1 THE ECONOMIST'S STUDY OF LABOR

The tools of his trade that the economist applies to labor are the same as those he would bring to any other subject in his field. They consist of micro- and macroeconomic theory, and a stock of information about institutions and magnitudes. The theory gives the economist a framework within which to arrange his observations and direct his inquiries: it suggests where causes and consequences are to be looked for, it traces the network of interdependence, and it guards against pitfalls in reasoning. The information provides a diagram, roughly to scale, of the whole mechanism of which the particular element studied forms one working part.

Applied to labor as a factor of production, these tools quickly yield an answer to a first question, why the rates of pay for different kinds of labor are what they are. These

rates appear as one set of prices, simultaneously determined with all others, whether of factors or of final products, through the interplay between demand and scarce resources in the pricing system. Any one rate has to equilibrate the number of applicants coming forward for a job with the number of vacancies offered. There is a supply curve of applicants, whose form depends in part on what alternative demands there are for that kind of labor. The vacancies are given by a curve of derived demand, i.e. the demand for one of several collaborating factors, derived from the demand for their joint product.

But this is only common form: we may have called the factor "labor," but the argument would be much the same if we spoke of land or equipment. Only when we bring in more particular circumstances do we develop a theory specific to labor. We do this when, for instance, we allow that how much work a man will do depends on his relative valuation of monetary income and leisure; or recognize the imperfections of the labor market, and apply the theories of market forms such as monopoly and oligopoly; or ask what obstacles prevent some men from earning as much as others, and on what conditions some remain unemployed. In such ways as these the methods of economic analysis are applied to situations which, though still generalized, are specified in sufficient detail to be characteristic of labor markets.

Such applications yield insights, but into possibilities rather than actualities. There has to be a running interaction between analysis and field work. Analysis there must be to start with, for facts do not speak for themselves, and the meaning that those we gather have for us depends on the framework within which we arrange them. But given an informative arrangement, it is only through the patient study of the facts that we can reach the actual causes of particular

states of affairs. Much more than this, the framework of analysis itself bends or breaks as new facts are brought into it, and it has to be designed anew. Gathering information does not merely give body to established relations, but questions existing hypotheses and suggests new ones.

A great part of the economics of labor consists accordingly of information about those institutions and procedures through which the labor force is nurtured and trained, deployed between occupations and industries, and organized and directed at the place of work; and those through which its rates of pay are administered and negotiated. This information is not merely factual. It has life: it is physiology, so to speak, and pathology, as well as anatomy. It shows us how things seem to work; it suggests what can or cannot be done about them. It also reveals an amazing variety. Everywhere men have to work to get their living, but the arrangements they work under have been and are extraordinarily divergent: techniques differ, but also there is a range of striking contrasts in the relations between the worker, the community he lives in, the consumer of his product, and the hirer of his work. It is a main purpose of this essay to remark on some of these. They break up the insularity of our thought and challenge us to extend our speculation. When we find the day's work organized in so many different ways, when the same effect arises from different causes or the same cause is followed by different effects, we recognize the interplay of more factors than we had seen at first.

In the study of labor, these additional factors include some that lie beyond the usual beat of the economist. Labor is a factor of production—but the worker is a human being, and his work involves social as well as technical relations. Work is not merely the way to get a living, but a way of life, a game or a thralldom, a field of conflicts and loyalties, anxieties and

reassurances, prestige and humiliation. The propensities of human nature that suffice to actuate a pricing system are limited, but the student of labor who does not go beyond the "economic man" leaves out much that is indispensable to his own etiology. The quality of the labor force depends on inheritance and upbringing. The occupational and social structures are interlocked. How much work any one man will do depends on his motivation—on his household, the standards of the group he works in, and the goals inculcated by his community. The application of labor requires direction: some workers are self-directed, but most come under management, and the relations between employer and employed affect both productivity and the satisfactions of the working life. They also affect pay. Though pay is arrived at in a market, it depends not only on the impersonal balance of supply and demand but also on custom, notions of equity, and the balance of power between groups and classes. At these and many other points the economist who has set out simply to study labor as a factor of production, and pay as a price, will find his attention drawn inescapably to matters commonly pertaining to psychology and sociology.

If this is true of the attempt to understand why things are what they are at any one time, it is even more true of the study of why things change. Such questions as why the differential for skill has generally diminished in Western countries over the last fifty years, or why real wages in Western Europe fell greatly during the sixteenth century but have risen greatly during the twentieth, can fairly be put to the labor economist; but when he tackles them he finds that what he has to try to understand is history. The growth of population, the stagnation of technique or its rapid development, the opening up of new natural resources and new channels of trade, the extension of literacy, the rise and fall of principles of

public policy—he cannot explain what has happened in the labor market without going to some extent into such questions as these. In part, of course, he can take them as given, and look simply at what goes on within the setting that they from time to time impose. But he cannot ignore the interaction between his own subject matter and the setting. This is evident in questions of economic growth: in the setting of a given achieved technique and stock of capital a certain distribution of the product between labor and capital will work itself out, but this distribution will react on the rate of accumulation, and this in turn on the technique and capital stock of the future. There is a similar interaction with the social setting: a higher general level of real wages enables wage earners' children to defer their entry into full-time employment and get more training meanwhile; the consequent change in the supplies of different kinds of labor reacts on their relative pay; this in turn reacts on social structure and attitudes, and these affect trade unionism. The test of the labor economist's ability to stop short at the boundary of someone else's field is his capacity to advise. What will he point to, for instance, if he is asked how an underdeveloped country can raise the productivity of its labor force? If he seeks the understanding that is effective operationally, he must study the labor market in its setting of economic growth and social change.

But in the division of labor among the social sciences he does not cease to be an economist, and economics proper has its distinctive contribution to make. In some studies of wages, it is true, the influence of such factors as convention and bargaining power have seemed so paramount that economic analysis has been dismissed, its services no longer required. But this has been too hasty. What stands out in particular transactions is often peculiar to them: the course of events

in the aggregate is influenced more by forces that may be secondary in any one case but work in the same direction in all. The forces of demand and supply are of that kind. The actual course of pay, country by country and period by period, shows uniformities that can be anticipated on the grounds with which the economist works, but would be surprising on others. Whatever their causes, the movements of the labor market are knit up with those of prices, incomes, and output generally, in a system whose static and dynamic connections have been explored only by economic analysis. If a textbook of that analysis is read as a description of what the investigator will find when he goes into the field, it will appear to leave out so much of practical importance that it may seem far removed from reality; but the forces it has lifted out for separate scrutiny are really at work, and policy will flounder if it neglects them. Nonetheless, the economist who studies labor needs to recognize that his own quest for causes leads him within the scope of other disciplines, from which he must get all the help he can.

The present essay follows the path of inquiry sketched here. It deals mainly with labor as a factor of production and with pay as a price and a distributive share, but it tries to appreciate influences that are the object of other sciences, and to set market processes in the context of history. The first question to be asked is what the place of the labor force has been within the economic system and the social structure —what arrangements have regulated the relations between those who direct work, or take its product, and those who carry it out. In a word, what has been the status of the worker?

2 THE STATUS OF THE WORKER

THE LABOR FORCE BEFORE THE CONTRACT OF SERVICE

Most of the work of modern economies is done by people who are under a contract of service: they put their skill and energies under the direction of an employer, who pays them wages or salaries. In man's previous experience, that is rare. The reason is not that the problem of how work is to be organized was very different in earlier economies: on the contrary, that problem arises in its essentials wherever there is division of labor, and economies in which the division of labor has been extensive have existed to our knowledge for four thousand years or more, and in the last two thousand years they have covered much of the globe. They have usually, it is true, contained at least some workers who earned their living through a contract of service with an employer, but only in the last two hundred years, and then

only in certain countries, has this type become predominant.

We can see several reasons for the slow growth of contractual employment. One is that men who can spend the hours of their working days at their own discretion regard it as an indignity to put themselves under the orders of another man. The issue is not how hard they shall work or how much they shall get, but whether they shall work as they choose or as they are told. The distinction most Greeks drew, M. I. Finley has said,[1] was not "between one kind of work and another, so much as between working for oneself, which was the mark of the free man, and working for another, working for hire, which was the mark of the slave. Hence, with the exception of domestic service, we find free and slave working side by side in every kind of occupation, skilled and unskilled. Even in the mines there were some free men who took small concessions and worked them themselves. What we rarely find is the free wage labourer, for such a man was 'under the restraint of another', in Aristotle's phrase, and even the poorest Greek avoided that position if he possibly could."

An evident way of keeping one's freedom is to work one's own land. Those who can stay on the land have seldom been willing, short of starvation, to leave it for employment as wage earners: the poorest peasants have been reluctant to commit themselves to work in the factory even though they can earn more there, and in Africa and Asia many of them still limit their commitment to a term of years. Wage earners who can get hold of land quit their employments—that was the experience of the colonists in America and Australia. In 1767 the Governor of New York, citing the case of the master of a glasshouse who had gone bankrupt because his servants, imported at great expense, had gone off to the land, remarked

1. "The Greeks and their Slaves," *The Listener* (London), September 10, 1959.

how such servants, "as soon as the Time stipulated for their Indentures is expired . . . immediately quit their Masters and get a small tract of Land in settling which for the first three or four years they lead miserable lives, and in the most abject Poverty: but all this is patiently borne and submitted to with the greatest cheerfulness, the satisfaction of being Landholders smoothes every difficulty, and makes them prefer this manner of living to that comfortable subsistence which they could procure for themselves and their families by working at the Trades in which they were brought up."[2]

But the attractions of the land are of no avail in a country where all the usable land has been taken up. That has been the state of many economies which nevertheless had few wage earners. It was not that they had few manufactures: on the contrary, they built cities, monuments, and ships; they carried out great works of irrigation; their workshops turned out clothing and furniture, harnesses, carts and ploughs, armor and weapons, knives and sickles, pots and pans. For this kind of production in a modern economy, most of the labor force is made up of wage and salary earners. If in many older economies that was not so, we have to look for circumstances that would inhibit the growth of wage earning even where the working population was greater than could live by farming, and a substantial part of it was in fact specialized to industry.

Those circumstances may be found in the absence of one or more of three conditions which are all necessary for the existence of the wage earner. The first is law and order. The second is the presence of a market, in which the wage earner can exchange his pay for houseroom and consumables. The

2. Report of Governor H. Moore to the Lords of Trade, quoted in E. L. Bogart and C. M. Thompson, eds., *Readings in the Economic History of the United States* (New York, Longmans Green, 1916), pp. 66–67.

third is the availability of free training for a trade. If the first is lacking, a man cannot live alone, but will have to put himself under the protection of another and pay for security by subservience, or else he may be captured and enslaved. If the second is lacking, a landless man can get a livelihood only by joining in some capacity one of the existing households; only here are supplies of the necessities of life accessible. If the third is lacking, men will be trained in a trade only in return for some lien on their produce thereafter. In the forms labor took where few laborers were wage earners, we can see the working of these circumstances.

The chief form was slavery. This comprised a great variety of arrangements whose common base was property in manpower: one man owned the skill and energies of another who could not end or vary that relation of his own volition. The slave's lack of freedom exposed him at the worst to ruthless exploitation and death itself, but it was also compatible with a relation of reciprocal obligation between master and man, and, until about a thousand years ago, it provided the working arrangements under which a great part of the labor force —including some of the most skilled—was organized and motivated. These arrangements ran through every field of employment.

One field more extensive then than now was the household. We have said that, in the absence of a market, men had to have a place in a landowning household in order to get food. Under the pressure of population in Japan, parents used to put their children out as perpetual servants to other families: these bondservants became, in a way, part of the family; they might marry, and their children also became servants in the same household. In Homeric Greece the free but landless laborer might have to undertake domestic service for life to ensure his keep. As the household grew bigger, it

became an economy in itself—indeed the very word "economy" means household management—and the bondservants were occupied not in domestic duties alone, but in farming (especially the care of animals) and in all the arts and crafts practiced in the estate workshops. A rich household in Rome of the later years of the Republic would have a retinue of barbers, perfumers, tutors, singers, poets, actors, and gladiators; Tolstoy's grandfather, early in the nineteenth century, would walk under his lime trees of a morning to the music of his serf orchestra, whose flutist remained in the house as a footman when Tolstoy was a boy. It was in an imperial household that the crafts of the time would be most fully developed: some of the earliest teachers of the crafts in Japan were Koreans who had been presented to the emperor by the king of Korea; in Europe the Emperor Charlemagne had hundreds of industrial slaves in his villas—the goldsmith, the blacksmith, the miller, the weaver, and the embroiderer were the highest in the servile hierarchy of those days. In the early Middle Ages, in both Europe and Byzantium, the manors, the estates of the nobles, and the monasteries all had their workshops staffed by slaves. But here a move appeared toward more modern arrangements: these workshops did not supply their own communities alone but began to trade with the outside world; and sometimes in Europe the slaves were allowed to carry on this trade for their own profit, subject only to the payment of fixed dues to their masters.

The arrangement by which the household slave was assured of maintenance in return for taking his part in the household's division of labor has had a more recent counterpart in the Indian village, where those who follow different occupations live apart, but craftsmen or laborers have hereditary affiliations to particular farming households. A carpenter, for example, would repair a particular farmer's imple-

ments and supply him with new ones without immediate payment, but in return for a share of the crop twice a year; the blacksmith, the potter, the barber, the washerman would work for him in the same way. One or more families of untouchables would be affiliated to each substantial farming household, which would feed them once a day and give them a share in the harvest and one new cloth a year. Although the untouchable used to work under compulsion, there has otherwise been no slavery in the system. Yet it has resembled household slavery in two respects—its restrictions on the worker, who cannot rise above the occupations permitted to the caste into which he was born or go outside the service of certain employers, and its restrictions on the employing household, which must employ only its own affiliates and give them not a rate of pay fixed by bargain but a share in the crop fixed by custom.

But slavery used to prevail not only in the household but more widely in all manner of public works and private manufactures, and its wider sources lay in destitution, rapine, piracy, and war. Freemen whose crops failed or who fell into debt would sell themselves or their children, or be condemned to work their debt out in bondage. Raiders carried men, women, and children off as they might cattle, and shipowners specialized in human cargoes. War was lucrative for the victors: the generals could make a fortune by selling or leasing out their prisoners, and the citizenry could keep the captives to do their hard and dirty work for them. Where the slaves were allowed families, the children grew up as slaves, and slave-breeding might be profitable.

The victims were used first and foremost to do the kind of work that freemen could not be made to do, either because there was no landless surplus bound to look for work, or because they would sooner starve than do it anyhow. Slaves

were used for the great works of civil engineering—irrigation, drainage, fortification; the backbreaking tasks in the raising of pyramids, palaces, and monuments; the toil of plantation and mine. Sometimes labor was found for these works as it is found for the armed forces today, by a draft or call-up or *corvée,* which rested on the freeman as well as the slave. In Babylon the irrigation system needed constant attention because of silting, and the obligation to work on it for a term of years was laid alike on some classes of freeborn labor and on slaves: when a slave was sold, the contract stated whether he had done his service. In China, before the time of Christ, ironworks and saltworks were carried on by the government with labor that was provided by compulsion but paid wages: we hear of a saltworks in the China of the Sung dynasty for which 380 families had each to provide two laborers, who were given a daily issue of grain, while the family received an annual payment in money. But where masses of laborers had to be brought together for hard work in bad conditions, most often they were slaves. In the Athenian silver mines at Laurium the number of slaves may have reached thirty thousand. The slaves died in thousands who dug the Great Drain of Tarquin the Elder. In the Spanish dominions of the New World, as the native Indians died out by disease and suicide, Negroes began to be brought in to take their place, and the importation went on at the rate of three thousand or more a year for some two centuries. The introduction of rice and indigo into the Carolinas set up an importation of Negroes there, until soon they outnumbered the whites. At their peak before the Second World War, the Russian labor camps, which provided the lumberyards and mines of the far North with an expendable labor force of kulaks and political prisoners, may have held as much as 6 per cent of the whole working population of the country.

