

Older workers
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(*Studies of
Ageing Within the Conditions of
Modern Industry*)

AGE AND
THE WORKING LIVES
OF MEN:

An Attempt to Reduce the Statistical Evidence
to its Practical Shape

By
F. LE GROS CLARK, M.A.

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FOREWORD

ONE of the difficult problems of industrial management is how to deal fairly and kindly with ageing employees. For the older men and women themselves, the approach of the age of retirement is a time for anxiety-laden decisions. In considering these problems it is salutary for us to remember that most of us, whether we are the managers or the managed, will have to solve our own retirement problems one day.

The elderly worker is now becoming a special case on the shop floor. As everyone appreciates, he must moderate his efforts: yet working conditions have become less accommodating to his diminishing speed and power of concentration.

The difficulties arise out of the still uncompleted technical revolution. In a peasant or handicraft economy they would be much rarer. And the time may come when industrial methods will be much more flexible than they are now and allow an older worker to play his part in production according to his powers. But just now the difficulties are real ones.

In this study Mr. Le Gros Clark attempts to measure the human dimensions of the problem. He has concentrated attention on men in their sixties or beyond. As he says, his enquiry is a prelude to a more serious question: how far can a mechanized economy absorb labour that has been rendered marginal by advancing age?

The answer is most favourable when the level of employment is at its highest. During the minor recession in December, 1958. *The Economist* noted:

“ . . . the main folly of present trends in unemployment surely lies in the large number of older people who are being dismissed at an age when their transfer to the reserve pool is sheer waste because no new employer is ever likely to take them on. So far as can be judged from inadequate statistics, the increase of 182,000 in registered unemployed compared with a year ago may well have been accompanied by the disappearance from the labour force of a nearly equal number of older people who have been forced into retirement before they wanted to be. In pursuance of this policy, some of the nationalized industries have actively boasted that they have been ‘softening’ their dismissals by persuading their older servants to go into retirement earlier; and the Ministry of Labour has only this month wound up a

committee which was engaged in examining ways to get older people to stay longer at work.

This policy of guiding unemployment towards those who are least easily re-employable must be wrong. It is wrong in principle, because it throws away the long-term advantage which medical science is giving us—those five years or so of extra work which many older people could and would like to do—in order to meet the short term vicissitudes of a very small dip in the trade cycle. It is wrong in economics, because older people who are sacked and cannot expect to get jobs elsewhere are a sheer loss to the economy. It is wrong in morality, because most of these older people thrust into premature retirement will suffer much greater hardship than would a young man who could normally find another job within about three weeks.”

Beyond this question lies another: if considerable numbers of men have to retire from paid employment simply because they are growing old, what social provision ought we to make for their full and active contentment in the years of leisure? The present study claims to be no more than a coherent pattern of provisional estimates; but it does at least offer a point of departure for further research on this important subject.

The Foundation is grateful for the help and advice that has been given by the officers of the Ministries concerned with these matters and by those of the General Register Office. It further appreciates highly the technical assistance Mr. Le Gros Clark has received throughout from Mrs. T. Blomberg and Miss Agnes C. Dunne. The conclusions reached and the views expressed in the report are, of course, those of the writer alone.

L. FARRER-BROWN,
Director of the Nuffield Foundation.

Summary of Contents

THE title and the chapter headings should be sufficient to explain the purpose of this study. It deals with the transitional phase of the ageing process, when men are passing from their full working vigour towards their ultimate retirement. This is a critical stage in the lives of most men. The aim has been to reduce the evidence drawn from a variety of statistical sources to a clear pattern, that can be provisionally taken as representing the true course of events. Such a pattern can later be modified from time to time in the light of further research.

It is made plain that the essence of the whole problem lies with those men who have been physically compelled by age to moderate their efforts, and who must therefore be given some chance of doing so if they are still to remain employable. An attempt is made to assess what proportion of the older labour force these men represent. By definition they are still capable of paid work of some description. The question whether contemporary industries can absorb all this 'marginal' labour is reserved for a later inquiry.

Mainly for the purpose of exclusion, an estimate is made of the proportions of older men who may be reckoned to have become more or less incapable of further paid employment. These men, it is pointed out, would have ceased to be an industrial problem. But larger numbers of men find their customary jobs getting beyond them, while still far from being incapacitated. Emphasis is placed throughout upon the wide diversity of such customary jobs in regard to the degree of strain and responsibility they impose on ageing men; and the need is stressed for avoiding any temptation to think of ageing 'in the abstract'. Though no attempt has been made to survey in this context the whole field of gainful occupations, opportunities are sought for illustrating their inherent diversity and for contrasting them with one another in the experience of the older men.

Finally, the true rates at which older men retire from work are examined: and some attention is paid to the comparative rates at which they apparently leave their customary jobs, whether for retirement or for types of work that are more appropriate to their age. It is suggested that only a minority of these moves seem to be of an arbitrary character. They may as a whole be reflecting closely the real incidence of industrial ageing.

The problems awaiting further research are shown to be industrial rather than personal. For instance, how far will a highly mechanized industry be able to absorb ageing men who can no longer carry out their normal work? Will there be a sufficiency of alternative jobs to meet any foreseeable demand? If there is not, what social and administrative measures are needed to ensure the spiritual stability and the happiness of retired men? Has industry some responsibility in the matter?

While the subject could only be treated statistically, the approach is a rigorously practical one.

The meaning of the tables has been made as clear as possible; and they are constructed for the purpose of illustrating the broad course of events.

I

Introductory

THE time comes in all fields of social and industrial research when a need is urgently felt for some kind of statistical framework. We begin to ask, for example, with what proportions of the working population we are really concerning ourselves. The passage of ageing men through the last stage of their working lives into retirement is a very important one. It is important not only for the men, but for industries and trade unions, that have to think in terms of large numbers and of industrial policy. We have to ask a series of pertinent questions. How many older men are affected at successive ages, for what causes and under what conditions of work? What part is played by senescence, and what part by the chronic invalidity that may accompany the onset of senescence?

The answers to these questions have obviously to be expressed in a statistical form. This form provides a convenient framework or pattern, within which we have to do most of our thinking on the subject. The argument has to be carefully plotted; but the overall picture should emerge from it in clear contours.

Will statistics of this kind be conclusive? They can never be entirely conclusive, because we are faced with a situation that is changing around us technically, medically and socially. Statistics can only give us our necessary point of departure. Moreover, in all social and industrial research new facts and figures continually come to hand; and as they come to hand we are led to modify our original estimates. But before we can enter upon such a process of critical re-assessments, we must have a basic statistical pattern on which to work. It is thus only a provisional pattern that I am trying to construct. In doing so I have in mind the practical requirements of men of affairs. It is time for social and industrial statisticians to recognize that the value of their labour depends on the immediate uses that can be made of it in the constantly changing world to which it refers.

It is necessary to say at once that when the term *ageing* is employed in this context it will invariably mean that the men are beginning to show organic signs of senescence. It must never be taken to mean

that they have simply reached a certain chronological age, such as the age at which they become entitled to a statutory pension. All men who live long enough grow old at last; and as they grow old they are compelled one by one to leave their customary work. It is only with this early stage in the rising tide of human senescence that I am concerned. Little or nothing will be said about the care of the elderly and infirm.

No attempt is here made to explain the process of growing old in biological terms. I shall take it for granted that we are all familiar with its outward and visible signs. Its onset may or may not be associated with degenerative or chronic symptoms of ill-health. So far as it is associated with them, these pathological conditions will presumably be controlled or mitigated in some measure by the advance of medical science. But men would still be growing old; and since it is impossible to forecast the course and rate of medical research in geriatrics, we have to study human experience as we find it among our contemporaries.

The fact that men age on their jobs is of interest both to the ageing men themselves and to those who employ them. There is an organic relationship between the two parties; and neither party in the industrial contract can be ignored without distorting the whole picture. Workers of any age must obviously be capable of doing the jobs for which they are paid; and however well disposed employers may be, there are usually technical and organizational limits to their range of tolerance.

It turns out in the event that most of this study concentrates upon one crucial question. *What happens to ageing men when failing powers make them no longer fully employable on their normal work?* Men usually experience this over a measurable period of time. Until that stage is reached they have put up a creditable performance. In a few months or possibly a few years they will be retiring for good. But it is for the intervening period of physical deterioration that we have to prescribe. The men with whom we are concerned can no longer carry out their familiar jobs, at all events in a customary and acceptable way. Yet they are still in comparatively good health. With what employment prospects are such ageing men faced?

I shall be dealing almost exclusively with manual workers, for they represent the large battalions of labour. Only men will be here considered. Their complex problems are quite sufficient for a single inquiry.

In the study that immediately follows I have tried to reduce the

onset of industrial senescence to some kind of statistical pattern. The inquiry would have to be statistical in any case, because men obviously age at very different rates and under very varied working conditions.

We do not need to be told that a few men of 70 or 75 can still do a full day's work; but we do want to know what *proportions* they represent of all comparable workers of the same age.

After I have examined the probable extent of chronic and incapacitating sickness among older workers, I try to estimate how many men of the same ages, though still in reasonably good health, would have to change or moderate their work loads if they are to remain in some sense employable. I then consider to what varied degrees of strain ageing men are apparently subjected; for we naturally suspect that jobs do not all possess for them the same searching and discriminating qualities. Finally, I attempt to plot the rates at which men really retire from work and to distinguish the true reasons for their retirement. Custom, ill-health and industrial policy all play some part in the process; but there is always a large residue of retirements that are due simply to senescence or to the failure to find work that is appropriate to a man's age.

II

How many Ageing Men become Incapacitated for further Work through Chronic Invalidity ?

WE ought first to ask how many of the older men become incapacitated through chronic ill-health, for it is obvious that these at any rate would no longer be industrial problems. They are certainly in need of social care; but the chances are that they have left the labour market for good. In precise terms, what proportions of the older men have apparently become chronic invalids at successive ages? Do we tend to underestimate the influence of ill-health on their retirement?

There are three sources of statistical information: (1) The Ministry of Pensions and National Insurance has surveyed the duration of sickness in samples of the insured population and has related the duration of sickness to age. (2) In studies of older men carried out in various parts of the country, medical workers have attempted among other things to assess what physical capacity they still had for paid employment. (3) The Census Tables of Age and Occupation indicate what numbers of men had admitted to being already in virtual retirement before attaining their pensionable age of 65.

If these sources of information seem substantially in agreement with one another, we can take it that they will give us a reasonable forecast of the amount of chronic invalidity we have to expect among ageing men. It would at all events be the amount of chronic invalidity we have to expect in the present state of medicine; in another 20 years the situation may have changed profoundly. But the statistical material has to be handled critically. The Ministry's figures, for example, give no complete indication of the amount of sickness among men past the age of 65, because most of the chronic cases would by that time have retired from employment; their periods of sickness would no longer be recorded for insurance purposes. Again, as far as the Census Tables are concerned, the mere fact that men aged 65-69 have retired from paid employment is no evidence, of course, of their relative state of health; for all we know they may have retired by choice or because they have been arbitrarily discharged. For the men who are past 65 we have, therefore, to rely only on medical observa-

tions and on such chance records of morbidity among them as come to hand. It is nevertheless plain that among men who survive to these late ages the level of chronic invalidity continues to rise at a steady pace.

It is necessary for this reason to examine first what happens to the health of men who are still below the age of 65, and then to see what evidence we have about their health when they have passed that age. As a matter of fact there is some advantage in adopting this method, because the pensionable age of 65 must always be a critical one and any argument on the subject is bound to give it some recognition.

The question is not whether ageing men are subject to occasional bouts of sickness, but whether their sickness is of so long duration that their chances of ever returning to work are likely to have diminished. After all, they are undeniably growing old in the chronological sense. Of course, the fact that a man of 63 has been on sick absence for a year or more is no proof that he will not subsequently resume work of some kind. But such cases of rehabilitation as do occur are liable to be counterbalanced by fresh cases of chronic invalidity, as here and there a series of acute attacks culminates at last in prolonged sickness. Relatively high death rates are natural among ageing men whose health has become seriously impaired. But they always leave behind them a residue of long-term invalidity; and this residue increases steadily with the ages of the men.

1. *Chronic Invalidity in the Early Sixties*

The Ministry of Pensions and National Insurance has analysed the numbers of older men who were certified as having been incapable of work for six months and over on December 31st, 1951, and December 1st, 1952. The following table indicates the rates of long-term sickness and shows that they increase with age:

TABLE I. *Percentages of Insured Men Certified as Experiencing at that Date a Sickness of Six Months or Over*

| <i>Date</i> | <i>Age 55</i> | <i>Age 59</i> | <i>Age 63</i> | <i>Age 64</i> |
|-----------------|---------------|---------------|---------------|---------------|
| December 1951 . | 3·01 | 4·67 | 7·87 | 9·16 |
| December 1952 . | 3·09 | 5·05 | 8·27 | 9·22 |

It is evident that at the age of 55 more than 3.0 per cent. of the insured men must have been sick for so long a period; by the age of 59 the percentage must have risen to about 5.0, and by the age of 64 to about 9.0. In the October of 1953 the Ministry further arranged for inquiries to be made over a period of four weeks from all persons then becoming entitled to a State pension. It was found that about 10 per cent. of the men reaching the age of 65 had been sick for at least six months; most of these could be identified from their records. They were assumed to have become cases of chronic invalidity.* This figure seems to confirm the findings shown in Table I.

