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Unpleasant or tedious jobs in the industrialised countries

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For some years now it has been obvious that scientific and technological progress is widening the disparities that have always existed between jobs as regards both their intrinsic interest and the conditions in which they are performed. At the top of the occupational ladder a sizeable minority of professionals and skilled workers perform rewarding and varied tasks in pleasant working conditions, achieving self-fulfilment and social recognition in the process, while on the bottom rungs the mass of ordinary workers are condemned to jobs that are frequently dull and repetitive—and sometimes have to put up with inadequate safety and health protection, long hours of work, lack of job security, poor wages and low social status into the bargain.

Particular attention has been focused on this question as a result of the commitment entered into in 1975 by the member States of the ILO " to reduce as far as possible... the most unpleasant or tedious of jobs " (in the words of the resolution concerning future ILO action in the field of working conditions and environment adopted by the International Labour Conference). It may seem arbitrary to lay down hard and fast objectives in a matter of this sort since the criteria for evaluating the unpleasantness or tediousness of particular jobs are ill-defined and there is little accurate and comparable statistical information on the subject. (In fact the latter consideration explains why the examples presented below are drawn from a limited number of countries.) This article attempts nevertheless to spell out what constitutes unpleasant or tedious work, to estimate how widespread it is in a few industrialised countries (both in the East and in the West), to pinpoint the occupations and sectors in which it is most prevalent and to consider possible future developments.

Variables and indicators

In the abstract it is impossible to draw a precise dividing line between unpleasant or tedious jobs and those that are not. The notion of unpleasantness relates to the physical and mental demands made on workers by jobs that are,

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for example, dangerous, strenuous, tiring or dirty, or that involve excessive working hours or exposure to noise, heat or cold. In calling a job " tedious " one is thinking in psychological and social terms: the work is repetitive, uninteresting, monotonous, mediocre, carries little prestige or is simply regarded as disagreeable. Taken together these two notions can be used to define both the nature of a job and its effect on the worker performing it.

How should one go about identifying the principal factors (or " variables ") which make certain working conditions, forms of work organisation and types of job unpleasant or tedious? The most direct way of course would be to study the *objective characteristics* of the job. One might also observe how workers react to different types of job, i.e. their actual *behaviour* at the workplace and in the labour market. Thus, in addition to absenteeism and the turnover rate, special significance would be attached to certain indicators (such as the shortage of manpower or difficulties in hiring workers for some jobs) which clearly have a bearing on the evaluation of working conditions. One could also judge from what workers *say* about their jobs, for example in response to job satisfaction questionnaires.[1] Another possible approach would be to relate the quality of working life to the *functioning of the labour market* ; according to the theory of labour market segmentation, unpleasant or tedious jobs become concentrated in a secondary market which comprises under-privileged groups of workers and is quite separate from the principal market. Finally, one could have recourse to *sociological criteria* which stress the prestige attached to an occupation according to its position in a social status hierarchy. These different options are not mutually exclusive and they can be combined to shed light on all the various aspects of the problem. In this section I shall deal more particularly with the first two of these approaches.

The objective characteristics of the job

The first variables we may use to identify an unpleasant job are certain physical characteristics for which it is possible to define one or more indicators that enable us to measure the scale of the problem either directly or indirectly.

A dangerous and unhealthy workplace. This variable relates to the hazards to life and limb inherent in the job itself. It covers such aspects as the handling or presence of dangerous substances, the lack of guards on machinery and generally unhealthy conditions which might affect the moral and physical well-being of the worker. Direct indicators that can be used here include the frequency and seriousness of industrial accidents and the number of working days lost through occupational disease.

Poor physical environment. The main factors here are lighting, ventilation, temperature, noise, vibrations, the space available and the general cleanliness of the premises. Possible indirect indicators include the number of workers employed in the open or exposed to intense heat. Direct indicators might include the number of workers whose exposure to noise, vibrations, etc.,

exceeds the limits established on the basis of ergonomic research. At the moment, however, there are no national statistics covering an entire occupation or industry.

Severe physical and mental stress. Working postures that are ill-suited to the human organism—hence painful and tiring—and strenuous muscular effort are the main cause of physical fatigue. Mental stress is bound up with the pace of the work and the care and attention it demands. Trade unions are unanimous in denouncing what they claim to be a growing tendency towards stepping up the pace of work, which results in physical and nervous fatigue that is difficult to overcome.[2] There are few indicators of such changes. Individual payment by results can, however, serve as an indicator of pressure to increase the pace of work. Another sign is the premature ageing of workers in certain industries; this is reflected in the physical inability of workers over 40 to perform certain arduous tasks, and can be measured by the age distribution of the workforce.

Long working hours and poor arrangement of working time. Excessive working hours (often because of overtime) and irregular work schedules (e.g. in the case of shift work) impair the health of the worker and limit his participation in cultural, social and political life. The indicators here are the weekly hours of work, the amount of overtime, the percentage of workers on shifts and, in particular, the extent of continuous shift work and night work. Work schedules involving three or four alternating shifts can be considered particularly unpleasant.