In better conditions and in more skilled tasks, slavery also provided much of the labor force for the factories, as we may call them, of the ancient world and its immediate successors in Europe. In the eighth century B.C., the Greek shipowners impoverished the free craftsmen by setting up factories manned by slaves for the mass production of jars to use in the export trade in wine and oil; the independent craftsman also had slaves working under him, and the larger workshops were manned almost wholly by slaves. As the Romans acquired slaves by conquest, in the second century B.C., the free craftsmen there too lost their customers to the slave workshops of potters, smiths, tailors, and armorers. Some of these workshops were part of the establishment of wealthy families, but sold to outsiders as well as serving their own household. The seignorial or abbey workshop in the time of Charlemagne traded in the same way.

Slavery and skill went together because slavery filled a gap in the system of incentives. Alfred Marshall pointed out how, on a comparison of the earnings of the educated and uneducated man in the Britain of the 1870s, the rate of return on education made outlay on it a highly profitable commercial investment; but the outlay was not made, because the investor had no guarantee of getting his annual return thereafter from the boy he educated. In our own day some firms and branches of the public service advance the cost of training to selected candidates in return for an understanding that the candidate will work for them for at least a certain term of years thereafter, but the understanding is not enforceable by law. Slavery did carry with it this sort of enforcement, and the training of slaves in the arts and crafts was a widespread enterprise. The neo-Babylonian contracts of apprenticeship for slaves contained a clause for the compensation of their owners if the master craftsman failed to

teach them the trade. Cato, the Roman Censor, educated slaves and hired them out or sold them at a profit. In Japan, even after slavery had been nominally prohibited in the thirteenth century, apprentices were bought and sold, and they might be bound to work for a long term of years—even for life—for their masters.

The effect was that many slaves were not only more skilled but less oppressed than those whom the name of slavery raises first to the mind's eye. The spectrum of servitude has extended from the captive worked to death under the lash to the craftsman who lived on his own, carried on his own business, possessed property (which in Babylonia may even have included other slaves), and was obliged only to pay an annual rent charge to his owner. Far from always carrying the connotation of the coarsest and most exhausting toil, slavery in the ancient world was specially associated with skill: not only the mason, the goldsmith, and the armorer, but the ship's captain, the civil servant, and the bank manager were slaves. Those whom we call today the white-collar workers were particularly likely to be slaves or to have been trained as slaves before gaining their freedom. In Athens during the fifth and fourth centuries B.C., the state slaves served as police, inspectors of weights and measures, registrars, and accountants; and slaves were made managers of workshops, banks, and estates, and captains of ships. In China under the Former Han dynasty (206 B.C.–25 A.D.), government slaves were educated to serve as clerks, accountants, entertainers, and teachers. In Rome, in the early imperial fleet, the common seamen were freemen; the captains, slaves; and the admirals, freedmen. It was slaves and freedmen who provided the civil servants of the Roman empire, in the imperial administration and the municipalities.

We have stressed the difficulties that beset the independent

wage earner, and the wide extent of slavery; yet the independent wage earner was generally to be found working alongside the slave, and in Hellenistic Egypt, at least, he was predominant. The foremost freeman in the labor force was sometimes the farmer working his own land, and he was the archetype of human dignity and sturdy citizenship: he demeaned himself if he became a "base mechanic." Yet some freemen did become mechanics and the like: it was difficult to be a landless freeman, but not impossible. The freeman might work as an independent craftsman who sold his product direct to the customer. He might undertake particular commissions for the customer at an agreed price for the job. or move one step more toward the status of the wage earner and be paid by the day as he worked on the customer's materials. The independent craftsman might overcome the limits of the local market by becoming itinerant; workers in wood, metal, leather, and pottery did so in Homeric times, shoemakers and tailors did it in the American mainland colonies. In building, where the function of the contractor was specialized, the free craftsman came near the position of the wage earner working under the direction of an employer, at least for the time of the job. Those craftsmen whom we have heard of as suffering from the competition of slave workshops in Greece and Rome may likewise have been working for an employer.

But where there was room for the employment of a permanent body of wage earners, most often the workers were slaves. Wage earners of the modern kind could not appear in any number until the growth of population created a body of landless men and until those circumstances arose, which we have already noted, that alone allowed the landless man to live, as a freeman, by his trade: that is, sufficient law and order to save him from looting and kidnapping; a market

sufficiently wide to give him enough work in his trade and provide the necessities of life for him to buy with his earnings; and the means of first learning his trade.

THE BREAK-UP OF SLAVERY AND DECLINE OF THE SELF-EMPLOYED

The transition to the arrangements of the modern labor market required two great changes: slavery had to go, and the employee working for wage or salary had to gain a numerical preponderance over the self-employed worker.

Slavery came to be opposed as immoral. But as long as the slave was kept in a brutish state, his bondage seemed part of the natural order of things: only as he became like other men in his work and accomplishments did it come to appear outrageous. Slavery was undermined by training.

We have seen that there was a profit motive for training the slave, but training was in any case made necessary by the narrow limits of the work in which the untrained slave was worth his keep. Kept like a horse, with fodder but without incentive, he would work only under close supervision and the threat of the lash. That would suffice for much of the toil in the plantations of tobacco, rice, sugar, and cotton; in the mines; and on public works. But even in the work that the chain gang could do, the slave-owner might see that he had to house and feed his laborers all the year round irrespective of the work he got out of them, whereas if he required them only to render certain limited services, and left them for the rest to raise their own food from holdings of their own, he might get as much work from them at less cost and trouble to himself. In that way outright slavery gave way to serfdom. In ancient Greece slaves working away from their masters, especially in vineyards and fruit farms, were given grants of

land; the slaves of the great Roman estates were succeeded by the serfs of medieval Europe. It was found that the convicts who made up the first labor force of New South Wales got more done if their forced labor was confined to limited hours, after which they were free to cultivate a plot of their own, or work for wages paid in rum.

If this was so in heavy toil, even more was the need for incentive felt in work that required thought and initiative. If a slave was to do work of that kind he must first be made a more capable sort of man by being trained for it, and then be given both the measure of freedom without which he could not set about it effectively, and the prospects of reward for working well. The slave who learned a craft worked alongside other craftsmen who were free—so it was in the building crafts of Athens in the age of Pericles, and of the American South before the Civil War. In the South, as in imperial Rome, slaves might live apart, running their own works or shop, subject only to making a weekly payment out of their profits to their owner, to whom they were hardly more subordinated than to a landlord who must have his rent. We saw that in Babylonia slaves who had set up in business might own other slaves: in the American South slaves might hire other slaves to work for them. The Sung dynasty in China paid regular wages to artisan slaves such as their swordmakers. These slaves whose powers were trained and used for skilled work were still tied to the employer they worked for, or obliged to pay a tribute to their owners, and they were still liable to be sold and uprooted and, with their families, shifted bodily to a strange place; but ordinarily they went about the day's work just like the wage earners or small employers who were freemen. The barrier that remained between them and their freedom was not high.

Sometimes it crumbled, sometimes it was swept away. In imperial Rome the slave obtained his freedom most often by buying it with money he himself had saved from his earnings as a wage earner or his profits in trade. His owner might require a full market price, or take something less, out of respect for his qualities and as a reward for services prospective as well as past. It was a powerful incentive to promise a slave his freedom if he could show he deserved it. The trouble of holding a serf on the estate when he wanted to abscond, and exacting day-labor from him that he gave sullenly, made its cost felt when the growth of markets and the use of money gave the owner the alternative of commuting labor services for a rent paid in money, and hiring wage earners instead who could be discharged if they did not work well. Where there was already a market for free labor, the slave might run away and get his living in it, unless his speech or color made him a marked man. Whether the slaves and serfs that remained were few or many, moreover, a force was working for their general liberation. If they were relatively few, their bondage stood out in indefensible contrast with the status of the citizen beside them who, now that they were no longer newcomers made outlandish by speech and faith as well perhaps as by color, must increasingly accept them as fellow countrymen. If they were numerous, they spread into skilled work, and then slavery had against it the unrelenting opposition of many of the most capable and indispensable workers—the slaves themselves. Whether by some considered measure of emancipation or in the upheavals of irruption and revolt, the institution was abolished.

The second great change needed to make the transition to the modern labor market was the extension of the relative numbers of those who worked for an employer over those who worked on their own account.

There had usually been some wage earners among the free workers, but as long as markets were local and technique was simple, those who worked under the direction of an employer were in a minority. To call the others independent would imply too much: they might not own the land they tilled or the houseroom they worked in, and the way they worked or the prices they charged might be closely prescribed and circumscribed by the authorities, by custom, or by a guild of their fellow workers. But they had this in common: they did not work under a contract of service. On the land, the peasant or smallholder or farmer, though he might have to hand much of his product over to a landowner and keep his work within the traditional pattern of the village, worked for the rest in his own time and for his own profit. As long as markets were local, the craftsman was typically his own master. He bought his materials with his own funds, worked them up in his own way in his own workshop, and sold the product directly to the consumer. He had helpers in the workshop, but they were learning the trade and working their way up, as apprentices first and then for some years as workers paid by the day or *journée,* and therefore called journeymen, with a reasonable prospect of becoming their own masters in due course. Other craftsmen, like the mason and the woolcomber, had no settled workshop of their own, and not having a material product to sell took a price for each job they did that came near being a piece rate or time rate in the modern sense; but those who paid them remained customers rather than employers, and they themselves, as they moved round from one job to another, were more like contractors than wage earners. Besides these producers, there were small traders and shopkeepers.

The self-employed worker remains with us to this day. In Japan the sector of unincorporated enterprise generates more

than 40 per cent of the national product. But the extension of markets and the development of technique, as they have come about from time to time and place to place since the Dark Ages in Europe, have acted to reduce the relative number of the self-employed and raise that of the employees, and their action has been powerfully reinforced by the growth of population.

The extension of markets broke down self-employment in several ways. It meant, in the first place, that the producer would now find his customer at some distance: he would need an intermediary to arrange for the transport and sale of the product, and finance it in the interim. The raw material, too, might now be brought from a distance, and this also required contacts, transport, and finance. The merchant who provided these functions might conceivably have been in effect only an agent working for the producer on commission, or a trader competing with other buyers and sellers in the markets for raw materials and the product; but in fact he tended to gain control, and set the producer to work for him at piece rates.

The reason must lie in restriction of competition between merchants. It is not enough to point out that once the market was no longer local the producer could not buy or sell except through a merchant; for if he could have played off one merchant against another, he could have dealt at the ruling market price and been no more dependent on any one merchant than he had been before on any one customer. If that was not so, it must have been because the merchants were not numerous enough, or did not compete effectively with one another: their numbers might be restricted by scarcity of the knowledge, connections, enterprise, and capital that their calling required, and they might combine tacitly or in a guild to maintain a local monopoly or monopsony. Improvements in transport made the product travel farther, but did not,

like bus, bicycle, and car in our own day, bring the worker into potential touch with more employers. It is because his market changed that the craftsman is held to have lost his independence when he ceased to own the materials he worked on, and began to work at piece rates on materials furnished and owned by the merchant: previously his living had depended on the prices at which he could buy and sell in the markets for commodities; now it depended on the price he could get for his labor in a market where competition between dealers gave him less protection against the hard bargain. Sometimes the worker lost his independence by getting into debt. Free miners had worked together in companies with "parts," which could be handed down from father to son; but they got into debt to those who supplied them with materials or made advances on their produce, and then their creditor became their employer and they worked for him as wage earners—so it came about by the sixteenth century at Liége in Belgium and at Newcastle and Nottingham in England.

Whatever the reason, the tendency of the merchant to become the employer of the craftsman has been widespread. We learn that in thirteenth-century England the dyers, who brought in essential supplies of dyestuffs from the Mediterranean, took on the functions of enterprisers, employing weavers and fullers and organizing production and sale. In the United States toward the end of the eighteenth century, the merchant-wholesalers were becoming small contractors employing outworkers for wages. In Osaka in the 1930s the production of silk thongs for sandals was organized by merchants, who bought the silk and employed workers to cut it up, then passed it to "manufacturers" who put it out to be processed in the workers' own homes and did only the finishing in their own workshops, after which they returned the

completed article to the merchant who had financed the whole process.

This last example illustrates a second way in which the extension of markets has broken down self-employment: it has increased the division of labor. This division may grow up spontaneously between a number of specialists who work on their own and finance themselves, and coordinate their work simply by buying from and selling to one another; but often the function of coordination has been undertaken by an agent who at the same time finances the whole process and comes to employ, rather than trade with, those who carry out the different parts of it. The division of labor lengthened the time taken for materials to move from the primary producer to the final buyer, and created a need for a large capital even when the equipment used at each stage remained simple. It was partly because the production of woolen cloth required so many different processes that its manufacture in medieval Europe tended to fall under the control of the capitalist.

Thirdly, the extension of markets increased the size of the unit of production, and in the bigger units most of the workers could only be wage earners. Already in the thirteenth century, where international trade had developed in Europe, cloth was manufactured in the Low Countries and northern France, copper at Dinant, silk at Venice, by workers who (though they might still be working in their own homes) were taken on and laid off as wage earners. Advancement from apprentice to journeyman and from journeyman to master craftsman could be general only if the ratio of apprentices and journeymen to masters was low, but larger units raised the ratio, and stopped advancement, creating a class of permanent wage earners: so it was in Europe in the fifteenth century; and in Japan in the sixteenth and seventeenth centuries apprentices too numerous to have prospects of ad-

vancement became a form of indentured wage labor, and many journeymen lost all hope of becoming masters.

The workers to whom work was put out by the merchant suffered some of the disabilities of the wage earner, but kept one element of independence, in that they worked in their own homes and their own time; in fact they would often play for the first day or two of the week, and then toil long hours by rushlight to complete their task and earn their money by Saturday morning. Those who worked at the employer's place of business had to be there at set times and work under discipline. While most equipment was still simple there had always been some kinds of production that brought men together in that way—shipbuilding, for instance, and the manning of the ship, some building and public works, the offices of the scribes and tax collectors, mining, smelting, brewing, and the making of glass and pottery. Sometimes also workers like weavers, whose equipment could be and usually was dispersed cottage by cottage, were brought together under one roof to save transport of the materials and prevent their embezzlement. But it was the development of the central power plant and costly machines to be driven by it that brought in the factory. Undercutting the independent craftsmen, and bringing more young entrants immediately into wage earning, the factories whose growth started two hundred years ago carried further and faster the supersession of the self-employed by the worker who owns neither the materials nor the equipment he works with, and who cannot set about his job in his own place, his own way, or his own time.

The influences we have been considering all flowed from the extension of markets, and the division of labor and development of technique which it fostered. But the predominance of the employee was advanced by another and distinct

factor—the growth of population. Labor that is surplus to the current requirements of work on the land has always been a source of wage labor, even when those concerned remained attached to their holdings: especially in India and China, where animal husbandry has played a small part relative to crops whose labor requirements are highly seasonal, the peasant has provided wage labor for towns and factories during the slack seasons on the land. When the population of the villages grows beyond the number who can get land to work within the existing pattern of holdings, the excess may be absorbed for a time by subdivision, or receive a subsistence as members of underemployed families. But if the growth goes beyond a certain point, the excess must starve or take themselves off to find a living somewhere else. These landless men appear as vagrants and migrants. They have nothing but their labor to sell, and if they are to find a livelihood, it can only be as wage earners. In Western Europe since the Middle Ages we know of two great upsurges of population: one, inferentially, in the sixteenth century; the other, on more direct evidence, from the middle of the eighteenth century onward. Meanwhile, the population of the territories settled by Europeans overseas has generally grown past the point at which the last free land was taken up; and, more recently, Western methods of hygiene and pest control have brought to the underdeveloped countries a rapid fall in the death rate and an explosion of population. The overspill from the countryside forms cities and conurbations. These can exist only with the wide market, the division of labor, and the large units of production that promote the transition from self-employment. But the labor force of the cities and conurbations of today does not derive from that transition so much as from the newcomers who, being surplus to the establishment, could not succeed to any

holding of land or capital, and, having only their labor power to offer, must find an employer to give them a job.

