to Mr. Charles Booth's investigation. Nowadays they compose generally the full staff of the small manufacturer. Their entry into the trade was simultaneous with the introduction of the sewing machine for fur work, and is encouraged by the Jewish Board of Guardians who, as already mentioned, are ready to pay a premium, if necessary, for them to learn the trade.

If the Fur trade offers a fairly good situation to the workers, its hygienic conditions are most objectionable, and rank it among the most unhealthy of all trades. The statistics given in the Report of Deaths concern furriers and skimmers indiscriminately and deal only with male workers. Taking the whole, if one compares the death-rate of people engaged in the Fur industry with those of printers and lead workers, for instance—two very unhealthy industries, as everyone knows—one finds that the death-rates in the Fur trade are in most cases higher:—

	15	20	25	35	45	55	65
Furriers %	3.71	4.42	8.74	13.59	20.90	54.05	165.94
Printers %	3.21	6.07	6.62	10.81	18.58	33.91	95.94
Lead Workers ... %	3.58	5.54	7.48	12.84	21.11	66.67	151.82

The percentage of death through suicide is very low indeed. That may be taken as a proof of the absence of real distress and misery.

If the seasonal character of the trade does not cause the workers to be plunged into destitution at least it has a far-reaching deleterious influence on the health of the workers.

Coming to the causes of seasonality we have already said that the primary one is Fashion. It would seem that furs, being rationally worn during the cold season, the sole cause of fluctuation would be the weather. It would be so if the wearing of furs was a necessity imposed by vigorous winter, but in England, like every country enjoying a temperate climate, fur wearing is a luxury, and as such is chiefly ruled by Fashion. This fact has become more and more noticeable during the last twenty years. The progress in the science of dyeing and in the increased skill of workmanship have enabled fur skins to be treated in a much larger variety of ways than formerly. Therefore some improvement has been brought into the style of making up furs; dainty and attractive garments are produced by elaborate combinations of furs, and the result has been to increase the demands, but also to change the situation of the workers.

There was a time when most of the articles belonged to a predictable current demand for consecutive years; there was no risk then in making "stock" of them; the work was fairly regular because the drapers did not hesitate to give orders as soon as samples were ready—that is to say, in March and April. Nowadays the drapers dare not risk such an enterprise; instead of dozens, they will order three or four pieces of some chosen samples with which they will try the taste of their customers, when the season of wearing furs is about to commence. So the stock made by the manufacturers, being at his entire risk, he waits as long as possible, and here is the reason why furriers are overworked during October and November. They have to

supply immediate demands, not only for new articles, but also for alteration of those out of date. It is a terrible rush. For three or four months workers are absolutely overwhelmed, toiling as long hours as they can in crowded rooms, escaping regulations of the laws, if possible; for it is cheaper for the manager to pay a fine than to miss the work of his people, and the justification of this is that in the first busy month only is the output as great as it is during the four or five previous months together.

There is no time to waste for cleaning the place thoroughly; the workers labour in a filthy atmosphere loaded with particles of hair and dust. However good and perfect hygienic conditions may be in a workroom, when work is going at full speed, they become the worst possible.

Besides fashion, weather is not without its influence on the trade, and has to be taken into account as well. But there is a third cause, more important, and that is over-speculation. Let us suppose some particular kind of fur, some particular article, has received the favour of the public. Directly that fur is in greater demand on the market, quantities of this article are made. But then two causes spring up to stop the sale of it or the fancy for such fur. First of all, the increase of the price following the increasing demand for it. Secondly, during the gradual rising of price the consumer has looked for a less expensive sort of fur, cheaper because neglected by fashion; he has also perhaps got tired of his fancy, his mind turns to another, as a consequence such or such kind of fur falls in public esteem for several years.

According to those who have a long experience of the trade, Fashion and Over-speculation have to be ranked as the main causes of the fluctuations in the trade; weather coming third, and, according to the circumstances, injuring or improving the state of business.

To summarise, it may be said that the Fur industry

has evolved in more recent times in a cycle of three successive periods:—

(a) A normal period, during which the average employment was eight months a year;

(b) A period of super-activity, when the employment was about ten months;

(c) A period of depression which brings the employment down to an average of six months.

Such is the situation of the trade to-day, and one can picture what influence this has on the workers. It seems that as a remedy for this seasonality, to begin with, the education of the public would be to a certain extent effective. If fashionable ladies were well informed of the conditions of the workers; if they were aware that, even for themselves, for the sake of the work they want to be done, it would be of some advantage not to send their furs to be altered at the very moment when furriers are over-worked by the making up of new articles, this would be in itself a great relief for those employed, and a partial corrective to the evil of seasonality.

Another suggestion is worth noticing, made to the present writer by an employer: the compulsion through legislation of constant employment for the workers. It is scarcely more just to take the best of a man when one needs him, and afterwards to throw him on the scrap-heap till he is wanted again, than it is to make a child toil sixteen hours a day, or to oblige work-people to toil in a room without air and light. The State has justified its gradual interference. Factory laws have proved themselves successful. Why cannot a step farther be taken?

And to be complete and fair such legislation would not be limited to one country; every concern in that way is common to all civilised parts of the world. There is place for such a question in an international conference.

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THE BOOT AND SHOE TRADE

By CONSTANCE CALVER

"Ho ! workers of the old time, styled
The Gentle Craft of Leather."—*Whittier.*

THE above lines bring to us the memories of an age long gone by when the craft of "showmaking," with its busy "cobeler," enjoyed an uncontested place in the nation's industries.

Probably no other trade has experienced greater change, both in the style of article produced and in the method of production, than this craft of shoemaking. From the sandal of plaited grass with soles of palm fronds; or, where climate demanded greater protection, the shoe shaped out of a simple piece of untanned leather laced with a thong. From these two forms came the shoe of mediæval times.¹

It was not till the eleventh century, when Englishmen mingled with Saracens, that shoemaking came to be designated a craft, and the craftsmen cordwainers;² this was the age when the Guilds controlled industry, and soon sprang up the Cordwainers' Guild with its Cordwainers' Hall. No fantastic shoe of curious design called forth the artistic instinct of the "shoemaker," for all boots and shoes (so ran the first ordinance of 1272) were to be made of durable calf hide. Nevertheless, the craftsman, while plying with bristle and thread, fed his imagination with the romantic incidents surrounding the life of his patron Saint, Crispin, and figured in the rollicking plays of Merrie England.

As time went on the cravings for more elaborate toilets influenced the style of footwear, and people of

¹ See "Royal and Historic Gloves and Shoes" by Redfern, London, 1904.

² A form of Cordouan, the name applied to the Saracens, whose metropolis was the city of Cordua.

³ Festival October 25th, see "Delightful History of the Gentle Craft" by Campion, Northampton, 1876, pp. 23-25.

quality desired elaborate shoes of thin material, with the toes curled upwards and fastened to the knees by cords of silk or chains of gold or silver.¹ These in turn gave place to the extreme broad toes which in Mary's reign needed an Act of Parliament to keep them to the modest limit of six inches wide. Then the changes of fashion were rung on high heels and low heels, and to-day one season demands one shape, the next an opposite one, so that the shoemaker of the present time is incessantly changing the shape and pitch of his lasts to suit the ever-varying demands of fashion.

Such a change as that of the fourteenth century greatly affected the workers. The less skilful were unable to train their fingers to deftly handle the lighter materials, and consequently dropped from the ranks of craftsmen and became the cobblers who lived "by the awl and meddled with no tradesmen's matters, nor women's matters, but with awl." In fact, the line of demarcation between a cobbler and a cordwainer became so rigid that an agreement to define clearly the work of the one and of the other was drawn up in 1395.² In spite of this, the cobbler did meddle with tradesmen's matters, and nearly three hundred years later a special letter from "his most dread lord, the King" was required to bring these meddlesome cobblers to a state of peaceful living.³ Whether the King's stern commands were of much avail is greatly to be questioned, for the cobbler comes down to us not only as a botcher but as a maker of shoes even if they be of a somewhat clumsy kind, and he, as well as his fellow-worker, the cordwainer, can be found as near to our own times as the last decade of the nineteenth century, the cobbler mending and making, the cordwainer, with loving care and artistic feeling, fashioning the more highly finished article. In fact, to-day, the cobbler makes as well as mends.

¹ Introduced from France in 1388. Probably adopted by the Duke of Anjou to hide a bunion.

² "Memorials of London and London Life," by H. T. Riley, pp. 539-541.

³ Ordinance of 1680.

But the old order has changed and machinery has invaded this "gentle craft" and made it the field for fierce struggling competition. Factories, large and small, in some of which about a thousand hands are employed, have sprung up in various towns and districts.² Some of these supply the large and small retail shops and the foreign and colonial markets. Others, in addition to this, have retail shops in which only their own manufactures are offered for sale.

The method of sub-contracting, by which a man took out from the factory dozens of pairs to be finished, is an almost obsolete practice. The adoption of machinery for finishing as well as for most other branches of the trade makes it impossible for the sub-contractor to turn out work at a price below the cost of the machine processes. And so throughout the country heavy and light boots, walking shoes, evening shoes and slippers are produced entirely factory made with almost dashing speed.

Nevertheless, hand-sewn boots and shoes are by no means driven out from the markets, and without doubt there is no other industry which can tell of so large a proportion of handworkers as the boot and shoe trade.

It must be remembered that the term hand-sewn is only applicable to the sole of the boot, for hand-work for uppers has entirely given place to the machine. The hand-closer, excepting for long boots, is not needed. The fitter, usually a woman, finds her work done by the holding-on machine.³ Consequently the manufacturer of hand-sewn boots and shoes has various methods for obtaining the uppers. A few are able to run their own

¹ The material embodied in the following paragraphs has been gained by visits to factories and to homes of workers in East London and Norwich. Conversations with proprietors of retail shops and their workmen, with secretaries of Trade organisations for masters and men, and correspondence with various people connected with the trade.

² These in order of importance are Leicester, Northampton, Kettering, Norwich, Manchester, London, Leeds, Bristol, and others.

³ Some maintain that the work of the fitter is better. The process necessitates more machines with the cost of their regular wear and tear, and no time is really saved.

factories or small workshops in which the uppers are produced; others employ clickers to cut out the uppers and then give them out to women to be machined in their homes; others, with smaller clientèle, send their measures to a factory which supplies a number of similar shops; others resort to a leather seller who stocks uppers made to two or three fittings for running sizes; and whichever method is adopted the uppers when finished are given out to bottomers to attach the soles by the hand-sewn process.

This part of the work is entirely performed in the homes of the workers, and, although machine work is almost its equal in most branches, the workers have maintained a fairly remunerative wage, varying from 7s. to 12s. per pair, so that a workman of average quickness can earn 40s. to 45s. weekly, a slower worker 33s., and a very quick worker as much as 80s.

So very little entire unemployment is experienced that no out-of-work fund is connected with the Hand-sewn Workers' Union. When the shopkeepers book few orders the workers obtain odd pairs from private sources and thereby earn more than an out-of-work fund would pay.

It is true that the busy season is not the same for all departments (May to July for light walking boots and shoes, July to September for shooting and hunting boots, September to December for heavy walking boots), but very rarely can a man who usually works on light boots turn out a smart, well-finished article of the heavier kind, and never is there dovetailing between even the heavy walking boots and hunting and shooting boots. Inasmuch as some London firms employ provincial workmen,¹ these are able to profit from the slight

¹ The following extract refers to a similar practice in the eighteenth century: "Journeyman earn 9/- or 10/- a week. Country shoemakers supply most of the sale-shops in Town, the price being too large to allow these shop-keepers to employ London workmen." See the *London Tradesmen*, being a historical account of all trades now practised in the cities of London and Westminster. London, 1747, pp. 216-219.

variation between the London season and that of the provinces.

Belonging to the hand-sewn branch of the trade but produced under somewhat different conditions is the sew-round or turn-shoe,¹ a thin, single-soled shoe, made in glacé, patent, suède, silk, satin, velvet, and other delicate materials.² Like the other kinds of hand-sewn boots and shoes, some are made to measure and are given out to the home-worker in single pairs, but the bulk of sew-round shoes are made entirely under factory supervision. The uppers are manufactured in the factories, and from thence are taken by the workers to their homes to be bottomed.

In sewing the sole to the upper several interesting processes are involved, and, since the work is generally divided between a man and a woman or a boy, it is possible in the visit of half an hour to see all the stages. The man seated on a low stool before his bench lasts the shoe, channels, and otherwise prepares the soles; the woman—often his wife or his daughter, or his son—sews the inside of the sole on to the inside of the upper (this can be done in fifteen or twenty minutes); the man turns the shoe from the inside to the outside, relasts, and then finishes the shoe. If the seat of work is regular, the grade of work first or second-class, the wife a careful manager, and the family small in number, then a separate room can be spared for the work. But, unhappily, all

¹ The terms sew-round and turn-shoe when used in the strict sense are applied the former to the hand-sewn shoe, the latter to the machine-made.

² Some firms invoice it as a slipper. It is not easy to draw a distinction between shoe and slipper. A slipper is made in all the materials enumerated above, and also in felt, camel's hair cloth, and in a cheap, hard material—a kind of leather—and is generally easy fitting with moderately low heels. On the other hand, the shoe has higher heels, narrower toes, and waist more arched. The chief centre for the slipper proper is Rossendale, near Manchester, where the output per month approaches one million pairs. The process of manufacture is in some parts similar to that of the sew-round. The slippers are sewn by a woman, turned by a woman, lasted by a man, put on to a lathe to steam into shape. Sometimes there are two soles fastened together with a solution, and these are also sewn by women like single soles and afterwards turned. Other districts for the manufacture of slippers are East London and Leeds.

these conditions do not fall to the lot of the average shoemaker, and he is obliged to earn his daily bread in a room which serves as the kitchen and general room for the family or in a bedroom. The atmosphere of such rooms may be anything but healthy, particularly if the room be a basement kitchen. On the other hand, the upper rooms of a large house with windows overlooking a garden stocked with trees, although by no means the ideal home, has very little to be dubbed insanitary. And in these varying surroundings are made the shoes for dancing, for the comfortable fireside, for domestic work, at prices varying from 1s. 6d. to 7d. per pair.

A quick man and his sewer can make eighteen to twenty pairs a day, or one hundred a week; a moderately slow man who employs no sewer can make forty-eight pairs a week; or twenty-six workers can easily turn out a thousand pairs a week. When the wages of the sewer (who is paid one-third of the price), and the cost of grindery are deducted, and the time of slack work considered, the average wage is less than 28s. per week; although there are a few first-class workers who are regularly employed and regularly earn about 40s. weekly. This latter is a fairly remunerative wage, but at the other end of the scale is found the cheap, sweated labour of the alien who, for the miserable pittance of 3½d. per pair, makes the notorious slipper sold in retail shops for 1s. 11½d.

The period from February, 1910, to May, 1911, has been an exceptionally good one for sew-round work. For fully ten years such prosperity has not been known. The time of slack work—January to May—has gone by without the enforced idleness of previous years, and there is no indication that the months that are to come will belie their usual character of busy ones. The reasons assigned for the prosperity are the great increase in the export of this particular article, and the smaller output of the turn-shoe—almost an isolated instance of

a return to the hand-made article after a trial of the machine-made one.¹

If the sew-round shoe is more than ever maintaining its place, it is much to be regretted that a dislike to the trade is everywhere so manifest. The plan of twenty, or even ten years ago, by which a father taught his girls to sew and his boys to last and finish, is no longer followed, and the reasons are clearly given by the workers. They complain that the bending position is detrimental to full, natural inflation of the lungs; that the work is too sedentary; that the chest wall is pushed inward by the process of turning the shoe; that it is impossible to earn sufficient in the short, brisk season to provide for the slack time. These drawbacks, however, can be remedied. Years ago a West End London shoemaker pointed out the evils and suggested remedies;² and the men themselves admit that it is quite possible to perform 75 per cent. to 80 per cent. of the work standing or sitting, so that these ailments may be things of the past. The objection of chest disfigurement can be overcome by firmly fixing the shoe, ready to be turned, on a perfectly steadfast pillar; and the last deterrent, if the present position of the department is maintained, is correcting itself.

When it is remembered that rivetted work first appeared at the exhibition of 1851, that machine work began to compete in the early seventies, and still hand-work continues, and in the metropolitan district employs over a thousand hands, it seems a pity that a branch of the trade in which the skill of the workers is so largely called into play, should not remain a flourishing one and continue alongside the machine—the one a relic of the past, the other an example of modern machine developments.

¹ The complaints brought up against the turn shoe are—lack of durability, lack of pliability of sole, and risk of damage to delicate materials when placed in the machine. Within the last sixteen months firms have almost ceased to run their machines and returned to the hand-sewn process.

² Upright shoemaking. An address to working shoemakers on the evils of the seat, by J. S. Hall, London. (?)

In fact, machinery is the keyword to boot and shoe-making of the twentieth century. If through the courtesy of a proprietor permission is granted to look over a boot and shoe factory, with about two exceptions from first to last the visitor will see all the processes performed by machinery.

For the upper of the boot or shoe patterns are necessary for the various parts (tops—two pieces, vamp or golosh, and perhaps toe-cap). These are cut out in zinc or paste-board by a graded machine so constructed that from one pattern any ordinary size in three or four different fittings can be produced by the simple adjustment of a small wheel. These patterns are used by the clicker who, with broad knife, cuts out the several pieces from skins of glacé and other kinds. The parts are then tied up in bundles with a descriptive label attached and sent to the machine-room. The three hundred machines are running with comparatively noiseless speed, worked by electric power. Every device for saving labour and for quickness is evident; no time is spent in winding spools or taking off the thread; the two or three rows of stitching required for the vamps are done at the same time; nine button-holes can be strongly and neatly worked in five minutes; the work of the fitter is generally dispensed with by the holding-on machine; and thus the upper is finished. The sole for the boots are cut out and shaped by heavy machines with thick and strong knives. Suitable bottom stuff is selected according to a descriptive label, a duplicate of that used in the clicking and machine-rooms, and then the uppers, with their labels, are tied to the soles with the duplicate labels and passed on to the bottoming department.