Fragmentation and restricted job content. This variable covers a large number of factors: opportunities to exercise responsibility and to show initiative; autonomy; amount of variety; length of the work cycle; abilities, skills and experience required; relations and co-operation with fellow workers and supervisors; prestige; and identification with the end product. The organisation of work on Taylorist principles results in fragmented jobs, of which assembly-line work is not only the best known but also the most disliked example in view of the brevity of the cycle and the necessity for man to keep pace with the machine. The only statistical indicator here is the extent of assembly-line work in industry. In surveys carried out in France work of this type is very strictly defined as having a fixed pace and involving repetitive operations with no buffer stocks. In the United States the numbers of workers performing repetitive tasks or jobs that leave no room for initiative have been calculated on the basis of estimates or national surveys. It should be added that fragmentation and scientific work organisation à la Taylor are insidiously but rapidly extending to non-industrial activities.

These variables are obviously inter-related and their joint effect plays a major role in impairing the worker's health or satisfaction with his job. Thus it is rare for an industrial accident to be caused by a single factor alone: accidents occur most frequently at the end of a long day and as a result of

a combination of various aggravating circumstances such as dirty or ill-lit premises and unguarded machinery.

Workers' behaviour

Other indicators—direct or indirect—relate to the attitudes and behaviour of the workers and give grounds for assuming either a deterioration in working conditions or greater awareness on the part of the workers of the risks they run and the harm they suffer. This is the case with absenteeism, labour turnover, industrial disputes and hiring problems.

These indicators must, however, be used with caution. A rise in the rate of absenteeism or turnover may also be caused or made possible by increased job security, higher and more stable wages or more comprehensive social security. Conversely, there can be no assurance that a drop in these indicators signifies a real improvement in working conditions. Furthermore, an alteration in behaviour patterns may be the outcome of a failure to satisfy occupational aspirations that have risen more rapidly than the necessarily slow improvement in working conditions and job content. Finally, the indicators in question reflect an economic logic (the reduction of the undertaking's labour costs) rather than a social logic (the elimination of poor working conditions).

Absenteeism. The continued existence of physically and mentally arduous jobs contributes quite considerably to absenteeism for reasons of ill-health. So, too, do such nuisances as noise, vibrations or air pollution. Moreover, absenteeism rates are on the increase in most industrialised countries.

Labour turnover. Dissatisfaction with the job and poor working conditions also influence the rate of staff turnover and, more particularly, the rate of voluntary separations, which has been rising for many years now. In some undertakings where the employees are young and have little experience and training, annual turnover is running at more than 50 per cent of the average workforce. This is a problem that affects both the socialist and the market economy countries.

Hiring problems and manpower shortages. In the West certain indicators such as the ratio of job vacancies to job applications reveal the persistence—despite high unemployment—of a shortage of manpower in certain occupations. This is confirmed by the continued employment of large numbers of immigrant workers in the many socially undesirable or unattractive jobs that are turned down by nationals (who would sometimes rather be unemployed than do them). This disinclination on the part of nationals varies from country to country and from one industry to another, which tends to show that hiring problems depend on the efforts made by the government and the undertakings to improve working conditions or to upgrade certain occupations. In the socialist countries unpleasant or low-prestige jobs can be identified with the aid of indicators such as the differential enrolment rate for apprenticeship courses. One should also take into account the high dropout rate in some apprenticeship courses. The problem does not only concern the young, since it has been found that

the number of adults training for the less attractive occupations is also declining. It is precisely in the occupations which are being spurned by apprentices and adult workers that recourse to overtime is most frequent and that as a rule the working conditions are poorest.

Industrial disputes. An analysis of the demands that have touched off strikes over the past ten years brings out the importance of matters relating to work organisation and working conditions. Very often, the deterioration in industrial relations—especially the growing number of wildcat strikes—can be put down to a worsening of working conditions and is a sign of the workers' rejection of fragmented and boring tasks.

Extent of unpleasant or tedious work and its distribution by sector and occupation

Number of workers performing unpleasant or tedious jobs

The difficulty experienced in measuring directly the number of workers exposed to bad working conditions is due, on the one hand, to the lack of statistical data for any of the direct indicators of the variables considered and, on the other, to the fact that even if such data were available it would still be necessary to fix a point, for each indicator, beyond which a task could be considered unpleasant. For example, in the case of the " long hours " indicator, one would have to fix a daily, weekly or yearly number of hours above which the job would be recognised as really unpleasant. It goes without saying that a figure of this sort might appear arbitrary since it could not take account of the particular occupational and socio-cultural context of each job. Even if this problem could be solved, it would still be necessary to decide how many variables or indicators would be needed to qualify a job as unpleasant or tedious and what weight to give to each variable. As for indirectly measuring the number of workers performing unpleasant or tedious jobs, this can only be done, on the basis of existing national surveys, for a few indicators.

In France there are laws and collective agreements defining unpleasant tasks. For example, the Act respecting the lowering of the retirement age for manual workers, dated 3 December 1975, explicitly lists the factors that go to make a job unpleasant and entitle workers who have performed such work for a certain time to opt for early retirement, namely having been employed on continuous or semi-continuous shift work, assembly-line work, as furnacemen or, finally, outdoor work. At the moment in France there are thought to be more than 2.5 million industrial workers, or about 10.5 per cent of the labour force, who fulfil these conditions.

According to the authors of a report prepared for the Government in 1976,[3] low-status manual work, i.e. " work which involves little autonomy and responsibility and consists of repetitive and fragmented tasks requiring no creative contribution from the worker ", was being performed by 5 to 6.5 million people in France.