THE GUILD

We have just seen how, as slavery receded, the labor force came to be made up mainly of two types, the self-employed and the wage earner, and that the self-employed predominated at first. Each type has formed its own characteristic organization. Down to the eighteenth century the leading and usually the only form of association among workers was the characteristic organization of the self-employed, the guild.

The one name of guild covers many forms and functions. There have been guilds of merchants, of craftsmen, of porters. Some guilds have been concerned mainly with religious observances or fraternal junketing, some have been organs of local government, some have been trade unions of wage earners. In the ancient world, in Babylonia, Hellenistic Greece, and republican Rome, there were guilds whose members were solely the tradesmen who sold to the public—the millers, the pastry cooks, the goldsmiths, the butchers, the ropemakers—and those who worked for them or learned the trade under them had no place in their membership. But we are concerned here with the guild whose typical member was a self-employed craftsman, with simple equipment but high manual skill, who sold his product to consumer or merchant, and whose workshop was so small that those who worked with him were few enough to expect to have workshops of their own in time. He had learned his trade as an apprentice, then served for some years as a journeyman for a daily wage. The structure of the guild thus held three tiers which were also rungs on a ladder of advancement—apprentice, journeyman, master.

Perhaps that structure was seldom found for long in its ideal form: the merchants who bought the product might reduce the masters to pieceworkers, or the journeymen might be taken on in such numbers that they became permanent wage earners and formed their own combination to keep wages up. But the main traits of the association of small masters, living by the sale of their product and working with apprentices and journeymen, appear over a wide expanse of space and time. Guilds of that kind can be traced in Japan from the eighth century, though the apprentices are said to have been often so numerous and bound for so long that they were little better than slaves. The written records of the Chinese guilds go back only to the seventeenth century, but those of the Korean guilds go back a thousand years, and refer to contemporary guilds in China. In India, guilds of craftsmen were general; they may have preceded the formation of castes—which may be in part a hardening of the separation and association by occupation that the guild itself provides, especially when membership is hereditary. The craft guild can be traced from the tenth century in London, and from the eleventh in Western Europe. The craft guilds of Byzantium enjoyed privileges such as a monopoly of the local market, and sometimes exemption from military service, in return for a strict supervision by the state of admissions, techniques, and prices. Their descendants, the Esnafs of Turkey, Bulgaria, and Serbia, in the early years of the present century, were said to bear "the closest resemblance to the medieval gild of Western Europe."[3]

So widespread an appearance suggests that the guild met

3. G. Unwin, *The Gilds of London* (3d ed. London, 1938), p. 3. But Unwin also remarked that the Esnafs differed from the medieval guild because they had not broken themselves up by engendering changes of technique.

needs common to the self-employed worker in very different societies. One of those needs was for the preservation of his art and mystery, for a way to transmit to the young entrant the skill that had been handed down to him in all its magic, rigor, and beauty. Another need was for security. The earnings of the worker who sells his product may be safeguarded by the competition of buyers in his market, or by custom that assures him a minimum price. His earnings are threatened by weak selling when demand falls off, by the entry of more neighbors into his trade, or the invasion of the local market by products made elsewhere. He is therefore prompted to stand shoulder to shoulder with his neighbors already in the trade. The French say, "craftsmen like to feel each other's elbows." The objectives of that united front are to regulate entry into the trade, to keep interlopers and "foreign" wares out of the local market, and to maintain agreed prices for the product and wages for the journeyman. These purposes are restrictive: but the student of the labor market soon learns that the pursuit of self-interest leads to combination as well as to competition, and that security is a goal sought no less ardently than profit.

CONNECTIONS BETWEEN OCCUPATION AND SOCIAL STATUS

Our sketch of how the modern labor force took shape has shown how the job a man does carries with it relations with other people that include but also go far beyond the relation of buyer and seller. Wherever there is division of labor, the worker must sell his product or his labor, and so he has to deal with buyers, and agree with them on terms that will decide how beneficial the transaction is to each party. But over and above that, the work a man does is likely to

carry with it particular ways in which he behaves toward other people, and they toward him: there is at any one time a more or less systematic connection between the occupational structure of the labor force and the social structure of the community.

This is at its clearest when the social structure is made up of hereditary castes. A boy born into a certain caste can enter only a certain range of occupations: he will not be allowed to enter higher occupations at all, and should he enter a lower one, he loses caste. The terms "higher" and "lower" call our attention to another feature: the castes, and their permitted occupations, are arranged in a hierarchy of prestige and respect. The members of the higher castes are socially superior: they do not speak to men of the lower castes as they do to one another; they may keep them at a physical as well as at a social distance; they abhor the thought of intermarriage. The men of the lower castes for their part must know their place, keep their distance, and approach their betters with every obsequious mark of respect. The essentials are that a range of jobs is linked with each stage of a social hierarchy; that this hierarchy is hereditary, so that each range of jobs is also hereditary; and that the gradations of the hierarchy appear not so much in income as in prestige, in acknowledged nobility or baseness, and in men's manners toward one another.

Much of this consciousness of rank still persists in societies that have repudiated the hierarchical principle. They have proclaimed the democratic principle instead—equality before the law and in the franchise, parity of esteem in the speech and bearing of citizens toward one another, and, so far as the nature of things allows, equality of opportunity. But even where castes are unthinkable, there still are classes: there are gradations of prestige, and there is segregation

by grade. The gradation is partly a scale of income, partly a scale of education shown also in manners and speech, and partly a scale established by consensus of esteem, which in European societies may contain vestigial venerations such as those for hereditary title and landownership. There is segregation by grade in that people tend to associate in their work, their place of residence, their recreations, and their schooling, mainly with members of their own grade. Though many people move out of the grade into which they were born, the majority do not, and most marriages are between members of the same grade. With this social gradation, again, there is linked a gradation of jobs. Architects and miners, shop assistants and bank clerks, truck drivers and school teachers—all tend to hold positions in the social scale that we can predict from knowledge of the jobs they do. People who do certain kinds of work feel themselves assimilated to one another thereby, and segregated to some extent from those who do other kinds, whether it is the job that makes the social distance, or the social distance that enforces the choice of job. In particular, the manual wage earners, who in a contemporary economy may make up as much as two-thirds of the whole labor force, may feel themselves to constitute "the working class," with its own distinctive manners, grievances, and goals.

This feeling is strengthened by some disabilities that having to work for an employer inherently imposes on the worker. The contract of employment is not simply a contract of sale, but carries particular relationships with it between the employed person and the rest of society, particularly with the employer himself. On several grounds the employed person has reason to fear that these will be relationships of inferiority for himself.

One ground is that in the fixing of his pay he is liable to

be exploited. If he has access to a number of employers, and they compete with one another, then he is unlikely to have to sell his labor below the value that the market puts upon it: if his day's work is worth $20 to employers, in the sense that they would reckon it just worth having even though they paid $20 to get it, then if one of them will not pay $20 for it, another will. But if he has access only to one or two employers, or if the potential employers, however numerous, maintain an understanding that they will not pay more than so much, and not poach labor from one another, then his case is very different. He is liable to meet this situation not infrequently in practice. We saw how the worker who sells his product can get into trouble if the market is narrow: for the worker who sells his labor, narrowness of the market is a threat even more imminent. So Adam Smith saw it in the eighteenth century: "We rarely hear, it has been said, of the combinations of masters, though frequently of those of workmen. But whoever imagines, upon this account, that masters rarely combine, is as ignorant of the world as of the subject. Masters are always and everywhere in a sort of tacit, but constant and uniform, combination, not to raise the wages of labour above their actual rate. To violate this combination is everywhere a most unpopular action, and a sort of reproach to a master among his neighbours and equals."[4] It is true that against the intent of the employers to maintain a certain maximum the worker can pit his own will to maintain a minimum, but here he comes up against another disability—he is generally less able to hold out. Adam Smith again recorded this as a fact of observation in his own day: "A landlord, a farmer, a master manufacturer, or merchant, though they did not employ a single workman, could generally live

4. *Wealth of Nations* (1776), Bk. I, chap. 8.

a year or two upon the stocks which they have already acquired. Many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment. In the long run the workman may be as necessary to his master as his master is to him; but the necessity is not so immediate."[5]

So the worker who makes his own bargain has reason to fear that he will have to settle for something less than his work is worth to the employer, who will thus be able to make a profit by withholding part of his due reward. This is the basic notion of exploitation. It tends to be extended in practice so as to tar with the same brush the quite different kind of profit that is the return to enterprise and risk capital after labor has been paid its full market value.

The disability that the worker is liable to suffer in this way is the more threatening the bigger are the firms. When each employer has many workers, each worker is likely to be in touch with fewer alternative employers than if the same labor force were spread over a larger number of smaller firms. The disparity between the resources, and the ability to hold out, of the employer and any one worker will generally be greater when firms are large. The worker's alternative possibility, of setting up in the trade for himself, will amount to little when the existing firms have great capitals.

There is another major ground for the worker's apprehension that his relationship with his employer may be one of inferiority for himself: it is, in a word, that he must put himself under the employer's orders. The independent craftsman works in his own home, in his own time, in his own way, subject only to the restraints that he must make the kind of thing that will sell, and make enough of it to get his living;

5. Ibid.

those restraints extend a little further when the customer commissions a particular piece of work, but the worker is still selling his *product* and not his *labor*. When he enters instead into a contract of employment, it is his labor that he sells: in return for his pay, he agrees to undertake the tasks that, within certain assigned limits, the employer will set him from time to time. This can be perfectly acceptable, a part of the arrangements for the job as necessary and natural as the provision of materials and tools. But it may seem quite otherwise: it may be felt and resented as a loss of freedom so great as to mean a loss of pleasure and pride in the job, of spontaneity and the will to work, even of manhood itself. The worker has to go to the employer's place of work, which has been laid out by the employer, and whose amenities or inconveniences, safeguards or dangers, the worker has to take as he finds. He cannot indulge his own inclination about when to start work and stop, but must attend through appointed hours, or be penalized. Nor can he always follow his own mood in the pace at which he works: the pace may be set by the machine, or kept up by bonuses and fines, or the rough side of the overseer's tongue and the threat of discharge. There have to be rules in the work place, and rules must have sanctions: so the worker in taking the job puts himself under discipline. Generally, though not necessarily or always, the work of a firm is more subdivided and more repetitive than that of the man who is self-employed; and the firm's employees lack to that extent the relief of variety, the interest of problem-solving, and the pleasure a man finds in setting about his work in his own way.

To represent resentment of these constraints as the invariable or even the general state of affairs would go much too far. There are work places where the prescription of tasks is undertaken and accepted not as the assertion of au-

thority over subordinates but as part of the organization of a team with whose purposes the individual worker identifies himself. There are temperaments to which directions, rules, and discipline are not irksome: rather they meet a need and provide reassurance. But the record of unrest, protest, and proposed reforms leaves no doubt that many men have felt and still do feel it irksome to be compelled, if they are to get a living, to put themselves under the orders of an employer. His authority appears arbitrary, and a way of exploiting the power that is his by reason of his relative wealth and his control of the access to livelihood. The parties once accepted in English terminology as master and servant have been renamed, in merely functional terms that imply no subordination, employer and employed; but the employed in practice may still speak of the employer as the boss. The issue is one not of amenity, or pay, but of power. The trade union leader Ernest Bevin, speaking in 1934 on an occasion that recalled the repression of the early attempts of English farm workers to form a union, declared: "The landlord does not fight to retain his land merely because of the money it yields him, but because of the power it gives him. The capitalist is the same. He will give you sport, welfare and charity and everything but one thing, and that is power. He will hold on to that, the power to give you the sack, to impose his will and withhold from you the means of sustenance. Such power is unwarrantable."[6]

So there seem to be two main sources of the worker's sense that his status is inferior: his liabilities to be exploited and to be subordinated. He may connect both with another aspect of that status—the fact that he and his employer are commonly at some distance from each other in the social scale,

6. A. Bullock, *The Life and Times of Ernest Bevin* (London, Heinemann, 1960), pp. 551–52.

that with their difference of occupation goes a difference of class. Those who are doing his kind of work share certain disabilities, certain habits of life and ways of speech: he recognizes them when he meets them, and marks the difference in the bearing, the interests, the very facial expression of those whose work is different. To the extent that he feels drawn toward his fellows and separated from the rest of society, he will see the disabilities of his working life as those of his class, and the conflict of interests between employer and employed as those of a class struggle.

Karl Marx, surveying the advance of industrialism in Western Europe in the 1840s, concluded that as it went on it would increasingly divide all men into two and only two classes—those who owned capital and controlled production, and those whose livelihood could come only from working for the capitalist—and that in the end the working class would expropriate the capitalist and establish a communist society in which they were their own masters. The belief that this is the mainspring of history remains the creed held and taught throughout the Soviet world, from the Oder to the Pacific. But the actual course of events has not borne it out. Where communist societies have been set up, it has been through the seizure of power by a minority. The social structure has proved too complex to allow the division of interests and loyalties into only two camps. Power has been dispersed through the checks and balances of a pluralistic society. The equality of men as citizens before the law and in the franchise, and the extension of educational opportunity, have mitigated the continuing inequalities of the working life. A rise in the standard of living has diminished the contrast between the incomes of men in different occupations.

Nonetheless, the conflict that in Western countries in the nineteenth century was called the conflict of capital and

labor remains as a stress and strain within those countries today, and appears wherever industrialism develops in the emergent economies elsewhere. Ways of accommodating it within an orderly society have been worked out: only rarely does it break out in violence, and though peaceful disputes still cause losses, these bear a minute proportion to the national product. But it remains as the unsolved problem of industrial relations. The employed feel a common interest in being able to resist the employers. Where agreements are reached, or relations are harmonious, they are still between "the two sides." When we speak of "the men's leaders," we do not mean the captains of industry.

THE RISE OF TRADE UNIONISM

It is the generality of the disabilities inherent in the status of the employed worker that must account for the generality of the institution he has created to offset them: wherever a permanent class of wage earners has appeared in substantial, locally concentrated numbers, and combinations are not broken up by the authorities, there has appeared the trade union. What the guild was for the worker who sold his product, the trade union has been and is for the worker who sells his labor. We hear of strikes in the ancient world, and these must have meant at least a temporary combination of workers. In the thirteenth century, where manufacture was already organized on a large scale in the Low Countries, northeastern France, and Tuscany, and though most of the workers remained outworkers large numbers worked for the same employer, years of bad trade brought unemployment: here strife was endemic, and unions enforced strikes and boycotts. But the concentration of employment was not

general enough as yet, and the authorities put down combinations with too rough a hand for a continuing unionism to grow up.

The roots of modern unionism are rather to be seen in the seventeenth and eighteenth centuries, when some members of the guilds began to find themselves in the position of permanent wage earners. In the early guilds the craftsman had united in his own person the functions of merchant, shopkeeper, employer, foreman, and worker. As markets extended and capitals grew larger, these functions became separated—singly or in pairs—and there appeared merchants, merchant-shopkeepers, merchant-employers, employers, small masters who worked themselves and also acted as foremen in their workshops, and, lastly, the journeymen. Within the industries that the guilds controlled it was from the last two types that the modern wage earner was formed. The small masters were reduced to the condition of wage earners when they came to depend for their work on what merchants put out to them. The journeymen found their numbers increased when restrictions on apprenticeship broke down; at the same time the amount of capital a master needed grew with the market, and the journeyman thus had less and less prospect of becoming a master in his turn and owning his own stock in trade. Employers also began to take on "foreigners" and "serving men" who had not been apprenticed. By 1776 Adam Smith could report that "in every part of Europe, twenty workmen serve under a master for one that is independent, and the wages of labour are everywhere understood to be, what they usually are, when the labourer is one person, and the owner of the stock which employs him another."[7] But small masters and journeymen alike had a tradition of asso-

7. *Wealth of Nations,* Bk. I, chap. 8.

ciation within the guild that helped them now to form combinations against it. It is in the efforts at organization of the small masters in seventeenth-century England that "the immediate antecedents of the modern trade union are to be sought."[8] The journeymen might already have had their friendly societies, for sick and funeral benefits, and now they formed "clubs" for bargaining. In 1682 the journeymen clothworkers of London took advantage of an export order to refuse to work for less than twelve shillings a week. In 1777 the journeymen hatters of London had a congress, probably eighty years old at that time, that drew up bylaws, limited apprentices, and threatened a strike unless fifty journeymen who had refused to pay dues to it were sacked.