Here are the greatest marvels of machine invention. After the upper has been placed on the last and tightly tacked to it, the lasting machine firmly pulls over the upper, at the same time tacking it with self-fed tacks. The soles, previously channelled by the machine, are sewn on in about a minute, and in the case of the hand-

sewn-machine process the method is such that only the expert can tell that it is not hand-sewn. All the work of finishing (which ten years ago was hand work) is dexterously performed by machines with wheel-like revolving stones for rubbing the soles, tiny wheels of different sizes and shapes for the edges, a special process for heel-balling the heels, other wheels for polishing the heels, and revolving brushes with special bristles for removing dust and loose particles. The boot thus finished is passed to the drying-room and finally boxed. When it is remembered that a factory with modern machinery as here described can turn out 20,000 pairs weekly, and has 150,000 pairs weekly circulating through its rooms, some idea will be gained of the briskness and speed going on within its walls.

But in consequence of the immense amount of labour-saving processes, the worker becomes chiefly an operator depending on his alertness for continuance of employment.

Boys are employed to wait upon the men, and so learn to become operators or clickers. Few firms receive boys as apprentices. They are of opinion that the boys learn more quickly when thrown on their own resources. Up to the age of 18 the employers reserve freedom of control, and pay the wage they consider fair. Above the age of 18 payment is given according to the agreement of January, 1909.¹ Before a worker can receive the minimum wage, he must work three years at the trade after reaching the age of 18, and must have had at

¹ Provisional agreement between the Federated Associations and the National Union, signed January, 1909: "That male operatives . . . shall be employed under the following graduated scale of wages:—

"On attaining the age of 18 years, 18/- per week.

"	"	"	19	"	22/-	"
"	"	"	20	"	26/-	"
"	"	"	21	"	30/-	"

"This scale to be subject to adjustment where the minimum wage is less than 30/-."

In January, 1911, the minimum wage was less than 30/- in the following towns: Leeds, 29/-; Scottish East Coast, 29/-; Kingswood, 28/-; Stafford and Wolverhampton, 29/-; Anstey, Hinckley and District, 28/-; Norwich, 28/-; Rushden and District, 29/-.

least three years' experience prior to attaining that age. Therefore it appears that six years is considered the average time in which to become a competent worker. It is also the rule that not more than one boy (under 19) shall be employed to every three men (over 19).

Of the men, at least six grades may be mentioned: The clicker, who cuts out the several portions of the upper and whose skill is exercised in gaining from the skin the largest possible quantity, and in placing his patterns so as to avoid flaws; the finisher, who either operates with the finishing machine or who does the work by hand; the laster, who prepares for the lasting machine, attends to its operations, or who does the work by hand; the pressman, who works the machine for sole-cutting and cuts rough stuff; the fitter-up, who is employed in putting the outer and middle soles together with regard to substance and quality as suited to the special kind of boot or shoe; the sorter, who sorts out soles, insoles, stiffeners, and middles with regard to quality and substance—all these work by piece or by time, and if by time the number of pairs they do is booked so that the week's work may be equivalent to the week's pay.

Although the minimum wage ranges from 26s. to 30s., according to the grade and district of the worker, since very few workers can report fifty-two weeks of fifty-two and a half hours per week for the work of any one year, it follows that the lowest grade wage of 26s. is not at all the average weekly wage. Indeed, if tables in the *Labour Gazette* for the first four months of 1911 for the London district be scrutinised the average weekly wage is barely 22s. 7d.; whereas in the Abstract of Labour Statistics dealing with the last working week of September, 1906, the average weekly wage per man

	Workers	Earnings	Av. per head.
1 January	2,536	2,782	21/11
February	3,034	3,355	22/1
March	2,708	3,120	23/-
April	2,600	3,029	23/3

is given at 28s. 3d. Women and girls are mainly employed with the uppers. The more skilful are engaged in machining the various parts; in the less up-to-date factories they fit the uppers (that is, turn down edges and paste seams together) for the machine (see note, p. 286); and the girls clean and finish the uppers, clean and finish the soles (where the latest finishing machines are not used), and some box the goods.

It has been extremely difficult to induce the women to band themselves together in trade unions, consequently it is almost impossible to obtain a general rate of wage, but from different statements given in the subjoined note¹ it seems to work out at about 9s. per week. In Leicester, where the women have combined to form a union, the wages of a machinist working full time on piece-work are 20s. to 27s. and 28s. per week; working by time they are 18s. to 25s.

Since there are no trades which dovetail with the boot and shoe trade, the shoemaker has no opportunity for earning money during the months of seasonal slackness. From the tables found at the end of the chapter, by comparing columns A and B it is noticed that the months which rank as high months for numbers employed are not always best for wages paid. For example, February, 1907 and 1908, in Table A, shows high numbers of workers, but in Table B not high pay; the probable explanation is that the season had started, but the people were not working full time.

¹ Patent repairers (time)	.. ..	8/-.
Boxers (piece)	.. ..	7/- to 14/-, slow workers 3/-.
Upper cleaners (time)	.. ..	5/3 to 8/- (in 1910, 19 weeks out of work).
Upper finishers	.. ..	8/-.
Bottom finishers (time)	.. ..	9/-.
” ” (piece)	.. ..	15/- to 16/-.
Machinists	.. ..	7/- (several weeks 4/3)
”	.. ..	9/-.
”	.. ..	9/-, + bonus of about 3/- if work was there.

Another firm paid to machinists 14/-, 15/-, 16/-, and 17/-; but short time in 1910 brought the 15/- wage down to 13/5.

In Table B, February, 1910, by exception, ranks as one of the best months for wages, but at this time several districts were starting a higher minimum wage.

From these points it seems fairly accurate to conclude that in spite of the turn-shoe season being August to December, the really busiest months are April and May.

It is also noticeable that in Table D, December, 1909, when large consignments were shipped to America, the generally slack August became a busy month; and a similar improvement is seen in October, 1910. Therefore it appears within the bounds of reason to hope that the increase of exports will diminish the seasonality of the trade, and this will be still further helped if the War Office can be induced to place its orders so that they can be executed in a period of slack work.

In the matter of trade organisations the boot and shoe trade shows a fair amount of activity. Employers have formed an Incorporated Federated Association of Boot and Shoe Manufacturers, comprising fourteen federated associations with an aggregate membership of 250 persons, companies, or partnership firms, and thirty-six non-federated associations with a membership of almost 500.

There are two other societies which cannot be classed among trade unions—United Clickers' and Assistants' Benevolent and Pension Society, founded in 1860, to provide pensions for disabled workers and a grant for necessitous widows. The yearly premiums are from 5s. to 10s., according to age, and the weekly pensions vary from 4s. to 10s., according to length of membership. The members number 130 and the pensioners fourteen (June, 1911); and the Clickers' and Assistants' Benefit Society, which provides sick benefit of about 18s. per week for six months and funeral expenses of about £18, the premiums are about 10s. 6d. and 12s. 6d. per quarter.

Of trade unions, the National Union of Boot and Shoe Operatives, which numbers 30,268 members, and

the Amalgamated Society of Boot and Shoe-makers, are the chief. Others are the London and Provincial Union of Hand-sewn Men, with 510 members; the Aberdeen Boot and Shoe-makers' Union, with thirty-two members; the Glasgow Operatives of Boot and Shoe-makers, with 154 members; the Edinburgh Operative Cordwainers, with 163 members (these are all hand-sewn workers); the Oldham Boot and Shoe Trades Association, with 110 members, of whom some are boot retailers as well as repairers; the Leeds Jewish Slipper-makers, with about forty members; and the Rossendale Union of Boot, Shoe and Slipper Operatives, numbering about 2,000.

There is one separate branch for women, in Leicester, with 614 members, and women numbering 700 belong to the Rossendale Union of Boot and Shoe and Slipper Operatives, and 800 to the National Union of Boot and Shoe Operatives.

But the total membership falls very far below the number of shoemakers, 197,555, of whom 191,270 were employed, as given in the Census of 1901.

For the more speedy and fairer settlement of disputes between employers and workers the Conference of 1892 agreed to the formation of Arbitration and Conciliation Boards.¹ These have been established in twenty-five English trade centres and two Scottish centres. As a result a number of awards have been granted and disputes settled (see Bibliography). In connection with the Trade Unions are funds for sickness and funeral expenses. For employers the manufacturers have formed the Manufacturers' Benevolent Association, which provides annuities of £20 to £29 for widows and £26 to £35 for men, and speedy relief in urgent cases. In January, 1911, there were thirty-four

¹ The Board shall consist of an equal number of employers and workmen, with one arbitrator elected by the employers and one by the workmen, who, when appointed, shall elect a third arbitrator or umpire; or, if both parties agree, a sole arbitrator may be appointed to represent the whole.

annuitants and eight residents in the Association's fifteen homes at Mortlake.

The question naturally arises—What is the position of the shoemaker to-day as compared with ten years ago? The figures of the Board of Trade previously referred to will supply some part of the answer.

In Table A the monthly average of the number of workers from 1901 to 1909 shows a steady increase, but in 1910 a slight decrease. The decrease for the year is small, but when the numbers for the early months of this year (1911) are taken into account and the unusual activity in sew-round work considered, there is some indication that the workers may soon find that the demand for labour is considerably less than the supply. There is no evidence that the output of boots and shoes has diminished—indeed, judging by the exports of the early months of 1911, the output appears to have increased and yet slack time is reported from several centres of industry. The reason for the short time is not far to seek—it is the introduction of machinery by which the output is doubled and trebled, but the demand for workers lessened.

As a case in point, in March, 1911, a firm introduced into the factory a machine of improved principles for lasting women's boots and dismissed eighty operatives; and this is not an isolated instance. The machine is ready for any expansion of trade. If a firm finds that orders are accumulating, the extra work will not be done by putting on more hands, but by purchasing more machines.

But short time is really a wage question, and it becomes such here. For, although in 1910 and 1911 several provincial districts secured a shilling advance on the minimum wage, there has been no increase in the average weekly wage for the United Kingdom. It has really been lowered to 19s. 2d. as compared with 19s. 9d. given in Abstract of Labour Statistics for 1906. With

these industrial conditions is it possible for the shoemaker to feel optimistic of the future?

For generations shoemaking has ranked as an inferior industry and its workers have been regarded as unreliable and undisciplined,¹ and yet it reckons among its followers such men as Sir Cloudesley Shovel, William Carey, George Fox, J. G. Whittier, Robert Bloomfield, Thomas Cooper, and George Odger—men who have played no insignificant part in the world's history, men who were not contented to leave things worse than they found them. Probably the shoemaker of twenty-five or more years ago may have kept "Saint Monday" and indulged in its proverbial indiscretions.² But times are changed, and the man who wants to maintain his position in the factory must be there on Monday as well as on Saturday, and the wage of to-day leaves no margin for weekly frolics and recreations. Perhaps he is no worse off than his neighbours, but, however true that may be, it seems somewhat permissible to plead for shorter hours and a higher minimum wage so that the much-abused shoemaker may have a better chance in the struggle for existence and may not know in such a practical sense where the shoe pinches.

¹ It is related that a deputation of working men waited on Sir Robert Peel to lay the wants of the trade societies before him. The two selected to speak were shoemakers. "How is it," said Sir Robert, "that you shoemakers are found in every movement? If there is a plot, or conspiracy, or insurrection, or political movement, I always find there is a shoemaker in the fray."

² A cutting from an Edinburgh magazine, entitled "Working Classes of Edinburgh," illustrates this: "Shoemakers work late on Saturday night, often lie in bed all Sunday morning, lounge in listlessness during the afternoon, drink all Monday, are sick and taking physic on Tuesday, and return to work on Wednesday."

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SEASONAL TRADES

A.

NUMBER OF WORKPEOPLE EMPLOYED.

	1907.	1908.	1909.	1910.	1911.
January	61,761	61,862	64,158	62,771	63,338
February.. ..	62,591	63,579	64,681	64,597	65,305
March	62,724	63,732	63,732	65,018	66,789
April	62,093	62,142	65,459	66,496	61,153
May	61,954	64,286	65,590	55,236	—
June	61,279	62,776	62,432	63,354	—
July	58,791	62,312	60,861	60,337	—
August	60,955	63,373	65,233	64,917	—
September ..	59,459	62,847	63,157	64,957	—
October	61,216	62,964	63,553	65,964	—
November ..	59,856	63,458	63,069	62,748	—
December ..	62,242	60,724	58,960	62,570	—
Monthly Average.	61,222	62,896	63,407	63,247	—

B.

EARNINGS IN POUNDS.

	1907.	1908.	1909.	1910.	1911.
January	58,943	59,146	60,542	59,399	60,692
February.. ..	60,518	61,598	61,583	63,208	63,113
March	61,263	61,742	60,452	64,605	64,555
April	61,308	61,804	62,308	66,137	59,834
May	62,344	62,782	64,364	53,109	—
June	58,440	59,938	59,185	60,530	—
July	54,772	60,143	57,237	58,147	—
August	56,971	60,211	60,741	61,971	—
September ..	54,942	58,227	58,671	61,533	—
October	58,124	58,481	59,179	62,199	—
November ..	56,781	58,317	59,068	58,453	—
December ..	61,074	55,769	55,792	58,982	—
Average Weekly Wage per person	19s. 2d.	19s. 3d.	18s. 10d.	19s. 2d.	—

C.

IMPORTS IN POUNDS.

	1907.	1908.	1909.	1910.	1911.
January	66,470	62,386	65,448	61,212	57,252
February	71,279	72,875	68,525	80,898	48,409
March	91,012	80,207	70,593	79,355	73,782
April	71,479	80,238	85,889	65,402	74,634
May	85,510	72,817	74,584	81,057	—
June	67,592	51,571	67,974	74,197	—
July	54,866	63,340	70,037	42,062	—
August	61,910	54,275	74,103	86,345	—
September	62,018	72,942	90,433	89,828	—
October	96,114	104,514	89,475	81,930	—
November	63,216	56,982	75,155	66,870	—
December	56,188	56,872	68,903	60,279	—
Monthly Average	70,637	61,243	75,093	70,786	—

D.

EXPORTS IN POUNDS.

	1907.	1908.	1909.	1910.	1911.
January	168,195	184,357	191,013	218,726	282,856
February	178,689	195,833	190,157	256,478	289,349
March	190,127	199,295	219,419	283,926	341,080
April	185,413	164,720	174,694	275,031	277,809
May	169,998	163,031	167,150	234,862	—
June	155,955	169,651	171,133	232,584	—
July	226,955	209,486	243,742	297,563	—
August	233,736	207,712	224,134	285,818	—
September	216,412	210,024	244,895	309,631	—
October	226,197	246,708	251,482	324,215	—
November	212,767	196,279	242,647	287,449	—
December	191,601	186,767	251,854	299,984	—
Monthly Average	196,337	194,488	214,360	275,522	—

THE BUILDING TRADE

By AUGUSTUS D. WEBB, B.Sc. (Econ.)

IT might be supposed that the trade which provided man with his dwellings, shops, and meeting-places, kept them in repair, made alterations to them, decorated them, and when necessary demolished and replaced them, would be characterised by regularity of employment and gradual but constant expansion. In fact, however, it is a trade which affords a most marked instance of irregularity and discontinuity of employment. The demand for the builder's work fluctuates from year to year, and month to month; the demand for the work of the different branches of the trade changes as new methods of construction come into vogue and new materials are used.

The Building trade is one of the most important in the country. The total number of males engaged in it in the United Kingdom, as recorded at the Census of 1901, was about 1,100,000, or nearly 9 per cent. of the total occupied male population aged 10 years and upwards. It is probable that of this number not far short of 1,000,000 were wage-earners, while at the present time (1912) the number must be considerably more than 1,000,000. The trade is essentially an occupation for males, although the Census authorities do not fail to record a certain small number of female builders, carpenters, joiners, plumbers, bricklayers, masons, slaters, tilers, plasterers, etc. But these gentle workers are doubtless the owners of businesses, and not employees. Yet the male can hardly regard the Building trade as his preserve for ever, when it is reported that,

in Chemnitz, women are employed "as labourers at such work as mortar carrying"¹

The sub-divisions or branches of the Building trade are numerous, several of them forming separate "trades." They include brick-layers, carpenters, joiners, plumbers, painters, decorators, plasterers, lath-renders and lathers, paper-hangers, glaziers, masons, slaters and tilers, fitters (for iron or steel framework), gas fitters, hot-water fitters, electricians, mill-sawyers, wood-cutting machinists, general smiths, locksmiths, bell-hangers, excavators or builders' navvies, scaffolders, timber men, brick-layers' labourers, masons' labourers, carpenters' labourers, plumbers' mates, painters' labourers, plasterers' labourers, builders' labourers, engine and crane drivers, and handy men. Carpenters and joiners form roughly one-third of the total, and brick-layers, masons, and their labourers another third.

These names, in most cases, sufficiently indicate the nature of the several trades denoted by them. The difference between carpentry and joinery is defined by Mr. C. H. Gregory² as follows: "Carpentry includes all structural work, and is usually of a heavy nature, the material being prepared and fixed on the building. Joinery includes the internal fittings of an ornamental as well as useful nature, the material being prepared in the workshop and brought to the building to which it is to be fixed." The line of demarcation is, however, not a rigid one, and the two trades are frequently combined by the same person.