In the United States, according to a survey of occupations which are described as allowing the worker no room for autonomy or initiative in respect of " data ", " people " or " things ", an estimate of the number of workers in such jobs indicates that their share of the total labour force (approximately 40 per cent in 1970) has remained constant for the past 20 years, despite the general rise in educational levels, and that " discretion-permitting " jobs are still largely the prerogative of White males.[4] According to another estimate for the United States, 7,900,000 people in 1960 and more than 10,130,000 in 1970 (respectively 12.2 and 13.1 per cent of the labour force) were doing repetitive work.[5]

A Hungarian study [6] showed that 500,000 to 700,000 people, or 10 to 14 per cent of the labour force, were doing disagreeable jobs or were dissatisfied with their working conditions and would move to other occupations or industries if their age, sex, domicile, training or experience did not prevent their doing so. An initial estimate was obtained by calculating the number of persons employed in the occupations in which there is the least demand for apprenticeships (in some trades the intake of apprentices fell short of the planned figures for 1970-71 by as much as 50 to 60 per cent). This method resulted in a count of 600,000 to 660,000 manual workers doing unpleasant jobs and a total of 700,000 to 780,000, or 14 to 16 per cent of the country's labour force. Other estimates using the variables and indicators employed in this article for the occupations and industries regarded as having bad working conditions yielded a similar percentage. A further estimate, based on the number of workers employed in jobs which do not match their qualifications or skills, arrived at the figure of 10 per cent as the lower limit of the proportion of the labour force dissatisfied with their jobs. Finally, statistics showed that the proportion of workers who left their jobs because they were dissatisfied with their working conditions amounted to between 6 and 9 per cent of the employed labour force, while 12 to 18 per cent would have liked to find a better and more suitable job.[7]

All these figures have to be interpreted with a great deal of caution. In the United States, for example, depending on the method and criteria adopted, very different proportions of the labour force—10 and 40 per cent—are obtained for two indicators representing the same variable, job content. This is a field, therefore, in which there is enormous scope for concrete research and statistical surveys.

Distribution by sector

A major Swedish survey on conditions of life and work helps to fill in the over-all quantitative picture sketched above. Conducted in 1974 with a sample of 12,000 people, it highlights the different sectoral characteristics of various working environment factors (see table 1). It can be seen that mines, manufacturing, construction, and, to a lesser extent, agriculture have worse working conditions than the other sectors.

Table 1. Sweden, 1974: Workers affected by certain types of working conditions
(% in each sector)

Working conditions	Agriculture, forestry	Mining, manufacturing	Engineering	Construction	Wholesale trade	Transport, storage	Banking, insurance	Public administration	Education, health and social services	Other sectors	Total
Working day more than 9 hours	11.2	9.5	8.4	7.2	11.1	12.8	8.2	13.2	11.1	9.4	10.3
Overtime more than 4 hours per week	10.8	10.8	10.0	6.6	11.5	9.2	9.5	12.0	2.8	11.8	9.2
Shift work	2.0	21.9	11.7	5.9	14.1	33.4	3.4	19.7	24.2	22.8	19.2
Night work	4.5	20.1	13.2	5.0	9.5	27.0	6.6	14.3	16.9	8.7	15.2
Frequent lifting of heavy loads	38.2	21.3	21.2	35.0	21.3	22.1	3.0	6.4	19.1	14.4	21.1
Unsuitable working postures	46.3	33.7	35.9	57.8	19.1	27.2	15.2	11.0	26.4	34.4	30.5
Severe vibrations	30.4	11.4	9.9	23.5	1.3	19.4	—	1.7	0.5	5.0	9.3
Mostly outdoor work	54.4	6.9	2.4	39.2	5.0	36.4	4.3	8.7	1.5	7.2	13.5
Working often in heat	3.9	8.1	6.7	2.9	4.8	7.8	3.0	4.0	2.4	6.1	5.3
Working often in cold	6.4	3.6	2.2	10.1	4.8	6.1	2.2	1.2	0.6	5.6	3.9
Working in very dirty environment	28.6	21.9	25.9	36.6	7.6	20.4	4.3	4.6	1.6	20.0	15.6
Working with dangerous substances	7.8	16.5	15.1	21.9	4.4	10.2	3.0	2.9	0.3	10.0	9.3
Very frequent exposure to noise	11.7	27.3	27.2	16.3	2.4	9.5	2.6	2.3	3.0	6.7	12.5
Work regarded as very hazardous	8.8	5.5	5.8	7.8	1.1	4.7	1.5	4.6	1.6	1.3	3.9
Very high mental strain and boredom at work	6.4	18.8	19.7	7.5	10.4	15.0	4.3	7.5	6.1	5.6	11.2
Worker has no influence on planning of his work	15.7	33.5	33.9	26.6	21.0	22.0	14.2	8.1	15.9	20.8	23.2
Worker has no influence on pace of his work	5.9	15.1	13.0	6.3	11.9	16.7	4.4	12.1	8.4	6.7	11.3
Little opportunity to improve skills	59.4	53.4	47.5	41.8	51.7	65.0	29.4	37.0	43.8	54.4	49.5

Source: Sveriges Officiella Statistik: *Levnadsförhållanden*, Report No. 2 (Stockholm, Statistika Centralbyrån, 1976).

