

TITULO: THE JOURNEY TO WORK

CAPITULOS I - II - III

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T H E J O U R N E Y T O W O R K

Its Significance for
Industrial and Community Life

by

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PART "A": GENERAL DISCUSSION

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PART "A": GENERAL DISCUSSION

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CHAPTER I.

DIRECTION OF THE DAILY MOVEMENTS

Every morning millions of workers leave their homes on their way to work. At first sight, the routes taken give the impression of a maze; but closer examination reveals certain definite groupings.

The most marked trend is from residential suburbs ("dormitories") to business and industrial districts. This stream — and its reverse in the evening — is so dominant that, ignoring cross-currents, the whole movement has been described as "tides of daily ebb and flow". (1) As workplaces are usually in the centre, and residential districts on the fringe, of towns, the general trend of the tide is centripetal in the morning and centrifugal at night. The outstanding example is the City of London, which "regularly expands and contracts between an insignificant night population of 13,709 and the more than thirty times as large number of 436,721 in the day". (2)

The main trend is, however, but across by multifarious crosscurrents and counter-currents of various volume. Cross-currents are most conspicuous in areas with several industrial centres within daily travelling distance, such as are to be found in Lancashire, Yorkshire and the Midlands. (3) But they occur also in big towns and conurbations with a number of business and industrial districts. Thousands of people travel daily from one outer London

(1) Census of England and Wales, 1921. General Report, p 190

(2) Ibid., Workplaces, p v.

(3) Ibid., General Report, p 193

Borough to another, as against the more usual movements between outskirts and centre; it give a random example: 1,350 inhabitants of Wandsworth travelled to work in Hampstead in 1921. ⁽¹⁾ The Merseyside boroughs presented a similar picture, and "between 10% and 60% of the working population of every Tyneside town went daily to work in some other town; between 9% and 50% of the workers in every Tyneside town had come in from outside" ⁽²⁾.

Counter-currents. In large towns which attract masses of labour from outlying suburbs, there are at the same time centrifugal movements. Inhabitants of central London districts travel to work in Reading, Slough, and Hatfields, to mention only a few instances; streams of workers leave central Birmingham each morning for Longbridge, Bourville, Fort Dunlop and other places; many Liverpool people proceed to work in Speke, but also to Manchester, Salford, and other more distant places. Manchester sends workers to Trafford Park; Glasgow to Hillington, and so forth. In all these towns routes can even be traced from the fringe of the built-up area across the city and out again to the opposite fringe; daily journeys of inhabitants of Becontree to factories on the Great West Road are a case in point. Counter-currents are not, however, restricted to large towns. In some smaller places, both daily exodus and influx are considerable and neutralise each other numerically. Chatham, e.g. had, in 1921, 3,416 inhabitants working elsewhere against 1,905 coming to work from other places. In Brentford, on the other hand, exits numbered 2,248, entries, 2,074.

Yet a different lights is thrown on the daily journey if viewed from the dwelling place and the workplace respectively; if viewed from the dwelling place

(1) Ibid., Workplaces in London and Five Home Counties p. 8.

(2) H. A. Mess, "The Growth and Decay of Towns" Political Quarterly, July-Sept. 1938, p. 393.

the configuration is one of dispersion: the inhabitants of a neighbourhood leave each morning in various directions on journeys of very different lengths. The extent of this phenomenon, even twenty years ago, was impressively demonstrated by the specification of workplaces of the enumerated population in the Census of England and Wales, 1921.⁽¹⁾ A more recent example is provided by a L. C. C. census in Watling in 1937.⁽²⁾ The dispersal on their daily journeys of the over 7,000 workers from this estate in the Hendon district was such that 38% worked with Hendon; a further 20% in various areas not very far from Hendon, while 42% travelled to a number of other London districts.

The same is happening in a unit much smaller than a residential area; a sample inquiry in some London Boroughs⁽³⁾ revealed a remarkable degree of dispersion even from individual homes where there are two or more earning members in a family.

Viewed from the other end, the configuration is one of the conflux at the workplace. The Census (1921) returns on "Workplaces" show this feature as complementary to the dispersal from domiciles. Actually, there is a high degree of concentration in a comparatively small number of workplaces, of employees coming from a very much larger number of scattered dwelling places.⁽⁴⁾ The situation in this country, twenty years ago, was summed up by the Registrar-General as follows:

(1) See Statistical Part, p 113 fol.

(2) See p. 22 f.

(3) See Statistical Part, p 155

(4) See p. 116, on the relevant findings in the Industrial Region of Central Germ.

Since the needs of industry and commerce have so far been best met by a concentration of the day population, while for residence and domestic purposes converse conditions are preferable, industrial areas are generally associated with a larger number of dormitory areas, and such intersection as takes place is characterised by a daily pulsation between the common industrial centre and a larger number of surrounding residential areas. (1)

On broad lines this description still holds good, although some changes have occurred since this was written. On the one hand, dormitories have been built for much more numerous populations, with the result that the numbers leaving such areas on their journey to work are considerably greater than formerly. On the other hand, workplaces have come to be more decentralized within the urban area, and there are now more very large works which employ thousands of workers. These developments have resulted in producing a more marked conflux towards the single works. Investigation of the daily journeys made by the employees of particular firms have yielded illustrative charts: hundreds or thousands of routes start at the disseminated homes of the respective firm's employees and converge at the factory gates. (2)

The terms "dispersion" and "conflux" should not be taken to imply that the daily movements of various workers from a given residential area or to a given workplace form regular patterns. Some streams of movement are short, and these are usually the most voluminous, others are long and of less volume. Furthermore, the routes taken are often only in a limited number of

(1) Census of England and Wales, 1921. General Report, p 193

(2) See p. 200 ff. of the same report.

directions. This is especially so in the case of places on the fringe of a large town or industrial area. Longbridge, for instance, which is situated in the South-West corner of Birmingham, draws its employees largely from North-East to North-West, a certain portion from the South, and hardly any from East and West. Carreras' cigarette factory, on the other hand, is located within the built-up area of London and has the lines of its employees' journeys converging from every direction. Corresponding differences exist between central and outlying residential districts.

The configuration of the routes taken on the journey to work must not be regarded as stable; viewed over a period, the picture is kaleidoscopic. The various currents of movement vary in strength and direction; some expand and contract periodically, other undergo less frequent but more definite changes.

CHAPTER II

FUNCTIONS OF THE DAILY MOVEMENTS

Clearly, these extensive and diverse daily movements must be prompted by various strong motivating forces. What, then, are these forces? In describing the various trends, it has already been mentioned that some journeys are due to the way in which urban settlements have grown: topographic conditions are one main cause of the journey to work. Others lie in the economic and social fields: in the structure and requirements of the modern system of society.

While the tides of daily ebb and flow between outlying dormitories and central workplaces are in general accepted as a natural consequence of the big urban agglomeration, the cross- and counter-currents are frequently considered as reflecting a lack of organisation and deprecated as a mere waste of money, time and energy. It will be seen, however, that more detailed analysis leads to a different appraisal of the position.

TOPOGRAPHIC:

Co-ordination of Dormitories and Workplaces

Modern town-growth is characterised by the separation of residential quarters from industrial and business districts. The earning inhabitants of dormitory suburbs travel to work as a matter of course — the very name "dormitory" implies that it is located at a distance from potential workplaces.

Factories, too, are being set up in more or less isolated localities, so as to make travelling a necessity for practically all their employees; this applies to large single works as well as to Trading Estates with numbers of smaller

In addition to these centripetal journeys to work, there are centrifugal ones, from homes in the old central districts to new factories on the outskirts of the towns. It is too early yet to see to what extent this tendency of "living in" and "working out" will develop. It is conceivable, however, that it may remodel town life considerably; after all, men are remaining in, and flocking to, the town largely in order to enjoy its facilities for a fuller life, in such spheres as social intercourse, education, amusement and shopping. At the same time, an arrangement which locates the residential quarters in the centre of the town and industry at the fringe provides workers and employers alike with good opportunities for choosing suitable jobs and labour respectively. Easy access to the open country would be a necessary feature of such a town plan. (1).

It has been due to the attitude of neglecting the implications of the daily journey that "there has been no attempt towards securing development with proper correlation of workplace and home". (2) "There is little consultation between the transport agencies and local authorities in the matter of disposition of housing estates." (3) In Greater London the main new housing estate was developed in the East of the town, while most of the new factories were built in the West. The result has been daily journeys across the whole width of London, from Becontree to the Great West Road, for instance. A similar situation arose in Glasgow, as the result of non-co-operation between various departments, "the Special Commissioners having located Hillington, their

(1) See p. 108

(2) Sir G. Gibbon, Barlow Commission, Minutes of Evidence- hereafter referred to as "Barlow Commission, Evidence", p. 863.

(3) Major H. E. Crawford, *ibid.*, p. 688.

trading estate, five miles on one side of Glasgow, and the local authority in Glasgow building their housing development five miles on the other side of the City". (1).

ECONOMIC AND SOCIAL :

The social and economic importance of the daily journey consists in its contribution to the mobility of labour, "the very breath of life to modern industry". (2) The primary manifestation of mobility of labour is, of course, migration: workers move from their old homes to the neighbourhood of new workplaces. There is a continuous migration of individuals and of families towards new centres of economic activity, thus adapting the geographical distribution of the population to the changing needs of industrial development. This re-orientation is taking place on broad lines and over long periods, but it entails incisive ruptures of human and of economic life. (3) The smooth working of the social-economic organism requires adjustments of a less radical kind; the flexibility of the industrial structure is assisted by the daily journey to work.

Apart from facilitating economic change, the journey to work fulfils important functions also in a stationary society: daily travelling widens the labour market, making easy the choice of employment to the employee and the choice of employees to the employer; this increases the independence, in both private and working life, of the wage-earner; firms too are rendered less de-

(1) Sir Montague Barlow, *ibid.* p 874

(2) Balfour Committee on Industry and Trade, Final Report, 1929, Cmd. 3282 p. 235.

(3) (written on following page)

Pendent on local labour in recruiting their workpeople. Further, daily travelling helps to preserve the family unit, by making it possible for various earning members to work in different localities while maintaining home life in the domestic circle. The daily journey thus serves to co-ordinate factories and offices with their varying labour requirements on the one hand, and the human beings offering their labour and grouped in families, on the other hand.

a) Essential Condition of Large-Scale Undertakings

The emergence of large-scale manufacture as the most economic form of production in various branches of industry has led to the development of huge plants, employing many thousands of workers, mainly in the iron and steel, engineering and chemical industries and also in the retail trade in the form of department stores. It would be physically impossible, e.g. to house the 20000 employees of an engineering works in the vicinity of the factory: the great majority of such workers being men, they and their families constitute by themselves the population of a medium-sized town. The community would be further increased by the auxiliary services which are necessary for such a number of inhabitants; the area covered by houses would render illusory the nearness between home and workplace. Moreover, there would be the social and economic disadvantages of a one-industry town. Even for a town of the size of Ox

(1) See A. D. K. Owen, "The Social Consequences of Industrial Transference" in *The Sociological Review*, October 1937.

ford, apprehension is felt about the one-sided type of employment offered and about serious results of a depression in the motor-car industry, upon which alone its industrial population depends. Daily travelling by the workers has thus become necessary to secure the concentration of labour in plants of the size demanded by technical and economic considerations.

b) Contribution to the Mobility of Labour

1) Widening of the Labour Market in General

From the point of view of the worker, the principal significance of the journey to work is that it extends the market in which he is able to offer his labour and thus enlarges his economic independence. He is not obliged to accept a job from those firms which he can reach by walking from his home. Moreover, daily travelling puts at his disposal a more varied choice of employment in a broader range of occupations and industries, to suit his inclination, training and skill. He can more easily change his employer if he wants to, without having to move his home to another locality, with all the cost and inconvenience this would involve; this is specially important for those who own houses in which they live. (1) The possibility of daily travelling to work reduces the danger of unemployment — more will have to be said on this point.

In the private sphere, too, the worker derives a greater amount of independence from daily travelling; the fact that he can choose his place of liv

(1) See p. 17

ing, to a large extent uninfluenced by his place of work, means an increase of personal freedom. This is most clearly demonstrated by the conditions as they exist in certain American "Company Towns", where not only the housing accommodation but also utility services and amenities are provided by the one company on which the inhabitants depended for employment. In such towns, there is hardly any side of the workers' life which is not, in one way or another, under the influence of the dominating employer. In this country, the system of paternalism under which the employer is at the same time the landlord belongs now, on the whole, to the past. Even to-day, however, it is not without significance that the worker can choose his place of residence beyond the sphere of an employer who is influential socially and politically.

A development should be mentioned here which operates to prevent the worker from becoming more independent in the choice of his dwelling place. At the same time when the tie binding the employee to the vicinity of his work is loosened by transport facilities, his freedom to choose where to live is endangered through certain consequences of the housing policy in this country.

Since the last war, local authorities have become almost the sole agents for building houses for the poorer sections of the community. ⁽¹⁾ This fact influences the location of individual workers' homes in two ways: first,

(1) This organization of subsidised building is peculiar to British housing policy. With the exception of the fully socialised provision of houses in Vienna and of course, Russia, the continental countries have developed bodies intermediate between the public authority, on the one hand, and the prospective tenants, on the other hand --- see the author's article, "Public Utility House Building in European Countries", in the International Labour Review, 1929, Vol. XX 1 and 2.

for various reasons, mainly administrative and financial, municipal building has in some towns been concentrated in a few large housing estates. Secondly, the monopoly of subsidised building in the hands of the local authorities has implied undesirable restrictions in the allocation of new dwellings: as a rule, a man is dependent for being housed or rehoused on the local authority in whose district he has been living. This creates difficulties in moving from one London borough to another as well as in inter-urban migration. The following is a case in point: when the Ford Motor Co. moved their works from Trafford Park to Dagenham, the workers coming with the firm could not be accommodated in the L.C.C. estate at Dagenham, since these houses were reserved for families who had been living in the London County area for at least two years. It is obvious that these features of municipal housing policy restrict the workers' freedom to select the place of their domicile according to their personal circumstances, and thus reduce the mobility of labour which is recognised as an essential factor of modern industry and of the worker's independence.