Although, on the big jobs, the several branches of the Building trade are kept distinct from one another, there is, on the smaller jobs, a good deal of overlapping and indistinctness of boundary between them. For example, plumbers sometimes do the work of the gas fitter and hot-water fitter; painters, on occasion, become decorators

¹ Cost of living of the Working Classes in Germany. Page 142.

[Cd. 4032] 1908.

² A Glossary of Building Construction for beginners. London: J. Haslam & Co. Ltd., 1910.

and paper-hangers; plasterers and brick-layers do much of the work of the tiler and slater. The small speculative builder, whose habitat is the suburbs of our growing towns, and also the small jobbing builder, employ men who have a smattering of many trades and do the work of each as occasion requires.

Some of these trades are not entirely confined to the building group—for example, electricians, carpenters, mill-sawyers, locksmiths, engine and crane drivers, and masons are common to other industries. The builders' labourer, too, is very often only a more or less temporarily specialised form of the "general labourer." "Everyone without a special calling calls himself a builders' labourer or general labourer."¹ Unfortunately for the building trade, such a person not only "calls" himself a builders' labourer, but endeavours to become one.

Besides the various trades which have been enumerated, there are intimately connected with the Building trade architects, engineers, and quantity surveyors, as well as timber merchants, gas-fitting makers, lock-makers, brick-makers, engineers' tool makers, and many others who furnish the Building trade with its plant and "raw materials." For present purposes, however, we shall limit the definition of the Building trade to those workers directly engaged in "the construction, alteration, repair, decoration, or demolition of buildings, including the manufacture of any fittings of wood of a kind commonly made in builders' workshops or yards."² Groundwork construction, in which navvies are so largely employed, shipbuilding, cabinet and furniture making, are considered as outside the Building trade.³

The ranks of the wage-earners in this trade are recruited in various ways. Boys enter the trade, make themselves useful, "pick up" particular branches of the

¹ Poor Law Report : Appendix volume xvi., page 43.

² The National Insurance Act, 1911. Sixth Schedule.

³ Many of the statistics of unemployment, however, unavoidably cover carpenters engaged in shipbuilding, and perhaps other industries.

trade, become "improvers," and in time full-fledged artisans. Young men enter in large numbers, pass from shop to shop, acquiring something useful here and something there, until they, too, take their place as skilled workers. Brick-layers' labourers, especially in the country districts, often become brick-layers. Plumbers' mates "under 25 may become plumbers if they have the ability."¹ Many men "jostle into the trade," as a general foreman expressed it, by starting as handy men to small country or suburban builders. The London trade is very largely recruited from the provinces.

Apprenticeship, which used to be fairly general as a means of entering the Building trade, seems to be gradually dying out. In London it has almost vanished, and the London lad has usually to "pick up" the trade as best he can, turning out very often an inferior workman, unable to compete successfully with the better-trained migrant from the provinces.² Outside London, apprenticeship still prevails to a fair extent, especially in the North of England and in Scotland. This system, and the all-round training which a worker gets in a small builder's business in the country, are more than a match for the specialised and more or less indifferent training acquired haphazard by the Londoner, and readily account for the large number of provincial men found in the London trade. Interesting light on the proportions of apprentices in different parts of the kingdom is thrown by the recent Board of Trade inquiry into the earnings and hours of labour in the Building trade in 1906. The figures are as follows. They cover only firms which made returns to the Board of Trade, but they are believed to be fairly representative:—

¹ London County Council: Report of the Special Sub-Committee on the Building Trades, 1899.

² "'Picking up,' indeed, is probably the most usual method through which the trade is now entered by London lads, but it tends to produce inferior workmen." N. B. Dearle: "Problems of Unemployment in the London Building Trades."

	Apprentices per 1000 workpeople (other than im- provers, appren- tices, lads and boys).
London	13
Northern Counties and Cleveland ...	201
Yorkshire (excluding Cleveland), Lan- cashire, and Cheshire	137
North-west Midland Counties ...	97
Rest of England and Wales	78
Scotland	253
Ireland	110

A builder's foreman stated that there are "any number of Scotchmen" in the London trade, while, from another source, we learn that only a few "South-erners" were to be found in the Scotch Building trade.¹ The ratios of apprentices to workmen, as shown above, help to explain this.

The men, whether skilled or unskilled, are engaged and dismissed by the foreman. Their engagement is subject to termination by an hour's notice on either side. Many men follow from job to job particular foremen, whom they know, and who in turn are satisfied with the capabilities of the men. A more or less large proportion of men, however, are taken on by the foremen for particular jobs without any previous acquaintance. Their efficiency is soon tested during the first few hours' work, and, if not satisfactory, an hour's notice or an hour's pay will get rid of them. There is, accordingly, no guarantee of continuous employment, even for the duration of one job, and there is no fixed and regular mode of engaging men. They may be taken by foremen from the "vacant book" of the Trade Unions; those known to foremen may be written to when jobs are starting; the men themselves disseminate information respecting vacancies; while numbers tramp

¹ London County Council report cited above.

from place to place in smaller or larger areas, where building work is being done, and offer their services to the foreman in charge.

The recently-established service of Board of Trade Labour Exchanges is now beginning to fulfil the useful function of a clearing-house for labour in the Building trade, and, it is to be hoped, will in time supplant the prevailing means of supplying labour. Meanwhile, it is clear that these unorganised methods of obtaining work, with their tendency to promote and maintain numerous independent "pools of labour," must complicate the question of employment. To this question attention may now be directed.

The function of the Building trade—the construction, repair, etc., of buildings—intimately relates it to what is vaguely called the "general state of prosperity or depression" of the country. Man must, in our climate, live in houses, and must transact most of his business in shops. The natural growth of population necessarily involves new construction. But at a time of depression a saving on house-rent is attempted, and people crowd into less house room; when business is restricted, shops, offices, and warehouses are not enlarged or multiplied; and, generally, when depression prevails, alterations, repairs, decoration, and even demolition are minimised. But when the country is experiencing a wave of prosperity, house-room is expanded, shops, warehouses, and offices are enlarged and increased, and repairs and decorative work are put in hand.

All these changes which accompany, and indeed are partly the sign of, growing prosperity or depression, must obviously alter the volume of employment in the Building trade. We should, therefore, expect the course of employment in that trade to be correlated with the well-known cycles which characterise modern industrial conditions.

Unfortunately, there are no statistics of employment or unemployment in existence which cover all industrial

workers, or even all workers in the Building trades. The best statistics available over a long period are the percentages of Trade Unionists unemployed, published by the Board of Trade. The principal trades for which information is given, together with the number of members in the Union making the returns in April, 1912,¹ are:—

	Membership of Trade Unions which reported in April, 1912.
Building (carpenters and joiners and plumbers only)	65,286
Coal mining	153,015
Iron and steel	22,041
Engineering	193,125
Ship-building	68,879
Other metal trades	28,419
Textiles	132,503
Paper, printing, and bookbinding ...	65,127
Furnishing and woodworking ...	41,381
Clothing	49,373
Miscellaneous	13,870
Total	833,019

The Trade Unions included in this table pay unemployed benefit to their members, so that the number unemployed at any time can be ascertained with a fair degree of accuracy, although, in some cases, those unemployed members who have "run out of benefit," and those who have not completed the qualifying period entitling to benefit, may be omitted. The Unions report to the Board of Trade the number of their members (so far as known) unemployed at the end of each month, persons on strike or locked out, sick or superannuated, being excluded.

It will be obvious that percentages of unemployment so arrived at are very limited in their scope. The monthly percentages relate only to one day, and the annual percentages are the average of twelve such

¹ Board of Trade *Labour Gazette*, May, 1912.

days, and since the days are not taken at random, it is doubtful, on general grounds, how far they can be regarded as typical of the whole year. Further, the figures relate to skilled workers, and to only a small fraction of them. They cannot, therefore, be held to apply, absolutely, to the whole body of industrial workers, estimated at some 12,000,000,¹ skilled and unskilled, organised and unorganised, young and old, and of both sexes. They cannot even be accepted as an exact statement of the unemployment experienced by skilled or organised workers alone. Trade Unionists number some 2,500,000 persons, and the unemployment percentage is based on returns covering only a third of this number. And in this third, the engineering, ship-building, and metal groups, in which the fluctuations of employment are greatest and the depressions deepest, are over-represented, while important industries in which employment is comparatively steady, as, for example, agriculture and railways, are not represented at all.

Taking the Building trade, with which we are immediately concerned, it is seen that figures are available for carpenters, joiners, and plumbers alone. Seasonal unemployment in these trades is less than among bricklayers, masons, and painters, for whom, and for other trades, unemployment statistics are not available. It has been calculated that unemployment in the whole of the Building trade is, in fact, approximately double that experienced by carpenters and plumbers.²

Further, when important changes in methods of construction are proceeding rapidly, as at the present time, there is a natural tendency for unemployment to become worse in those trades adversely affected by such changes relatively to unemployment in other trades, which are either unaffected by these changes

¹ Including workers engaged in agriculture.

² Report of Actuary on the Scheme for Insurance Against Unemployment embodied in the National Insurance Bill. H.C. 162. 1911.

or benefited by them. This tendency will, of course, be neutralised when the supply of labour has adjusted itself to the new demand. It happens that carpenters and joiners, among others, are being hard hit by the new ferro-concrete method of construction, and this tends to give to the figures of unemployment for this trade somewhat less validity as an index to unemployment in the Building trades as a whole, than could formerly be claimed for them. The effect of such an influence as this on the figures is, however, probably small, and can safely be neglected when broad features and general changes are under consideration.

When all these criticisms have been passed on the Board of Trade percentages of unemployment, those percentages, although they cannot be used as a complete statement of the amount of unemployment existing at any given time among all wage-earners (and no one claims this application for them), can, nevertheless, be accepted as a good index to *changes* in the general volume of employment. In the words of the late Mr. A. Wilson Fox, C.B., before the recent Poor Law Commission, they show "whether employment is going up or down, whether it is better or whether it is worse."¹ This much, indeed, as already suggested, may be claimed for the unemployment percentages of carpenters and joiners, that is, that they reflect the general movements in the whole Building trade. The following series of figures are therefore given as a fair guide to the course of employment during the last fifty years (*a*) in industry generally, and (*b*) in the Building trades. The percentages in column (1) have been corrected by the Board

¹ For a more complete and detailed discussion of the Trade Union percentages of unemployment, the reader is referred to: The Second Series of Memoranda, Statistical Tables and Charts, prepared by the Board of Trade with reference to British and Foreign Trade and Industrial Conditions. Section III. (Cd. 2337) 1904; The evidence of Mr. A. Wilson Fox, C.B., before the Poor Law Commission (from which the above quotation is taken) and the papers put in by the Board of Trade in connection therewith, printed in Appendix volume IX. (Cd. 5068); The Report of the Actuary on the Scheme for Insurance Against Unemployment (H.C. 162) 1911.

of Trade to allow for changes in the relative numbers in the engineering, ship-building, and metal group of Trade Unions.¹ In the last column the general industrial character of each year is stated.

Year.	Corrected Percentage Unemployed in all Trade Unions making Returns. ²	Percentage Unemployed among Amalgamated Carpenters and Joiners. ²	General Character of Year. ³
	(1)	(2)	(3)
1860	1.85	0.2	Prosperity.
1861	3.70	1.8	Cotton Famine.
1862	6.05	1.8	Distress.
1863	4.70	1.2	Revival.
1864	1.90	0.4	Prosperity.
1865	1.80 —	0.3 —	Wild speculation.
1866	2.65	1.1	Crash (Overends, Gurney).
1867	6.30	3.0	Depression.
1868	6.75	2.9	"
1869	5.95	3.6	"
1870	3.75	3.7	Revival.
1871	1.65	2.5	General Prosperity.
1872	0.95 —	1.2	" By leaps and bounds."
1873	1.15	0.9	" Never more prosperous."
1874	1.60	0.8	Highest point of prosperity.
1875	2.20	0.6 —	Declining Prosperity.
1876	3.40	0.7	Depression.
1877	4.40	1.2	"
1878	6.25	3.5	Distress.
1879	10.70	8.2	Culmination of distress.
1880	5.25	6.1	Slight improvement.
1881	3.55	5.2	—
1882	2.35 —	3.5 —	" The golden year of shipbuilding."
1883	2.60	3.6	—
1884	7.15	4.7	Depression.

¹ See Appendix volume ix. (appendix xxi. (B)) to Report of Poor Law Commission. (Cd. 5068.) 1910.

² Appendix Vol. IX. to Report of Poor Law Commission (Cd. 5,068) ; and Fourteenth Abstract of Labour Statistics of the United Kingdom 1908-1909 (Cd. 5,458).

³ Report of Royal Commission on Poor Laws (Cd. 4,499).

(Figures of maximum unemployment are in heavy type. The dashes indicate the figures of minimum unemployment).

Year.	Corrected Percentage Unemployed in all Trade Unions making Returns.	Percentage Unemployed among Amalgamated Carpenters and Joiners.	General Character of Year.
	(1)	(2)	(3)
1885	8.55	7.1	Distress.
1886	9.55	8.2	Culmination of distress.
1887	7.15	6.5	Revival.
1888	4.15	5.7	Marked revival.
1889	2.05 —	3.0	Prosperity.
1890	2.10	2.2	"
1891	3.40	1.9 —	Decline.
1892	6.20	3.1	Depression.
1893	7.70	3.1	"
1894	7.20	4.3	Settled depression (Baring's crash).
1895	6.00	4.4	Revival.
1896	3.35	1.3	Slow revival.
1897	3.45	1.2	Prosperity.
1898	2.95	0.9 —	"
1899	2.05 —	1.2	Great prosperity.
1900	2.45	2.6	Culmination of prosperity.
1901	3.35	3.9	Slow ebb.
1902	4.20	4.0	"
1903	5.00	4.4	Depression.
1904	6.40	7.3	Distress.
1905	5.25	8.0	Revival.
1906	3.70 —	6.9 —	Prosperity.
1907	3.95	7.3	Prosperity and decline.
1908	8.65	11.6	Decline.
1909	8.70	11.7	—
1910	5.10	8.3	Revival.

Three things will be observed from this table :—

- (1) That the years of greatest depression or greatest prosperity in the Building trade, as represented by carpenters and joiners, do not always synchronise with those of greatest depression or prosperity in industry generally.

- (2) That employment in the Building trade follows sympathetically the cyclic movement covering from six to eleven years, which is characteristic of industry in general; and
- (3) That in addition to this cyclic movement, the Building trade appears to experience a long period fluctuation of about twice the length of the ordinary cycle.

There is a general consensus of opinion that the Building trade is one of the last to feel a depression in industry and also one of the last to recover from it. "During 'boom' years contracts are entered into and carried out during depression, but after depression caution leads to few contracts."¹

There is a natural hesitation on the part of traders to commit themselves to heavy expenditure on building work until a rising wave of prosperity has bred some measure of confidence in its stability. With prosperity, too, comes extension of business and trade in all directions, and this involves building work either in new construction or in alterations. The decline in prosperity finds the business and commercial community committed to building work which keeps the building trade busy when most other trades have already begun to feel the oncoming depression. Not only are business premises extended, altered, or reconstructed in times of prosperity, but ordinary houseroom is also extended, and building speculation becomes rife. Hence, in the subsequent depression, complaint is often heard that the towns have been overbuilt, with consequent stagnation in the Building trade.²

¹ Poor Law Report. Appendix volume xix. Page 535.

² Many witnesses in different parts of the country informed the Royal Commission on the Depression of Trade and Industry, 1885, that in their opinion the depression in the Building Trade was caused, or partly caused, by overbuilding in prosperous times.

Although the Building trade thus appears to lag somewhat behind the upward and downward movements in trade generally, it is, nevertheless, because of its great dependence on conditions in other trades, closely connected with the general fluctuations.

The third characteristic mentioned above has been described by Mr. Dearle. During the twelve or fourteen years "previous to the collapse of 1878 the trade enjoyed almost uniform prosperity, and the depression of the later 'sixties passed without any violent decline. A few years of very great prosperity then produced a rise in wages all over the country, and a rapid increase in the numbers and power of the Trade Unions. Then came the commercial depression and financial difficulties of 1878 and the following years, and the trade was further affected by several disastrous strikes. The result was a long-continued depression through the 'eighties; wages fell, and the membership of some of the Unions decreased with alarming rapidity. Generally, trade revived somewhat during 1882 and 1883, but building hardly got brisk at all, and suffered another severe depression during 1886 and 1887; this latter, though less intense in its worst years, lasted longer than in most other trades. Then came an improvement; 1889 was fair, and 1890 and 1891 good, whilst even in 1894 and 1895 members of the trade escaped comparatively lightly. With the summer of the latter year began a period of very great prosperity, which lasted for five years."¹ This has been succeeded by another long period of depression, which is only now showing signs of passing away.

The cause of the depression which succeeded the boom in the closing decade of last century is thus stated in the report of the Poor Law Commission: "Between 1891 and 1901 the new and striking activity of municipalities in water, gas, electricity, tramways, housing,

¹ N. B. Dearle: "Problems of Unemployment in the London Building Trades." Pages 25, 26 and 42. London: J. M. Dent & Co., 1908.

drainage, etc., not only increased the flow of population into urban centres, but induced a disproportionate flow of capital and labour into the Building trades, and the ebb of the tide has left both plant and men stranded.”¹

The various influences hitherto described affect the Building trade as a whole. But different sections or trades are affected in different ways by certain other special causes operating over long periods of time. Such causes, neither cyclical nor seasonal in character, are imports of manufactured materials (ready made joinery and dressed stone and marble), the extension of machinery, and changes in methods and materials of construction.