Table 2. France: Some indicators of working conditions, by branch of activity

Indicator		Mining, quarrying	Manufacturing industries: Food, drink	Textiles, leather, clothing	Wood, furniture	Paper, printing	Chemicals, rubber, plastics	Stone, glass, minerals	Iron, steel, basic metals	Metals, machines, equipment	Electricity, gas, water	Building, public works	Wholesale and retail trade, hotels, restaurants	Transport, communications	Banking, insurance, real estate	Public, social and personal services, sanitation
Industrial accidents, 1975 (seriousness) [1]	(1)	.	1.05	0.76	1.44	1.32	0.89	1.84	.	1.29	.	2.48	0.61	1.81	.	.
Weekly hours of work, 1975	(2)	40.2	43.1	40.0	42.5	41.5	40.1	39.8	41.2	41.3	40.0	45.4	42.4	43.1	.	.
Shift work, 1974 (%)	(3)	28.3	21.8	50.2	10.0	52.6	34.6	58.0	71.0	18.7	.	1.4	7.7	9.3	.	3.8
Assembly-line work, 1974 (%)	(3)	5.7	13.8	24.1	4.6	2.3	11.0	9.4	.	10.5	.	.	3.9	.	.	.
Payment by results, 1972 [2] (%)	(4)	17.8	.	24.7	21.3	.	15.7	.	18.4	20.7	.	.	.	.	.	.
Rate of absenteeism, 1974 (%)	(5)	6.2	5.8	8.2	5.5	4.7	6.6	.	8.1	6.9	.	5.5	4.1	4.4	.	4.4
Labour turnover rate (%)	(6)	1.7	.	24.0	.	.	4.0	1.8	5.6	6.7	.	.	.	.	.	.
Foreign workers, 1973 (%)	(7)	10.3	7.5	12.2	12.6	7.7	6.4	14.5	13.5	11.3	.	30.7	7.0	.	1.0	6.2
Industrial disputes [3]	(8)	13	28	45	24	150	54	48	67	52	212	11	5	31	9	9

[1] Number of days lost through temporary disability divided by number of hours worked and multiplied by 1,000. [2] Percentage of workers paid by results or piece-workers. [3] Days lost per 100 workers employed.

Sources: (1) Annual statistical report of the National Wage Earners' Sickness Insurance Fund, 1975. (2) Ministry of Labour quarterly inquiry into hours of work (1975), in *Liaisons sociales* (Paris), 16 Aug. 1977. (3) Ministry of Labour survey of labour force activity and conditions of employment, April 1974. (4) European Community survey of wage structure in industry and construction, October 1972. (5) Ministry of Labour inquiry, October 1974, in *Liaisons sociales*, 24 Dec. 1975. (6) OECD. (7) *L'immigration en France* (Paris, ministère du Travail, 1976). (8) " Les conflits du travail en 1975 ", in *Liaisons sociales*, 16 May 1976.

Table 3. Italy, 1975: Some indicators of working conditions, by branch of activity

Indicator	Mining, quarrying	Building, public works	Manufacturing industries: Food	Engineering	Chemicals, pharmaceuticals	Textiles	Clothing, leather, footwear	Building materials	Paper, cardboard	Electricity, gas, water	All branches
Industrial accidents and occupational diseases [1]	1.85	2.05	0.74	0.92	0.76	◄— 0.40	—►	1.73	0.63	.	0.84
Weekly hours of work [2]	30.48	29.40	33.44	33.19	33.06	32.07	30.22	33.15	34.30	35.08	32.20
Rate of absenteeism (%)	.	.	10.08	13.90	12.49	◄— 15.02	—►	11.65	9.58	.	12.98
Turnover [3] (%)	17.16	44.74	◄—			13.77			—►	6.24	16.92
Industrial disputes [4]	1 393	14 153	2 159	30 026	10 075	6 159	2 818	1 577	2 323	1 065	180 361

[1] Hours lost as percentage of hours worked. [2] Hours and minutes. [3] Voluntary separations/average workforce (%). [4] Hours lost per year (in thousands).

Source: *Rassegna di Statistiche del Lavoro* (Rome), May-Aug. 1976 and 1977.

In France (table 2) and in Italy (table 3) the occupations in which unpleasant or tedious jobs are most prevalent are also concentrated in the manufacturing sector and particularly in the textiles, clothing, glass, stone, minerals, metal-working and iron and steel industries—and in building and public works. This sectoral pattern is much the same in the other market economy countries as well as in those with centrally planned economies. As regards hours of work, shift work, industrial accidents and occupational diseases, sectors such as mining, textiles, wood and furniture, construction materials, building, commerce, hotels and restaurants present a fairly similar picture in both types of economy.

It should be noted that, in the industrialised countries, the number of unpleasant or tedious jobs in commerce, services and government employment is keeping pace with the expansion of employment in these branches. In the United States, for example, where over half the labour force is employed in the tertiary sector, a great many non-manual jobs may be described in this way.

Distribution by occupation

Unpleasant or tedious jobs are particularly numerous in the manual and unskilled white-collar occupations. In France, for example, industrial accidents are commonest among manual workers (who account for 62 per cent of the wage-earning population and 85 per cent of the accidents) and especially among immigrants (9.4 per cent of the labour force and 22.3 per

cent of serious accidents). In addition to their generally strong correlation with unpleasant work, unskilled occupations have a lower social status in the undertaking and society and are at once the cause and the consequence of the devaluation of certain types of work. Nevertheless, many occupations calling for a high level of skill are also regarded as unpleasant by young people.