As a matter of fact, a large number of the men shown in Table I as sick for at least six months had been absent from work for much longer periods than this. The proportions are very consistent over the 10 years of life. More than 80 per cent. of these long-term invalids had experienced a sickness of over a year's duration, and more than 40 per cent. a sickness of over three years. Table II gives concisely the relevant figures.

TABLE II. *Percentages of Insured Men Certified at that Date as Sick for Periods of Varied Duration*

| <i>Duration of Spell</i> | <i>December 1951</i> | | <i>December 1952</i> | |
|--------------------------|----------------------|------------------|----------------------|------------------|
| | <i>Age 55-59</i> | <i>Age 60-64</i> | <i>Age 55-59</i> | <i>Age 60-64</i> |
| Over 6 months . | 3.82 | 7.12 | 3.94 | 7.26 |
| Over 1 year . | 3.12 | 5.89 | 3.20 | 6.11 |
| Over 3 years . | 1.78 | 3.14 | 1.96 | 3.39 |

So far the argument is fairly straightforward. To whatever extent older men in this condition of health may or may not be able to resume work after a year's absence, the main trends in their health records are unmistakable. A year's sickness at the age of 65 is usually a far more serious matter for a man than it would have been 10 years earlier; and it is likely enough that by that age 10 per cent. or so of workers may be reckoned as being physically beyond any prospect of further employment.

There have been a few medical surveys undertaken in which some attempt was made to assess the relative fitness for work of older men.

* *Reasons Given for Retiring or Continuing at Work*, Report of an Enquiry by the Ministry of Pensions and National Insurance, London, H.M.S.O., 1954, Table 4 and para. 13.

For the moment we are concerned only with those who are judged completely unfit for work of any kind. More will have to be said later about the 'marginal' cases, who were judged to be no longer capable of carrying out their *normal* work, but who were fit enough perhaps for some alternative job. The immediate question is whether the medical evidence can be accepted.

This is no matter of a medical certificate of invalidity; the statistics are based on considered surveys, in which the criteria applied had presumably been predetermined. Under such conditions of research a medical man examining workers in their middle and late middle lives is likely to be correct in the vast majority of his assessments of their incapacity for any kind of work. Uncertainties must increase roughly in proportion to the ages of the men themselves, at all events once they are approaching their mid-sixties. There would naturally always be cases that leave no room for doubt in the mind of an examining doctor. But he may be swayed in some instances by the evidence he sees of the onset of old age, and in others by a suspicion that ageing men tend to exert only a modicum of the physical effort of which they are probably capable. These influences may counterpoise one another: they may lead a medical man to overestimate or underestimate slightly the true extent of incapacity among elderly men. He has moreover to decide whether the condition of a man's heart or arteries might not deteriorate more rapidly, if he were removed from work altogether, than if he were encouraged to continue on suitably modified operations. These are disturbing elements in medical research no less than in general practice.

Broadly speaking, I am inclined to accept the medical assessment of unfitness for work up to the mid-sixties. Beyond that age any assessment related directly to a man's continued capacity to undertake paid employment has to be more cautiously examined. Up to the mid-sixties the picture presented by a chronic or crippling sickness is usually an unmistakable one; and it occurs, after all, among men who still expect and are expected to hold themselves available for work.

Dr. Richardson published in 1956 a report on the health and working fitness of older men in Aberdeen.* Most of his survey was concerned with retired men beyond the age of 65. But he includes a table showing the health-grades by age of a number of employed men below the age of 65. The numbers of men at each age were very

* Richardson, I. M. 'Retirement: A Socio-medical Study of 244 Men', *Scot. med. J.*, 1956, 1, 381.

small; there were only 45 of them in the ages 60-64. Of these he reckons 53.3 per cent. to have been still fit for work of any kind, and 4.5 per cent. to have been completely unfit. These men were assumed to be still working or available for work; and Richardson makes no reference to men of the same ages who were already in virtual retirement. The figures are therefore not strictly comparable with those already quoted. But they do suggest that the full extent of incapacity, if we only knew it, may have been even higher than that recorded by the Ministry of Pensions and National Insurance. The men Richardson was observing were not on sick absence; they were of the types that manage to continue at work in the face of increasing physical discomfort. Such ageing men can be found in any accommodating factory; and they usually retire from all work as soon as they are sure of a pension.

In 1958 Professor McKeown and his colleagues published a series of reports on a more comprehensive survey of older men carried out in Birmingham.* It had been arranged that 11 Birmingham practitioners should among them examine 1,062 men all lying within the ages 60 to 69. The age distribution of the men was roughly proportionate to the age structure of the male population of the country. More than 82 per cent. of the men could be classified as manual workers. It is believed that little bias was introduced. The medical examinations were of the 'Life Insurance' type; and this is satisfactory enough, except for a doubt one may have whether it would accurately assess the working fitness of those men who were at the more advanced ages.

Among other matters, the doctors were asked to judge how far the men they examined were still fit for employment. We shall have later to refer again to their findings. For the moment we will deal only with such of the men as were considered in their early sixties to have been completely unfit for any work. There were 707 men aged 60-65. The percentages judged at successive ages to be completely unfit for any form of employment are shown in Table III. The large majority of the 707 men were still in employment.

In future the Birmingham report will for brevity be referred to simply as the work of McKeown. It will be observed that his figures

* Brown, R. G., McKeown, T., and Whitfield, A. G. W. 'Observations on the Medical Condition of Men in the Seventh Decade. II. Fitness for Employment', *Brit. med. J.*, 1958, 1, 558.

TABLE III. *Percentages of Birmingham Workers 60-65 Medically Judged to be Incapable of any Form of Work*

| <i>Ages</i> | 60 | 61 | 62 | 63 | 64 | 65 |
|-------------------------------------|-----|-----|-----|-----|-----|-----|
| Numbers examined . | 115 | 140 | 130 | 108 | 111 | 103 |
| Percentage unfit for work | 6.0 | 6.4 | 6.2 | 8.3 | 5.4 | 9.7 |

are very similar to those we derived from the Ministry of Pensions and National Insurance. McKeown further gives a table showing the relative fitness of the *employed* men as compared with that of the men who had already *retired* from work. By far the greater number of the men in their early sixties judged to be incapable of work were already in virtual retirement; but it seems from the table that about 1.9 per cent. of those still employed (or prepared for employment) were in quite as poor a state of health. Clearly, in Birmingham as in Aberdeen there were men still technically at work with their health seriously impaired. The contrast in the percentages between the two cities is probably due to differences in the medical criteria adopted.

Thus we have substantial medical support for the belief that considerable numbers of men become incapacitated well before their pensionable age, that their numbers increase with age and that they must be touching a 10 per cent. level of chronic invalidity by about the age of 65.

The Census Tables of Age and Occupation not only provide information on the numbers of men employed (or available for employment) in a large range of occupations; they also show what numbers of men had recorded themselves as being 'in retirement' from the same occupations at successive ages. While in the manual occupations the vast majority of retired men seem naturally to lie in age groups that are beyond the age of 65, a certain number do nevertheless record themselves as being already in retirement at earlier ages. It has to be assumed that, when they say they are thus retired, it means that they have in most cases actually left the labour market, not that they have merely transferred to some alternative occupation; for that is how they had been instructed to fill up their Census forms. Yet

there are here some possible sources of error; and it was therefore thought advisable to select for study only the occupations in which men seem least likely to have been tempted to mis-state their true positions.

It is necessary also to select occupations from which men are not normally retired, or even tempted to retire on their own account, before they reach the age of 65, unless it is for physical causes that are beyond their control. Occupations, from which men are customarily superannuated at the age of 60 or thereabouts, have to be carefully excluded; for their retirement from work would obviously give no indication of their state of health. It is known that in a wide range of manual occupations comparatively few men are industrially pensioned off before the age of 65 except for health reasons; and until they reach the age of 65 they are not, of course, entitled to a State pension. We can thus take it that the men who record themselves between the ages of 60 and 64 as being already 'in retirement' have probably in most cases become subject to chronic complaints or to crippling injuries.

I begin now to deal (as I shall frequently be dealing in the course of this work) with a number of distinct jobs. It is as well to remember that in discussing ageing men in relation to their jobs most generalizations would be a fatal error; and the only way to avoid that error is to make sure that we are not thinking of ageing men in the abstract but of ageing miners, farm workers, dockers, machinists and the rest. I have taken two Census Reports for England and Wales, those for 1931 and 1951, and examined the positions of men in 25 selected occupations at the ages 60-64, the last five years before they would have attained their pensionable age.* The 1921 Census Report does not break down the age groups so narrowly and could not therefore be used for this purpose. In each occupation and for each date we have combined the numbers of men still occupied (always the large majority of them) and the numbers who had recorded themselves as being already retired; and we have calculated what proportion of the combined figure is represented by the retired men. Thus there were, for example, in 1951, 21,978 men of these ages who were still or had previously been employed as farm workers; and of this total figure 1,457 admitted to being already in virtual retirement, a percentage of 6.6.

* 1931 *Census of England and Wales*, Occupation Tables, Tables 2 and 12. 1951 *Census for England and Wales*, Occupation Tables, Tables 2 and 15.

It must be recognized that from one Census period to the next some changes are invariably made by the Registrar-General in the classification and coding of occupations. But care has here been taken to see that for all practical purposes the jobs listed were the same in both Census years.

TABLE IV. *Percentages of Retired Men at the Ages 60-64 in 25 Manual Occupations*

| Occupation | Percentage retired aged 60-64 | |
|------------------------------------|-------------------------------|------|
| | 1931 | 1951 |
| Fishermen | 8.5 | 11.9 |
| Farm workers | 5.2 | 6.6 |
| Coal miners | 6.5 | 9.3 |
| Pottery workers | 6.0 | 6.1 |
| Bricklayers | 3.6 | 5.7 |
| Carpenters | 5.4 | 6.5 |
| Painters | 4.9 | 5.1 |
| Building labourers | 2.7 | 5.3 |
| Foresters | 2.6 | 4.9 |
| Weavers | 6.1 | 8.1 |
| Spinners | 8.9 | 6.3 |
| Electricians | 12.1 | 7.7 |
| Watchmakers and repairers. | 9.3 | 8.6 |
| Smiths and forgemn | 7.2 | 6.9 |
| Foundrymen | 5.3 | 5.8 |
| Crane drivers | 4.7 | 3.8 |
| Engine drivers | 10.8 | 7.8 |
| Bus drivers | 4.7 | 7.1 |
| Dock workers | 4.5 | 5.4 |
| Bakers | 7.5 | 8.8 |
| Bootmakers and repairers | 7.0 | 7.0 |
| Compositors | 12.4 | 4.7 |
| Waiters | 6.8 | 4.1 |
| Warehousemen | 6.5 | 4.4 |
| Watchmen | 2.1 | 4.0 |

Figures of this kind can only be surveyed as a broad picture. Since some men must always be doubtful whether to describe themselves as 'retired' before they have become fully entitled to a State pension, the occupations that have in them relatively small numbers of men

might obviously show distorted percentages one way or another. In the larger occupations the figures may in balance be more reliable. The most we can say is that, on whatever manual jobs men have been employed, the proportions that have retired from work in their early sixties oscillate around 5–8 per cent.; and this is remarkably close to the percentage of long-term sickness experienced by men at these ages (see Table II above), i.e. a six months and over sickness rate of about 7·2 per cent. A few of the men so recorded in the Census Tables would, of course, have been already incapacitated and so 'retired' from work at yet earlier ages; but cumulatively their numbers would have grown to these proportions by the time they were aged 60–64.

It is possible that a more detailed analysis would reveal some interesting contrasts. The figures of all the coal miners, for example, certainly mask considerably higher rates of premature retirement among coal face workers. As for building labourers, a number of these men seem to drift into factory labouring and similar jobs as age advances; and they might thus, if prematurely retired, have become classified elsewhere in the Tables. One suspects, too, that the distinction between foresters and farm workers would not have been as clearly defined in the past as it probably is to-day. But these conjectures are not very profitable. The figures are best left as a crude indication of what were probably general trends of invalidity among the older manual workers.

The question naturally arises, however, whether we are justified in assuming that most of the men listed in Table IV had indeed retired only through ill health, injury or some allied cause. We have little information on the subject, but Professor McKeown could provide us with some relevant facts about those of the men in his Birmingham sample who recorded themselves as being 'retired' before the age of 65. There were 89 of them. A scrutiny of the causes of their retirement shows that 57 had retired or been discharged through ill health and 9 because they had reached their age limit. Since there was a total of 604 men in his sample aged 60–64, we have a retirement percentage due to these two causes of 10·9. It must be remembered that a good many of the men in the Birmingham sample were professional, managerial, higher clerical and similar workers; and these presumably account for a number of those who had 'reached their age limit' or had retired for reasons of their own. The men who

had retired only through ill health are 9·4 per cent. of all men of these ages; and that is not far off many of the percentage levels that have been derived from the Census Tables.

Nine per cent. of all the professional, technical and higher clerical workers of these ages seem to have retired for reasons other than health, whereas the percentage among all the manual workers in the sample was only 2·5. A good many of these latter were obviously rather exceptional cases. For instance, only one of the partly skilled and unskilled workers had retired for reasons other than that of ill health. This man stated that he had left work to look after a blind sister. Out of the 359 skilled men of the same ages 13 had apparently retired for other than health reasons. Nine of these said they wished for leisure or that it was usual to retire from their firm after 30 years' service. Some of the retired men clearly had good superannuation prospects, and most of them had been in occupations that were not included in Table IV. While, then, there are undoubtedly some anomalous cases of premature retirement among manual workers, we are probably right in assuming that the dominating factor with them is impaired health.