It is a very general view among carpenters and joiners that the imports of foreign joinery work are responsible for a good deal of unemployment by rendering a certain number of native joiners superfluous. Witnesses before the Royal Commission on the Depression of Trade and Industry in 1885, and also witnesses before the recent Poor Law Commission, attributed distress in the Building trade partly to this cause. As an instance may be quoted the evidence of Mr. Melhuish before the latter Commission: “If the large amount of imported joinery used in this district (Cardiff) was made here, every joiner would find employment.”² The rank and file of the trade are equally convinced that foreign imports displace a vast amount of home labour. It is highly probable, however, that these imports are saddled with a responsibility for creating unemployment which is mostly undeserved. Their value, as given in the annual statements of the Trade of the United Kingdom, is comparatively small. The imports since 1890, together with the percentage of members unemployed in the Amalgamated Society of Carpenters and Joiners, are given as follows:—

¹ Report of Poor Law Commission. Page 336. (Cd. 4499). 1909.

² Report of Poor Law Commission: Appendix volume viii. Page 545.

IMPORTS INTO UNITED KINGDOM.

Year.	Wooden House Frames, Fittings, and Joinery Work.	Furniture and Cabinet Ware.	Percentage Unemployed in Amalgamated Carpenters' and Joiners' Union.
	£		Per cent.
1890	616,000		2.2
1891	654,000		1.9
1892	675,000		3.1
1893	660,000		3.1
1894	668,000		4.3
1895	763,000		4.4
1896	975,000		1.3
1897	1,146,000		1.2
1898	1,339,000		0.9
1899	1,445,000		1.2
1900	1,195,000		2.6
1901	1,154,000		3.9
1902	£	£	4.0
1903	469,000	707,000	4.4
1904	333,000	588,000	7.3
1905	317,000	577,000	8.0
1906	273,000	613,000	6.9
1907	225,000	565,000	7.3
1908	210,000	448,000	11.6
1909	185,000	391,000	11.7
1910	205,000	406,000	8.3

Unfortunately, the trade returns do not distinguish joinery, etc., from furniture and cabinet ware until 1903. It is seen that the imports of the latter, in recent years, have much exceeded in value the imports of the former, and it is not unreasonable to assume that this was the case in the years prior to 1903. It is fairly safe to say that in no year, except perhaps 1898 and 1899, have the imports of foreign joinery, etc., exceeded £500,000 in value, while at present they are only about £200,000. It will be noted, too, that the imports were greatest when unemployment among carpenters and joiners was least, and *vice versa*. The obvious inference is, not

that the imports displace many joiners, but that both depend on the volume of building work. A builder's foreman informed me after a rough calculation that probably 1,000 joiners in a modern shop equipped with machinery could turn out in a year all the joinery imported in 1910. Even if this is much too low an estimate, the number of joiners displaced by imports must be insignificant compared with the total number engaged in the industry. It is very probable that much more displacement is effected in large towns by joinery imported from the provinces than by joinery imported from abroad.

The modern practice of dressing stone and marble at the quarries instead of sending them to this country in the rough, has tended to displace masons, while the dressing of stone at the quarries in the United Kingdom, instead of in the towns where it is used, lessens the demand for masons in the towns and increases it in the quarry districts. This practice seems, however, to have raised active opposition on the part of Stone-masons' Unions.¹

There are two opinions as to the effect of machinery

¹ Mr. and Mrs. Sidney Webb, in their "Industrial Democracy" (new edition: Longmans, Green, and Co. ; 1902) state that "the Friendly Society of Operative Stonemasons incurs considerable odium because the branches in many large towns insert in their local rules a prohibition of the use of stone imported in a worked state from any outside district. But this general prohibition arises from the fact that the practical alternative to working the stone on the spot is getting it worked in the district in which it is quarried. Now, whatever mechanical or economic advantage may be claimed for the latter practice, it so happens that the quarry districts are those in which the Stonemasons are worst organised. In these districts for the most part no Standard Rate exists, the hours of labour are long and variable, and competitive piece-work, unregulated by any common agreement, usually prevails. Moreover, any transference of work from the Stonemasons of large cities where jobs dovetail with each other, to the Stonemasons of quarry villages, entirely dependent on the spasmodic orders for worked stone received by the quarry owners, necessarily involves an increase in the number of Stonemasons exposed to irregularity of work, and habitually "on tramp" from county to county (p. 77). This is given as an example of Trade Unionists resisting attempts of contractors to evade trade union regulations by getting work done in districts where the workers are not organised, or in which they work at a low standard rate.

on labour in the Building trade. There has been in recent years a large extension in the use of machinery. Twenty or thirty years ago, its use was mostly confined to large builders, but now almost every builder has some machinery in his shop. The introduction of machinery undoubtedly at first diminishes the demand for the particular kind of labour whose work is taken over by the machine. Thus, carpenters and joiners have been hit by the introduction and extension of wood-working machinery of all kinds. Mr. G. Warner, Secretary of the General Union of Operative Carpenters and Joiners in Manchester, informed the Royal Commission on the Depression in Trade in 1885, that, in his opinion, "ten joiners with the aid of machinery would supply the place of 200 or 300 joiners."¹ This may be so with particular kinds of work, such as circular work, but the displacement, so far as joinery in general is concerned, is not so great as this. Brick-layers, too, have been affected by machinery for cutting bricks for gauged work, and masons have been affected by machinery for dressing stone and polishing marble. The steam hoists and Scotch derricks, which are now so common in all building work, have displaced labourers.

All these results are the obvious and immediate outcome of the introduction of machinery, and it is natural that a number of wage-earners should attribute to it a certain amount of unemployment. But against this is to be set the view, also widely held, that machinery, by cheapening production, stimulates demand and accordingly improves employment. This is true, but it may happen that the particular class of labour which gains from the stimulated demand is not the class which originally suffered from the introduction of the machinery.

Of far more importance than imports or machinery to the employment of particular classes of labour, are

¹ Second Report of Royal Commission appointed to inquire into the Depression of Trade and Industry. Page 64. (C. 4715-1) 1886.

the changes in methods and materials of construction which are now so rapidly taking place. In every progressive community changes are, of course, continually being effected, with a consequent alteration in the demand for the different kinds of labour. But so long as these changes are gradual, the supply of labour is able to adjust itself to the varying demand without much hardship. But occasionally changes come about rapidly, and the result is anything but pleasant to those trades which find their products in less demand or entirely displaced by others.

The Building trade in recent years has been experiencing such a time of rapid change. The most pronounced example is the substitution of ferro-concrete and steel frames for brick and stone structures. Ferro-concrete, or reinforced concrete, is already gaining ground on steel construction. The principal methods and materials of construction may be classified as follows¹ :—

(i.) Steel Frame Buildings—

- (a) With thin solid curtain walls of concrete;
- (b) With hollow curtain walls of concrete slabs;
- (c) With curtain walls of brick, hollow or solid;
- (d) With curtain walls of patent materials;
- (e) With hollow curtain walls of expanded metal faced with cement and plaster.

(ii.) Reinforced Brick-work Buildings.

(iii.) Ferro-concrete Buildings.

(iv.) Brick Buildings, with solid or hollow walls.

(v.) Timber Frame Buildings with Slab Casing.

(vi.) Wooden Buildings.

These methods may, of course, be combined in various ways.

Carpenters will be at a maximum in the construction of wooden buildings, and at a minimum in the construction of ferro-concrete or steel-frame buildings. Brick-layers will be at a maximum in the construction

¹ Board of Education Report of Departmental Committee on the Cost of School Buildings. (Cd. 5534). 1911.

of brick buildings, and at a minimum on ferro-concrete and wooden buildings. Stone masons will vary with the amount of stone work, and marble masons with that of marble work, involved in any building. Plasterers would be most largely required on buildings falling under (i.) (e) or (v.) above, and less required on other types of building. Slaters and tilers would be less in demand on buildings with asphalt or concrete roofs and floors than on the older type of buildings with tiled or slated roofs and with internal tiling. Plumbers, too, lose by the substitution of asphalt or concrete roofs for lead roofs. Fitters will be at a maximum on the steel-frame buildings, but not wanted at all on most of the other types. The various kinds of patent materials used for the curtain walls in steel and other structures are frequently worked by specialised classes of workers employed by the patentees.

It is obvious from this brief summary how important to the employment of the different trades in the building group is the type of building in vogue at any given time or place. The extension, for example, of steel or ferro-concrete construction in substitution for older methods and materials means a diminished demand for bricklayers, carpenters and joiners, slaters and tilers, and an increased demand for concretors and fitters.

A small, but instructive, idea of the extent of displacement of some trades by others, according to the methods of construction, is afforded by the following estimate of the cost of erecting a school building with constant accommodation.¹

Item of Cost.	COST IN	
	Brick.	Ferro-concrete and Slab.
	£	£
Excavator and concretor ...	185	540
Slab concrete	—	91
Brick-layer and asphalter ...	994	153
Mason and granolithic paving	94	14

¹ Report on School Buildings cited above.

Item of Cost.	COST IN	
	Brick.	Ferro-concrete and Slab.
	£	£
Tiler	130	—
Carpenter, joiner, and iron- monger	776	238
Founder, smith, heating, and gas	168	275
Plasterer	98	123
Plumber, glazier, and painter	288	218
Other items	2002	1548
	<hr/>	<hr/>
Total cost	4,735	3,200
	<hr/>	<hr/>

Another instance may be quoted where the use of the patent Frazzi system of construction was estimated to effect on the ordinary brickwork construction a saving of 55 per cent. on the foundations, 45 per cent. on the walls, and 10 per cent. on the plasterers' bill.¹

In addition to changes in the general methods of construction, special classes of workers have to contend with the introduction of new materials. The gas fitter is displaced by electrical installations; artificial stone dispenses with the mason so far as stone-dressing is concerned, and often as regards fixing, which is frequently done by foreigners (Italians); granolithic stone is used for staircases and so displaces either the "staircase hand," a specialist among joiners, or the mason. Steel window frames instead of wooden sashes; steel ceilings instead of plaster; metal lathing instead of wood; enamels and patent preparations instead of paints; and many other changes all produce their effect on the demand for particular kinds of labour, and, while rendering some kinds superfluous or superabundant, call forth other kinds.

The various changes that have been described, incessantly and rapidly taking place in the Building trades, together with the imports of manufactured wood- and

¹ Op. cit. Page 105.

stone-work, and the extension of the use of machinery, produce real and permanent effects on the numbers of workers required in the different trades. The more rapid the changes, the harder are the displaced workers hit. Even in times of prosperity, such workers experience a large amount of unemployment, while in bad times these changes aggravate the situation.

It happens that the last ten years, during which changes have been rapid, have witnessed a heavy depression in the Building trade. The effect on the different classes of workers cannot be statistically measured owing to the absence of data. The occupation results of the 1911 Census are not yet available, so that the changes in the number engaged in the different trades since 1901 cannot be stated. It is certain, however, that cyclical fluctuations of employment in the separate trades are profoundly affected by the changes described above, which are not without their influence even on the seasonal fluctuations.

Besides the long-period fluctuations in employment, which have been hitherto considered, there are short-period fluctuations which form the subject-proper of this paper.

These are changes in the amount of employment within the year, which tend to recur regularly year after year. They have been classified as seasonal, due to the weather or climate, and quasi-seasonal or social, due to social influences.¹ The whole Building trade is subject to such changes, but the extent of the seasonal fluctuation and the time of the year at which the maximum or minimum of employment occurs vary from branch to branch of the trade. It is also an important fact that the time of the seasonal maximum or minimum varies from one locality to another.

The general character of the seasonal fluctuation is illustrated by the following table, giving the average

¹See N. B. Dearle: "Problems of Employment in the London Building Trades." London: J. M. Dent & Co. 1908.

percentage of unemployment at the end of each month from 1901 to 1910, among the members of the Amalgamated Society of Carpenters and Joiners and the United Operative Plumbers:—

	Average percentage unemployed 1901-10			
January	9.5
February	8.8
March	7.7
April	6.5
May	6.1
June	6.37
July	6.42
August	6.0
September	6.9
October	8.0
November	8.2
December	9.7

These percentages are based on the experience of only two Trade Unions, comprising but a small proportion of the total workers in the two trades concerned. It may be objected, therefore, that the figures cannot be taken as representative of the monthly movement of unemployment in the whole of the Building trades. This is to some extent true, since employment in all branches of the Building trade does not vary exactly in the same way as among carpenters and plumbers. But in view of the great dependence of the several trades upon one another, the objection is not so strong as it appears.

Fortunately, however, there are other figures which may be used to demonstrate the seasonality of the Building trades. Since September, 1906, the Board of Trade have published in the *Labour Gazette* the number of skilled tradesmen, labourers, and lads and boys paid wages on the last pay-day of each month by a large number of building firms all over the country. The number of firms furnishing this information is not

constant, and the information is collected for only twelve selected days in the year. The latter weakness in the statistics is not very important for present purposes, and the former can be remedied by using percentages and index numbers. The changes in the numbers paid wages from month to month have been expressed as percentages. The number given for the last pay-day in December, 1906, has been represented as 100, and the percentage changes in succeeding months to the end of 1910 (*i.e.*, over a period of four years) have been calculated from this number as a starting-point. The result is a series of index numbers of employment for four years. By averaging these index numbers month by month the seasonal fluctuation is brought into prominence. The result is as follows:—

Index Numbers of Men paid wages in the
United Kingdom at the end of each month.
(Average of 1907-1910).

	<i>Skilled Men.</i>	<i>Labourers.</i>	<i>All Workers.</i>
January ...	92	89	90
February ...	97	93	95
March ...	103	98	100
April ...	105	101	102
May ...	105	102	103
June ...	103	101	101
July ...	105	104	103
August ...	109	106	106
September ...	104	102	102
October ...	97	96	96
November ...	94	93	93
December ...	88	87	87

Bearing in mind that this table represents changes in employment, while the preceding table shows changes in unemployment, it is seen that the two tables broadly confirm each other. They show that unemployment is greatest in December; diminishes to about May; slightly increases again in June and July; is at its minimum in

August; and then increases again to its maximum in December. In other words, employment is worst in December; increases to about May; falls off in June and July; is greatest in August; and then sinks to a minimum in December. Thus, there appear to be two "seasons" of very good employment, one about May, and the other work about August.

That, as a rule, less building work is done in winter than in summer is a matter of common observation. It is not often that the English winter is severe enough absolutely to stop building operations, and, in fact, large contract work is generally continued throughout the year. For this reason it is sometimes denied that the Building trade is, strictly speaking, seasonal.¹ Bad weather, whenever it occurs, in summer or in winter, is likely to stop building, and, in this country, the winter cannot claim to monopolise the bad weather! But the greater part of work falling to be done is not new construction or reconstruction on a large scale, but small construction or reconstruction, repairs, alterations, and decorations, and there are many reasons why this small work should be seasonal.

It is more costly to build in the winter than in the summer. The daylight is shorter, and fogs occur, so that to complete a job in the same time in winter as in summer involves either more men, which may or may not be practicable, or artificial light, either of which events increases the cost of building. The weather, too, apart from fogs, is more unpropitious in winter than in summer—frosts occur, and there is frequently rain or snow. Any of these may temporarily stop all outdoor work, while dampness affects also internal work like painting and plastering. Winter work, therefore, is much more liable to temporary stoppages through the weather than is summer work, and this tends to increase the cost. Then bad weather is harmful to a new structure itself unless properly

¹ See for example Poor Law Report. Appendix volume xix, page 47.

protected. Hence efforts are made to get the walls erected and the roof on before the bad weather "sets in." Brick-layers accordingly find their slackest time to occur in the first two or three months after Christmas, and slaters are in the same plight. With the walls and roof in position, internal work can be proceeded with.

For every disadvantage that winter time offers to building operations, the summer time has advantages. The days are long, so that no artificial light is required. They are warm, and less liable to bad weather, so that building work can be proceeded with almost continuously.

So far, then, as climate alone is concerned, one would expect to find that building and employment would be at a minimum in mid-winter and at a maximum in mid-summer, with a gradual ascent and decline. The figures already quoted, however, show that this is not altogether what happens. They confirm the minimum of employment in winter, but show two maxima in the spring and summer. The reason is largely to be found in "social" causes. The spring maximum is mainly due to the repair and decorating work associated with the annual "spring cleaning," while the August maximum is due to new construction plus the alterations, repairs, and decorations carried out in the "holiday season," when large houses are more or less empty of their usual occupiers or when business is slack. The August maximum, therefore, is more seasonal, in the strict sense, than the spring maximum, which is largely due to "quasi-seasonal" or social causes.

It is difficult to translate these results into concrete numbers owing to lack of sufficient data. The table given above (page 333) of the average percentage of carpenters and plumbers unemployed at the end of each month in the decennium 1901-10 shows that between the winter maximum and the summer minimum of unemployment there is a difference of nearly 4 per cent (*i.e.*, for every

100 employed in August there are only 96 employed in December).

But, as already explained, these percentages are based on the experience of two Trade Unions, covering only some 55,000 to 70,000 carpenters, joiners, and plumbers, out of a total of probably not far short of 400,000. The figures are indeed fairly satisfactory for the purpose for which they were used, namely, to indicate the seasonal character of the Building trades, but they do not afford a complete statement of the actual amount of unemployment in those trades. It has been calculated, as already stated, that the average rate of unemployment in the whole of the Building trade is really approximately double that among carpenters and plumbers. This would give an average variation of about 8 per cent. between the winter and summer numbers in employment.

The table given on page 334, showing, by means of index numbers, the changes in the numbers of workpeople paid wages on the last pay-day of each month, discloses a difference between August and December of about 22 per cent. This table, too, has its limitations when attempts are made to apply it to the actual numbers in the whole Building trade. It covers only four years, 1907-10, during which depression in the Building trade was very bad, and the firms furnishing the returns on which the table rests varied in number from month to month. Further, although all branches of the Building trade are represented in the table, the actual number of workpeople reported as paid wages was sometimes below 40,000, and never exceeded 70,000. But, as in the previous case, the usefulness of the figures in showing seasonality is not impaired.