The conditions that broke combinations of wage earners away from the guilds worked to form trade unions in industries that had no guilds. They have also given rise to unions as they have appeared at different times in other countries—in the United States, as in Britain, toward the end of the eighteenth century; in most other countries, later.

We have noted some of these conditions for the development of unions: there must be a class of permanent wage earners sufficiently numerous and concentrated to be able to keep in touch with one another and to get together in some force; and efforts at combination must not be repressed by the authorities absolutely. To these conditions we may add some others. The great protection of the wage earner, in the absence of a union, was custom, which prescribed a customary wage and made it seem unjust to take advantage of the worker's need for a job by paying less. Whatever broke down custom, therefore, heightened the felt need for a

8. G. Unwin, *Industrial Organization in the Sixteenth and Seventeenth Centuries* (Oxford, 1904, republished London, Cass, 1957), pp. 200–01.

union, whether it was the improvement of communications exposing once sheltered local markets to the vicissitudes of wider competition, or a time of rising prices, very likely in wartime, that made it urgent to seek rises in pay. If unions are to maintain themselves from their own resources, two other conditions are requisite: the wages of their members must already be high enough for them to be able to pay their dues regularly (it is a great source of stability if the dues can be high enough to finance a scheme of "friendly benefits," that is, of insurance against, for example, sickness, death, and unemployment) and there must be at least some among the members who are educated enough to be able to keep accounts, write minutes and correspondence, and administer the business of the branch or head office. In the underdeveloped countries these last two requirements have hitherto been met by only a minority of the employed workers; and if unions were to be kept going for the rest, they have had to be administered, and often subsidized, by outsiders—a political party, or selfless men devoted to the workers' cause, or politicians in search of publicity and lawyers in search of briefs, or adventurers and sheer gangsters.

Until the end of the nineteenth century trade unionism was largely confined to the manual wage earner: the twentieth century has seen its extension among the white-collar workers in clerical, administrative, and technical occupations. That these workers had not felt the need to combine before may be explained by the social distance that separated them from the manual worker who typified the unionist of those days, by their working in smaller units than he and with more personal contact with the employer, and by their having more prospect of personal advancement. In recent years these factors have been broken down or offset by the extension of education and the rise (relative as well as abso-

lute) in the standard of living of the manual worker, the increases in the relative number of white-collar workers and in the size of offices, and the need in times of inflation to move salaries up with less lag than under individual bargaining. Unionism extends among the more highly paid or educated employees in proportion as they cease to regard it as beneath them socially and come to feel the same needs as the manual worker in their own working life.

We saw that these needs were mainly two—for support in bargaining about the terms and conditions of employment, and for keeping one's own end up despite having to put oneself under another man's orders at the place of work. The functions that the union performs for its members correspond with these needs. Through collective bargaining it enables them to hold out for a certain rate, despite their own lack of resources and their need for a job, by ensuring that they will not be undercut by other workers, and by amassing strike funds and building up a common purpose. The same sanctions it brings to bear on bargaining can be applied, through the bargain itself or outside it, to make its members' views on the arrangements of their work felt by management, to set limits to the executive discretion of management at the place of work, and within those limits to protect its members against any use of the executive power that they may feel arbitrary or unfair. It may negotiate a detailed code of working rules to govern the day-to-day administration of the firm, or it may only set itself to uphold customary practice and make its wishes known on fresh issues as they arise; but in either case it will generally resist what it sees as victimization or favoritism, seek a rule for or a voice in promotion, obtain safeguards in disciplinary procedure, and try to limit or regulate redundancy.

The checks and balances through which the union exercises these last functions do not work without some friction and, from time to time, some strife. Nor do they satisfy those who wish not merely to offset the disabilities inherent in the status of the employed worker but to change that status altogether, and who may contrast it with the status of the same worker as a citizen in a democracy, where he has the right to be informed and consulted about all matters of common concern, and has as much voice as any other voter in the ultimate choice of the executive and its policy. They may also contrast it with that of a working partner, who has an equal voice in the councils of the enterprise, does his work in it neither as one who gives orders nor as one who has to take them but as a member of a team, and draws his income as an agreed share in the product. Both contrasts enforce the difference between existing arrangements and the ideal of industrial democracy. This ideal has obtained only very partial acceptance, if effort in pursuit of it be the test, among trade unionists, but it is persistent: it has survived the small success or outright failure of various experiments in profit sharing, employee shareholding, joint consultation, and workers' control, and since the Second World War it has inspired attempts to build an element of self-government into the very constitution of the firm. Notable among these have been the statutory provision for *Mitbestimmung* or codetermination in the coal and the iron and steel industries of Western Germany, under which the Works Council of employees appoints one of the three executive directors of each firm and half the members (other than the chairman) of the supervisory Board of Directors; and the scope given by the Yugoslav decentralization law of 1952 to the Workers' Council of each enterprise and the Management Board it appoints.

STATE ACTION TO REMEDY THE DISABILITIES OF THE WAGE EARNER'S STATUS

The disabilities that attach to the status of the employed worker have been offset not only by the trade union but by the state.

In part the state has acted along the same lines as the unions, fostering the growth of voluntary unionism, providing statutory bodies and rules to fill the gaps that unionism leaves, and supplementing collective agreements by general regulations. When unions first appeared in Western countries they were often treated as seditious conspiracies, or at least as being against the public interest because they were combinations in restraint of trade. In the course of the nineteenth century their functions began to be better understood, and the law was changed—at first by the removal of prohibitions, and later by the working out of a code that gives the unions protection and may lay on the employer an obligation to accept and work with them. The growth of unions, meanwhile, was still partial, and left wide tracts of employment without collective bargaining. In these tracts some states have set up boards to arrive at terms and conditions of employment, in much the same way as in collective negotiations, by discussion between spokesmen of employers and employed; but the boards also contain spokesmen for the public interest, and their decisions may be made legally binding on all employers. In other countries the legislature has provided for a general minimum wage—either fixed in dollars and cents in the law itself, as in the Fair Labor Standards Act (1938) in the United States, or adjusted from time to time

according to the cost of living, as in the French S.M.I.G. (1950).[9]

States that have provided for the compulsory arbitration of labor disputes were usually moved to it originally by the wish to ensure a settlement and keep the peace, but it has had the effect in practice of enabling trade unions to enforce rates on employers who would not voluntarily negotiate, to uphold a national minimum wage, and to extend local advances over adjacent sectors; in Australia and New Zealand it has come to determine the main proportions of the national wage structure. The state entered another wide field in which protection by unionism was inadequate or nonexistent when it began to build up a code of factory law, as it is still called, though today it applies to much more than the factory. The hours of work, and the design of equipment and processes so as to guard the worker against accident and disease, can be and are the subjects of collective negotiation, but the workers who suffered most from exhaustion by long hours in the early days of modern industry were the unorganized women and children; and though the miners and the seamen had their unions, these were far from being able to protect them from the hazards of life and limb to which the day's work exposed them. "Is it not optional with the miners to go into the pit?" an English mine-owner asked, when a miners' leader was describing the dangers of work underground. "Certainly," the miners' leader replied, "but it is also optional with them to starve if they do not."[10] The

9. Salaire Minimum Interprofessionnel Garanti (guaranteed minimum rate of pay for all occupations).

10. Royal Commission on the Organization and Rules of Trade Unions, 1867–69, Seventh Report, Q.15485, *Parliamentary Papers* (1867–68), 39.

common purpose of the wide range of regulations in the factory laws of today is to ensure that the worker's need of a job shall not oblige him to undergo any risk of accident or disease that can be warded off by measures within the power of management.

In all these ways the state has acted to offset disabilities whose source is the dependent status of the employed worker, and especially the urgency of his need for a job. But there are other ways in which what is remarkable in his status is its independence. Here, too, there are disabilities, and the state has taken action to offset them.

The employed worker is independent in this sense: it is he who must look after himself and his family day in and day out, and all that his employer has to provide him with under the simplest form of the contract of service is a payment for particular pieces of work. But he can do those pieces of work only if he, or someone for him, has incurred certain costs. He has had to be reared as a child, given some general education, and trained for the particular job. To be in health and strength for the work he has had to provide himself with a certain standard of consumption. Where there is slavery, these costs of maintaining the labor force fall on the employer, but when the worker is independent, they fall on him, both in his own capacity and as the parent of workers to be. There is no presumption that his pay will cover these costs. Because the cost of training for a particular occupation restricts entry into it, the pay will be higher, but it does not necessarily go to those who have borne the cost of the training, nor does what is being spent out of today's pay on rearing and training future workers bear any necessary relation to the price that the trained ability is going to command. There is not even any presumption that the rate of pay a worker can command will at least be enough to provide him and his

household with the bare essentials of physical efficiency: as recently as in the years just before the First World War, a third of the households of British towns were getting less than that, and in the emergent countries today very generally the worker's pay is low because of his low efficiency, and his efficiency is low because of his low pay. The obstacle to the employer himself investing in the building up of a stronger work force is the independence of the worker.

But there are still other ways in which the worker's independence makes him responsible for provisions that are needed to make labor available to the user. There is a familiar example in the docks, where the amount of work to be done fluctuates, and if a man is to be available on the days when there is work for him, he must somehow be maintained through those when there is none: if he is treated as independent, then he must bear the cost of that himself. The function of a scheme of decasualization is to transfer the cost to the user of his labor. But the same principle arises in all unemployment that is not the worker's own fault. This includes his absence from work through illness, which reminds us in turn of the cost of medical care, quite apart from absence: it is because of the independent status of the worker that (short of organized provision to the contrary) this cost is borne by him, whereas the cost of care and maintenance of a machine is met by the employer. A like consideration applies to the cost of accidents suffered in the course of employment. At the last, there is old age. Most of today's workers are bound to need maintenance later on when they are too old for work: should provision for that be their responsibility alone or be treated as a current cost of employing them?

In the last half-century the feeling that the user of labor should bear more of the costs of supplying it has joined with the generally increased willingness to transfer income to

those who are worst off, and changes have been made in two directions. In the first, trade unions have widened the collective agreement to include sick pay, unemployment pay, and pensions; and governments have set up schemes of social insurance against the same contingencies, financing them, in whole or in part, through a payroll tax. The state has also laid greater liability on employers for the cost of accidents to their workers. The general effect of these measures is to transfer the cost of this sort of provision from the employed worker to his employer in the first instance, and through the employer to the buyers of the product, who include the employed worker himself; there may or may not be some endeavor to vary the charge laid upon different sectors of employment according to the different incidence of given contingencies, such as unemployment, within them. The second direction of change is to lay the charge for such provisions on the community as a whole, which meets it out of its general tax revenue. The difference from the first method may be more in form than in substance, for the objects may be the same, and the first method of financing may be only a form of the indirect taxation that is part of the second. But the second has been used to assume charges that are not so closely connected with current employments, and not only to meet the cost of provision already being made but to make much greater provision: through the maintenance of a minimum standard of living, especially for children, through assisted housing, medical care, and, above all, through education.

3 THE QUALITY OF THE LABOR FORCE

ADAPTATION OF LABOR TO REQUIREMENTS OF ECONOMIC GROWTH

Economists, noting that the equipment used in current production is itself the product of earlier activity, have sometimes tried to trace all output back to ultimate factors of production that make, but have not themselves been made. They have found these factors in labor, waiting, and land, or the gifts of nature. It is hard, however, to imagine what labor in that unshaped shape could be like. Every man is what he is, and works as he does, through nurture as well as nature: what sort of producer he will be depends on what sort of product he is. This is true not only in the obvious sense that to do most jobs he has first to be trained: much more important, his capacity to be trained, his whole attitude to work, the kind of economy he can tolerate and develop—

all these depend on the way he has been brought up and the imprint that family, society, and culture have set upon him.

This is manifest when modern techniques are brought into a primitive society. Labor there cannot simply be trained to use them. The difficulties that arise at many points show that the whole way of life of the worker—his customs, values, habits of thought, his ties of kindred and his notions of obligation and authority—must undergo deep changes if he is to serve the uses of a developed economy.

This appears in the very pattern of the day. We can understand that those who have no clocks find it hard to keep good time—but more than that, they may lack the very idea of punctuality and of allocating time at all. It goes with this that they start and stop according to the feeling of the moment, moving spontaneously, enjoying variety in their activity, making great exertions and enduring great strains sometimes, but only between long spells of ease, and generally being indefinite about what they are going to do next. The steady, regular pattern of the day's work, the week's and the year's, which the worker of the developed economy for the most part accepts as part of the nature of things, is strange and repugnant to them.

One reason is that where regularity of work is accepted, it is as the means to an end, namely, a regular income; but the categories of means and end, cause and effect, are alien to a more intuitive habit of mind. True, life can go on nowhere without action that is instrumental in effect: weapons must be fashioned for the hunt, seed planted for the harvest. But such action need not be seen and felt as instrumental: it may be traditional, and performed without men asking themselves, "In order to attain this object eventually, what measures shall I take now?" still less, "What measures can I devise to attain the object best?" Where much activity is spontane-

ous, or not directed beyond the immediate task in hand, the very distinction between work and play may be absent, and both alike be rites. Men from such communities will find it hard to understand machinery, not just because it is new to them but because it is made and used not for its own sake but as a means to an end. Operating it efficiently means understanding it in that way—running it at its operational speed, not racing it for the fun of seeing the sparks fly. When it goes wrong, what it needs is diagnosis—that is, observation and inference that will find the cause: it cannot be set right by love or anger. This is a strange approach; when the tractor stops, the natural remedy is to beat it. The same unfamiliarity with the categories of cause and effect brings a difficulty in understanding the division of labor. Where this division has been pushed far any one man's work does not yield a product that is directly useful to himself or indeed has necessarily any use that is apparent to him at all, but has its place in a complex design, as a means to a remote end: as such it may be incomprehensible to those whose purposes are generally immediate. In the same way the payment of wages by time is harder to understand than payment by task or piece. The latter is like a sale in the market place: hand so much over to the employer, and he will pay you so much for it. But when he pays by time, he requires you to attend for certain hours and do what he tells you, and after a while he will give you some money. This is intelligible only if you can see how your work can be a means to the employer's end of output and your own end of pay, even though it has no immediate connection with either.

Part of the difficulty here may lie in the size of the employer's business. The firm in the developed economy, though its working in each particular instance depends much on personalities, is inherently an impersonal system of administra-

tion, with its structure that sets positions, not persons, in their due relation to one another, and its working code that assigns authority to offices and is binding upon all. This is confusing to those for whom authority is inherently personal. It is hard for them to see their place in an organization chart when the question they are asking is, "Who is my father here, who is my chief?" When rules are applied to them, they see this only as the exertion of someone's power, and so capable of being changed if he will show favor. They come too easily under the sway of the foreman, or the sirdar through whom they have been recruited.

The problem of finding personal relations within the impersonal firm is graver when the worker deprived of such relations is far more bewildered than he generally is in Western societies. In these, for all the ties of kindred and locality, men have become accustomed to standing by themselves, not much restrained in their activities or supported in their difficulties by ties beyond those of husband and wife, parent and child; even this last tie may be strong only in the early years of life, and children are brought up in the expectation of going out into the world, of getting married and setting up for themselves. In the last century the word "individual" came into use for what had been divided as far as division would go. But in other societies family or tribe or village permeate the being of their members, who, when separated from them, are not just lonely or homesick but lose much of their capacity for action. The analogy of the hand that can no longer grasp when it is cut off from the body is needed to bring home to Western man, with his custom and virtue of independence, how the one lifeblood of feeling and judgment suffuses the veins of all the members of such a group. It is not so much that they depend on the group as that there is no "they" apart from it. One manifestation of this is the pro-

pensity to carry grouping by family or tribe into the place of work, and to refuse to work alongside those who do not belong: workers whose very being is in kindred and affinity find it harder to shake down together than the more separated, self-contained individuals of the West. But this is only one form of the more general difficulty: a developed economy requires its workers to be units who can be variously combined and assorted, whereas in much of the emergent world men are not units.