I am still inclined to think that by the time men attain their pensionable age of 65 at least 10 per cent. of manual workers have little further prospect of remaining in paid employment. The numbers had been rising among the men progressively since their mid-fifties and would continue to rise through the years that follow.

2. Chronic Invalidity in the Late Sixties and Beyond

For reasons I have already mentioned (p. 14), we have only medical surveys on which to rely when we are speculating about the working fitness of the men past 65. If they had become unfitted for any form of employment, the chances are that they would have retired. But even then, a surprisingly high proportion of those who are still technically in employment are recorded as cases of prolonged sickness. When men retire, the Ministry of Pensions and National Insurance transfers their records from the employed register; and we can no longer trace from that source their state of health. It appears that somewhere between 1·0 and 1·2 per cent. of the ageing men who have remained in employment after 65 are certified as having been sick for more than six months. Many of these must have become almost cases of chronic invalidity, yet they had not applied for their pension.

Few doctors examining a mixed sample of retired and employed

men at these late ages would venture to assess their relative fitness for work. They would mostly be content to record how far their mobility or their sense-organs had become impaired. It would always be difficult for them to decide whether an ageing man who had been in retirement for three or four years, could ever be expected to resume work. Our only plan is to compare such sources of statistical information as are to hand and see what conclusions we can draw from them.

Professor Hobson and Dr. Pemberton published in 1955 the results of a survey of elderly persons in Sheffield.* In their view, the mobility (and presumably the working fitness) of 18·4 per cent. of 38 men aged 65–69 had become more or less seriously impaired: At the ages 70–74 the percentage of impaired mobility had risen to 21·2. From the age of 75 upwards the percentage was 42·5. As far as their fitness for employment is concerned, a mere test of mobility applied to men in their seventies would probably be quite insufficient. At a somewhat earlier date (1948) Dr. Sheldon in his classic survey of elderly persons in Wolverhampton also gave an estimate of the men's capacity for movement.† The mobility of 29·6 per cent. of men aged 65–69 had become impaired or restricted (two in five of these were bedridden or housebound). At the ages 70–74 the percentage was 22·4.

It is obvious, of course, that a good many chronic invalids die before they reach the age of 70, and, as they depart, they seem always to leave behind them a somewhat hardier body of survivors. Only in their later seventies do these survivors succumb in steadily increasing numbers to the diseases of old age. At the ages 75–79, 32·4 per cent. of Sheldon's elderly men were becoming more or less immobilized; half of these were housebound or bedridden. Thus we may expect occasionally to find that the proportion of invalids has declined slightly in the early seventies; but it rises once again as men pass into more extreme old age.

In his Aberdeen survey Dr. Richardson examined 111 men aged 65–69.‡ These men were all retired, and he attempts to grade them

* Hobson, W., and Pemberton, J. *The Health of the Elderly at Home*. London: Butterworth, 1955. (Table LIX.)

† Sheldon, J. H. *The Social Medicine of Old Age, Report of an Inquiry in Wolverhampton*, Oxford University Press, 1948. (Table 6 of Appendix 2.)

‡ Richardson, I. M. 'Retirement: a Socio-medical Study of 244 Men', *Scot. med. J.*, 1956, 1, 269.

in accordance with their relative working fitness; 19.0 per cent. of them were held to be unfit for any form of employment. The main causes of their incapacity were cardio-vascular diseases, arthritis and chronic bronchitis. At the ages 70-75 the percentage of men reckoned as completely unfitted for work was 17.3. Richardson notes the slight decline in the percentage figures and remarks that the difference could easily be due to chance. But it is likely to have been caused to some extent by the same factors as were probably at work in Sheldon's figures. Anyway, at these late ages assessments of fitness for work must always be doubtful, though assessments of the general state of health may be accurate enough.

In his Birmingham report Professor McKeown records the proportions of men in their late sixties who had been assessed as completely unfitted for employment; and these proportions are shown in Table V.*

TABLE V. *Percentages of Birmingham Workers 65-69 Medically Judged to be Incapable of Any Form of Work*

| <i>Ages</i> | 65 | 66 | 67 | 68 | 69 |
|---------------------------------|-----|-----|------|------|------|
| Numbers examined | 103 | 96 | 79 | 91 | 89 |
| Percentage unfit for work . . . | 9.7 | 8.3 | 16.5 | 13.2 | 23.6 |

To facilitate comparison with the figures given above, we may add that the percentage of incapacity among all the Birmingham men aged 65-69 was 14.0, as compared, for example, with Richardson's 19.0. McKeown comments in his report on the sharp upturn in numbers that took place at the age of 69, a subject to which we shall later revert.† It is probably a true finding. It is interesting to note that the proportion of these elderly Birmingham men judged completely unfit, while they were still technically in employment, corresponds closely with the Ministry's figure of prolonged sickness among

* McKeown, T., etc. 'Observations on the Medical Condition of Men in the Seventh Decade. II—Fitness for Employment', *Brit. med. J.*, 1958, 1, 558.

† See p. 55.

employed men of the same ages. The Ministry's percentage lay between 1.0 and 1.2; McKeown's was 1.1. All disparities among the medical figures quoted are as likely to be due to differing methods of assessment as to any other cause; the broad picture emerges clearly enough.

In the face of all this evidence we cannot avoid the conclusion that by about the age of 70 the proportion among the surviving men who have become completely unfit for paid employment must be well over 20 per cent. The figures tend if anything to be an under-estimate. Men in hospital or in homes for the infirm would not normally be examined by a research worker. Richardson, for instance, secured his sample in Aberdeen from the Central Pensions Office of the Ministry of Pensions and National Insurance, and of the 422 invitations issued to men of the ages of 65 and upwards he had only a 60 per cent. acceptance. Though only one of the refusals was avowedly due to sickness a considerable number of the men who declined a visit may have been relatively incapacitated. For all practical purposes, however, 20 per cent. or more at the age of 70 seems a fair estimate.

Thus the sources I have quoted agree that there is a substantial amount of incapacitating or chronic ill health among older workers and that it increases with their age. At the age of 60 it is withdrawing more than 5 per cent. of them through prolonged bouts of illness from the labour force. By the age of 65 it is affecting at least 10 per cent. of them more or less permanently; and we may take it for granted that 20 per cent. or more of the men of 70 are well beyond work. So far I have only been clearing the field. The diseases of old age plainly have some influence on the rates of retirement. But they are not necessarily the most important of the influences. They represent rather the hard core of unemployability among the older men; and this core will yield only with the slow progress of the medical science of geriatrics.

III

The Crucial Question—How Many of the Older Men have to Moderate or Change their Jobs?

I COME now to what is for many ageing men the essence of the problem. They all know that they face impending changes. Some are overtaken by chronic ill health. Considerably larger numbers reach a stage in life beyond which they can no longer carry out their *normal* duties to the full. Sooner or later they too will have to retire. In the interval they will remain in employment only if the work load is adjusted to their failing powers. They have usually to resign themselves to less responsible or less remunerative jobs. These men become real employment problems, because their prospects depend entirely on industry's capacity to absorb them.

It is necessary to see what statistical information we have. *How many men reach this phase in their working lives, and at what ages?* I will make the *overall* figures our immediate concern. For this purpose we have to rely on convergent evidence from a number of sources. Whether such 'marginal' older men can all be provided with suitable work is another matter. I want first to establish the broad dimensions of the problem. The argument has to be followed with some care, because the evidence is not all of the same kind and much of it is admittedly rather elusive.

We may begin with Professor McKeown's figures for Birmingham, as published by himself and his colleagues in 1958.* At first glance they seem straightforward enough; but there are some complicating factors. The 11 Birmingham practitioners were asked to assess, not only whether the men they examined were completely unfitted for work, but whether they were unfit for their present jobs (or for their original jobs if they had by that time retired) yet indubitably fit for some other employment. Such an assessment is far more difficult for a general practitioner to make. It would have to be assumed, for instance, that he was sufficiently familiar with the conditions of a man's

* McKeown, T., etc. 'Observations on the Medical Condition of Men in the Seventh Decade. II—Fitness for Employment', *Brit. med. J.*, 1958, 1, 558.

daily work: and, while an industrial doctor has some opportunity of visiting the shop floor, there is little time for this in general practice. Moreover, a considerable proportion of the men who were examined in their late sixties had already been in retirement for a period of years; and even if their memories were good, it is still a question whether the jobs they recorded were those they had held immediately before their retirement or those they had been earlier following for the greater part of their working lives. As we shall see, the distinction is an important one.

Since comparatively few of the Birmingham men had retired before the age of 65, the crude figures up to that age may be fairly reliable. But the figures give a true picture of what was really happening only when they are critically analysed. Table VI, then, shows the proportions of the men aged 60-65 who were medically judged at the time to be fit only for alternative forms of work, but not fit for the jobs they were actually doing.

TABLE VI. *Percentages of Birmingham Workers 60-65 Judged Medically to be Unfit for their Present Jobs but Fit for Alternative Work*

| <i>Ages</i> | 60 | 61 | 62 | 63 | 64 | 65 |
|--|-----|-----|-----|-----|-----|-----|
| Numbers examined . | 115 | 140 | 130 | 108 | 111 | 103 |
| Percentage unfit for original but fit for other employment . | 7.0 | 4.3 | 1.5 | 1.9 | 8.1 | 8.7 |

The trouble with these figures is that we know from experience that considerable numbers of men would *already* have transferred to some less exacting form or phase of work by the age of 63 or even by the age of 60. If they had made a satisfactory transition of that kind, they would probably be carrying out their new jobs in relative comfort; and they would in consequence be medically assessed as completely fit for their present work. From the men's own point of view Table VI would not give a full and honest picture of what had really been happening to them. McKeown, however, also ascertained what proportions of the men had apparently moved to a new job less than

five years before the date of their examination; and since a large number of these transfers are likely to have been in the direction of 'lighter' work, they must be related to the assessments of fitness for work as recorded in Table VI. Table VII shows what proportions of men at successive ages said they had effected these recent changes of employment.

TABLE VII. *Percentages of Birmingham Workers 60-65 Stating they had Changed Jobs within the Last Five Years*

| <i>Ages</i> | 60 | 61 | 62 | 63 | 64 | 65 |
|---|-----|------|------|------|-----|-----|
| Percentage less than 5 years in present job | 6.4 | 13.0 | 15.8 | 12.2 | 8.2 | 9.7 |

This Table probably explains the curious pattern of percentages in the Table that immediately preceded it. If comparatively few of the men were felt by the doctors to need a change of job at the ages 62 and 63, it was simply because by that time considerable numbers of them had already made the necessary change, some presumably only a year or two before the date of interview.

We have to recognize that these transfers with age to alternative or modified jobs have to be studied as a cumulative process, and that the cumulative process is naturally going on over a term of years. It is not like asking what proportion of men have become chronic cases of incapacity by any defined age; the number of chronic invalids can be medically determined with some precision. To ask, on the other hand, whether an ageing man is in need of a less arduous type of occupation will have little point, unless we know something about his recent work history. When the Birmingham practitioners were examining men of 64 or 65, a fair proportion of the men presented to them would already have gravitated to the 'light work' category and would appear therefore to have no further need of a change.

If we assume that the Birmingham figures in Tables VI and VII provide us with a fairly representative picture of events, we can conjecture from them what would probably happen to any given number of employed men between the ages of 60 and 65. In the first

place they will almost certainly experience an increasing annual mortality. That will reduce their numbers; and we can be further sure from the evidence that by the age of 65 about 10 per cent. of the survivors will have become incapable of any kind of work. But over the same period the numbers of men who transfer or need to transfer with age from their original or *normal* jobs will be slowly accumulating from year to year; and allowing for the influence on them of mortality and chronic invalidity, it is easy to calculate from the two Tables that between the terminal ages of 60 and 65 the proportions must have grown at last to some 16.0 or even 18.0 per cent. Most of the men of 65 who had effected a transfer in the course of their last five years would probably have moved in the direction of less arduous work; and about half of the men represented in our percentage of 16.0 to 18.0 would be those who must at 65 be found similar light work if they are to have any hope of remaining much longer in employment.

This is a very conservative estimate; but for men on the verge of old age it does not seem an unlikely one. A number of men, of course, would have been under the physical necessity of changing their jobs even before they reached their sixties; but we have less opportunity of surmising how many they would have been, because labour mobility at these earlier ages would have been less conditioned by the mere physical need to find lighter work. Job transfers go on well after men are past 65; but the *rate* of transfer tends to decline, because those who fail to find an accessible job are naturally tempted to retire from the labour market.

The Central Office of Information had earlier published the results of a survey carried out for the Ministry of Labour in 1950.* According to this Report there had been a considerable amount of labour mobility among men from the age of 55 upwards. 1,172 men of these ages still employed were questioned as to the length of time they had been in their present jobs. The proportions who had been employed for less than five years in the occupations they held at the time of their interviews are shown in Table VIII.

We have once again to rely on the memories of the men themselves. If we do so, it is further significant that no less than 35 per cent. of the men still working at ages 65–69, and 36 per cent. of those aged

* Thomas, G., and Osborne, B. *Older People and their Employment, an Inquiry made by the Social Survey*, Central Office of Information Reports Nos. 150/1 and 150/2. (Tables 12, 17 and 19.)