There is another set of figures which may be cited, namely, the number of workpeople paid wages in the last pay-week "or other ordinary week" in each month in 1906, as returned to the Board of Trade in

the inquiry into earnings and hours of labour in the Building trade.¹ The figures are as follows:—

				Total number of Workpeople paid wages in 1906 in the United Kingdom by firms furnishing returns to the Board of Trade.
January	...	...	...	101,800
February	...	...	...	105,200
March	...	...	...	111,400
April	...	...	...	114,400
May	...	...	...	115,900
June	...	...	...	114,300
July	...	...	...	113,100
August	...	...	...	115,300
September	...	...	...	112,900
October	...	...	...	110,200
November	...	...	...	106,500
December	...	...	...	102,200

These numbers relate to one week only in each month, and to about 11 per cent. only of all wage-earners in the Building trade. But the firms furnishing returns are the same throughout the year, and are believed to be fairly representative of the whole trade. Only one year (1906) is covered, but although the Building trade was depressed, there were no unusual interruptions of work of any magnitude. It may also be noted that the weather caused no serious suspension of work, either at the beginning or at the end of the year. It is seen that, even with favourable weather conditions, the number employed varied from 101,800 in January to 115,900 in May and 115,300 in August, a variation of nearly 14 per cent.

All three sets of figures that have now been examined agree in revealing a much greater amount of unemployment in the winter than in the spring and summer. The

¹ Report of an Enquiry by the Board of Trade into the Earnings and Hours of Labour of workpeople of the United Kingdom: iii. Building and Woodworking Trades in 1906. (Cd. 5086), 1910.

difference between the two seasons of the year is given by one table as 22 per cent., while if unemployment among carpenters and plumbers be regarded as only half that in the Building trade generally, the figures for those two trades will give an average difference of 8 per cent. The table from the 1906 "Wage Census" gives 14 per cent., about the mean of the two other percentages. This means that, taking 1,000,000 as approximately the number of wage-earners in the Building trade, from 80,000 to 220,000, or a mean of about 150,000, are on the average periodically unemployed owing to seasonal influences alone. This is the mean number in the worst month, December or January. By about March, and again about October, the number seasonally unemployed is about half the maximum number, while about May and again about August seasonal unemployment is at its minimum and has practically vanished.

It should be noted that even in the very best years there are some persons unemployed owing to time taken in getting from one job to another. This is easily understood, when the prevailing methods of obtaining work in the Building trades, as described above (p. 316), are borne in mind. No record exists of the amount of unemployment due to this cause. The smallest percentage of carpenters and joiners unemployed at the end of any month in the last fifteen years, as reported to the Board of Trade, is 0.8 per cent. This was in May, 1897, a year in which the Building trade was very prosperous. But, as previously stated, the actual percentage among the Amalgamated Carpenters and Joiners cannot be taken as a complete measure of the amount of unemployment in the Building trades as a whole.¹

Mr. A. Wilson Fox, C.B., in his evidence before the Poor Law Commission, put the "irreducible minimum" of unemployment on account of losses between jobs,

¹ It will be noted that it has only been claimed that the *changes* in the percentages for Carpenters and Plumbers are illustrative of the *changes* in the whole Building Trade.

breakdowns of machinery, bad weather, etc., in industry generally at 2 per cent.¹ This is probably far from an overstatement of the case in the Building trades, but applying this percentage, we get about 20,000 men as "unemployed" through time lost between jobs, etc., when trade is at its very best. Unemployment of this nature, however, is not a serious matter except as an aggravation of other causes.

So far, the seasonal character of employment in the Building trade as a whole has alone been considered. But the seasons for all branches of the trade are not exactly synchronous. Unfortunately, there are no statistics of unemployment month by month for trades other than carpenters and joiners, and plumbers. For these two trades, the following table shows the average monthly percentage of unemployment during the ten years 1897-1906² :—

	Carpenters and Joiners.		Plumbers.	
January	5.22	...	6.71
February	4.80	...	7.26
March	3.84	...	6.94
April	3.15	...	6.53
May	2.88	...	6.35
June	3.07	...	7.07
July	2.88	...	6.93
August	2.87	...	6.01
September	3.39	...	5.92
October	4.11	...	6.15
November	4.54	...	5.94
December	5.93	...	6.17

The figures indicate that, in these two trades at least, the course of employment from month to month is not the same, but that each trade is subject to special influences. The two maxima enjoyed by carpenters and joiners in the spring and summer, while common to

¹ Poor Law Report : Appendix volume ix. Q 98897.

² Poor Law Report. Appendix volume ix. Appendix No. xxi. (D) (Cd. 5068) 1910.

some other trades (for example, painters and decorators) are not general to the whole of the Building group. For instance, a Trade Union secretary informed me that brick-layers as a rule experience only one maximum in the year, which occurs in the late summer. It may perhaps be said that trades associated with decoration and repair work, like carpenters, painters, and decorators, may be expected to have the two maxima, while those restricted more to new construction, alteration, or reconstruction, in which class brick-layers would fall, may be expected to have only the one maximum of employment in the year.

The several trades are further differentiated from one another by the extent to which the winter minimum of employment differs from the spring or summer maximum. The table just given for carpenters and plumbers shows that, in the decade 1897 to 1906, the difference in the case of the carpenters and joiners averaged 3.06 per cent., and in the case of the plumbers 1.34 per cent., or less than half the former. This result is not surprising when it is remembered that carpentering and joinery work falls off in winter in common with the general slackening in building work, while winter frosts tend to create work for plumbers. Brick-layers and other outdoor workers are more affected by winter weather than are carpenters and joiners, and, if figures were available, they would doubtless disclose a greater difference between the summer and winter volume of employment than do the figures for carpenters. The substitution of cement for mortar may, however, do something to lessen the winter fluctuation for brick-layers.

Some interesting figures were supplied to the Poor Law Commission, showing the average weekly number of painters and decorators employed by a firm engaged in alteration and decoration work in London.¹ They were as follows:—

¹ Poor Law Report : Appendix volume xvi. Page 45.

Average weekly number employed :—

WINTER SEASON.			SUMMER SEASON.		
Oct. 1903 to March 1904 ...	...18	April to Sept. 1904 ...	...32		
„ 1904 „ „ 1905 ...	...17	„ „ 1905 ...	...27		
„ 1905 „ „ 1906 ...	...17	„ „ 1906 ...	...36		

This, of course, shows the experience of only one firm, but the table is highly suggestive of the size of the seasonal fluctuation among painters and decorators. The table on page 334 appears to indicate that the difference between the August maximum and the winter minimum of employment is very slightly less among labourers than among the skilled men, and a London foreman of long experience thought this very probable.

Besides the differences in seasonal fluctuations between trade and trade which have just been considered, there are also differences in the time of the “season” between place and place. The figures hitherto given for the whole kingdom mask this important variation, but the following two sets of figures serve to reveal it for the Building trade as a whole. The first table (p. 343) has been compiled from the Board of Trade *Labour Gazette*, from the same data and in the same way as the table on page 334. It shows, by means of index numbers, the average course of employment in different parts of the United Kingdom during the four years 1907-10.

The next table (p. 344) is taken from the Report of the Board of Trade inquiry into the earnings and hours of labour of workpeople in the Building trade in 1906.¹ It gives, by means of percentages or index numbers, the changes in the numbers of workpeople paid wages in the last pay-week or other ordinary week in each month in 1906. The average of the twelve monthly numbers is taken as the base of the index numbers.

The data on which these two tables are based can, in neither case, be relied upon as a complete and accurate record of the local variations in seasonal unemployment. But the agreement of the two tables in their general

¹ Op. cit. Cd. 5086.

Index Numbers of Employment (Average of 1907-10).

District.	Index Numbers of Employment (Average of 1907-10).											
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
London	89	95	101	102	98	90	97	107	97	89	87	83
Northern Counties and Yorkshire	88	92	97	101	104	104	103	101	98	94	92	85
Lancashire and Cheshire	91	97	102	104	107	106	108	106	105	101	95	83
Midland and Eastern Counties	101	106	108	112	113	113	114	116	113	107	104	98
South and South-west Counties and Wales	91	95	98	102	104	104	103	106	102	97	96	90
Total England and Wales	92	98	104	105	105	104	106	109	104	99	96	90
Scotland	87	89	93	96	95	97	96	101	99	94	89	85
Ireland	93	95	96	97	101	101	104	108	106	102	96	93
United Kingdom	90	95	100	102	103	101	103	106	102	96	93	87

(The maxima of employment are in black figures.)

Percentages of Average Weekly Numbers paid wages.
(Average of twelve months = 100.)

Districts.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
<i>(a) SMALL TOWNS.</i>												
(Population less than 100,000.)												
Northern Counties and Cleveland	91	92	101	104	106	105	102	105	104	101	97	93
Yorkshire (excluding Cleveland), Lancashire & Cheshire	89	93	99	101	105	106	105	106	105	102	97	92
North and West Midland Counties	91	94	98	101	104	105	106	105	104	102	98	93
Rest of England and Wales	94	97	101	104	107	105	103	103	102	99	95	91
Scotland	94	98	103	107	104	105	103	102	101	99	95	89
Ireland	98	97	98	102	105	109	110	105	105	97	91	82
Total United Kingdom	92	95	101	103	105	105	104	104	103	100	96	91
<i>(b) LARGE TOWNS.</i>												
(Population more than 100,000.)												
London	91	96	103	106	103	98	97	108	102	99	99	99
Northern Counties and Cleveland	105	103	103	103	105	99	99	102	99	97	95	93
Yorkshire (excluding Cleveland), Lancashire & Cheshire	91	93	98	102	108	107	106	105	101	99	97	94
North and West Midland Counties	91	95	102	102	102	95	97	103	107	108	103	96
Rest of England and Wales	96	96	102	105	109	105	105	104	101	96	95	87
Scotland	94	96	104	106	105	104	103	105	100	98	94	90
Ireland	97	90	99	99	100	102	106	104	112	105	97	90
Total United Kingdom	93	96	102	104	105	102	101	106	102	99	97	95

(The maxima of employment are in black figures.)

features strongly supports the opinion that they exemplify with fair accuracy the local variations under discussion.

The maxima of seasonal employment are seen to be spread over the five months April to August, although appearing to occur most often in May and August. The actual variation in the seasons from place to place is, however, much greater than these figures serve to show. University towns like Oxford and Cambridge find the building trades busiest during the vacations; seaside resorts which have their holiday season in August find that month very slack in the Building trade; and, generally, as the holiday season varies from town to town, so the local Building trades vary in the amount of employment they experience.

The time of the year at which the Building trade season occurs depends, in any given place, largely upon custom or upon the nature of the industry characteristic of the locality. In Scotland, for instance, the annual term for house-letting is customarily in May, and it is said that, in general, the busy season in the Building trade is somewhat earlier there than in England.¹

The two preceding tables cover the Building trades as a whole. The next table shows the variation, from district to district, in the month of minimum unemployment among carpenters and joiners and plumbers. The percentages of unemployment in these trades, in separate districts in the United Kingdom, were published in the *Board of Trade Labour Gazette* during the years 1902 to 1905, and these figures have been used for this table.

Not much reliance can be placed on the statements for the Northern Counties, Eastern Counties, and Wales and Monmouth, owing to the very small numbers covered by the returns made to the Board of Trade. In

¹ Report of Enquiry into Earnings and Hours of Labour in the Building Trade. P. xxix. (Cd. 5086). 1910.

Month in which the minimum percentage of unemployment occurred.

DISTRICT.	CARPENTERS AND JOINERS.					PLUMBERS.				
	1902.	1903.	1904.	1905.	Av. 1902-5.	1902.	1903.	1904.	1905.	Av. 1902-5.
London	March	August	August	August	August	March	August	August	August	August
N. Counties and Middlebro'	May & July	March	February	June	March	February	June	January	November	November
Lancashire and Cheshire ...	June	May	July	August	July	March	March	October	August	October
Yorkshire	August	June	July	May	June	October	October	September	September	October
East Midlands	September	March	July	June	August	October	October	August	September	September
West Midlands	August	July	August	August	August	June	Sept.-Oct.	August	October	September
Eastern Counties	June	May	August	June	June	June	May	Sept.-Oct.	September	September
South and S.W. Counties ...	May	May	March	May	May	August	May	September	May	May
Wales and Monmouth	May	September	July	March	July & Sept	November	January	Oct.-Nov.	November	November
Scotland	April	April	March	April	April	October	January	March	May	June
Ireland	September	May	April-May	August	May	October	July	January	August	October

The figures on which this table is based are given in Appendix I. (page 371).

all cases, indeed, the numbers are small in relation to the total number of carpenters and joiners and plumbers in the country. But the representative character of the table is attested by its general agreement with the two preceding tables (pp. 343-4), and any great differences that exist are probably explicable by the paucity of data. It must be remembered, too, that the earlier tables relate to the whole of the Building trade, while the last one covers but two branches of it.

The months of maximum employment among carpenters and joiners are seen to vary from March to September, and those for plumbers are distributed over almost the whole year. It is obvious that local conditions must play an important part in determining the annual season.

The last three tables also indicate that seasonal fluctuations are at least as much due to social causes as to climatic. The latter, in fact, tend to be largely spasmodic in their effects. A hard and prolonged frost in winter will stop building operations—and incidentally benefit the plumbers—but a long spell of heavy rains in summer may prove equally injurious.

We have now briefly discussed the fluctuations of employment in the Building trade. The cyclical movement has been touched upon, and the seasonal fluctuations described. The latter have been shown to vary in time from place to place, and also in time and amount from trade to trade. In any given trade and locality the regularity of the seasonal fluctuation is generally such that it can be foreseen from year to year, though the exact amount of unemployment will depend on the state of industry generally, modified by local conditions, and accidental or casual disturbances. For any particular individual, however, employment is almost always precarious.

In the Building trades, apart from speculative building, work is obtained as a rule by tender and contract. There is practically no question of working

for stock, and at the end of one job the workmen are dismissed unless another job has meanwhile been contracted for. The kind of work done—the method of construction followed, or the materials used—may differ from one contract to another, and in this case the numbers of the different classes of workmen required will constantly vary. A firm may put up one building in brick, employing, among others, a number of bricklayers and carpenters; the firm's next job may be a ferro-concrete one, and most of the bricklayers and carpenters will not be wanted, while fitters and concretors will be taken on in their place. The speculative builder, indeed, works in anticipation of demand, but may have frequently to wait for demand to overtake him. Each individual worker in the Building trade is therefore liable to numerous periods of unemployment throughout the year, and these periods tend to be lengthened by the methods of obtaining work pursued by the workmen themselves, as described above (page 316).

So far as the individual is concerned, the seasonal fluctuation renders the periods of unemployment shorter and less frequent in the busy season than in the slack season—it does not mean either continuous employment at the one time or continuous unemployment at the other. This liability to frequent spells of unemployment is thus thrust on the workman, independently of his personal character and ability. These, of course, are not without their influence. The relatively inefficient or worthless workmen, if known to foremen, will not be engaged except at times of great stress. If they are not known to the foremen, and so get engagements—for no testimony of character or capability is asked for—a few hours or days at work will generally suffice to reveal their inefficiency, and the recognised practice of terminating engagements by one hour's notice on either side will enable the foremen to dismiss them at once. Bad character or inefficiency will therefore determine which workers will go

first as busy times decline into slackness, while at all times it will tend to shorten periods of work and lengthen those of unemployment.

Another cause of individual irregularity of work is the growing specialisation of occupations. "Excessive specialisation," say the recent Poor Law Commissioners in the Majority Report, "in the Building trades of itself leads to unemployment. Among even the lower grades there are scaffolders and hoisters, timbermen, masons' labourers, brick-layers' labourers, plumbers' mates, and painters' labourers. . . . Very seldom would a labourer think of asking for employment in any other section but that which he was accustomed to."¹ It is obvious that in such an industry as building, subject in any given locality to seasonal concentration of work, the narrowing of occupations to very small sections of work must tend to shorten the periods and to increase the irregularity of employment.

If the specialist desires to avoid lengthy periods of unemployment he must be prepared to go outside his special occupation, or to become very mobile. For instance, the staircase hand, a specialist among joiners, or the cutter, a specialist among brick-layers, must frequently do ordinary joinery or brick-laying respectively, or travel far afield to get his own special work.

The following tables afford a good indication of the amount of unemployment experienced by individuals. The statistics already given show only the average amount of unemployment among certain trade unionists at any given time, and throw no light on individual unemployment. There is obviously a vast difference between many persons being unemployed for short periods in the year and a few persons being unemployed for long periods, yet the average percentage of unemployment in relation to the whole of the workers may be the same in both cases.

Some information on the extent to which individuals

¹ Poor Law Report. Majority Report. Page 336, note. (Cd. 4499). 1909.

are effected was obtained by the Board of Trade for the Poor Law Commission.¹ As regards the Building trades, the figures relate to the Operative Plumbers' Trade Union and to eight branches of the Amalgamated Society of Carpenters and Joiners. The average number of trade unionists covered was about 5,300 in the case of the plumbers and about 1,750 in the case of the carpenters and joiners. These numbers are very small, but the results are significant. The periods for which the information was collected were, for the carpenters and joiners, twelve consecutive months in 1898-99, 1902-3, and 1904-5, and for the plumbers the years 1899, 1902, and 1904. These periods represent respectively years of good, medium, and bad employment. (In the following summary of the results of this investigation carpenters and joiners unemployed for less than three days and plumbers for less than four days are classed with those who were not unemployed at all.)