From these characteristics of the people of that world there follow some features of the labor force. Foremost is the reluctance with which men enter the labor force at all. The fruits of economic development may be desired, but the way to win them does not attract those who have not been in the habit of acting to better their own condition. Often the impulsion into the new forms of work has had to come from behind. Sometimes government has supplied it, either by imposing taxes that force men to go out at least for a time to work to pay them, or by some form of forced labor on public works. But the main propellant has been the pressure of population. When this pressure is not too high, it may make itself felt only at certain seasons, and provide a reversible migration. Animal husbandry needs attention throughout the year, but in arable farming there may be a big difference between the labor force needed in seedtime and harvest and at other times—it was reckoned that on the average farm in northeastern and central China there used to be work for about 190 man-days in the course of the year, but this was performed by two men, capable, say, of 600 man-days. So a rural people may gain an habituation to industrial work through seasonal migration; and the other side of the same penny is that industry has a seasonally fluctuating labor force. But where population pressure becomes higher, sep-

aration from the soil must last longer or become permanent. Sons and daughters may be sent away to work long enough to earn bride-price or dowry; men who can earn more in industry than from their share of the yield of the family holding may spend most of their working years, with some interruptions, in the town, but return to the village at the last; some will move their whole being to the town. But in India and Africa these last are still few: men may have a right to share in the family produce or tribal land that they cannot sell outright or draw on to bring them revenue while they are in the town, and their only way to use it is to go home.

The labor force thus provided to industry remains unstable. Beside a minority of long-service workers is a majority that works only intermittently. Those coming to town for the first time change their jobs in their quest for the work that they dislike least or that pays best. Almost all, including those who have settled in a job, withdraw after a time to go back to the village. They often return, and to the same employment, so that many of a firm's workers will have long years of service with it, but these years are not continuous. There is also much absenteeism for shorter visits home, or through sickness, which is frequent among the undernourished. So it comes about that just where labor is in excess supply it is hardest to retain.

The reason for this paradox is ultimately the reluctance of men and women to enter into a way of life quite alien to their own habits of thought and social ties. In noting some of the sources of this antipathy we have by implication noted some of the qualities that the labor force of a developed economy requires. It needs to accept regular and steady work through fixed periods of time. It must use the categories of means and end, cause and effect, in its own thought, both to be able to operate machinery and to understand the contract

of employment under the division of labor. It must be accustomed to the distinction between personal authority and the executive authority vested in an office under a constitution or administrative code. Its members should be sufficiently independent of the ties of the extended family or tribe or village to make their way on their own and to be capable of being variously combined with one another. Though in this way mobile, they must at the same time be settled, in the sense that they have no ties to pull them back into another way of life.

These are not the prerequisites for all and any industrialization: even where they are still largely lacking, firms whose technique or markets enable them to carry high labor costs do operate modern plants; Kenya and Egypt, for instance, have attained in this way a considerable industrial development. Nor can countries and phases be readily classified or contrasted: there are many mixed conditions and intermediate stages. But the labor forces that attain technical skill and a high material standard of living do seem to need such qualities as we have noted. Let us go on to ask how they can be acquired.

RAISING THE QUALITY OF THE LABOR FORCE IN EMERGENT ECONOMIES

To form from the peoples of a primitive society a labor force capable of high output means helping men and women to find a new way of life. The main responsibility rests on management, whether public or private. It is on the manager as a man that the worker accustomed to personal authority will fix his hopes and fears. But the manager cannot simply take the social setting as given, bring in equipment, and train men to operate it: he has also to help them

get used to living in a different place and to following a different pattern of work, leisure, and expenditure. His technical knowledge will avail him little unless he also knows how to handle people. "The impression is recorded that the efficiency of East African natives depends first on the quality of the European administrators, business executives and foremen who control them."[1] Not least in influence is the foreman, who is likely to combine the functions of recruiter, fitter or machine-setter, and overseer. It is he who is in direct touch with the workers and can make the day wretched or cheerful for them; but too often he has had no training in man management, and, even if he is trained, he is often preoccupied with too diverse responsibilities.

Though good management is specially needed, it does not necessarily have to use special methods. Of course it must take account of local circumstances, such as the tribal or religious differences that limit the allocation of tasks and the ability of men to work together. But there is evidence that the labor force of emergent societies can respond to the methods that are considered good labor management in an advanced society. Though the newcomer to industry is in many ways so different from the Western worker, he can still respond in much the same way to the same treatment. Indeed, what sort of man we take him to be may depend on what sort of treatment he receives. The local and traditional employer's view of his workers may be borne out by the way they behave under treatment based on or rationalized by that view: their behavior under different treatment might warrant different inferences about their attitudes and potential. Some at least of what seem to be inherent and specific characteristics of the

1. U.K. Colonial Office, *African Labour Efficiency Survey*, ed. C. H. Northcott (London, 1949), p. 34.

labor forces of the emergent societies may only mark the kind of handling they have been getting.

Though in emergent societies good managers are a more productive asset than good equipment, they are far harder to acquire. Where these societies have armies in the Western tradition, the training of the young officer not only to take executive control of his men but to consider their comfort and well-being provides a possible source of managers schooled to see understanding of the worker and care for his welfare as a foremost part of their job. But that approach is unlikely to be general. Where labor is cheap, there is no immediate incentive to get the best out of it, or to consult its feelings. Higher education may be valued traditionally as setting one apart from manual toil and toilers. Managing labor may be regarded as a subsidiary matter to be subcontracted to the sirdar who can work in the local vernacular and must be left to do his job in his own way. "It is fair to say . . . that a great many Indian managements still remain unconvinced or unaware of the value of in-plant supervisory and management training programmes."[2]

Experience has suggested various measures that good management can employ or the government promote to help build up a strong and settled labor force. Within the firm a principal part may be played at an early stage by provisions for welfare such as have appeared only late in the course of development of Western economies: there is no presumption that the sequence in which industrial relations and conditions of employment have evolved in those economies is either necessary or desirable in the economies now emergent. Amenities at the place of work make more difference to labor

2. C. A. Myers, *Labor Problems in the Industrialization of India* (Cambridge, Mass., 1958), p. 114.

that is housed squalidly than to the worker who returns to a comfortable home. Selection according to aptitude may help the raw even more than the seasoned entrant. Workers may understand joint consultation and be able to make something of it before they are capable of collective bargaining. There are also grounds for believing that workers whose response to wage incentives is uncertain do appreciate opportunities for advancement. Sometimes men shrink back from it because of an inbred fear of arousing envy; but when that does not inhibit them, they value the chance to work their way toward the more desired jobs. In Uganda, for instance, they will for that reason take work at low pay as cleaners and greasers in a garage; and a racial bar to advancement beyond a certain point, as when the Asian wage scale begins where the African leaves off, or the more qualified work is reserved for Europeans only, discourages the aspirations that might otherwise energize the worker.

Outside the place of work, much depends on housing. The migrant from the country who can find quarters only in a shantytown will not want to commit himself to work in industry. There is little incentive to earn more if you have no thief-proof house in which to keep what your earnings would buy. A decent house is not only a great part of a higher standard of living in itself but a prerequisite for much of the rest; and it enables the women, who will be pressing for more household amenities, to join their men in town.

If public agencies can foster the growth of an independent trade unionism, this will do something not only to negotiate better terms for the worker and protect him from abuses but to develop his own caliber and provide him with amenities outside the place of work. Thus in Mexico the unions have built houses, helped the newcomer from the village to find his feet, and combated his illiteracy by providing adult edu-

cation. The very maintenance of a union, moreover, gives its members self-respect and training in citizenship. Reflecting in the 1890s on the effects of trade unionism in its early days in Britain, Alfred Marshall reached a conclusion that has application to the emergent societies of today:

> The power of Unions to sustain high wages depends chiefly on the influence they exert on the character of the workers themselves . . . Trade-unionism . . . found even the artisan with but little independence and self-respect, incensed against his employers, but with no well-considered policy for compelling them to treat him as an equal who had something to sell that they wanted to buy. This state of things would in any case have been much modified by the increase of wealth and of knowledge; which . . . would have taken away much of that want and fear of hunger which depressed the physique and the moral character of the working classes. Unions have been at once a chief product and a chief cause of this constant elevation of the Standard of Life: where that Standard is high, Unions have sprung up naturally; where Unions have been strong, the Standard of Life has generally risen.[3]

We touch here upon that progressive interaction of higher output on personal quality and higher personal quality on output that reverses the vicious circle of poverty and weakness within which the labor force of undeveloped economies is initially locked, and provides the main way out of it. Higher earnings improve physique. There is great scope for this, and sometimes the effect can be rapid. An English

3. *Elements of Economics of Industry* (London, Macmillan, 1892), Bk. VI, chap. xiii, par. 16.

engineer who had had experience in railway building in many parts of the world a hundred years ago concluded that

> with regard to unskilled labour men seem to be like machines: the work given out bears some relation to the food consumed. A good illustration of this occurred on the French railways executed by Mr. Brassey . . . He began by largely employing English navvies, paying them much higher wages than would have been required by French labourers, but the larger amount of work done by the Englishmen compensated him for the higher wages. After a time . . . the Frenchmen, gradually receiving higher wages than previously they were accustomed to receive, were enabled to live better and do more work, until ultimately the French labourers came to be chiefly employed.[4]

But a yet more powerful effect on physique comes as a new generation grows up that has had more to eat in childhood, where malnutrition does most harm. Better physique brings better health, which means less absenteeism and a longer span of life. This, a gain in itself, also brings an indirect gain by extending the return on investment in training: in Uganda, for example, only 11 per cent of the population have been living beyond the age of 45, and apprenticeship is lengthy in comparison with the span left to apply it in. A rise in the standard of living also promotes an improvement of personal quality, because it tends to bring a reduction of the birth rate where that has been out of balance with the rate of mortality. Overpopulation, it seems, is not self-correcting: the misery it brings imposes an ultimate check through the death rate, but the remedy of a lower birth rate is likely to be

4. Sir Arthur Helps, *Life and Labours of Mr. Brassey* (London, Bell and Daldy, 1872), letter from John Hawkshaw, p. 364.

reached only when economic development first brings a relief from misery. There remains to be noted a linkage through management; as labor comes to cost more, relative to equipment, and to be at once more capable of good work and more resistant to rough treatment, management is put under pressure not only to be more considerate but to organize work more efficiently and economize on labor—that is, to raise output per man yet further.

Our survey of the means of raising the quality of the labor force of an emergent economy has left to the last the means that, given the right social setting, acts most directly—namely, training. This includes education, both general and vocational. An effective system of only elementary education makes a great claim on resources (in India a plan for it is expected to take forty years to carry through), and noticing how well the illiterate can be trained for certain jobs, some observers have doubted whether education can be given priority in a still poor economy. But it is not only that once the light of learning is at hand you cannot deny it to men without deliberately shutting them in the dark: an elementary education seems also to be prerequisite for most industrial training, not only because so many jobs require the worker to read, write, or figure, but basically because the illiterate man is less able to reason, to communicate, and above all to adapt himself to fresh requirements. A distinction may be attempted insofar as general education exists to develop the pupil and enrich his life, and so is an end in itself, whereas vocational training is only a means to the end of production. But this does less than justice to vocational training; and in any case the economist, concerned with the effect on the potential of the pupil as an agent of production, can draw no dividing line, but sees the general and the vocational alike as part of the formation of the labor force.

We proceed to consider this process of formation as an activity of developed as well as emergent economies.

TRAINING FOR THE WORKING LIFE

One would have thought that any ruler concerned with perpetuating his house's sway would have found his surest means in the training of a cadre of officers and administrators; and still more that any father of his people would have sought their continuing strength and prosperity by ensuring that the young folk would be trained, generation after generation, in skill, discipline, and purpose. But governments until quite recent times have made singularly little provision for training. Some, it is true, have taken care to recruit their servants from among the best qualified of their young men; the armed forces have had their ways of instructing and seasoning; Sparta had a plan for the exercising of its children, and ancient China for the training of its mandarins. In most ages, too, governments have been attracted by autarky, and have wanted their people to be able to make at home whatever others were making abroad: so they have sent for foreign craftsmen to come and impart the secrets of their trade, have offered settlements to industrially qualified migrants, and welcomed refugees who brought new skills with them—as the Huguenots brought silk-working to England. Yet what is remarkable, on a wide survey, is how small the provision is that governments have made for raising the quality of their peoples—for imparting knowledge to them, and the ability to read and write, reason and calculate; for their instruction in the arts and crafts, in agriculture and industry; and, not less, for causing them to learn by experience the rules of self-discipline and respect for others. On what a people in any generation have taken in as they grew

up depends their stability, their capacity for growth, the fullness of the life they lead, their very survival in a dangerous world. The philosopher of history, seeking causes for the rise and fall of empires, might well ask what arrangements they have made, or failed to make, for training.

One reason for the lack of provision is that education, whether liberal or technical, has often been regarded as a function of the religious orders, and a matter proper to the members of a cult. Homer's carpenters and shipwrights were guided by the goddess Athena, and when Odysseus built a raft, it was Calypso who brought him the augers, the axes, and the drills. The practice of a craft was associated with worship of a particular deity, and the temple was a training center. The early guilds of Japan began in services to shrines. Later it was the monasteries that were the schools not only of letters but of the industrial arts: so it was in Europe under Charlemagne, and in Japan, where from the seventh century A.D. the Buddhist monks were being sent to China to learn shipbuilding, bridgebuilding, and the ceramic arts, which they taught on their return. To this day, we are told, "for the traditional Indian craftsman his trade is a way of life supported by religious sanctions and expressed in religious themes and objects. His knowledge and skill are a divine revelation which he must carefully guard and transmit to his disciples; and his tools are inspired instruments which will do his bidding if he shows them the appropriate reverence."[5]

Another reason for the neglect of training by governments may be that the upbringing of children in all its branches was felt to be solely a matter for the family. Perhaps the most

5. M. B. Singer, "Changing Craft Traditions in India," in W. E. Moore and A. S. Feldman, eds., *Labor Commitment and Social Change in Developing Areas* (New York, Social Science Research Council, 1960), p. 269.

widespread of all methods of industrial training has been the training of sons by their fathers in the father's trade. That crafts should be hereditary in this way was sometimes made a principle of law, or of custom no less binding. Under the Roman empire the "colleges" which the workers in various trades had formed were made corporations in which membership was both compulsory and hereditary. In the state factories of Byzantium, the sons of workmen had to follow their fathers. In the caste system of India, a boy born into a craftsman's caste must become a craftsman himself. More generally, the father was held responsible for the training of his son, though the training did not have to be in his own trade: in Athens if a father failed to have his son trained, the law exempted the son from the general obligation to provide for his father. This law calls attention to a lack of incentive: even the father's identification of himself with his son may not suffice to make him provide a training whose cost will fall upon him immediately, but whose benefit to him will accrue only uncertainly and remotely. We have seen how this led at one time to the industrial training of slaves rather than of freemen. The long interval between outlay and return may also be part of the explanation of the lack of outlay by governments, whose preoccupation has been to meet the day's problems with the day's resources. But where industries have been carried on in the home, parents have had all too strong a motive to press their children into its service early and to habituate them to its processes: of some English clothmaking districts in the sixteenth and seventeenth centuries, it was recorded with pride that every child above the age of five could earn his own living. This often meant cruel drudgery and a stunted body. But where manufacturing was carried on as a family affair, perhaps as a part-time occupation in the farmer's slack season or as the woman's part in the earning

of the family's living, generally the children would learn by watching and helping. Industry apart, moreover, this was how girls learned the craft of housekeeping, and how the boys, and many girls too, learned how to farm.