The benefits which the employer derives from the extension of the labour market brought about by the workers' habit of daily travelling correspond to those accruing to the worker. The possibility of selecting his hands from an area wider than the immediate vicinity of the factory premises makes it easier for a firm to find "the right man for the right job". This is very apparent in the case of skilled and otherwise specialised jobs. Standard Telephones, e.g. draw the male employees of their New Southgate factory from all over London, as it would not be possible to find the necessary number specialised in

light engineering within walking distance of the works.⁽¹⁾ Another example is the employment by the motor industry in Birmingham of people from the Blank Country for certain hard work to which they are traditionally accustomed and which they are better able to do than townsfolk. The workers concerned, on the other hand, obtain higher wages in Birmingham than those prevailing in their own district. For the recruitment of several hundreds of stokers, the Leuna Works (Central Germany) went as far as to the Mansfeld District, over 30 miles away, where the decline of the copper mining industry had set free labour suitable for this hard work. Special workmen's trains were run for these men. Incidentally, an interesting feature was that, since the Reichsbahn-Gesellschaft asked for a minimum of 500 passengers for these trains, a number which surpassed Leuna's demand for the type of worker to be drawn from the Mansfeld district, the firm recruited other workers from places along the route, in order to make up 500. The rather long journeys of these complementary men had thus an origin connected neither with the firm's nor their own actual requirements — a situation whose causes can seldom be so clearly traced but which may be assumed to prevail in many cases. The history of the Leuna works provides also an illustration from a different aspect of the importance for the employer to be not dependent on local labour. In 1920, the works was for several days occupied by rioting workers thereafter, the firm's housing scheme was altered and only a restricted number of watchmen, foremen, and key-workers accommodated in the imme

(1) See the Statistical Part, p 145

diate neighbourhood of the works. This occurrence may explain why also in less extreme cases a firm may favour daily travelling by its employees, out of dislike for having an isolated factory surrounded by the homes of masses of dismissed or otherwise dissatisfied workers. "In the opinion of the directors there are many disadvantages in a Joint Stock Company being landlords as well as employers" was the answer by an important factory in this country to the question about firms' housing schemes for their employees. From both the employer's and the worker's points of view, firms' housing schemes are to be considered as possible causes of friction in industrial relations.

ii) Facilitating Economic Changes in particular

The daily journey's contribution to mobility of labour is especially important in the process of economic change such as occurs in expansion and decline of industry, short-distance migration of factories, seasonal fluctuations and labour-turnover in general.

Expansion of Industry. The industrialist who plans to erect a new work finds labour among the principal location factors, together with raw materials, site and services and markets. Generally, location will be based on a combination of these various factors. The factor "labour" can be taken into account in three ways; either the new works has to be situated in the vicinity of a pool of suitable labour, or new housing accommodation adjacent to the factory has to be provided for the prospective employees, or the problem may be

solved by relying on the workers' daily travelling. The first method must often conflict with other main location factors (sites, e.g., are most expensive in densely populated neighbourhoods, and the transport of raw materials to such premises may be expensive). The second method (housing the required workers near the new factory), if undertaken by the industrialist himself, involves initial capital outlay to an extent which may be prohibitive. To leave, on the other hand, the construction of houses to private enterprise or to local authorities means a postponement of the start of production, a delay which it might be essential to avoid. ⁽¹⁾ Daily travelling by the workers is the expedient to solve this dilemma. Though the firms, as will be shown below, have in many cases to subsidise their employees' transport during the initial months or even longer, those expenses are incomparably lower than would be the costs of erecting dwelling houses for them. — To some extent, this function of the daily journey may lose in importance. Light mobile industries employ a growing proportion of earners, and trading estates providing suitable premises for small new factories may come to be located within easy reach of residential areas. But this is only a partial solution.

It is in fact a common experience that new and expanding works have high proportions of their employees coming from considerable distances, as against more local recruitment by old-established firms. This is especially marked

(1) "The success of many new enterprises depends on the speed with which it is possible to start production." P. E. P. Report on the Location of Industry in Great Britain, 1939, p. 90.

where a huge plant is opened in a rural district, the location being determined by factors other than labour. The Leuna Nitrogen Works, for instance, the construction of which was begun in 1916, are dependent on the vicinity of bituminous coal-pits, and strategical reasons accounted for the location in Central Germany. Only secondary consideration, consequently, was given to such factors as labour supply. Without the device of daily travelling on the part of nearly 20,000 employees, production at the Leuna Works would have been held up for years; in the early 1920's, the erection of the necessary number of houses would not only have meant an enormous capital outlay but, under the post war conditions in the building industry, have been uncertain of achievement. Similar conditions prevailed at Eindhoven, Holland, during the rapid growth of the N. V. Philips Gloelampenfabrieken in the 1920's; the town of about 80000 inhabitants could not supply the 20,000 employees wanted by the firm; consequently large numbers, including many women, were drawn from other places far and near. The same problem was faced by the De Havilland Aircraft Company on opening their new works, and they too were helped by being able to draw their employees from far afield. When a big engineering firm undertook to build a "shadow" aircraft factory under the Government's rearmament programme in 1936, the site chosen was on the firm's own premises. The weight of the location factors in favour of this place (readiness of site and services, common management with the existing huge works) must obviously have outweighed other factors, including labour supply, which would have recommended a different location; it proved very difficult to carry the required number

of additional workers to the factory, but ultimately daily travelling was made possible.

Short-distance migration of Industry. -- The same factors operate in the removal of a factory to another district. During the 1920's and 1930's quite a number of firms have seen fit to move their works from the centre to the fringe of large towns, or even beyond, where production and working conditions seemed superior. As a rule, the chosen site was beyond walking distance from the homes of the employees and mostly without nearby adequate housing accommodation. Even if there should be a numerically sufficient supply of labour in the new neighbourhood, the firm could not consider relying altogether on this labour, thus parting with its old workers, whose experience, training and loyalty are an asset, imponderable but none the less important, to the prosperity of the firm. On the other hand, insistence on its old personnel being housed in the new district would place the migrating factory in the same situation as an entrepreneur starting production afresh. The daily journey solves these difficulties. There is ample statistical evidence that in works transferred to their present site as long as five and more years ago, the residential distribution of the employees still largely reflects the former location of the factory and entails daily journeys for the workers concerned. (1)

(1) See Part B, pp. 134, 141, and 145.

Reorganisation of multiple Plants. — A development similar to the transplantation of entire factories is the concentration in a single place of the various local branches of one firm; the daily journey is important also in this connection, as shown in the case of the London Passenger Transport Board. In the course of its formation out of numerous local transport agencies, the Board took over repair shops and garages scattered over a wide area. In the subsequent unification, "inadequate and inconveniently situated garages acquired by the Board have been closed . . . Chiswick Works are being radically replanned and enlarged to enable (all) the buses and coaches to be efficiently overhauled. . . ."

The work of maintaining and overhauling trams has been centralised at Charlton Works, while trolley-buses are dealt with at Charlton Works and Fulwell Depot. Eight repair-shops have, in consequence, been closed." (1) This meant a divorce of home and workplace for the mechanics and engineers who lived near the closed garages and repair shops where they had been employed. If they had not been able to travel to the new and distant workplaces, either the Board would have lost these experienced men and the men their jobs, or the latter would have had to move nearer to the new workplaces and thus forsake their residences.

Continuity of residence is generally desirable in the interest of private and of community life. For those who have bought their houses it is furthermore an important financial consideration. Genuine ownership as well as

(1) L. P. T. B., 5th. Annual Report, pp. 11-12

the hire-purchase system bind a man to his residence, for often the house can not be sold without loss. This tie either encroaches upon the mobility of the owner-occupier, if it prevents him from accepting an advantageous but distant job, or else, if he does accept it, leads to daily journeys of excessive length. For this reason alone, if for no other, the purchase of a house, so emphatically encouraged from various quarters, cannot be regarded as beneficial to the wage-earner. The need is for plenty of well distributed dwellings to let, to help families which want to move nearer to new workplaces.

In addition to the more far-reaching and fundamental changes there are less drastic but more frequent changes in which the journey to work plays an equally important part.

Seasonal Fluctuations. — In such regular occurrences as seasonal trade fluctuations daily travelling acts as a shock-absorber. In the motor car industry, for example, there are slack months in the year when many hands are temporarily dismissed; they are re-engaged with the start of the annual upswing of production. In the meantime these workers take up other temporary jobs. Many of the large motor works are at some distance from other factories, and only by daily travelling between home and workplace can unemployment be avoided and the firms enabled to recruit the full number of men needed during the peak period of their activity.

The seasonal character of employment is very marked in agriculture. In fact, on the Continent many workers alternate between agricultural and industrial employment, in the course of the year. In the rural districts of Wur

ttemberg (South-West Germany) the law of inheritance led to a splitting up of farms to such a degree as to make the individual plot too small to support a family. The result often was that farmers took to industrial work during the winter months without giving up domicile on the farm; comparative nearness of factories and facilities for travelling thus enabled them to supplement the insufficient yield of their shrunken farms. (1) In Belgium, too, Mahaim's investigation showed a large proportion of daily travellers to be farmers taking up work in factories or mines as a seasonal job; farming was not discontinued but had ceased to yield enough for the livelihood of the family. (2)

Labour-turnover. - Apart from workers who are temporarily dismissed during the slack season, there are unstable elements who do not remain long in any job. Statistical information on labour-turnover is scanty; the ratio varies from industry to industry, between areas and from one firm to another. That the figures are sometimes quite considerable is shown by data given for the Morris Cowley Works; the aggregate of workers entering and leaving the firm during 1935 accounted for 75% of the total number employed at the beginning of the year, (3) while the actual increase of the personnel was only 11.7%. Whether the job is of a non-permanent nature, or whether frequent loss of employment is due to personal reasons, daily travelling makes it easier for those dismissed to find new work.

(1) Württ. Jahrbücher für Statistik und Landeskunde, 1902.

(2) See p. 123

(3) Including seasonal fluct.

Decline of Industry. — During a period of depression of an industry or when a single works is shut down, the daily journey is of outstanding importance for the workers affected. Where other employment is within daily reach the people concerned are spared the alternative of long unemployment or uprooting of the home. Usually, the dismissed workers look for new jobs individually and find them by infiltration, as it were, into other works. Longbridge, for instance, has numbers of such men from the Black Country on the pay-roll. ⁽¹⁾ We know, however, of cases in which a common solution has been found by arrangement for daily travelling and thus the social and economic consequences of protracted and extensive unemployment have been avoided. In the Reports on the Depressed Areas ⁽²⁾ it is stated that "one example specially worthy of note, is travelling of miners resident in hamlets adjoining closed pits to other pits, often belonging to the same coal-owners, where housing is not available". While the Report mentions this as an outstanding instance, it is the usual policy in Belgium; after the exhaustion of a coal-mine the displaced miners are daily conveyed to work in another pit; long-distance trains at cheap rates are run for this purpose.

The problem becomes less manageable when unemployment is widespread as a result of the decline of the staple industries of a whole area. The non-existence of alternative labour markets within daily travelling distance has been

(1) See p. 147

(2) Cmd. 4728, 1934, p 200

a contributory cause of the dereliction of the "Special Areas". In Scotland, e.g., "the basic industries are particularly interdependent, and the sharing of prosperity or depression by the whole area is inevitable on this account".

(1) All the more is it important that different industries within daily reach should give opportunities for other employment to the workers in areas stricken by the decline of their staple industries.

The usefulness of the journey to work is not restricted to a system of private enterprise governed by competition. A planned society would equally be faced with the conflicting needs of economic change and of continuity of community life. In any dynamic society "the prompt and continuous diversion of labour and capital into relatively new types of production is an essential condition for maintaining a satisfactory rate of material progress as well as for avoiding chronic relapse into depression". (2)

iii) Preserving the Family Unit — The Case of the Secondary Earners

A considerable number of daily journeys are due to the impact on the family unit of the organisation of modern industry. Homes and workplaces have come to be not only separated in space but also different in structure. The labour supply offered by a family may consist of husband and wife, or, more often, of father and one or more children, sometimes supplemented by other relatives. In the modern labour market, however, this family group

(1) Ibid

(2) Allan G. B. Fisher, *The Clash between Progress and Security*, 1935, p 204

is in demand not as a unit but as individual workers. (1) The composition of labour in workshop and office is determined by types and grades of occupation and little thought is given to drawing people from the same home. Reflecting the immense variety and differentiation of modern industry, the demand for labour in most firms is to a high degree specialised. Requirements vary as regards physical strength, skill, training and adaptability, and consequently as regards sex and age. Many firms employ great numbers of one special type of labour. In these circumstances it is obvious that the various members of a family often fail to obtain work in the same neighbourhood. The daily journey, however, brings jobs within reach of those members who are unable to find suitable work near home and thus helps considerably to preserve the family unit. The process of disintegration of the family has been going on for many decades; it would have proceeded much further without the facility of travelling to work. Assuming, in the first instance, that the family's home is near the householder's job, it is the secondary earners who have to travel to work. The average number of earners per family was found to be 1.72 in

(1) In non-factory work, certain cases of the family as a working unit survive to this day: some peasants, craftsmen and shopkeepers continue to employ all working members of the family in their business on the premises of the home. On the Continent, the habit is still alive of a whole family being hired and accommodated as a combined labour force for agricultural work. In this country married couples to "live in" are a combination in demand as gardener (or chauffeur) and cook (or housemaid).

A scheme to create identity of living and working units, such as had ex

the Survey Area of the New Survey of London Life and Labour, in 1929. (2) This means that for every ten principal earners (mainly male householders) there were over seven earners other than the householder (mostly sons and daughters); in other words, 41.8% of all earners living with their families were not in a position to move their home to the vicinity of their work. (3).

Girls in particular often lack the opportunity for work near their father's workplace. This is most conspicuous where there is a daily exodus of female workers from an area which attracts male labour from outside. The main example is that of mining districts, which offer occupations for men only,

isted in the family household of former ages, under the conditions of factory production, is to be found in Fourier's Phalanstère: a phalanstère was conceived as a community for living and working of 400 families in a local unit. In all such cases, real and schematical, a daily journey to work is eliminated in principle.