The mean percentage of unemployment as ordinarily given (*i.e.*, the average percentage unemployed at the *same* time during the year) was:—

	Good Year.	Medium Year.	Bad Year.
Carpenters and Joiners	1.1	3.3	6.0
Plumbers	1.7	3.5	6.4

The percentage of members who were unemployed for *some* time during the year was, however, much more than this:—

	Good Year.	Medium Year.	Bad Year.
Carpenters and Joiners	19.7	34.0	43.1
Plumbers	18.0	29.6	41.4

Thus in a good year the number of members actually experiencing unemployment was nearly 20 per cent. of the total, although those out of work at any one time

¹ Poor Law Commission. Appendix volume xxv. Page 864 *et seq.*

averaged less than 2 per cent. In a bad year the number unemployed during some part of the year increased to over 40 per cent. The lengths of the periods during which these members were unemployed are given as follows :—

Period Unemployed.	Percentage Unemployed.		
	Good Year.	Medium Year.	Bad Year.
CARPENTERS AND JOINERS.			
Less than 3 days or not at all	80.33	65.97	56.91
3 days and less than 4 weeks... ..	15.41	17.61	18.32
4 weeks " " 8 "	2.56	9.43	8.89
8 " " " 12 "	1.01	3.64	6.34
Over 12 weeks	0.69	3.35	9.54
PLUMBERS.			
Less than 4 days or not at all	82.03	70.43	58.62
4 days and less than 4 weeks	9.61	12.83	14.23
4 weeks " " 8 "	5.14	8.54	11.39
8 " " " 12 "	1.59	4.13	6.86
Over 12 weeks	1.63	4.07	8.90

It is seen that for a fairly large proportion of carpenters and plumbers the amount of unemployment in a year is considerable. In the good year over 4 per cent. of the carpenters and joiners and over 8 per cent. of the plumbers were unemployed for four weeks and upwards; in the medium year these percentages rose to over 16 per cent., and in the bad year to about 25 per cent. and 27 per cent. respectively. How serious is this matter of unemployment to the individuals affected is made more apparent still by the following figures showing the average number of days lost per member in the three years :—

								Average number of working days lost per member.		
								Good Year.	Medium Year.	Bad Year.
CARPENTERS AND JOINERS.										
Members losing—										
3 days and upwards	...	...	...	...	...	...	17	31	44
More than 4 weeks	...	...	...	...	...	...	48	52	68
" " 8 "	...	...	...	...	...	...	70	77	86
" " 12 "	...	...	...	...	...	...	88	99	105
PLUMBERS.										
Members losing—										
More than 3 days	...	...	...	...	...	...	29	37	49
" " 4 weeks	...	...	...	...	...	...	50	57	68
" " 8 "	...	...	...	...	...	...	82	83	94
" " 12 "	...	...	...	...	...	...	108	111	124

The average amount of working time lost by those members who were out of employment at some time during the periods under observation was, in the good year, seventeen days in the case of the carpenters and twenty-nine in the case of the plumbers, and in the bad year, over seven weeks and over eight weeks respectively. Among those who lost more than four weeks in each year, the average time lost amounted, in the good year, to about eight weeks for both trades, and, in the bad year, to over eleven weeks, or over 20 per cent. of the whole year.

The ages of those who were unemployed were also investigated by the Board of Trade in the case of the carpenters and joiners. The general results were as follows:—

Age of Members Unemployed.	Average number of working days lost by those members who were unemployed at least 3 days during the year.		
	Good Year.	Medium Year.	Bad Year.
15 and under 25 years ...	15	25	45
25 " " 35 " ...	13	27	40
35 " " 45 " ...	13	27	32
45 " " 55 " ...	24	39	52
55 " " 65 ¹ " ...	27	51	70
65 and over ¹ ...	62	68	22
Total all ages ...	17	31	44

This table confirms what is generally believed, namely, that the older workmen experience more unemployment than the younger. It is of interest to notice, however, that in the year of bad employment the workmen in the age-group 35 to 45 suffered less unemployment than those in the two younger age-groups.

It must be repeated that the whole of this investigation into the duration of unemployment in individual cases, and the ages of those unemployed, is based on the experience of a very small number of trade unionists, and the results, considered absolutely, cannot be applied, without much fuller inquiry, to the whole Building trades, or even to the two trades furnishing the data. At the same time, the general character of these results would probably be found to hold good over the greater part of the wage-earning classes in the Building trade, if not in industry generally. That is, the amount of unemployment experienced by individuals in any year varies from a few days to many months, and is greater with the older workmen than with the younger.

We are now brought to a consideration of the means

¹ The number of workmen aged 65 and over covered by the investigation was too small to enable conclusions to be drawn with respect to them.

available or possible for tiding over the periods of unemployment that are recurrent in the Building trade. This question is always present to the individual worker, but it becomes pressing at times of seasonal slackness and acute in times of cyclical depression. In this place, however, we are concerned only with the ways of meeting seasonal unemployment.

The ways employed are various:—

The Building trade as a whole reduces the working-hours in the winter.

The Trade Unions, in some cases, pay out-of-work benefit, or provide means for securing work.

The individual workers in some cases endeavour by migration from place to place to lengthen their own busy seasons, or they seek work in other occupations when their own trade is slack, or they subsist on their savings, or on the earnings of their families.

Consumers sometimes endeavour to mitigate the extent of seasonal fluctuations by calling for work to be done in what is normally the slack season.

Further improvement may be effected by increasing the mobility of labour; by developing the "dovetailing" with other industries enjoying their busy season when the Building trades are slack; by extending the Trade Union unemployed benefits into a general system of insurance against unemployment; by regularising demand for building work over the year, encouraging this, if necessary, by making building in the summer more nearly equal in cost to that in winter.

1. *Reduction of Working Hours in Winter.*—There is no need in this place to give a detailed statement of the weekly hours of labour in summer and winter recognised by the different sections of the Building trade all over the country. It is sufficient to give as illustration the working hours agreed to by the London Master Builders' Association and the Brick-layers, Carpenters and Joiners, Mill-sawyers, etc., Stonemasons, Plasterers, Plumbers, General Smiths and

Fitters, and Wood-cutting Machinists. The agreement is that the working hours in summer shall be 50 per week for thirty-nine weeks, and in winter 44 per week for thirteen weeks, commencing on the second Monday in November.¹ The practical effect of this arrangement is to do something towards spreading the diminished amount of work in the winter season over the whole industry. By diminishing hours in the winter, too, some slight reduction in the cost of building work is effected by the saving in artificial light, so that both the consumers' and the producers' interests are served. Shortening hours is a remedy, however, which cannot be carried very far without diminishing the output per man, and therefore the wages per week, and to this process the men themselves will naturally object.

2. *Trade Union Unemployed Benefits.*—Some Trade Unions in the Building trade include in their benefits out-of-work pay, others grant travelling allowances; some grant a reduction of or exemption from the workmen's contributions during unemployment; while some Unions give no special benefits on account of unemployment. The practice of the different Unions is given in Appendix II. (p. 378). The unemployed pay is practically a form of insurance, to which the Building trades, or at least most branches, lend themselves. Seasonal unemployment tends to occur with fair regularity—it can be foreseen, its effects measured, and its treatment as an insurance proposition undertaken without much risk or unduly heavy premiums. The matter has now been made a national one under the National Insurance Act, 1911, which covers the Building trades in its unemployment sections.

The irregularity and seasonality of work in these trades are frequently adduced as part cause of the comparatively high rates of wages prevailing in relation to the rates in some other trades. The building operative is therefore in a position to save some of his

¹ The London Master Builders' Handbook, 1911. Page 76.

wages during the busy season to assist him over the slack season, and insurance provides one of the best means of doing this. It has the further advantage of distributing the burden of unemployment over the whole trade, and so long as malingering is prevented, a minimum number of premiums fixed before benefits are payable, and the duration of benefits limited, the distribution of the burden is an equitable procedure. It is reasonable that the whole community should directly share the cost of insurance, since seasonal unemployment is largely due to social custom and the want of regularisation of demand.

3. *Mobility of Labour*.—The variation in the time of the busy season from one place to another, as discussed above (pp. 342 *et seq.*), is of great importance to many workers in enabling them to secure much more employment in the course of the year than they would be able to do if the season were incident at the same time all over the country. For example, a painter expressed the opinion that to stop in one part of London all the year round was to be unemployed, *quâ* painter, half the year. The West End of London finds painters busiest in the late summer, when people are “out of town,” and the opportunity is taken to redecorate their houses. In less well-to-do residential parts of London painting is at a maximum at the time of the “spring cleaning.” Between these two seasons in London an enterprising painter can enjoy an intermediate season at a seaside watering-place which is preparing for the late summer holiday.

But not nearly so much advantage is taken of this variation in the time of the local seasons as might be supposed to be possible. There is the obstacle to migration imposed by differences in the local rates of wages. For instance, the standard rates of wages recognised at January 1st, 1911, for carpenters and joiners varied from 8d. per hour in Brighton, Ipswich, Norwich, and other towns, to 10½d. per hour in London,

through the intermediate rates of $8\frac{1}{2}$ d., $8\frac{3}{4}$ d., 9d., $9\frac{1}{4}$ d., $9\frac{1}{2}$ d., and 10d. The rates for brick-layers varied from 8d. to $10\frac{1}{2}$ d. per hour through intermediate rates; for plumbers, from $7\frac{1}{2}$ d. to 11d.; masons, 8d. to $10\frac{1}{2}$ d.; plasterers, 8d. to 11d.; painters, $6\frac{1}{2}$ d. to 9d.; bricklayers' labourers, from $4\frac{1}{4}$ d. to 7d.¹ The recognised hours of labour likewise varied from $46\frac{1}{2}$ to $56\frac{1}{2}$ hours per week in summer for brick-layers, carpenters and joiners, and plumbers; $44\frac{1}{2}$ to $56\frac{1}{2}$ for masons, and $49\frac{1}{2}$ to $56\frac{1}{2}$ for plasterers and painters.¹ Men are not disposed, except under the stress of urgent necessity, to work for a less rate or for longer hours than those to which they are accustomed.

Another factor, possibly stronger than the last, against the mobility of labour is human inertia itself. Many men will not move outside one district of London. Others will move freely all over London in search of work, but will not go out of London even when work is offered them. The same fact is observed in provincial towns, men declining to leave their own to go to another town a few miles distant, even when work is already waiting them. The domestic tie, while furnishing a reasonable excuse in some cases, is not sufficient to explain the general disinclination to travel from one locality to another for work.

It sometimes happens that migration is discouraged by Trade Union secretaries who send to headquarters gloomy accounts of the local labour markets, although work may, in fact, be fairly abundant. An inflow of men from other districts is naturally not desired, especially if the men on the spot have already experienced a period of slackness. Such practices, where they have not already been found out, will, of course, be rendered futile by the recently established system of National Labour Exchanges, which will gradually make the whole country one market for the demand and

¹ Fourteenth Abstract of Labour Statistics of the United Kingdom. (Cd. 5458.) 1911.

supply of labour, in place of the innumerable local markets which now exist. The Exchanges, too, are empowered to facilitate the mobility of labour by advancing railway fares in cases where employment has been secured through the Exchanges. These advances have to be repaid either by the workmen or the employers.

While it is desirable to secure easy mobility of labour, its power to modify the amount of seasonal unemployment experienced by individual workers is probably not very great. The boom in the Building trade which characterised the closing decade of last century attracted a vast supply of labour, and the succeeding depression, from which the trade is only now beginning to recover, found the labour market overstocked, and it would be difficult to find any locality which cannot meet all its own requirements. Easy mobility, in these circumstances, though it may be advantageous to the specialist or the highly skilled worker, is of little use to the average mechanic.

But there are other considerations which tend to limit the power of mobility to relieve local unemployment. It has been pointed out already (pp. 329 *et seq.*) that the number of any particular class of workers required depends upon the kind of buildings in the builders' hands, the materials used, and the method of construction followed. London concretors, or fitters, could not be drafted into a provincial town where houses of brick were being erected, however much men were wanted. A town developing its business quarters would require men in different proportions according to trades than another town extending its suburban residences, or, again, than a fashionable holiday resort building large hotels for visitors. The ordinary carpenter and joiner of the suburban builder, whose busy season is in summer, is of no use to the large contractor on a high class job where hard and seasoned woods are being used, although his work is going on in the winter and men may be

wanted. These few illustrations will serve to indicate that ready mobility of labour is not such a simple remedy for seasonal unemployment as it may appear to be.

4. *Dovetailing of Occupations*.—A good deal is done by individual workmen to tide over the periods of seasonal slackness by taking up work temporarily in other occupations. In the neighbourhood of docks there is some dovetailing between unskilled labour in the Building trade and dock labour. Such an interchange also exists between gas-works in winter (when they are busiest) and the Building trade. Sir G. Livesey told the Poor Law Commission that a good many men “work as brick-layers in the summer and stokers (in gas-works) in the winter.”¹ In Hertfordshire it used to be a regular practice for brick-layers to do malting in the breweries in winter, although this practice seems to have died out. In some colliery districts brick-layers find the archery work in the tunnels of mines a source of employment in winter.

There seem to be very few industries, however, in which this “dovetailing” is deliberately and regularly practised on an extensive scale. What most often happens appears to be that the unemployed worker takes any kind of employment that he can get and is willing to accept. Other men appear to make little, if any, effort to go outside their own occupation. These tide over the slack times with their savings, the earnings of their families, or any assistance they can get either by way of gift, loan, or credit.

It is probable that much more “dovetailing” of industries is possible than is actually done. This, and the learning of subsidiary or complementary handicrafts, might be made to go some considerable way towards relieving winter slackness. It is true that at present there is much Trade Union hostility to mobility from trade to trade. Mr. Ramsay MacDonald gave the

¹ Poor Law Report vol. viii. Q. 83222.

reason to the Poor Law Commission: "The organisation of labour is absolutely essential in view of the organisation of capital, and it is practically impossible to organise labour if there is much fluidity of labour between trade and trade."¹ There is a fear that employers may use the workers in one trade as "blacklegs" in another, or that the over-supply of labour in the one may simply be transferred to another and depress the rate of wages, or diminish each person's share of work. But only a relatively small proportion of workers would be required to be made transferable from trade to trade; the sum total of workers in the group of trades affected would, in time, become no greater than the greatest demand for them at any one time; and if the transference of labour were deliberate and organised, as it should be, there seems no reason why the evils feared by the Trade Unions should be realised.

5. *The Regularisation of Demand.*—Something is done, and more may be done, by the general public, that is, the consumers, distributing their demand over a greater part of the year than is customary. The greater part of outdoor work must probably continue to be done in the summer months, when weather and daylight are propitious. But a good deal of indoor work at present done in the spring or late summer seasons could be postponed until the autumn or winter months. Internal painting and cleaning might in many cases, for example, public schools and railway stations, be carried out in the winter. The old London School Board authority used to arrange for a number of their schools to be painted internally in the winter so as to relieve the winter slackness of painters.² Something, too, might be done to avoid the slack season in the midst of summer between the spring and late summer maxima, by arranging to spread general building work more equally over the year. It has been suggested that

¹ Majority Report of Poor Law Commissioners. Page 348.

² Poor Law Report. Appendix volume xix. Page 69.

a stimulus to the distribution of demand over the winter months might be afforded by paying a higher rate of wages in summer than in winter, thus making building in the summer more costly.¹

The various means of meeting unemployment here stated will go a good way, if carried to their utmost extent, towards removing seasonal unemployment, and a long way towards remedying its evils. They will not, of course, cure unemployment. They apply for the most part only to unemployment caused by the regularly recurrent seasonal fluctuations, and not to that due to cyclical depressions on the one hand, or to personal bad character or inefficiency on the other.

This paper has shown, it is hoped, that unemployment in the Building trade is a highly complex phenomenon, and that being so, it is not to be expected that it will admit of a simple and easy remedy. At the same time, there seems no insuperable obstacle to stripping seasonal fluctuations of their worst consequences.

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¹ See e.g. evidence of Mr. Beveridge before Poor Law Commissioners, vol. viii. Page 18. For a longer and more detailed discussion of the spreading of work over the year, see a paper by Mr. N. B. Dearle, entitled "The Building Trades and the Organisation of Public Work," read before the National Conference on the Prevention of Destitution, 1911.

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BUILDING TRADES. APPENDIX I.
 Percentages of Trade Unionists unemployed at the end of each month, as reported to the Board of Trade.
 (From Board of Trade *Labour Gazette*.)