But the means of formal training in earlier days was apprenticeship, and this belonged not so much to the family as to the guild. The essentials of apprenticeship are that a boy is placed under an obligation to work for a fixed term of years for a master, who on his side undertakes to have the lad taught a trade, not one or two processes only but the whole range that the craftsman commands; the boy gets little pay or none; someone may even have to pay a premium on his behalf. The term of years is long enough for his output meanwhile to become of value to the master, who is compensated thereby for the time and trouble of teaching a beginner. This sort of arrangement has been extraordinarily widespread. In Babylonia contracts for the apprenticeship of slaves provided for the compensation of the owner if the master failed to teach them the trade. In Greece of the fifth and fourth centuries B.C. formal contracts of apprenticeship—indentures, as we would call them—were drawn up, and high premiums were paid to sculptors and painters, though we are told that the treatment of apprentices was harsh and they were not always allowed to learn trade secrets. The papyri of Hellenistic Egypt include indentures, some of them of slaves, to a wool carder, a fuller, a stenographer, a flutewoman. In Japan, the first apprentices were bought, and were bound for life, and this variant of slavery continued until after 1600, when an endeavor was made to limit the contract to three years in the crafts and ten in commerce: in Tokyo a patriarch was appointed in each guild to keep the masters to their agreements. In Europe of the eleventh and twelfth centuries, apprenticeship, we are told, was thorough

and effective: "the working classes have never at any time had a better technical preparation for the fulfillment of their function."[6] In Byzantium apprenticeship was enforced strictly. In India, though apprenticeship is rare today, the guilds of craftsmen have maintained it. In China, until recent years, apprenticeship to a trade was a prerequisite for any employment in the towns except as a coolie. In a word, apprenticeship seems to be found wherever the craftsman had a status, for there it seems to have met needs both of the parent and of the craftsman himself. The parent who could not endow a boy with land could still set him up with a stock in trade if he could enable his son to become a craftsman. The craftsman got some useful work out of the apprentice before his time was out, and as a member of a guild he himself had an interest both in maintaining the numbers and skill of journeymen and in restricting competition by insisting that only those who had served their apprenticeship might practice the trade.

With the rise of modern industry, apprenticeship has had its vicissitudes. It has been open to abuse: some masters have used it as a supply of cheap labor and failed to give the apprentice a training in all the branches of his trade; some unions have used it as a means of creating an artificial scarcity. It has been attacked, moreover, as inadequate to the needs of the day—as being spun out for longer than is needed to shape a workman by intensive training, and as ill suited to the trades where the learner must be instructed in an advancing technology. It has become costly, and only the bigger firms can maintain it. But it has held its own, and in

6. P. Boissonnade, trans. E. Power, *Life and Work in Medieval Europe, fifth to fifteenth Centuries* (New York, Knopf; London, Kegan Paul, Trench, Trübner, 1927), p. 213.

contemporary discussion of vocational training as a means to economic growth it appears to have gained acceptance as a major agency. This may be attributed to two considerations. First, it is a form of training on the job, in which the schoolroom is an actual workshop and the teacher a craftsman such as the pupil himself aspires to be; it is therefore likely to keep more closely up to date, provide more equipment, and above all motivate the pupil and keep his interest more surely than would courses in the classroom alone. Second, though apprenticeship is a cumbrous method of teaching particular operations, it provides the range of experience that alone will give the pupil the versatility that is the hallmark of the true craftsman.

It is this aim of versatility, with the independence and initiative which make it possible, that marks off apprenticeship from the other forms of training on the job whose only aim is to practice the pupil in particular operations that will be carried out under supervision. But such training as this is all that most workers in contemporary industry have ever had. Even to call it training may be to claim too much, for often there is no explicit provision for practice or instruction, and the newcomer is left to pick up the work from the example of the older hands, with a word or two from the foreman here and there; and what experience even of this kind any one man may get depends on what new job he happens to find, or how senior he is in his existing employment. But the bigger firms of today are likely to provide carefully for the training of their semiskilled workers. They may have vestibule schools, to orient and equip the entrant before he goes into the workshop. They train the trainers, whether these are specialists or the first-line supervisors. For young people, they may combine training on the job with some further schooling: in Western Germany, the learners spend five days a week

in the shops and one in a vocational school, and they are prepared for a trade test.

The need for management to plan for training on the job is great in the emergent countries, where such training encounters special difficulties if it is left to itself. The pupils have a greater adaptation to make than in countries where industry is familiar. To be able to receive instruction they may have to learn something of another language; Swahili, for instance, has no words for engine parts and cannot express fractions. They may be herded into occupations according not to their aptitudes but to the caste, village, or tribe they come from. The trainer may be unwilling—in East Africa Asians are said to be reluctant to teach the African; in Egypt the experienced hands fear being replaced by newcomers if they make good workers of them. Too much depends on the foreman, who may himself have had no training in how to train, who is in any case likely to be overworked, and who may advance the pupils because of their race or the bribes they give him instead of for their proficiency. To overcome such obstacles, some big firms have developed training programs with their own schools. The linchpin of such programs is the training of trainers who will not be required to act as supervisors at the same time; thus in the Johannesburg mines, "boss boys" are given a two months' course to teach them how to teach, even though their own contract may be for only six months, and they serve as intermediaries between the European foreman and the African worker.

As governments have become more willing to take responsibility for the condition of their peoples and more aware of the possibility of raising the standard of living by raising productivity, we should expect them to make increasing provision for the training of the labor force. Insofar as that

training depends on a general elementary education, they have done so: it is a distinctive mark of modern societies that they provide general and compulsory schooling, and this has brought about a "silent social revolution"[7] within the last hundred years. But the more technical training that prepares the pupil for a specific occupation has been less developed by governments. This is partly in the nature of things—schooling that is much the same for all boys and girls can be provided by public agencies more readily than the many and various courses required for myriad diverse occupations. These occupations, however, fall into groups with common processes and problems, and so the question arises whether young people cannot be helped by a phase of preparatory training between their general schooling and their entry into paid employment—by courses in mathematics, the physical sciences, and the use of basic tools, for example, for those who are going into industry, or in accountancy and stenography for entrants to commerce. Much has been done in some countries to diversify the courses open to those who stay at school after about the age of thirteen, with this aim in view. There has also been some setting up of technical schools, but hitherto their effectiveness has been limited. Often they have lacked up-to-date equipment and teachers of sufficient caliber. They have sometimes gained the reputation of setting a low standard for a day's work; employers may find their products harder to fit in than the complete novice. The more academic side of their teaching may be over the heads of many of their students. We have seen how they are likely to lack the practicality and the incentive that go with training on the job. But this is not to say that their

7. The title of a history of English public education by G. A. N. Lowndes (London, 1937).

work cannot be developed. Experience has already shown the value of combining training on the job with some periods of work in the classroom, whether in the firm's own school or in a center that serves the neighborhood. Some central provision is in any case necessary to train the labor force of firms too small to maintain efficient programs of their own.

The training of the labor force has naturally found a place in the programs of the centrally planned economies. In the first years of planning in Russia, it is true, the vast numbers of entrants to industry had to pick up a partial knowledge on the job, and a system of factory training schools was introduced only under the Second Five-Year Plan, which began in 1932; training on the job remains the main channel, and the ways in which it is provided in the workshop and combined with classroom work in or out of the plant are very similar to those of Western countries. But a distinctive feature appears in the Russian system of State Labor Reserves. In 1940 this took the place of the factory training schools. In the schools of this system the discipline is quasi-military; some give a six months' course in preparation for factory work, others a two-year course for craftsmen and railwaymen. At first many of the students were drafted, but now all are believed to be volunteers. These schools open the door, especially for young people from the villages, to better paid jobs in the towns. In China most of the universities have become "technical and political labor schools," whose function is to turn out technicians, and many of whose students are on leave from wage-earning employment; the graduates must go where they are posted. Schemes of apprenticeship that provided at first for courses of only a year or eighteen months proved inadequate, and in 1957 the courses were extended to three years, beginning at not less than sixteen years of age.

Our account of training so far has applied mainly to the manual worker and the junior technician. The approach to the higher technical and professional occupations runs naturally through the subjects that are taught in schools and universities on their academic merits—the future doctor studies physiology, the lawyer jurisprudence, and so on—though some additional provision may be needed for more vocational training. Generally, a greater output of the higher skills has been achieved by the expansion of schools and colleges of existing types, though with many changes in the relative sizes of faculties. But many of the students who acquire these higher qualifications will in practice be concerned with management, and this has been increasingly recognized as a specific function requiring a distinctive course of training with its own body of information, principles, and problems. In particular, a manager needs a conspectus of types of organization, an awareness of the issues of principle in administration, and insight into human nature and human relations. In recent years, increasing provision for such training has been made through graduate schools of business administration, sandwich courses for managers already in positions, and executive development programs within the firm. "There are no bad soldiers, only bad officers": that is only part of the truth, but it is an important part, and no other form of training seems to offer greater prospects of raising not only productivity but the whole quality of the working life of people in production.

THE LIMITATIONS OF HUMAN POTENTIAL

Training schemes commonly come up against limitations of ability: not every applicant has the capacity to learn the job. When there is a shortage of men who fit the jobs, firms have to adjust the jobs to fit the men. In several

ways the pattern of the work to be done is constantly being adjusted to the pattern of the abilities available, and though in one way this does not raise those abilities, it does enable people to make the most of them, and so raises the quality of the labor force as that is measured by performance.

The limitations of ability may be illustrated by the intelligence quotient, though this is a measure of only one kind of proficiency. In the tests commonly used, the scores people make prove to have a normal distribution: the Stanford-Binet scale assigns a rating of 100 to the average performance, and most of the individuals tested lie between 70 and 130, less than 5 per cent lying outside each of these points. Though the proficiency that the I.Q. measures forms only part of any man's capacity to work, it does seem to limit the range of occupations open to him. If a boy's I.Q. is less than 115, say, he cannot really hope to become a doctor, for whatever his drive and determination, he will fail his exams. Though requirements for admission are less formalized outside the professions, it seems likely that other occupations have their effective thresholds of I.Q. too—a man will not be able to do satisfactory work as a maintenance fitter, for example, unless his capacity includes an I.Q. higher than will suffice for a machine-minder on repetitive work; or a girl may be able to become a good shop assistant while lacking the capacity to become a good stenographer. If this is so, then the frequency distribution of I.Q.s provides one set of limits to the potential of the labor force: if jobs that require more capacity to acquire knowledge, communicate, and solve problems than do the manual and simpler clerical occupations can be performed effectively only by those whose I.Q.s are not less than 115, the frequency distribution of I.Q.s tells us that only one-sixth of the population is able to fill them.

The illustration shows a basic problem of all economies,

but it lies in disputable ground, and is in any case partial. Performance in one kind of test is no sure measure of the proficiency that will be displayed in other settings. When tests of I.Q. are designed, they are adjusted as necessary until the scores yield a normal distribution, and this is not necessarily the form of all the relevant qualities. Height is one human attribute that is distributed normally—but there are others, like weight, whose distribution is highly skewed. Men's earnings depend on the conjunction of personal attributes and the economic environment: we shall see later (below, pages 153–56) that the distribution of personal earnings is generally skewed.

But though the forms it may take are various, at any one time there exists a distribution of capacities that assigns certain proportions of the population to each part of the range of attainment. We need not suppose that the capacities are all innate: some may be precast genetically, but what a man can learn to do depends also on his upbringing, on the influences that have come to bear on him in home, neighborhood, and school; these influences, however, will have their own distribution, so that were they all-powerful, there would still be a dispersion of capacity about the mean. Nor need we suppose that the average level of capacity is impervious to education and the processes of social improvement generally: the experience of Africa already runs to the contrary. But wherever the average lies at any time, there will be a dispersion about it, and only a limited part of the labor force will be available for work requiring capacity above any but the lowest threshold.

This would not matter if the threshold was low for all the jobs there actually were to do. There may have been some Arcadian economies in which this was nearly so: in them anyone who could work at all could learn to do pretty well

any work that was going on, and men who had the capacity to become surgeons and architects, had such jobs existed, might have passed their days as fishermen and plaiters of straw. But part of the secret of economic growth is that it differentiates tasks and finds some to occupy the highest abilities exclusively and fully. It is as though, in some primitive task of excavation, people were carrying the earth away by the basketful, and there was one size of basket for everybody, small enough for a child to carry: but then baskets of different sizes were brought in, and now while the child carried the same as before, the grown man carried far more. In this kind of way the division of labor raises the quality of the labor force that is actually applied and engaged.

But in practice the baskets are not simply adjusted to the strengths of the laborers: their design proceeds under influences some of which take no account of what labor is available. At any one time a given firm or industry will be using different occupations in proportions which are fixed within a narrow range of discretion by the nature of its plant and processes. The proportions will differ from one industry to another—the ratio of manual workers to technicians will be higher in coal mining, for instance, than in pharmaceuticals. Taken together, the jobs to be filled industry by industry compose a certain pattern of jobs in the economy as a whole. What assurance is there that this pattern will agree with that of the capacities available in the labor force? Since the pattern of jobs depends on the relative size and the techniques of production and administration in different industries, it tends to change as demand in the market shifts and as technology develops: but these pressures are independent of the current availability of different sorts of labor and the way this may itself be changing.

What happens when the tendencies diverge? In consider-

ing training we have been looking at one of the processes of adjustment. But if training is fitting the worker to the job, there is also the possibility of fitting the job to the worker. When war brought an excess of demand for the skilled man, especially in engineering, it was found that his work could often be broken down: some parts of it did not themselves need skill at all, others newcomers could learn to do fairly soon if each had to learn only one of them. Sometimes the semiskilled could do skilled work if they had more jigs, or women could do men's work if they were supplied with power for lifting. In recent years the name "ergonomics" has been given to the studies whose object is to improve the design of the work place and process so that the operative can work with less strain, discomfort, and fatigue and so with greater speed or precision. These studies can help to bring jobs within the reach of those who were not up to them when they were more exacting. Years of full employment have led management to adapt the conditions of work so as to tap additional sources of labor. Another recent minting, "geriatrics," denotes studies of aging, and of the kind of work that the elderly worker can do; and part-time work, or short shifts and evening shifts, have been organized to enable married women to combine paid employment with work in the home. It is in making more use of the abilities of women that thought given to the design of process and system seems specially promising. Intelligence tests have gone far in settling a long argument by showing that, whatever it is that these tests measure, women have as much of it as men: what seems remarkable by contrast is the small proportion of working women who are found in the more highly qualified occupations, and there may be changes in the conditions of work and in men's attitude to women that will help to make fuller use of women's abilities.

We have been dealing with ways in which the pattern of the labor force and the pattern of the jobs to be done are adapted to one another by the training of labor and the reshaping of jobs. But mingled with these adaptations are other processes of adjustment, to which we now turn.

4 THE DEPLOYMENT OF THE LABOR FORCE

MIGRATION

The broadest form of deployment is that which distributes mankind over the face of the globe and allocates a labor force to the resources of each region. The growth of numbers within any one region depends partly on the rate of increase of those already there and partly on migration. The forms of migration range from the eruption of armed and ravening multitudes who raid, seize, and settle, through the broad but peaceful currents that have flowed to lands of opportunity from those where soil and jobs were scarce, to those unchanneled movements of this man and that in search of employment or betterment, which on balance bring gradual but extensive changes in the labor forces of different regions.

Two periods of the movements of multitudes over long

distances have shaped the modern world. The first lies between the heyday of the Roman empire in the second century A.D. and the end of the ninth century. Coming, some of them, from Central Asia ultimately, and then from the steppes and the German forests, the Huns, Goths, and Vandals poured across Danube and Rhine. Angles, Jutes, and Saxons crossed the narrow seas to occupy England and the Scottish Lowlands. The Norsemen sailed the Atlantic as far as Greenland and Vineland the Good, penetrated the Mediterranean, harried the coasts of Europe, pressed inland, and settled. They followed Volga and Dnieper to the Caspian and Black Seas, and colonized Kiev—"Russians" means "rowers." Meanwhile an explosion of energies, and perhaps of numbers, occurred among the Semitic peoples of the Near East: the Arabs spread through North Africa and Spain, and conquered northwestern India. What the impelling forces of these outpourings were, we can only conjecture. There is evidence of a change of climate, a desiccation of central Asia that would have driven whole peoples from the dust bowl: the Huns, being thrown back by the Chinese, recoiled upon India and Europe. Perhaps, too, it was because the seventh century was a time of drought that Arab tribes were on the march even before Mahomet gave them their fighting creed. But we also have reason to believe that populations can begin to grow rapidly without any apparently connected change in their environment or way of life, perhaps through a decline in the virulence of their endemic diseases: so it seems to have been in Western Europe in the sixteenth and again in the eighteenth centuries, and so it may have been too in some of the overspills of the first millennium.