(2) Vol. VI, p 34: Average working class family, omitting families without earners: including as "families" groups of one or two earners. The average number of earners was 1.75 per household in the inquiry by the Ministry of Labour into "Weekly Expenditure of Working-Class Households in the United Kingdom in 1937 - 38". *Ministry of Labour Gazette*, Dec. 1940, p 304.

(3) It would be interesting in this context to examine the conditions as to the journey to work of those persons who leave their home in order to live nearer their workplace. They form an unknown proportion of the lodgers and boarders i.e. the "many unattached men and women whose circumstances necessitate their living away from their own homes and who have no intention or opportunity of setting up as housekeepers themselves" (*Census of England and Wales 1931, Housing*, p. xl). But the information about them is scanty and incongruous. "Exactly what numbers or proportions of the 839,000 shared dwellings in England and Wales are occupied in this way cannot be stated with precision . . . though . . . it may reasonably be inferred that the proportion is a large one." A more detailed analysis of the Census 1931 results was made for certain controlled Post-War Housing Estates in London (Becontree), Birmingham, Liverpool and Manchester (*Ibid.*, p xiix foll.) This resulted in proportions varying from a rate of about one lodger in every nine families in

while women and girls travel to work, for instance, in the textile and clothing industries. Such conditions prevail in the West Riding, where Leeds is the centre of attraction for female labour from the surrounding mining villages. In the case of Bootle, a net daily influx of men is contrasted with a net daily outflow of girls.

While the large modern docks, engineering and ship-repairing works, timber yards, tanneries etc... provide occupation for a very large body of men, drawn in part from outside, the large shipping and commercial offices which are concentrated in Liverpool, and the large stores and shops in that city, attract a considerable number of female workers from Bootle. (4)

Becontree to one in every six families in the Manchester sample.

Unfortunately, no comparable figures are available for the older parts of the towns. The New Survey of London Life and Labour (Vol III p 37) and Social Survey of Merseyside (Vol I, p. 193 ff.) give information on lodgers, but the findings — about one lodger in every 40 working-class families in Liverpool and about one in every 80 such families in the Eastern Survey Area of London — are based on different definitions. In London, only those who board with the family are counted as lodgers, in Liverpool also others. The Census records such relations as brothers and brothers-in-law as lodgers; the two Surveys do not. The main difference is in regard to sub-tenants; they are, as separate lodger families, included in the Census specimens of new housing estates, but excluded from the more comprehensive samples of the two Surveys. sub-letting is, however, much more common in the inner than in the outer districts of a town (see New London Survey, Vol. III, p. 52).

An investigation of the local distribution of sub-tenants and lodgers would help to show in how far consideration of the journey to work influences the choice of where to live. Do lodgers (in a wide sense) live nearer their work than workers in general? From where do the lodgers come, from other districts of the town or from more distant places? In the Liverpool sample, more than two-thirds were natives of Merseyside. How is the number and composition of lodgers affected by the opportunities for employment for various types of earners? A factor which goes some way to explain the very small number of women lodgers (in Liverpool) is the lack of industries likely to attract wo-

In Litherland; Lancs, females accounted for over half of the daily influx, as against less than one-quarter of the daily exodus. (5)

Juveniles, too, join in the daily movement, but no statistical documentation is available regarding their participation. That the extent is not inconsiderable is reflected in the following statement by the London Regional Advisory Council for Juvenile Employment. (6)

For many years local committees for juvenile employment have been deeply concerned at the comparatively high cost of travelling in relation to wages earned by juveniles resident in the suburbs and employed in Central London.... The greatest demand for juveniles lies in the central and western half of the London Region, while the largest supply of juveniles is in the eastern half

A sample inquiry in four London boroughs (7) shows about the same proportion of boys & girls using means of transport on their journey to work as in the case of adults.

This inquiry indicates further that the daily journey facilitates the social rise of a family; by being able to travel to firms which provide proper training, a docker's or roundsman's children have access to skilled occupa-

men to Merseyside from other parts of the country".

(4) W. Hewitt, *Workplaces and Movement of Workers in the Merseyside Area*, p. 19.

(5) Census 1921. *Workplaces*, p. 9.

(6) *First Annual Report (1935)*, p. 3.

(7) Based on the household cards of the New Survey of London Life and Labour, see, p 155 f, below

tions often not to be found in the vicinity of their father's workplace. Many household cards of unskilled workers had entries for children, including grown up sons and daughters, who travelled to other parts of the town where they were apprentices or had posts of higher standing, and sometimes higher income, than their fathers who worked within walking distance from home.

In other cases the situation is reversed, that is to say, the household er travels to work, while his wife or children find local employment. This happens frequently in outlying suburbs; many factories have in recent years been located on the fringe of large towns, largely factories which employ predominantly unskilled labour; they offer employment to women and juveniles living on nearby housing estates, but have no demand for skilled men. Such conditions are clearly visible at Watling, the L. C. C. housing estate in Hendon; of the householders, little over one quarter worked in Hendon, as against over one half of the secondary earners; on the other hand, more than one half of the householders travelled to distant boroughs, as against not much more than a quarter of the secondary earners (the balance being made up by persons working in intermediate districts surrounding Hendon) ⁽¹⁾ However, the advantage of living near their work is for juveniles offset by the fact that their employment is of a blind-alley type; the demand for their labour ceases when they come into their late 'teens. "For Watling youngsters, Hendon is a place where one can earn money, provided one is young enough, and London is

(1) Ruth Durant, Watling, p 13

a place which harbours prospects.

.....Those adolescents who can afford ambitions, and who want a career rather than a job, do not work near by; they travel to London each day." (1) The journey to work thus helps to prevent social decline by remedying such dangers as are found, for instance, in Cumberland, with its lack of a supplementary labour market within daily travelling distance, namely "the almost complete absence of openings for juveniles, which is crowding children into blind-alley occupations, endangering their whole economic future". (2)

Apart from enabling the worker to rise in the social scale, daily travelling also widens the choice amongst callings of equal social standing. In the modern economic system in which labour has become so highly specialised, it is important that the entrance of a young person into working life should be suited to his individual capacity. Vocational guidance endeavours to steer boys and girls into careers suited to their special aptitudes. This refinement in the use of man-power can be turned to use only if openings of various kinds are available to the inhabitants of all districts. This opportunity is often lacking in a small town or poor borough, but daily travelling to a more distant workplace overcomes this difficulty and makes the choice of the right opening possible, whilst the place of residence is not robbed of its promising young citizens.

At the same time, the family as a whole benefits from the varied employment of its members. It is economically safer for the family not to have

(1) Ibid.

(2) Reports on the Depressed Areas, 1934, p 41.

Place of Work of All People At Watling in 1937
(L. C. C. Census of the Estate)

Districts (of workplace)	Tenants		Others	
	Number	%	Number	%
Westminster and Chelsea	225	5.6	69	2.3
Kentish Town, St. Pancras, Islington City, Holborn	687	17.2	227	7.5
Paddington	552	13.8	203	6.4
South London	554	13.7	334	11.1
	80	2.0	15	0.4
	2,098	52.3	858	27.7
Hendon	1,055	26.3	1,681	54.3
Willesden and Marylebone	501	12.5	396	12.7
Hampstead and Highgate	170	4.2	108	3.2
Finchley and Southgate	70	1.7	20	0.6
Acton and Southall	72	1.7	54	1.5
Other Districts	66	1.3	--	--
Total	4,032	100 %	3,117	100%

all its eggs in one basket, i.e. not to depend on one industry which may decline while others prosper. Domestic life, moreover, is enriched by a variety of occupational interests among the family.

If a severance occurs between residence and workplace, either by a transference of the factory or by removal of the family home, young persons are frequently willing and able to change their jobs so as to live again near their work. Older employees, however, stick to their jobs; it has become increasingly difficult for men over 40 and for women even over 30 years of age

to find new employment. Many older employees, moreover, have gained special experience in their jobs and enjoy confidential and responsible positions, and in some firms also can look forward to a pension if they stay on. This is made possible for them by travelling to work.

In conclusion it can be stated that everyday working life is full of instances in which the journey to work is serviceable to the worker; daily travelling helps him in getting the right job, in retaining a suitable job, in combining two intermittent jobs, and in changing over from declining to flourishing industries. But for the daily journey, breaks in the worker's life would be much more frequent through repeated migration of individuals and of families.

In the profound fluctuations of the modern economic system, the daily journey is an important means of giving the necessary flexibility to the industrial structure and thus mitigating the impact of change. Whenever this flexibility has been lost, there have appeared areas of stagnation and decay such as the Depressed Areas. The daily journey is certainly no panacea; but the isolation of an area, without access to alternative labour markets for the principal earner as well as for other members of the family, is without doubt one factor making for economic depression.

By increasing the mobility of labour, the daily journey is not only in the best interests of employers and workers, but it also fosters the progress and prosperity of the economic life of the nation as a whole. Daily travelling to work enables the country to make the best use of its man-power; it helps to direct workers to those points where they can most effectively be put into action.

CHAPTER III

THE PRICE OF THE DAILY JOURNEY

1. The Cost in Money

a) The Burden on the Community as a Whole.

i) An Item of the Costs of Production in General

For reasons which have been discussed in the preceding pages, travelling to work is in principle an essential feature of the present social and economic system. It is, therefore, an error to regard the cost of this transport merely as a wasteful addition to the necessary cost. It is characteristic of the modern economic structure that the cost of distribution forms a considerable part of the cost of production in a wider sense; and this applies to the transport of labour as well as to that of raw materials and of finished goods. Nor is it a valid argument against the economic soundness of transport to and from work that vehicles required for the peak traffic lie idle during the greater part of the day; similar periods of idleness occur in other services which are governed by the rhythm of nature or of human life; agricultural machinery is an example of the first, restaurants of the second type of periodicity.

The capital invested in transport, both public and private, for the purpose of the journey to work has to be conceived as a constituent part of the country's industrial equipment, and the running costs of railways, busses and trams as an item in the cost of production. Beyond this general fact, however, little is known of the importance of the cost of daily travelling as an item in the national economy. Under the present complicated economic organisation,

the transportation of labour to the workplace naturally costs more than formerly — but what is actually the nation's bill of costs for the journey to work, and what proportion of the total cost of production is to be regarded as normal or desirable? Neither question can at present be answered satisfactorily. More research is needed on these points. Until further information is available, recourse must be had to some illustrative data, in order to obtain an approximate idea of the magnitude of the costs involved.

First, with regard to the capital sunk in transport equipment: the railways were estimated in 1928 to account for 8.6% of the national capital.⁽¹⁾ This figure, however, includes all passenger traffic and also goods traffic. On the other hand, there is no comprehensive estimate of the capital invested in road traffic.⁽²⁾

Writers on the economics of railway operation agree that it is scarcely possible to separate the capital and working costs applicable to goods traffic and passenger traffic respectively. It is also difficult to single out the journeys to work from the total passenger traffic. For while practically all journeys on season and workmen's tickets are travel between home and workplace, many other "bread-and-butter journeys" are paid for at standard rates and are, therefore, not distinguishable in the statistical returns. On the London buses, e.g., no season or workmen's tickets are issued. Buses, however, account for over 50% of the London passenger traffic (in numbers

(1) Sir Josiah Stamp, *National Capital*, 1937, p 234

(2) A certain indication of the relative importance of passenger transport as an industrial undertaking is given by the fact that the London Passenger

of journeys).

The importance of the daily journey varies between different railway lines, but on many of them it has become the backbone of passenger traffic, and, on the whole, the journey to work accounts for a considerable proportion of the total journeys. The adaptation of the transport services for the daily conveyance of earners between home and workplace is, of course, specially marked in the case of urban and suburban traffic, as is shown by the following data for London and Birmingham.

On ordinary weekdays, three-fifths of the journeys on the system of the L. P. T. B. are made during the six hours before the start and after the cessation of work respectively. (3) While this figure includes certain numbers of travellers for other purposes, such as children on their way to school and shoppers who return home after the closing of the shops, part of the journeys to work, notably by second-shift workers, are made at other times of the day. It is estimated that roughly two-thirds of the Board's total traffic is business traffic, (4) consisting mostly of the conveyance between homes and workplaces. Similar conditions prevail in Birmingham, where "no less than 69% of the rolling stock lies idle between the hours of 9:30 a. m and 4:30 p. m." (5)

Transport Board, which caters for over 85% of the public local passenger transport in the London Transport area, employed, in 1939, a staff of 86,456. (6th Annual Report, p. 21) This is 2.3% of the 3,767,000 persons occupied in Greater London in 1931 (Census Report), and a somewhat smaller proportion of the larger number employed in the total London Transport area.

(3) L. P. T. B. 5th Annual Report, p 30

(4) Mr. Frank Pick, Evidence before the Barlow Commission, p 367

(5) A C. Baker, "Problems for Municipal Transport", in Modern Transport, June 1932, p 13.

Next to the question of the aggregate cost of daily travelling, the consideration arises as to the distribution of the burden, a subject on which more is known. This is not the place to discuss the part played by local authorities in the provision of transport facilities, principally their responsibility for roads and streets, and municipal tram and bus undertakings. One measure, however requires fuller discussion, as being specifically designed to facilitate the journey to work, namely the concern taken by the State in workmen's trains.

ii) Public Concern in Workmen's Trains

On the whole, it is left to the two parties in industry, and mainly to the workers, to pay the cost of the workers' transport to and from work. Their respective shares in the expenses will be discussed in the subsequent sections. To some extent, however, these costs have been made a concern of the community: in this as in other countries the State has intervened and has assumed a certain responsibility for the cost of the journey to work. Cheap travelling has been found to be essential for industrial development. Consequently as normal fares proved to be too high for the lower-paid worker, specially reduced workmen's tickets have become a common feature in industrialised countries. The term "normal fares" must in this context be understood to include season tickets issued for non-manual workers; these, although reduced as compared with ordinary fares, are yet remunerative to the railway companies. Workmen's tickets, on the contrary, are commercially not profitable, and their issue is, therefore, dependent on State intervention.