Table 4 shows which socio-occupational categories in Sweden are the most affected. Some American studies have revealed that repetitiveness, defined broadly as the performance of the same task on a continuous basis, mainly affects semi-skilled and office workers in the United States but does not spare middle-rank supervisory and technical personnel. In industry, the occupations cited most frequently are those of semi-skilled and unskilled workers in the textile, clothing and leather industries (many of whom are women and immigrants). Miners, welders, boilermakers and manual workers in iron and steel making, electronics and the metal trades, as well as those in the paper pulp and wood industries, are typically engaged on unpleasant work, particularly in small undertakings where working conditions are poor. In building and public works, construction labourers, carpenters and plasterers often work under difficult conditions. In agriculture, labourers and small farmers have to do unpleasant or exacting jobs such as tending animals. In the services sector, the most unpleasant jobs are those of charwomen, hotel and restaurant employees (particularly kitchen assistants) and cleaners, and certain health occupations such as nursing aides or porters. In the public service and offices, the jobs of postal and telecommunications workers, bank employees and key-punch operators are becoming increasingly fragmented and devoid of interest.

It should scarcely need pointing out that the categories listed above include most of the workers who help to satisfy our essential needs: it is thanks to them that we have food, clothing and shelter, that the sick and the elderly are cared for, that the household chores are done and the streets kept clean.

Probable future trends

In attempting to forecast future trends in the field of unpleasant or tedious work we shall start by examining some past trends in respect of the skill content of jobs since, as we have seen, this type of work is often left to people who have no skills or qualifications. If, over all, the level of skills and qualifications required on the labour market is rising, we may conclude that the demand for labour to fill unpleasant or tedious jobs will decline. We shall then go on to compare the probable future trends in labour supply and demand in the occupations identified as unpleasant. If the main sources of labour supply for these jobs are in danger of drying up in the near future—which calls among other things for a careful study of immigration policies—this relative shortage should lead to a marked reduction in the number of tedious jobs or contribute

Table 4. Sweden, 1974: Workers affected by certain types of working conditions
(% in each socio-occupational category)

Working conditions	Unskilled manual workers	Semi-skilled manual workers	Skilled manual workers	Unskilled non-manual workers	Skilled non-manual workers	Engineers, technicians	Managerial, professional	Farmers	Self-employed, entrepreneurs	Total
Working day more than 9 hours	6.2	10.6	10.3	6.5	12.3	12.0	18.4	.	.	10.3
Overtime more than 4 hours per week	6.2	8.6	6.1	5.1	14.0	12.3	16.4	.	.	9.2
Shift work	25.7	27.6	17.6	14.8	13.5	10.4	11.7	.	.	19.2
Night work	14.7	20.5	19.7	9.5	14.5	8.4	13.8	.	.	15.2
Frequent lifting of heavy loads	29.5	33.5	30.8	4.3	10.5	3.3	0.8	36.4	20.8	21.1
Unsuitable working postures	37.4	37.5	57.4	12.0	17.6	9.4	5.4	44.4	28.7	30.5
Severe vibrations	5.9	16.4	16.9	0.9	1.7	2.0	0.4	22.2	13.7	9.3
Mostly outdoor work	10.4	23.9	13.7	2.6	8.1	4.6	1.5	42.6	20.8	13.5
Working often in heat	7.2	9.2	5.8	2.6	3.4	1.3	3.8	2.5	5.2	5.3
Working often in cold	5.9	5.3	6.7	2.9	1.4	0.7	0.4	4.3	2.9	3.9
Working in very dirty environment	10.8	24.4	35.4	2.9	4.7	3.9	1.5	18.5	18.9	15.6
Working with dangerous substances	10.0	13.9	21.2	1.4	4.7	1.7	0.8	4.3	8.8	9.3
Very frequent exposure to noise	13.1	21.5	26.8	4.0	5.1	2.8	1.9	4.3	5.9	12.5
Work regarded as very hazardous	2.5	6.1	7.8	—	2.7	1.1	3.0	.	.	3.9
Very high mental strain and boredom at work	21.2	18.1	11.3	11.7	4.7	2.8	1.1	0.6	6.2	11.2
Worker has no influence on planning of his work	36.9	36.0	28.4	20.2	7.1	3.6	0.8	.	.	23.2
Worker has no influence on pace of his work	17.6	17.1	8.8	12.5	9.1	2.2	3.0	.	.	11.3
Little opportunity to improve skills	75.5	64.8	42.3	51.3	33.6	26.1	17.6	.	.	49.5

Source: As for table 1.

decisively to their upgrading. Finally, these two approaches need to be complemented by an examination of changes in various work characteristics that go to make certain jobs unpleasant or tedious (e.g. longer working hours and an above-average incidence of industrial accidents, shift work and assembly-line work).

Changes in skills and qualifications

It has long been observed that the increase in the number of skilled jobs (particularly in the tertiary sector) has in the long run entailed an over-all improvement in working conditions. In addition, the distinction between manual and non-manual work is gradually giving way to a more fundamental division of workers into the skilled and the unskilled. It is essential therefore to know whether, on the supply side, there is a greater proportion of skilled blue- and white-collar workers now than in the past and whether, on the demand side, the structure of jobs has altered so that a greater proportion of them now call for high skills or qualifications.