TABLE VIII. *Percentage of Workers in C.O.I. Survey Stating they had Changed Jobs within the Last Five Years*

| <i>Ages</i> | <i>55-59</i> | <i>60-64</i> | <i>65-69</i> | <i>70-74</i> |
|--|--------------|--------------|--------------|--------------|
| Number interviewed . . . | 494 | 419 | 187 | 72 |
| Per cent. less than 5 years in present job . . . | 17 | 18 | 13 | 21 |

70-74 had been in their present jobs for more than 45 years. In other words, the prospects of men in later life must depend in great measure either on a sensible change of employment effected in good time or on having established themselves in their firms as reliable old employees. Though we cannot be quite sure in making guesses of this kind, it seems from Table VIII that at least 18 per cent. of the men who reached the age of 65 would have changed their jobs somewhere within the five preceding years. The proportions are likely to have been rising with their ages; and soon after 65 many men who would have been well advised to effect a change may find they have left it too late.

The writers of the C.O.I. Report clearly believe that the nature of a man's work makes a notable difference in his prospects. Thus among ageing manipulative workers (i.e. those who by employing skill or judgment shape materials) the average tenure of their present occupations had been one of almost 35 years; the average tenure of their occupations among the unskilled workers had been one of only about 14 years. To remain in the same occupations, be it recognized, does not necessarily imply that men had remained with the same firms. Indeed, the Report further shows that 30 per cent. of all the unskilled workers interviewed (255 men) had been with their present firms for less than five years. The extensive mobility among ageing labourers suggested by these figures seems a matter of common experience, as compared with the relative stability of tenure among ageing craftsmen and operatives.

We may suppose, then, that ageing men are inclined to move to alternative jobs in their early sixties, and that between the ages of

60 and 65 the proportions would rise to somewhere near 20 per cent. But there are always differential job factors at work, and with labourers and probably with many of the partly skilled operatives the proportions are considerably higher. It may be noted that many of the old craftsmen are likely to have moderated their efforts.

When the writers of the Central Office of Information Report come to consider how far these older men had felt their work to be a strain, they warn us that their findings can only be treated as the broadest generalizations. If we take all the 1,172 employed men aged 55 to 74, 36.0 per cent. of them protested that they did experience a sense of industrial strain. But the proportions change with age; 44.0 per cent. of the men aged 65-69 said they were finding their work a strain whereas in the ages 70-74 the percentage was one of only 25.0. 'The fact of remaining in employment after the age of 70 is probably already an indication of particularly good health.' The sense of being in good or indifferent health seemed plainly, as we might expect, to have some bearing on a man's attitude to his work. A feeling of strain was admitted by almost twice as many of the men who were in indifferent health as by those in good health.

Certain parallels begin to emerge. We have the same impression as we gained in the last chapter, that men who are still at work in their seventies tend on the whole to be those of tougher fibre, whereas the late sixties come as the critical testing time of a man's health and working capacity. Fairly large numbers of men do make or need to make a change of occupation in their early sixties; and by common agreement their numbers (varying no doubt with the nature of their jobs), will have increased by the age of 65 to a level of 18 or even at times 20 per cent. and over.

We have been dealing for the most part with general statistics of employment. But it has become obvious that we shall also have to concern ourselves with contrasted types of work. Even the Central Office of Information Report just referred to makes some distinctions among manual occupations. For instance, 518 men (some already in retirement), who had complained of strain on their jobs, were asked what had been the apparent cause of their discomfort. 58.0 per cent. of those who had been on very heavy labouring attributed the strain they felt to the characteristics of their jobs, as compared with only 38.0 per cent. of the men who had been on moderate or light labouring. The latter tended to ascribe their strain rather to poor health and age.

No undue weight should be placed on such figures as these, except that they do seem to indicate a difference in approach and perhaps a physiological difference between the two groups. After all, those who remained to a relatively late age on heavy labouring operations must have been, constitutionally speaking, a highly selected body of men.

An interesting study of transfers to 'lighter' work was made in a Liverpool firm in 1951-3 by Mrs. M. Pearson.* The movements of 220 men aged 60-64 were traced through their industrial records, always a more reliable method than that of depending upon their own memories, provided, of course, that the records have been well maintained. The firm is in the seed-crushing industry, manufacturing animal feeding stuffs, vegetable oils, etc. On the production side the work is often heavy or relatively heavy, involving in some departments a good deal of humping, carrying and trucking; the work may be dusty as well as heavy. The medium and lighter jobs include trucking, packing and some machining, as well as cleaning and checking. All production jobs had been evaluated not only for the assessment of wages but in order to facilitate the placing of employees. Mrs. Pearson describes the firm as having enjoyed a long reputation as a progressive employer; and it seems clear that every possible effort is made to transfer to less exacting work those who feel their jobs are becoming too much for them.

Under these conditions the transfers effected are likely to represent the extreme of industrial tolerance of which such a firm is capable; 19 per cent. of production jobs had been assessed as heavy or moderately heavy, 32 per cent. as medium in their demands, and the remaining 49 per cent. as moderately light or light. There was thus considerable latitude for transferring older men. Of the 115 production workers aged 60-64, 63 had moved since the age of 40-45 to work graded as less exacting than the work on which they had been previously employed. Many of them had moved in two or more stages. If we take only the *final* moves they had made, we find that 46 out of the 63 men had made their transitions between the age of 55 and the time in their sixties when their records were being examined. It may be assumed that before all the men retired at the age of 65 (a rigid policy with the firm), still more of the men would have made some change in their work status. Two out of three of the 63 transferred

* Pearson, Margaret. 'The Transition from Work to Retirement' (I), *Occupational Psychology*, 1957, 31, 79.

men had moved from the heaviest jobs. In brief, it appears that about 40 per cent. of the 115 old production workers, whose records were studied, had taken their *final* moves to lighter work after the age of 55; and 21 per cent. of them had transferred somewhere beyond the age of 60.

These are not unreasonable figures because it must be remembered that, although in their sixties men often transfer through age alone, changes of work due to injury or premature invalidity usually take place well before that age. In fact, 30 of the 63 transferred men were reckoned as being technically disabled; and it may be assumed that a fair number of these had been among earlier cases of transfer. In other instances men had moved as a result of temporary illness and had never returned to their former jobs. Some had made an application for lighter work through an increasing awareness of strain or on the advice of their supervisors.

In the maintenance and transport departments of the firm far fewer job changes had taken place. There were in these departments 78 men aged 60-64; and of these only 12 had moved to jobs graded as light. All these moves had been effected before the age of 60. The work is less heavy than work in the mill; and men have usually more control over the pace of their operations and rest pauses.

We could apparently describe the process by saying that 143 of these manual workers (production and maintenance combined) reached the age of 60 without having made any *final* move to lighter forms of work. A number of them had already moderated their efforts to some extent; but they had not yet taken the *final* step open to them; 25 of these 143 men or 17·0 to 18·0 per cent. made such a move after reaching the age of 60 and probably still more of them would have done so before reaching their retirement age. It will be noticed that this proportion is very near the proportions suggested by the Tables of McKeown and the Central Office of Information, which also covered mixed bodies of workers. But Mrs. Pearson's figures further serve to show the striking differences that may exist among contrasted occupations. The tradesmen on maintenance work had been little affected in their sixties, whereas with the unskilled or partly skilled men on production the level of transfers was comparatively high. This contrast between one manual occupation and another will become more and more obvious, I think, as the argument proceeds. It was foreshadowed in some of the figures quoted from the Central Office of Information.

In 1957 the Nuffield Foundation published a study of the careers of 300 London busmen from the age of 60 onwards.* Half of the men had been drivers and half conductors. They were all traced through their industrial and medical records down to the ages at which they had variously retired from the service. Here of course the nature of the men's duties can be clearly defined. There was no fixed retiring age at the time of the inquiry. Those who by reason of age or slight infirmity had to leave their normal work before the age of 65 could be almost invariably offered alternative jobs in the garages, offices, etc. Since all such transfers in the London buses are now carefully recorded, we can be fairly certain how many moves take place.

At 60, all the busmen had still been employed on their normal jobs. The report states that, if we allow for a few doubtful cases, the men who were by the age of 65 no longer fit for their normal work though capable of alternative jobs probably represent 15 per cent. or over. About two out of every three of these men had been retained on comparatively light work by the London Transport Executive; most of the remainder seem by preference to have found work elsewhere. There were in addition a few men of the same ages who had succumbed to incapacitating sickness.

It was believed that the proportion of busmen who would have been reckoned fit only for alternative work must have increased quite steeply once they had passed their mid-sixties. But beyond the age of 65 they would no longer be offered alternative work by the L.T.E.; and we have consequently no means of tracing their subsequent moves. As a matter of fact, even before bus drivers and conductors reach the age of 60, the losses among them due to incipient ill health are not negligible.

Before his move to Aberdeen Dr. Richardson had carried out medical examinations of a group of older miners and foundrymen in the neighbourhood of Glasgow;† 489 men were interviewed, all from the age of 50 upwards, and for evidence of any job transfers they had experienced Richardson relied on the memories of the men themselves. He has been criticized for adopting this method of analysis, mainly on the grounds that the more remote in time a transfer had been, the less likely was a man's memory to be accurate. But an interval of five years or so, would scarcely have been too long.

* *Bus Workers in their Later Lives*, The Nuffield Foundation, 1957.

† Richardson, I. M. 'Age and Work', *Brit. J. industr. Med.*, 1953, 10, 269.

Let us reduce the process of job changes to what were probably its true dimensions. Richardson had interviewed only men who were still in employment, and this he admits to be a weakness, because we should have no idea how many men had retired through sickness or old age; 97 of the men interviewed were aged 60–64, and a number of them testified to having moved to somewhat lighter work even before the age of 55. Some of the early transfers would doubtless have been due to industrial and other injuries. A further 24 out of the 97 men stated that they had made a move to lighter operations within the ages 55 and 59; and that is a percentage of about 25·0. When we come to the men still employed in their late sixties we have to be more cautious, because in these industries a considerable number would probably have retired soon after reaching 65; 74 men were interviewed at the ages 65–69, and, of these, 19 (or again about 25·0 per cent.) stated that they had transferred in a similar direction within the ages 60–64.

Richardson agrees that beyond the age of 60 men in these heavy industries tend to become a highly selected group, and the element of selection increases with age. He believes that he has evidence that the proportions of men on heavy work decline progressively from the fifties onwards. It is obvious, indeed, from his medical assessment of the men's state of health, that the critical stage came here in the early sixties, because those who remained employable for any length of time beyond their pensionable age are likely to have been an unusually well-preserved body of men. He assessed men as in completely good health, where no past illness or injury had affected their condition, where they themselves said that their present health was satisfactory, and where they had been receiving no recent medical attention. Table IX shows what proportions of the men (all, it will be remembered, in employment) were judged to be still thoroughly fit, due allowance being made for their ages.

The remainder of the Glasgow men were classified as being either in poor physical health or 'intermediate'. There were no men in poor health on coal mining beyond the age of 65, and only four in the foundries. Six out of the 97 men aged 60–64 were judged to be in poor health. The men examined, however, were still all in employment, and no account was taken of those who had been absent through long-term sickness. The full amount of serious invalidity in mining was probably much higher than the figures would suggest.

We seem again to have some confirmation for our belief that men

TABLE IX. *Percentages of Glasgow Workers Judged to be in Good Health*

| <i>Ages</i> | <i>55-59</i> | <i>60-64</i> | <i>65-69</i> | <i>70 and over</i> |
|--|--------------|--------------|--------------|--------------------|
| Numbers examined | 132 | 97 | 74 | 24 |
| Approximately per cent. in good health | 60.6 | 48.4 | 64.8 | 83.3 |

who are employed on strenuous work of this kind transfer in increasing numbers to alternative jobs from about the age of 55 and certainly from the age of 60. It happened with labourers, with production workers in the seed-crushing industry, and with miners and foundrymen. The rate of transition seems higher among such men than among busmen and factory maintenance workers. But that appears to be due less to anything in the physical qualities of the men themselves than to the inherent characteristics of their jobs. There is no reason yet to qualify our assumption that by their mid-sixties an *overall* average of near 20 per cent. of manual workers would have made a recent move to 'lighter' work or be in immediate need of one.

I have said that a criticism of Dr. Richardson's study arose from a doubt whether it is always safe to rely on the memories of men interviewed; and the same criticism would apply to other studies. But there have also been some doubts in the matter of definition and terminology.* We may agree that it is probably not sufficient in this context merely to describe jobs as being 'heavy' or 'light', even when they have been so described in the course of job evaluation. If the terms are applied, as often in habitual usage, to the relative weight of the materials and products that have to be handled or conveyed, the effect of the work on an older man depends almost invariably on the control he has over his own pace and rest pauses. Where the industrial concessions made to his age allow him a greater measure of control, his load of work is correspondingly lightened; and he would usually recognize concessions of this kind as a transition to less arduous work.

* Belbin, R. M. 'Older People and Heavy Work', *Brit. J. industr. Med.*, 1955, **12**, 309.