The manner in which this measure of economic policy has been put in effect has differed in different countries. The outstanding example of Continental conditions is Belgium, where the main railways are State-owned. When, in the early days of industrialisation in Belgium (the 1860's), the factories and mines needed cheap labour in excess of local supply, the parliament decided upon reduced fares for manual workers, and by administrative decree the State railway was directed to issue abonnements d'ouvriers at very low rates. (1) The railway being a public undertaking, operating losses that might arise from the rebates on workmen's tickets were borne by the taxpayer. There has been controversy as to the origin of the measure: E. Mahaim (2) maintained that the Government took the initiative, while E. Vandervelde (3) stressed the pressure brought about by the employers, who had a particular interest in low travelling costs for their prospective workers, at a stage of industrial development when the factors determining the wage level were not yet fixed. In the first decade of this century, 42% of all passenger journeys on the Belgian State Railways were made on workmen's tickets; after the last war, even more.

In Great Britain, where the railways are owned by private enterprise, it has been more difficult to procure cheap transport for workers: During the first decades of their transport monopoly in the nineteenth century, the Rail

(1) See p 122.

(2) Les Abonnements d'Ouvriers sur les Lignes de Chemins de Fer Belges. 1910. p. 10

(3) L'Exode Rural, 1903 p 130 seq.

way Companies discouraged even third-class travel, not to speak of travelling at sub-standard fares. Workmen's trains were obtained from the Railways in return for concessions made by Parliament.

The origin of the workmen's trains in this country (and in fact in any country) dates back to 1861. They were introduced as a more or less incidental measure to meet a special situation in central London, not as a general policy of cheap transport. The case is of particular interest to-day, for the reason that it contains an element of town planning. The construction of railway termini in built-up urban areas entailed the demolition of houses, often of working-class houses. It was the practice of Parliament, in granting powers to railway companies, to impose on them the obligation to rehouse the evicted people within one mile of their previous homes. When, however, Parliament was asked for powers to build Liverpool Street Station it would have been a most onerous obligation to rehouse the ejected families in the congested neighbourhood. Instead, the Railway Companies were put under the obligation to provide cheap transport for the displaced workers between certain residential districts and Liverpool Street. The beginning was made in the North London Railway (City Trains) Act, 1861, section 45, which stipulated that one train should be run daily each way, before 7 a. m. and after 6 p. m. respectively, between Kingsland Station and Liverpool Street, at fares not exceeding 1 d. for each journey, or 2 d. for the return journey.⁽¹⁾ Similarly, in 1864, the Great Eastern Railway, on being granted powers to build a station in Liverpool Street, was called upon to convey workers from and to Edmonton

and Walthamstow at return fares of 2 d. (amounting to about a farthing a mile) before 7 a.m. inwards and after 6 p.m. outwards. (2) The development of the densely populated working-class districts round Edmonton, Walthamstow and also Stratford is thus clearly traceable to the deliberate policy of providing very cheap transport to what were then outlying districts, in order to allay the congestion in the centre of London.

These trains to and from Liverpool Street have become the prototype of workmen's trains in this country, which were introduced as a general institution by the Cheap Trains Act, 1883. The Act abolished the Passenger Duty on all fares of not more than 1d. a mile and at the same time required the Railway Companies to run "proper and sufficient workmen's trains ... for workmen going to ... and returning from their work between 6 o.c. in the evening and 8 o.c. in the morning as appear to the Board of Trade to be reasonable" (3) The supervision has now passed to the Ministry of Transport. The tickets issued are returned tickets. The time-limit for the journey home has since been relaxed-- the companies having termini in London agreed in 1894 to allow holders of workmen's tickets to return any time after noon, (4) but no extension of the morning hour has taken place. The railway companies run a certain number of workmen's trains in the early morning, and any person travelling on these trains can do so at the low workmen's fares. (5)

(1) Metropolitan Workingmen's Trains. A Narrative of the Travelling Tax Abolition Committee. 1893.

(2) J. Blundell Maple, M. P. Cheap Trains for Workers, 1891. See also: E. J. Harper, "Statistics of London Traffic" in Journal of the Royal Statistical Society, June 1904.

(3) Para. 3 (1b) of the Act. (4) Modern Railway Working, Vol VII, p 206.

The remission of the passenger tax thus constitutes a contribution towards the lowering of workmen's fares at the costs of the Exchequer. The scale of the benefit derived by the tax remission may be gauged from the fact that in the case of the Great Eastern Railway it amounted, in the 'nineties, to about £ 70,000 a year. (6)

In fact, the workmen's trains do not cause actual loss to the railways, for the takings usually cover the cost of the train service, though not the overheads. (7) It can be understood that the railways in this country, as profit-making companies, are not financially interested in workmen's traffic. Mr. K. G. Fenelon sums the situation up as follows: "The railways do not make much profit out of workmen's fares, as the charges are so low, (8) but there is a legal obligation on them to provide reasonable facilities. " (9)

Nearly one-fifth of all passenger journeys on British railways (in 1938 over 244 million, or 19.8%) are made on workmen's tickets. (10) At first sight,

(5) In fact, the accommodation provided at the time of demand is often insufficient — see below, p 61 f.

(6) London Reform Union, Pamphlet N° 79 (1899), p 7.

(7) F. J. C. Pole and J. Milne in *Modern Railway Working*, Vol. VII, pp 206 -7 Cf. Further Mr. Frank Pick, Evidence — Barlow Commission, p 360: "On the railways and trams you have workmen's fares at half rate. . . The trams and trolley-busses are not run at a loss. They do not earn in full the interest on the capital invested in them."

(8) Workmen's fares are on a tapering scale, starting at 2d. for a return journey of one mile each way and amounting to one farthing a mile after the twentieth. The average charge on workmen's tickets was 0'53 d. per mile in 1927, Memorandum N° 11, Royal Economic Society, p 16.)

(9) "British Railways since the War," in *Journal of the Royal Statistical Society*, 1933, p 394. See also D. N. Chester, *Public Control of Road Passenger Transport*, 1936, p 208.

(10) Returns of the Railways of Great Britain, Summary Table A. 1(d), pp 22 and 26. Season tickets accounted for 31'3% of all journeys.

this ratio and the number may seem impressive; however, in Belgium the proportion is nearly one-half of all journeys (47.6% in 1925, for instance); it must also be remembered that a worker travels twice daily, i.e. 600 times in a full working year. On this basis, only 407,300 persons availed themselves of workmen's tickets, in 1938, on the railways of Great Britain (excluding London Transport.)

Of the road services, tramways are, like railways, compelled by law to issue reduced workmen's tickets. Where they are run by municipalities, the situation resembles that of the Continental State railways: losses due to low workmen's fares are borne by the ratepayers. On buses workmen's tickets are sometimes issued for reasons of competition with trams. However, in some instances at least, the term "workmen's ticket" has changed its original meaning: the fares are at the level of season tickets rather than so low as to comply with the rates of workmen's tickets imposed by statute. (1)

The number of passenger journeys and the use of the various types of tickets in the London Transport Area is shown by the accompanying table. Workmen's tickets amount to 23.6% of all local journeys on the main railways, and to between 14 and 17% on the Board's railways, trams and trolley-busses. On the buses they are not issued, and as the latter convey half of the total passengers in London, the average percentage of workmen's

(1) This can be seen from the fares on country buses in the Oxford region; from Kidlington, e.g., the weekday season ticket to central Ox. costs 15s. monthly, while workmen's tickets to Cowley (at the far side of Ox) amount to 19s. 6d. (Time Table of the City of Ox. and Dist. Motor Bus Services, Ed. N° 119, p 78.)

tickets on all services is only 8.7. It must be kept in mind, however, that many bus rides only represent a part of the total journey: the bus is often used as a complementary service to the railway from the home to the

LONDON TRANSPORT AREA

Number of Passenger Journeys (in thousands) according to Means of Transport and Type of Ticket Year ended 30th June, 1939

Means of Transport	Total 1939	Journeys by type of ticket		Workmen's number % of col. 1
		Ordinary 1 st 3 class	Season number % of col. 1	
Main Railways ^a	586,554	230,782	217,620 37.1	138,152 23.6
L. P. T. B. :				
Railways	472,665	318,445	75,306 15.9	78,914 16.7
Trams	516,133	432,851	--	83,282 16.2
Trolley-buses	570,605	489,169	--	81,436 14.3
Buses and Coacher	2,222,695	2,221,056	1,639 0.1	--
Grand Total	4,368,652	3,692,303	294,565 6.7	381,784 8.7

a) Parties to London Passenger Pooling Scheme

Compiled from L. P. T. B., Sixth Annual Report, p. 45

station and from the station to the factory or shop. In quite a number of instances, the cost of the daily journey is made up by a workman's fare for the train plus an ordinary fare for a bus. Travellers who change buses on

their journey to work have to buy two ordinary tickets each way. 60% of all London bus and coach rides were penny rides in 1937, and feeder services doubtless accounted for a high proportion of them. (Barlow Commission, Evidence. p 372.)

Other implications of the workmen's trains will be discussed below in the sections "Hardships of the Daily Journey" and "Measures of Relief".⁽¹⁾

b) Employers' Share in the Cost of Transport

As a rule, the employer does not directly share in the expense of the worker's journey to work. Notwithstanding this fact, employers are definitely concerned with the fares to be borne by their employees, for the obvious reason that they have an influence on the wage-level.

Wages paid by a firm which has all its workers living within walking distance need not take travelling expenses into account. Where, however, labour is recruited at greater distances, the wages have of necessity to be high enough to permit the payment of fares, unless everybody cycles. This consideration must be assumed to influence the various agreements on wages, although in most cases it is not clearly ascertainable. As implied in the term, collective agreements fix wage-rates for a whole industry (or branch of industry) on a national or regional basis; they do not take account

(1) The problems of workmen's tickets from the point of view of the transport undertaking are discussed in Municipal Trading, by Herman Finer, 1941, Chapters 15 and 19.

of high travelling costs caused by the isolated location of either factories or residential districts. The higher expenses of travelling prevailing in the large towns as compared with smaller places are certainly partly responsible (the other main item being higher rents) for higher wages in the former, particularly in London. (1) According to a Report on Collective Agreements between Employers and Workers, (2) some national agreements classify towns and districts; some group them into seven classes of places; some provide higher rates in the Home Counties.

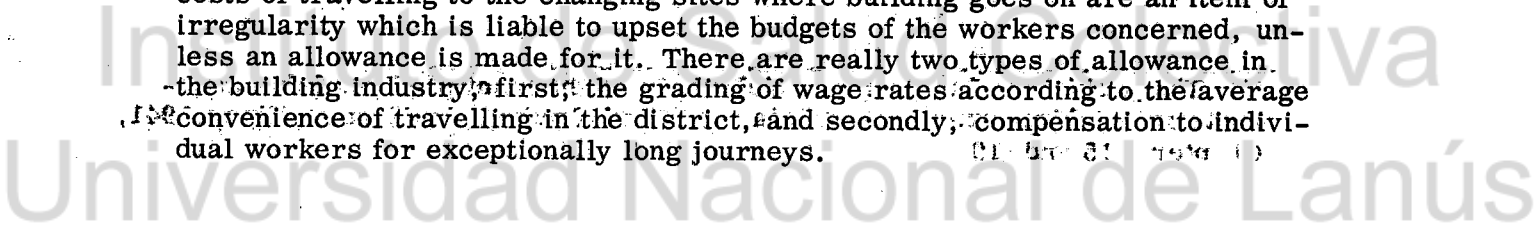
The principles on which grading proceeds are not usually enumerated in agreements, but in the building industry... some of the matters taken into consideration are indicated in a questionnaire which must be completed before application for grading... is entertained. They include... transport facilities... in the locality. (3)

Thus, except in the building trade, the costs of the journey to work are not perceptibly taken into account in the fixing of wage rates. There are, however, instances of direct contribution by firms towards their employees' transport to work.

(1) See the juxtaposition of wage-rates in London and the larger provincial towns in the Barlow Report, p 320.

(2) Ministry of Labour; Vol 1 (1934), p xvii.

(3) In the building industry, workers have of course, no fixed workplace, and costs of travelling to the changing sites where building goes on are an item of irregularity which is liable to upset the budgets of the workers concerned, unless an allowance is made for it. There are really two types of allowance in the building industry, first, the grading of wage rates according to the average convenience of travelling in the district, and secondly, compensation to individual workers for exceptionally long journeys.



Employers' subsidies are either permanent or temporary. The latter usually reflect changes in the demand for labour. Employers undertake to subsidise workers' transport costs when undertakings are started or expanded; when a factory is transferred to another site; when a multiple concern reorganises its branches; when a special scarcity occurs of a particular type of labour. Some examples may illustrate these various cases.

A highly differential system of employers' shouldering the costs of their employees' travelling was adopted during the rapid development in the 1920's in some districts in Germany. It became usual for certain firms to subsidise the fares of their workers on a sliding scale proportional to the distances covered by the daily journeys. This was called *Entfernungszuschlag*. The allowances nearly equalled the total amounts of the fares. Foremost among these firms were the huge plants of the chemical industry, which entered the labour market only after the last war, with works situated in the open country (plants at Leuna and in the Bitterfeld and Wittenberg districts). The employers' federation in the old-established machine industry, on the contrary, explicitly forbade its members to pay such *Entfernungszuschläge*.

In the period of rapid growth of the N. V. Philips Gloelampenfabrieken, Eindhoven, Holland, this firm provided bus services for its workers on a large scale at less than economic costs. Though the passengers paid fares, the services involved a loss to the firm, as the vehicles were idle between starting and stopping hours at Philips', except for a small amount of travelling by the employees' families. (1)

"When our works first moved from Edgware to Hatfield," states a large engineering firm, "we provided free transport for such as required it for a period of three to four months." In other cases, the period of adaptation of housing and transport to the new location of a factory, and therefore the need for subsidisation of fares by the employer, takes not months but years.

After a reorganisation, involving the closing-down of some pits, in South Wales, "nearly 300 men and boys from Dowlais found employment at collieries at distance of two and four miles respectively, where they were conveyed by train at the expense of the Dowlais Company." (2)

The shortage of juvenile labour in the western part of London in the mid-1930's led some firms to offer free transport to boys living in East London, either on the L. P. T. B. system or by special buses.

Permanent contributions to the costs of transport by employers range from financial investments for the improvement of railway facilities for the firms' employees to such modest services as the provision of cycle-sheds and works canteens.