The fact that young graduates are finding it more and more difficult to obtain direct access to jobs that match their qualifications has led many people to speak of the " de-skilling " of the labour force. They argue that product standardisation, mechanisation and work organisation methods are tending to create a host of unskilled jobs and only a few supervisory posts. In partial support of this theory it can be observed, for example, that between 1960 and 1970 the proportion of labourers and semi-skilled workers among those doing manual jobs in the United States remained practically unchanged, that of labourers dropping slightly from 14 to 12.5 per cent and that of semi-skilled workers rising very slightly from 37.3 to 38 per cent, while their number increased from 1,467,000 to 1,580,000. In Great Britain the proportion of unskilled and semi-skilled workers has dropped only very slightly, from 22.7 per cent of the total in 1961 to 20.2 per cent in 1971. In France the proportion of semi-skilled workers in the labour force rose from 9.7 per cent in 1954 to 12.4 per cent in 1962 and to 13.2 per cent in 1968; that of labourers rose from 5.8 per cent in 1954 to 8.2 per cent in 1962 and stood at 7.7 per cent in 1968. The average skill content of jobs has hardly changed, then, while the level of education and qualifications of the labour force has risen rapidly. This is a major cause of job dissatisfaction and of discontent generally, particularly among the young and women, since the ideas the young have formed about the matching of jobs and education no longer tally with the realities of labour demand, while women are being relegated more and more to the unskilled manual occupations.

If we look at occupational mobility in manual workers, it will be seen that demotion, i.e. moving down to a lower skill category, is not at all uncommon. In France, between 1965 and 1970, this happened to 5.4 per cent of foremen, 6.6 per cent of skilled workers and 3.6 per cent of semi-skilled workers among the men and 21.5, 14.9 and 5.3 per cent respectively among women.

In opposition to the " de-skilling " theory it can be argued that developments in this field over the past 20 years must be interpreted rather as a transformation of people's social status. Indeed, if we think of qualifications in terms of the individual rather than of the job it is patent that workers' qualifications, and particularly young workers', have improved considerably. However, the differences observed between young workers and the rest of the population do not tell us whether those who entered a trade with qualifications below those that are demanded nowadays have not meanwhile acquired a practical efficiency which skill evaluation alone is unable to measure. Analysis of the content of jobs shows up changes in the skill components. Traditional trades are tending to disappear but are being replaced by new ones in which the use of complex machines is transforming the job content. Purely labouring jobs are giving way to ones which require the worker to use machinery (e.g. a fork-lift truck or mechanical cleaning equipment) and can therefore be classified at a higher level; in many cases, however, the new skills merely reflect a shift from physical effort to nervous fatigue without any manifest change in job content.

In the socialist countries, on the other hand, the average skill content of jobs has increased considerably since the 1960s. The proportion and number of jobs for skilled workers in the manual occupations have markedly increased while at the same time there has in some cases been a drop in the absolute number of unskilled jobs. These trends are expected to continue in the coming decade.[8] The observed difference between the socialist countries and some of the market economy countries can be attributed in part to differences in the structure of production and in technology which are reflected in a higher initial proportion of unskilled workers in the socialist countries than in the industrialised nations of the West.

Projected labour supply and demand for unpleasant or tedious jobs

Harold Wool[9] has attempted to estimate the occupational structure of labour supply in the United States up to 1985. He arrives at the conclusion that the supply of workers for " low-level " occupations should decrease in the 1980s if full employment is achieved. The criterion he adopts to establish five occupational status groups for 57 occupations is the percentage of White workers in each occupation with at least 12 years of education and aged between 25 and 34.

All the jobs in the fifth group, as well as some in the fourth, embody characteristics we have already identified as making jobs unpleasant or tedious. They are generally done by Blacks, women and young workers, who formed the principal sources of supply for these jobs between 1960 and 1970. Wool then works out labour supply projections for each group for the years 1980 and 1985 and finds that the proportion of workers who will be available to do the undesirable jobs in groups IV and V should drop substantially.

The projection model forecasts a slowdown in the supply of young workers who accounted for a large segment of the " low-level " labour force in the 1960s, but it assumes an unemployment rate of not more than 4 per cent in the 1980s. Comparison of the projected manpower resources and needs of the economy reveals probable surpluses in the higher-level jobs and shortages in the lower-level ones. The market may adjust to these new conditions in various ways: as the supply of educated workers becomes more plentiful, by reducing relative wages and by raising selection standards for the higher-level jobs; as some lower-level jobs become harder to fill, by seeking substitutes where possible (e.g. for domestic servants), by raising wages and making the jobs more attractive (construction labourers, unskilled hospital staff, etc.) or, finally, by transferring low-wage industries (such as clothes manufacturing) to regions where there is still a supply of low-wage labour. The author concludes, then, that the shortage of labour for the low-level occupations will lead in the 1980s to an upgrading of unpleasant or tedious jobs and to a reduction in their number.

In France forecasts of labour supply and demand by occupation were drawn up in connection with the preparatory work for the VIIth Plan. The French list of occupations contains six levels of training and occupational skill, the majority of unpleasant or tedious jobs being found in levels V and VI.[10]

According to these forecasts a shortage of manpower can be expected in the higher and medium-grade supervisory positions in the tertiary sector, and a more or less evenly balanced supply and demand position in the case of skilled manual workers and unskilled white-collar workers. On the other hand, there may be supply surpluses in the case of technicians, skilled white-collar workers, semi-skilled manual workers and labourers. A more detailed breakdown of labour supply by skill underlines the considerable penetration of blue-collar occupations into the tertiary sector, particularly in commerce and services. The French Committee on Employment and Labour concludes that the rapid increase in the numbers employed in the tertiary sector will not be accompanied by a rise in the level of job skill content. On the contrary, this sector has less capacity for using manpower with medium-level skills and there is a risk that unpleasant or tedious jobs will shift from the secondary to the tertiary occupations. In contrast to the American situation described above, France does not expect a shortage of manpower in the low-level occupations, since there will still be a plentiful supply: there will continue to be a surplus of unskilled blue-collar workers and the number of school-leavers without any vocational training is not expected to fall below 200,000 a year up to 1981.