Whether these migrations were of whole tribes or only of the younger sons, they had come to an end by the tenth century. There followed nine hundred years without movements

of great masses: only the Turks pressed their conquests west; the Germans with sword and settlement advanced eastward beyond the Oder; the Russians spread slowly north and east from their heartland on the Dnieper. But in the sixteenth century a rise of population sufficient to about halve the real wages of artisans in Western Europe still did not drive men far afield. There were now no unclaimed lands, no abandoned forts and cornlands open to rapine: those who sought a new settlement would have had to go far overseas. A few did begin to go: the Spaniards sent settlers to South America and the Caribbean, and the Portuguese to Brazil; the first English colony on the American mainland was attempted in 1606, and soon a slow but general migration set in across the Atlantic. The labor force of the New World was further augmented by the slave trade: it has been estimated that some twenty million Africans were carried off in all. But when one considers the vast territories to be opened up, and the great disparity between the New World and the Old—not in prospects only but in the earnings that came to be immediately available—it is remarkable how few people moved. The obstacles lay in transport: by sea, in the small, slow, storm-beaten sailing ship; by pack and wagon on the further shore.

Those obstacles were removed in the first half of the nineteenth century by the steamship and the railroad. At the same time the population of Western Europe, which probably had not changed much since 1600, was bounding up again. There set in the second period of the movement of multitudes. This time the movement did not depend on conquest: though British rule was extended over much of India between 1770 and 1850 and most of Africa had been divided between European powers by the time of the First World War, settlers followed the soldier only in Kenya and Rhodesia, and there only in small numbers. The new movement of

multitudes was rather to lands where only a thin peopling of aborigines resisted the newcomer: the vast hinterlands of the United States and Canada, and Australia and New Zealand. Before long, the immigration was serving to reinforce an already developed economy in the coastal regions, from which the pioneers were pressing up-country, to farm, ranch, and mine. The rate of migration from year to year now began to depend increasingly on the momentary state of the demand for labor in the new economies, rather than on that of the pressures driving them out of the old. The turning point, at least for the United States, may be set about 1870. Before that, the potato disease in Ireland in 1846 had driven starving families in hordes down to the shore, to go wherever ships would take them: here was a tragic set-piece of Malthusianism, a country which in the next half century was to halve the population that had expanded so precipitately in the seventy years before. There had also been an expulsive force at work in the emigration of the liberals after the repression of the European revolutions of 1848. But from about 1870 onward the annual rate of immigration into the United States is closely correlated with the cyclical variations in the economy's path of growth: in earlier decades the great bursts of railroad building and house construction had followed after the years of greatest immigration, so as both to use and to provide for the newcomers, but now the lag was the other way round: more newcomers arrived only after more jobs had been offered. But though the time at which the emigrant set out seems to have depended on the advices reaching him, whether ultimately he set out at all may still have been determined by the state of his difficulties and prospects at home.

Basically, the great migrations of the nineteenth century were from regions where the pressure of population upon

natural resources was higher into those where it was lower. This holds not only of movements from Europe to America but of the other major movements of the time: the Russians spreading over Siberia; Italians, Poles, Belgians, and Spaniards moving into France; the Chinese settling around the Pacific, whether in Malaya or California; and the Indians, moving in only small numbers to any one place but in large numbers in total, to Trinidad and British Guiana, Fiji, Mauritius, and East Africa.

After the First World War a number of changes combined to reduce migration across frontiers. In the European countries of origin, the natural rate of growth of population had generally diminished. Some of these countries restricted emigration for political reasons. In the receiving countries, most if not all of the free land had now been taken up and the great tasks of primary construction completed: so the unskilled immigrant no longer found a job waiting for him as a laborer, and if he were to be used he would have to be trained—the "coolie trade" could flourish no longer. Instead of being complementary to the skilled worker of older stock, therefore, the immigrant now appeared as a competitor likely to undercut the rate for the job. The "new immigration" of the twenty years before the war had brought to the United States increasing numbers of southern Italians, Russians, and Poles, and these had been less easily assimilated to the American way of life than the British, Germans, and Scandinavians who had predominated before. In all the receiving countries, had there been no restrictions, a greatly increased proportion of the immigrants would now very probably have been Asians, who aroused even more sharply the anxieties concerning undercutting and assimilation. Organized labor therefore gained the assent of public opinion and of government to its demand for limitation of entry. By 1939 it appeared likely

that migration would continue only insofar as governments found an interest in providing for it by mutual agreement.

Since the Second World War, however, some forces have been making for greater freedom of movement. Full employment decreases anxiety about the competition for jobs and the undercutting of rates, and through the "promotion effect," which shifts shortages of labor to the lowest grades, it specially increases the vacancies for the kind of labor the unskilled immigrant can provide. At the same time the receiving countries have entered on a conscious course of economic development that goes far toward taking the place of the advancing frontier of old, and sets up a demand for the skilled man and the specialist, who may be attracted by a sufficient difference of pay. As standards of living in the less developed territories are raised, the reduced pressure of want may be more than offset by men's increased capacity to qualify themselves for work in another land and pay their fares to reach it. Better education and broader channels of information give more adaptability and greater knowledge of other countries, and make migration less of a leap in the dark and more likely to be considered as a step in a career. Generally, the combination of full employment, economic development, and wider knowledge seems likely to make for some reductions in the restrictions on migration, as on trade, and to guide the movement of labor across frontiers by much the same influences that play upon the changing deployment of labor within any one country. But this tendency continues to be resisted by the difficulties of assimilation.

DEPLOYMENT OF THE LABOR FORCE DURING ECONOMIC GROWTH

Any one job requires a man to help make a particular product by applying a particular proficiency in a par-

ticular place, and the changes that occur in the deployment of the labor force in the course of economic growth can be examined in these three dimensions of industry, occupation, and region.

The relative size of different industries evidently depends in part on how people apply their incomes: the proportion they choose to save bears on the division of output between consumers' and producers' goods, and within their consumption the relative sums they spend on different articles bear on the relative quantities of those articles that will be made. In part, the pattern of outlay depends on custom and fashion: at any one time households of much the same real income in different countries divide their outlay differently—French wage earners, for instance, generally spend a larger part of their income on food than do the British—and similar differences can come about in the course of time within any one country. The invention of new products will also divert outlay, not to these products alone: in Western societies the automobile is changing the whole way of living. But the pattern of outlay also depends on the total spent. Studies of the budgets of households with different incomes at any one time suggest that the sums spent on each article vary systematically with the household's income. If we take any one article, say meat, we can plot the sums spent on it household by household as a function of the income; and we often find that this function, known as the Engel function, is approximately linear. But the slopes of the lines for different articles vary: as we move from households of lower to those of higher income, outlay on rent, for example, will commonly rise faster than that on food; and within food, outlay on potatoes will not rise as fast as that on meat. Some lines may even slope down: as we move away from the poorest households, outlay on bread may actually diminish. These observations suggest

that as the standard of living of a whole community rises, the pattern of its outlay will change, and a higher proportion of its production will be devoted to the comforts and luxuries of life, a smaller to the bare necessities.

What inference we draw for the industrial deployment of the labor force depends much on the classification we use, for one industry broadly defined may produce necessities and luxuries alike—agriculture, for example, provides strawberries and cream as well as bread. But we can at least see that as output per head rises, the composition of that output will be altered by changes in the allocation of income, and generally we may expect that the industries that wrest the primary foodstuffs and raw materials from nature will not grow as much as those that work them up into more elaborate forms or provide intangible amenities.

Even this conclusion, however, needs qualification, because the division of outlay depends not only on tastes and the standard of living but on the relative prices of the different products available. It is for this reason that we may find, in an economy whose standard of living is relatively low, a large part of the working population engaged in providing those services of retail distribution and household amenity whose increase is usually a mark of the continued advance of societies where real incomes are already high. Thus in Japan the "tertiary sector," as it is called—which includes the small shopkeeper, the odd-job man, the servant, and the craftsman working directly for the consumer—expanded from about a quarter of the labor force in 1920 to more than a third in 1955, because, we are told, it offered the only outlet for people with very small capital, working with unpaid family help; and of Mexico one observer remarks that "much of the increase in the so-called service and white-collar industries . . . simply reflects the fact that the population of work-

ing force age has increased more rapidly than have the job opportunities in industries producing physical goods. This is implicit in the fact that so many of these service and white-collar industries pay lower than average wages."[1]

Thus an industry may be big because those who crowd into it for lack of anywhere else to go press their products on the consumer at very low prices. When more capital becomes available and better techniques are applied with it, the numbers in such industries may diminish at the same time as the output greatly rises. Transport has provided a notable instance. "The statement that 20 per cent of the population of China is engaged in transport," an observer remarked in 1932, "is no doubt an exaggeration: but it is not wholly unplausible," and he went on to tell of the "almost unbroken procession of human beings moving bales and packing cases" in a large town.[2] The change to be made here by the coming of railroad and motor truck exemplifies the effect that advances in technique take by simultaneously increasing an industry's output and decreasing the numbers occupied in it; the agriculture of Western countries in recent years has provided another instance. Changes in technique also affect the industrial deployment of labor because they change the division of labor between industries: thus the rise of the automobile and truck has caused a relative decline in the reported number of transport workers, because more transportation is now carried out by other industries and by consumers for themselves. This reminds us that the outcome of any statistical inquiry into industrial deployment depends on the prevailing division of labor: in the underdeveloped economy the peasant, whom the enumerator can only assign

1. A. J. Jaffe, *People, Jobs and Economic Development* (Glencoe, Ill., 1959), p. 265.

2. R. H. Tawney, *Land and Labour in China* (London, 1932), p. 120.

exclusively to agriculture, may in fact spend much of his time in delivering and fetching, buying and selling, and—he or his family—weaving and building. As the division of labor develops, the numbers reported as occupied in these other activities rise faster than the proportion of the working hours of the labor force that is actually devoted to them.

So far we have been assuming a self-contained economy. To the extent that the people of a particular country take part in the division of labor in the world economy, the connections between the stages of their economic growth and the industrial deployment of their labor force are transcended. In the extreme, some sheikdom where oil is struck may attain one of the highest incomes per head in the world, through the same forces as concentrate its labor force in the one primary industry. It is because both New Zealand and Britain participate in international trade, and not because their standards of living are so very different, that in recent years more than a quarter of New Zealand's labor force has been in the primary or extractive industries as against less than a tenth in Britain, whereas for manufacturing the proportions are about a sixth in New Zealand but two-fifths in Britain.

This survey of the course of change in industrial deployment has denied us any generalizations about the outcome but has brought to light the chief forces that go to shape it. These are: the tastes and customs of consumers, the changing division of their outlay as their standard of living rises, the relative numbers seeking employment in different industries, the division of labor between industries, and the techniques they use. There is a continual interplay between changes arising on the side of supply and of demand.

A similar interplay governs deployment by occupation. In part this is locked into deployment by industry: indeed, in

the simplest form of the division of labor, when each man makes only one product but himself performs all the processes that go into making it, occupation and industry coincide; even today the miner, for instance, cannot work as such outside mining, and mining cannot be carried on without miners. As soon, however, as men specialize in processes, a difference appears. The occupation is defined by the process, not the product: a given occupation can often be carried on in more than one industry, and any one industry can be carried on with some different blends of occupations. The forces that govern deployment by occupation can therefore be considered separately.

Here, in the course of economic growth, three major changes appear on the side of demand. One is the extension of the division of labor already noticed: men attain a higher proficiency when they learn to perform only one or two of the many processes that go into making a product. In part this is because practice makes perfect, but only in part, for training up to the highest level of performance of which he is capable in one process usually leaves a man time to attain as high a level in another. The major gains when men specialize by process are rather that the proportion of their working life they spend in training is reduced; that since versatility is rare, most men can reach and maintain a higher level if they have to perform only one process; and that a man who has more aptitude for one process than another can, if he has been well guided, give all his time to what he can do best. The last consideration has an important bearing on the contention that specialization by process is degrading because it denies men variety and initiative and holds them to a dreary repetition. The charge holds when the process in which a man has specialized is below his capacity, and indeed there is no assurance that the range of specializations

will match that of capacities, or that everyone will find his way into the specialization his own capacity matches; but the greater the range, the greater the opportunity for each man to give all his time to what fully extends him, and not have to do work he finds dull.

The second major change is an outcome of the growing size of enterprises. When a great part of production is carried on in small enterprises, many people will be employers, or self-employed, and combine with their daily work in a particular trade some functions of initiative, risk-bearing, and administration; and many of those who work for them will be members of their own families. As recently as in the 1950s, about a quarter of the whole labor force of both Japan and Italy consisted of employers and self-employed, and in Italy a further sixth, and in Japan a third, was made up of unpaid family workers. But agriculture, in which the small unit generally prevails, commonly loses ground to industry in the course of economic growth, and in industry itself the unit of enterprise expands. The proportion of the labor force that is occupied within the household consequently tends to fall; and so does that which is occupied at least in part in functions of management. This last tendency, however, has later been offset by the discovery of the high potential productivity of an expansion of management beyond those minimal requirements of quantity and quality that must be met if a business is to be carried on at all. In part this productivity arises from the need to make the best use of elaborate equipment and the technicians who serve it. A recent comparative study of management found that the large Egyptian textile mills "are among the most up-to-date if not the most modern in the world. Furthermore, they are equipped with the most advanced labor-saving machinery that money can buy." Yet "in the best Egyptian factories four to six workers may be

employed for every one in comparable establishments in the United States. But, managerial resources are scarce and managerial methods are quite primitive."[3] The need is for quantity as well as quality. The same study compared a German and an American steel plant, each employing seventeen to eighteen thousand people. It was largely because the German plant had old machinery that its output was only half that of the American; but it was also notable that "in comparable steel making and rolling departments, the American company used three foremen to every one in the German mill," and for senior technical staff the ratio was ten to one.

This tendency to increase the relative size of managerial occupations at an advanced stage of economic development may be looked on as part of that general expansion of the clerical, technical, and administrative occupations which forms the third major change in the occupational structure of the demand for labor. This has been the most strongly marked development in the labor forces of Western countries since 1914. Its origins are in part social and political: the activities of central and local government have extended, partly under the pressure of two great wars, but also because people generally, whatever their abstract philosophy, have come to find a concrete advantage in using the machinery of government to control and promote more activities and provide more benefits. But the origins are also industrial. Part of the technique of "scientific management" was "to take the brains out of the job," that is, to extend the division of labor between manual operations and the tasks of designing prod-

3. J. D. Brown and F. H. Harbison, *High-Talent Manpower for Science and Industry* (Industrial Relations Section, Princeton University, 1957). See also F. H. Harbison, "Steel Management on Two Continents," *Relations Industrielles* (Revue Trimestrielle, Laval University, Quebec, Canada), March 1955.

ucts, solving problems, and organizing processes. At the same time the agencies of research, planning, communication, and control have been developed as part not of the dead weight or top-hamper of the factory but of its essential equipment: according to traditional nomenclature the labor in them is "unproductive," but in that sense the aim is now a factory without a single "productive" worker in it. So industry has come to employ more and more people at desks for every hundred at the bench; and within industry as well as in the community around it, more and more people have come to be occupied in designing products and processes, planning output, and collecting, analyzing, and communicating information.

In occupational as in industrial deployment, there have been changes initiated on the side of supply as well as of demand. Of these the most extensive has been the increased provision of general and technical education by public agencies, which was discussed in the last chapter. This has diminished the relative number of entrants to the labor force who are capable only of muscular exertion, and increased the relative number of those who have already reached the standards of education that are prerequisite for the attainment of manual skills and of proficiency in the clerical, technical, and administrative occupations.