It is not uncommon for big works to build, or contribute towards the costs of, stations at the doors of the factory for the convenience of their employees. The Siemenswerke, Berlin - Spandau, with an aggregate personnel of 65,000 in October 1928, undertook an even costlier scheme — the construction of a line connecting Siemensstadt with the existing passenger railway.

(1) F. Bakker Schut, *Industrie en Woningbouw*, 1933, p 91

(2) Hilda Jennings, in *Second Industrial Survey of South Wales*, Vol, III, p. 130.

Recent years have brought an increase of auxiliary services on the part of firms in connection with their employees' journeys to work. As the bicycle is found by many workers to be a convenient and economic means of transport, firms are faced by a growing demand for orderly storage places near to where the cyclists arrive and depart. (1)

The growing distance between home and workplace has at least partly accounted for the provision of works canteens by a great number of firms. "Canteens are an employees' service, not regarded as a profit-making concern." (2) While the food costs are usually covered by the takings, the initial capital outlay for the canteen and equipment is borne by the firm. Heating and lighting are mostly paid for by the firm, the wages of the canteen staff in some cases. Formerly, the additional costs of taking the midday meal away from home were borne by the worker. Many had their dinner brought to the factory by their wives or children, continuing the rural custom of carrying the midday meal to the workers in the fields. In one case at least, transport to the factory of dinners prepared in the various homes was organised and appropriate vans put into use. For a certain factory in Baden, the cost of this transport was estimated, before the 1st war, at 5 to 10 pfennig per meal, and accordingly a minimum cost of 20 marks annually per worker was put down for this item. (3)

(1) The price of cycle-sheds is between 22 s. and 60 s. per accommodated bicycle (exclusive of extra structural items), and about 10s to 20s p/cycle for simple racks.

(2) "Canteens in Industry" pub. by the Industrial Welfare Soc, first ed. 1939, p 29

(3) Page 65 of the study reviewed on p 124.

c) The Cost of the Daily Journey to the Employee

It is the exception to find the employer taking a recognisable share in workers' transport costs — as a rule the costs of the journey are borne by the employee. According to the amount of travelling expense they incur, earners can be classified in three sections: expenses are nil for those who work within walking distance of their homes; expenses are comparatively low for cyclists; and expenses vary greatly for users of public means of transport. The available statistical evidence does not allow an assessment to be made of the proportions of the three sections in the country as a whole or in single districts. Yet it is this proportion, together with the amounts of individual fares, which determines the average costs of travelling to work for any given body of earners.

1) ACTUAL COSTS

A country-wide survey would be needed to find out the number and distribution of the earners who work within walking distance of their homes and are thus free from travelling expenses. Not even an estimate can be ventured. The statistical material collected for this study is probably weighted on the side of travelling, as attention has been mainly given to instances where a fair amount of daily travelling was assumed to take place. The synopsis ⁽³⁾ points to a very great variation in the proportion of earners who

(1) Canteens in Industry, published by the Industrial Welfare Society, first ed. 1939, p 29.

(2) Page 65 of the study reviewed on p 124

(3) pp. 164/5.

walk from door to door; the range is from 71.5% to 1.5% of the firm's employees. At most of the firms under review, however, employees who walk and employees who travel to work are more evenly mixed.

A similar diversity in the incidence of travelling costs prevails amongst the inhabitants of a given place of residence and between various residential places. Of the householders in L. C. C. block dwellings (mostly in central districts) 28% work locally and pay no fares, of the householders in Becontree and in St. Helier, only 9%.

Cycling is a cheap means of transport, and it is used by millions of earners for their daily journey. It is estimated that 8 million bicycles are used during the summer months, and 4 million in the winter season.⁽²⁾ Not all bicycles serve the journey to work: the figures include those which are used only for the purposes of shopping and pleasure and by children on their way to school. It is clear, however, that without the widespread use of the bicycle the nation's expenses for travelling to work by public conveyance would be considerably higher.

No information is available on the local distribution of bicycles, but it seems safe to say that the countryside and smaller towns benefit to a larger extent from cycling than towns of metropolitan size; and within the conurbations, the outskirts lend themselves better to cycling than the streets in the central districts where traffic congestion is notorious. The relief of tra

(1) Communication, in 1937, from the British Cycle and Motor Cycle Manufacturers. Ltd.

travelling costs by the use of the bicycle is therefore presumably higher in small and medium-sized places than in London or Liverpool. The cost of cycling consist mainly in the purchase of a bicycle; the price, in normal times, is from about £ 4 or somewhat higher if paid in weekly instalments of 2s or 2s. 6d. spread over a year. After this sum has been paid there remain only the relatively small expense for repair and maintenance and possibly insurance, and in some cases for special protective clothing. Many people however, use their cycles during the summer only and join the ranks of fare payers during the wet season. The problems involved in cycling to work are mainly of a non-financial nature and will find their place in the section on the strain of the daily journey.

Fares are the main form of expenses of travelling to work. The total amount of fares paid is no better known than the total number of fare-payers. Various investigations show a wide divergence of fares ranging from a penny to well over 1s. a day, that is from 6d. to upwards of 6s. a week.

The accompanying table summarises some of the findings on the range of weekly travelling costs. Whether the level of fares is low, as in the Mersey side sample, or high, as in the case of the L.C.C. cottage estates, there is in most instances a considerable range of travelling costs: in the latter case over a quarter of the daily travellers paid under 3s. a week, while nearly another quarter paid over 6s. The average amount per fare-paying miner in the South Wales Coalfield was 2s. 3½d weekly; in one district, however, for which particulars are given, the average fares of those who travelled

Range of Weekly Fares

Summary of Sample Inquiries

Groups of Earners	Total fare-payers under review	Percentage of fare-payers who pay			
		2/- under 2/	3/- to 3/-	4/6 to 4/6	6/ and more
Carreras' Employees (a)	779 (c)	37.5	34.0	18.0	10.0
Riverside Workers, Merseyside (b)	371	30.5	52.5	17.0	
		up to 3/- over 3/-		to 6/- over 6/	
Tenants, L. C. C. (a)					
Cottage Estates	43,477	27.3	48.6	24.1	
Block Dwellings	11,294	66.9	28.9	4.2	
		up to 2/6	over 2/6 to 4/-	over 4/- to 5/6	over 5/6
Earners, 4 London Boroughs (a)					
East Ham	365	31.3	37.2	17.4	14.1
Stepney	483	72.2	23.5	2.5	1.8
Tottenham	246	52.8	26.8	9.0	11.4
Willesden	282	57.2	29.4	5.1	8.3

(a) For particulars, see Statistical Part, below

(b) Source: Social Survey of Merseyside, Vol. II, p 137

(c) Including 0.5% unascertained cases

by bus or train were 3s. 7½ d. (1)

The difference between various places or districts are increased if the incidence of high fares goes with a high proportion of fare-payers amongst the total earners in one place, while in another place there is a small proportion of fare-payers and these pay only low fares. Such contrast is illustrated by a comparison between a central and an outlying London borough. The sample of Stepney showed well over half of the earners working locally and the remainder averaging a fare of 2s. 2d. weekly. East Ham, on the other hand, had only between a third and a quarter of its earners working in the neighbourhood of their homes, and the 71% who travelled to work paid a weekly average of 3s. 7½ d. in fares.

The outstanding feature of these examples, and indeed of every inquiry into the matter, is the remarkable variation in the burden of fares, and that between various localities as well as amongst the employees of a single firm and amongst the earning inhabitants of a single place or district.

The question arises therefore as to the relative costs of the journey to work: how do the expenses of daily travelling compare with the income of the respective workers, and for what proportion do they account of the total weekly expenditure of the family?

ii) Relative Costs

Fares and Wages. — The information so far available does not

(1) Hilda Jennings, loc. cit., p 38 and p 107.

reveal a correlation between fares and wages: it has not been found that the amount of fares paid by various persons is proportional to their earnings. Not even a definite upper limit has emerged for the fares in proportion to wages. There must, of course, be a limit beyond which the worker will rather forgo the job than pay the fares, unless the employer is prepared to contribute towards the cost (the question of choosing the cheapest means of transport also appears at this juncture). It is probable that from an examination of more extensive and varied statistical material certain correlations between wages and travelling costs would emerge, though qualified by other factors. Pending further information, the material in hand yields some interesting results, notably a distinct difference between the position of primary and secondary earners. The self-dependent worker, especially, the main breadwinner of the family, cannot spend more on fares than would leave at least a bare subsistence. This limit is not effective with secondary workers; juveniles in particular are not expected to maintain themselves entirely. The restricting influence of transport costs on the choosing of a job is, therefore, of less concern to juveniles than to men, and in fact many boys and girls are found whose fares absorb substantial proportions of their earnings. Even when the fares for juveniles are lower, the rebate is not great. This is made evident by the sample inquiry in four London boroughs. (1) The respective travelling costs of juveniles and adults were 2s. 4½ d. as against 2s.

(1) See p 188.

11 d. in the case of sons, and 2s. 3d. as against 2s 10d. in the case of daughters. Until they reach their late teens, however, juveniles earn in peace-time under 20s., many of them only about half this sum. Similarly, information given for miners in the South Wales Coalfield showed that in some cases where fares for adults were 4s. a week, boys enjoyed a reduction of only 6d. (1)

Many women, too, are secondary earners; their wages, like those of juveniles, serve to increase the combined family income rather than to provide for the total maintenance of the individual earner. Their transport costs need not, therefore, be restricted to a small fraction of the wages, as is the case with the primary earner. This explains why fares are allowed to swallow up high proportions of the gross wage of females. At Carreras' cigarette factory, over one-fourth of the reporting girls paid 4s. 6d. or more per week, and another third paid between 3s. and 4s. 6d. (2) A girl earning £ 2 might thus spend 10% or more of her wage on transport to work. Housewives as far as the available material goes, appear to be in a special position: on taking a job, they have a double range of duties and find it, therefore, imperative to avoid lengthy journeys; their average fares are low. (See p.188)

But juvenile and women workers by no means regard high fares as negligible. The anxiety felt on this score by committees for juvenile employ -

(1) Second Industrial Survey of South Wales, Vol III, p 106

(2) See p. 171

ment in London has already been mentioned.⁽⁴⁾ The need to keep travelling expenses down is shown by the use of workmen's trains, which are cheap but run only early in the morning. The statistical returns on workmen's tickets do not specify the issue to various types of workers; however, a visit to a London railway terminus between 8 and 9 a.m. shows numbers of juveniles and of women waiting in the station: although their work does not start before 9 o'clock they are forced to sacrifice as much as an hour each day in order to benefit by the reduced fares on these trains.

Fares as an Item in the Family Budget. — The discussion of the travelling costs of the secondary earners leads to the conclusion that the amount spent on fares must not in the main be related to the wages of the individual earner; what matters more is the family income, made up of the pooled incomes of the various earning members. The sum of their expenses for the journey to work has to be fitted into the household budget.

Fares occupy an intermediate position between the necessities of life and the dispensable items. Travelling to work is not of such importance as food, clothing and shelter — after all, very many earners still live within walking distance of their workplace and are not, therefore, charged with any expenses under the heading. For a large proportion of the working population, however, daily travelling has become a prerequisite in securing or retaining a job. For them, the net wage available for consumption is gross

(1) See p. 22

wage less the amount of the fares for the daily journey.

There are few items of expenditure in the working-class budget which range from nil to many shillings a week. Drinks and tobacco resemble fares in this respect, but they are semiluxuries, and spending under these headings is at the discretion of the people themselves. Travelling expenses, on the contrary, are in most cases capable of reduction only within narrow limits by the persons concerned. Another feature which makes travelling costs specially burdensome is the fact that fares have to be paid in cash at the time of travelling, or, in the case of weekly or season tickets, even in advance; there is no possibility of deferred payment such as can be arranged with the purchase of many household goods, and with the rent in cases of emergency.⁽¹⁾

In view of their importance as an item of domestic expenditure, it is astonishing that so little is known about the actual burden on the family budget of the costs of the daily journey. One would, on first thought, look for information to the various calculations of the cost-of-living index, based on investigations of household expenditure. This expectation, however, is disappointed, for reasons deriving from the peculiar nature of the travelling costs which make it difficult, if not impossible, to gain reliable knowledge on this point from sample inquiries into family budgets. This becomes obvious from an analysis of the method and results of the latest Ministry of Labour publication on the subject.

(1) Several small money-lending firms were known, before the war, to advance money, at high rates of interest, for the purchase of season tickets.

This investigation of "Weekly Expenditure of Working-Class Households in the United Kingdom in 1937-38" ⁽¹⁾ has, for the first time, not only specified fares, but subdivided this item (N° 82) so as to show separately the fares for the journey to work. ⁽²⁾ The result obtained by this sample inquiry is an average of 1s. 6½d per family, representing 1.8% of the total expenditure of 86s. 3d. a week. ⁽³⁾ Although it is not impossible that this amount and ratio are fairly correct averages for the whole country, there are reasons for considering them to be understatements.

The main reason is the selection of families according to their local distribution. Painstaking care has been applied to have all regions of the United Kingdom as well as the various occupations and types of family adequately represented. But it is one thing to make the distribution of sample families representative from the point of view of the cost of living in general and another to do so from the particular point of view of the daily travelling costs. Little is known about the incidence of fares, apart from the fact that they are conspicuously sensitive to location. Within each region there are signal differences, both in the proportion of fare-payers and in the incidence of high fares. This applies to the South Wales Coalfield and to Stockton-on-

(1) Ministry of Labour Gazette, December 1940. Excl. Agricultural households.

(2) In the former compilation of the cost-of-living index number, fares had been lumped together with: soap and soda, domestic ironmongery, brushware and pottery, tobacco and cigarettes, and newspapers. All these items together had been assessed an aggregate of 4% of the costs of living; it is clear that not much weight can have been allocated to fares. Source: Ministry of Labour, Cost of Living Index Number; Method of Compilation, 1939.

(3) Plus 8½ d. for journeys other than to and from work.

Tees, as well as to London and Liverpool.