In the socialist countries it is anticipated that there will be a drop in the supply of labour for unskilled jobs owing in particular to the growing proportion of educated workers in the total labour force and the drying up of the traditional reserves of unskilled labour such as housewives re-entering the labour market or surplus agricultural workers seeking employment in other sectors. In Hungary, for example, it has been estimated [11] that between 1970

and 1985 the number of unskilled manual workers will decline by about 400,000, or 13 per cent. On the demand side it is estimated that over the same period there will be a 50 per cent reduction in non-manual jobs requiring no more than a primary education. The reductions will be largest in agriculture as this sector industrialises and in the industries where unpleasant or tedious jobs tend to be concentrated, so that the number of such jobs should decline as well. However, this reduction in demand will not be enough to eliminate the shortage of labour for unskilled jobs: in 1985 it is estimated that the demand will still exceed the supply by 6 per cent.

The socialist countries have decided to pursue a vigorous policy of " job reconstruction " through the application of new technical or work organisation methods. In the German Democratic Republic 300,000 jobs (about 7 per cent of the total) have thus been modified over the past three years, and in the period 1976-80 the Plan envisages that a further 7-10 per cent will be modified each year.[12] In the USSR 28 million workers in manual occupations are due to be transferred to mechanised and automated jobs in industry between 1976 and 1980, while in the construction industry the number of non-mechanised jobs is to be reduced by 25-30 per cent.

Employment forecasts for immigrant workers

In Western Europe trends in the employment of foreign workers also have a bearing on the future of unpleasant jobs: immigration perpetuates the tedious jobs and in many cases provides an excuse for not upgrading them. It is also the indicator of a shortage of national manpower for the less attractive types of employment. The introduction of immigration controls has led to some rethinking on the part of planners in some countries on how future immigration policy could be integrated with policies aimed at improving working conditions. France provides an example of this approach. The VIIth Plan aims to base future economic development solely on the current resident population resources and, when the economic situation has improved, to permit the renewed entry of (non-EEC) foreign workers only as an exceptional measure. If these policies go into force, it is expected that by 1980 the proportion of foreign wage earners in the total labour force (approximately 12.4 per cent) will have stabilised or even dropped slightly. On this assumption the number of immigrant workers would fall from 1.9 million in 1975 to 1.5 million in 1980, the effects of which would of course be felt mainly in such sectors as building and public works, engineering and machine building, textiles, transportation and sanitation, where foreign workers are recruited in large numbers. The National Institute of Statistics and Economic Studies (INSEE) [13] has moreover attempted to calculate the effects on the economy of a reduction of 250,000 foreign workers in 1981: for this considerable change the net balance of job vacancies for French workers would be only 80,000, the growth of gross domestic product would be slowed down and the trade balance reduced. These forecasts led the authorities to make provision in the VIIth Plan for a vigorous policy of up-

grading jobs, without which French workers would refuse to do the jobs left vacant by foreigners.

Future changes in working conditions

The diminishing supply of labour for unpleasant jobs and the rising level of education and training may lead employers to speed up the elimination of tedious jobs, but this does not tell us anything about the ways in which the jobs themselves will change—for example, what forms of work organisation will be developed, what influence technological progress will have on the quality of working life and what trends are likely to emerge in regard to job content and restructuring.

It may be assumed that shift work will continue to increase both in the socialist and in the market economy countries and probably at an even faster rate than at present to judge from the way it is spreading to the tertiary sector and non-manual occupations. One expert has estimated that by the end of the century 70 per cent of Britain's labour force will be working shifts.[14] Nevertheless, social considerations could moderate this change. A survey of establishments in Britain that had abandoned this type of work organisation (or plans for its introduction) found that some 40 per cent had done so because of trade union or employee opposition, labour supply difficulties or absenteeism.[15] Moreover, for the same reasons, the different systems of shift work will probably not develop at the same rate: those most likely to find favour are the double day shift or semi-continuous work with a week-end break, while those that involve night work or the continuous systems (four crews operating for the full week) are most likely to be rejected. If night work for women continues to be prohibited, this will also set bounds to the use of these types of shift work.

Although the available information scarcely permits a comparison over time, it appears that assembly-line work in industry in the market economy countries has been declining for a number of years and that this trend should continue; in the socialist countries it is possible that this type of work will go on increasing in the less technically advanced sectors. Assembly-line work, however, is not the only kind of fragmented work, and it seems likely that the latter will continue to spread to the tertiary sector. Present attempts to enlarge and enrich jobs do not seem capable of reversing this trend permanently since they are still being made on a very small scale in the industrialised countries. A great many workers are therefore in danger of being employed on fragmented and repetitive work and, until it has been demonstrated that the economic advantages of the division of labour no longer offset the economic and social costs, one cannot expect radical changes.