We have become aware that the nature of the jobs on which older men are employed must make a considerable difference to their prospects. But the difference is far more subtle than one that is related to static muscular strength. Dr. Belbin's own comments seem to come close to the heart of the matter. Transfers, he says, tend to occur from operations that require continuous bodily movement and activity, in association with a rapid *tempo* of work, especially when this *tempo* is accentuated by the payment of piece rates or enforced by the requirements of a working team, a series of machines or a conveyor-line. I should prefer to add to these such factors as continuity of alert attention throughout the working day, excessive heat, dust or noise, eye strain, operations demanding agility or on occasion very prompt action, and work involving an element of public or of personal risk. It is under these working conditions that the incidence of transfers with age may become especially marked. An experienced and healthy old man, however, can usually adjust himself to the demands of heavy lifting or excavating, if he is left in control of his methods and timing; the trouble is that modern forms of industry tend to involve elements of rigorous timing, detailed labour organization and continuity of attention to the work in hand. Thus it is a fact that such terms as 'heavy' and 'light' are ceasing to convey an accurate description of the *quality* of the stresses and strains to which older men may nowadays be exposed. The terms are convenient for certain purposes, but the use of them may prevent us from analysing what it really is about a job that tests the capabilities of an ageing man.

Strictly speaking, when I refer to the need for alternative work I simply mean that the work has to be in some way less exacting than a man's *normal* job; but precisely in what way it has to be less exacting, I have not attempted to define. That would usually depend on the man. All I can say is that the need for transfers plainly arises and that the quantitative evidence seems surprisingly consistent.

One further source of information is the Report published in 1954 by the Ministry of Pensions and National Insurance, to which reference has already been made.* In the October of 1953, 12,009 men reached the minimum pensionable age of 65, and, of these, 10,171 were interviewed for the purpose of the enquiry. About 10 per cent.

* *Reasons given for Retiring or Continuing at Work*, Report of an Enquiry by the Ministry of Pensions and National Insurance, London. H.M.S.O., 1954. (Tables 4, A3, A10, A11, A13, and A25.)

of the men had been sick at the time for more than six months; and these were the men who were assumed to be chronic invalids and they were not interviewed. This 10 per cent. of invalidity seems a firm figure. But for the rest we have to rely mainly on what the men themselves said about their various reasons for retiring. The interviews were carried out by the Ministry's own local officers. When an inquiry is undertaken in this manner, we usually have no choice but to accept or reject the findings as a whole, for we have no means of assessing the relative value of the information.

Where the Ministry records the number of days of a man's sickness the information can naturally be taken as correct. But when men are asked about the state of their health or the working conditions to which they have been exposed, the replies they make are our only evidence.

It is clear from the published Tables that, over and above the 10 per cent. of chronic cases, 13.9 per cent. of the men stated on reaching the age of 65 that they proposed then to retire through a sense of ill health or of industrial strain or simply because they wanted a rest. A further 11.2 per cent. stated that they were retiring because they had been compulsorily discharged or 'retired' by their employers. It is impossible to check these figures. Even where the Ministry's records of sickness do not entirely correspond with the statements of those who gave 'ill health' as their reason for retiring, this is not really sufficient evidence that such men were completely fit for employment. Many workers do manage to hang on to their jobs in impaired health until they become entitled to a State pension.

The obvious question is whether some of the 11.2 per cent., who said they had been compulsorily discharged, had really been discharged only because they had become ineffective workers. It is certainly clear from the Tables that a fair number of the 11.2 per cent. had been employed in industries that favour a fixed retiring age, e.g. in transport, chemicals, gas and electricity. But a smaller proportion stated that they had been compulsorily discharged at 65 from industries that do not ordinarily adopt a rigid policy in this respect, e.g. mining, building and agriculture. Though many of the men of this type might not themselves have admitted a decline in their physical powers, some deterioration may have become apparent to their supervisors. We have evidence suggesting that this may well have been the case. For instance, it is common to find that the men who were compulsorily retired had often been exposed to testing conditions of work; a considerable

number of them had been working under conditions that involved excessive heat or cold, fumes, inclement weather, shift work, eye strain, etc. It is true that these conditions may also be characteristic of some of the industries from which men are customarily 'retired' at 65 or thereabouts. But that certainly does not account for the figures as a whole. A considerable proportion of the compulsorily discharged men were recorded as having experienced over the 44 months preceding the date of their interview more than 80 days of incapacity due to illness or injury. Indeed, about a quarter of the miners and of the building workers who said they had been compulsorily discharged must have been incapacitated over that period of time for an average of about one week in every four.

While we cannot be sure how many of the compulsorily 'discharged' men were really cases of ill health or senescence, I would assume conservatively that at least one in five of the 11.2 per cent. must have been showing some evidence of industrial strain or ill health. If we add these to the 13.9 per cent. who admitted to incipient ill health, strain or a need for rest, we reach a gross percentage of about 16.0. They all retired from work. They lie, I must repeat, over and above the 10 per cent. of cases of chronic invalidity. It must, therefore, be supposed that most of them could have remained at work, if they had been found suitable jobs and had been willing to accept them.

In other words, they presumably represent the authentic types of ageing men who were in need of an alternative job; and, if this interpretation is justified, the proportion comes remarkably close to those derived from other sources. It must be remembered, however, that some men, who had already found themselves alternative work, did not immediately retire. As a matter of fact, about 6.0 per cent. of the 10,171 men, who were interviewed at the age of 65, stated that they had changed their jobs within the five preceding years by reason of ill health or because they needed lighter work. The proportion was higher among those who decided to remain at work than among those who elected to retire. We have to agree that a fair proportion of the 10,171 had either found themselves alternative work or were at the age of 65 in immediate need of a change. To argue from the Tables that the overall percentage is probably in the neighbourhood of 20.0 would be mere conjecture.

There seems to be common agreement that we are faced with

many older men who exist for a while suspended, as it were, between chronic ill health and full working capacity. They constitute the true industrial problem of senescence. If they are to remain in paid employment, they have to be provided with jobs that are appropriate to their age. Though for convenience I have limited the argument mainly to the age of 65, it is obvious that their numbers must increase progressively with the passage of the years. Indeed, many of them retire before they have any conclusive need to do so, because they have been unable or unwilling to find appropriate jobs.

As a working hypothesis we may perhaps assume that men of this kind represent near 20 per cent. of all men of the age of 65, at all events under contemporary industrial conditions. But the proportion must never be taken as more than a broad indication of the rate of onset of senescence. By the age of 68 their numbers might well have doubled. It has become clear, moreover, that the proportions vary with the characteristics of a man's customary work. To absorb all this 'marginal' labour into the industrial life of the country would not be a trivial undertaking. Their numbers are much higher than the numbers of men who become chronic invalids by the same ages; and we should not be far astray if we assess the authentic *industrial* problem of ageing men as at least double that presented to our society by ill health in its more incapacitating forms. For this reason I have been led to call it the crucial question in human senescence.

IV

How far does his Job Determine the Employment Prospects of an Older Man ?

A WORKER'S primary interest is with his *normal* job, the job with which his pay packet, his industrial status and often his social prestige have become identified. As he ages he may be prepared to move at last to an alternative occupation. But the first critical test his failing powers have to meet is the job on which he has spent most of his working life. *To what extent does an ageing man's job make a difference in his employment prospects?* This question has to be asked, because I suspect it to be a serious error to assume comfortably that all older men have about the same chance of holding down their normal jobs.

Not that men age more rapidly in the organic sense on some jobs than on others. It is possible, of course, that labourers of a casual or nomadic type would more commonly have the appearance of being 'worn out' with age than would settled and experienced craftsmen. In some occupations, too, there are greater risks of bronchial or lung diseases. Factors such as these certainly have some influence in deciding the rates at which men are compelled to quit their normal jobs. But we have no conclusive evidence that the relative health and physique that men had enjoyed in their younger years make much of a difference to their prospects in old age. What is more probably decisive is the varied amount of stress and strain to which they are daily exposed. The amount of stress and strain may not have changed perceptibly; the men themselves are organically changing year by year. They are literally not the 'same men' as they were in middle life.

We need, then, to compare a fairly large number of jobs with one another, and discover how late in life we can honestly expect ageing men to remain on them. It is, of course, entirely a statistical matter. There are not many jobs on which a few vigorous elderly men would not be found still holding their own. The real question is *how many* of them remain on their jobs and *how many* have been physically compelled to leave them. Sooner or later they will all have left by reason of age, ill health or death. I am concerned here solely with the comparative rates of their departure.

The only comprehensive information we have on the subject is that contained in the Tables of Age and Occupation published by the Registrar General. They analyse the figures for several hundred typical occupations. It is true that each Census Report shows us only what the situation had been at a single moment of time, the moment at which the members of the population completed their Census forms. We have moreover to rely on the citizen's own word. But the possible sources of error can usually be suspected. Though each Census Report records only a single moment of time, we yet have (as was pointed out on p. 20) a series of successive Census Reports, and these give us some chance of discovering whether the employment experience of older men had apparently remained constant over the last 20 or 30 years. The figures have to be handled very critically but they do reveal a certain consistency in these occupational proportions.

Care has to be taken to ensure that the classifying and coding methods used by the Registrar General had been the same for the occupations selected in all the Census Years we examine. Nevertheless, deductions can be cautiously drawn from a scrutiny of the figures, provided we have good factual information to support them.

I am now considering what would be the simplest and most economical way of comparing for this purpose one job with another.* I have accordingly selected a number of manual occupations in which the conditions of work seem clearly definable. The numbers of employed men aged 60 to 64 at the time of each Census were noted. We have already seen that the proportions of men in chronic ill health at these ages were probably about the same for most of the manual occupations;† and it is recognized, moreover, that in the occupations I have selected relatively few men are compulsorily retired at the age of 65. This is an important proviso, because if large numbers of men are compulsorily retired from an occupation at 65, we have no means of judging their working capacity beyond that age.

After noting the numbers of employed men aged 60–64, I noted the numbers of men recorded as still at work at the same time in the ages 70–74. I deliberately ignored the intermediate five-years' span. I did so, because we know that considerable numbers of men, even if they have not been arbitrarily discharged, retire at these ages through

* See further Clark, F. Le Gros, and Dunne, Agnes C. *Ageing in Industry*, The Nuffield Foundation, 1955.

† Table IV.

custom or inclination. We know, too, that at these ages there seems a fairly rapid increase in the incidence of sickness and chronic ill health. The men who are still employed after they have passed into their seventies tend on the other hand to have tougher constitutions and good health records. They are, in fact, the last industrial survivors of a much larger ageing generation.

I proceeded on this basis to compare one job with another. If the numbers surviving on a job were relatively small, it suggested strongly that the pace or load or intensity of the work made it unsuitable for ageing men. If the numbers were relatively large, there were probably factors in the job that gave ageing men some measure of advantage.

The numbers of men are derived from the Census Reports for 1931 and 1951.* As was the case with Table IV above, the Census Report for 1921 had not broken down the age figures minutely enough.

In Table X are shown the numbers of employed men 70-74 expressed as ratios of the numbers of men employed at the same moment of time in the ages 60-64, the latter being in every case taken as 100. For instance, in 1951 there were 20,521 farm workers recorded as at work within the ages 60-64, and 6,347 within the ages 70-74; that gives a ratio for the farm workers in 1951 of 30.9.

Of course, even over a historical period of 10 or 15 years there might have been curious fluctuations in the levels of employment that would soon begin to affect the relative size of successive age-groups. If we had more of the Census Years on which to rely, we should no doubt be on surer ground. But even as it is, many of the occupations listed show a remarkable degree of consistency. In most cases we have some factual information that helps us to interpret the figures.

The 30 occupations are listed in order of the ratios they yield from the 1951 Census, our last available source of statistical information of this nature.

Occupational figures of this kind have always to be treated as a 'spectrum' in which only the deeper colours would be expected to stand out in clear relief. Many of them fade confusedly into one another. But taken as a whole the Table is very suggestive.

It must be remembered that a decline in the numbers employed would not invariably mean that all the departed men had died or

* 1931 *Census of England and Wales*, Occupation Tables, Table 2. 1951 *Census of England and Wales*, Occupation Tables, Table 2.

TABLE X. *Numbers of Employed Men 70-74 Expressed as Ratios of the Numbers of Employed Men 60-64 in the Same Years*

| <i>Occupation</i> | <i>1931</i> | <i>1951</i> |
|---|-------------|-------------|
| Coal-getters by hand | 11.0 | 6.7 |
| Coal-repairing and maintaining roads | 10.0 | 8.7 |
| Coal-surface workers | 16.3 | 9.9 |
| Shipwrights | 9.9 | 10.9 |
| Building labourers | 22.8 | 12.1 |
| Foundrymen (moulders) | 15.3 | 12.8 |
| Spinners | 14.1 | 13.2 |
| Fishermen | 25.5 | 13.3 |
| Quarrymen | 17.3 | 13.8 |
| Painters | 20.9 | 16.0 |
| Bargemen | 21.9 | 16.4 |
| Dockers | 14.0 | 17.6 |
| Carders | 18.9 | 18.1 |
| Warehousemen | 16.6 | 18.6 |
| Plumbers | 19.8 | 20.9 |
| Smiths | 20.6 | 21.3 |
| Bakers | 18.9 | 22.0 |
| Carpenters | 34.8 | 23.2 |
| Foresters | 35.8 | 23.9 |
| Plasterers | 35.2 | 26.1 |
| Weavers | 19.3 | 27.2 |
| Cabinet makers | 36.6 | 28.1 |
| Farm workers | 37.2 | 30.9 |
| Barbers | 17.5 | 32.2 |
| Bricklayers | 33.8 | 32.3 |
| Boot makers and repairers (not factory) | 40.3 | 36.2 |
| Watch makers and repairers | 48.5 | 36.6 |
| Goldsmiths | 40.6 | 41.9 |
| Watchmen | 39.0 | 50.5 |
| Saddle makers | 37.8 | 71.8 |

retired; some of them might have moved to other jobs. What I am trying to emphasize is that *from these particular jobs* many of the men

would have departed simply because they could no longer hold their own; and what is significant is the contrast in this respect between one type of job and another.