Minor points, at least suspect of loading the results towards understating the expenses for daily travelling, are: a) the inclusion in the inquiry of unemployed persons; b) the unspecified proportion of a group of earners many of whom must be assumed to live near their workplace, namely permanent employees of railway companies, local authorities, public utility undertakings and Government departments, with wages or salaries not exceeding £ 250 per year; railway employees, moreover, travel on free passes — and c) neglect of the costs of cycling.

In view of all these uncertainties it remains, to say the least, an open question whether the collection of 9,000 budgets of working-class families from the whole United Kingdom has hit the true average of daily travelling costs of millions of families.

Professor Bowley and Miss T. Schulz have excluded the fares to and from work from their recent analysis of "Working-Class Budgets."⁽¹⁾

In their sample inquiry, which includes towns of various sizes, expenditure for fares between home and workplace was accounted for in 51 out of the total 168 budgets under review and ranged from 6d. to 7s. 6d. per week, averaging at 2s. 4d. per fare-paying family a week.

The results on the costs of daily travelling obtained from a general inquiry into household budgets have thus proved to be inconclusive.

(1) Institute of Statistics, Oxford. Bulletin Vol. II N° 9, p 5. The authors assume that in some cases fares were not recorded as household expenses but paid out of the pocket-money retained by the earner.

Another approach proves equally unsatisfactory; it errs on the large side. Based on traffic statistics, an estimate of the travelling costs per family has been made for the London Transport area. (1) The receipts from fares, in 1936-7, amounted to over £ 41 million. As a population of 9.700,000 was assumed to be served by the London transport system, this meant travelling expenses of £ 4 6s. 2d. per person or about £ 15 per family per year. The average income of the working - class family was taken to be £ 190 annually, and from these data it was concluded that the total travelling costs were " about 8% of the average income of working - class families". This computation, however, which is being widely used in public discussion, is fallacious. The reasons why the result of 8% is definitely an overstatement are the following. The average travelling costs, which are here related to the income of the poorer section of the population, include, on the one hand, the fares for journeys in which poor families scarcely take part, such as season tickets (including first class) and ordinary first and second-class tickets on the railways, fares for visits to shops and theatres in the West End and for week-end excursions, including coach rides, further, the fares for local journeys by visitors to London from the Provinces and from abroad. On the other hand, it is ignored that workmen's tickets cheapen the travelling costs of the poor, and that the fares on trams and troller-busses, which chiefly serve working-class districts, are on a lower basis of charge than the bus fares. (2) Finally, it is not known whe

(2) Barlow Commission, Evidence, p 360

ther the poor travel as often and over such long distances as better-off people. The proper calculation would be to relate the total average travelling costs to the (un known) total average income of the Greater London families which would result in a lower percentage taken up by travelling costs; this would, moreover, have to be qualified by the statement that the workers enjoy certain reductions and that the poor make fewer pleasure rides (which are estimated at about one-third of the total journeys). (2)

As general sources fail to produce satisfactory results on the travelling expenses of the family, these expenses must be made the object of special investigations. But most special inquiries have started from the workplace and could not, from the material thus obtained, examine the burden of fares on the whole family unit. Only a few small sample inquiries are so far available for giving some indications of the position.

In the Statistical Part, (3) the aggregate fares for the journey to work have been computed for 923 working-class families with more than one earner each from four London Boroughs. The result, referring to all 1930, is an average of 4s. 2d. per week per family. If we assume, for the sake of argument, that the weekly income per family (with several earners, including juveniles) was £ 5, the fares amount to 4.2% of the total income. The average of 4s. 2d. includes those families who have all members working locally and thus no expenses for daily travelling. The average

(2) Ibid, p 367

(3) See p. 155

weekly fare per family with more than one earner ranges from 2s. 8d in Stepney to 6s. 8d in East Ham.

In a survey of three Brighton housing estates, 2s. to 3s. per family per week were found to be the most common amount of transport costs; and "wages are low in Brighton".⁽¹⁾

On the Liverpool housing estate, Norris Green, the amount of fares for the daily journey was, in 1937, 2s. 6d per household per week, despite the fact that nearly half of the earners walked or cycled to work.⁽²⁾

On new housing estates where very few are employed within walking distance of their homes, the family's aggregate expenditure for travelling goes up nearly at the same rate as the number of earners. This is clearly demonstrated in a report on the Kingstanding Estate in North Birmingham.⁽³⁾ Among families with one adult male earner only, the most frequent entry as to costs of transport is 2s. to under 3s.; among families with two earners, 4s. to under 5s.; with three earners, 7s. to under 8s.; in families with four or more earners, the most frequent entry is 10s. or more. "2s. 6d. or 3s per employed person per week is a fairly typical subtraction that must be made from the earnings on account of distance from work."

In an investigation of 141 budgets from a new housing estate in

(1) Marion Fitzgerald, Rents in Moulsecomb, Brighton, 1939, p 39

(2) Population Problems of New Estates, University of Liverpool, 1939, p 18

(3) M. S. Souter, E. H. Wilkins and p. Sargent Florence, Nutrition and Size of Family, 1942 (the inquiry was made in the Spring of 1939), pp 44 and 45.)

Stockton-on-Tees, (1) the average weekly fares were 1s. 2d. per family. There is a noteworthy absence of correlation between fares for the daily journey and incomes. The households were classified in five groups according to income, which ranged from between 25s and 35s. to between 70s. and 80 s. a week. Their respective travelling expenses were: 1s. 2¼d., 10d., 1s. 4d., 1s. 4d., and 1s. 3½d. In the lowest income group, which comprised about one-third of all families under review, the average fares for the journey to work amounted thus to between 3.39% and 4.75% of the total income of the family.

Most of these samples, it is true, refer to new housing estates on the fringe of the towns, where the burden of fares is higher than in the older districts, but in fact a quite considerable proportion of workers are now housed on the outskirts. In Birmingham, for example, only 18.8% of the working-class population live in the Central Wards, 28.6% in the Middle Ring, and 52.6% in the Outer Ring. (2)

Fares and Rent. — The conclusion from the foregoing sections is that fares are not proportional to wages: neither are the travelling expenses of individual workers taken into account in the determination of wages, not are the costs of travelling in any way assessable as a fixed percentage of the respective individual earnings or of the pooled incomes of the

(1) G. C. M. McGonigle and J. Kirby, *Poverty and Public Health*, 1936, pp. 198, 201

(2) *When We Build Again*, a Bournville Village Trust Research Publication, 1941, (the figures relate to 1938) p. 44.

families. This would mean that earners living within walking distance of their work-place enjoy, in a theoretical sense, a quasi-differential rent to the amount of their colleagues' travelling costs. Or is the non-expenditure on fares (or the payment of low fares) offset by higher costs of housing? It has indeed been widely held that such compensation takes place, in other words that as a rule high fares go with low rents, and vice versa. In the New Survey of London Life and Labour this view was voiced as follows:

(1) "The cost of travel to and from work commonly bears an inverse relation to the level of house rent, the workman who moves away from the congested centre frequently paying more for travel and less for housing." This opinion is based on the assumption that housing in the town centre and housing on the outskirts are the same thing, so that the location is the only variable in the comparison. On location depends the cost of the building site, and as sites in the centre are more valuable than at a distance, the rent in the suburbs must be correspondingly lower. This theory of a complementary character of fares and rents is borne out by the facts under certain conditions, namely where the comparison concerns dwellings of similar age, size and type. Oxford workers, for instance, taking houses in Kidlington are indemnified for high travelling costs to Oxford by rents which are definitely lower than they would have to pay for similar houses in or nearer Oxford. Less clear is the following case. The London Passenger Transport Board undertook to prove

(1) Volume I, 1930, p 97

or less directly correlative.

The four boroughs included in a sample inquiry (1) show the following weekly averages for rent and for fares respectively:

Boroughs	Average rent (a)		Average fares per family(b)	
	s.	d.	s.	d.
East Ham	12	6	6	8
Stepney	10	2	2	8
Tottenham	12	4	4	2
Willesden	16	4	4	7½

a) Total Survey Samples; New London Survey, Vol III, pp. 355, 395, 403; and Vol. VI, p 461.

b) Families with more than one earner — see p. 186

This table shows that both rents and fares are lowest in Stepney, whilst East Ham combines the second highest rent with the highest fares of the four boroughs reviewed.

Further evidence for the cumulation of fare and rent is given by various recent investigations of the cost of living in outlying housing estates.

In Stockton-on -Tees, two central areas from which families were moved to a new suburban estate had average weekly rents of 4s. 8d.

"On their transfer to Mount Pleasant the commitments of the translated families were, by reason of higher rentals, increased by 4s. 4d. per week."

(2) In addition fares up to 2s. 6d. per family per week became unavoidable.

(1) See p. 155 f.

(2) G. C. M. M'Gonigle and J. Kirby, p 118

Similar results emerge from a report on the cost of living in three Brighton housing estates: "It is the high rents taken together with other necessary expenditure that create difficulty" "The cost of travelling to work is generally increased on moving to a new estate, unless tenants already possess bicycles." (1)

It is, therefore, "not uncommon to find people continuing to reside in unsatisfactory houses in the vicinity of their work, rather than incur the additional expense of travelling costs from a suburb where housing conditions are vastly superior". (2)

Correspondingly, there have been complaints that the inhabitants of outlying housing estates suffer from malnutrition: they are at a loss to make both ends meet, as a result of high rent plus high fares.

The conclusions as to the money costs incurred by the worker for the daily journey can be summed up as follows. Fares, the main costs of travelling, are related to the family budget rather than to the individual budget. Fares are of very uneven incidence. This unevenness is wholly borne by the worker, for under present conditions it is neither compensated by differential wages according to travelling expenses, nor counteracted by the rent.

(1) Marion Fitzgerald, loc. cit. p 37, seq — "Between 2s and 3s a week, either on bus fares or hire purchase of cycles, is a common estimate, but a considerable number have transport costs much higher than that, rising as high as 8s in families with several earners," *ibid.* Dr. M'Gonigle, too, stresses the point that "the capital cost of the bicycle (probably bought on the hire-purchase system) constitutes, for a long time, a drain upon the family income" (*loc. cit.*, p 201).

(3) G. C. M. M'Gonigle and J. Kirby, *loc. cit.*, p 202.

2. HARDSHIPS

When a person sells his service as a commodity he has to present himself where these services are to be delivered; he cannot send them on like the merchant who sells material goods".⁽¹⁾ The hardships, together with the costs of the journey to work, are directly felt by the travelling public and are often regarded as the main aspect of the whole matter. The hardships of the daily journey present the unambiguous problem of reducing them as far as possible. For this purpose, it is necessary exactly to know their causes, their nature and their magnitude.

On the whole, the prices of the daily journey, paid in the three media of money, time and energy, are parallel and cumulative: long journeys are usually costly and tiresome as well, while a penny ride is unlike to involve much loss of time or great fatigue. However, there are also features of interchangeability of the three items, that is to say, it is to a certain degree possible to reduce one or two of them at the expense of the third: an employee who can afford a private car for his daily journey reduces the time and probably the strain, as compared with transport by a public conveyance; a man on the other hand, who does not mind the exertion of cycling to work minimises the costs and often saves time; a person, finally, who puts up with loss of time by waiting can travel by an early workmen's train at a cheap rate.

The first device, the private car, has not so far attained practical importance for the journey to work in this country or on the Continent, whilst it

(1) P. Sargent Florence, *Economics of Fatigue and Unrest*, 1924, p 61

plays an outstanding part in the U.S.A. The second method, cycling, is good for fit persons in fair weather, provided the journey is not too long and does not lead through dangerous streets and traffic jams. (1) The fact that workmen's trains are run only up to 8 a.m. means in many cases a serious prolongation of the time spent on the journey. (2).

In view of the cumulative character, as well as of the interchangeability, of the three media in which the journey to work is paid for, it would be convenient to measure them all by the same yard-stick. An interesting attempt has been made by a Dutch writer to express the burdens of loss of time and of the strain of the journey to work in terms of money, so that they might be compared as "indirect costs" with the direct money costs. But as shown in the Statistical Part, (1) this attempt has not been successful; the present state of knowledge of the effects of daily travelling on well-being and efficiency does not permit of weighing the duration and fatigue of the journey in percentages of wages earned or fares spent. In the absence of a common denominator for the price paid in the various media, loss of time and strain have to be reviewed separately.

a) Loss of Time

Travelling time is entirely charged to the employee — collective agreements about the hours of work do not take account of the duration of the journey. On the whole, firms are unconcerned with their employees' whereabouts before clocking in and after knocking off. Working hours have become shorter, but to a certain extent this gain of leisure time has been

eaten up by the lengthening of the daily journey. The hours spent on the way between home and workplace do constitute a loss, for they are lost to sleep or recreation, to family life, education or public activities, in short, to time at the employed person's own disposal. Travelling, even at its best, can not be counted as leisure, considering the lack of privacy, of ease and of choice of occupation during the journey. Under favourable conditions, it is true, people read or chat in the train or bus; others play cards; some women knit. But these occupations are hardly practicable in the rush-hour traffic, and besides, they are mere stop-gaps. During the journey concentration is as difficult as relaxation; instead, the mind is given to killing time, and thus a mental mechanisation is fostered which is a general danger in the present organisation of life. Some newspapers and the illustrated press doubtless owe much of their popularity to the length and dullness of the daily journey.

In most cases, it is not mere distance which determines the duration of the journeys: the minutes spent on actual train or bus-rides account sometimes only for a moderate proportion of the total time taken from door to door. For those who use public means of transport the journey consists of various components. It begins with the walk from home to the stop or station where train, bus or tram is boarded. (4) This walk takes a

(1) The problem of making cycling safe has not yet been solved. Separate cycletracks, "regarded by many people as the main hope ... break off at all road junctions, which are just the spots where accidents are most frequent" (H. A. Tripp, Town Planning and Road Traffic, 1942, p 28).

(2) See p. 61 f.

(3) See p. 126 f.

(4) See p. 138

couple of minutes in central districts, but in the suburbs, where the building density is low, it may require 15 minutes or more to reach the nearest stop or station. There follows the wait for train, bus or tram — a short interval if all goes well, but a long one if the vehicle is late or overcrowded. The time spent in the carriage on actual travelling is the third stage of the journey. Those travellers are fortunate who can catch a through train to their destination — for many the journey involves one or more changes, each of which means another period of waiting. Then there is the walk from the station or stop to the door of the firm's premises. This is the last stage of the journey for employees of small and medium-sized works. In large factories, however, where a number of workshops are spread over an extensive site, each employee clocks in at his department. This procedure adds as much as ten minutes to the journey in some cases.