Automation of a growing number of industrial jobs should help to reduce the physical arduousness of work. Efforts made in the socialist countries to replace unpleasant or tedious manual work with mechanised or fully automated work are reflected in the additional resources allocated for the introduction of new manufacturing techniques and methods and in the measures to improve

working conditions incorporated in the national economic plans for 1976-80. Nevertheless, planners recognise that many jobs in hotels and restaurants, housework, or the health service, for example, scarcely lend themselves to automation. Besides, automation can also lead to the creation of low-skilled and mentally arduous jobs. In the postal services, for example, although the introduction of new equipment such as computers eliminates many irksome tasks, it brings with it an increased measure of nervous tension, isolates the workers and reduces their scope for initiative.

Conclusion

In the industrialised countries millions of workers are tied to unpleasant, monotonous, tedious or low-prestige jobs. It is as if the employment market were split in two, with one part marked by a combination of bad working conditions, exposure to various hazards, low skills, poor pay and inferior social status. It is nevertheless beginning to be realised that it is intolerable that certain underprivileged groups—the young, women and immigrants—should be used as a labour reserve for unpleasant or tedious jobs. Signs of an alienation from work are already appearing among some young workers in the form of disputes, absenteeism, excessive turnover or " dropping out ". The unpleasantness and monotony caused by job fragmentation, automation and the infiltration into office employment of rigid types of work organisation result in various forms of de-skilling or unemployment. The gulf between skilled wage earners and unskilled factory or office workers is gradually widening.

These developments could lead the authorities and employers to improve basic working conditions and to facilitate the acquisition of higher skills through education and vocational training. More specifically, in the Western countries the most likely policy would seem to be to reduce the supply of labour for unpleasant jobs by limiting the use of immigrant manpower and reinforcing the policy of equality of opportunity and treatment for women, while at the same time encouraging the dissemination of experience in job restructuring. In the socialist countries particular stress will be laid on reducing the demand for labour for tedious jobs through an improvement in the technological and organisational level of undertakings and the increased mechanisation and automation of such jobs. At the same time, where it might prove difficult to introduce such improvements, these countries will continue to give workers performing unpleasant jobs compensation in the form of higher wages, reduced hours and more frequent paid leave.

Notes

[1] The worker's views are of course very important but the use of opinion surveys as an indicator of working conditions has been challenged. See, for example, Jack Barbash: *Job satisfaction attitudes surveys* (Paris, OECD, 1976); Guy Roustang: " Why study working conditions via job satisfaction? A plea for direct analysis ", in *International Labour Review*, May-June 1977; and J. E. Thurman: " Job satisfaction: an international overview ", ibid., Nov.-Dec. 1977.

[2] Some surveys lend support to these allegations. For example, a study carried out in the Federal Republic of Germany for the Ministry of Labour and Social Affairs between 1972 and 1973 showed very clearly that job dissatisfaction was due mainly to excessive work pace (Institut für Angewandte Sozialwissenschaften: *Qualität des Arbeitslebens*).

[3] *Rapport du Groupe d'étude des rémunérations des travailleurs manuels* (Paris, La Documentation française, 1976), p. 27.

[4] Julius S. Brown: " How many workers enjoy discretion on the job? ", in *Industrial Relations* (Berkeley (California)), May 1975.

[5] Author's estimates based on a tabulation of job characteristics in Don Dillon: " Toward matching personal and job characteristics ", in *Occupational Outlook Quarterly* (Washington, US Government Printing Office), Spring 1975.

[6] The figures concerning Hungary quoted in this article come from an unpublished study carried out for the ILO by L. Kőszegi in 1976.

[7] For data on other European socialist countries see Edmund Wnuk-Lipiński: " Job satisfaction and the quality of working life: the Polish experience ", in *International Labour Review*, Jan.-Feb. 1977; and László Kőszegi: " Labour turnover and employment structure in European socialist countries ", ibid., May-June 1978.

[8] See L. Kőszegi: *Work and labour in industrialised countries: the case of selected centrally planned Eastern European socialist countries* (ILO, 1975; mimeographed), pp. 16-19 and 40-41.

[9] Harold Wool: " Future labor supply for lower level occupations ", in *Monthly Labor Review* (Washington, US Department of Labor), Mar. 1976.

[10] Commissariat général du Plan: *Rapport du Comité de l'emploi et du travail* (Paris, La Documentation française, 1976). Changes in the lower occupational categories can serve as an indicator of trends in respect of unpleasant jobs if it is assumed that all workers in these two categories suffer equally from bad working conditions and that these conditions will remain unchanged throughout the period considered.

[11] Róbert Cravero, György Fekete and Pál Iván: " A munkaerő-állomány szakképzettségi és iskolázottsági struktúrájának tervezett alakulása 1970-1985 között" in *Közgazdasági Szemle* (Budapest), Mar. 1975.

[12] According to an ILO mission report (1976).

[13] See Henry Bussery: " Incidence sur l'économie française d'une réduction durable de la main-d'œuvre immigrée ", in *Economie et statistique* (Paris, INSEE), Mar. 1976.

[14] Statement by Dr. William Colquhoun, Head of the British Medical Research Council's Applied Psychology Unit. See Department of Employment, Industrial Relations Division: *Shiftworking: some problem areas*, Information Paper No. 9 (London, Central Information Service, 1973), p. 20.

[15] Ibid., pp. 5-6.