We begin in the lowest of the ratios with a cluster of jobs that are admitted to be strenuous and to involve certain natural or industrial hazards. Many of them are carried out by teams or gangs of men and at a fairly intense pace; the teams must be able to rely on a common level of aptitude and preparedness for prompt action. These merge gradually into jobs that, though themselves exposed to the chances of weather and to some working hazards, seem yet to offer slightly better opportunities for adjusting the work-load to a man's age. We then reach a broad band of skilled, partly skilled and agricultural occupations; in many of them experienced older men would have considerable latitude for 'easing up'. But such freedom as they have is not unlimited, and it varies markedly from occupation to occupation. Finally, we have a series of jobs, that are either (like that of a watchman) traditionally reserved for elderly men, or highly skilled crafts where what probably count most are a man's garnered experience, the lack of younger men to carry on the trade, and the fact that the work can usually be done at a man's own pace.

To give further substance and meaning to these detached figures I shall comment briefly on a few of them. It is always necessary to interpret industrial statistics, especially where they might appear otherwise to be anomalous or even contradictory. My purpose is partly to carry out my intention of dealing not with ageing men in the abstract but with ageing miners, farm workers, carpenters and the rest. Only in that way will the true situation reveal itself.

1. *Miners*. It will be noticed that the ratios of the surface workers are considerably higher than those of the men at the coal face. This is usually taken to reflect a natural tendency among the older coal face workers to move to surface jobs. The tendency had probably been increasing over the intervening years. The proportion of men needed at the coal face has been falling in relation to all coal miners employed; and the age difference is here significant. In 1931 there had been 33 men aged 55 and onwards working above ground for every 100 men of the same ages working at the coal face; in 1951 the proportion of surface workers of 55 and onwards had risen to 95. In the Table only the getters by hand are shown. The getters by machinery are increasing in numbers and were still in 1951 a comparatively young body of men. The decline in the ratio of the hand-got miners is likely

merely to have reflected the fact that their age structure was changing perceptibly as the oldest of them died or retired.

2. *Building Labourers.* The numbers of men so employed in the building and civil engineering industries had increased considerably in the interval of time, and especially since the 1939-45 war. This increase had affected all ages. But while there had been an increase of more than 60 per cent. in the ages 55-64, the increase in the ages 65-74 had been one of only 22 per cent. The ratio was naturally much lower in 1951. The occupation is subject to wide fluctuations in demand. But we seem always to find in it a body of hardy old survivors, many of them employed no doubt on relatively light labouring jobs. Unless there are surprising changes in the age structure, however, the 1931 ratio is probably about as high as we should ever encounter. As long as factory labourers remain in short supply in many areas, an ageing building labourer would often tend to gravitate to the more settled conditions of factory work as a cleaner, light porter, trucker, etc.

3. *Fishermen.* The obvious decline that had taken place in the proportion of elderly men in the industry is explicable from the fortunes of the industry itself. The total numbers of men employed had declined in the interval of years from 26,935 to 15,248. Probably three to four thousand of the men in 1931 were among the occasionally employed crews on the inshore fisheries, and these have now for the most part vanished. By 1956 their numbers had fallen to about 20 per cent. of their 1931 level. This may be associated with a decline of more than 20 per cent. in the number of small fishing vessels, and in the period the number of small sailing vessels used in fishing (partly replaced by small motor vessels) had diminished by 85 per cent. In 1931 a considerable proportion of the older men probably remained on part-time fishing of this kind, recording themselves as 'fishermen' for the purpose of the Census but employed seasonally in other forms of work. The decline in total numbers had affected all ages; but, while the numbers aged 55-64 had declined by a half, the numbers aged 65-74 had declined by more than two thirds. Unless costs permit inshore fishing to revive, the age structure of the industry is likely to remain much as it was in 1951.

4. *Painters.* As compared with other tradesmen in the building industry, painters seem on the face of it to have low ratios of survival. It is probably a true finding. Experience suggests that somewhat larger numbers of painters tend in later life to seek alternative work

than is the habit among *bricklayers* or *plasterers*. House painters are expected to work on ladders and cradles when need arises; and, though elderly men would not ordinarily be put to work at heights, they cannot in other respects do much to lighten the load of their operations. For instance, a bricklayer on maintenance work usually has a far less exacting job to carry out than he would on constructional work, whereas for a painter there is little difference in the work load; if anything, redecoration jobs on old property may prove more arduous than painting and papering on a new building site.

5. *Carpenters*. The decline in the ratio is not necessarily very significant. There seems to have been a gradual 'run down' in numbers among carpenters beyond the age of 65, associated with a somewhat higher wave of men moving through their early sixties. But a point of additional interest is the fact that carpenters occasionally move in later life to such jobs as that of a clerk of works. The increase in building activities naturally led to a corresponding increase in the demand for clerks of works. There were, for example, more than 1,400 men aged 60 and over so described in 1951, as compared with about 750 in 1931. It is probable that a number of elderly carpenters had vanished from their normal occupation in this and similar directions, and that would help to account for any apparent decline in the ratio. In occupations of this kind the ratios seem usually to oscillate around the 25 to 30 level.

6. *Foresters*. Though many of these men are now employed by the Forestry Commission, the numbers employed as woodmen in privately owned woodlands still account for a large proportion of them. These latter may readily move to farm work and back again. In fact, like *farm workers*, they probably tend nowadays to retire technically in greater numbers than formerly at or about the age of 65, and then to engage in part-time or seasonal work. In other words, the proportions recorded as being still at work at later ages may be deceptively low. There had been more than a 70 per cent. increase in the total number of foresters and woodmen since 1931, and this had affected even the ages 55-64 where the numbers had increased by more than 25 per cent. On the other hand there had been a slight decline among men aged 65-74, one of about 13 per cent. It will later become clear whether the comparatively large numbers of men now moving through the ages 55 to 64 reflect an ageing trend in the occupation.

7. *Weavers*. A decline of at least 60 per cent. had taken place in the total number of male weavers, and this decline had been to some

extent reflected at all ages. There was some slight evidence, too, of an ageing trend in the older age groups. The decline in the ages 55-64 had been a little higher than that in the ages 65-74.

8. *Barbers*. The number of male barbers had declined over the intervening years by about 26 per cent.; and this decline appears to have continued since 1951. There has been more than a corresponding increase in the number of women hairdressers. Though a small proportion of the decline among men may have been due to changes in the Census coding, there can be little doubt that the profession has failed to attract younger men. In 1951 about 38 per cent. of all barbers were aged 45 and over, as compared with only 28 per cent. in 1931. Men have been growing old in the profession. The age group 65-74 was as much as 33 per cent. larger in 1951 than it had been 20 years earlier. By contrast, the number of barbers within the age span 55-64 had scarcely changed at all. If the trend continues the number of elderly barbers among us is likely to be substantial.

9. *Boot Makers and Repairers*. These men it must be noted, are not working in factories, but for the most part in the bespoke and repairing sides of the trade. According to estimates made in a previous study,* the proportions of elderly men would have been considerably lower on the manufacturing side. But on the repairing side too methods have been changing. An increasing amount of repairing, at all events in the towns, is now concentrated in small factories and workshops, where much of it is carried out with appropriate small power machines. This trend may come in time to affect the prospects of older men, since the skills acquired differ in many respects from the skill of the traditional cobbler.

10. *Watchmen*. For a variety of reasons the numbers of men recorded as watchmen increased between 1931 and 1951 by more than 40 per cent. The increase has almost all taken place in the older age groups. The numbers so employed aged 65 and over had doubled in the interval, whereas between the ages of 55 and 64 the numbers had increased by little over 60 per cent. This sufficiently accounts for the upward movement of the ratio. But the proportion of elderly men in the occupation is always comparatively high.

11. *Saddle Makers*. This, of course, is almost a dying occupation. Little more than a third of the numbers so employed in 1931 were on the job in 1951, and almost half of the men still employed in 1951 were already aged 55 and over. Indeed, there were about as many

* *Ageing in Industry*, The Nuffield Foundation, 1955 (p. 82).

saddle makers over the age of 65 as there were between the ages 55 and 64. That seems an extreme example of what can happen in a skilled craft where experience is at a premium and where the mere pace of work has probably ceased to be a factor of any importance.

I shall not pursue the analysis further, because this work does not set out to be a survey of the whole industrial scene. Enough has been said to show that the occupational figures have substance behind them. There may have been a tendency in recent years for men to retire from some of the occupations at a rather earlier age than was formerly their habit. But it would be difficult to establish this; the apparent trend in some jobs is balanced by a counter-trend in others, at all events as far as these selected occupations are concerned. The differences between the two census ratios seem more likely to have been due to the oscillations that arise from normal changes in an age structure. Besides, the jobs had in many cases themselves been changing over the 20 intervening years. Industrial processes have often speeded up, and this may well account for the departure of an increasing number of 'marginal' elderly men.

If the fact needed any demonstration, these figures surely demonstrate that the jobs men do play a dominant, or even the decisive, role in determining the rates at which they have physically to leave them for good. These men were all growing old, of course; but they were growing old under very different working conditions. After this it should be less possible for economists and administrators to rely on generalizations about the working capacities of older men. By their sixties, such men would have become completely identified in mind and body with the jobs they had held down for most of their working lives. A boy of 18 may be plastic enough to become reasonably proficient at almost any of the 30 jobs listed; by the time he is 60 he and his job are no longer separable in thought. His prospects as an employed man depend thenceforth largely upon the nature of his daily work.

Moreover, not all ageing men can find alternative work. Their choice is limited both geographically and by their own versatility and habits of mind. Some areas, for instance, have little alternative work to offer; and some ageing men adjust themselves less easily than others to changed conditions of work. It becomes clear, in fact, that we have to see the problem less as a simple matter of delaying the average age of retirement than as a very complex pattern of contrasted jobs and opportunities.

V

At what Rates do Men Really Retire from Work and for what Causes ?

SINCE there is a marked decline in the numbers of employed men between the ages of 65 and 74, it is obvious that many men would have retired in the intervening years. But at what *rates* do they leave their work, and are their jobs making any significant difference in these rates? I am inclined to believe that there is much confusion of thought on the subject. There is no doubt that certain numbers of men retire by preference in their mid-sixties before they have any physical need to do so. But it seems to me that their numbers are not necessarily very large. Such figures as are available will have to be carefully analysed before we can be sure what causes lead to retirement.

We have to rely on a variety of sources of statistical information, and it is not always easy to relate these sources to one another. We can only draw what inferences we may from them and hope that the convergent evidence will give us some insight into the problem.

The Ministry of Pensions and National Insurance has analysed the ages at which the men who had become entitled to a State pension actually applied for it.* The ages analysed are, of course, those from 65 to 70. For at 70, men become entitled to draw their pension whether they continue to work or not. We have thus no indication from this source how many men would have virtually 'retired' through ill health or some other cause before the age of 65, or at what rate the elderly survivors among them were leaving work in their seventies.

The Ministry's published figures are shown quarter by quarter. In each quarter all men applying for their pensions are analysed according to their ages at the time of application. Over the years 1952 to 1954 the age percentages remained very constant. Of every hundred men applying for pension in each quarter somewhere about

* Report of the Ministry of Pensions and National Insurance for the Year 1954, H.M.S.O. (Table 8.)

38 were aged 65 (the minimum pensionable age for men), while about 21 were just reaching the age of 70. The remainder of the retiring men were spread fairly evenly over the intervening ages.

Since the proportions were remarkably consistent, we have reason for assuming that we are gaining some insight into the regular movements of such elderly men over the years 1951-3. Apparently considerable numbers of them always delayed their retirement for varying periods of time. But once we have said that, we have to become cautious with the figures; for, after all, we are not tracing precisely the same men through their last years of employment. We are only assuming from the consistency of the age proportions that this is how they commonly chose to behave. The question is how to interpret the figures. Mortality, for example, would have been making some difference in the total numbers affected from one year of life to the next. Moreover, the numbers retiring at each successive year of life were retiring from a rapidly diminishing labour force of their coevals.

Table XI shows broadly the age distribution of all the men who applied for pension over the years 1951-3. There was, of course, some variation around these proportions from quarter to quarter.