		CARPENTERS AND JOINERS.				PLUMBERS.					
		1902.	1903.	1904.	1905.	Average.	1902.	1903.	1904.	1905.	Average.
London.											
January ...	...	4.4	6.8	8.0	10.3	7.4	7.6	13.3	11.6	11.0	10.9
February ...	...	3.2	5.1	8.1	10.1	6.6	7.2	14.5	9.8	16.0	11.9
March ...	...	2.4	4.3	7.1	8.1	5.5	5.6	12.8	9.1	14.6	10.5
April ...	...	3.1	4.2	7.2	8.3	5.7	5.9	9.3	8.0	11.3	8.6
May ...	...	2.6	3.7	7.1	8.3	5.4	10.1	8.6	9.4	14.2	10.6
June ...	...	4.9	4.9	7.9	8.8	6.6	10.7	8.7	9.4	11.7	10.1
July ...	...	5.2	4.3	6.7	7.9	6.0	11.3	6.7	11.5	11.1	10.2
August ...	...	4.6	3.1	4.2	5.5	4.4	8.6	5.3	7.6	8.7	7.6
September ...	...	4.5	4.6	6.2	7.1	5.6	6.3	6.4	11.9	9.9	8.6
October ...	...	4.8	6.9	8.5	8.8	7.2	7.2	9.8	13.1	13.2	10.8
November ...	...	6.8	7.2	10.3	10.2	8.6	12.1	12.2	13.0	14.6	13.0
December ...	...	6.9	8.0	11.3	10.0	9.1	10.7	10.6	13.6	—	12.5 (a)
Northern Counties (including Middlesboro).											
January ...	...	4.0	6.8	11.0	12.3	8.5	3.1	8.5	6.3	11.6	7.4
February ...	...	6.3	7.9	7.8	10.7	8.2	2.7	9.0	7.7	10.1	7.4
March ...	...	3.2	1.3	9.3	9.9	5.9	2.9	9.2	8.7	10.9	7.9
April ...	...	1.9	2.2	10.8	9.2	6.0	3.0	6.7	10.0	10.8	7.6
May ...	...	1.1	3.8	9.1	11.0	6.3	3.5	5.8	8.6	9.6	6.9
June ...	...	2.6	5.4	9.4	8.2	6.4	2.9	5.4	9.4	8.8	6.6
July ...	...	1.1	5.8	8.7	8.3	6.0	4.8	8.7	10.0	7.9	7.8

	CARPENTERS AND JOINERS.					PLUMBERS.				
	1902.	1903.	1904.	1905.	Average.	1902.	1903.	1904.	1905.	Average.
August
September
October
November
December
Lancashire and Cheshire.										
January
February
March
April
May
June
July
August
September
October
November
December

Yorkshire.												
January	7.4	8.7	8.7	12.5	9.3	6.8	7.0	8.1	9.9	8.0
February...	7.6	8.0	8.0	11.1	8.4	6.4	7.0	9.7	12.3	9.0
March	5.1	4.7	9.5	9.4	7.2	6.9	5.0	11.0	12.3	8.8
April	4.1	3.2	6.7	7.3	5.3	6.5	5.2	9.7	11.3	8.2
May	3.5	3.1	7.5	7.0	5.3	6.5	6.1	10.1	11.3	8.5
June	4.1	1.7	6.8	7.2	5.0	6.2	5.8	11.2	10.9	8.5
July	3.7	3.5	4.8	8.4	5.1	6.2	6.1	11.3	11.9	8.9
August	2.5	3.5	7.3	8.8	5.5	5.1	5.9	8.4	9.4	7.2
September	3.2	3.5	6.9	9.1	5.7	5.5	5.9	6.8	8.5	6.7
October	6.4	6.4	8.9	9.2	7.7	3.4	3.8	8.5	8.7	6.1
November	7.0	6.6	10.3	10.0	8.5	4.0	4.7	9.7	9.0	6.9
December	7.8	8.0	12.7	—	8.9 (a)	4.0	5.8	8.2	—	6.9 (a)
East Midlands.												
January	5.7	5.3	8.2	13.7	8.2	2.2	4.5	10.6	8.8	6.5
February...	7.5	4.3	8.0	8.5	7.1	4.5	9.1	14.0	8.5	9.0
March	5.7	1.6	6.8	6.7	5.2	4.4	6.8	11.8	7.5	7.6
April	3.4	2.3	5.2	6.6	4.4	3.8	8.2	13.8	7.6	8.4
May	3.5	3.1	4.3	5.1	4.0	2.7	5.5	10.3	9.3	7.0
June	2.6	3.7	4.7	4.9	4.0	4.2	7.4	11.1	8.7	7.9
July	2.5	2.5	3.6	5.6	3.6	4.9	4.7	8.3	9.0	6.7
August	1.3	2.0	3.7	5.9	3.2	3.7	3.6	6.6	7.7	5.4
September	1.0	2.7	6.2	5.3	3.8	2.4	3.3	6.7	5.9	4.6
October	2.5	4.2	6.8	7.2	5.2	2.1	3.1	7.0	7.0	4.8
November	2.9	4.1	9.1	6.9	5.8	2.7	3.5	9.2	7.4	5.7
December	4.7	7.3	12.2	—	8.1 (a)	3.0	3.9	7.7	—	5.6 (a)

	CARPENTERS AND JOINERS.					PLUMBERS.									
	1902.	1903.	1904.	1905.	Average.	1902.	1903.	1904.	1905.	Average.					
West Midlands.															
January	4.2	6.7	6.9	11.7	7.4	4.0	4.6	8.5	9.2	6.6
February...	6.5	5.9	8.4	9.4	7.6	7.0	7.5	9.6	12.1	9.1
March	3.7	4.2	8.5	7.8	6.1	4.3	8.5	10.8	10.6	8.6
April	2.5	4.3	7.1	8.7	5.7	2.9	10.1	10.2	7.0	7.6
May	2.3	2.4	5.1	7.1	4.2	5.1	7.2	8.4	7.0	7.0
June	2.2	2.7	4.9	6.7	4.1	2.3	7.1	10.4	9.0	7.2
July	2.0	1.9	3.8	5.3	3.3	4.4	4.9	7.9	10.0	6.8
August	1.4	2.3	3.4	4.5	2.9	6.2	4.3	5.1	9.3	6.2
September	1.8	2.7	4.6	4.8	3.5	3.4	4.0	7.9	6.7	5.5
October	3.4	4.0	5.0	6.2	4.7	4.5	4.0	12.0	5.6	6.5
November	3.4	4.2	7.7	6.3	5.4	4.6	6.5	13.6	6.7	7.9
December	5.7	6.1	8.9	—	7.2 (a)	3.9	7.2	7.0	—	6.5 (a)
Eastern Counties.															
January	2.3	5.1	10.7	10.6	7.2	6.1	10.3	11.6	7.3	8.8
February...	2.6	3.9	8.1	7.5	5.5	5.8	7.7	13.2	5.5	8.1
March	1.3	2.8	8.1	5.5	4.4	6.5	3.8	8.8	11.3	8.1
April	1.2	2.1	6.0	6.9	4.1	0.9	3.2	6.4	10.0	5.1
May	0.8	1.2	5.7	6.3	3.5	2.2	0.8	7.1	11.1	5.3
June	0.4	2.1	5.9	5.2	3.4	0.7	1.6	2.8	9.3	3.6
July	0.8	5.1	5.5	9.0	5.1	2.3	1.6	4.6	9.3	4.5
August	1.9	2.7	5.1	8.6	4.6	7.7	3.3	7.3	6.3	6.2

September	...	...	...	2.3	5.0	7.5	6.6	3.7	6.6	1.7	4.5	4.5	3.3
October	...	...	...	2.3	6.4	9.3	6.7	6.6	6.7	4.5	4.5	10.9	6.3
November	...	...	...	1.5	7.4	10.3	9.8	6.1	9.8	8.5	10.3	11.0	7.8
December	...	...	...	4.6	9.0 (a)	—	12.0	8.5	12.0	12.8	10.9	—	10.1 (a)
South and South-Western Counties.													
January	...	...	...	6.5	5.8	9.2	5.6	5.2	5.6	4.8	5.6	11.1	7.0
February	...	...	...	6.1	4.1	7.5	3.8	2.2	3.8	4.8	6.0	11.1	7.0
March	...	...	...	5.2	3.8	6.0	3.2	3.0	3.2	7.5	5.8	9.9	7.1
April	...	...	...	4.9	3.3	6.0	3.5	2.0	3.5	7.7	7.2	9.3	7.3
May	...	...	...	5.3	2.6	4.3	3.6	1.2	3.6	3.2	6.3	5.7	5.1
June	...	...	...	6.5	3.7	6.4	3.6	2.7	3.6	5.1	5.7	9.4	6.7
July	...	...	...	4.6	3.7	6.0	4.5	2.0	4.5	5.4	8.1	10.8	7.2
August	...	...	...	3.2	3.7	6.4	3.8	2.0	3.8	5.3	6.3	7.5	5.6
September	...	...	...	6.9	4.1	6.4	4.8	2.4	4.8	6.9	3.4	7.8	6.3
October	...	...	...	6.5	5.1	7.5	5.7	4.1	5.7	7.5	5.4	9.4	7.2
November	...	...	...	5.6	5.9	7.6	8.0	4.1	8.0	6.7	9.8	8.5	7.7
December	...	...	...	5.5	7.3 (a)	—	9.9	5.8	9.9	5.7	8.3	—	7.1 (a)
Wales and Monmouth.													
January	...	...	...	6.9	6.2	6.3	7.6	5.6	7.6	4.8	8.3	7.4	6.9
February	...	...	...	11.0	5.9	6.4	7.0	5.2	7.0	5.9	10.0	7.7	8.7
March	...	...	...	5.8	4.9	4.6	4.1	7.3	4.1	9.2	9.3	7.7	8.0
April	...	...	...	7.4	5.1	8.2	4.3	4.9	4.3	8.9	6.0	12.5	8.7
May	...	...	...	7.4	3.7	4.8	3.8	3.7	3.8	5.5	8.2	8.0	7.3
June	...	...	...	7.1	4.1	4.8	3.4	3.8	3.4	7.9	6.7	12.2	8.5
July	...	...	...	8.5	3.5	4.7	3.0	2.8	3.0	9.4	5.9	12.6	9.1
August	...	...	...	8.6	3.7	5.3	3.3	3.0	3.3	9.0	5.5	12.0	8.8
September	...	...	...	7.0	3.5	5.3	3.4	2.0	3.4	5.8	5.5	10.6	7.2
October	...	...	...	6.3	3.8	5.5	3.5	2.8	3.5	7.9	3.6	6.9	6.2
November	...	...	...	5.4	4.7	6.0	4.2	4.4	4.2	5.4	3.6	5.7	5.0
December	...	...	...	6.2	6.6 (a)	—	6.2	6.4	6.2	8.3	6.6	—	7.0 (a)

		CARPENTERS AND JOINERS.					PLUMBERS.				
		1902.	1903.	1904.	1905.	Average.	1902.	1903.	1904.	1905.	Averages.
Scotland.											
January ...	...	5.9	3.8	6.2	11.0	6.7	6.9	3.4	11.0	14.6	9.0
February...	...	7.1	2.8	4.0	7.6	5.4	4.1	5.0	8.7	13.0	7.7
March ...	...	2.5	1.2	2.4	5.6	2.9	5.5	5.7	8.4	11.0	7.6
April ...	...	0.5	0.5	2.7	4.4	2.0	4.5	4.6	9.8	10.5	7.4
May ...	...	0.6	2.4	5.5	4.9	3.4	3.9	5.4	10.8	8.7	7.2
June ...	...	1.0	1.3	7.2	4.9	3.6	3.8	5.1	10.4	9.0	7.1
July ...	...	1.4	3.2	7.7	6.9	4.8	4.9	5.8	12.7	11.3	8.7
August ...	...	1.4	2.3	9.0	10.1	5.7	5.4	6.4	13.6	12.7	9.5
September	...	3.6	2.4	9.6	7.6	5.8	5.5	4.4	13.0	14.0	9.2
October ...	...	3.6	3.5	11.0	9.3	6.8	3.6	7.1	11.7	24.3	11.7
November	...	1.7	4.2	10.0	9.7	6.4	4.2	8.1	11.5	19.4	10.8
December	...	4.2	7.2	11.6	—	8.5 (a)	4.4	8.0	11.1	—	10.6 (a)
Ireland.											
January ...	...	6.0	10.0	6.1	17.2	9.8	6.2	6.3	7.3	21.7	10.4
February...	...	4.9	7.2	5.0	14.7	8.0	3.4	7.2	11.8	19.3	10.4
March ...	...	7.4	4.3	5.1	11.2	7.0	6.0	9.8	10.0	13.9	9.9
April ...	...	5.8	2.9	4.5	7.4	5.2	10.6	10.7	10.8	13.7	11.5
May ...	...	4.6	1.3	4.5	5.4	4.0	7.4	11.7	8.5	16.4	11.0
June ...	...	5.4	8.2	7.3	6.4	6.8	7.3	29.6	11.8	12.2	15.2

July	...	...	...	5.1	3.7	6.2	5.0	5.0	11.2	7.6	11.6	10.6	10.3
August	...	...	...	3.8	2.4	6.2	4.6	4.3	4.6	14.6	11.3	9.4	10.0
September	...	...	...	3.8	2.8	10.4	9.4	6.6	5.7	15.9	17.1	12.4	12.8
October	...	...	...	4.0	2.6	11.0	8.3	6.5	3.3	10.1	9.1	13.8	9.1
November	...	...	...	4.8	5.9	14.4	7.4	8.1	5.7	9.8	16.0	11.4	10.7
December	...	...	...	7.8	5.0	14.6	—	8.9	4.3	10.8	20.3	—	11.9 (a)

(a) Estimated.

NOTE.—The numbers of members in the Trade Unions furnishing the returns on which the above percentages are based were approximately as follows in January, 1903, and November, 1905:—

	Carpenters and Joiners		Plumbers.	
	Jan. 1903.	Nov. 1905.	Jan. 1903.	Nov. 1905.
London	...	7,200	1,000	1,100
N. Counties and Middlesex	...	1,400	200	1,400
Lancashire and Cheshire	...	10,100	2,500	2,300
Yorkshire	...	5,100	1,000	1,100
E. Midlands	...	2,800	700	600
W. Midlands	...	4,800	500	500
E. Counties	...	1,200	1,100	100
S. and S.-W. Counties	...	5,600	5,500	400
Wales and Monmouth	...	1,700	1,900	300
Scotland	...	4,900	1,800	2,100
Ireland	...	4,800	600	600

These numbers are in many cases very small, and the percentages based on them can be used as only rough illustrations of the conditions described in the text (p. 345 *et seq.*). Special and casual influences may easily affect the percentages to such an extent as, in some instances, to mask or destroy the normal monthly changes.

APPENDIX II.

Analysis of the financial rules of Trade Unions in the Building Trades with regard to Unemployed and Travelling Benefits. (The payments quoted are for ordinary members.) (From "Tables showing the rules and expenditure of Trade Unions in respect of Unemployed Benefits." [Cd. 5,703]. 1911.)

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
BRICKLAYERS. Ancient Guild of Incorporated Brick and Stone Layers' Trade Union of Ireland.	822	8d. per week.	—	—	—	—	Dispute, Sick, Accident and Superannuation.(Special levy for Funera Benefit.)
United Operative Bricklayers' Trade, Sick, Accident, and Burial Society of Gt. Britain and Ireland (Manchester Unity).	2117	Age at entry—18 to 30, 7½d. per week; 30-35, 8d.; 35-40, 9d.; 1/- per year to Sick Fund; 1/- per year Superannuation Fund.	52	—	1/6 to 5/6 per Branch per 4 months, according to size of town and distance travelled.	—	Dispute, Sick and Accident, Accident Bonus, Superannuation, Legal Aid. (Funeral Benefit raised by Special Levy.)
Operative Bricklayers' Society.	28,495	Age at entry—Under 25, 7½d. per week; 25-30, 8d.;	52	—	1/6 for one day per Branch in each 3 months. Two or	—	Dispute, Sick and Accident, Accident Bonus, Sup-

Operative Brick and Stone Layers' Soc. of Drogheda.	17	30-35, 9d.; 6d. per quarter for Management expenses; 3d. to 1/- per quarter to Benevolent and Incidental Fund (optional for each Branch); 1/- per quarter to Medical Fund (optional for each Branch). Not stated.	—	—	more days' relief allowed in certain large towns.	Dispute.	errannuation, Funeral, Benevolent Grants, Medical Aid, Legal Aid.
MASONS.							
United Operative Masons' Association of Scotland.	1,769 (in 1907)	4½d. per week and 1/- per year to Subsidiary fund.	—	—	—	Contributions reduced to 1d. per week when unemployed or sick.	Dispute, Accident Bonus, Fatal Accident Grant, Funeral, Legal Aid.
Operative Stone Masons' Society of England & Wales.	9,596	9d. per week.	52	—	6d. per day under 10 miles; 10 to 20 miles, 1/-; and further 1d. for every additional 3 miles. (Not more than 56 days' relief allowed per year.)	Contributions reduced when sick or disabled by accident.	Dispute, Trade Accident, Accident Bonus, Fatal Accident Grant, Superannuation, Funeral, Legal Aid.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
Operative Stonecutters' Society of Stepaside and its locality.	43	3d. per week.	—	—	—	—	Dispute, Sick Grant, Funeral.
Stone Carvers' Trade Association.	223	4d. per week to General Fund; 1d. per week to Superannuation Fund.	—	—	—	When unable to pay through sickness. When unemployed for 8 or more weeks.	Superannuation, Loans for fares to jobs, Legal Aid. (Dispute, and Accident Bonus partly by special levy; Funeral by special levy.) Dispute.
Stone Carvers' Soc. of Ireland (Dublin)	26	6d. per week.	—	—	—	—	Dispute, Accident Bonus, Funeral.
United Operative Masons and Granite Cutters' Union.	2,022	6d. per week, and 6d. per year for Journal.	78	10/- for 10 weeks. An advance not exceeding £2 may be drawn for removal expenses when going to work at a distance.	—	When unemployed and not receiving benefit, and when sick.	

Amalgamated Operative Marble and Slate Masons' Trade and Benefit Society.	97	4d. per week to Benefit Fund; 1d. per week to Funeral Fund; 1d. per week to Management Fund; 3d. per quarter to Distress Fund; 6d. per quarter to Trade Dispute Fund.	26	Duration of Membership. Per week. 6 mths. 4/- for 6 wks. 1 year 8/- 2 " 10/- 3 " 12/- 5 " 12/- for 8 wks.	Dispute, Funeral, Distress Grants.
CARPENTERS and JOINERS.					
General Union of Operative Carpenters & Joiners.	5,241	11d. per week, and 1/- per year to Parliamentary Representative Fund.	52	10/- for 8 weeks. Same as ordinary.	Dispute, Sick and Accident, Accident Bonus, Superannuation, Funeral, Loss of Tools by fire, water, or theft, Legal Aid.
Northampton Local Operative Carpenters' & Joiners' Friendly & Trade Society.	16	1/6 per month.	52	7/- for 8 weeks; 3/6 for 8 weeks.	Sick and Accident, Victim, Funeral, Loss of Tools by fire, water, or theft, Distress Grants.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
Amalgamated Soc. of Carpenters and Joiners.	61,220	1/3 per week; 4d. per quarter to Contingent Fund; 6d. per year to Trade Movement Fund.	52	10/- for 12 weeks; 6/- " " "	Same as ordinary.	When unemployed or sick.	Dispute, Sick and Accident, Acci- dent Bonus, Super- annuation, Funer- al, Fares to jobs, Loss of Tools by fire, water, or theft, Distress Grants, Legal Aid.
Associated Carpen- ters' and Joiners' Society.	5,708	9d. per week; and 3d. per quarter to Benevolent and Contingent Fund. or 1/- per week, and ditto. 3d. per week.	— 52	— 10/- for 13 weeks.	— —	Reduced when re- ceiving sick bene- fit, and for 13 weeks in any one year when unem- ployed.	As above, <i>except</i> Fares to jobs.
Trade Movement Society of Car- penters & Joiners.	25		—	—	—	—	Dispute, Accident Bonus, Loss of Tools by fire, water and theft, Legal Aid.