Even though the total journey is made up of these stages, the sum of their duration in minutes does not give the whole span of time to be reckoned with. If work starts at 8 a.m. and the time which a given employee needs for the journey from door to door is, say, three-quarters of an hour, it is more likely than not that he or she leaves home at 7 a.m. instead of 7.15 as one would expect. The reason is the necessity to be punctual. Firms enforce timekeeping by their employees by regulations of discipline and wage-cuts;

these vary in their strictness but make the fear of being late a very real one.

(1). The transport services cannot be expected to work exactly according to schedule, and delay is beyond the passenger's control, especially where the journey involves changing of vehicles. Travellers have, therefore, to

allow for possible delay by inserting a number of minutes, up to over a quarter of an hour, into their morning's timetable. The true duration of the journey to work is thus the net duration plus some additional time to provide a buffer, as it were, against the risk of being late.⁽²⁾ A grievous loss of time is imposed on many users of workmen's trains by the discontinuation of this cheap service after 8 a.m. For those whose work starts at 9 o'clock the arrival at the terminus before 8 o'clock means a sheer waste of time. This question will be discussed in the section on measures of relief.

The available information on the actual time taken up by travelling in general and on the incidence of long journeys in particular is scanty. When data are given of the length of the daily journey, this is usually done in terms of mileage.⁽³⁾ The distance as the crow flies is easy to determine and may be helpful as a preliminary measuring-rod for the purposes of town and country planning and of transport. What matters for the traveller, however, is the time needed for the journey. The difference can be observed at Corby, the new works town of Messrs. Stewarts and Lloyds in Northamptonshire, where "even those living just opposite the works have to go something like a mile and a quarter round to cross the railway and to reach the works entrance".⁽⁴⁾

(1) In one firm at least, the factory doors were closed five minutes after the start of work; employees arriving late were not admitted and lost the wages for the whole day.

(2) See pp 135/6

(3) For instance, in the table on the workplaces of the tenants of the L. C. C. housing estates, and in the report on conditions in the South Wales Coalfield (see Statistical Part.)

(4) G. Boumphrey, "Industry comes to Corby" in *The Listener*, 13th March, 1935, p 432. See also p 92.

Some data on the actual duration of the daily journey have been collected for this study and are analysed in the Statistical Part. They show a remarkable variation between different places and districts, different industries and different types of workers. Some firms, mostly of moderate size, continue, as in the old days, to draw the bulk of their labour from the village in which the factory is situated. Long journeys, on the other hand, prevail in the large towns, especially in Greater London, and in such districts in the country where a shifting of industry has occurred, further among the employees of very large plants where thousands of persons are occupied on one site. In such places considerable proportions of employees have journeys of an hour or more, both in the morning and evening.

So far, no general standard has been evolved for the duration of the daily journey — the time of 30 minutes, which some writers stipulate as the maximum, is in many cases impracticable. On the other hand, it is obvious that the drawbacks of lengthy journeys are being increasingly appreciated. The Minister of Labour (Mr. Bevin) wants "to see such staggering of hours ... that in the majority of cases we get a person from his home to his work in half an hour" (1) Factory Inspectors have for some years already taken up the question of reasonable duration of the journey in case of a firm's application for a permit to work two shifts. In Leek, Staffs, for instance, there were difficulties, "as so many women residing in the Potteries were employed"; a condition was therefore imposed "requiring the employ

(1) House of Commons, 27th November, 1940, Hansard, col. 306.

ers to provide means of transport. The women employed on eight-hour shifts have special buses, and the journey taken 1 to 1 1/4 hours, whereas the journey without special buses takes 1 1/2 to 2 hours. (1)

Some firms pay attention to the daily journey when recruiting their staff and do not draw from beyond certain distances; at a department store in Liverpool, for instance, "about half an hour is the time allowed to come to business... a few people are living at roughly 40 minutes' train journey, but these are the exception". (2) Another pertinent statement is: "When we are engaging employees, we realise that it is very important that they shall be able to get to these works very easily from their home." (3) This attitude may seem sound policy on the part of individual firms, but it must be kept in mind that if it were general, remote districts and outlying housing estates might be entirely cut off from employment. From declining and temporarily depressed industries some instances are recorded where those employees who live at a distance from the works are dismissed first. (4)

b) Strain

It is by now generally recognised that many journeys to work impose a strain on the daily traveller, impairing both his personal well-being and his working efficiency. In the words of the Barlow Report (p 91): Tra

(1) Annual Report of the Chief Inspector of Factories and Workshops, 1928, p52.

(2) Answer to the Industrial Welfare Society. It is not clear whether the walk to the station and waiting time are included.

(3) Ibid. (4) Second Industrial Survey of South Wales, Vol. III p 35.

velling ... can hardly fail to have adverse effects on health and to result in fatigue (and) loss of energy... There can be little doubt, too, that these adverse effects on the workers are reflected in no small measure on their efficiency and output, and, in turn, on the employers' cost of production." As the wording of this statement indicates, the realisation of the ill-effects of daily travelling under prevailing conditions is founded on general impression rather than on exact knowledge. No special investigation of the strain involved in regular travelling has been published in this country. But in the speech already quoted, Mr. Bevin said that "experience has shown that where you can get a person from his home to the factory in half to three-quarters of an hour, as against the hour or two hours that it is taking now in many cases, you increase production by 9 or 10%". It would be very helpful if the material on which this statement is based could be made public particularly if it makes possible the determination of an exact correlation between the duration of the daily journey and the output. A few tentative inquiries into this matter have been made in Germany. (1)

The scarcity of information is largely explained by the fact that, unlike costs, and loss of time, the strain cannot be assessed in definite units. Fares are measurable in shillings and pence, duration in hours and minutes; but the strain has to be gauged by description of the inconveniences inflicted

(1) Friedrich Ritzmann, Einkommens- und Wohnverhältnisse der Arbeiter der Maschinen-fabrik Gritzner A. G. in Durlach, 1914. W. V. Drigalski a. o., Arbeit und Wohnung, 1931. Charlotte Gräbe, Der Einfluss der Pendelwanderung auf die Arbeitnehmer, 1926. L. Preller "Die Entfernung vom Wohnort zur Arbeitsstätte" in Reichsarbeitsblatt, 1925, N° 24.

on the travellers and by the effects on health and efficiency. Attempts (both in previous and in the present investigations) at an accurate assessment of the strain will be discussed in Part B of this study.⁽¹⁾ The results so far obtained do not lend themselves to generalisation, but rather serve to shed light on the complexity of the problem and to indicate the lines which further research might follow. Inquiry into the strain of daily travelling must consider four points: causes of the strain; types of persons affected; different forms of the harm suffered; and effects on efficiency.

The mere duration of the journey is a strain in itself. An hour's travelling both morning and evening, added to a working day of $8\frac{1}{2}$ hours⁽²⁾ and a midday break of an hour, makes a total of eleven and a half hours away from home. It is obvious that this has a direct bearing on the times and types of meals and on the opportunity for sport and exercise in the open air. Lengthy journeys added to a twelve-hour shift curtail even the hours of sleep. The question is whether a limit can be set, from the point of view of industrial health, to the duration of the daily journey, either generally or in conjunction with the length of the working day proper.

The circumstances of the daily journey by public means of transport need detailed examination, in order to apportion the responsibility for strain amongst the various features. These are: first, the inconveniences of

(1) See p. 124 seq., and p. 139 seq.

(2) Including $\frac{1}{2}$ hour to make up for the free Saturday afternoon

the various stages of the journey, walk to and from the station, waiting, queuing, changing vehicles; secondly, the condition in the conveyances, viz., standing sandwiched in overcrowded compartments and the stuffy atmosphere which tires and fosters contagion; further, superimposed on all other items, a constant hurry and nervous tension due to the fear of being late; and lastly, equally influencing each phase of the journey, bad weather.

Bad weather is also the chief enemy of cycling in this country; during the winter months the number of persons who cycle to work drops sharply.

The London Passenger Transport Board reports that "inclement weather aggravates the difficulties of meeting the peak flow to and from the factories, as many users of pedal cycles then prefer to travel in greater comfort in the

Board's vehicles". (1) Similar reports, from other parts of the country, were

made by member firms of the Industrial Welfare Society. On the other hand,

this method of transport is free from most of the drawbacks of public transport.

Not the least advantage is that the cyclist is, to some degree, out at

his own time; one minute lost does not mean for him the missing of train or bus.

The Continental investigations pointed to the adverse effects of the physical exertion involved in cycling; (2) but this was largely ascribed to a hilly country

side and referred, in the years of the German inflation, partly to undernourished

workers. Nevertheless, the fatigue from cycling is not negligible. This

is indicated by the fact that cycling to work finds comparatively little favour

(1) L. P. T. B., Fourth Annual Report, p 26

(2) These remarks also apply to lengthy walking, though probably not to the same degree as to cycling.

with female workers, in spite of this being often not only the cheapest but also the quickest method of transport.⁽¹⁾ Girls have another reason, however, which may be at least as effective in keeping them from cycling, namely consideration for their clothes. The difference in dress habits which still, if in diminishing degree, distinguishes the "black-coated" from the manual workman is much less marked among females. The factory girl's apparel is essentially of the same kind as that of the shop assistant or clerk: it is town wear, not really suitable as a cycling outfit.

It must be assumed that the strain of travelling is felt unevenly by different types of persons; separate examination is required of males and females, juveniles and elderly workers, office employees and those with non-sedentary occupations.

Too little is known about the various forms of the harm done; it may result in specific complaints of the respiratory or digestive systems, but it may also make itself felt as general tiredness and nervousness. "Vastly more days are lost from vague, ill-defined but no doubt very real, disability due to ennui than from all the recognised industrial diseases together."⁽²⁾ How much of this disability and ennui is caused by the strain of the daily journey?

To examine these complaints is actually a matter for medical research; but in some cases it is possible to get information from a perusal of a firm's personnel records on absenteeism and of the pay-roll. If the length and

(1) See the findings at Achille Serre Ltd., p 143

(2) Annual Report of the Chief Inspector of Factories and Workshops, 1931, p 75

circumstances of the daily journey have an influence on health and efficiency, this should be traceable in the respective employees' proneness to sickness and accidents and in the amount of wages earned by them on piece rates. The relevant German investigations found indeed a definite correlation between the length and discomfort of the journey and absenteeism due to sickness, also a similar correlation between the hardships of the journey and accident rates, and finally an inverse correlation between the travelling hardships and the wages earned. (1) But these inquiries have been in the nature of experiment rather than of final establishment — the matter wants further illumination. (2)

Only after the various disadvantages of the daily journey are assigned to their respective causes and to the persons affected can proper steps be taken to reduce the more serious harm done by the journey to work.

(1) See p. 124 f

(2) Among the statistical data collected for this study, the material of Carreras' cigarette factory had seemed to make possible an examination of the relation between the absenteeism and the travel burden of the individual employees. However, the number of cases which could be included in the inquiry proved too small for a statistical analysis of this kind, and the results were inconclusive. See p. 139 f.

3. MEASURES OF RELIEF (1)

The price paid for the journey to work in costs and hardships is high; to many writers it seems indeed so high as to justify the demand that daily travel should be abolished. Yet, as has been shown in the preceding chapter, some of the journeys fulfil wholesome functions in the modern social and economic system, and others are caused by hard facts of a topographical nature (namely the existing location of industrial and residential districts respectively) which may often be neither inevitable nor useful, but which cannot now be undone for many years to come. Travelling to work by masses of earners has, therefore, to be accepted as unavoidable for the time being. As no panacea can be found for the complex grievances, it is all the more important, and fortunately possible, to some degree to relieve the various complaints. Sometimes comparatively small measures have a considerable effect.

a) Measures by Firms.

The Five-day Week:- The five-day week is a helpful device: it reduces by a full sixth the number of journeys and with it the cost, loss of time and strain involved. To minimise the employees' travelling is one of the main considerations prompting firms to introduce the five-day week. The five-day week "is more often found in cases where workers

(1) See the author's articles "The Journey to Work" in Industrial Welfare, July 1936, January 1938, and April 1940.

have to travel long distances to their work than where they live around the factory" (2). Instances are given of a firm which had moved from South London to the Reading district: "the five-day system was mainly started because many of the original workers continued to reside in London, and so much time was taken in travelling"; and of cases in Birmingham where "in factories in which labour is drawn from the Black Country it is specially convenient since it is not necessary to make the long journey on Saturdays". (3)

The working hours lost through not opening on Saturday morning are usually added to the five remaining days. As shown by the following case, this can lead even to a two-fold saving of fares:

The main reason for adoption (of the five-day week) in the wholesale dressmaking trade in the West End of London appears to be one of location. The factories are situated in an area which is no longer residential, and workers are drawn from long distances and are unwilling to make the journey for a few hours' work on Saturday morning. 9 a. m. was the usual starting time before the advent of the five-day week, when it was changed to 8:30 a. m., and incidentally allowed workers to make use of workmen's tickets. (4)

(2) Annual Report of the Chief Inspector of Factories and Workshops, 1929 p 52

(3) Ibid. 1927, p. 57

(4) Annual Report of the Chief Inspector of Factories and Workshops, 1930, p 62

For factories, the short hours worked on the Saturday make this day the obvious choice for being dropped as a working day. Retail shops, on the other hand, might consider adopting the practice of the big department stores in Paris: in view of the fact that housewives are busy at home after the weekend they used to keep the shops closed on Monday mornings. If different business branches could agree to close on different days, this organisation of the five-day week would not only reduce the total number of journeys but, being a "staggering" of working days, would also relieve the overcrowding of vehicles and the traffic congestion on each day. Whether the reform can be carried so far or not, there is no doubt that from the point of view of lessening the cost and hardships of the journey to work, the five-day system is strongly to be advocated.