TABLE XI. *Age Distribution of the Awards of State Pensions to Men in 1951-3*

| <i>Ages</i> | 65 | 65-65½ | 65½-66½ | 66½-67½ | 67½-68½ | 68½-69½ | 69½-70 | <i>Total</i> |
|---------------------------------------|----|--------|---------|---------|---------|---------|--------|--------------|
| Per cent. of t o t a l awards . | 38 | 11 | 10 | 8 | 6 | 6 | 21 | 100 |

We have followed the age distribution that was adopted by the Ministry, for we have no way of adjusting it. As I say, at each successive age the numbers of employed men from whom the retirements were taking place would have been declining steadily, partly through mortality and partly through the obvious decline in the numbers that were still working. It is thus plain that, after the first heavy rush of retirements was over, the rate of decline in the numbers employed was probably fairly smooth. As a matter of fact, it may well have been even smoother than appears from the figures, because 6 men aged 68 could represent a higher proportion of the employed male population of that age than 10 men at the age of 66. We have, indeed, a suspicion

that at the age of about 69 there was a slight increase in the proportionate move into retirement; and a certain number of the men who took their pensions at 70 must then or soon after have left work for good. Only a body of well-preserved elderly men would have worked on for a time into their seventies or beyond. In 1951 the employed men aged 70-74 were about 44 per cent. even of those aged 65-69, and the employed men of 75 and over were about 20 per cent. That gives us a clear indication of the final rate of decline in their numbers.

So far we have only examined general figures of retirement. But do industries vary much in this respect? For, if they do, we may fairly take it for granted that the variations reflect concrete differences in the conditions of work or terms of employment. It has become clear that taken as a whole the industrial losses due to retirement are by no means abrupt and immediate. If anything, two-thirds of the losses are very gradual. Even the comparatively large numbers of men who apply for pension at the age of 65 are not all cases of a sudden and arbitrary decision to retire. We have evidence that about one in four of them had probably become more or less a chronic invalid by that age.* Many of these chronic invalids would presumably have applied for their pensions at an earlier age, had State pensions been then available. In other words, departures from the labour force spread over a far wider range of years than that indicated in Table XI. The large numbers at 65 are partly illusory, except so far as they are measured by the mere fact that State pensions become then payable for the first time.

For the moment, however, I am asking whether there are any marked differences in this respect among the industries of the country. The Ministry's Report on 'Reasons Given for Retiring or Continuing at Work' provides Tables that follow much the same pattern as that summarized in Table XI above.† The age structure adopted was not absolutely the same in the two cases; this, of course, is rather unfortunate, but broad comparisons are possible. It must incidentally be noted that Table XII below deals with industrial and not with occupational categories; that is to say, the figures would all presumably include small proportions of clerical, technical and ancillary employees, but the large majority of the men represented would be manual workers. The figures analysed were those for the four weeks ending

* *Reasons given for Retiring or Continuing at Work.* (Table I.)

† *Ibid.* (Tables A4 and A5.)

on October 11th, 1953. Once again they show the age distribution of all men who within that period applied for the pension to which they had become entitled.

These are the only industrial statistics of the kind that we possess. They obviously all fall into the same broad pattern as that revealed in Table XI; and if Table XI reflects a consistent pattern of overall retirements in 1951-3 it may safely be argued that Table XII reflects an equally consistent pattern of industrial contrasts over the same period of time. At all events, I shall make this assumption. The problem is once again how to interpret the figures.

TABLE XII. *Age Distributions of the Awards of State Pensions to Men in Various Industries, October 1953*

| Industry | Ages | | | | | At age 70 (still working) |
|--|--------|---------|---------|---------|--------|---------------------------------|
| | 65-65½ | 65½-66½ | 66½-67½ | 67½-68½ | 68½-70 | |
| Agriculture . . . | 38.4 | 8.9 | 9.9 | 7.6 | 10.6 | 24.6 |
| Mining . . . | 26.0 | 14.7 | 13.6 | 13.4 | 14.3 | 18.0 |
| Chemical and allied trades . . . | 52.0 | 7.7 | 7.2 | 7.2 | 7.7 | 18.2 |
| Metal manufacture . | 23.1 | 11.3 | 8.9 | 11.6 | 9.2 | 35.9 |
| Heavy engineering and ship building . . | 33.9 | 8.2 | 8.2 | 4.2 | 10.5 | 35.0 |
| Textiles . . . | 28.0 | 10.4 | 8.5 | 8.1 | 10.6 | 34.4 |
| Building . . . | 31.4 | 8.7 | 7.1 | 8.1 | 15.1 | 29.6 |
| Gas, electricity and water | 60.0 | 12.5 | 7.1 | 6.2 | 6.3 | 7.9 |
| Retail distribution . | 36.9 | 9.5 | 10.1 | 6.6 | 8.7 | 28.2 |
| Catering . . . | 37.7 | 12.7 | 9.0 | 4.7 | 8.1 | 27.8 |

Figures of this kind must never be taken as more than a broad indication of the course of events, but within limits they can be very revealing. For example, in chemicals and in gas, water, etc., the losses at 65 are unusually high; but they are obviously related to the fixed retiring ages that have been commonly adopted in such industries. Many of the men who retired at that age were presumably unable or unwilling to find themselves alternative occupations, and those who did manage to make the transition would still be reckoned as employed men. On the other hand, agriculture, retail distribution and catering show a fairly close resemblance to one another in all the age percentages. If they start with a somewhat higher level of retire-

ments than we might have expected (as compared with textiles and metal manufacture), we must remember that it is probably easier for elderly men in these three industries to find casual or part-time employment; many of them incline to take their pensions as soon as they have the chance, and to supplement them from casual or seasonal work. Moreover, the retail and catering trades seem to attract a certain number of the less robust men, and it must be recognized that much of the work demands a measure of physical endurance.

Miners are not normally subject to any retiring age; but the rapid decline among them in their late sixties is very evident. The proportion recorded as remaining at work into their seventies is even lower than it is with chemical workers, many of whom we can assume to have been compulsorily retired. The contrast between mining and textiles is unmistakable. Though the proportions of retirements at 65 are about the same, they diverge steadily thereafter. The proportion of textile workers surviving at work into their seventies is almost twice as high as is that of the miners, and very close to that in metal manufacture and heavy engineering. These last two industries embrace a number of jobs that would be reckoned heavy or exacting, but they also cover a large number of small factories, and they include work on, for example, ship repairing, where the older men seem often to have some advantage.

A noticeable feature of Table XII is the apparent upturn in the proportion of retirements among the men who were approaching their seventieth birthday. This upturn occurs in agriculture, heavy engineering, textiles, building and catering. It is less obvious in mining and metal manufacture, though it must be remembered that men who retire at 69 are retiring from a labour force much diminished by mortality and earlier departures. The rate of decline in numbers probably accelerates about that age, and in some industries quite rapidly. Why the proportion of retirements rises in this way it would be difficult to say. But we had some confirmation of it from the Tables that were published by Professor McKeown to illustrate medical assessments of the working capacity of Birmingham men. McKeown shows that at these late ages there came a startling increase in the number of men who were medically judged to be completely unfit for employment.* The figures may reflect a true physical deterioration that is for some reason characteristic of the late sixties. It is possible,

* See Table V on p. 25.

however, that many men on attaining that age grow more conscious of the symptoms of senescence and are more prepared to admit them. They find themselves close to the critical age of 70 and contemplate a final retirement. It is reasonable to suppose that all these factors may be playing a part.

We may gain a little further light on the problem by adopting a fresh approach. This time, however, we shall be examining occupational and not industrial statistics; and for that reason (and because the two methods of analysis are completely distinct) the figures in Table XIII on next page cannot be compared directly with those in Tables XI and XII. I wished only to observe whether the broad patterns are not dissimilar.

In preparing his One Per Cent. Sample of the 1951 Census, the Registrar General had a record made of the numbers of men employed in certain occupations, and the numbers retired from the same occupations, *at single years of life* from the ages of 60 to 69. A few of these figures were published in a table in the subsequent Sample Report;* but more detailed occupational figures were provided by the kindness of the General Register Office, and it is upon these figures that I am here relying. There are many possible sources of error inherent in them. In a One Per Cent. Sample relatively small figures could produce large distortions; and again, since we are observing all the men concerned for only a single moment of time, there are bound to have been curious fluctuations in their numbers over a term of ten years.

This was the only occasion on which the Registrar General had arranged for the numbers of occupied and retired men to be thus analysed by single years. The Table was not repeated in the Final Report of the 1951 Census, nor is the experiment ever likely to be tried in future Census Reports. The One Per Cent. Sample is therefore the only evidence of the kind that is available. Table XIII provides us at best with a very broad picture of events. But there is nothing unreasonable or indeed unexpected about it. It is quite possible, for instance, that any one moment of time there are larger proportions of foundrymen or building workers still working at the age of 68 than there are at the age of 67; these are mere chance fluctuations, complicated by the crude nature of the figures themselves. Table XIII shows what percentages of men were still in paid employment

* *Census of Great Britain 1951. One Per Cent. Sample Tables. (Table II.4.)*

at three successive years of life, out of the total numbers of men who were still in or had retired from the occupations listed.

TABLE XIII. *Percentages of All Men (Employed and Retired) Recorded as Still in Employment at Ages 67-69 in 1951*

| Occupations | <i>Per cent. still working at ages:</i> | | |
|------------------------|---|------|------|
| | 67 | 68 | 69 |
| Farm workers . . . | 55·2 | 47·8 | 41·5 |
| Coal miners . . . | 44·8 | 35·0 | 26·9 |
| Foundrymen . . . | 52·9 | 57·1 | 25·0 |
| Textile workers . . . | 46·8 | 40·7 | 45·1 |
| Building workers . . . | 45·6 | 47·5 | 34·2 |
| Dockers . . . | 38·8 | 53·8 | 18·1 |
| Warehousemen . . . | 60·0 | 50·0 | 55·8 |
| Labourers (Eng.) . . . | 68·4 | 65·4 | 57·4 |

There seems some probability, then, that in several of the occupations the age of 69 was really making a significant difference in retirement. The decline in the proportions at work is marked among foundrymen, building workers and dockers; it is perhaps less abrupt with farm workers, miners and engineering labourers. Among textile workers and warehousemen there is little evidence of any change with age.

As a matter of fact, in all cases there had been an unmistakable overall decline in the numbers employed since the age of 65, for at that age almost invariably 60 to 70 per cent. of surviving men were recorded as being still at work; the remainder had passed into retirement. These are the proportions we have already been led to expect from the retirement statistics published by the Ministry of Pensions and National Insurance.

But the decline in the numbers employed does seem to vary in its gradient from occupation to occupation over the five years of life 65-69. In some occupations (e.g. textiles and warehousing) men beyond the age of 65-66 behave as though for a while age had made

little difference to them. The probable reason is that in these industries employers are often prepared to grant concessions in order to retain a reliable old operative, whereas in foundries and on the docks such concessions are less common nowadays than they would formerly have been.

We may try the effect of a small statistical exercise in the problem. Leaving out of account the question as to how many ageing men retire or die, have we any method of finding out how many are still apparently on their *normal* jobs from one year of life to the next? To state it precisely, for every 100 working plumbers aged 58 how many could we expect to find on that job at 63, how many at 68, and how many at 74? That there would be a few plumbers still at work even at the latest of these ages, we may be tolerably sure from experience. But proportionately how many? If we have figures for a number of occupations, in which fixed retiring ages have had little influence, we may be able to make some interesting comparisons in the 'run off'.

The comparisons could only be of a crude character. At any moment, for example, there might be rather more working plumbers at the age of 62 than there are at the age of 58. The number frequently depend upon fluctuations of intake into the trade that had occurred many years earlier. But the broad trends of the employment figures remain clear enough, and they become especially marked as age advances.

I have to rely once again on Tables derived from the One Per Cent. Sample of the 1951 Census, and, because the figures are comparatively small, I have adopted the method of calculating the averages for successive groups of years. I start with an average year in the age span 55-9; at these ages most workers would still be in a reasonably good physical condition. A few of the men would probably be drifting to alternative jobs, but their numbers do not seem large. I then proceed to calculate the proportionate number for average years over the later age spans, ending with an average year in the ages 70-74.

Table XIV lists fourteen occupational groups, and shows the comparative numbers of men recorded in 1951 as still at work in their later lives. Each number is shown as a ratio of the number at work in an average year of life between the ages 55 and 59 (this last being stated in each case as 100). The Table must not, of course, be compared in any direct way with Table XIII, where the figures were treated quite differently.

TABLE XIV. *Numbers of Men so Employed in an Average Year of Life within the Successive Ages Indicated, as Compared with Numbers Employed in an Average Year of Life within the Ages 55-9 (1951)*

| Occupation | Years of age | | | | | |
|----------------------------------|--------------|----------|----------|----------|----------|----------|
| | Av. 55-9 | Av. 60-2 | Av. 62-4 | Av. 65-7 | Av. 68-9 | Av. 70-4 |
| Coal miners . . . | 100 | 82 | 79 | 48 | 26 | 6 |
| Foundrymen . . . | 100 | 83 | 84 | 46 | 40 | 10 |
| Dockers . . . | 100 | 69 | 57 | 44 | 24 | 12 |
| Painters . . . | 100 | 61 | 70 | 42 | 26 | 11 |
| Building workers . . . | 100 | 80 | 81 | 46 | 25 | 14 |
| Smiths . . . | 100 | 102 | 89 | 49 | 49 | 15 |
| Plumbers . . . | 100 | 110 | 97 | 41 | 36 | 10 |
| Textile workers . . . | 100 | 96 | 97 | 44 | 34 | 13 |
| Printing workers . . . | 100 | 89 | 87 | 51 | 29 | 16 |
| Warehousemen . . . | 100 | 91 | 78 | 42 | 25 | 11 |
| Labourers (in engineering) . . . | 100 | 92 | 87 | 51 | 35 | 14 |
| Farm workers . . . | 100 | 122 | 120 | 64 | 54 | 31 |
| Gardeners . . . | 100 | 109 | 115 | 70 | 64 | 42 |
| Watchmen . . . | 100 | 118 | 162 | 103 | 115 | 55 |

These are curious figures, and it is certain that for many other occupations the comparative numbers, spread as they are over a period of 20 years, would present a still more puzzling picture. Nevertheless, some of the contours do stand out in bold relief. There is the obvious contrast, for instance, between coal miners and farm workers; and jobs such as those of watchmen and gardeners, that are known to attract older men, have naturally an age structure that is peculiar to themselves. We have the characteristic decline over the mid-sixties that follows a very similar course in most of the occupations. But in the late sixties there are considerable differences; such men as plumbers and smiths seem to stand out as having perhaps been less affected by age than some other workers. They are, it must be remembered, tradesmen who often have a good chance of modifying the efforts they have to undertake. But the transition into their seventies clearly begins to make its influence felt with men of this type, as it does to a slightly less marked extent with textile workers and labourers in engineering.