**SLATERS and
TILERS.**

Amalgamated Slaters' Society of Scotland.	861	Per week—2d. to Protective Fund; 4d. to Sick and Funeral Fund; 1d. to Central Board Management Fund; 1d. to District Management Fund; 6d. per quarter to Contingency Fund	—	—	—	When unemployed or sick (paid from Contingency Fund)	Dispute, Sick and Accident, Funeral (Accident Bonus and Retirement Grant by special levy.)
Amalgamated Slaters' and Tilers' Provident Society.	1,060	Per week—1d. to Trade Protection Fund; 4d. to Provident Fund; 3d. to Management Fund	26	—	1d. per mile up to 10/- in 6 months.	—	Dispute, Sick and Accident, Accident Bonus, Funeral, Fares to jobs, Legal Aid.
PLUMBERS.							
United Operative Plumbers' Association of Gt. Britain and Ireland.	11,389	1/- per week.	Unemployed, 52 Lock-out, not stated.	9/- for 49 days. For Lock-out due to dispute in other trades: 12/- (15/- after one year's membership) while lock-out lasts.	1/6 per day (Sundays included) for 49 days.	When unemployed or sick.	Dispute, Sick and Accident, Accident Bonus, Superannuation, Funeral, Legal Aid.
United Operative Plumbers' Association of Scotland.	982	3d. per week to Trade Fund; 4d. per week to Sick Fund; 3d. per quarter to Supplementary Fund.	—	—	—	When unemployed contributions are paid from Supplementary Fund.	Dispute, Sick and Accident, Superannuation, Funeral, Distress Grants (Accident Bonus partly by special levy).

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
London Plumbers' Society.	22	9d. per week, and $\frac{1}{2}$ d. per week to Incidental Fund.	—	—	—	When unemployed or sick.	Dispute, Sick and Accident, Accident Bonus, Superannuation, Funeral, Distress Grants.
PLASTERERS. Dublin Operative Plasterers' Trade Society.	170	6d. per week.	52	10/- per week when unemployed at any time between 6 weeks before and 6 weeks after December 25. A sum of £1 allowed after 4 weeks idleness.	—	—	Dispute, Superannuation, Funeral.
Cork Slaters' and Plasterers' Society	121	6d. per week.	52	—	—	—	Dispute, Funeral, Fares to jobs, Emigration.
Belfast Operative Plasterers' Protective & Friendly Trade Union.	60	6d. per week.	—	—	—	—	Dispute, Sick and Accident, Funeral, Fares to jobs, Loans for Emigration. (Distress

Grants and Gifts to Widows and Orphans by special levy.)

Dispute, Sick and Accident, Superannuation, Funeral, Loans for Building Investments, Legal Aid. (Accident Bonus and Fatal Accident Grant raised by special levy.)
Funeral. (Dispute by special levy.)

Funeral, Sick and Accident, Legal Aid. (Dispute by special levy.)

Dispute, Accident, Superannuation, Funeral.

When sick and benefit is exhausted.

After 4 consecutive weeks' unemployment or sickness.

Contributions may remain in abeyance when unemployed or sick.

1/6 for one day per district up to a limit of £4 in one year. Two days' relief granted in certain large towns

10/- for 8 weeks during Dec., Jan., and Feb. only.

Travelling, 52

7d. per week, and 1d. to 2d. per week for Branch Management expenses.

7,019

National Association of Operative Plasterers.

3d. per week.

1,067

Scottish National Operative Plasterers' Federation.

1/- per week.

482

PAINTERS and DECORATORS.
Metropolitan House Painters' Trade Union (Dublin).

4d. per week.

1,170

Liverpool and Vicinity Operative House Painters' Old Society.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
Belfast Operative House and Ship Painters' and Decorators' Trade Union.	44	1/3 per week, but exempt during Jan. and Feb.	52	10/- for 8 weeks, during Dec., Jan., and Feb. only.	—	When sick.	Disputes, Sick and Accident, Accident Bonus, Superannuation, Medical Aid, Legal Aid. (Funeral partly by special levy.)
Southport and Birkdale Painters' Soc.	234	6d. per week.	52	6/- for 7 weeks.	—	Case considered when unable to pay through unemployment or sickness.	Dispute, Trade Accident, Funeral, Legal Aid.
National Amalgamated Society of Operative House and Ship Painters and Decorators.	17,462	1/- per week, and 3d. per quarter for Contingent Fund, and 2d. per quarter to General Federation of Trade Unions.	52	10/- for 10 weeks, during Nov. to Feb. only.	Same as ordinary.	—	Dispute, Sick and Accident, Superannuation, Funeral, Benevolent Grants. (Accident Bonus by special levy.)

St. Helens Operative House Painters' & Decorators' Soc.	28	8d. per week.	Not stated.	7/- for 5 weeks, during Jan. and Feb. only.	—	Dispute, Sick and Accident. (Funeral by special levy.)
Barnsley Operative House Painters' Society.	38	6d. per week.	52	8/- for 6 weeks, during Nov. to Feb. only.	As for Southport Society above.	Dispute, Accident. (Funeral by special levy.)
Birkenhead Operative House Painters' Society.	270	4½d. per week to General Fund; 1d. per week to Sick and Benevolent Fund.	—	—	As for Liverpool Society above.	Dispute, Sick and Trade Accident, Funeral, Benevolent Grants.
Scottish Painters' Society.	2,918	3½d. per week, and 4d. per quarter to General Federation of Trade Unions	—	—	—	Dispute, Trade Accident, Funeral, Distress Grants, Legal Aid.
Do.		7d. per week, and 4d. per quarter to General Federation of Trade Unions.	—	—	—	Dispute, Sick and Accident, Fatal Accident Grants, Funeral, Distress Grants, Legal Aid.
The "Cave" House Painters' and Decorators' Trade Union (London).	55	2d. per week.	—	—	—	Dispute, Trade Accident, Funeral, Distress Grants, Legal Aid.
Nelson and District Operative House Painters' Association.	30	3d. per week.	—	—	Case considered when unemployed or sick.	Do.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
BUILDERS' LABOURERS. General Labourers' Amalgamated Union.	1,883	3d. per week, and 4d. per quarter to Management Fund and 4d. per year to Municipal and Parliamentary Fund.	—	—	—	—	Dispute, Accident, Funeral, Legal Aid. (Accident Bonus raised by special levy.)
United Order of General Labourers of London.	1,385	3d. per week, and 6d. per quarter to Management Fund and 3d. per quarter to Strike and Benevolent Funds	—	—	Contributions up to a maximum of 5/- in one year paid from Benevolent Fund when unemployed or sick for 4 or more weeks.	—	Dispute, Accident, Funeral, Legal Aid. (Accident Bonus partly by special levy.)
National Association of Operative Plasterers' Labourers.	230	3d. per week to General Fund; 2d. per week to Local Management Fund	Travelling, 52	—	Under 30 miles, 1/6 per day; over 30 miles, 2/6. (One day's relief only in each district in a year.)	—	Dispute, Trade Accident, Funeral.

2	Navvies, Builders' Labourers, and General Labourers' Union.	2,072	4d. per week, and 3d. per quarter for salary of Branch Secretary.	Unemployed, 26 Travelling, 52	10/- when unemployed through contagious disease.	9/4 per week for 8 weeks in one year.	—	Do., and Accident Bonus, and Legal Aid.
C	United Builders' Labourers' Union.	2,568	Per week—1½d. to Trade Fund; 1½d. to Accident and Funeral Fund. 5d. per quarter for executive expenses 1d. per year for postage.	—	—	—	—	Dispute, Trade Accident, Funeral, Legal Aid. (Accident Bonus raised by special levy.)
	United Labourers' of Dublin Trade Union.	461	4d. per week, and 4d. per quarter.	—	—	—	Exempt for not more than three months when sick. When unable to pay through sickness or accident.	Funeral, Trade Accident. (Dispute by special levy.) Dispute.
38	Cork Builders' Labourers' Union.	200	Not stated.	—	—	—	—	Dispute, Sick and Accident, Funeral, Distress Grants.
	Catshill Society of Builders' and General Labourers.	39	4d. to 5d. per week, according to age at entry; and 3d. per quarter to Distress Relief Fund.	—	—	—	—	Dispute, Sick and Accident, Funeral, Distress Grants.
	Coventry and District Builders' Labourers' Protective, Accident, and Burial Society.	130	4d. per week.	—	—	1/4 per Federated Society per six months.	When sick exempt for eight weeks, or may be longer.	Dispute, Accident, Funeral, Legal Aid.
	Nottingham Builders Labourers' Trade Society.	670	4d. per week, and 3d. per quarter to Incidental Fund.	—	—	Do.	Do.	Dispute, Trade Accident, Funeral.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
Oxford and District Builders' Labourers' Society.	37	4d. per week, and 1/- per year to Reserve Fund.	—	—	1/4 per Federated Society per six months.	—	Dispute, Accident, Legal Aid. (Funeral by special levy.)
Wolverhampton and District Builders' Labourers' Protective, Accident, and Burial Society	39	10d. per month to Sickness Fund, 6d. per month to Management Fund	—	—	—	—	Dispute, Trade Accident, Funeral, Legal Aid.
Oldham and District Bricklayers' Labourers' Accident and Burial Society	110	2½d. per week to Benefit Fund; 1½d. per week to Management Fund.	—	—	—	—	Trade Accident, Funeral.
Manchester and Salford District Operative Plasterers' Labourers' Society	188	5d. per week.	—	—	—	—	Dispute, Trade Accident, Funeral.
Wigan and District Builders' Labourers' Union, Accident and Burial Society.	60	1/4 per month.	—	—	—	—	Do.

Leigh and Bedford District Bricklayers' Labourers' Union.	14	4d. per week.	—	—	—	—	Dispute, Accident, Legal Aid. (Funeral by special levy.)
National Association of Builders' Labourers.	2,653	4d. per week; 3d. per quarter for Management Expenses; and 3d. per quarter to Superannuation and Total Disablement Benefit Fund.	26	—	1/4 for one day per Branch in any six months, maximum of 13/4 in twelve months. (Extra day's relief at certain branches.)	—	Dispute, Accident, Superannuation, Accident Bonus, Funeral, Legal Aid.
Birkenhead, Liscard and District Bricklayers', Plasterers' and Slaters' Labourers' Society.	211	3½d. per week.	—	—	—	—	Dispute, Trade Accident, Legal Aid. (Funeral by special levy.)
MISCELLANEOUS BRANCHES.							
Gas Fitters' Trade Association (Birmingham).	80	6d. per week.	52	10/- for 13 weeks; 5/- for 13 weeks.	Same as ordinary.	When sick for four or more weeks. Reduced to 3d. when receiving unemployed benefit.	Dispute, Accident Bonus, Loans for Fares to jobs, Legal Aid. (Funeral by special levy.)
Glass Painters' Union (London).	40	9d. per week.	52	12/- for 10 weeks; 5/- for 10 weeks.	—	—	Dispute, Funeral, Distress Grants.
Fret Lead Glaziers' and Cutters' Union.	68	6d. per week.	52	9/- for 11 weeks.	Same as ordinary (less postal expenses).	—	Dispute.

NAME OF TRADE UNION.	Members at end of 1908.	Ordinary Regular Contributions.	No. of weeks after joining Union before entitled to Unemployed and Travelling Benefits.	UNEMPLOYED BENEFIT.		When exempt from contributions through Unemployment, Sickness, or Accident.	Other Benefits covered by contributions of Members.
				Ordinary Unemployed Benefit. Amount per week.	Travelling Benefit.		
Amalgamated Soc. of Ornamental Decorators of the Composition Trade	75	6d. per week, and 6d. per quarter to Incidental Fund.	52	12/- for eight weeks.	—	Contributions reduced to 1d. per week when sick more than 2 weeks.	Dispute, Funeral, Legal Aid.
Glasgow Operative Glaziers' Trade & Friendly Society.	125	3d. per week to Trade Protection Fund and 4d. to 6d. per week to Sick and Funeral Fund, according to age at entry.	—	—	—	When unemployed or sick exempt from payment to Trade Protection Fund.	Dispute, Sick and Accident, Funeral.
Dublin Whiteners' Trade Union.	65	6d. per week.	—	—	—	—	Annual Division of Surplus Funds. (Funeral raised partly by special levy.)

Amalgamated Soc. of Decorative Glass Workers of the U.K.	226	Per week—7d. to General Fund; 1½d. to Management Fund; 1d. to Contingent Fd. 8d. to 1/3 per week, according to age at entry; and 1d. or 2d. per week for District Expenses.	52	10/- for 10 weeks.	—	When unemployed or sick.	Dispute, Gift to Widow or Orphans, Removal, Distress Grants and Loans, Legal Aid. Dispute, Sick and Accident, Funeral.
National Association of Tile, Mosaic, and Faience Fixers (Manchester).	95		—	—	—	When sick.	

No.	Name	Age	Sex	Profession	Religion	Caste	Marital Status	Remarks
1
2
3
4
5
6
7
8
9
10

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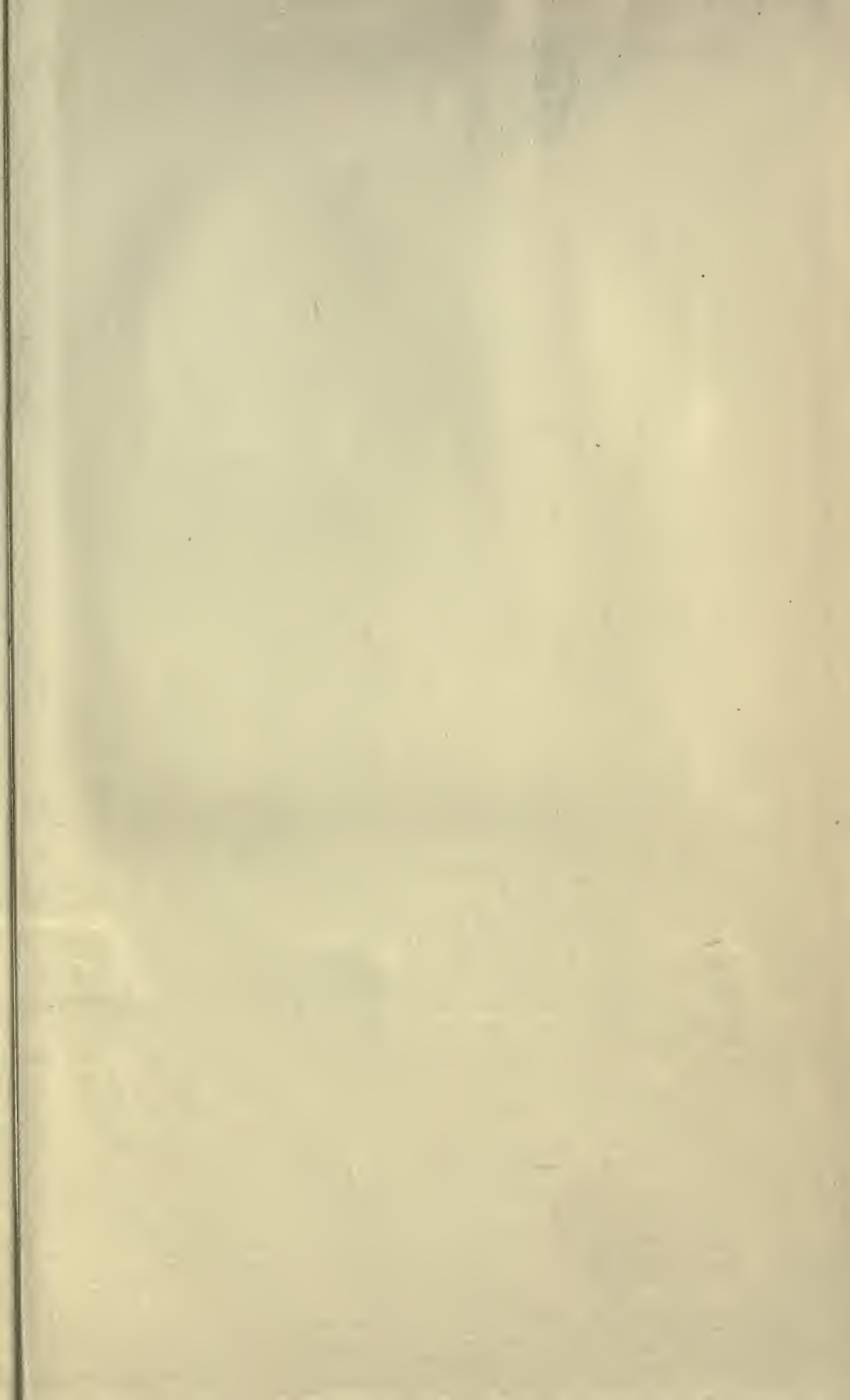
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