"Staggering" of Working Hours. - Much interest has recently been focused on the "staggering" of working hours. While this device does not reduce the number of journeys but the amount of fares, it relieves the rush-hour traffic. A great deal of the strain of the journey to work is due to the fact that many thousands hurry to their work at the same time. If the cataract of workers arriving at the conventional time can be regulated into an even flow over an extended period, many of the traffic difficulties will be eliminated. Less crowding within the vehicles and less waiting, queueing and straphanging will result. There will also be less congestion in the streets and consequently a shortening of the time taken on the journey.

It must not be overlooked, however, that "staggering" involves con

siderable difficulties; it is a problem of business organisation, and it also requires very careful dovetailing of the transport services. An object-lesson, both of the achievements and limitations of the scheme, is the introduction and operation of a staggering scheme at Austin's, Longbridge, which is described in the Statistical Part. Similar schemes in other countries seem to confirm that "staggering" is a suitable device for very big works or groups of factories, where numerous employees are concentrated on the outskirts of a town. (1)

Some years ago the Siemenswerke in Berlin-Spandau set the times for starting work at intervals of ten minutes for different units. At the Ford Motor Works in Detroit, U. S. A., the "stagger" extends over two hours. In the administrative centre of Washington, "staggering" was necessitated not so much by the crowding of public conveyances as by the congestion of the streets by private cars, because so many of the civil servants arrive in their own cars.

In business and shopping centres; on the other hand, where the conflux consists of the employees of a number of firms, often belonging to the same trade; more intricate problems arise which make it doubtful whether the scheme is practical at all. Agreement on the starting and stopping times of these firms is necessary; but can an Oxford Street shop, for instance, be expected to close half or even a quarter of an hour earlier than his next-door competitor? Would "stagger" opening and closing times of the various firms be in the interest of the buying public, considering that it reduces the opportu

(1) J. E. Cowderoy describes staggering of hours for outlying factory groups in wartime London in "Public Co-operation in Transport", Journal of the Institute of Transport, January 1943

nity of selecting the wanted articles from amongst the stocks of several firms? The inconvenience to the customers would be increased if, in order to do justice to the shops, a system of monthly rotation as to the times were introduced.

Some degree of staggering already exists through the fact that large towns, particularly London, have several centres, demanding journeys of different lengths from the main residential districts.

In one important respect, the development during recent decades has brought a compression rather than a staggering of the period when work starts. Formerly, factories began work earlier in the morning than shops and offices; with the shortening of working hours in industry, however, the starting times of manual workers have become later and thus drawn nearer to those of clerical and commercial employees. This fact is of consequence for the appreciation of the Railway Companies' policy of operating workmen's trains only up to 8 a. m., as will be discussed in a subsequent paragraph.

Other Measures. It does not seem unlikely that more exact investigations than have been made so far will confirm the harm caused by the fear of being late, both in adding to the time allowed for the journey and as a major cause of nervous strain. In that case, the remedy will have to be a relaxation of time-keeping rules, although these are at present thought necessary in the interest of output and discipline. There are certainly cases in which late-comers disturb the process of production; but not all earners are employed at conveyer-belts making a whole gang dependent on each other, not are they all members of a team getting group wages. Experience in the present

war shows that rigid time-keeping regulations can in many cases be relaxed without serious harm to efficiency. In this as in other respects, good management should not find it impossible to reconcile the requirements of factory, shop or office with the human needs of the employees.

A modest contribution towards shortening the daily journey can be made by firms which have branches situated in various districts of a town, by transferring employees to branches which are nearer to their homes. Such a transfer was carried out some years ago by the municipal Gas Works in Berlin, and it has been practised by Messrs. Marks & Spencer in London. Where it can be applied, this method reduces the length of the daily journey together with the cost and the strain, but it is limited in its possibilities. Employees are transferred only in cases of very long journeys, because a frequent exchange of personnel would be harmful to the team-work in the branches. A strict system of local recruiting is not possible with the present location of residential and business districts, and the advantages of the mobility of labour in a large town would thereby be lost.

As already mentioned, in large factories where a number of workshops are spread over an extensive site, each employee clocks in at his department which may be as much as ten minutes' walk from the gate. Where access to the works, whether by road or by rail, is from several directions, help can be given to the employees by providing several entrances, while for cyclists further time may be saved by placing cycle sheds at convenient points within the factory grounds.

Within the working day, rest-pauses and the supply of good meals in the works canteen do much to counteract the strain of the journey as well as the normal fatigue of the working hours.⁽¹⁾

b) Measures in the Sphere of Transport

Every technical improvement in the transport services reduces the loss of time and the discomfort of the daily journey. Such measures are the running of through trains, of more frequent trains, of longer trains, and similar devices in road traffic. It is clear, however, that in the more serious cases of overcrowding and congestion such as prevail in the large towns, and notably in London, the success of these measures is relatively slight.

Workmen's Trains - Workmen's trains, which have been repeatedly dealt with in this chapter, must be discussed here from a particular viewpoint. On the one hand, their raison d'etre is to relieve the financial burden of the fares; on the other hand, severe grievances are inflicted on many users of these trains in strain and loss of time. The questions are whether and how the hardships can be mitigated.

It will clear the issue to compare present conditions with those in the early times of the operation of workmen's trains. In the 1880's and 90's, workmen's trains from Walthamstow and Edmonton to Liverpool Street were run only up to 6.47 a.m. "The Railway Companies have somewhat underesti-

⁽¹⁾ See pp. 35 and 69.

estimated the evils of a wage-earner being landed in London one or two hours or more before his work begins", was a judgement in the Court of the Railway and Canal Commission in the Matter of an Inquiry under the Cheap Trains Act, 1883. (1)

The situation has not materially changed in the last 40 or 50 years; in 1936, the medical officer of Harrods, London, for instance, made the same complaint about "the increase of the working day by members of the staff (especially juniors) who make use of the workmen's tickets to save expense, though not obliged to travel at the early hour required because of their starting work".

Workmen's trains, it is true, are now being run up to 8. a. m. (arrival at the terminus), but the number of trains run shortly before 8 o'clock is quite inadequate to cope with the demand, so that many persons have to go by earlier trains; in addition, hours of work, in many London firms at least, do not begin before 9 a. m.; the time-lag between arrival at the station and clocking-in time thus remains. Severe crowding in the workmen's trains and the ensuing discomfort is the other grievance. In this respect, an ironical development has taken place: conditions have become equal to those of ordinary business traffic — not through improvement in the service of the workmen's trains, but through deterioration of the ordinary train service during the rush hours. Overcrowding of the vehicles (and congestion of the streets) before the opening and after the closing of shops and offices is so intense as to be little better than that of workmen's trains. The overcrowding of workmen's trains has thus largely become part of the general problem of the traffic peak. An extension of the operation of workmen's trains be-

yond 8 a. m., while affording some relief, would on the whole narrow the period of the rush hours and thus intensify the pressure.

This is demonstrated by two diagrams showing the London peak traffic on the District Line (Whitechapel Station) and on the Morden-Edgware Line (Oval Station) respectively.⁽²⁾ At Whitechapel, the Westbound loadings of the trains are about 12,500 at 8 a. m. (per half-hour), 8,000 at 8.30 and 10,000 at 9 a. m., while the available seats are about 4,000. This means that even in the interval between 8 o'clock, when the ordinary traffic is at its highest; the train loading is twice the seating capacity. On the Morden-Adgware Line, the drop between the two peaks (both about 12,000) is sharper, viz. to under 7,000 while the number of seats is between 4,000 and 5,000. In this case a half-hour extension of the availability of workmen's tickets would bring some relief (moreover, the seats provided before 8 o'clock might be brought to the full capacity reached for the ordinary traffic an hour later). In outlying factory districts, on the other hand, heavy workmen's traffic is compressed into half an hour, with little ordinary business traffic to follow. In such areas, an extension of the workmen's tickets period beyond 8 a. m would, from the service point of view, be possible and would facilitate the staggering of working hours. But the main problem is inward travel.

The situation needs consideration from a wider angle. Circumstances with a direct bearing on the operation of workmen's trains have changed

(1) Report from Select Committee on Workmen's Trains, 297, 1903, pp. 44/5

(2) L. P. T. B. Third Annual Report, Frontispiece.

so considerably as to call for a reorganisation, or at least for an amendment, of the existing regulations for workmen's tickets. From the beginning up to this day, "the reduction of fares by workmen's tickets has been intended to assist low-paid workers," while the transport undertakings were and are to earn the revenue from the fares of the ordinary business traffic. Formerly, when the starting time of factories was distinctly separate from those of offices and shops, the discontinuation of workmen's trains after 8 a. m. served as a criterion of bonafide workers. As shown above, however, the two periods of traffic have drawn closer together. Furthermore, it is now not always factory operatives who earn the lowest wages, thus most needing cheap fares, but rather juvenile and other low-paid employees of business houses which do not open before 9 a. m. Modern conception of the workers' welfare, however, regards hanging about the station as highly objectionable.

Thus, the intended beneficiaries of cheap tickets cannot now be classified by either time of transportation or rough grouping of occupations. A more specific selection has become necessary, in order to ensure that those — and only those — who need it, get extra cheap transport without sacrificing an hour or more of their morning sleep. Under the present system it is not possible to "pick and choose the people to push up" into the later period, at reduced fares.⁽¹⁾ But such discrimination is just the method which

(1) Frank Pick, Varlow Commission Evidence. p. 417.

would serve the purpose. In Belgium, as described in the Statistical Part, every buyer of an *abonnement d'ouvrier* has to produce a document showing him to be a bona-fide worker under the terms of the workmen's trains act. In this country, it does not seem necessary to subject the bulk of the users of workmen's tickets to such a scheme, which, moreover, involves considerable administrative work. It should be possible to find an intermediate solution: up to 8 a. m., everybody might use workmen's tickets, as at present, while those who are to be entitled to reduced fares after that hour would need certificates showing their claim; new regulations would have to fix the categories of eligible persons, mainly according to the amount of wages earned. Such a procedure would only be an expansion of some existing schemes. On the railways, for instance, season tickets for periods from a month upwards are issued at half rates to workers under 18 years who earn no more than 18s per week. (1)

The principle of a flat rate, i. e. uniform fares for local journeys of any length, is applied in some large American and Continental towns, but

has, on the whole, found no place in the transport system of this country. From

the point of view of the worker's journey the main considerations are (1) Persons with long daily journeys have their fares appreciably reduced under a flat-rate scheme. (2) Unless the maximum distances over which the flat rate works are fairly short, a flat rate is bound to depend on public subsidies, because traffic over short distances would not bear the increases of fares im-

(1) As a war-time measure, this concession has been extended to weekly tickets, and the age limit has been raised to 25 s. since 1st. December, 1940

plied in an equalisation. (3) Flat rates are a temptation to spread the conurbations further and thus to increase travelling and aggravate the loss of time and the strain suffered.

Encouragement of Private Transport. The advantages of cycling to work, both to the individuals concerned and as a relief of the pressure on public conveyances, make encouragement of the use of bicycles the right policy. This is increasingly recognised by employers who provide cycle-sheds at suitable points within the works premises and facilitate the purchase of bicycles by their employees, for instance by supplying them at whole sale prices. During the winter months, many workers cycle in fair weather only and go by public conveyance when it is wet; the transport agencies are usually expected to cope with this bad-weather demand for additional seating capacity. (2)

It is to be expected that after the war the ownership of private motor-cars will expand. The relief thereby afforded to public transport depends not

(2) In view of this habit, an instance like the following cannot be regarded as serving the general interest; In the case of a certain firm the employees who cycle in fair weather cannot avail themselves of the most convenient public means of transport, when they wish to do so; bus services, in this instance, cannot be sufficiently augmented to take all would-be passengers in time for clocking-in. It happened that regular passengers were left behind on rainy days, as "fair-weather cyclists" had boarded the bus before them. Thereafter, by arrangement between the firm and the bus company, only the holders of weekly tickets were admitted to the buses. The Traffic Commissioners have sanctioned this regulation. The bus might, of course, make a second journey to pick up the remainder, but they would be late for work. This firm has not found it possible (as others have done) to relax the time-keeping rules, but expects the fair-weather cyclists to travel by train in bad

only on the number of cars thus used but also on the number of persons carried by each car. Up to the present war, it was an offence for several people to contribute to the costs of a car which they used in common unless they obtained a Public Service Vehicle Licence and a Road Fund Licence. (1) This regulation was bound to put a severe check on the sharing of cars by workers, although there is evidence that to some extent the ruling was circumvented. It is to be hoped that the emergency measures which, in the earlier part of the war, encouraged the sharing of cars in order to save petrol, on the other hand, will be continued, in some form or other, in peace time. A lesson can be learned from conditions in the United States, where the ownership of cars is widespread amongst all classes of the population, unhampered by the imposition of special licences. Several American investigations illustrate the frequency of the car-sharing habit in that country. In 1936, a special Workers' Transportation Count was taken of the 30,000 employees of four automobile (and accessory) factories in Flint (Michigan); (2) it showed that two-thirds of the total reached the workplace by private car, the greater part of them sharing it with at least one other, but more often with two or more persons. 53.9% of the workers spent 15 minutes or less on their journey, and a further 37.5%;

weather, which takes longer than by bus and means a walk in the rain from the station to the works. Such a policy obviously discourages cycling to work. The firm subsidizes the bus service and, in order to make it pay, deliberately discourages cycling to work by the employees.

(1) In May 1939, five men were fined at Cowbridge (Glamorgan) Police Court for thus "acting in direct competition with the public service vehicle system" The Times, 17th. May, 1939

(2) Unpublished material, obtained in 1937 through courtesy of the American Association of Planning Officials.

20 to 30 minutes; over nine-tenths, therefore, had not more than half-an-hour's ride. This would have been impossible if two-thirds of the workers had not travelled by car. A small sample inquiry in several places in another American State (1) showed that only in a minority of cases was the car shared by members of the same household. It was usually non-relatives who were picked up at their own houses, each passenger being carried by private car from door to door.

The measures of relief which can be applied in the spheres of factory organisation and transport service are all of relatively modest importance. The major solution must be sought in town planning. The urban layout as recommended from the point of view of the daily journey will be discussed in Chapter V. It will there be shown that the burden of daily travelling can be lessened in two ways: the number, as well as the length and strain of journeys to work can be reduced.

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(1) Massachusetts. I am indebted to Professor Carle Zimmerman, Harvard for this information.