Examining the jobs in detail, we may note that dockers have an unusual age structure. In the 20 years 1931-51 there had been a

heavy decline in their numbers through the ages 55 to 64, and this was partly due, no doubt, to the fluctuations in employment in that period. Though the work of house painters is reckoned comparatively light, their duties usually involve climbing; and for that reason, as we have already noted, they seem more inclined to move to other jobs with age than do such men as plumbers and bricklayers. The building workers are a heterogeneous group. They include not only tradesmen, but large numbers of navvies and other labourers, and this accounts for the rapid decline among them in their late sixties. Labourers of this kind often gravitate to factory jobs, where a certain amount of cleaning and light labouring work is available; and a comparison between them and the engineering labourers probably shows this trend. The gardeners almost certainly include a large infusion of old jobbing gardeners, who have gravitated to the work from railways or from building and farm labouring.

Of course the decline in numbers shown in Table XIV was not always due to the retirement of men. Some men may have moved to alternative jobs; or, for the matter of that, they may have died. But the Table gives a crude indication of the contrasting rates at which they are compelled to leave their *normal* occupations. Though necessarily less precise than Table XII above, it yet provides a more elegant picture of events, because it shows comparatively the actual average numbers of men who were still at their customary work in 1951. It is plain, too, from Table XIV that the men's prospects must have depended in some measure upon the degree to which individuals among them had some chance of continuing their work at a more restrained pace or under less arduous conditions.

No doubt the only sure way of discovering at what rate ageing men leave their *normal* occupations (not necessarily for final retirement) would be that of following a group of employed men from year to year until the last survivor among them had departed for good. This would take several years. But if industrial records are sufficiently detailed and reliable, they offer an alternative approach. In large industrial undertakings records are usually filed away for a time after a man's departure.

In two reports published by the Nuffield Foundation the method was adopted for tracing rates of 'wastage' among the older employees.*

* *The Later Working Life in the Building Industry*, The Nuffield Foundation, 1954. *Bus Workers in their Later Lives*, The Nuffield Foundation, 1957.

Samples were taken without bias from among the records of the men. At the age of 60 they had all been in full normal employment, and they all subsequently left their jobs at successive ages. Tables could thus be constructed, showing what percentages of the original men were still on their jobs at each successive year of life, until the last survivors among them reached the age of 70. All the physical causes for their departure were aggregated, i.e. ill health, age and death; a few instances of removal due to disciplinary action or to a man's own choice were neglected. It was assumed that, if they had remained on the job, they would have been compelled to leave it at about the same rate as their colleagues.

The Tables for three contrasted occupations have been extracted from the Nuffield reports. No fixed retiring age was applied at the time covered by the enquiry. The building workers had all been employed on building maintenance by the London County Council, and it can be assumed that the work on which they were engaged would usually have been carried out at a more restrained pace than on constructional work. To that extent ageing men probably had some advantage.

TABLE XV. *Numbers of Men Surviving on their Jobs at the Ages Indicated, Expressed as Percentages of those who had been Working at 60*

| <i>Age</i> | 60 | 63 | 65 | 66 | 67 | 68 | 69 | 70 |
|---|-----|----|----|----|----|----|----|----|
| Building workers—maintenance (320) per cent. still on job | 100 | 89 | 83 | 75 | 63 | 55 | 46 | 32 |
| Bus drivers (150) per cent. still on job | 100 | 86 | 78 | 50 | 31 | 21 | 15 | 7 |
| Bus conductors (150) per cent. still on job | 100 | 85 | 80 | 35 | 26 | 23 | 16 | 11 |

The decline in numbers among busmen in their mid-sixties was unquestionably associated in part with their traditional habit of retiring at that age from the service; many of them then went in search of another job. But it is clear from the records that age and ill health

were already beginning to affect them. How many of these old busmen or building workers found alternative work after leaving their jobs we do not know, but it is likely that most of the building workers would have retired.

We can once again observe the contrasts between different occupations. The building workers would probably have had as favourable a chance with the L.C.C. as would any manual workers of surviving late on their jobs. They represent, in fact, the highest level of survival we should expect to meet, unless perhaps it be among farm and allied workers or craftsmen working at their own pace.

It is obvious that only a minority of men apply for their State pensions at the age of 65, and, according to the Ministry of Pensions and National Insurance, about one in four of those who do apply would have become so incapacitated as to be already in virtual retirement. The main reasons that men otherwise gave for retiring were either incipient ill health and the strain of work or the fact that they had been compulsorily discharged by their employers. We have seen that a number of the men who were thus 'discharged' are likely to have been discharged simply because they were no longer considered effective. In other words, they too, would probably have been showing signs of strain or incipient ill health.

No doubt many of these 'marginal' men could in theory have avoided retirement by moving to lighter forms of work. Did they, then, apply for their pensions because they preferred to retire or because no alternative work seemed to be available? If we can accept the testimony of the men themselves and the implications of the statistical evidence, their numbers increase significantly at later ages. The critical question remains whether industry is failing to absorb a large proportion of this 'marginal' ageing labour as it inevitably emerges year by year.

VI

Conclusion

ACCORDING to the Report of the Ministry of Pensions and National Insurance, 1,323 men said that they were applying for pension at 65 because they had been discharged by their employers, and more than 70 per cent. of them declared that they would have remained in some capacity with their old employers if they had been offered a job.* Yet only about 25 per cent. of these same men of 65 had tried to find a job elsewhere before deciding to retire. Again we have to rely on their own statements. We have no information on the numbers who succeeded in finding alternative work after they had been compulsorily discharged by their original employers. For since they had delayed the date of their retirements, they would naturally not have been recorded as applying for a pension. But the figures as they stand are very suggestive. We need to know much more about the difficulties men may be encountering at this phase of their lives. Were these men setting their demands too high or were they merely discouraged after a few abortive efforts to find an alternative job?

The comparatively large numbers who would have been prepared to remain with their old firms suggest that for many men a familiar place of work acquires some value of its own; such men may not be willing to apply for work elsewhere unless the transition can be socially facilitated. They are aware that age is overtaking them; and the change will mean that they must acclimatize themselves to new surroundings and new workmates.

It would not be easy to say how many men are lost to industry through arbitrary discharges of this kind while they are still thoroughly fit and efficient. In some industries the numbers are probably significant. But it seems to me that the industries that have adopted rigid retiring ages tend also to be those in which technological changes had been most rapidly taking place. We have to bear in mind that the pace and intensity of production have been increasing, and even if the pace of manipulation has not increased, a greater degree of mental concentration may be demanded from an operative. Where the level

* *Reasons given for Retiring or Continuing at Work.* (Table 8.)

of output is geared to the measured capacities of young or middle-aged men, it may have become too hot for many who are approaching their mid-sixties. It may, in fact, be felt as a discriminating test of the onset of senescence long before a man's health is impaired. Our mistake in industrial research is to imagine that the process of ageing is a type of physical derangement akin to degenerative disease. The process may often be simply associated with gradually slowing reactions and failing powers of concentration. It is not possible to say whether a firm is or is not justified in adopting a rigid retiring age, unless we know precisely what are the qualities it needs in its employees.

Some mention has been made in passing of the types of alternative work (such as that of a watchman or jobbing gardener) to which older men are suspected now and then to gravitate. In a recent report 16 jobs of this kind were selected for study in consultation with the General Register Office.* The occupations, as represented in the 1951 Census Report, run as follows; 'watchmen, office cleaners, estate labourers, caretakers, lift attendants, attendants of baths and wash-houses, gardeners (other than market gardeners), "others in personal service", hall and hotel porters, lodging and boarding house keepers, "other railway workers", "other road transport workers", kitchen hands, boilermen, messengers and porters (not elsewhere specified).'

It cannot be assumed that by any means all the elderly men on these jobs had necessarily gravitated to them late in life. While many of the old gardeners and boilermen had probably done so, a large proportion of elderly caretakers and hotel porters are more likely to have grown old in the service. But the elderly men in rail or road transport are undoubtedly often those who have left the more active and responsible jobs. Moreover, these 16 occupations do not represent the only forms of alternative work that might be open to older men. A good many of the men are absorbed into light factory work such as that of a sweeper or routine packer. Yet it is demonstrable that these occupations do probably account for a fair proportion of alternative work. A study was made of the experiences of 537 men who were known to be moving (or to have recently moved) to some alternative work from the age of 60 upwards;† 347 of them had moved to the conventional 'light' jobs and services of the kind listed above. A further 118 were

* *New Jobs for Old Workers*, The Nuffield Foundation, 1955.

† *The Employment Problems of Elderly Men*, The Nuffield Foundation, 1956.

simply stated to be moving to light factory labouring, and the residue were transferring to new jobs in which they might require a short period of training.

The question is whether such conventional jobs offer much opportunity nowadays for older men. According to the 1951 Census Report for England and Wales there were 123,862 men aged 60 and over employed in the 16 occupations listed. Many of them were beyond the age of 70. The numbers are not very impressive when related to the total number of employed men of the same ages, i.e. 1,428,109. If the proportion of the men in their mid-sixties who have moved or need to move to less exacting work is as high as the evidence led us to believe, their chances of finding suitable work cannot be good, at all events for jobs of a traditional kind. After all, a large number of the 123,862 jobs would not have been filled by late entrants but by men who had survived on them since their middle lives. It must be admitted that many retirements around the mid-sixties are presumably due to an inability to effect a satisfying transfer.

Such technological and occupational factors as those I mentioned a little earlier necessarily complicate the whole problem; and it is clear that with them much further research will have to concern itself. Meanwhile I want to summarize briefly the apparent course of events. Older men decide to retire for a variety of reasons; and the fact that they become entitled to State or industrial pensions naturally influences their decisions. Beyond the age of 65 the numbers applying for a State pension settle down to a fairly even flow, increasing in volume as men approach their seventies. It becomes progressively more difficult to distinguish the true reasons for retirement. Comparatively few men at these late ages seem to be discharged in an arbitrary way, though some employers do place the limit at 70.

The most reasonable assumption we could make in our present state of knowledge is that by the age of 65 about 10 per cent. of manual workers are already in virtual retirement through chronic invalidity, and somewhere near 20 per cent. can no longer be expected to be holding down their normal jobs, whatever alternative work they might undertake. Some of these 20 per cent. would have been provided by that time with work that was felt appropriate to their age; and they might thus avoid retiring for several years. But a large residue lack the urge or the opportunity to find a suitable job, and these men

retire, possibly after a real or 'token' effort to examine their prospects in the labour market. On general evidence I should assess that such men represent some 10 to 15 per cent. of all the manual workers who reach the age of 65. A further group of men certainly retire at that age rather by custom or inclination. It would be difficult to estimate their numbers. I should cautiously set them down as somewhat over 10 per cent. of the manual workers of that age.

Through the next five years of life the decline in the numbers of employed men reflects more accurately the gradual erosive effect of senescence. At any rate, it reflects their decreasing prospects of finding any appropriate work. Both the amount of chronic invalidity and the need of alternative work increase steadily among the men who have survived into their late sixties. After the age of 70 the gradient of declining numbers may be moderate for a while and then slope down precipitately. By their late seventies at least four out of every five of the men, who had composed the diminished labour force of the late sixties, would have been removed for ever by retirement or death.

But, as we have seen, the rate of decline in numbers varies throughout with the characteristics of men's jobs. It may, moreover, be taken for granted that the longer a man had delayed to go in search of a job appropriate to his age the less his chance of finding one.

Such appears to be the transitional phase, as manual workers move from their full vigour into old age and retirement. In the light of further experience we shall no doubt be led to modify our statistical patterns. But future research will have to be concentrated less on the personal than on the industrial aspects of the problem. The basic question is how far an increasingly mechanized industry will be able to absorb ageing labour of the kind we have been describing. The term *ageing*, it will be remembered, implies in this context an irreversible organic process, not the attainment of any chronological age. There is a supplementary question that will have to be asked and answered. If mechanized industries are technically and organizationally unable to absorb all their ageing labour, what social and administrative reforms will be needed to ensure the spiritual stability and happiness of the men themselves? The statistics seem to give little support to any proposal for raising the pensionable age. A postponement of the statutory age would probably only mean a corresponding increase in National Assistance and Unemployment charges. By the age of 66 the numbers of retired and unoccupied men appear to balance the

numbers who are still in employment, and at the age of 68 they exceed them by about 18 per cent. While some of those who have retired would undoubtedly have done so rather through choice than senescence, their opportunities of remaining at work would have been diminishing with the years.

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