The third dimension of deployment is regional. Some production must be located near the source of raw materials or power, some near the consumer, and some can be carried on at various points between, with its actual location a matter of accident or of the availability of labor. Little, therefore, can be said in a general way about the changes that occur in the regional deployment of a population in the course of economic growth. But one tendency seems to be a function of growth, namely urbanization. A high density of

population naturally occurs where raw materials are concentrated or the channels of trade converge, but the urbanization with which we are concerned arises when the reason for one man's working in a given place is only that others are working there too. This reason may make itself felt in various ways. For firms there are external economies in proximity, through the common services that will grow up and the breadth of the common labor market. For many types of activity, moreover, aggregate costs of transport are reduced by location near the customer: electricity has removed some of the limits formerly set by the cost of carrying fuel; and the more highly fabricated products that enter into higher standards of living tend to be more costly to move than are the raw materials they are made from. So the mere fact that there is already, for whatever reason, a concentration of production and therefore of consumers in a certain place tends to bring more production in: save for zoning by public authorities, there seems to be no reason why a new plant not tied by its nature to sources of raw material or water should not always come in to raise a density already high, unless it be the deterrent of high land values there or the attraction of untapped sources of labor elsewhere. Hence an urban concentration of the demand for labor. But there are also factors at work to concentrate the supply. The worker in the large town feels he has some greater security and opportunity through the greater number and variety of jobs within his reach—a man seeking a job or a fortune commonly moves from the country to the town, and not the other way round. Some amenities of residence are available only in the countryside, but others, especially of entertainment and society, are available only in the town, and these are more attractive to many, perhaps most, people. All these reasons help to account for the fact that population does not grow evenly

throughout a country in the course of its economic development, nor concentrate only on the veins and nodal points of natural resources, but agglomerates wherever it was densest to start with. In Japan, in 1920, less than an eighth of the population was in towns of more than 100,000 inhabitants, but by 1940 the proportion was approaching one-third, and of the total increase in numbers in the five years before 1940, about three-quarters went into the six big cities. In the United States in the 1950s nearly two-thirds of the whole population was classified as urban.

When we ask whether industry has settled in the towns because the people were there, or the people have settled because industry was there, we raise again the problem of the mutual adjustment between vacancies and applicants that has run through all our discussion of changes in deployment. In the tracts we have been surveying, the problem has seldom been solved on any scale by planning and direction. Within any one household or farm or firm, it is true, the head may decide what jobs are to be done by an existing labor force, and allocate its members to them. But over most of the economy there has been no such plan, and various forces have played upon the allocation independently: consumers have generally been free to spend their money on what they choose, managers to make changes in methods, workers to take what jobs they prefer among those within their reach. One might suppose that these freedoms are incompatible with one another: how can consumers be entitled by switching their outlay to direct production into this or that particular line, when producers are entitled to take what line they choose?

We know that there has been no clear-cut solution, but a rough adjustment has gone on from day to day in a world of immobilities, predilections, incentives, and tolerances. The

processes of this adjustment have been threefold. First, workers have been trained to fill jobs, and job requirements have been trimmed to the capacities of workers: this we discussed in the last chapter. Second, the choices made by consumers, managers, and workers react upon one another, and are shaken down together, through the interplay of supply and demand in the pricing system: we will go on to look at this in the chapter following. At any one time the adjustments of these first two kinds will have provided one pattern of jobs available for workers and another of workers available for jobs: the two will match each other largely but not completely, and where they overlap they call for a movement of workers to jobs and of jobs to workers. The workings of this third kind of adjustment through the labor market we will consider here.

THE WORKINGS OF LABOR MARKETS

The function of a market is to bring buyers and sellers into touch with one another. The fulfillment of that function by labor markets has never been more than partial and imperfect.

A general meeting of buyers and sellers of labor used to take place in some parts of Britain where farm servants were hired for a year at a time; in the fall a fair was held, at which those seeking engagement stood each with an emblem of his trade in hand, and the farmers walked round and discussed terms with them. In the nineteenth century in Scotland those terms rose and fell with the trade cycle and the demand for labor in the towns. In North China in more recent years, "for extra men, to work by the day at harvest time, spring and fall, the employers went to the 'man market' which usually was held before sunrise at some central place

in the village. The employers would circulate among the waiting workers quoting the price they would pay. The 'condition of the market' would naturally push wages up to a peak at the height of the harvest and drop them rapidly thereafter."[4] More often it has happened that those seeking work present themselves together, and an employer who wants labor will take his pick, but the applicants have little chance to play off one employer's offer against another's. In the manufacturing towns of medieval Europe, the journeymen wanting work went to the market place in the morning, to hire themselves out by the day or the week. In India, to this day, craftsmen walk the streets with the tools of their trade, or sit each at his door, waiting to be engaged. Casual labor, so called because at each hiring the applicant has only a chance of being taken on, has commonly had to appear in a body at the hiring point. So it has been throughout the docks of the world, until decasualization schemes have been applied and the enrolled docker has been assured of some payment for attendance even when there is no work for him that day. In Britain before 1914 groups of casual workers could be found waiting in many other places where the work load varied from day to day—at the railway yards, the warehouses, the butchers' and bakers'. In the textile mills of India a substantial proportion of the workers are nominally substitutes for absentees: a crowd of such *badlis* waits at the gate each morning for the foreman or sirdar to take those he chooses, whether by rotation, seniority, or favor, for the one day's work. Where countryfolk come in to seek employment in a new factory, whether in Egypt or the southern United States, they will very likely stand in a throng to be hired. "When a company opens a new plant

4. S. D. Gamble, *Ting Hsien: A North China Rural Community* (New York, Institute of Pacific Relations, 1954), p. 221.

in rural Georgia or Tennessee, five to ten thousand applicants may be lined up at the gate when hiring starts, and some may have come five hundred miles."[5]

But more often the applicants do not present themselves together to an employer; still less do employers meet in one place to hire. The market is defined rather by potentialities of individual access. For a given employer there are a certain number of workers who could possibly work for him, and with whom he is in touch or can get in touch. For a given worker, similarly, there are a certain number of potential employers within his reach and his actual or potential knowledge. Where a set of employers and a set of workers exist so that each member of one set has potential connections with a number of members of the other, and relatively few with outsiders, the two sets may be said to constitute a market. But the members may see little of each other; their knowledge of each other may be vague and fragmentary; and they may meet only as one employer and one applicant at a time, without either having much immediate opportunity to compare alternative offers.

Some markets, so defined, are nationwide, and even in part international. Generally, in the more technical occupations and the professions, the main features both of the position offered and of the applicant's qualifications can be presented initially on paper; though personal qualities must be tested by interview, the cost of the required journeys bears a small proportion to the annual salary of the post; and the members of these occupations have not only the resources to move, with or without assistance from their new employer, but also the expectation of moving from time to time in the course of their careers, and the greater adaptability given by higher

5. E. Ginzberg, *Human Resources: The Wealth of a Nation* (New York, 1958), p. 48.

education. The main means of communication for changes of job in such a market as this is the advertisement in the newspaper or trade journal. The terms offered in these advertisements will have their influence on the adjustments being made from time to time in the terms of existing engagements throughout the market.

But more often the effective labor market is restricted to one locality, whose bounds lie within a radius of less than a day's journey from where the workers are living. The limits are set partly by the difficulty of making contact over greater distances, partly by the reluctance of the worker to move far away from the place and society with which he is familiar. A study of histories of workers in a factory city of New England in 1947 found that 60 per cent had not worked outside the area, and 75 per cent had not worked outside the state.[6] A similar inquiry in Britain in 1949 found that "geographical change is largely a change from one town to another within the same region. Even so, nearly half the population has worked in one town only and a further quarter in two towns only. Three quarters of the population have worked in one region only. Few have worked in more than two regions."[7] Shifts in the preponderance of population across the whole length and breadth of a country, such as the growth of northwestern England in the Industrial Revolution, and of southeastern England since the First World War, have been brought about mostly by the cumulation of short intermediate movements, with few people moving all the way between the opposite poles of growth. Women are even less ready or able than men to take a job that means a change of

6. L. G. Reynolds, *The Structure of Labor Markets* (New York, 1951), pp. 77–78.

7. U.K. Social Survey, Report 134, *Labour Mobility in Great Britain 1945–49* (not printed, c.1952), Pt. I, 3.C.

residence. Workers may be reluctant to move far in space even where, as in the United States, they show "a surprising propensity to make drastic changes in their work status," and move readily from one occupation or industry to another.[8]

The limiting factor is not strictly distance in miles but the cost, time, and trouble of the journey; and the improvement of roads and the coming of railroads did much to throw together markets that were once separate. This has been associated with some of the origins of trade unionism, for it exposed the worker to more competition for his job. More recent changes in transport, however, which have shortened distances not so much between markets as within them, have worked the other way. The improvement of local travel by subway, streetcar, and train, by bus, and, in some countries, by the workers' own motorcycles and cars, has increased very greatly the number of jobs accessible to the average worker from his present house. The consequent reduction of the imperfections of the market shows itself as a major change in the working of Western economies whenever unemployment is low, for employers must now find themselves in more effective competition with each other than they used to be at that level of aggregate demand. The short distance between alternative employers and the availability of local transport may have been part of the reason why earnings in cities have been generally higher than in regions of lower density. As more and easier transport reduces the effective distances within these regions too, we may expect that the flash point at which the aggregate demand for labor begins to make earnings rise will be generally lowered.

But however easy the communications within the local market, the information on which its members act is still

8. W. Haber, et al., eds., *Manpower in the United States: Problems and Policies* (New York, 1954), p. 151.

likely to be rough and meager. Most workers who are old enough to have settled down and found by trial and error a job that is "not too bad" have no intention of leaving it in quest of something better, and do not keep themselves posted on alternatives. Those who do want to change, or being out of work need to find a job, can by their own efforts learn about only part of the field, and in any case can hardly tell what a new job will be really like until they have tried it. This does seem bound to make the market very imperfect. "The typical worker," Lloyd Reynolds has concluded, "has no sensation of being in 'a labor market'. He has no idea of the full range of jobs, wage rates and working conditions prevailing in the area; nor does he have any realization of the hundreds or thousands of job vacancies available on a particular day."[9] He does not do much window-shopping before he takes a job, but is guided by tips from friends and relatives, and by the chances of propinquity. The employer, for his part, it is true, can advertise his vacancies to a wide range of readers, but in practice he is likely to recruit mostly from those who are brought along by his present workers and those who live nearby.

Yet we must not overestimate the effect of these imperfections of knowledge. Most workers are not desirous of moving, but neither do they want to stay where they are and watch other men's pay rise relative to theirs: the sensitiveness of pay claims to changes in differentials suggests that actual immobility may be conditional upon the market having provided no sufficient inducement to move. In times of peace employments seldom expand or contract so rapidly that their changes cannot be accommodated by the movements of a fringe of workers already in jobs, and some diversion of the

9. Reynolds, *The Structure of Labor Markets,* p. 85.

young entrant. Here as elsewhere in human behavior—notably in the consumer's reaction to a change in price—movements that individually are rough and ready, hit or miss affairs, but at the same time are subject to some common influence, may compose in the aggregate the curve of a functional relation.

Nonetheless, it is greatly in the common interest to raise the level of information in the labor market, and this has been attempted by two kinds of agencies—vocational guidance and the employment exchange.

The object of the first is to inform young people about the requirements and rewards of different occupations, and to help each to choose one that will suit his own tastes and aptitudes. Without such guidance young people, and their parents, are apt to give too much weight to the pay offered in the short run, or, insofar as they take the longer view, to be influenced by current notions that accord prestige to some occupations and industries and dismiss others as unfashionable; they may also have no very clear appreciation of what doors are opened and closed to them by their own attainments. Vocational guidance therefore tries to provide young people with a picture of the prospects that various occupations and industries offer them throughout a working life, to set out the training required before and after entry, and to help them make a realistic assessment of their own tastes and aptitudes, which they can then compare with the requirements and prospects of different callings. Early in the present century there were vocational guidance centers in various towns of France, Holland, and Switzerland, but the first legislative provision seems to have been the setting up of Juvenile Advisory Committees under the British Labour Exchanges Act of 1909. The prevailing contemporary administration in Britain is by a partnership between the Ministries

of Education and Labour—the first entry into insured employment is a natural point at which to make sure that every entrant has been offered guidance—and the Ministries work through local committees that include representative employers and trade unionists. But however good the system, there will be many young people who will pay little heed to it, and some of those who do use it will make mistakes nonetheless. So there still has to be much learning of what jobs are like by trial and error, and that means much chopping and changing by young people. It is important accordingly that entry to organized training within industry should not be confined to the school-leaving ages but be open to some who are making a fresh start later on. Here British apprenticeship, which generally can be entered at not more than sixteen years of age, is at a disadvantage in comparison with the United States, where the usual age of entry is from eighteen to twenty-five.

The second agency is the employment exchange. Its object is to inform each applicant of the range of vacancies for which he seems eligible, and each employer of the applicants who might suit him. Some exchanges have long been operated for particular occupations by private enterprise—for actors, secretaries, nurses, and domestic servants, for instance. Trade unions, especially craft unions, often serve as an exchange for their members: the employer with a vacancy calls the union office, and the members seeking work attend in a hiring hall, or wait for a message at home. The union network may cover more than the local market, and it has long been the practice of some unions to inform their branches of the towns in which there are jobs vacant, and help their unemployed members to reach them. In France in the seventeenth and eighteenth centuries there were two nationwide unions, the Gavots and the Dévorants, each of which kept

an inn in the chief towns for its itinerant members and had its *capitaine placeur,* who maintained liaison with the capitaines of other towns, so as to keep his members informed of the state of the market. But today the exchanges that cater for all comers are those maintained by governments. Potentially, these exchanges might give every employer and worker a far wider view of the opportunities offered him by the market than his own contacts can provide: employers could then use the exchanges as their channel of recruitment for vacancies at all levels; and workers of all sorts, though in good jobs already, could keep in touch with the exchanges for the same reason that the professional worker casts his eye down the situations-vacant column in a journal. In this way the employment exchange would fulfill the purpose of general information and contact served by the floor of the produce or stock exchange from which it draws its name. But such a perfecting of the market requires a general agreement to make use of the exchanges that has never come about. Some firms do make regular use of them, most firms use them occasionally; but among the workers there is a feeling that the good jobs are filled directly, which has its counterpart in a presumption among employers that only the weaker applicants are left for the exchange to place. So though the activities of the exchanges have widened, their principal function remains to help those who cannot find a job by direct application, which is still the chief procedure of the labor market.

Inadequacy of information does not inhibit a great deal of movement. Between 1947 and 1950 almost all hirings in Britain had to be registered with the Employment Exchanges, and they proved to be running then at the rate of about one in five of the working population each year. This was a time of full employment, and what evidence we have

suggests that the rate of turnover falls when employment falls, and was much lower in the interwar years. The British inquiry of 1949, already mentioned, attempted to find the motivation of the high rate of change by interviewing a sample of those who had made at least one change in the past four years:

> 24 per cent of all those interviewed had left their previous job because they were dismissed or declared redundant. 39 per cent had left because of bad pay, prospects or conditions, or because there were better pay and prospects elsewhere. 35 per cent had left for personal reasons associated with health, family, or desire for a change, or, alternatively, to set up their own business or find work nearer home. . . . A greater number of men and women thought their present wages, hours and conditions were good, than had thought their previous wages, hours and conditions were good. Similarly, a higher proportion of informants liked their present job than had liked their previous job.[10]

Even at the lower rate of the interwar years, this kind of movement was enough, together with the allocation of the new entrants to employment, to change the industrial deployment of the British labor force radically in a short span of time: between 1927 and 1937, for example, the numbers of workers in coal mining and in cotton both fell by more than a quarter, but the numbers in entertainment and sports, and in electrical cable, apparatus, and lamps, more than doubled, and those in electrical wiring and contracting came near trebling.

10. U.K. Social Survey, *Report on Labour Turnover in Great Britain, 1945–49* (not printed, c. 1952), p.2.